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THE CATCH

I shook my net where whitebait seemed to thresh;
A shoal of moonbeams slithered through the net.

ÔTÔ

THE WORK PRESENTED IN THIS THESIS IS
MY OWN EXCEPT WHERE ACKNOWLEDGED IN
THE TEXT. IT HAS NOT BEEN PREVIOUSLY
SUBMITTED, EITHER IN WHOLE OR IN PART,
FOR A DEGREE AT THIS OR ANY OTHER
UNIVERSITY.

Jeannie Devitt.....

JEANNIE DEVITT
JUNE 1988

ABSTRACT

This thesis is an account of the role of contemporary Aboriginal women in subsistence. It refers to women living on remote outstations in the Sandover River region of arid, Central Australia. In this post-traditional situation, women's subsistence contribution combined foraging with the use of purchased foods. Their foraging contributed a small, but nutritionally important, component of the diet. However women devoted more time to foraging than to other subsistence activities. A sexual division of labour existed whereby men hunted regularly to provide fresh meat, while women were largely responsible for purchasing and preparing store foods. Substantial technological change was evident, but traditional values continued to shape contemporary subsistence practices. While women had abandoned the most onerous of their traditional tasks, they retained a central role in subsistence. Their contribution, though much changed, was essential to the maintenance of families and households. The subsistence work undertaken by women comprised one aspect of their productivity which also included child-care and household management.

Anthropological models of subsistence that have emphasized the aspect of sexual separateness in the traditional division of labour have been influential in the analysis of women's role and social change in Central Australia. This modern ethnographic data, however, highlighted the inter-dependence of women and men. It suggests that subsistence is, and was traditionally, a sphere of domestic life within which the inter-relationship of women and men is a prominent and necessary feature.

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I am most of all indebted to my hosts on the outstation communities of Utopia: the people of Angkwele outstation, Eniltyiye outstation and the women then living at Three Bores - their photographs are shown here. I wish to especially thank Ada Bird and her late husband, and June, Hilda, Eileen, Paddy, Lindsay and Mavis Bird who made me feel welcome within their small family circle. As well, they took seriously and patiently the task of teaching me. My thanks also to Glory Ngale and Michael Kngwarraye, my hosts at Eniltyiye outstation; to Ronny Price and Glory Pityarre, Myrtle Pityarre, Lena Perrurle, Maggie Perrurle, Polly Perrurle, and Emily Kngwarraye.

Others at Utopia made my stay satisfying as well as memorable - Jenny Green, Dr Toby McLeay, Pip Duncan, Daphne Nash, Kevin Keefe, Andrew and Jenny Ong, Brian and Marie Moynihan. To Deborah Speedy and Richard Bell I am especially grateful.

The suggestion to work at Utopia was made by Peter Latz of the Conservation Commission, Alice Springs. He generously shared



1 Hilda Bird 2 (left to right, adults) T. McLeod, Mavis Bird, Lindsay Bird 3 Ronny Price, Glory Pityarre 4 Desmond Bird
 5 June Bird 6 Anna Bird 7 Ada Bird 8 Ronald Bird 9 Paddy Bird 10 Eileen and Tanya Bird, Ada, Steven Bird
 11 Rosie Bird 12 T. McLeod, Kwementyaye, Colin Bird 13 Michael Kngwarraye 14 Emily Kngwarraye 15 Polly
 Perrurle 16 Pansy McLeod 17 Trisha Pityarre 18 Glory Ngale, Maureen, Dolly Pityarre 19 Maggie Perrurle, Myrtle
 Pityarre, Barbara Kngwarraye, Violet Pityarre 20 Margaret Price

his knowledge of the area and undertook the identification of plant specimens. The Human Nutrition Unit, University of Sydney, provided an analysis of food samples.

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I would, finally, like to thank my parents, Martin and Elizabeth. Years ago they believed that girls should be educated too.

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A NOTE ON ORTHOGRAPHY

I have used the modern orthography for Anmatyerre. It follows closely that for Arrernte (See Nash 1981; Green 1984; Purle, Green and Heffernan nd). Some principal points of difference with English are as follows:

ng	a velar nasal as in the English <u>si<u>ng</u></u>
ty	a palatal stop as in the English <u>ch<u>ur</u>ch</u>
ly	a palatal lateral as the English <u>mi<u>ll</u>ion</u>
h	a velar fricative as in Scottish pronunciation of <u>lo<u>ch</u></u>

Vowels

a	as in English <u>fa<u>th</u>er</u>
e	as in English <u>bi<u>r</u>d</u>
i	as in English <u>ti<u>n</u></u>
u	as in English <u>pu<u>t</u></u> (initial position) as in English <u>ca<u>u</u>ght</u> (other positions)

Stress

In Anmatyerre the first vowel following a consonant is stressed.

In the literature on Central Australia, Aboriginal group names are variably spelt. The following are the more common variants. The accepted modern form is underlined.

<u>Anmatyerre</u>	<u>Arrernte</u>	<u>Alyawarre</u>
Unmatjera	Aranda	Yalyawara
Unmatchera	Arunta	Alyawara
Yanmatjari		Iliaura
		Aljauwara

CHAPTER 1

HUNTERS, GATHERERS AND WOMEN

May 1982: I had almost completed the first twelve months of fieldwork in Central Australia working with Aboriginal women on foraging and subsistence practice. Three weeks before my departure date, a group of women commented that they had yet to show me seed processing and that the "story" would be incomplete without it.

We set out on a clear winter morning and quickly located an extensive area of the grass, **alyatywerenge** (Eragrostis eriopoda). The seven women took up tasks commensurate with their skills in this activity. The younger women collecting the seed heads, some of the older women winnowing the seed in preparation for the husking, while the two oldest women carried out the most complex tasks; the husking and final separation of the seed. As they went about their various tasks, one woman commented that this activity, this "seed business" used to be "number one women's work".

Watching the continuous activity of that small group I had a glimpse of the reality of the routine of women's traditional work and began to appreciate the magnitude of the changes that have occurred. Women no longer process seed and have not done so for many years. In the 1980s their "work" was dramatically different. Other tasks had replaced foraging and the effect of recent change was pervasive.

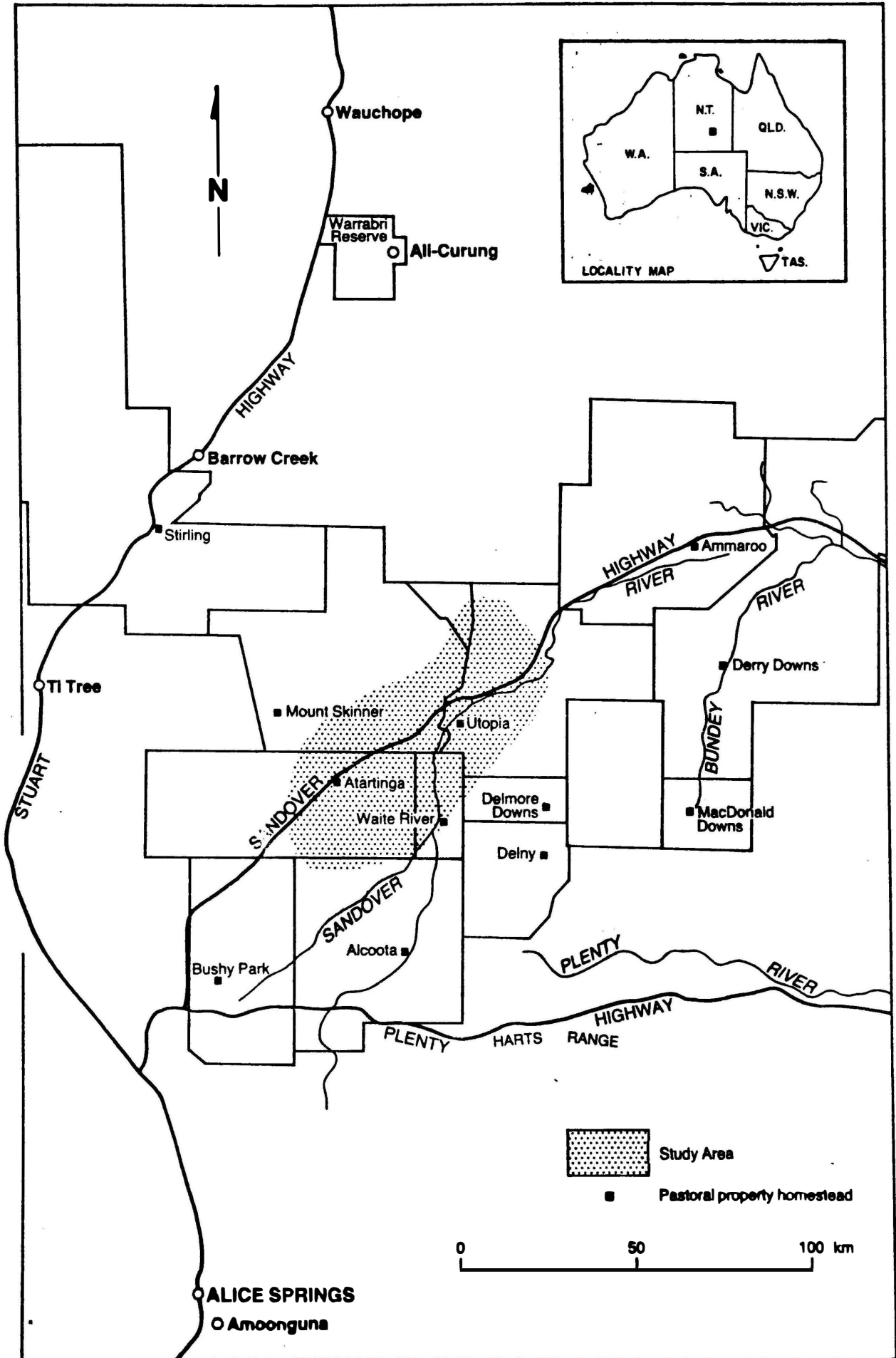
I investigated this many-sided subject throughout a period of twenty months fieldwork spent living on two pastoral properties, Utopia and Atartinga (previously Woodgreen), 250 km northeast of Alice Springs in the arid Central Australian

region (Figure 1.1). Groups of Anmatyerre, Alyawarre and Arrernte speaking people were living on these stations which now cover part of their traditional territories.

THE STUDY

The central theme of the thesis concerns the role of contemporary women in subsistence in a small remote community. The study examines how women's subsistence contribution has altered with changing circumstances. It explores the influences shaping the trends within a system which incorporates hunting and gathering within a cash economy. In particular it considers the extent to which aspects of a hunter-gatherer tradition continue to influence subsistence practices. The emphasis is on subsistence production but it is presented within a broad context. I examine the organization of subsistence, modern patterns of foraging, technological change and the domestic situation within which women work. I concentrated my observations on the role of women, a choice based on practical considerations, and the division of labour is therefore described from a female perspective. The ethnographic data of the study provides a basis to review prevailing anthropological images of women's role. In particular, I examine the relationship between anthropological models of subsistence and the interpretation of women's role in Central Australia.

I understand subsistence to mean all activities which lead directly to the production of food. Foraging in this context was a particular type of subsistence activity in which women (or men) procured food from the environment. The purchase and preparation of purchased foodstuffs for consumption was a complementary sphere of subsistence activity.



Throughout, my focus is contemporary. This thesis is not an exercise in reconstructing the past but an attempt to understand present behaviour within a specific historical context. The contemporary situation now under discussion has clear linkages to both a recent and an ancient past, and, little as the actual content of that history can now be retrieved, its significance is nonetheless critical (Leacock 1978).

I use the term "post-traditional" throughout the study simply to contrast the present with the past. It is not inferring that there was some moment in time at which the traditional life-style ceased and another began. Similarly, the term "contemporary" indicates and emphasises that the situation under study exists within modern, not ancient or historic Australia. Although the women whose life I describe are geographically isolated from urban Australia, its influence is pervasive, not least because Aboriginal people are ultimately dependent upon it economically.

BACKGROUND

Feminists and Foragers in Anthropology

Evidence documenting the role of women in foraging societies has been increasing steadily since Lee (1968:42) drew attention to data showing that most extant foraging groups subsisted primarily on foods gathered by women. But a particular interest in the role of women grew within the context of the women's movement of the early 1970s (Quinn 1977:181). Female anthropologists, reflecting on the discipline, argued that anthropological perspectives reproduced the sexual bias of the wider society and that the study of "Man", was, by and large, the study of men by men (Reiter 1975; Rosaldo and Lamphere 1974).

In hunter-gatherer studies new directions arose from Slocum's (1975) re-examination of the prevailing view that male hunting and aggression provided the original dynamic of cultural evolution. Slocum (1975:49) asked a "simple question" - "What were the females doing while the males were out hunting?". In setting out to answer it, Slocum confronted the more general question of how women, in that particular anthropological discourse, had been marginalised to the point of invisibility.

An examination of the division of labour is central to any analysis of the position and status of women (Kuhne and Wolpe 1978:8). Thus the anthropological literature exploring women's status overlaps and is, to varying degrees, founded on that concerning the division of labour and the nature of women's work. Slocum's re-interpretation of the role of women is a seminal work within a large literature related to the division of labour within hunter-gatherer groups. A multifarious subject, it may be considered from a diversity of view points. Empirical evidence has been drawn from examinations of foraging patterns, time allocation studies, child-care arrangements, resource distribution and control mechanisms, or on problems related to the origin of the division of labour (see for example, Brown 1970; Draper 1975; Lee 1979; Halperin 1980; Dahlberg 1981; Hurtado, Hawkes, Hill and Kaplan 1985).

Despite this surge of interest, the documentation of women's role in foraging societies remains patchy - dominated ethnographically by research among the !Kung (Estioko-Griffin and Griffin 1981:121). A myriad of researchers have recorded aspects of the lifestyle of hunters and gatherers in Southern Africa but the work of Lee (1968, 1979, 1982, 1984) and Lee and DeVore (1968, 1976) have provided the most influential models of foraging society. Recent research emerging from studies among South American foragers (for example, Hill and Hawkes 1983; Kaplan, Hill, Hawkes and Hurtado 1984) and that

of the optimal foraging school (Winterhalder and Smith 1981) are more oriented to archaeological interests (Barnard 1983:195) and have yet to be integrated with earlier work.

While Lee (1979:192) has said that,

In all regions and throughout the year mongongo collecting is the major activity of both men and women...

the strength of the image of "women the gatherer" in the literature on hunter-gatherers derives in large part from his research among the !Kung. It was later reinforced by interpretations of evolution which argued, partly on the basis of Lee's research, that "gathering and not hunting was the initial food-getting behaviour that distinguished ape from human" (Zihlman 1981:93).

Women and traditional life in Australia

Australian anthropology reflects, if a little later, the trend evident in the international literature - a recent focus on the affairs of women (Gale 1978:1). In Australia also, it is female anthropologists who have carried out the most comprehensive investigations of women's role. Their work has, as a dominant theme, the relation between gender and status; (see for example, Reay 1963; Berndt 1978a, 1979, 1981, 1983; Hamilton 1975, 1979, 1980, 1981b; White 1975, 1978; Gale 1978, 1983; Bell 1983a, 1983b). With few exceptions the domestic, economic and material dimensions of women's lives have attracted much less sustained interest (although see for example, Goodale 1971; Cowlishaw 1979; Meehan 1980, 1982; Hamilton 1981; White, Barwick and Meehan 1985). More commonly that information is subsumed within studies not explicitly concerned with women, such as the work of Tonkinson (1966, 1978) Brokensha (1978) Gould (1980), Altman (1982, 1984, 1987), O'Connell, Latz and Barnett (1983), White (1985) and Rose (1987).

The apparent lack of interest in the material aspects of women's lives reflected the earlier ethnographic trends within Australian anthropology as much as it reflected a disinterest in the role of women. Australian hunter-gatherers were long the source of international debate on matters of kinship and social organisation (Woodburn 1980:96). As Gould (1969:252) pointed out at the earliest **Man the Hunter** Conference, papers dealing with Australia

showed a tendency toward specialisation in the study of marriage and land-ownership which set them apart from the material presented by most of the other contributors.

Ethnographic information on the traditional life of women is, therefore, scant (Berndt 1981:168) and the dimensions of the division of labour can no longer be fully documented.

Malinowski, in 1912, reviewed the existing ethnographic and historical literature and on the question of the division of labour concluded (Malinowski 1963:287) that since women's work was the more heavy and monotonous, the division was unnatural. Women therefore worked as they did under compulsion from men. After field work in Arnhem Land, Warner also pondered the implications of the division of labour. Warner (1969:123) proposed a causal relation between the simplicity of female technology, their simplified personalities and their consequent inability to achieve "social value" (Warner 1969:6) equivalent to that of men. He posited no reason for the origin of the apparent sexual separation but speculated that it was linked to what he perceived as men's technological superiority. But whilst Warner did examine the division of labour, his data was heavily biased towards the subsistence activities, artifacts and technology of men with only a cursory description of those of women (Warner 1969:127-143).

Kaberry (1939), on the basis of her field work in Western Australia, refuted prevailing views of the division of labour that characterised Aboriginal women's work as elementary, repetitive and artless and men's as skillful and stimulating. She commented:

We can dismiss the statement that women's work involves more drudgery than that of the men, even though it may take longer. It is compulsory only in the sense that it is an occupation that is of vital importance to the maintenance of life; but there is no question of the "brutal imposition of the heavier tasks on the weaker sex" (Kaberry 1939:24).

On the contrary, she reported that the need and the expectation of sharing separately collected resources ensured that men and women, on the whole, worked to maintain relationships of co-operation (Kaberry 1939:25). Kaberry (1939:35) concluded that the existence of a labour division is not of itself reflective of status but of the availability of resources, physiological sexual differences and exploitation strategies. Further, she suggested that the economic skill of women "is not only a weapon of subsistence, but also a means of enforcing good treatment and justice" (Kaberry 1939:36).

Kaberry's interest in the secular and material aspects of women's life was ground-breaking. Her proposition that some attention to this dimension of their life logically precedes examination of any other (Kaberry 1939:187) has significantly influenced my own study. Like her, I have taken woman the worker as "the point of departure into the concrete reality of her world" (Kaberry 1939:9), but unlike Kaberry I restricted myself to that dimension of life in order to better understand the complexity within it.

One wonders why it is that the every-day domestic life of women has remained such an apparently unattractive subject of

study even given the current interest in women's affairs? Is it that domestic life itself offers less of anthropological worth than other aspects of life, or that a predominantly male anthropological discipline defines it to be so. Or is it indicative, as Berndt suggested, of the orientation of female researchers themselves away from domesticity in their own world? She speculated whether it was,

...because they themselves [female researchers] were concerned with the larger issues of public life, with the "emancipation" of women: and, misreading the signs, they saw in the position of Aboriginal women an awful warning, or reminder, of the connection between women and domesticity from which women almost everywhere find it so hard to escape. (Berndt 1978:80)

Strathern (1984) has argued that the contemporary search for domains of women's power which lie outside the domestic is a reflection of our own devaluation of domesticity. There is a tendency to impute our own cultural meanings to recognisable domestic symbols (1984:31) and thereby misrepresent the domestic life of both men and women in other cultures (Strathern 1984:31).

Interpretations

Two central ideas about women's production and the traditional division of labour dominate the Australian literature. The first is that women were economically dominant because they exploited the more reliable sector of the resource base; secondly, that their economic dominance, coupled with a strict division of labour was the basis of their independence of men. Berndt (1979:34) summarised them:

In regard to traditional Aboriginal society, generally speaking, several points are well established:

- (1) Women provided the most substantial and most consistent food supplies. They were the most dependable providers of food for their families...
- (2) Accordingly, women could be economically, virtually independent of men. They did not need male bread-winners.

McCarthy and McArthur (1960) carried out the first quantitative survey of Aboriginal subsistence in 1948. Although it has several shortcomings (Jones 1980:135), it is the earliest available account. It offered no unequivocal evidence that women were the mainstay of the subsistence economy. Meehan (1980:17) and Altman (1982, 1984), on the basis of recent long-term quantitative studies among Aborigines of coastal Arnhem Land, are both of the opinion that the contributions of men and women under traditional conditions were equally important. Fieldwork led Meehan to specifically revise her earlier conclusion (Hiatt 1978:13) that women were more important food-providers in areas, such as the tropics, where gatherable foods were plentiful. She wrote (1980:17),

Based on my experience with the Anbarra people since then that statement would now have to be modified because it appears that in tropical, coastal areas, women and men are equally important food providers.

While the available ethnographic data indicated that women regularly carried out subsistence work separately from men, it is a different and unsubstantiated assertion that women were therefore economically independent of men.

Central Australia was obviously different to coastal Arnhem Land, but even greater uncertainty surrounds women's role in this region. There is extensive evidence that environmental variation rather than uniformity characterises the Australian desert (Strehlow 1965; Mabbutt 1971; Peterson 1979) but the

only extensive studies of desert subsistence patterns have been based on the Western Desert, the harshest of the desert environments (Gould 1969, 1980; Cane 1984). When comparing the plant resource inventories of Warlpiri, Alyawarre (both Central Australian groups) and the Western Desert groups, Gould (1980:61) concluded that:

...the Western Desert stands out as a place that is exceedingly poor in numbers of edible plant and animal species and in the actual amounts of those species as well... In terms of water supplies and plant and animal resources, this is a physical environment that by any standard may be the most unreliable and impoverished in the world where people now live or are known to have lived directly off the land.

In that environment, at that time, the diet was primarily vegetarian and "at least 90% of the time females provide 95% of the food available to the group as a whole" (Gould 1980:62). Given the extreme nature of the Western Desert as a habitat for humans however, the subsistence patterns Gould documented are not representative of all desert regions nor should the role he attributed to women be accepted as typical. Rather than a model for arid Australia generally, Gould (1980:61) regarded the Western Desert as a baseline against which other arid, but less harsh, environments may be compared.

The traditional economic role of women, except in broadest outline, is undocumented and therefore must remain a matter for continuing speculation. There is little convincing evidence, at least for Central Australia, for example, to support the assertion that, because,

...women are the economic mainstay, they must camp near sites where they have access to food resources. In this way women determine camp location and movements... (Bell 1983a:55).

The "vegetarian stress"

The vegetarian character of the diet and the image of "woman the gatherer" are integral parts of the proposition that Aboriginal women's economic importance was founded on the reliability of their subsistence contribution. Bell (1983a:54) claimed that,

...most anthropologists allow that in pre-contact days women's contribution to the diet was considerable, up to eighty percent in desert regions.

She offered here, an oft-repeated but unsubstantiated assessment made originally by Meggitt (1957:143). His quantitatively expressed conclusion concerning the contribution of vegetables (gathered by women) to the diet was unsupported by data, nevertheless his statement concerning the "vegetarian stress" (Meggitt 1963:4) of the diet has been a powerful and continuing influence. It has fostered a rigid association of women, gathering activities and vegetable foods, and a common idea that the "life of the Australian woman centred around the vegetable world" (Roheim 1974:46). That association has so thoroughly permeated the anthropological literature that it is taken as a commonplace. Its influence has recently extended to the arena of policy recommendations on land use in desert outstations.

Currently Aboriginal men are trained as gardeners. This is in marked contrast to the traditional sexual divisions of labour. Consequently, women should be trained as gardeners and female horticultural advisors employed (Cane and Stanley 1985:216)

While Gould indicated the critical importance of plant foods for the extremely arid areas of Central Australia, the data are both too limited and contradictory to support such firm conclusions for the whole of arid Australia. Finlayson, a

zoologist who travelled extensively through the southern Aranda and Pitjantjatjara country during 1931-35, commented on the importance of meat in the diet of people he encountered and worked with. Finlayson (1935:38) wrote that the little known (zoologically) small mammals "form the mainstay of the black man's diet" and that they were of particular interest to women:

The kangaroo, the euro, the rock wallaby and the emu are the big game, the red meat, of the lords of the land [men]... upon their gins [women] devolves the constant task of digging out the smaller mammals to supplement the larder, and from them a wealth of material and data may be obtained which is otherwise most difficult to access. (Finlayson 1935:41)

He remarked on the abundance of lizards, calling the area a "land of lizards":

Of the larger kinds, two species of monitors... are more often seen than any others, and scarcely a day goes by without encounters... with these two great lizards, on account of the black's fondness for them as an article of diet. (Finlayson 1935:36)

Finlayson identified the most commonly caught goannas as Varanus gouldii and V. giganteus. He suggested that Aboriginal people sought lizards

...not [for] the flesh but the fat. In a land where mammals are nearly always lean, the big lizards and the emu are practically the only sources of fat-supply and are cherished accordingly. (Finlayson 1935:38)

Between 1957 and 1964, Long travelled among the Pintubi in the vicinity of Lake Mackay, in the Western Desert and reported:

Only two of the twenty-two groups were found to be using grass seeds for flour making ... other seeds and fruit were more often available than grass

seeds, the most used being probably Solanum fruits and the quandong (Santalum acuminatum) ... men have been seen gathering solanum and other fruits in quantity, as well as lizards and rodents. It seems reasonable to assume that the main staple in the area was lizard meat. Virtually every group met had been gathering lizards; in most instances this was the only food brought back to camp. Small lizards (linga) seem to have provided the staple for children and to some extent for women. Of the larger lizards probably the "blue tongues" (lungkata wana) were the most important source of food ... it seems probable that lizards were similarly the reliable, all seasons staple in the sandy deserts to the south ... where the mean annual rainfall is even lower but where insects and lizards are similarly numerous. (Long 1971:267)

Cleland believed the subsistence of Central and Southern Australia to be meat-oriented with a plant-food supplement.

The food available may be summed up as follows. The native of Southern and Central Australia, though omnivorous was essentially a meat-eater (including fish). Animal food was his mainstay. There might be a considerable supplement of plant foods in Central Australia but in the South they were hardly procurable. (Cleland 1966:118)

Tindale (1972:248) reported that the Pitjantjatjara left animals with insufficient fat, an indication that animals were relatively plentiful. He later commented that the "Desert folk regard themselves as fundamentally meat eaters" (Tindale 1981:1874). Macfarlane (1978:51) on a field trip to the Western Desert in 1963, a drought year, reported women taking mainly non-vegetable foods: cossid larvae, honey ants, frogs, some caterpillars and quandongs. Plant foods were in short supply, an observation also made by Gould (1980:66) who noted a reduction in plant species diversity during drought. Finally, Hamilton, on the basis of her desert fieldwork was prompted to remark:

that the stress in the literature on women as gatherers of vegetable foods has, I think, been grossly overdone and the importance of small protein sources such as eggs, birds, lizards, burrowing animals and grubs has been greatly underestimated ... Women in the Eastern Western Desert saw themselves as going out primarily for **for meat**. The vegetable foods they gathered were an important supplement rather than an alternative, to the animal foods. (Hamilton 1980:11, author's emphasis)

As others have noted (Dahlberg 1981:15), discussion often hinges on the definition of "gathering". Is the taking of lizards, burrowing animals, grubs or shellfish "gathering" or something else? Or are particular foraging activities glossed as "gathering" because women perform them? Anomalies abound. O'Connell and Hawkes (1981:Table 5.A.2) for example, presented data on female foragers in Central Australia. They recorded 24 foraging events and despite documenting that on 10 of the 24 occasions the women brought in animals (lizards and grubs) as well, the table was titled "Quantitative data on some plant collecting trips originating at Bendaijerum 1973-75." A minor example perhaps, but one indicative of a blindspot in apprehending the complexity of women's foraging. The Australian data, especially the recent quantitative accounts, currently support Ember (1978:440) who, after surveying data in the **Ethnographic atlas**, concluded:

The results of the present survey do not support the view that gathering is generally the most important or even the more important subsistence activity, nor does the survey support the related view that women contribute substantially more to subsistence than men.

Models of subsistence relations

Berndt (1978a) suggested that the principal subsistence technology of Aboriginal men and women, the spear and the digging stick respectively, served well as symbols for the distinctive roles of men and women in Aboriginal society.

A spear is a symbol of maleness. One symbol of femaleness is a dillybag or basket or a wooden food-carrying dish. But a digging stick, though less sharply distinctive in form, is also a female symbol - indicating the main economic activity that is the prerogative and virtual monopoly of women, the sphere of food-collecting. (Berndt 1978a:72)

While Berndt noted the way in which the "digging stick and the spear complement and supplement each other" she commented that either "could stand alone" (Berndt 1978a:72) and focused on their separateness.

In Aboriginal Australia the division of labour between the sexes was fairly clear cut in all facets of living ... There was some overlap, some common ground - but generally speaking no areas of uncertainty. (Berndt 1978a:74)

Without labouring the metaphor, I think the similarities of spear and digging stick are equally striking. The overlap in their subsistence functions could equally well symbolise the overlap of male and female subsistence pursuits to produce, what Meehan (1980:15) has called, a system of varying responsibilities. A digging stick is an effective killing instrument when used as a club. On the other hand any suitable stick can function as a digging stick or a club and men may thus avail themselves of the same resources as do women. The separateness of the system described by Berndt (1978a:72) where a "man could manage by himself over a period, as far as food-getting went, just as a woman could, although his efforts were fraught with rather more uncertainty than hers" belies the fact that men could as well gather as hunt, they could exploit the entire range of resources (Meehan 1980:15) whereas it was women whose activities were limited either by cultural proscriptions or by the exigencies of child raising.

Hamilton (1979, 1980), explicitly building on Berndt's model, used ethnographic data from the eastern Western Desert to argue that the division of labour between males and females

...is so thorough-going and complete that it can better be understood as two separate systems. The instruments of labour, the techniques used, the organisation of work, the means of redistribution of the product and the ideology governing these activities is notably different for men and women. (Hamilton 1980:12)

Her analysis ultimately was directed to the relationship between economic activity and the secret life of both men and women, but the existence of sexual separation in daily subsistence pursuits was central to her argument. It is unclear what time-frame she used - traditional and therefore reconstructed, or contemporary. She said that it was not a "traditional" situation but that "elements of pre-contact behavior remained" (Hamilton 1980:4). Nonetheless, her description of production is framed in traditional terms; the use of stone and wooden gear, the organisation of foraging and the critical importance of grindstones.

Although Hamilton based her argument on an examination of the division of labour and technology, she set the discussion within the context of a more generalised and broadly based division between men and women, saying that:

The dichotomy between male and female in Aboriginal societies is too well known to need either documentation or re-statement. (Hamilton 1979:xiv)

She noted how White (1975) had established "for the first time, the extreme separation of male and female in the Central Australian areas" and suggested that in desert society sexual separation is so pervasive and sex-based groups have such a high profile that "the family becomes less obvious and visible" (Hamilton 1979:xix).

Whereas Kaberry had earlier proceeded from an examination of the economic and domestic role of women to an examination of other aspects of their social life, White (1975) did the reverse. She argued that a division between the sexes was the essential feature of social life in Central Australia; that men and women, including marriage partners "lived mainly separate lives" (White 1975:136). This conclusion was based on anecdotal observations of Aboriginal social life conducted within a Lutheran mission with a large number of residents. She speculated whether the apparent division may have originated in the more extreme division of labour traditionally necessary in desert environments. Although no evidence was adduced in support, White (1975:134) suggested that, in contrast to more fertile areas, the harsh desert environment resulted in reduced economic co-operation between men and women and that this more pronounced separation in economic activities then recurred through social and ritual life. Observing that "Aborigines did not share our concept of the nuclear family as a residential and operational group", and that men and women (in a large Aboriginal settlement) operated rather separately, she concluded that sexual separation was the central feature of desert social life (White 1975:136).

The separate life of Aboriginal women in desert society has since emerged as a dominant theme in recent anthropological statements of women's role and, interestingly, it is one advanced most strongly by female researchers. Bell (1983a) for example, has further elaborated the theme of sexual separateness through her focus on the existence of separate women's residences.

The **yawulya** (women's ritual) and the **jilimi** (women's camp) embody much that is dear to women: both provide visible proof in the wider society of women's separateness and independence. It is from the **jilimi** that the women's ritual activity is initiated and controlled, and it is in the **jilimi**

that women achieve a separation from men in their daily activities. A refuge, a focus on women's daily activities, an area taboo to men, a power base, an expression of women's solidarity, the home of the ritually important and respected women, the **jilimi** is all this and more (Bell 1983a:17).

In addition, there are strong inferences that, for these women, domestic life is of less value than ritual concerns.

As women leave behind their mothering roles they move into more prestigious women's activities and play an increasingly important role in decision-making (1983(a):35).

As Strathern (1984) commented, the devaluation of domestic life is more likely to be a construction of the anthropological observer than the observed. An extended concern with the separate subsistence activities of men and women has obscured the underlying common purpose of both men's and women's activities - to acquire food for themselves and their dependants. The dietary aspects of subsistence are downplayed in these interpretations which emphasise the social dimensions of the activities themselves rather than their ultimate purpose.

Change and a lost livelihood

Comprehensive quantitative anthropological studies of the last twenty years have unequivocally established the importance of women's role in the economic life of hunter-gatherers. By then the majority of such groups had, however, already undergone major economic and social transformations. There is an increasing interest in the process and conditions of those transformations, and a concomitant interest in the changing role of women.

Rose, in his **Winds of Change in Central Australia** was among the first to draw attention to the significance of changing

Aboriginal subsistence patterns, specifically the adoption of flour. He described it as "one of the most revolutionary influences in bringing about a change in the way of life of the Aborigines..." (Rose 1965:31). He argued that on the basis of this massive change to subsistence practice, women had become an economic liability to their menfolk, since men rather than women now supplied the necessary carbohydrate foods through their earned income (Rose 1965:89). Traditionally, women as labourers, had constituted an asset for men.

Not that earlier commentators failed to report changing subsistence patterns - they did. But seeing the widespread use of flour, tea and sugar, there was a tendency towards impressionistic judgements, and, for unclear reasons, women were thought more seriously affected by the changed situation than men. In reference to the Ooldea people, Berndt and Berndt claimed that,

Sex is one of their chief interests and diversions, with gambling a close second. The former results no doubt from the spare time that woman now finds at her disposal. No longer does she collect seeds to grind and make into damper, as now the flour is supplied and the mixing and kneading is an easy task. (Berndt and Berndt 1942:323)

Shortly after they wrote that woman's life since contact was "much easier and simpler" but that the subsequent spare time available

tends to make her somewhat lazy. Such tendency was much more noticeable among women than among men. (Berndt and Berndt 1944:220)

Long (1970:328) speaking of central Australia, thought that women did little since they no longer foraged, and this increase in leisure time "appears to be the basic cause of some neurotic conditions".

1972:41; Turner 1974:179; Brokensha 1978:11), but one usually given little extended consideration. It puzzled McArthur, who, after completing her examination of Aboriginal diet and foraging in Arnhem Land wrote:

The great majority of Aborigines in the reserve are thus no longer an autonomous community but are dependent on the settlements for their livelihood. Their lives are ordered by Europeans but they are free, theoretically at least, to go back and live as nomads, should they so desire. Although it seems strange that a once proud, strong and independent people should willingly give up their independence, a great variety of reasons could probably be advanced in explanation. Four of the most important would appear to be security, tobacco, the desire to become more like the whiteman and inertia - not necessarily placed here in order of importance. (McArthur 1960:5)

The increasing availability of Aboriginal oral history and the use of historical records is only now revealing something of the process by which the incorporation of new foods and drugs precipitated widespread social, demographic and economic change (see for example, Read and Japaljarri 1978; Brady 1986).

Meggitt's (1957:143) statement that women traditionally provided the major portion of the diet, which was 70 - 80% plant foods, added a particular authority to arguments that women's role collapsed with the adoption of flour. Put simply, the view was that since women ceased to perform their traditional subsistence tasks they ceased to have an effective role. It is a theme that recurs in the recent literature - woman's productive role has declined and her economic contribution in modern times is of little significance (Altman 1984). Hamilton (1975:178) suggested that contemporary women on settlements in Arnhem Land, had lost their previous independence and were dependent on men for their subsistence needs. Bell argued similarly that change has undermined

women's traditional economic independence and led to a diminished social position.

In Aboriginal Australia before white settlement, women worked constantly and that contribution made them indispensable to their menfolk. Rations relieved women of the burden of food-getting but made them primarily someone's wife and mother ... Men now monopolise the work which women and men previously shared. (Bell 1983a:46)

Both of these arguments rest on a particular view of women's traditional role. Implicit in the latter, though, is also the suggestion that being "someone's wife and mother" was not only less socially significant than being a forager but that it entailed no work.

Examinations of cross-cultural evidence indicate that the relationship between status and economic productivity is neither direct nor predictable (Sanday 1973). Draper (1975) concluded, for example, that an increasing burden of domestic and subsistence work resulted in a loss of autonomy for some !Kung women. As Dahlberg (1980:406) pointed out, the very choice of economic activity as a significant indicator of social status may be suspect for cultures other than our own. Aside from these problems, the propositions show little recognition of the paucity of ethnographic data concerning traditional labour patterns. Nor do they account for more recent research which, while not explicitly concerned with gender and status, has important implications for both.

Where research enquiring into the status of Aboriginal women develops at a tangent to that concerned with the material and economic conditions of their life, we will continue to find old stereotypes being stretched beyond recognition. For example, Wade-Marshall (1982:70) recently suggested that:

Provision for wives and off-spring was not a traditional, nor has it become a modern practice for Aboriginal men. Traditionally women were independent in their day-to-day activities and their food gathering provided a large proportion of their own and their children's diet.

Summary

The secular aspects of Aboriginal women's lives, particularly their economic and domestic roles are little documented. At the same time, notions about economic and domestic life provide the basis of much that is written about women in desert society. Within the anthropological literature of Central Australia the recognition of a sex-based division of labour in combination with particular residential arrangements has been elaborated into an all-pervasive social division. The anthropological images of desert society are of women separate from men. It is argued that traditionally this was because the division of labour predisposed men and women towards separation: in contemporary times, because women unite to assert their influence despite their loss of economic significance in a monetary economy.

The importance of economic and material life to anthropological interpretations of women's role is clear, but so far, unreflected in the ethnographic record. It is my intention in this study to separate the issue of women's economic contribution from that of status and to concentrate on the former. I have opted for a broad approach. The major focus of the study is the contemporary subsistence work of women. But I also examine the domestic context of subsistence activity and locate the women themselves within, not only a single-sex framework, but within their households and families. This study is the first such account of the every-day life of Australian desert women. It is novel as well because it concerns women who lived as members of small family-based groups on outstations rather than in large settlements. Ethnographically it adds to the existing important data on other aspects of Aboriginal life in Central Australia.

THESIS ORGANISATION

The ethnographic data and its interpretation are organized within ten chapters. This one presented the aims of the study and reviewed relevant literature. Chapter 2 describes the study location and the lifestyle of the Aborigines living there, drawing attention to the environmental and historical circumstances which distinguish this particular area from other arid regions in Central Australia. Chapter 3 explains how I came to work at Utopia, the organisation of the research and the principal methods of data collection.

Chapters 4 to 7 form a unit insofar as they contain the bulk of the data on contemporary subsistence. The first of these chapters is an examination of the contemporary diet and a quantitative analysis of women's foraging contribution. A primary influence on the patterns documented in Chapter 4 was the adoption of flour which forms the focus of Chapter 5. Chapter 6 describes the way in which women organised their foraging activities. It includes an analysis of group organisation and the way women accommodated the requirements of child-care. The changing technological base of women's subsistence is discussed in Chapter 7.

The subsistence work undertaken by women is placed in a context of the broader range of women's domestic work in Chapter 8. The contemporary division of labour is briefly considered. Chapter 9 examines the relationship between women and others, locating them as members of families as well as households. Chapters 8 and 9, taken together, provide a broader perspective on the subsistence role of women. The final chapter considers the changed role of Aboriginal women in subsistence and its implications for contemporary domestic life in a remote community. An assessment is made of the extent to which contemporary practices reflect what is known of traditional practices. As well, the final chapter relates the study data to current anthropological views

concerning women's role in both traditional and modern communities in Central Australia.

CHAPTER 2

THE SANDOVER RIVER REGION: PEOPLE, HISTORY AND ENVIRONS

TERRITORIES AND TRADITIONS

The study area (Figure 1.1) lies across the margins of Anmatyerre territory as Strehlow (1971) delineated it. It encompassed a small part of the total Anmatyerre territory which extended further to the north and the west (Figure 2.1). The Alyawarre lived to the east; northern neighbours included the Kaytetye and Warlpiri while to the south were the lands of northern and eastern Arrernte (Strehlow 1947).

I spent most of the fieldwork time on one outstation, Angkwele, working with people who thought of themselves as Anmatyerre and who contrasted the language they spoke with that of their northeastern neighbours. However, group identification terms like Anmatyerre and Alyawarre were rarely used without my prompting. Occasionally people distinguished between "us mob" and "those Alyawarre", or "that Anmatyerre mob". The terms used referred to the language of others but in this border zone they were both infrequently and inconsistently applied. For example, the Angkwele mob described the people at Three Bores as being "half and half Anmatyerre and Alyawarre" and those living closer to Ti Tree as being "proper Anmatyerre". Ti Tree was in the heart of Anmatyerre territory by the reckoning of the Angkwele Aborigines, Strehlow (1947) and Tindale (1974). The usual manner of group reference and identification was in terms of current residence, for example, the Three Bores mob, the Angkwele mob, the Alalkwere mob and so on.

Anmatyerre and Alyawarre people ordered social relations within a classificatory system of kinship. In addition they employed a

system of sections and sub-sections. The Anmatyerre were organised within an eight class sub-section system and the Alyawarre, a four class section system. The two systems are closely related, with each Alyawarre section corresponding to two Anmatyerre sub-sections. The social network was integrated with a land tenure system of estates held by patrilineally based descent groups, the *kerde* or "owners"; assisting the owners was a second group, the *kwetengwele*, the children of female members of the patriline, known locally in English as the "off-side mob". These related groups held responsibility for land-based ritual and ceremonial affairs. Bell (1983:Appendices) has a useful and concise outline of the inter-related network of social and land relationships in this area.

The Anmatyerre do not figure prominently in the early written records of Central Australia. The outstanding ethnographers of the region, Spencer, Gillen and Strehlow concentrated on the Arrernte, only incidentally comparing them with neighbouring groups like the Anmatyerre. Spencer and Gillen's (1904, 1927, 1928, 1969) records of observations made during the 1890s represent the earliest systematic documentation of Aboriginal life in the region. Despite criticisms (Strehlow 1971:xxvi) their writings are a rich, indispensable ethnographic source. It is unfortunate that women and their life were given such a low profile.

Spencer and Gillen (1904:1) commented on Anmatyerre daily life by simply recording their similarity to the Arrernte:

The Arunta may be looked upon, in regard to its organisation and customs, as typical of the important group of tribes occupying the very centre of the continent. The group includes the Arunta, Ilpirra, Unmatjera, and Kaitish tribes, all of which have fundamentally the same organisation, customs, and beliefs and may be spoken of, using the term first proposed by Mr Howitt, as the Arunta nation.

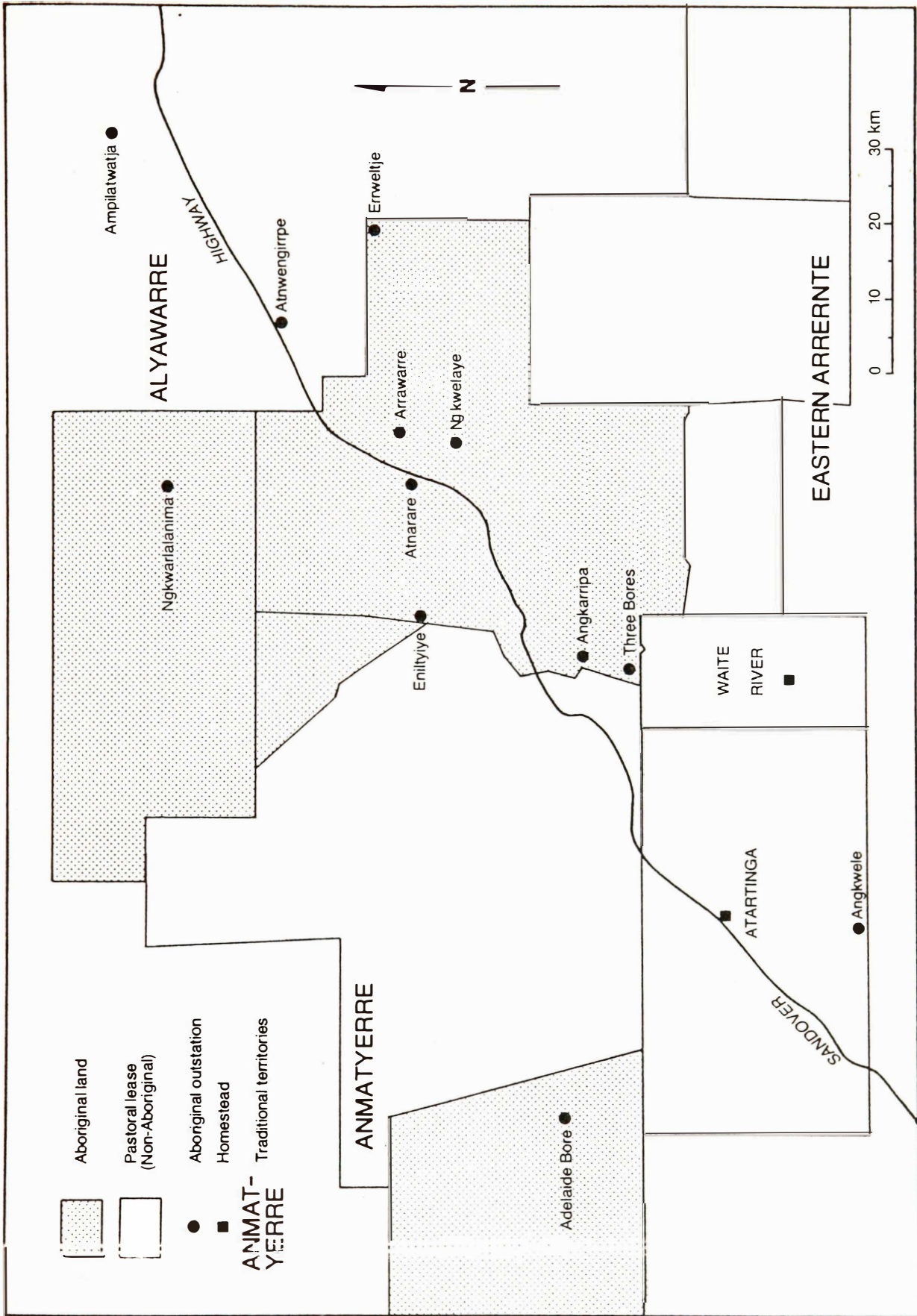


Figure 2.1: Outstations of Urupuntja Council and Aboriginal affiliations in the Sandover River area, (according to Strehlow 1971).

Linguistically, the Anmatyerre, Alyawarre, Kaytetye and Arrernte languages are part of the Arandic language group which included one or two other groups of Central Australia and had a speaker population of perhaps several thousand (Yallop 1977:1).

Spencer and Gillen (1969:18-53) described a day in the life of a small group of Arrernte living at the turn of the century. In this, they commented briefly on many aspects of domestic life including subsistence practices and material culture. For a glimpse of daily life in earlier times for Central Australian women I compiled the following extract from their account. I selected passages which related specifically to women, and indicate page references (in brackets) at the conclusion of each passage.

If, now, the reader can imagine himself transported to the side of some waterhole in the centre of Australia, he would probably find amongst the scrub and gum-trees surrounding it a small camp of natives. Each family, consisting of a man and one or more wives, children, accompanied always by dogs, occupies a *mia-mia*, which is merely a lean-to of shrubs so placed as to shield the occupants from the prevailing wind, which, if it be during the winter months, is sure to be from the south-east. (18)

Early in the morning, if it be summer, and not until the sun be well up if it be winter, the occupants of the camp are astir. Time is no object to them, and, if there be no lack of food, the men and women all lounge about while the children laugh and play. If food be required, then the women will go out accompanied by the children and armed with digging sticks and *pitchis* (wooden troughs used for carrying food and water), and the day will be spent out in the bush in search of small burrowing animals such as lizards and small marsupials. The men will perhaps set off armed with spears, spear-throwers, boomerangs and shields in search of larger game such as emus and kangaroos. (19) So far as cooking is concerned, the method is primitive. Many of the vegetables such as the *Irriakura* (the bulb of the *Cyperus rotundus*), may be eaten raw, or they may be roasted in hot ashes.

(21) Very often large quantities of the pods of an acacia will be gathered and laid on the hot ashes, some of which are heaped up over them, and then the natives simply sit round, and "shell" and eat the seeds as if they were peas... Perhaps the most standard vegetable diet of the natives in this part of the Centre is what is called by the natives in the north of the Arunta, Ingwitchika, and by white men usually Munyeru ... (22) From earliest childhood boys and girls alike are trained to take note of every track made by every living thing. With the women especially it is a frequent amusement to imitate on the sandy ground the tracks of various animals, which they make with wonderful accuracy with their hands. (24)

If we examine their weapons and implements of various kinds, that is those usually carried about, they will be found to be comparatively few in number and simple. A woman always has a **pitchi**, that is a wooden trough varying in length from one to three feet, which has been hollowed out of the soft wood of the bean tree (*Erythrina vespertilio*) ... In this she carries food material, either balancing it on her head or holding it slung on to one hip by means of a strand of human hair or ordinary fur string across one shoulder. Not infrequently a small baby will be carried about in a **pitchi**. The only other implement possessed by a woman is what is popularly called a "yam stick", which is simply a digging stick or to speak more correctly, a pick. (26) Of course the children go out with the women, and even from the moment they can toddle about they begin to imitate the actions of their mother. In the scrub a woman will be digging up lizards or honey ants while close by her small child will be at work, with its diminutive pick, taking its first lessons in what, if it be a girl, will be the main employment of her life.

So far as clothing is concerned, a woman is not much encumbered in her work. She usually wears around her neck one or more rings, each of which is commonly formed of...fur strings. A similar kind of ring is often worn on the head and, amongst the younger women especially...there may be worn a long string of the bright red beads of the bean tree. North of the Macdonnell Ranges the women wear small aprons formed of strands of fur string, and on the forehead they often wear an ornament...of porcupine-grass resin, into which are fixed either a few kangaroo incisor teeth or else a number (27) of small bright red seeds. (28) Such are the ordinary personal belongings of the natives which

they carry about with them on their wanderings. (30) Amongst the women the hair is generally worn short...A very striking feature of both men and women are the body scars...(40)

When conditions are favourable everyone is cheerful and light-hearted, though every now and then a quarrel will arise, followed perhaps by a fight, which is usually accompanied by much noise and little bloodshed. On such occasions, if it be the women who are concerned, fighting clubs will be freely used and blows given and taken which would soon render *hors de combat* an ordinary white woman, but which have comparatively little effect upon the black women; (32)

The women are certainly not treated usually with anything which could be called excessive harshness. They have, as amongst other savage tribes, to do a considerable part, but by no means all, of the work of the camp, but, after all in a good season this does not amount to very much, and in a bad season men and women suffer alike, and of what food there is they get their share. (50)

At night time men, women and children gather round the common camp fires talking and singing their monotonous chants hour after hour, until one after the other they drop out of the circle, going off to their different camps, and then at length all will be quiet... (53)

EARLY HISTORY

The areas to the north east of Alice Springs remained largely unknown to Europeans until the 1870s when the South Australian Government commissioned H.V. Barclay and Charles Winnecke to survey the eastern border of the Northern Territory (Hartwig 1965:295). The area continued to have little appeal to Europeans. As a result, few written records exist which describe life before the pastoral take-over (Hagen and Rowell 1978:20). By 1872 however, the telegraph line between Alice Springs and Darwin had been constructed, providing a corridor of European activity through territories of many different Aboriginal groups. The corridor almost bisected Anmatyerre territory. European activity expanded into favourable areas

to the east and west of this line. Still, as Hartwig (1965:299) reminded us:

The frontier [pastoral] must not, however, be thought of as gradually moving northwards; it jumped...picking the eyes out of the country and then occupied the better parts of the intervening space.

This "leap-frogging" effect was evident in the Sandover area. Pastoralists occupied the better watered land that surrounded the Alyawarre before finally invading the heart of their territory in 1947 when the Sandover sub-division was made available for leases (Hagen and Rowell 1978:19).

The Anmatyerre were much less fortunate. Their territory lay both east and west of the telegraph line and they were involved in some bloody conflicts. The party avenging the murder of Whites at the Barrow Creek Telegraph station in 1874 inflicted widespread suffering on them.

The severe reprisals taken included the indiscriminate shooting of many innocent Unmatjera people within an area up to 50 miles south of Barrow Creek. (Strehlow 1971:xxxiii)

When they resisted the incursion of Whites onto their land (Hartwig 1965:387) the penalties meted out were extreme.

To counter the growing discontent occasioned by the closing of many surface waters to the natives on most of the cattle stations, the South Australian Government despatched Mounted Constable Willshire to Central Australia in 1881. Willshire and a fellow police officer Wurmbrand inaugurated a severe "pacification" policy during the eighteen-eighties. The then settled areas were quietened, and organised tribal resistance broken by the liberal use of rifles and bullets. (Strehlow 1971:xxxiii)

They suffered heavy population losses, the full extent of which we can no longer ascertain, but in 1901 Spencer (1928:412) commented that the "Unmatchera" tribe:

always a small one, was now nearly wiped out, partly by drought and partly by the fact that they had, years ago, been what is called "dispersed".

Pastoralists first occupied the better watered, higher country and by 1910 had taken up much of the Harts Range area, as well as country in the vicinity of the Davenport Ranges north of the Sandover River. In the following two decades stations important to contemporary Aborigines were also established - for example, Alcoota, Atartinga (previously Woodgreen), Utopia, MacDonalD Downs, Waite River, Bushy Park, Mount Skinner (previously Harpers Springs), Delny, Mount Riddock, Woola Downs and Derry Downs (Figure 1.1).

With the pastoralists came a suite of animals unfamiliar to the Aborigines: cattle, sheep, goats, horses, camels, donkeys, fowls, cats and rabbits. Many of these had a detrimental, though still undetermined effect on the environment (Frith 1978). Watering places used by stock quickly became polluted and pastoralists, claiming that the presence of Aborigines and their dogs frightened stock (Reece 1943), excluded them from the best waters. Whereas degradation of other aspects of the environment by stock may not have been so immediately apparent or disturbing, the pastoralists' water management would have been provocative from the first (Hartwig 1965:391; McGrath 1983:44). The value of many water sources was increased by their status as sites of ritual significance.

As late as the nineteen-twenties a group of Unmatjera natives pleaded with the owner of a newly-established station... not to erect any buildings on the actual site of the central **ragia pmara kutata** of their group territory. The sacred soak was situated in a belt of limestone which ran through the whole of the newly-leased station

property; and wells with good water at shallow depth could have been dug at many other places in this belt. But the new owner had been warned by white neighbours not to stand any "nonsense from these niggers"...The station was set down on the **pmara kutata**, the trees were cut down for yard posts, the soak filled in and the stones around it were scattered. (Strehlow 1971:586-7)

Ford (1966) recorded a pastoralist's view of settlement in her account of the establishment of MacDonald Downs in 1923, identifying the hardships and loneliness which characterised their lifestyle. She failed, however, to address the fundamental issue - the conflict of interest over land that arose between pastoralists and Aborigines. In her account Aborigines appeared as peripheral actors to the drama of European survival in a hostile environment. The Chalmers' immediate family ultimately controlled over 10,000 km² of Alyawarre country, a feat Ford (1966:180) signalled as a victory. She was apparently unaware of the pastoralists' role in dispossession:

In a firm ringing voice, Chalmers continued the poem, slowly, thoughtfully...in order to dwell on the haunting poignancy of this dispossessed race which he loved so dearly - to whom he had been "like a chief", while his wife had been a "star".
(Ford 1966:181)

Hers is a particularly sanitised history. Nowhere did she consider the hardships inflicted, unintentionally as well as deliberately on the original land-owners, by White men who believed that "bullocks and Blacks won't mix" (Reece 1943).

From the earliest decades of the century miners were also active in the region. At Harts Range, Jervois Range, Hatches Creek area and near Barrow Creek men worked to retrieve minerals including mica, wolfram, gold and tin. Details are few, but some idea of scale can be gained from a report by Patrol Officer Evans (1949) who, in 1940, visited 26 mines in

these areas. The majority were owned and operated on a small scale by one or two men. No mine precipitated a major rush to the region. According to Evans, 69 Aborigines were associated with the mines but few were actually employed.

Stations and mines were the principal sources of employment for Aborigines in the area. They worked, with some exceptions, for short periods and repeatedly, but according to the earliest records the absolute number of persons involved, especially females, was low (Table 2.1). Data is incomplete and may be unreliable (Stevens 1974:55) but on a patrol in 1949 covering the area from Yambah in the south out to the Jervois mines in the east and back west to Barrow Creek via MacDonald Downs, Utopia and the stations between, Evans (1949) noted altogether 351 Aborigines, of whom 122 men and 15 women were in employment on either stations or mines in the area. The total population figure is probably an underestimate since it did not account for those away from homesteads at the time. Patrol Officer Sweeney (1943) reported a pronounced drift towards Alice Springs by Aborigines of the area:

Mr Turner [of Alcoota Station] told me he is unable to obtain satisfactory native labour, being so close to Alice Springs. Previously when he had taken his stock boys into Alice Spring with cattle and paid them there, they had gone to the various Gambling Schools among the natives in the town, gambled their money and the clothes he had bought them, then either refused to return or were always looking for excuses to get into Alice Springs and its excitements...Among the stations of the east and north east of Alice Springs, native labour is becoming scarce and station owners must treat their employees well to hold them...

By 1976 the population of Utopia was 306 (Toohey 1980:7) and that of the largest camp at MacDonald Downs, 130 (O'Connell 1979:109).

TABLE 2.1: ABORIGINAL EMPLOYMENT AND RESIDENCE FIGURES FOR SOME STATIONS IN THE SANDOVER RIVER AREA FOR THE YEARS 1935, 1943, 1949, AND 1957

STATIONS	YEARS								
	1935		1943		1949		1957		
	*	A m/f	B	A m/f	B	A m/f	B	A m/f	B
Astartinga		3/4	-	-	-	(2)	0	-	0
Alcoota		(2)	-	1/0	-	-	-	-	54
Bushy Park		4/3	-	-	-	-	-	-	0
Delny		-	-	2/0	-	3/0	-	-	0
MacDonald Downs		-	-	10/3	34	9/0	51	-	64
Utopia		-	-	-	-	11/3	33	-	80
Waite River		-	-	-	-	3/3	-	-	0

A = Number employed
 B = Number resident
 m = male
 f = female

- = no information
 () = not differentiated by sex

Sources: - Evans (1949)
 - Sweeney (1943)
 - Reports of Northern Territory Pastoral Leases Investigation Committee (1935)
 - Commonwealth of Australia Register of Wards (1957)

During the research period (1981-3) no Aboriginal people lived at MacDonald Downs, Waite River, or Atartinga; a small group of between 30 and 40 people were at Alcoota and I have no information concerning Bushy Park or Delny. Today neither mining nor the pastoral industry offer employment to Aboriginal people of the area.

"travelling all over this country" : an Aboriginal view

Against the background of events described, what would life have been like for Aboriginal people - particularly women? I asked Glory Pityarre, a woman born about 1942, to describe how she spent her earlier days. The account probably refers to the late 1940s and 1950s and describes the time before her marriage when she lived with her parents. With her father, his brother, their wives and children she travelled between Stirling Station in the north, Alcoota in the south, through Atartinga and Waite River Stations and on to the estate named Alhalkere where Eniltyiye is presently situated.

When I was older we used to go a long way, camping out... We used to go to Athathenge (Atartinga Station) to get rations. We used to work on the fences, making holes for the fence posts. That whitefella boss was a very cheeky boss for us. He used to shout at us to dig the holes deeper. Throwing away the dead branches, picking them up and throwing them away, clearing the line, and as we were clearing, lighting a fire to warm ourselves. Then we used to go and get witchetties [grubs] and other bush foods, perhaps honey ants, and eat them. We used to wander around looking for goannas...

My sisters and the others used to work. In the morning we'd get up and eat food - flour and rations that the whitefella boss, Old Purvis, had given us. There was flour, jam or treacle. From then we used to go to work...cutting the [fence] line... When the work was finished completely it would be holiday time, Christmas holiday. We'd go back and he'd [Purvis] give us food. We'd put on the clothes that he gave us and eat the grapes he

gave us in a wheelbarrow. Then we'd go off on a holiday to Alcoota. We'd go back to the station at Alcoota. You could just go and get food. Straight away people would start working again. The old women would shepherd the cattle and do the milking. Then we'd go to Angkarape (Utopia Station) towards here, and then to Alpwerrunenge (Waite River Station)... We'd keep going right up to Alhalkere.

Oh, talk about bush potatoes and yams. Yes. There would be bush potatoes every day of the week, and emu; so much of everything. This was a long time ago when I was a kid, there were many emu. Look at it now, there's nothing left, its all finished. We used to get Acacia seeds, dry them up and drink them - it was lovely. [Soaking dry Acacia coreacea seeds in water produces a milky drink]. And seeds, mulga and pigweed and grasses. We'd get bags full of them. We used to go and get wild tobacco out west from Woodgreen [Atartinga Station], at a place called Therreltye to the west of Ingkelaye [Kurrajong bore area]... When we got short of food, when the food ran out, at that time we used to go back to the station, to the boss, to our boss.

When I was a kid...it always rained, it was always green and we had bush food everyday. [now] It's really run out. It's changed over to dry times. When lots of whitefellas came, bush meat and food started to disappear. A long time ago we used to have lots of goannas, perentis, porcupines [echidnas], lizards, kangaroos, emus, but there's not much now.

We used to go off all the time, travelling all over this country. We used to go a long way and spread for hunting. Some went bush, some went back to the stations... To Alcoota, to Ahertekenhe [Harper Springs/Mt Skinner Station], Athathenge and Stirling [Station]. We used to travel about like that, sometimes to Ammaroo. It used to be like that. It was always green and always raining. We used to go through all the grass. There was no sickness, when we walked around.

Mum used to kill goannas and feed me, feed me with sugarbag, little animals and with witchetties [grubs]. Mum used to cook witchetties and grubs

from the river red gums, and get rabbits from their burrows. We used to eat porcupine when we were working at Alcoota. From there they'd come back and work in the station, washing plates, looking after the cows, sheep and nannygoats, Mum used to milk the cows. (Recorded 1985, Translated: J. Green and M.M. Turner).

The lifestyle of Aborigines of the Sandover River region was characterised by mobility. People moved regularly between the stations of the area, combining a foraging lifestyle with regular periods of work in return for rations. People preferred job-sharing so that "when one boy wants a holiday another boy takes his place" (Sweeney 1943). Much of the work carried out by Aborigines, such as fencing or looking after bores allowed for families to accompany the workers to the work site. Those not occupied with the task foraged in the surrounding areas. Glory noted that her brother went into a stock-camp where work routines and life in general were more regulated. Glory's competence as a forager reflected her early intensive association with bush life. Her mother was one of the few that could perform all stages of seed processing, an indication that it had been a regular part of her own early life. The account has overtones of an earlier golden age when it was "always green, always raining...and there was no sickness".

The repatriation of land

During the 1970s after protracted negotiation with the local Aboriginal community, the Utopia Station lease-holders, the Chalmers family, sold the property to the now defunct Aboriginal Land Fund Commission. It was purchased on behalf of the Aboriginal community resident there in 1976 (Toohey 1980:6). Two years later, in what was to be a precedent-setting case, the Aboriginal Central Land Council successfully claimed Utopia Station under the Aboriginal Land Rights (Northern Territory) Act 1976. Five patri-clans (one

Anmatyerre and four Alyawarre) numbering about 400 people, became the legal owners of Utopia Station after a drawn-out process of bargaining and litigation. The establishment of services to resident Aborigines began during this time when the Alice Springs based Central Australian Aboriginal Congress set up an independent health service at Three Bores. The community formed a council to direct the clinic's activities and this has continued to be the community's central administrative body. After Utopia Station was repatriated there was a dramatic increase in population as Aborigines from neighbouring areas took up residence. In 1981 the population was around 800 people dispersed over eleven outstations (Figure 2.1).

ON THE OUTSTATIONS OF UTOPIA

Outstations or homeland centres, are a relatively recent residential choice among Aborigines living in remote areas (Coombs et al 1982; Loveday 1982), providing them with a higher degree of control over their day-to-day affairs than they have in settlements and towns. Typically, outstations are small, dependent on basic facilities and linked administratively to a larger, regional body such as community council or resource centre.

Until mid-1983 housing on all Utopia outstations consisted of a variety of tents, tarpaulins, bough-shades, windbreaks, sheets of iron and car-body constructions. The smallest residential unit consisted of either a married couple and their pre-adolescent children or a group of unmarried males or females. The latter were the **arnkentye** and **alwekere** respectively. A household then, did not necessarily comprise one nuclear family. I refer to those groups occupying separate shelters as households, and the aggregation of households that formed an outstation, as the camp. The living area of each household tended to have a north-westerly outlook

and individual shelters were between 10 and 20 metres apart. On some outstations, household shelters remained fixed within the camp but in others they regularly shifted a few metres this way or that. A bore supplied the outstations with water which people carted from the tank for all daily household requirements. There were no ablution or toilet facilities.

Shelter arrangements changed with the season but with the exception of periods of rain people rarely slept under cover. During the summer they built bough shades for the long hot days; in winter they built sturdy windbreaks aligned against the cold south-east winds. With a supply of wood for an all-night fire, the shelter was cosy, though open. Rainy periods caused the most discomfort. Shelters, draped with a selection of blankets, tarpaulins and plastic gave protection in light rains but were quite inadequate during prolonged or heavy rain. At these times people either sheltered in the clinic caravan, cars, or vacated the outstation altogether.

All outstations had one element in common: a high degree of variation in population numbers and a related high degree of household mobility. Members of households, entire households or groups of households re-located frequently. Conversely, an outstation received many visitors who stayed for periods of time ranging from a few days to a few months (Table 2.2). For some periods outstations were completely vacated. O'Connell (1979) and Denham (1975) provide more detailed accounts of household types and residential patterns in this area.

The Utopia Council had taken a decision to ban the use of alcohol on the property. Generally the policy was adhered to by residents. There were spasmodic episodes of alcohol use but on the whole, camp and family life was not disrupted by drunkenness. At Angkwele **Artwe ambwe** vehemently opposed its use and as a consequence none was consumed there.

The outstations of Utopia arose not through a process of fragmentation of a large settlement - the more usual pattern, but from the gradual return of people from elsewhere and the fission of already existing outstations in the area. In an area of environmental diversity the location of outstations provided opportunities for people to exploit a range of resources and micro-environments.

Three Bores: the administrative centre

Representatives of the eleven outstations made up the Urapuntja Council which employed a non-Aboriginal manager, a bore mechanic, and a medical team (a doctor and two nurses). Three bores was the administrative centre for the Council. It had a small clinic, office and shop. The Council held meetings there as well as distributing social security payments and mail once a week. The Council kept the number of non-Aboriginal personnel to a minimum and during 1981-1983 they numbered only 13, including children and myself. This was part of a policy to discourage the establishment of a complex infrastructure at Three Bores. More Aboriginal people lived in the camps at Three Bores than at other outstations. There were usually about 100 residents during 1981 - 1983. The school was a cluster of large, permanent caravans sited at the old station house, 7 km north of Three Bores. Most children on outstations were unable to attend.

A short-wave radio network linked outstations and provided a regular channel of communication between widely separated groups. Every morning people made their arrangements for the day: the medical team arranged visits, answered requests and checked on patients; others swapped news. The clinic provided each outstation with a caravan to house the radio and store basic medical supplies.

TABLE 2.2: POPULATION VARIATION AT ANGKWELE OUTSTATION IN SEPTEMBER, DECEMBER 1981 AND MARCH 1982

	SEPTEMBER 1981	DECEMBER 1981	MARCH 1982
Minimum population	18	9	5
Maximum population	28	23	26
Visitors	7	1	6
Total visitor-days	83	13	28
Days outstation vacated	0	1	12
Recording days	20	19	27

In addition to the small store at Three Bores, a travelling storeman or hawker visited the area once a week. He set up at Three Bores every Saturday, then continued a selling itinerary which included the larger outstations. The hawker, (occasionally, there was more than one), brought such valued items as fresh fruit, bread, chewing gum, fruit drinks, toys and clothes as well as the essential staples of flour, tea, sugar, tinned goods and tobacco. Saturday was given over to leisurely shopping by women, men and children. The Council held its meetings prior to the arrival of the mail plane. Most outstation residents travelled to Three Bores at least each fortnight on Saturday to collect their social security payments, to shop, gamble and exchange gossip. The day always had an air of excitement, partly because an unusually large number of people had congregated and partly because of the day's anticipated activities. Saturday was a day to look forward to.

Angkwele outstation

Angkwele was the smallest of the Utopia outstations. Not on Utopia Station proper, it was part of an area excised from the

neighbouring Astartinga Station (Figure 2.1) and it lay in the heart of mulga woodland plains. The outstation itself was sited on a cleared patch of red clay, surrounded by a grey-green scrub of mulga trees, many of which were dead. Other people sometimes referred to the Angkwele mob as **artitye arinye** or "people of the mulga". There was a small, fenced garden area in which various fruits and vegetables were planted and given intermittent attention - watermelons and rockmelons were favourites.

The excision incorporated a principal site of the Ilkawerene estate, the patrilineal country of Angkwele's senior male resident and his younger brother, Lindsay Bird. The elder brother died in December 1985 and the use of his name causes distress to relatives. To avoid this, I have referred to him throughout the thesis as **Artwe ambwe** or "old man" which was the acceptable local form of respectful address to senior men. The families of the two brothers, organised into five households, made up the core population of the outstation (Figures 2.2, 2.3). Households were placed around a central cleared space of approximately 70 m in diameter (Figure 2.4). A further cleared area of between 15 m and 20 m wide separated the inner camp area, in which most daily camp activity took place, from the surrounding bush. Various types of household rubbish, most noticeably plastic of various hues, fringed the outermost perimeter of the camp as well as the first few metres of bushland. Vehicles were parked beside the owner's shelter, and the clinic caravan was stationed permanently in the inner camp area.

People were respectful of each household's privacy and although inter-household activity was constant it was modified by social regulations. For example, a son avoided any direct contact with his mother after initiation. While he was not barred from visiting his parents' hearth he could only do so in his mother's absence.

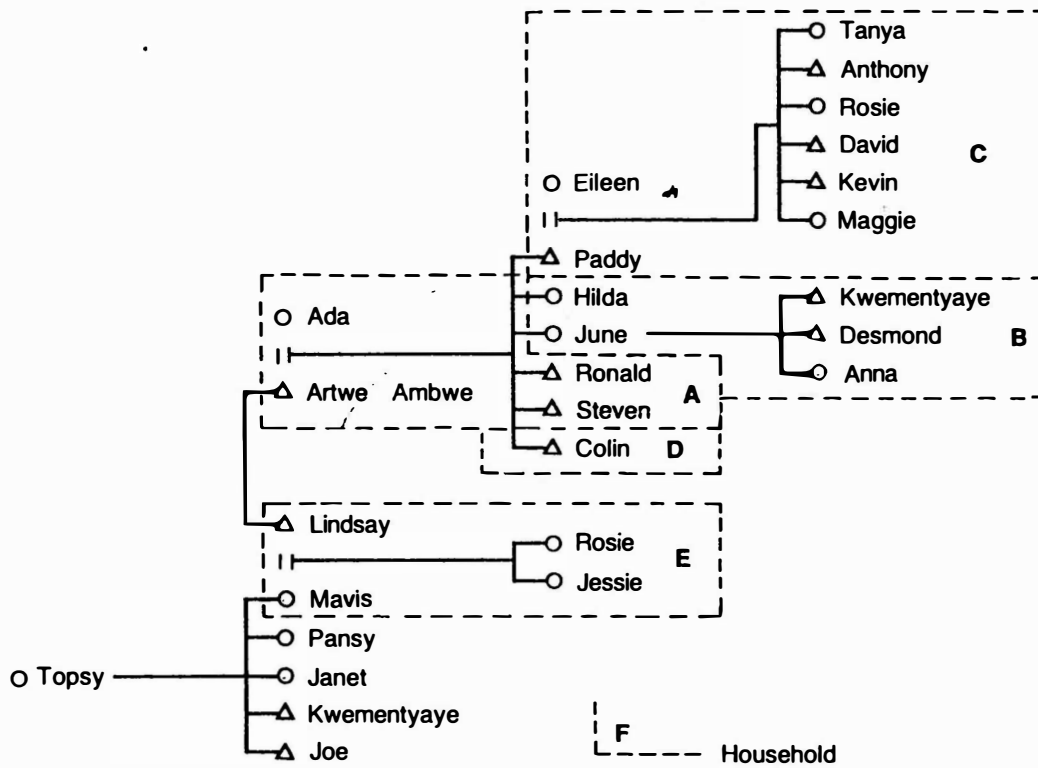


Figure 2.2: Kinship relationships of Angkwele household members.

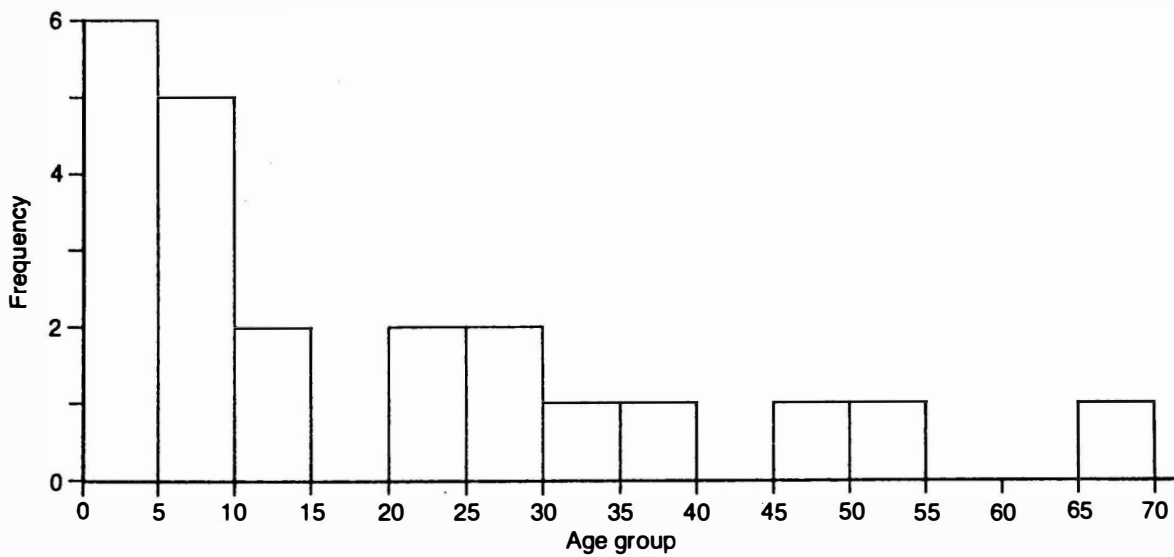


Figure 2.3: Age structure of Angkwele outstation population, 1981.

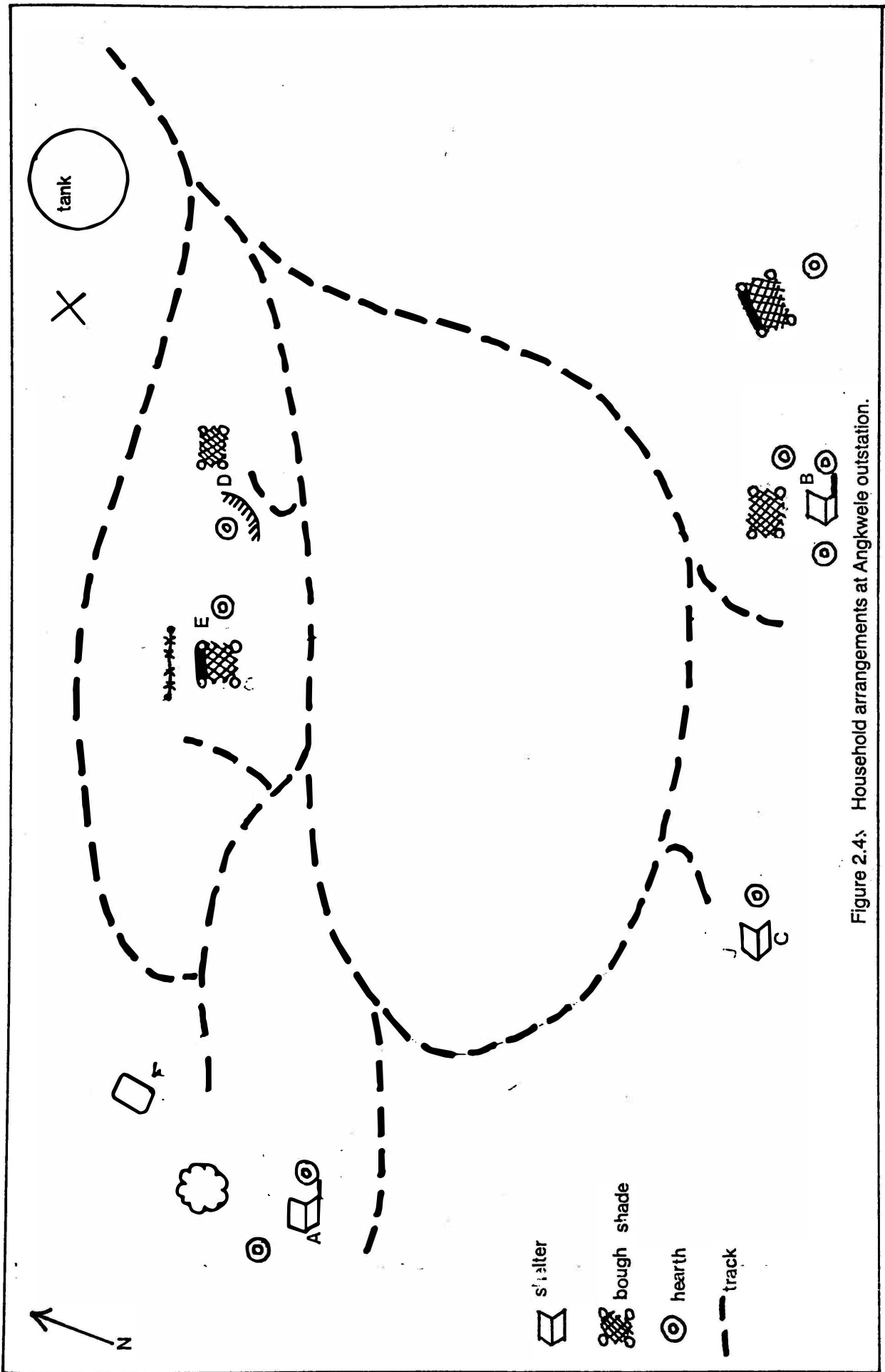


Figure 2.4: Household arrangements at Angkwele outstation.

Mother-in-law/son-in-law avoidance was also strictly upheld but persons of that relationship were only occasionally present. Younger people tended to visit older people at their hearths rather than the reverse. Senior men and their wives spent much time at each other hearths. Spaces designated as either men's or women's existed only in the immediate vicinity of the **arnkentye** (men's camp) and **alwekere** (women's camp). In contrast to other larger desert encampments (Meggitt 1987:129) the camp and surrounding bush were not divided along sex lines.

Every family owned dogs. The Angkwele dogs were visibly healthier than those on any other outstation: they were without mange or obvious disease and they did not eat human faeces. To maintain a smaller number of camp dogs, **Artwe ambwe** arranged for pups to be given away.

Eniltyiye outstation

Eniltyiye, set up in late 1982, was a sharp contrast to Angkwele. It was located on a low shrub covered sand-hill on the fringe of the spinifex and sand-plain country that dominated the region north east of Utopia. It usually had a population of about 50 people within at least 12 households, including four **alwekere** and sometimes an **arnkentye** (Figure 2.5). The senior landowner and his wife lived in household A, but he was an invalid, elderly and frail man and so neither travelled nor moved about the camp (Figure 2.6). The next senior man and his wife (who were my patrons) lived in household B, although I, as a single person, stayed in the nearby **alwekere** at household E. In contrast to Angkwele, Eniltyiye had infirm and dependent elderly folk among its usual residents. As a consequence, the outstation was never entirely vacated. Household B was sited strategically at the point of entry to the outstation so that Michael and his wife, Glory, were always aware of visitors.

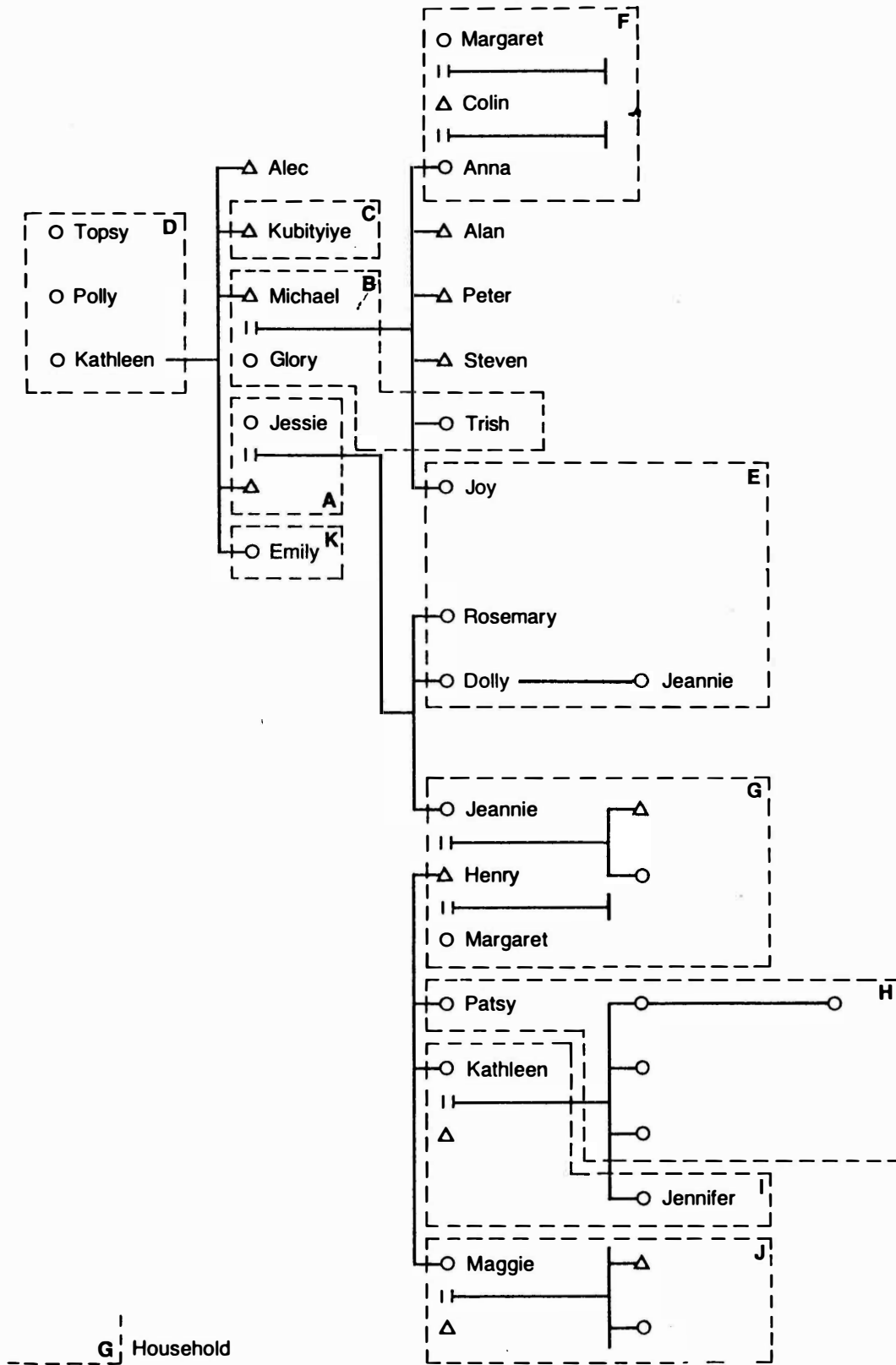


Figure 2.5: Kinship relationships of some Enlityiye household members, 1983.

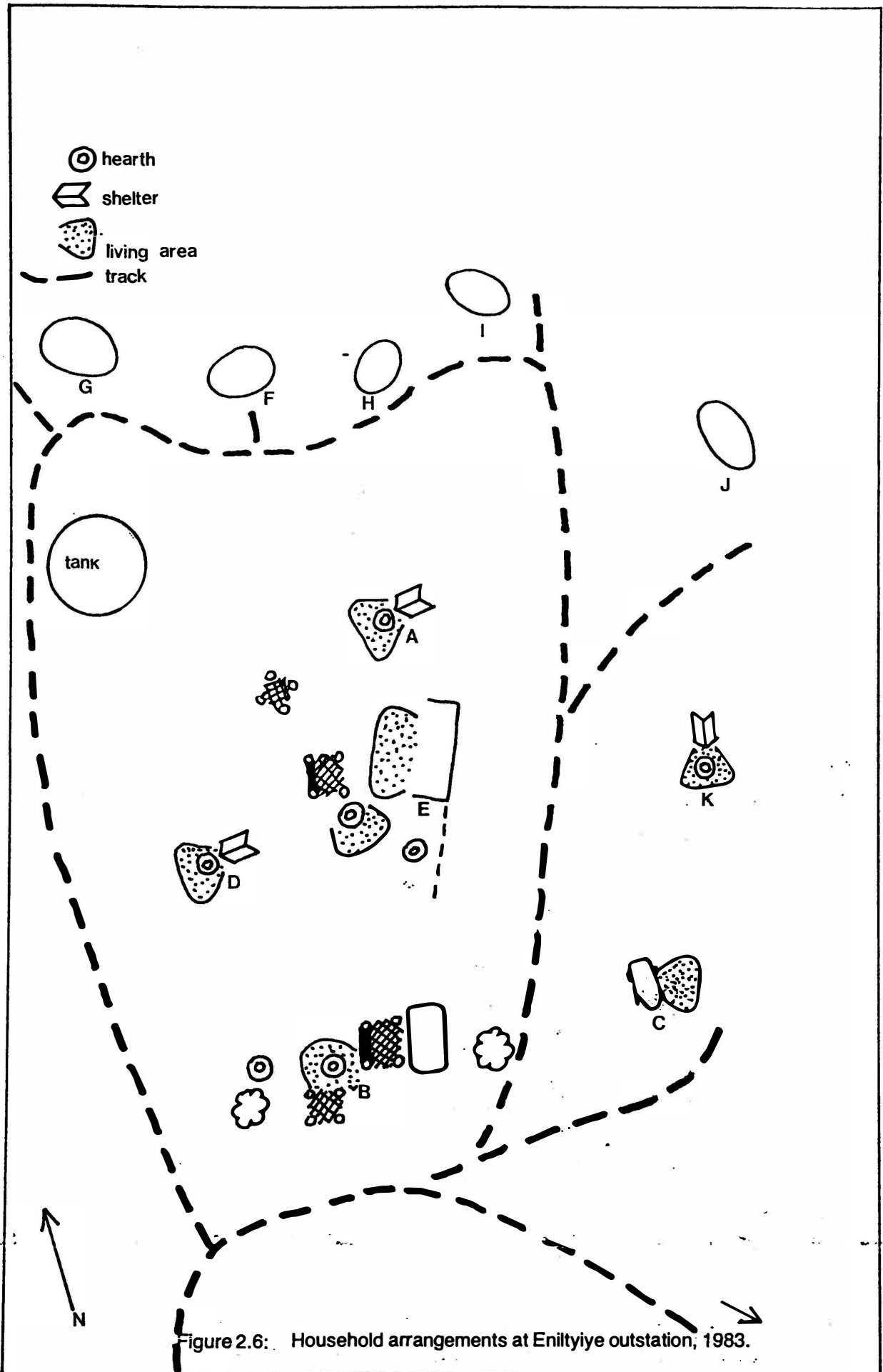


Figure 2.6: Household arrangements at Eniltyiye outstation, 1983.

Their household area incorporated the clinic caravan because Glory was the outstation health worker. They had built an extra large bough shade (of the same dimensions as the caravan) on its western side and this was a favourite summer resting place. As at Angkwele, no-one lived in the caravan itself. Jessie, from household A, had two small garden plots in which she grew watermelons. Eniltyiye had a large number of dogs, many of which were unhealthy and hungry for much of the time.

The households at Eniltyiye were scattered; there was not one central inner camp area as at Angkwele, rather there were definable clusters of households which tended to create distinct areas of focus. Households A, E, K, C, B and D constituted one such cluster. The other households, situated on the sloping side of the dune were only partly visible from these more centrally located households and had their own activity areas.

ENVIRONMENT

Aridity is a dominant environmental feature of modern Australia with about 70% of the continent qualifying as arid zone (Mabbutt 1971:66). This area, though described as arid, is far from uniformly so. Variable climate, particularly rainfall, and diverse landforms combine to produce a non-uniform landscape containing a range of environments in which humans and animals live.

Climate

Generally the climate is warm and dry. Day temperatures are highest from December to February when they remain between 35-40°C; from June to August, temperatures fall to between 20-25°C and night ground temperatures frequently fall to zero. Expected annual rainfall of the area is between 300 and 400

mm, most of which falls during the summer months. Rainfall during the study years, 1981-1983, conformed to that pattern although there were marked differences among the three years (Figure 2.7). The rain during that time was sufficient to cause the Sandover River region to flow on two separate occasions. For most of the time, it was a wide, dry, sand bed, of between 150 and 200 m in width. During the heaviest rains the river filled completely. It flowed strongly for about a week, taking its waters to the floodouts in the sand-plain country away to the northeast (Figure 1.1). The flow soon slowed and the water disappeared. For up to a month afterwards small pools of water remained along the bed. Occasions when the river flowed were times of general excitement, particularly as the first frothy rivulets coursed along the sands near Three Bores.

Seasons

It is the variability of rainfall as well as its low absolute amount that contributes to the special features of arid zone ecology. A longer rainfall cycle (Figure 2.8) indicates the extent of rainfall variability. In the thirty year period, 1953-1983, only two recordings fell within the expected 300-400 mm range; the rest were below that amount. Because vegetation growth is closely tied to rainfall, plant growth patterns show a similar variability. The resultant seasonal unpredictability is one of the important characteristics of the arid zone and one that has far-reaching implications for a foraging people. Latz (1982:126) stated that "the climate is so variable that an 'average season' is a rare event in Central Australia".

Although regular temperature changes marked summer from winter, the *uterne* "hot-time" from the *alurrpe* or "cold-time", rainfall was the functional trigger of seasonal variation. When rainfall occurred as expected, during the summer months,

it was followed by a burst of growth; this was referred to as **atherrekinye** or "green-time" - when the country was covered in grass and when fruits appeared in quantity. Despite the discomforts of life during wet weather when roads were impassible, shelters inadequate and food scarce, people spoke not of their temporary discomfort, but of the impending benefits of rain - fat goannas and sweet bush bananas. The people of Central Australia accepted the critical importance of rain and Strehlow (1971:460) said:

rain charms, which seek to stimulate the sullen, stubborn, idle rain clouds into parting with their precious moisture, were once among their greatest treasures.

Late November to March, when days were extremely hot, was a time of generally reduced foraging activity. It was undertaken in the late afternoons, if at all. According to women, it was difficult to track animals in the glare of the mid-day summer light and the ground was uncomfortably hot for those without footwear, especially children. Women who foraged during the high temperatures of summer were alert to heat stress on young children. The measures they took to minimise the danger included covering an infant with a water-soaked sheet beneath a blanket; taking small containers of water with them; periodically blowing a fine spray of water over infants and, persuading children to wait in the deepest available shade while they worked. During **alurrpe**, foraging often did not begin until mid-morning as people were reluctant to leave the warmth of their wind breaks and fires to be exposed to bitterly cold south easterly winds. The sun set earlier too at this time, so foraging days were shorter.

More research is required into the ecology of plant and animals found in arid habitats before we can better understand the relationship which existed between Aborigines and their environment in pre-European times.

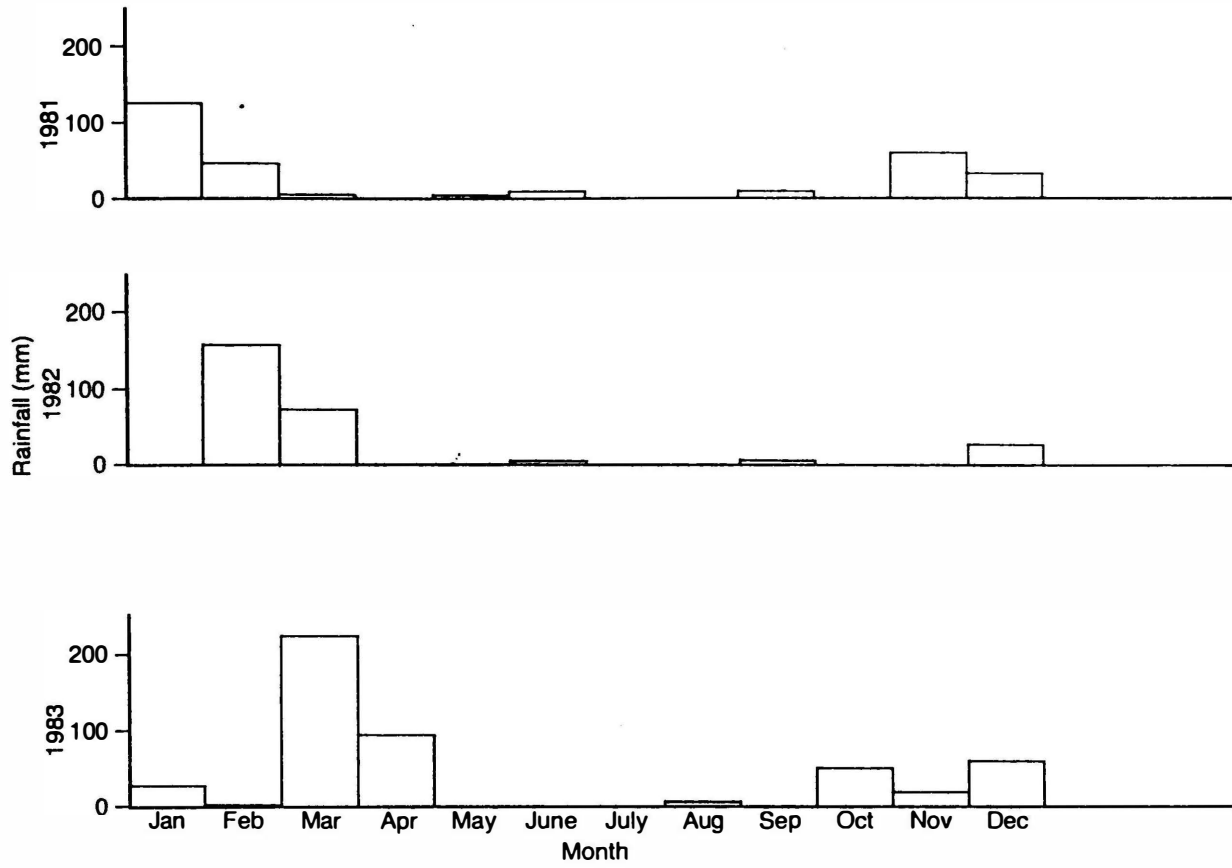


Figure 2.7: Monthly rainfall, 1981-1983, measured at Alcoota Station.

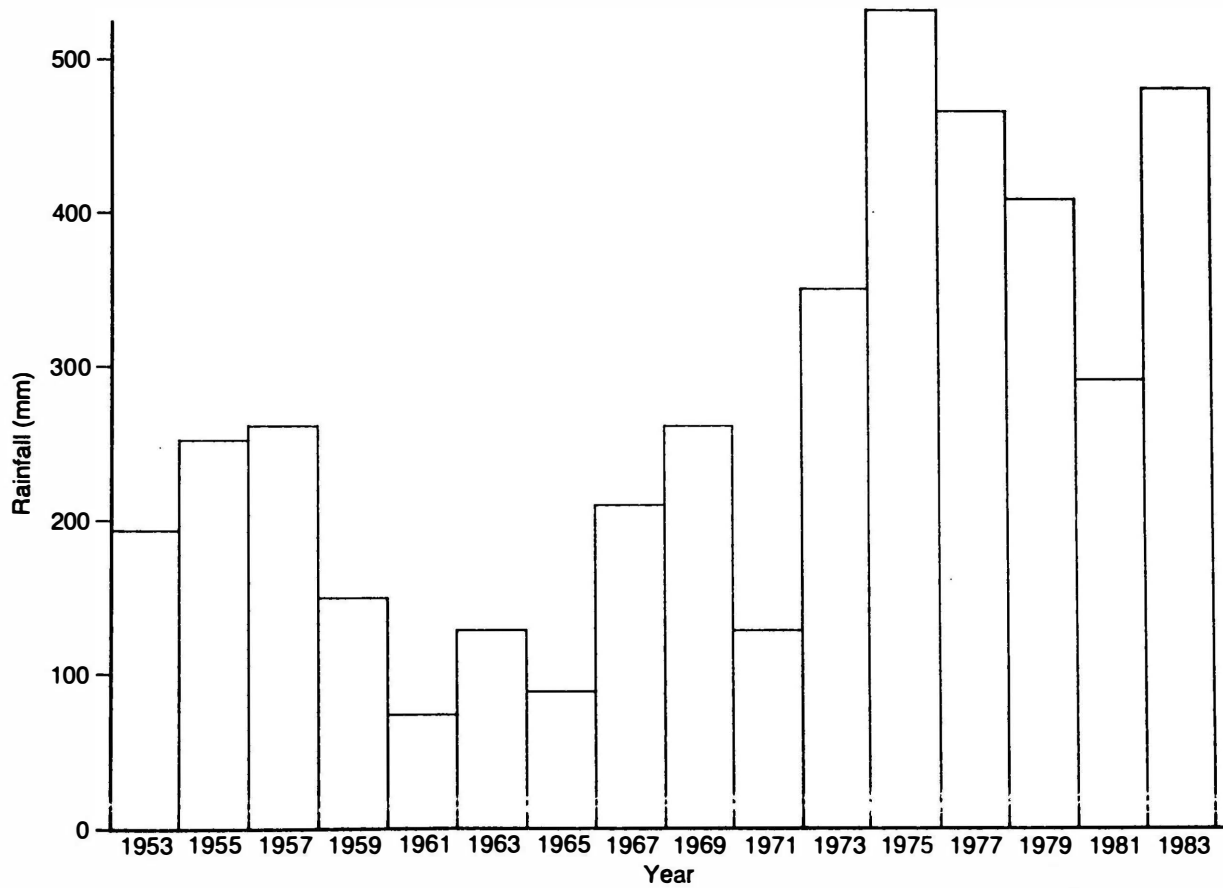


Figure 2.8: Bi-annual rainfall variation over a period, 1953-1983, measured at Alcoota Station.

Pate (1986) provided an example of how the application of a theoretical model of subsistence behaviour (optional foraging) may falter on inaccurate empirical botanical information. As another example, the work of O'Connell et al (1983) in the Sandover River area and my own enquiries indicated that mulga seed (Acacia anuera) was a traditional seed food. The dominance of mulga in the area might lead one to conclude that its use must only have been limited by people's choice. According to Latz (1982:127) "one can safely assume that a group of 100 people could obtain a month's supply of mulga seed (more than $\frac{1}{4}$ of their food needs) from an area of about 5 hectares". However, during the eighteen month period of my stay in the area, I saw only one patch of mulga in flower and was unable to even document the gathering of that seed.

Water

Traditionally, people depended on reliable soaks, rockholes large and small, waterholes (Plate 2.5), as well as sources in plants and animals. Some water sources, like the Apwengalindeme rock hole near Eniltyiye, contained water all year round. Knowledge of the location of water sources had value for contemporary people. **Artwe ambwe**, without exhausting his knowledge, named about 90 soaks and watering places along the length of the Sandover River and its tributaries. We had occasion ourselves to use the soaks in the vicinity of Angkwele.

The outstation windmill had broken down. On 14th August 1981 **Artwe ambwe** sent his daughters and myself to fetch water from a nearby soak called Tyirripiye. We were unable to find it so later in the afternoon he and his wife joined us to locate it. We found the soak in the bed of Muller Creek, south east of the outstation. There were several obvious depressions in the river bed that marked previously used soaks. Ada set to work on one of these with a shovel. She firstly levelled the area surrounding the centre of the depression, to lessen the amount of loose sand sliding into the hole. Next she shovelled away sand to form a flat platform. Seated on this platform she leaned over to enlarge and deepen the soakage pit

using an old powdered milk tin. While she attended to the soakage itself, her daughter constantly cleared falling sand from the perimeter. Water collected in the bottom of the soak when it was about 50 cm deep. It was brownish in colour but tasted good - like rainwater and we filled two (16 kg) flour drums and a couple of plastic bottles - about 30-35 litres. Ada then used an axe to trim the base off another flour drum, leaving it a cylinder which **Artwe ambwe** set into the freshly excavated soak. Sand was pushed in around the sides of the drum and its original removable lid put in place. The soak was ready for immediate use should we return. This happened three months after I arrived during which period there had been no rain our way.

Other water sources were smaller. One that I saw comprised a rockhole in a small, flat plate of rock in mulga scrub. A rock plug limited water loss through evaporation. It was no more than 35 cm in diameter and quite inconspicuous. In addition to these sources, people were aware of water-bearing plants, such as the roots of the desert kurrajong (Brachychiton gregorii). There were also other methods of gaining relief from dehydration. **Artwe ambwe** recalled that as a boy his father used to squeeze liquid from the partly digested grass in the stomach of kangaroo over his head. This was to keep him cool he said.

Ecological distinctions

The diversity of environments within the arid zone is the result of variable rainfall received by differing landforms. This diversity and its implications for hunter-gatherers of the region have been the subject of comment (Strehlow 1965; Peterson 1979; Gould 1980). Despite this, models of subsistence, particularly in regard to women's role, tend to assume a uniform arid zone pattern - that of areas with least resource diversity and harshest climatic conditions. In describing the land systems of the study area I have drawn extensively on the work of Mabbutt (1971) who has considered human use of arid areas of Central Australia.

Within the arid zone a primary distinction can be made between areas where rainfall is collected within integrated drainage channel systems, and those areas in which this is not the case. These make up respectively, the co-ordinated and the unco-ordinated drainage systems (Figure 2.9). In areas of co-ordinated drainage that characterise the eastern arid zone, rainfall and runoff from the higher country are more effectively concentrated and thus more readily accessible for both human and animal use. In the uplands larger, permanent rockpools and holes occur, while along their drainage streams and channels, permanent and semi-permanent waterholes form. In the remaining low relief country of unco-ordinated drainage, runoff is minimal. Rainfall is dispersed rapidly through ephemeral, unlinked channels or percolates away immediately through the dunes and sand-plains. The occurrence of accessible water is minimised in these areas. The study area includes the Sandover and Bunday River systems that drain the MacDonnell, Harts and the Davenport Ranges - within an area of co-ordinated drainage.

A more detailed examination of the region which considers both landforms and vegetation, shows it to be a mosaic of micro-environments. These range from the more productive higher country to spinifex sand-plains where resources for foragers are less varied. Perry (1962) compiled a generalised classification of pasturelands of the Alice Springs region and I have drawn on this to distinguish principal ecological zones within the Sandover River area (Figure 2.10). There are five distinct zones: mountains and hills; vegetated hills and lowlands; river floodplains; plains, and sand-plains. Within each of these distinctive areas different suites of resources were available.

Mountains and Hills: These include the Spring and Tomahawk Ranges as well as the southern extension of the Forster Range, all of which are below 700 m and are small ranges compared to

others in the Central region. The hills, sparsely vegetated with Acacia sp. are relatively inaccessible and only of marginal significance in the modern foraging system. For Eniltyiye residents, the nearby stoney range was, however, a source of gidgee wood (Acacia georginae) for fires. The larger area of high country which included Harts Range was outside the study area. The major river systems of the area, the Sandover, Bunday and Plenty Rivers, however all drained Harts Range and it was therefore a major influence on the regional ecology.

Vegetated hills and lowlands: This minor (in area) zone consists of lowlands vegetated mainly by mulga and witchetty bush (Acacia kempeana) over short grasses and forbs. Occasional low rocky outcrops, sparsely vegetated, harbour echidna and sometimes perenti, making them an area of particular foraging interest (Plate 2.3).

River floodplains: These are sandy, open well-grassed plains which carry areas of mixed open woodlands, including mulga, gidgee, black wattle (A. victoriae), ghost gums (Eucalyptus papuana), coolibah (E. microtheca) and bloodwood (E. terminalis). River red gum (E. camaldulensis) fringe the broad sandy river beds and tributaries (Plate 2.6). The Sandover River and the creeks feeding it (Muller, Waite and Crooked Hole) were the focus of the Angkwele foragers. The sandy open country was excellent for tracking animals. In addition, grubs, wild honey and seasonally available small yams, wild oranges and bush onions were available. Kangaroos were rarely seen in this country. After rains, the rivers and creeks provide good quality water either on the surface or through shallow soaks.

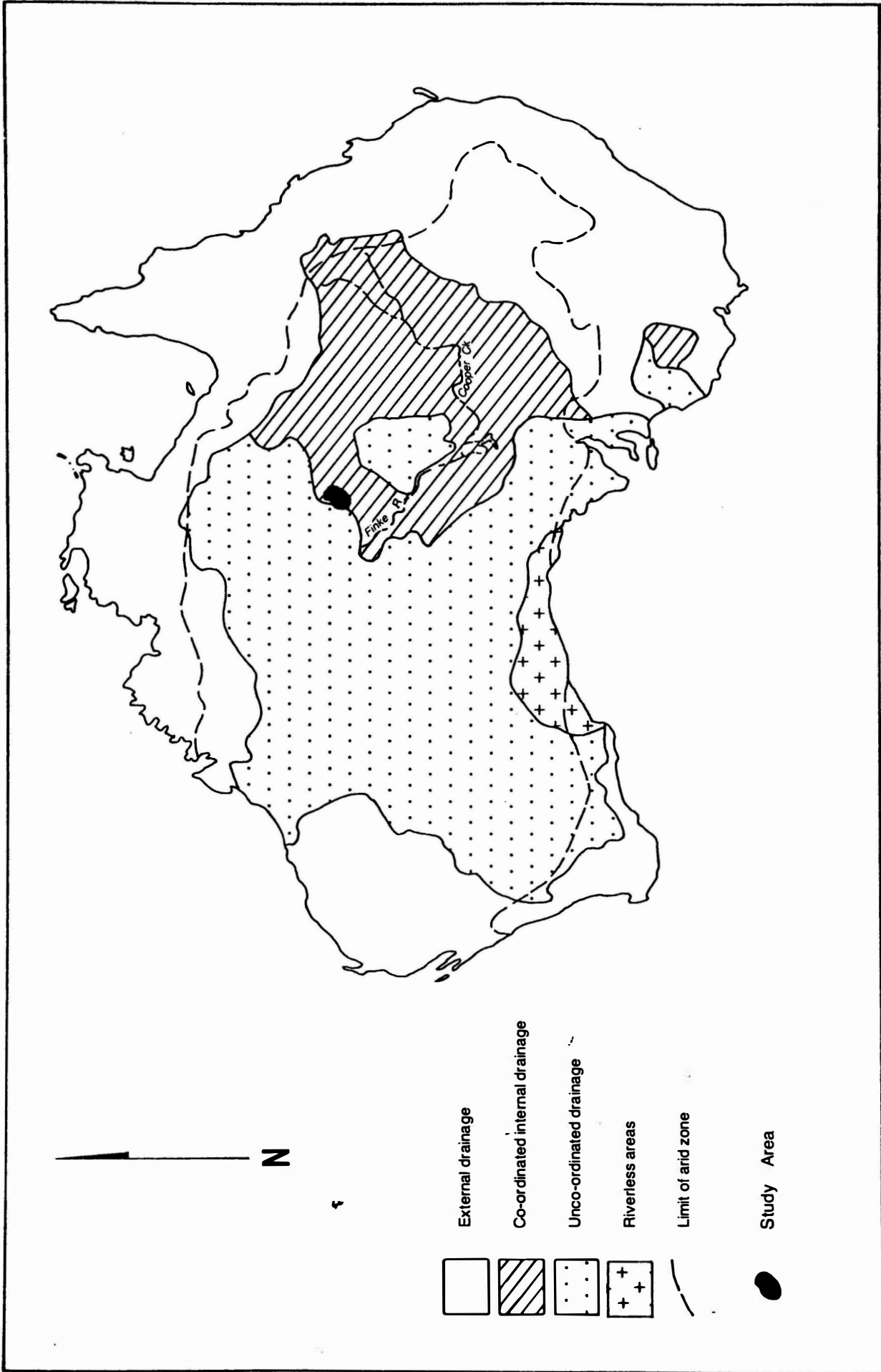


Figure 2.9: Drainage systems of arid Australia (After Mabbutt 1971).

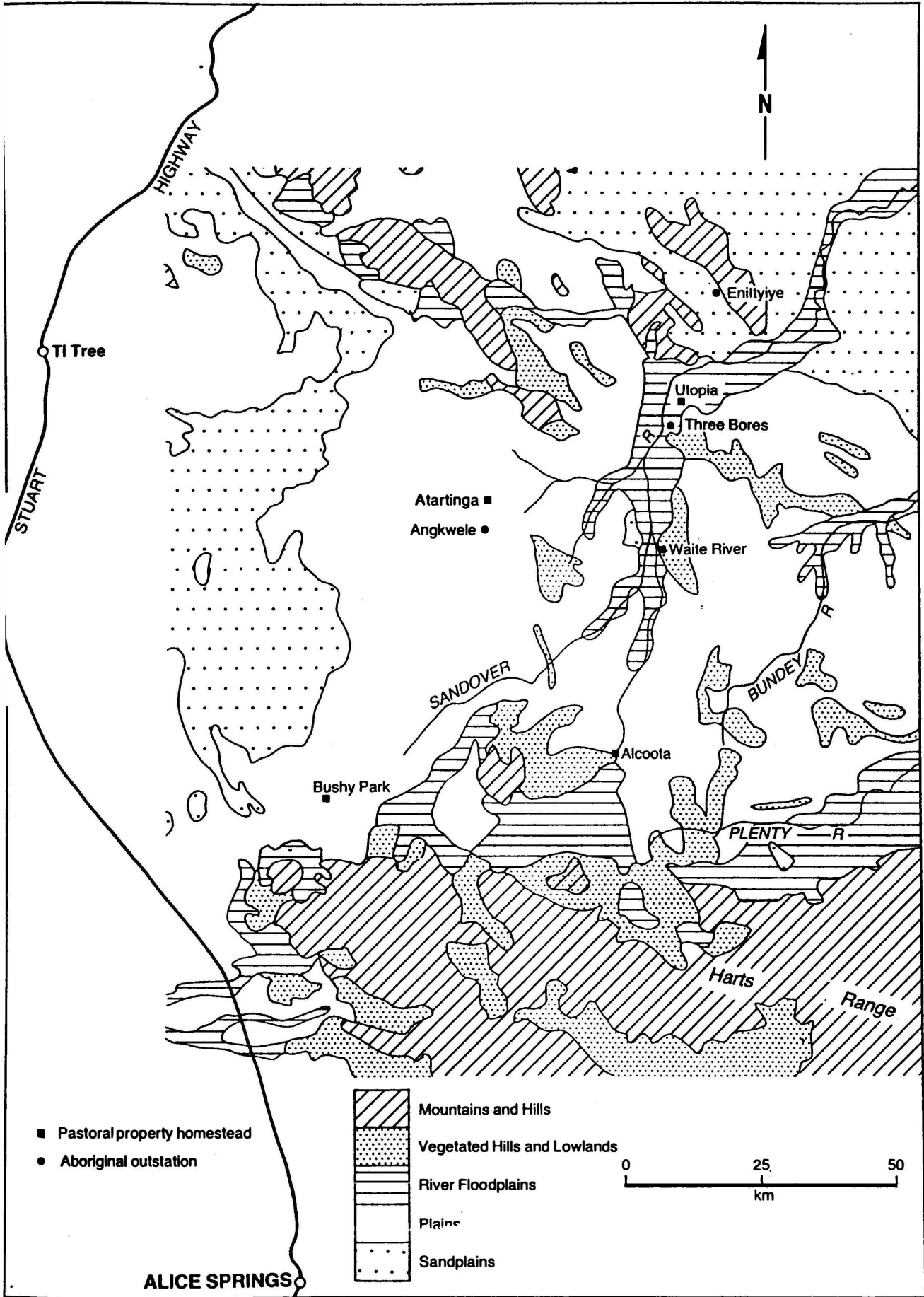


Figure 2.10: Ecological zones of the Sandover River region (After Perry 1962).

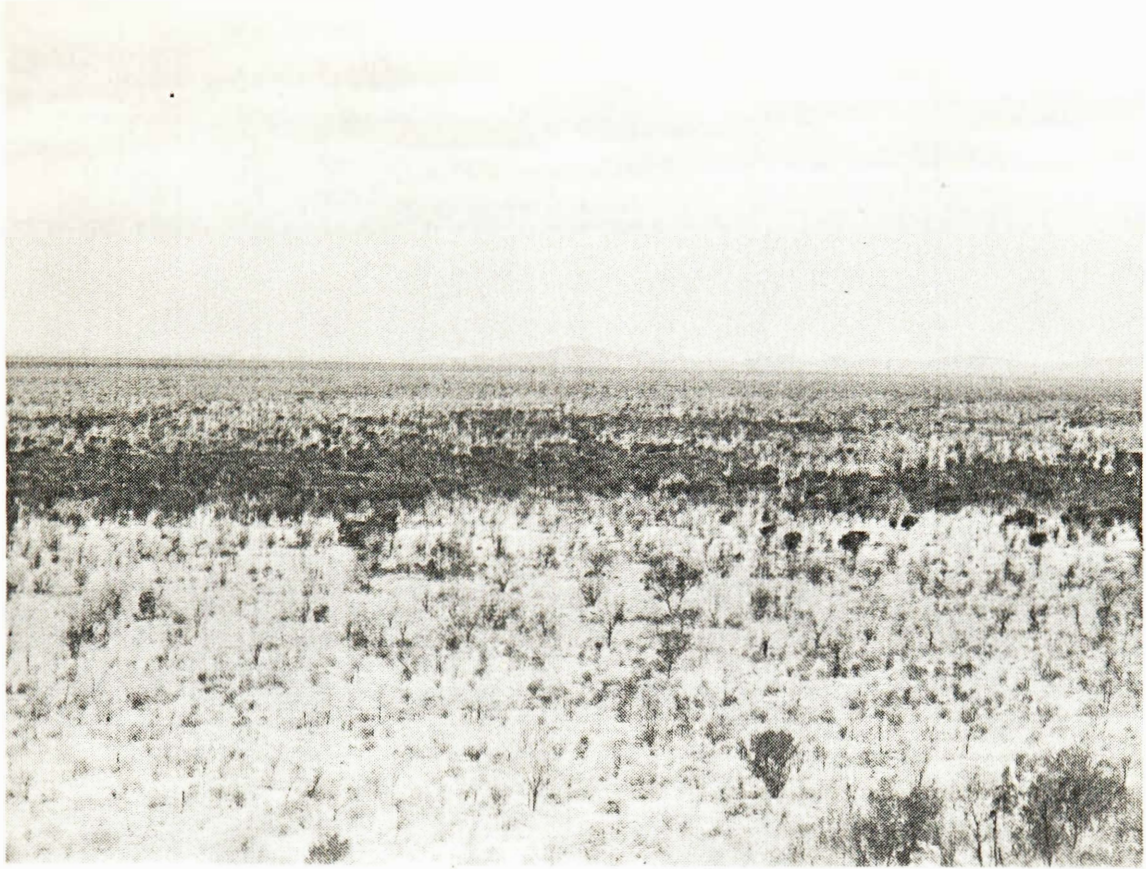


Plate 2.1: Burt Plain, an expanse of predominantly mulga woodland (*Acacia spp.*) with Hart's Range in the distance to the south.



Plate 2.2: A dense stand of mulga in the vicinity of Angkwele outstation.



Plate 2.3: Low stoney outcrops such as this were favoured locations for hunting echidna.

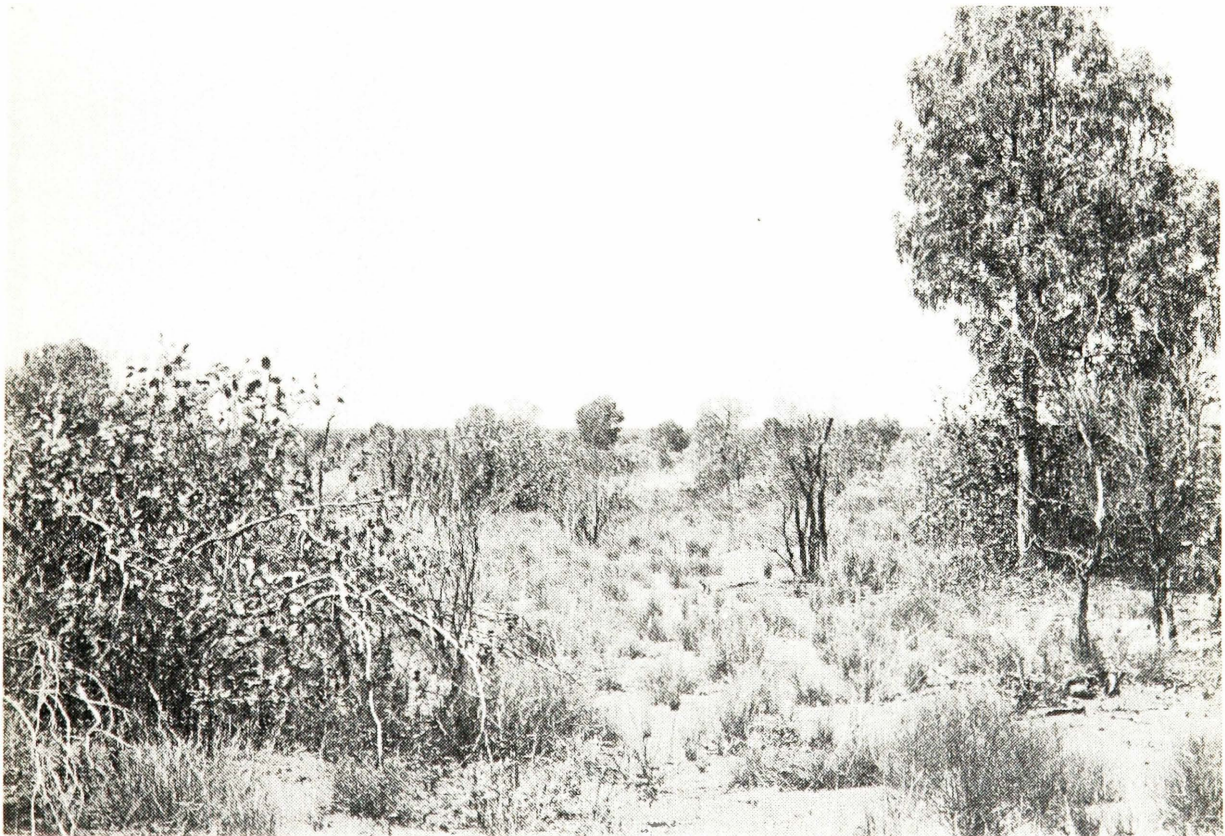


Plate 2.4: Sand plain country near Eniltyie outstation with Kurrajong (*Brachychiton gregorii*), Blue Mallee (*Eucalyptus pachyphylla*) and spinifex (*Triodia* spp.).



Plate 2.5: Extensive rains replenished permanent water sources such as rock-holes.

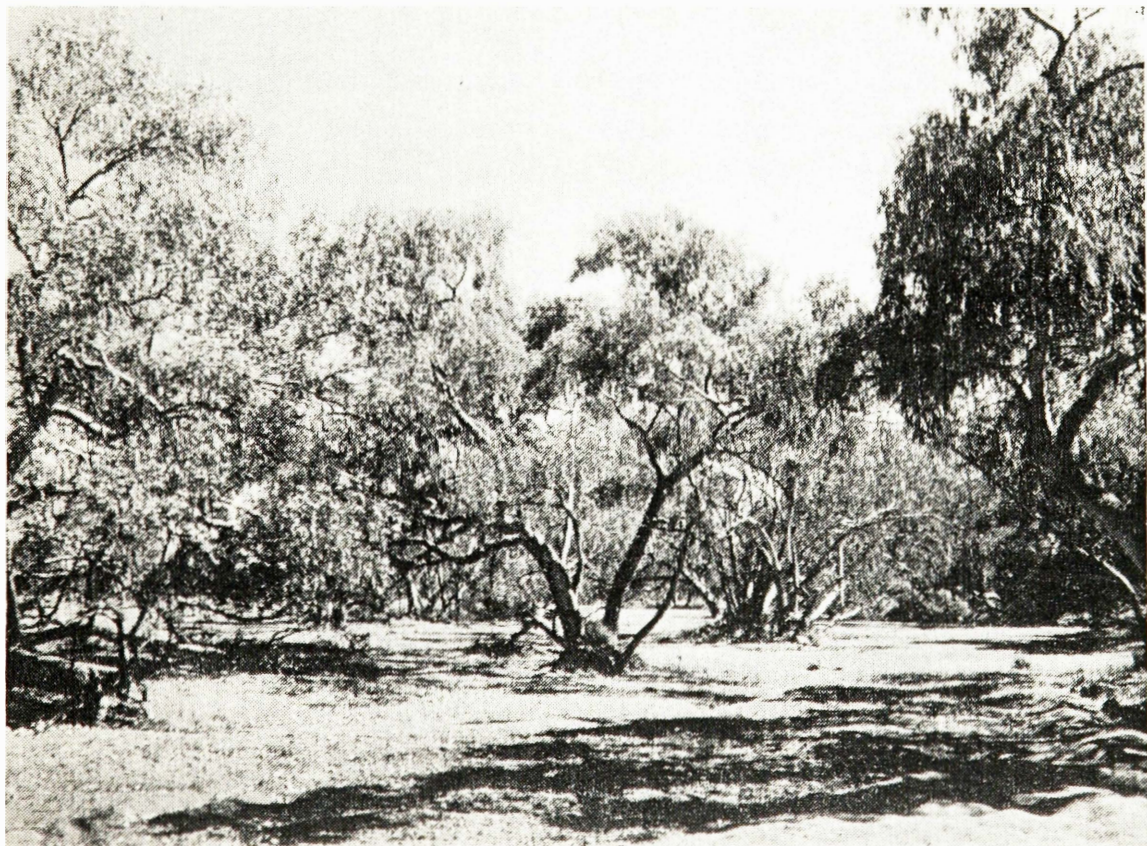


Plate 2.6: Dry sandy river beds fringed with River Redgum (*Eucalyptus camaldulensis*) were favoured places to seek fresh animal tracks.

Plains: The major (in area) zone of the region is dominated by mulga woodlands occurring in dense groves and open patches (Plates 2.1, 2.2). Stands of gidgee or patches of witchetty bush may replace mulga, and all occur over grass, particularly woollybutt (Eragostis eriopoda). Shrubs include Eremophila spp. and Cassia spp. This area provided a variety of food items but was particularly favoured for kangaroo, lizards and echidna. Here people also procured grubs, honey ants, small yams, bush bananas, beans and a range of other less abundant plant foods.

Sand-plains: This waterless zone dominates areas to the north and to the southwest of the Sandover River region. It is vegetated mainly by spinifexes of various types but develops substantial shrub cover in areas or times of less aridity. The dune country around Eniltyiye was well covered with blue mallee (Eucalyptus gamophylla), red mallee (E. pachyphylla), Grevillea sp., and the occasional kurrajong (Brachychiton gregorii) over spinifex (Plate 2.4). In this country people hunted bush turkey and lizards. They gathered large and small yams, bush raisins, bush bananas, beans and native bee honey.

The environmental diversity of the area provided a comparatively broad resource base for its resident foragers and was one of the more productive living areas in the arid zone. Meggitt (1962:32) indicated this in suggesting that in pre-European times, the Arrernte population of the more central areas was probably twice that of the Warlpiri, whose country was largely sand-plain and spinifex. During my fieldwork rainfall was plentiful and had been for a number of years. The country was, on that account, probably near peak potential from a forager's point of view.

Modern geography: bores, stores and roads

Europeans initially monopolised the best available surface waters, but by sinking wells and later bores, they extended the area of land available to stock. Accessible surface water sources were soon polluted by stock. Although wells and bores did not always provide water fit for human consumption and required regular maintenance, it was the development of an extensive network of artificial watering places (Figure 2.11) that allowed the continued pastoral occupation of the region. Bores superseded the older wooden-sided wells. They consisted of a pump, either wind-driven through a windmill or engine powered, and a large, metal collecting tank. Water remained the critical resource, now as in the past, but its widespread availability through the use of bores reduced attention to its value.

Every adult knew the locations of all bores, the quality of the water at each of them and their state of repair. The location of water in relation to other resources was no longer a critical factor in decisions about movements, but the knowledge of water locations remained important. That local people rarely carried water in their vehicles when they travelled, reflected the importance of this knowledge. If water was needed during a day's foraging, travels were interrupted to visit the nearest bore:

We were on a trip collecting *akarlitye* (wild oranges). It was January 1981 and the temperature was 40° or more. A large group of women (10) and children (8) travelling in two vehicles, were searching for fruit as we drove along the Sandover Highway about 70 km north of Eniltyiye. The country was sand-plain and spinifex, the kind known in local parlance as "perishin' country". During this trip we stopped at two bores, both a kilometre or two off the main road. We stayed only 10 minutes at the first for people to drink and fill their billycans. At just after 1 p.m. we drove to a second bore where we stayed for 20 minutes. There was a jolly atmosphere as the young girls clambered up the sides of the tank and, perched on its rim, filled the billycans that were

passed up to them. Those below drank their fill then doused themselves thoroughly. After a cursory wringing out of their skirts, and much refreshed, everyone returned to the vehicles and we continued the search for wild oranges.

People were confident that their knowledge of the surrounding supplies, natural and man-made, would be adequate in normal circumstances. Bores have enabled the permanent re-establishment of a number of small communities in remote and otherwise uninhabitable locations.

Many of the stations in the area operated small stores. These opened irregularly and stocked basic non-refrigerated food items, petrol and some mechanical goods. Although Utopia was a centre for Aboriginal services in the area, several other stations had smaller resident populations of Aborigines who depended on their local station store. There was much travelling between stores - either to buy goods not available locally or to visit relatives when their social security payments arrived. The Alcoota store (Figure 2.11) stocked a wider range of goods than that at Utopia and the Angkwele families regularly travelled there. This was partly because the distance from Angkwele was less than to Utopia but also because many of the family's closest relatives lived there. At least one store (on Delmore Downs Station) actively sought Aboriginal custom by providing highly-prized foods such as ice-cream and cooked chickens.

On published maps the study area appears to be crossed by few roads. The Sandover Highway, a major link between the Northern Territory and Western Queensland, crossed Utopia Station. A wide gravel road, it carried regular though infrequent traffic. The station homesteads were connected to this road. As well, a series of well-formed tracks connected stations more directly (Figure 2.11). Each property had tracks connecting its bores and yet other tracks were created whenever a fence was erected.

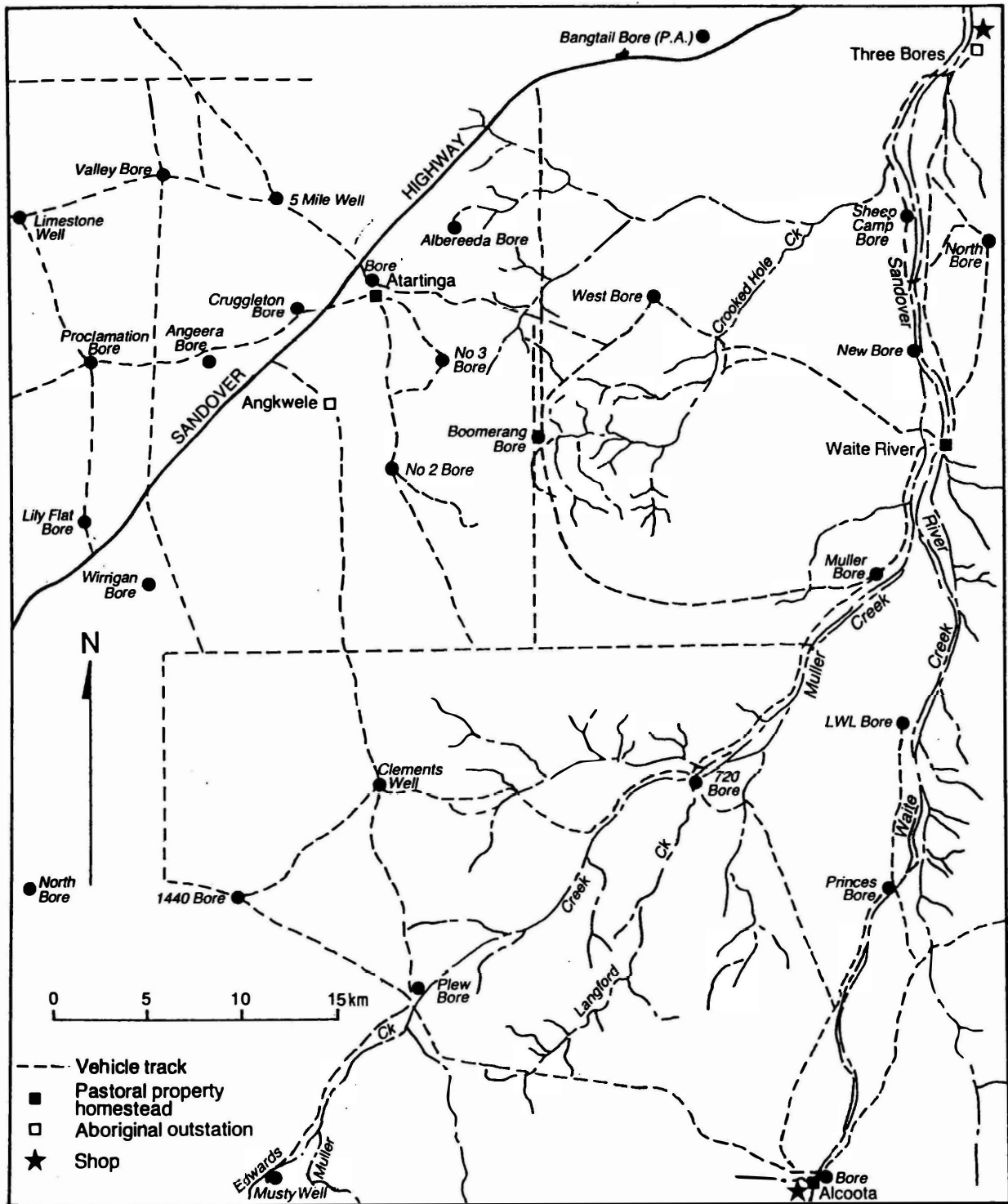


Figure 2.11: Modern geography of area in vicinity of Angkwele outstation.

The open vegetation of much of the country facilitated off-road travel though the likelihood of punctures increased. However, cross-country driving was a regular feature of foraging expeditions, especially for men hunting kangaroo (O'Connell and Hawkes 1984). Favoured open plains were visibly criss-crossed with the tyre tracks of many hunting expeditions. A bird's-eye view of the area would have revealed a maze of tracks and roads all of which were an essential part of the country knowledge of local people. Through use of this track and fence network, people were able to gain access to most parts of the country.

A PARTICULAR LIFESTYLE

To what extent could the experiences of Aboriginal people in this area be described as distinctive? Within Peterson's (1979:117) ecological continuum of desert societies, the Sandover River region is most similar to that of the Arrernte - the least hostile of desert environments in which hunter-gatherers lived. In the study area, waterless, spinifex sand-plains were not the dominant feature of the landscape as they were in the territories of both the Warlpiri and the Pintubi. On environmental grounds then, it can be expected that the subsistence practices of the Sandover River region would have differed from those areas. It was also different from the Western Desert, - an area more hostile to human occupation but better known ethnographically. Historically, the eastern Anmatyerre and the Alyawarre retained some freedom of movement within the constraints of pastoral occupation of their territories. It is perhaps an historical accident that no attempt was made to set up an administrative centre, either mission or government, in their country and they were therefore not presented with a choice of congregating at a "super water-hole" (Hiatt 1968:100). Neither did they choose to move permanently away to centres, such as Warrabri, established in neighbouring territories (Hagen and Rowell

1979:19). Small groups continued to care for their country even within the restrictions imposed on them both by pastoral occupation and the weakening of their ceremonial network (Strehlow 1971:xxxiv). This is not to say that people stayed on their own countries - clearly they did not. But the pattern of movement included travels across their own country, the use of its resources and the maintenance of a level of knowledge of the area that was impossible for those bound to settlements and missions. In day-to-day life small groups retained autonomy - operating according to their own authority and requirements. Such a degree of independence had no place within institutions dedicated to the conscious re-arrangement of the social and cultural life of Aborigines as the authorities strove to bring upon them what John McDowell Stuart called in 1865 "the dawn of liberty, civilisation and Christianity" (Hardman 1975).

The following account of an Aboriginal woman, of approximately the same age as Glory Pityarre but whose early life was spent at Phillip Creek and later at Warrabri, (two Government settlements to the north) provides a useful contrast:

At the mission at Phillip Creek we used to stay in the dormitory. We was separate. Our parents stayed in the camp. They took the kids away from their parents.

I was growing up at Phillip Creek, and I was working for that Mr and Mrs Ingham - only for a little while - then we were getting ready to move to Warrabri...I stayed with the Inghams. Everyone was moving on the truck to the Warrabri... They were still building at Warrabri. We lived in number six house.

Then at Warrabri, after the Inghams left, I started working for Mr Lovegrove [Settlement Superintendent] for three straight years - cleaning, cooking lunch for him...washing clothes and ironing. Now when I stopped working for Mr Lovegrove I started working in the kitchen [a communal dining room and kitchen for Warrabri residents]. I worked there for two years... After

the next Christmas, I started in the sewing factory with Mrs Loader... I worked there for six years... (Bell 1985:12).

The lifestyles experienced by these two women, living no more than 200 km apart, were in stark contrast. Where people avoided long periods of institutionalisation as in the Sandover River area, the integrity of local groups and families was preserved. That was impossible in situations where children were isolated from parents and adults were routinely organised and directed. As Bell (1985:12) commented of the woman above:

When she showed me the camp sites of her parents and the separate dormitories at the Phillip Creek Native Settlement for male and female children of school age, Topsy's gentle reminiscence masked the grim reality of the impact of mission policy on family life.

Why some Aborigines chose to move more or less permanently into situations of decreased independence remains a puzzle. Perhaps in the Sandover River area Aborigines resisted that pressure and maintained direct links with their land because intrusions, although widespread, remained at a low level. Aborigines were able to exploit these small, dispersed European supply centres to satisfy their desire for goods, with minimal loss of freedom. At the same time, pastoralists had little reason to encourage large numbers of itinerants to settle. For the Aborigines, no further advantage could be gained by travelling to the more distant, larger settlements.

What implications does such a distinctive history have for the women now living at Utopia? The stability and coherence of social life was more sustainable within a pastoral lifestyle than that of large centres... Women maintained an understanding of their rights and responsibilities and more importantly, the

knowledge that it was within their power to exercise them. They were less exposed to the domestic models of European culture and under no concerted pressure to adopt them. In addition, it enabled them to retain an active relationship with country that they have never abandoned.

CHAPTER 3

AN ANTHROPOLOGIST AT UTOPIA

INTRODUCTION

In 1980 I was awarded a Research Fellowship by the Australian Institute of Aboriginal Studies to undertake a study of Aboriginal women's food production techniques. On the basis of suggestions from other anthropologists and their colleagues, I contacted the Urapuntja Aboriginal Council through the resident medical officer. The negotiations involved a preliminary visit to the Community, discussion of the project with the Council and approval of my temporary residence. The process was lengthy and anxiety-ridden. Eight months elapsed before the Council formally consented to the proposal and I set out for Utopia to begin the task.

THE FIELDWORK EXPERIENCE : Year One

I arrived at Utopia with a four wheel drive vehicle and a caravan which I set up, about 6 km north of Three Bores on the edge of the dry Sandover River. My nearest European neighbours were about 200 m further north-east along the River and the nearest Aboriginal neighbours, about 500 m away at the site of the original Station homestead. Over the period of residence, I used the caravan as a base camp; a place to write, to store specimens, film, books, clothes and food. I made additions and alterations to it and eventually lived more around it than in it. Without electricity, it was both too hot in summer and too cold in winter. I built a large shade on the western side of the caravan and a wind break and fireplace at its southern end. I carried water from my neighbour's camp and collected my own firewood as necessary.

From my base camp I travelled to the surrounding outstations where I lived in one of the **alwekere**. Having a base camp for storage meant that I could visit outstations with few possessions. Usually I took food, a small bag of personal possessions, note books, camera, a swag, and one or two other small items of equipment. I kept diaries and other precious records in a small metal tool-box which I kept locked. This travelled well and was sturdy enough to be left without anxiety. Irrespective of which outstation I was on, I travelled to Three Bores each Saturday, usually with several other residents. I restocked food and film supplies, showered at my neighbour's camp, collected mail, bought a few items from the hawker, and caught up on local European news. Like everyone else, I enjoyed the excitement of Saturdays.

I do not wish to give the impression that a predictable routine developed during my fieldwork. Many failed plans and unexpected developments ensured that this was not the case. For example, I had determined to focus only on contemporary activities during the early part of my fieldwork. I therefore rarely questioned people about "olden times" and never requested demonstrations of abandoned technologies or foods. It was the women themselves who, on learning that I should soon be leaving, felt that I should see such practices in order to fully record their subsistence knowledge. As well, outstation residents constantly formulated travel plans which involved my vehicle - we should go shopping in Alice Springs; we should join a ceremonial group at another outstation where I was unknown; I should assist this group or that to go this way or that, and so on. In time I became more discriminating about my obligation to the community and restricted my activities and assistance to those with whom I had the closest associations. During extended rainy periods the entire outstation population sometimes moved to Three Bores. Occasionally I was confined to my caravan because of rain, when the petrol supply ran out, and twice when I was ill.

A week after my arrival, at the conclusion of a community meeting, an old man (**Artwe ambwe**) approached me and invited me to visit his outstation at Angkwele. That same day I had also asked another group of women to visit their outstation Atnarare. During the following month, I made several short trips to each, staying only two days. I also offered to take the women from Three Bores on foraging excursions and thus began to build a relationship with them too. By July I had decided to concentrate my work at Angkwele. This decision was based on several factors - the small population, the availability of vehicles there in addition to mine, the stability of the group, and partly because I felt more at ease there. I have returned to this small community since the completion of fieldwork.

On the second visit to Angkwele, during a discussion of the study, **Artwe ambe** brought up the matter of payment. I had been provided an allowance with which to pay Aboriginal people who assisted with the research. From that time on, I paid him regularly. The payment was described by him as "rent". It meant that I could live on his outstation and his family would undertake to teach me. The amount itself, while not commensurate with the depth of instruction given, made a significant contribution to that family's income. It is now obvious to me that I should have paid his wife. At Eniltyiye I chose that course, paying Glory not her husband, despite his status as senior landowner. However, in the beginning of my fieldwork I now realise that I was unable to negotiate in a culturally acceptable manner. I took up the first options that were presented. Later, I thought it impossible to re-negotiate earlier arrangements without giving offence. As well as the cash payments to individuals, outstation residents had the use of an additional and reliable vehicle whilst I was there. When I visited Three Bores I worked with one of the women there, paying her for days that we worked together. In addition I paid women to collect particular foods that I required for nutritional analysis.

I learned enough Anmatyerre to follow simple conversations, and even to join some. But my language facility was inadequate for sustained discussion or investigation. For this I largely relied on English and Aboriginal English. Most women's lack of confidence in using English compounded my communication difficulties and this reticence lasted a long time. **Artwe ambwe**, the oldest man at Angkwele, had an excellent command of English because of his years of employment by Whites.

Second period of fieldwork

In June 1982 I returned to Brisbane for three months. Back once more at Utopia in October, I found that a new outstation, Eniltyiye had been established. It was located in sand plain country to the north of Three Bores and seemed to offer a contrast to the mulga-dominated environment of Angkwele. This was not however a simple contrast as the outstations differed in other respects as well, particularly population and vehicle availability. Despite my explanation of the desirability of continuing my research at this second location I found it difficult to change the geographic focus of my fieldwork without offending my former hosts. I had become publicly identified with the Angkwele mob and did not wish to embarrass or, anger them by choosing to live with another family. During the first month of the second field season the Angkwele families expected my former routine to continue. They arranged for me to return with them after shopping days; they sent messages to me by radio and hinted that I would encounter problems working at Eniltyiye. They considered that I still had much to learn from them. The second period of fieldwork was more stressful than the first. I had less time (six months) to settle in to a new and larger outstation. As well I needed to maintain regular contact with my former hosts who lived over a 100 km from Eniltyiye. I also maintained contact with the women in the largest **alwekere** at Three Bores,

although I did not stay with them. My contact with them during the twenty month period was intermittent, but they assisted with demonstrations and requests to find particular items of food.

Learning to be an alwekere resident

In each of the **alwekere** in which I stayed women allotted me a place for my swag at one end of their space. At Angkwele this usually meant that I had a comfortable place beside a fire, on the other side of which were June, her children, and her sister. My belongings were hung on the shelter poles, out of the reach of dogs. I shared tasks such as making tea, shelter maintenance, wood collection and rubbish disposal. My vehicle was requested for larger tasks like major camp clean-ups, communal wood collection and occasional emergency medical trips. As much as possible I participated and co-operated in activities without either initiating or controlling any of them. Sometimes I displayed some competence at foraging activities but generally it was agreed that I was more capable as a recorder of events than as a participant. There were many memorable occasions. On one, I carefully tracked a "porcupine" which turned out to be a small dog that was part of the foraging party!

I took sufficient food to the outstation to cover my needs but shared it as our household, or others, required. When our combined supplies were exhausted, I, along with everyone else, depended on returns from foraging. The food varieties I chose to purchase were in keeping with those already in use and I avoided attempting to influence dietary choice in any way. That included foraging. I neither encouraged nor discouraged it, verbally, at least. While living on outstations my diet was identical to that of other residents.

I learned the etiquette of approaching other household areas and to be circumspect rather than direct in my dealing with others. I avoided using notebooks or tape-recorders within the camp as much as possible because I believed that this inhibited normal domestic life. I wrote my notes in the privacy of the **alwekere**, usually when others were also attending to chores such as washing. More extensive writing, the preparation of botanical specimens, photograph documentation and the like, took place at the caravan.

DATA COLLECTION

I recorded data using standard anthropological techniques - taking notes, photographs and film. As well I recorded quantitative measurement wherever possible. On each foraging trip I recorded the participants' names, the distances travelled and the time taken, locations where foraging and food preparation were carried out and the implements used in foraging. Once at a chosen foraging location, I recorded events as they unfolded. I accompanied one or two women, recording the details of their foraging techniques, taking photographs and collecting botanical specimens. Initially, I asked women if I could weigh the items they collected. I was never refused, and soon a routine developed whereby women handed me their food as a matter of course. I used three separate sets of hanging scales: a Pesola 500 g x 5 g, a Pesola 1000 x 10 g and a Selby 10 kg x 1 kg. I did not weigh the largest animals, the kangaroos and bush turkeys, or portions of beef. These animals were most often hunted by groups of men and it was socially inappropriate for me to be involved. Neither did I weigh all the small quantities of fruits that people collected and ate as they foraged, as this would also have been interruptive of their activity. Purchased items were not weighed at all, but most of those (for example the tins of meat) were of standard weights. More specific details of data collection and analysis are provided

within the relevant chapters of the thesis. Throughout the thesis I recount events from fieldwork that illustrate points under discussion. These accounts are taken from field notes and have thus been separated from the thesis text. They are presented in a form however which differentiates them from strict quotation.

As well as recording the techniques of foraging, I sent 47 food samples to the Human Nutrition Unit in the Biochemistry Department of the University of Sydney where they were analysed for nutritional value. After initial collection, I put the foods in the clinic freezer at Three Bores. From there, I took them to Alice Springs in a small esky where they were airfreighted to Sydney. The specimens included plant and animal foods. The results of some of those analyses have since been published (Brand et al 1983; Brand and Chirikoff 1985); while all completed analyses are presented in Appendix II. I collected and pressed 279 plant specimens including species used for food, for medicinal and for other purposes. The specimens were identified by Mr Peter Latz of the Arid Zone Research Station in Alice Springs and are stored at present in the Darwin Museum of Arts and Sciences. Finally I collected a set of contemporary domestic and foraging implements for the Anthropology Museum at the University of Queensland.

In general, I carried out my research by always choosing the least intrusive methods. For this reason, the cash economy does not form part of my research. Money, who had it, and what they did with it was not surprisingly, a topic of sensitivity. People were extremely discrete in any dealings involving cash (see also Altman 1982:284). For example, every week I gave **Artwe ambwe** an envelope of cash. On one occasion I inadvertently gave him an empty envelope. We were both sitting in the vehicle at the time. As I started the engine, I noticed **Artwe ambwe** slowly tearing up the envelope. I

assumed that he had unobtrusively transferred the money to his pocket, as he usually did. Nothing was said. Over a week later, I unexpectedly came across an envelope of cash - the amount due to **Artwe ambwe**. Puzzled, I checked with him about the previous payment. He looked strangely at me, saying that I had not paid him at all. I realized then what had occurred and apologised with embarrassment. When I enquired why he had not questioned me at the time, he only laughed. But with hindsight, the careful tearing of the envelope took on more significance. To some extent this approach constrained the quantitative precision of the study, but it allowed for vastly better relations between my hosts and myself. Despite any shortcomings, the data indicated dietary trends and enabled me to document the role of women in contemporary subsistence.

Bias

In order to adequately evaluate my data, I need to consider the extent to which my presence influenced the situation I documented. Did the presence of a female who owned a reliable vehicle and wished to learn about bush-foods cause an increase in the frequency of women's foraging and thereby change the subsistence pattern? Did I also influence other aspects of subsistence through my contributions? Different circumstances prevailed at each of the three study locations.

At Angkwele, two factors minimised the impact of my presence: the length of my stay and the number of vehicles owned by other outstation residents. When it was understood that I would be a resident, not an occasional visitor to the outstation, interest in frequent foraging waned. A pattern emerged which reflected factors unrelated to me such as the availability of food, weather conditions and people's own commitments. Some days everyone stayed in the camp attending to tasks not associated with foraging. My vehicle was less important at Angkwele because there was always at least one

other vehicle on the outstation. The fact that my vehicle was more reliable than most of those which were locally owned seemed less important than the independence people retained by travelling in one owned by an Aboriginal relative.

Eniltyiye outstation residents usually owned one or two vehicles, but there were long periods when my hosts had no access to a vehicle other than mine. However, the women here were active batik producers and their enthusiasm for this activity meant they were less ready to go foraging simply to oblige me. During my time as a camp resident I too became involved in batik so as not to appear as though waiting for women to go foraging. Nevertheless the women of Eniltyiye outstation probably did forage more frequently while I was there. On one occasion while I was absent, the nurse asked the women there if they had been out hunting lately. One of them replied, "No, Jeannie's not here". I understand that one older woman, an energetic forager, shifted to Eniltyiye specifically because she knew that I was working there and that a vehicle was available for women to use in foraging.

The women living at Three Bores, had less frequent access to vehicles than their counterparts at the other outstations. Sometimes, the medical staff who lived at Three Bores, took them on foraging expeditions. As these women got to know me better they sometimes arranged expeditions at times when I visited Three Bores.

At Angkwele, I was a member of an **alwekere** which frequently combined with other households to eat. My purchased food contribution was thus distributed over at least two households and sometimes more. I felt that this wide distribution substantially modified the effect of my contribution on the household in which I was resident. My contribution to the purchased component of the diet was more substantial at Eniltyiye than elsewhere even though I followed the same

arrangements at both places. Because of my shorter periods of residence there and the substantially larger population, I remained a relative stranger to the camp as a whole. Relations between myself and the residents of Eniltyiye remained more formal than they did at Angkwele. I received few requests to share my supplies which were then all given to my hosts. Their household membership was small - usually two adults and an infant daughter. Although their other older daughter lived in the **alwekere**, she and I joined their household for most meals. In this situation, my contribution was a significant dietary addition. I rarely ran out of European foods, nor did they, events which happened repeatedly at Angkwele. I did not at any time live in the Three Bores **alwekere** and have no systematic records of purchased food use there.

Thus I have sets of data derived from three different situations: they are comparable in some respects but not in others. For example, the data on total food consumption is drawn from records of diet at **Angkwele** outstation. However, I have used the data from the three locations to discuss the strategies women used in foraging - the way they organised groups, the effect group size had on foraging success and so forth. I have also used it to compare the pattern of resource use by women from each of the three locations. The advantages in organising the research the way I did outweighed any arising from the lack of comparability. I recorded women working in a variety of situations. I lived for periods of months in two **alwekere**, had shorter stays of several days in another two, and was a daily visitor to several others. The organisation of these **alwekere** varied as did the social arrangements that existed between them and other households. This variety of situations better enabled me to assess the potential significance of factors like environment, vehicle access and outstation size. I became particularly familiar with one outstation community and the strongest of my views

are based on that experience. But I have not restricted discussion to the data related only to that group. The several situations that I observed have informed my interpretation.

THE CONTEMPORARY CONTEXT OF FIELDWORK

The value of anthropology has been debated internationally for at least two decades (Gough 1968; Asad 1973; Hymes 1974) as researchers "face the uncomfortable fact that our work as anthropologists has gone on largely and primarily under the imperialist umbrella" (Wolf 1980:458). In Australia, Aborigines themselves began to draw attention to the implications of that "uncomfortable fact" and asserted that "there has long been too damn much research and not enough action" (Gilbert 1973:viii). In the intervening period Aboriginal involvement in the study of Aboriginal culture has become increasingly active, critical and regulative. As Myers (1986:138) explained:

The anthropologist's complex interaction with the community he or she studies has become a defining feature of the project...In their growing desire to exercise some control over the processes that define their reality, Aboriginal people see anthropologists less as privileged Others than as human actors accessible and responsible to Aboriginal expectations.

In retrospect, and with additional field experience, my thoughts on much discussed notions such as "informed consent", and "useful research", on the reality of "the community", and on the role of administrative and political organisations in research, are ambivalent to say the least. The ideal of accountability, beyond that of a voluntary, personal, and totally unenforcable commitment to the particular host group, seems to remain a still distant goal - and not only for anthropologists.

CHAPTER 4

FEMALE FORAGERS AND CONTEMPORARY DIET

FORAGERS IN A MARKET ECONOMY

The foraging practices of desert women have been radically altered by a changed subsistence context. Little, however, is known of the pattern of their hunting and gathering beyond statements that they no longer undertake many of the tasks that they did traditionally (Bell 1983b:25) or that their foraging contribution is minimal (O'Connell et al 1983:83). Other accounts (for example, Anderson 1982; Young 1981) are generalised - useful indicators of the possible scope of women's activities rather than detailed investigations. There is a need to examine what it is that women are doing in relation to subsistence. What is the extent of their contribution? How is it constituted? What role, if any, does foraging play? Within the context of a description of the diet of one outstation, I document in this chapter the pattern of foraging of contemporary women. "Pattern" here refers to the regularities in women's exploitation of traditional food resources.

CALCULATING THE CONSUMPTION OF FOOD

The Utopia communities are irreversibly linked to the cash-based market economy and their diet is now a combination of foraged and purchased foods. Although I have distinguished the two elements of the diet for analytical purposes, no such separation existed in everyday life - foraging and purchasing were inextricably interwoven. The problem to be solved each day was not "What shall we forage for?" or "What shall we purchase?", but, "What shall we eat?".

Bush foods

Bush food contributions to the diet came from three main sources: parties of adult males only, family-based parties and parties of women and children only. A fourth, but infrequent source of bush foods was from visitors. A "party" denotes a foraging group. It usually included members of more than one household and was family-based, but rarely compromised all family members nor every member of any one household.

I did not join male hunting parties. Men mostly hunted for the largest animals, kangaroos, and less often they captured other animals such as bush turkeys, perentis and occasionally smaller lizards. Meat from a successful hunt was always distributed to the rest of the camp, and since the number of households was small I could account for the numbers of large animals hunted by men. This was especially so for kangaroo which was by far the largest animal as well as that most frequently killed. I calculated weights of those animals on the basis of data supplied by O'Connell and Hawkes (1984:516). Successful hunters sometimes brought back meat that had already been cooked and butchered, sometimes not, depending on the time of the kill. If it was early in the day, they cooked the animal near the hunting site, and consumed among themselves the delicacies such as liver, kidneys, entrails and blood. At other times they cooked the animal a short distance from the camp, where they remained eating in private. At these times children carried meat between the group of men and the other camp residents. Equally frequently, they cooked the meat at one of the households. I am unaware of any occasion that men captured game and did not return any portion of it to the camp.

Family-based parties were the most regularly formed foraging group at Angkwele and parties that I usually accompanied were of this type. Some days, two or three such parties formed and

foraged separately; other days two large family-based parties travelled in separate vehicles but shared a dinner-camp site. (The dinner-camp refers to the location away from the base camp where food was prepared and eaten).

Parties comprised only of women and children formed regularly, though at Angkwele this was often as a sub-group of a more broadly based family group. They were the most usual party formation with which I was involved at both Eniltyiye and Three Bores.

People collected bush foods on 102 of the 209 days that I lived on Angkwele outstation. On those days I recorded returns. To the data from trips in which I participated I added the returns on men's hunting and that of other foraging parties where known. Calculations incorporated a 20% waste factor for all game and for fruits (Capparis spp.) that had thick, inedible skins. All weights given are therefore nett weights.

Purchased foods

Each fortnight, one day was devoted to the purchase of supplies. In the intervening period people made small purchases from the Utopia store or from one of the several neighbouring stations. Purchased foods thus arrived at an unpredictable time. At no time did the outstation have a "closed" economy in the manner described for Arnhem Land (Altman 1982:57). There, during the northern rainy season, the outstation became virtually isolated from the surrounding centres, with one external source of supply. Because of the complexity of the supply network in the Utopia region, I calculated the consumption of store foods on the basis of actual consumption rather than initial purchase. This method provided a minimum estimate of consumption rather than the maximum estimate produced by monitoring total purchased quantities.

A range of foods were available from the hawker. It included the staples of flour, bread, tea, sugar, tobacco as well as a variety of tinned meat, eggs, potatoes, onions, one or two fruits, (oranges, apples, bananas or grapes depending on season), tinned fruits and vegetables, powdered milk, biscuits, dried fruits, nuts, jams, treacle, cereals, salt, dripping and soft drinks.

To calculate the total amount of purchased foodstuffs consumed, I used records of individual consumption for the months of September (1981), December (1981) and March (1982). For 53 days during that time I recorded the meals of the particular group I was with throughout the day. That provided data on 130 eating events. For each event I noted the number of participants and the type and quantities of foods consumed. In many cases the food was in easily identifiable quantities, for example a 340 g tin of meat, in other cases such as damper, I estimated quantity. To check the accuracy of my estimates I made similar sized dampers at home, weighing them whole and in portions. On that basis I calculated the daily per capita consumption of non-bush foods. In addition, I included a "snack factor" to cover the consumption of items that I saw eaten but did not systematically record including, potato crisps, chewing gum or soft drinks. I estimated that each person consumed one 375 ml can of soft drink, 50 g of potato crisps, 50 g of chewing gum and 150 g of sweet biscuits each week. These estimates were conservative. The energy and protein equivalents of purchased foods were based on values provided by Thomas and Corden (1977); bush food values were calculated on the basis of food samples analysed (see Appendix II). I included myself as a member of the Angkwele group for all calculations.

Dietary Contribution of bush food relative to store food

The total daily per capita intake of food was 893 g which provided 9279 KJ of energy and 136 g of protein (Table 4.1). There was a clear division in the structure of the diet in that the store food component contributed the bulk of the energy (68.1%) while bush foods provided the greatest proportion of protein (73.5%). Both bush and store food categories are further subdivided (Table 4.1) to indicate the relative contributions of major food types. Purchased processed plant foods, mainly flour and bread, were the source of over a third (36.8%) of the total daily energy intake. Bush fruits and vegetables, on the other hand, constituted a proportion of the energy intake which was extremely small relative to that of processed foods. It appears, therefore, in this calculation as negligible (<1%). Nevertheless, even small quantities of fresh foods provide essential nutrients (Appendix II) and therefore may have a dietary significance not readily apparent from a summary such as this. Some wild plant foods were collected regularly albeit in small quantities. Commonly they were collected only in sufficient quantities to satisfy a person's immediate needs. Less frequently, plants were collected in quantities large enough to permit distribution of the surplus. Although flour and bread were the major source of energy from processed foods, a small amount of energy was derived from fresh vegetables, particularly potatoes and occasionally onions.

The energy that was provided from bush sources came, not from plant but from animal foods (31.9%), especially from animal fats. Lizard fat (Varanus sp.), for example, which was frequently procured, provided 3222 kJ/100 g while the flesh, at 736 kJ/100 g, was less energy rich (Appendix II). In addition, purchased animal foods, principally tinned meat, contributed a further 6.8% of the energy intake. Animal foods (both bush and purchased) provided 37.5% of the total daily energy intake while plant foods of all forms provided 53.7%.

TABLE 4.1: DAILY PER CAPITA CONSUMPTION OF BUSH FOODS AND PURCHASED FOODS AT ANGWELE OUTSTATION, JUNE 1981 - MAY 1982

	WEIGHT		ENERGY		PROTEIN	
	g	%	kJ	%	g	%
Total Bush Foods	342	38.3	2962	31.9	100	73.5
Total Purchased Foods	551	61.7	6317	68.1	36	26.5
Total Foods	893	100.0	9279	100.0	136	100.0
Bush Foods:						
animal	326	36.5	2853	30.7	100	73.5
plant	11	1.2	43	0.5	0	-
honey	5	0.6	66	0.7	0	-
Purchased Foods:						
animal	71	7.9	630	6.8	10	7.3
plant	347	38.9	3418	36.8	25	18.4
sugars	98	11.0	1521	16.4	0	-
others *	35	3.9	748	8.1	1	0.8
Total Foods	893	100.0	9279	100.0	136	100.0

* includes soft drinks, potato crisps and similar snack foods.

By all measures, family-based foraging parties made the greatest contribution to the bush food sector of the diet, providing 54% of weight, 55% of energy and 53% of protein consumed (Table 4.2). Male-only hunting parties also provided a substantial proportion, bringing in 41% of the total weight, 41% of energy and 44% of protein. Parties composed only of women and children provided 5% of the total intake of weight, 4% of energy and 3% of protein. The significance of family-based parties' contributions was due to a combination of factors: the presence of one or more male hunters who captured larger animals; the presence of one or more older women who were the most experienced and generally successful foragers and, the frequency with which family-based groups formed. Foraging parties comprised of a man and his wife were classified as family-based parties. These were a regularly formed foraging party type at Angkwele. The Angkwele **alwekere** rarely included older women able to form a skilled core group for female-only groups. There, the older women were married and preferred to forage within family-based groups.

TABLE 4.2: CONTRIBUTION TO DAILY PER CAPITA INTAKE OF BUSH FOODS BY DIFFERENT TYPES OF FORAGING PARTIES AT ANGKWELE, JUNE 1981 - MAY 1982

	WEIGHT		ENERGY		PROTEIN	
	g	%	kJ	%	g	%
males only	141	41	1216	41	44	44
women only	16	5	124	4	3	3
family-based	185	54	1622	55	53	53
Total	342	100	2962	100	100	100

Dietary requirements

To calculate the theoretical requirements of an individual's energy and protein needs, I followed guidelines provided by Thomas and Corden (1977). On this basis the daily energy requirements of the Angkwele "reference person" (Thomas and Corden 1977:27-29) was 8965 kJ/person/day (2135 kcal) and 56 g/person/day of protein. These requirements are within the ranges calculated for Aboriginal groups in the Arnhem land region. McArthur (1960:21) calculated an energy requirement of 2350 kcal for adult males, 1750 kcal for females and 2200 kcal for children aged 5-14 years; Meehan (1982:156) computed the Anbarra requirements at 2050 kcal and Altman (1982:62) calculated a slightly higher requirement of 2505 kcal and 65.5 g protein for the Momega group.

TABLE 4.3: DAILY PER CAPITA CONSUMPTION AS A PROPORTION OF CALCULATED DIETARY REQUIREMENTS FOR ANGKWELE OUTSTATION, JUNE 1981 - MAY 1982

	ENERGY (kJ)	PROTEIN (g)
Total food procured	9279	136
Calculated requirements	8965	56
Procured as % of requirements	103	244

The daily intake of both energy and protein was in excess of calculated requirements (Table 4.3). Energy intake, at 103% of requirements was less striking than the protein intake of 244% of requirements. To some extent the comparison is a statement of the obvious - the group in question obtained

sufficient quantities of energy to live. However, the high protein intake is interesting and unexpected from the perspective of conventional anthropological interpretations of traditional diet (chapter 1). The contemporary intake of protein at Angkwele was of a similar magnitude to that reported for the tropical north of Australia where protein intakes of 203% of calculated requirements have been documented (Altman 1982:69).

Despite economic change, bush foods remained an essential element of the total diet. They contributed a substantial proportion of daily energy needs and provided the major proportion of the protein requirements. While this was the situation for most outstations in the Sandover River region it may differ from other communities. There is no comparable data for other locations in Central Australia but Cane and Stanley (1985), after a survey of outstations in the Walpiri, Luritja, Pintubi and Pitjantjatjara areas (all west of the study area) concluded that of outstations visited;

there were only two [outstations] (6 per cent) at which bush foods were thought to make a major dietary contribution. Fourteen camps (44 per cent) used bush foods to a moderate degree whereas there were 15 (47 per cent) at which we estimated that bush foods were of minor importance. (Cane and Stanley 1985:197)

The pattern reported for the larger, older communities is one of weekend foraging (Silberbauer 1971:24; Young 1981:76).

The decline in the supply of bush vegetables and fruits and the substitution of purchased carbohydrate foods as the principal energy source confirmed findings of researchers working in Northern Australia (Meehan 1982:150-1; Altman 1984; White 1985:354). At Utopia the decline in interest in bush

vegetables contrasted to the continuing intensive use of animal foods and honey. As well as foraging for animal foods and honey people continued to buy foods from both these categories (e.g. tinned meats and treacle). In contrast, purchased plant food and its processed derivatives provided an alternative to wild plant foods rather than an additional source of them.

The diet was meat oriented. Animal foods contributed substantially to the daily energy intake (30.7%) as well as providing necessary protein. A feature of the hunting pattern was a concentration on native species. Angkwele residents hunted neither rabbit nor feral cat as was common in other areas (Cane and Stanley 1985:196) nor did they depend on beef. Angkwele was an excised lease on a pastoral property and the residents therefore could not kill cattle near the outstation. They sometimes acquired supplies of beef from people at Three Bores or from the Waite River Station when kangaroo was particularly scarce.

By weight, the relative proportions of animal (excluding honey) to vegetable foods in the diet were 44.4% and 51.1% respectively; by energy the proportions were 37.5% and 53.7%. On this account the contemporary diet bore little relationship to that of traditional times which, it is frequently reported, had a distinct "vegetarian stress" with the proportion of vegetable foods in the diet being "of the order of 70 to 80 per cent of the total food supplies" (Meggit 1964:4). Irrespective of whether this referred to weight (which is probable) or some other measure, it raised an interesting question. Has the post-traditional diet changed to the extent that former vegetarians have become mainly seekers of meat? What of women? Purchased foods have replaced what was once their primary subsistence field, supposedly obviating the need for them to forage at all yet female parties continued to contribute a modest proportion of

the bush food component of the diet. Why did women continue and what constituted that contribution?

PATTERNS OF WOMEN'S FORAGING

The remainder of this chapter describes foraging by groups of women and children. Having determined that for one outstation group women's foraging contributed a relatively minor proportion of weight and energy in the total diet, I collated data on women's foraging parties from the three study locations to provide a more comprehensive account of women's activities. The dietary information presented so far related only to Angkwele outstation whereas the account of women's foraging patterns which follows refers to women from Angkwele, Eniltyiye and Three Bores. The following account of one day's foraging was similar to many and illustrates the patterns to be discussed.

A foraging trip with women from Three Bores

It was a week devoted to the collection of samples of bush food for nutritional analysis. Glory and Lena had agreed to give me for analysis a portion of whatever food items they found during the day's foraging. However the choice of location and foraging target were their own.

The 24th of November 1981 was cool, overcast with an occasional sprinkle of rain - ideal foraging weather. Six women, Glory Ngale, Lena Perrurle, Myrtle, Nancy, Violet and Jean Pityarre, and Glory's adolescent daughter made up the foraging party. These seven women, all from Three Bores, were from six different households; four were married and two others lived in separate **alwekere**. The women had five crowbars (including one borrowed from the medical officer), two full size axes, one slightly smaller one (a 3/4 axe), one tomahawk, billycans and tins. They were seeking wild honey or "sugarbag". I had a 10 litre container of water. By 11.45 a.m. everyone was in the vehicle and we set off south along the road to Waite River Station. Turning to cross the Sandover River near the homestead we continued along the main road towards Atartinga (Figure 2.11). At 1 p.m. we had

reached a suitable place and parked the vehicle in the bush just off the road. Here the women fanned out, walking through an area of open woodland that had recently been burnt. New grass shoots gave the area a park-like appearance. We crossed a small creek bed that still had one or two pools of water in it from recent rains. I heard the sound of an axe, and went to investigate but the tree had been unproductive and was abandoned by the time I arrived. The women had gathered here and decided to return to the vehicle. Not far from the vehicle Myrtle found native bees coming from a gidgee tree (Acacia georginae). Glory, Lena and Myrtle shared the task of chopping from 1.50 p.m. to 2.10 p.m. When they had exposed the honey cache (arrwengarkere), all the women helped themselves to it. Using their fingers or pieces of freshly cut wood-chip to dig it out, they consumed it immediately. About 350 g was removed.

Leaving there as soon as the honey was eaten, we travelled back towards Waite River but turned off this road onto a track heading northwards. We drove another 10 km before stopping at 2.45 p.m. It was sandy here, we were on the flood plains of the Sandover River. The vegetation was again open, mixed woodland. The group split into smaller parties: Glory and Lena working together, Myrtle and Nancy, while the others made up the third party.

I moved off with Glory and Lena, but shortly they had separated and myself and Glory walked through the area checking trees, especially gidgee, bloodwood (Eucalyptus terminalis) and iltyintye (Grevillea striata) for hive entrances, a small opening about 0.5 cm diameter. Glory stood close beside trees and looked up, watching for signs of bees entering or leaving entrances higher up. She located two hives in gidgee trees and I found one in a grevillea, however we had no axe so at 3.15 p.m. we left them to find Lena. Lena had, during that period, killed two goannas, one of average-size (440 g) and a larger one (780 g). In this area, Glory found two hives in an ironwood tree (Acacia estrophiolata) but by then, Lena was again out of sight, so she sat to dig the roots of a nearby witchetty bush (A.kempeana) collecting grubs (tnyemayte) for me. Periodically she called to Lena and Nancy to bring the axe. I too began to dig for grubs and continued to do so when Lena returned and those two chopped out the honey. Myrtle re-appeared and also dug for grubs, collecting 10 which she gave me. Lena had earlier dropped five grubs beside my bag. Glory gave me 560 g of honey from the ironwood tree that had just been opened - this was not the entire hive but it was more than sufficient for a sample. It contained the eggs, pollen, honey, wax and one or two dead bees. Whilst separated from us, Nancy and Myrtle had found three hives. Nancy had a large powdered milk tin that was two thirds full of honey (about 850 g), as well, Myrtle had a small dragon lizard.

Our party moved slowly back towards the vehicle as it was now 5 p.m. On the way, Glory found two more hives in gidgee trees. She removed the honey which filled a small (1 l) billycan and weighed 760 g (excluding the can). By 5.30 p.m. we had reached the vehicle. Jean had a large goanna (1.5 kg), an arramaye (Varanus sp.), a kind not often caught so there was an air of satisfaction among the group. Nancy and I remained near the fire while the other women returned to cut the "sugarbag" from the three trees that Glory and I had seen earlier.

Nancy set a fire, gutting and cooking all the lizards while the other women were away. We had drunk all the water so there was no tea. I measured some of the crowbars and while doing so Nancy told me that she had brought her special "sugarbag" crowbar which was rather shorter and thicker than the others. Such a sturdy crowbar can be used to jab, lever and prise wood away from a sugarbag without being bent. The others returned at 6.15 p.m. Lena had a billycan (2 l) that was two-thirds full of honey (about 800 g). During the day 11 hives had been cut by various individuals and groups:

Myrtle and Nancy	3 hives
Glory	2 hives
Lena	1 hives
Lena and Nancy	1 hives
Glory and Myrte	1 hives
Glory, Myrtle, Lena, Joy, Jean	3 hives

Each person took their cooked lizards. As well, Nancy had 10 grubs that she had cooked and shared with Glory and myself. Lena provided me with the tail and back legs of the larger lizard (for analysis), and the tail of the smaller one to be given to the non-Aboriginal nurse in return for lending Lena her thongs for the day. While that happened the other women collected their food, crowbars and billycans, climbed into the back of the truck and we had gone by 6.30 p.m. We reached Three Bores about 7.30 p.m., no doubt with the women eating for most of the homeward journey.

Organisation of the data

During the 20 months that I was in the field, I recorded 89 foraging trips in which only women and children participated. I excluded any trips which included males over 15 years old. These accounted for 47% of all foraging trips recorded for all locations during that time. Each trip had a

similar general pattern. I picked up a group of women and children in my vehicle and travelled with them to a site of their choice. On arrival most women immediately set off alone or in small parties to forage in the surrounding bush. One or two remained near the vehicle with the children. Foragers later returned to the vicinity of the vehicle where they cooked and ate the food at the dinner-camp. Sometimes, depending on yields and available time, they made further forays into the surrounding bush.

I always accompanied one party, attempting to record what happened, including weights of food items procured and the time devoted to relevant activities. At the dinner-camp, I weighed the foraging returns of other women or recorded numbers of items if they were already cooked. Occasionally women spent the entire time away in which case they took their returns to their household for consumption and distribution. Women typically brought back items from more than one type - usually a mixed bag of animal foods and honey or fruit.

Women's foraging style was such that a neat allocation of time to individual items and foragers was impossible: women foraged co-operatively, they dug grubs and honey ants together, tracked lizards in groups, left tasks incomplete to begin others, shared collection containers and most importantly, did not forage single-mindedly for one item. To allocate time only from the moment a woman began to retrieve or capture a resource significantly underestimated foraging time since it ignores search time as well as unsuccessful foraging effort. I have therefore considered returns as being the product of the total foraging hours (in woman-hours, wh) for each trip. This calculation included both search time and unsuccessful efforts. The 89 trips totalled 949 woman-hours (wh) of effort or, about 3 hours per woman per trip. This excluded time spent travelling to and from the foraging site as well as time that children devoted to foraging. I have also omitted myself and the few items I collected from the calculations.

The ages of women participating in the foraging trips ranged from young mothers in their twenties to women over sixty (Figure 4.1). Children accompanying them were predominantly under the age of five years. There were few older women and a large cohort of adolescents aged between 15 and 20 years most of whom were without dependants. In total, however, there was a large number of children; they constituted 46% of the total group. Further data related to the parties themselves is the focus of a later chapter; here I concentrate on the manner in which women used the resources available to them.

I have organised the analysis of returns from these trips in terms of Anmatyerre food categories. For example, I discuss the collection of **tyape** (grubs), as well as that of **merne** (fruits, yams and other plant items). A short description of that classification system is necessary here.

Anmatyerre food classification and resource inventory

The Anmatyerre classified food initially into un-named plant and animal categories. Within the group of animal foods they differentiated grubs, **tyape**, from other animals which were **kere**. Within the category of plant foods, edible seed-bearing plants, **ntange**, were distinguished from other plant foods which made up the category **merne**. The final category, **ngkwarle** encompassed sweet substances and included honey obtained from both native bees and honey ants as well as that exuded from some blossoms (Table 4.4). An individual item of food was identified by a broad resource category name and its particular name. For instance, **kere amwelye** was the meat of the bearded dragon (**amwelye**), **kere agherre** the meat of the kangaroo (**agherre**) and so on.

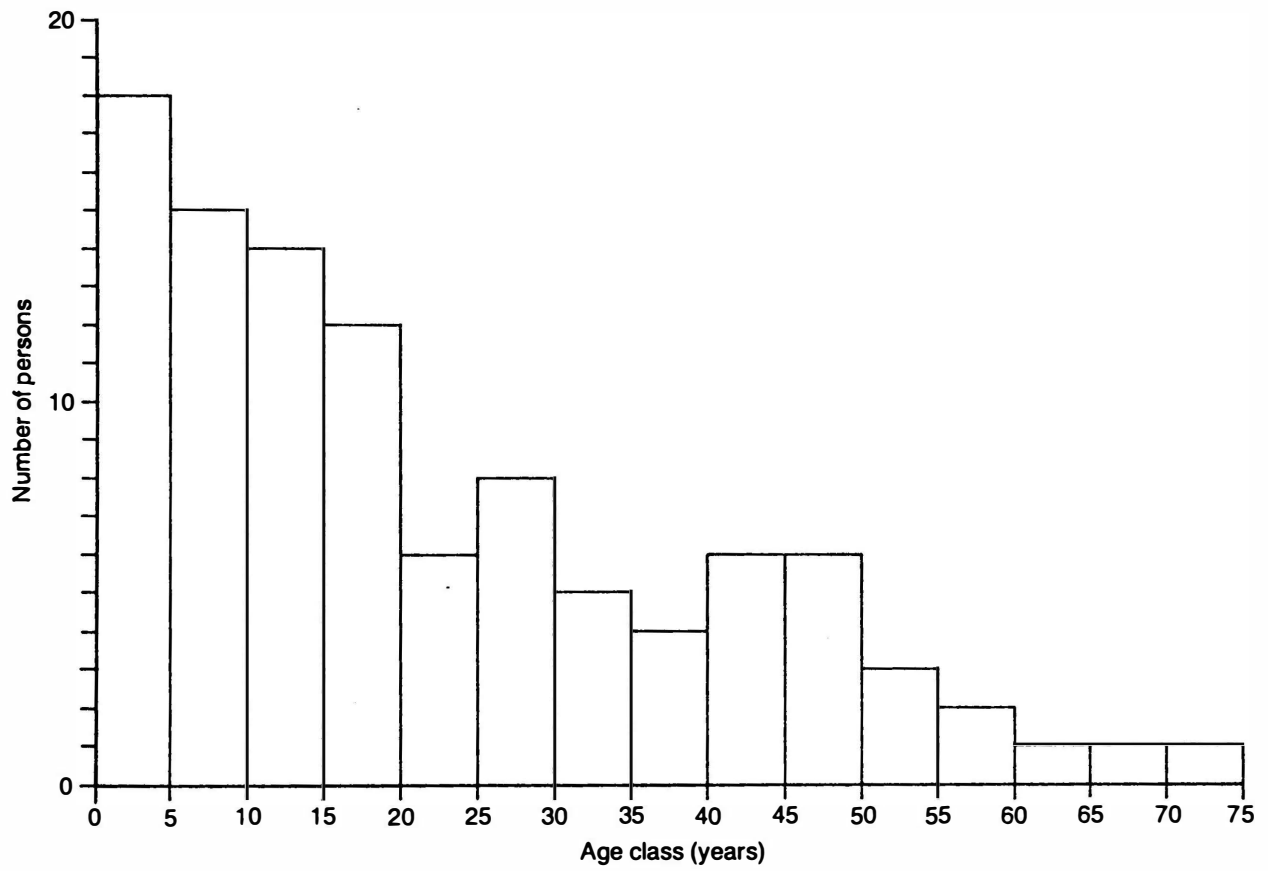


Figure 4.1: Ages of female foragers.

On foraging trips people either simply noted that they were seeing **kere** or less often, they specified the actual item. Water was distinguished according to source. For example, **kwatje ngentye** was water from a soakage. The Pitjantjatjara to the south and southwest employed a classification scheme that differed from the above only in the absence of a special seed category. They incorporated seeds with other plant foods to give them a broader category **mai**, containing all plant foods (Bryce 1986). Some store-brought foods have been assigned to a food class others have not. Flour and prepared damper were both **merne**; all fruits and vegetables also were classified as **merne**. Alcohol, soft-drinks, fruit juices and cordials were **ngkwarle**. Freshly killed beef and tinned meat were **kere**. If a further distinction were necessary, the first was **kere bullock**, the latter, **kere tyampete** (meat in a tin). Tea and sugar were described by English terms.

TABLE 4.4: ANMATYERRE FOOD CATEGORIES.

CATEGORY	DESCRIPTION
kere	animal flesh including mammals, reptiles and birds
tyape	varieties of grub
merne	fruits, tubers and leaves
ntange	edible seed varieties
ngkwarle	sweet substances including those from ants, native bees, nectars, lerps and sweet gums

Each resource category contained a number of items that together made up the total inventory of bush food resources. Contemporary foragers selected items from a larger inventory of items they knew to be edible, available and possibly even exploited in the recent past. I ranked contemporary exploitation on a four point scale: items that were

consistently sought (3); items that were taken only if they were encountered (2); items taken rarely (1); or ignored (0) (Table 4.5). The inventory, compiled by Aborigines, was not necessarily co-incident with a resource list compiled by a European observer. For example, the plant items **alangwe** and **alkwarrirre** were, according to Linnaean classification, the same species (Leichhardtia australis). This is also probably true for a number of grubs. O'Connell et al (1983) compiled an extensive inventory of the plant resources used traditionally by the Alyawarre but gave no indication of modern levels of use.

Returns: energy and protein

Women exploited four of the five folk resource categories. They sought **kere** (animals), **merne** (plants), **tyape** (grubs) and **ngkwarle** (honey). The category **ntange** (seeds) was no longer used as food but several species were occasionally collected for sale to local seed merchants.

Over all food categories and all study locations women procured bush foods at a mean rate of 0.3 kg/wh, a quantity which produced 2200 kJ of energy and 35 g of protein (Table 4.6).

There was some variation in the rates of food procurement at the three study locations. Women from Eniltyiye outstation procured quantities of food at a substantially higher rate (0.6 kg/wh) than women from either Angkwele or Three Bores (0.2 kg/wh). Their rate of energy production from that weight of food was also higher (3156 kJ) than that of Angkwele (1689 kJ/wh) or Three Bores (2023 kJ/wh). Much less variation was apparent in the rate of protein procurement at each of the three locations. Women from Angkwele and Eniltyiye achieved rates of 38 g/wh and 37 g/wh respectively while those from Three Bores achieved 31 g/wh.

TABLE 4.5: INVENTORY OF RESOURCES INDICATING PRESENT USE LEVEL

FOOD CATEGORY: kere (animal foods excluding insects)

Aboriginal name	ITEM		USE LEVELS
		Other names	
artewe	australian bustard	<u>Eupodotis australis</u>	3
ilkwirte	perenti	<u>Varanus giganteus</u>	3
lewatyerre	goanna	<u>Varanus sp.</u>	3
arramaye	goanna	<u>Varanus sp.</u>	3
amwelye	bearded dragon	<u>Amphibolurus barbatus</u>	3
inape	echidna	<u>Tachyglossus sp.</u>	3
aherre	red kangaroo	<u>Macropus rufus</u>	3
angkerre*	emu	<u>Dromaius novaehollandiae</u>	2
arenge	Euro	<u>Macropus robustus</u>	1
ilpangkere+	blue tongue skink	<u>Tiliqua scincoides</u>	1
pwelkere	crested pigeon	<u>Ocyphaps lophotes</u>	1
arrwe	rock wallaby	<u>Petrogale sp.</u>	0
atnwengkwe#	spectacled hare wallaby	<u>Lagorchestes sp.</u>	0
kwarlpe#	nail-tail wallaby	<u>Oychogalea lunata</u>	0
angkerthe	mountain devil	<u>Moloch horridus</u>	0
antenhe*	brush-tail possum	<u>Trichosurus vulpecula</u>	0
aherte	bilby	<u>Thylacomys sp.</u>	0
arlude#	bettong	<u>Bettongia sp</u>	0
altywekerre	black goanna	<u>Varanus sp.</u>	0
kapele	lizard		0
kirrekirre	lizard		0
ilentye	galah	<u>Golophus roseicapillus</u>	0
arlpate	port lincoln parrot	<u>Barnardius zonarius</u>	0
atetherre	budgerigar	<u>Melopsittacus undulatus</u>	0
arewarewe	cockateil	<u>Nymphicus hollandicus</u>	0
angkwene	major mitchell cockatoo	<u>Cacatua leadbeateri</u>	0
irrarnte	black cockatoo	<u>Calyptorhynchus magnificus</u>	0
uremparenga	mulga parrot	<u>Psephotus varius</u>	0
arntepe	pigeon		0
unenangke	tawny frogmouth	<u>Podargus strigoides</u>	0
impaympe	bird		0
nyingke	zebra finch	<u>Taeniopygia guttata</u>	0
irreperrepantyele	bird		0
pelyakwe	waterbird		0
urralyerre	bird		0
antethirrike	snake		0
utneye	snake		0
wurreyirrpe	snake		0
arrwepwele	snake		0

TABLE 4.5 (contd.)

FOOD CATEGORY: **tyape** (grubs)

Aboriginal name	ITEM		USE LEVEL
	Other names	Host Tree	
atnyemayte	witchetty grub	<u>Acacia kempeana</u>	3
alperrayte	grub	<u>Atalaya hemiglauca</u>	2
ingweninge	grub	<u>Eucalyptus camaldulensis</u>	1
lyenayte	grub	<u>Acacia validinervia</u>	1
apunhayte	grub	<u>Cassia nemophila</u>	1
wurrinyingayte	grub	<u>Acacia georginae</u>	1
ukinayte	grub	<u>E. camaldulensis</u>	1
ngkenarre	grub	<u>E. camaldulensis</u>	1
lyalthengayte	grub	<u>A. georginae</u>	1
akultyayte	grub	<u>A. aneura</u>	1
awenthayte	grub	<u>A. coriacea</u>	0
alapelayte	grub	<u>A. dictyophleba</u>	0
unterrnengayte	grub	<u>A. spondylophylla</u>	0
alkelayte	grub	<u>Salsola kali</u>	0
athengayte	grub	<u>Acacia estrophiolata</u>	0
artetyayte	grub	<u>A. aneura</u>	0
alkemalayte	grub	<u>Codonocarpus cotinifolius</u>	0
alepayte	grub	<u>Acacia victoriae</u>	0
utneringayte	grub	<u>Eremophila longifolia</u>	0
angkerrayte	grub	unknown	0
alethalethe	grub	unknown	0
ntyeminyayte	grub	<u>Rhagodia spinescens</u>	0
alangkerayte	grub	unknown	0
utniynte	grub	unkown	0

FOOD CATEGORY: **ngkwarle** (sweet substances)

arwengarlkere	honey	native bees	3
yirrampe	honey ant	<u>Camponotus sp.</u>	3
untiyampe	blossom	<u>Hakea cordophylla</u>	2
tharrkarre	blossom	<u>Grevillea junctifolia</u>	2
athengalpele	gum	<u>Acacia estrophiolata</u>	1
aperiltye	lerp	<u>Eucalyptus camaldulensis</u>	1
tyerrampe	ant nest		1
wutinewutine	red honey ant		0
rlpele	lerp?	<u>Acacia anuera</u>	0
alperrampe	gum	<u>Altalya hemiglauca</u>	0
atnyirrampe	gum	<u>Ventilaga viminalis</u>	0
aterrkampe	gum	<u>Acacia ligulata</u>	0
aperante	gum	<u>E. camaldulensis</u>	0

TABLE 4.5 (contd.)

FOOD CATEGORY: merne (plant foods excluding seeds)

	ITEM		USE LEVEL
Aboriginal name	Other names		
anatyē	bush potato	<u>Ipomea costata</u>	3
atnularre	pencil yam	<u>Vigna lanceolata</u>	3
alatyiye	pencil yam	<u>Vigna sp.</u>	3
alangkwe	bush banana	<u>Leichhardtia australis</u>	3
alkwarrirre	bush banana	<u>Leichhardtia australis</u>	3
atwakiye	wild orange	<u>Capparis mitchellii</u>	3
akarlitye	wild orange	<u>Capparis umbonata</u>	3
katyerre	desert raisin	<u>Solanum centrale</u>	3
ahakiye	native currant	<u>Canthium latifolium</u>	3
irriyakwerre	wild onion	<u>Cyperus bulbosus</u>	3
iwurrarrkwe	wild orange	<u>Capparis loranthifolia</u>	2
mwanymē		<u>Solanum cleistogamum</u>	2
alperrantyiye	bush tomato	<u>Solanum elipticum</u>	2
kipangkwele	bloodwood apple	<u>Eucalyptus terminalis</u>	2
altyiye	leaves	<u>L. australis</u>	1
wulkantye	buds	<u>L. australis</u>	1
atyankene	mistletoe	<u>Lysiana murryia</u>	1
pakityelkere	mistletoe	<u>Amyema sp.</u>	1
perraleme	mistletoe	<u>Amyema presii</u>	1
utyirrke	wild fig	<u>Ficus platypoda</u>	1
ngkwiyange	kurrajong seeds	<u>Brachychiton gregorii</u>	1
aylpere	bush potato	<u>Ipomea sp.</u>	0
anakatye		<u>Solanum chippendalei</u>	0
angwelthe		<u>Cynanchum floribundum</u>	0
antyuwarle	unknown		0
wirrpe	beans	<u>Ryncharrhene linearis</u>	0
anukitye		<u>Carissa lanceolata</u>	0
ngkwerrime	mistletoe?		0
ntyeminye		<u>Enchyleana tomentosa</u>	0
arruwalpa	unknown		0

FOOD CATEGORY: ntange (seeds)

ntyerre		<u>Acacia coreacea</u>	1
alapina		<u>Paspalidium rarum</u>	0
alyatywerenge	woollybutt grass	<u>Eragrostis eriopoda</u>	0
lyawe	pigface	<u>Portulaca oleracea</u>	0
ingwiytike	pigface	<u>Portulaca intraterranea</u>	0
altyawarte		<u>Panicum decospositum</u>	0
aperrperre		<u>Eucalyptus camaldulensis</u>	0
angkwurrine		<u>Eucalyptus microtheca</u>	0

TABLE 4.5 (contd.)

FOOD CATEGORY: ntange (contd.)

ITEM			USE LEVEL
Aboriginal name		Other names	
apwertalkwene	button grass	<u>Dactyloctenium radulans</u>	0
ngalyerre	unknown		0
alpare	rats tails	<u>Dysphania kalpari</u>	0
altyiliyaltyiliye	unknown		0
artetye	mulga	<u>Acacia anuera</u>	0
atnyeme	witchetty bush	<u>Acacia kempeana</u>	0
aleperlterrke		<u>Acacia maitlandii</u>	0
antwelinye		<u>Acacia tenuissima</u>	0
alepale		<u>Acacia dictyophleba</u>	0
alepe prickly	wattle	<u>Acacia victoriae</u>	0
ampwiye		<u>Acacia stipuligera</u>	0

use levels: 0 = not taken
 1 = taken rarely or for demonstration
 2 = taken when encountered
 3 = actively sought

= thought by Aborigines to be extinct
 * = rarely seen
 + = taken by some groups only

TABLE 4.6: FORAGING RETURNS OF WOMEN FROM ANGKWELE, ENILTYIYE AND THREE BORES, MAY 1981 - MAY 1983

	WEIGHT		ENERGY		PROTEIN	
	total (kg)	mean rate (kg/wh)	total (kJ)	mean rate (kJ/wh)	total (g)	mean rate (g/wh)
Angkwele (323 wh)	70	0.2	545,604	1689	12,425	38
Eniltyiye (244 wh)	140	0.6	770,111	3156	9,019	37
Three Bores (382 wh)	89	0.2	772,836	2023	11,876	31
All locations (949 wh)	299	0.3	2,088,551	2200	33,320	35

Of the four resource categories the highest mean energy return rate (863 kJ/wh) was derived from **kere** (animals) while **merne** (plants) provided 687 kJ/wh. From the category **ngkwarle** (honey) women produced energy at a mean rate of 485 kJ/wh and from **tyape** (grubs) a much lower 165 kJ/wh.

Variation in rates of energy and protein procurement related primarily to the different pattern of exploitation of the four resource categories (**kere**, **merne**, **tyape**, **ngkwarle**) at the study locations (Figures 4.2, 4.3). Women at Angkwele and Three Bores procured the greatest proportion of energy from **kere**. Eniltyiye, however, differed from this. There, plant foods contributed the greatest proportion of energy. Women from Eniltyiye also achieved the highest mean rates of total energy production (3156 kJ/wh). This was a consequence of

their greater use of plant foods from which they acquired energy at a rate of 1402 kJ/wh. This rate was in excess (> 300%) of that produced at either Angkwele (415 kJ/wh) or Three Bores (461 kJ/wh) from the same resource category.

That Eniltyiye women gathered a greater quantity of plant foods than the women of either Angkwele or Three Bores was related as much to environmental differences between the locations as it was to a greater interest in plant foods. One species, **alkwarrirre** (Leichhardtia australis), constituted 83% of the weight of plant food collected by Eniltyiye women. This fruit (Plate 7.28) responded rapidly to rain and was particularly abundant in the mallee-covered sandhills surrounding Eniltyiye. It was a relatively large fruit (mean weight of 25 g) and shortly after rains large quantities could be gathered quickly.

A large group, including seven women, four adolescent girls and an infant, left Eniltyiye on the 18th April 1983. There had been rain on several occasions during the previous month and the **alkwarrirre** were at their best. New-grown after rain, they were particularly succulent and were eaten in their entirety when picked early. Later in the season the skin toughened and became inedible. The fruits hung in clusters of between two and five on vines that entwined the mallee shrubs. During a two-hour period of foraging the women collected a total quantity of 43.7 kg of **alkwarrirre**. The skill required for this task was minimal and all members of the party were productive. Individuals gathered quantities of up to 7 kg. One woman had three lizards (0.95 kg) in addition to her 6.4 kg of fruit.

Although the same fruit occurred in the vicinity of Angkwele in mulga woodland areas and also near Three Bores, neither location produced it in such abundance as the sand-plains of Eniltyiye.

Ngkwarle (honey) contributed significantly to energy production. For all locations, it was collected at a mean rate of 0.03 kg/wh, producing 485 kJ of energy and 2 g of

protein. The principal source of honey for women from Eniltyiye and Three Bores was that of the native bee (Plate 7.26). One such collecting trip has been described. A slight difference between the collecting rates of Three Bores and Eniltyiye may have been due to the frequency with which Eniltyiye women located hives in softwood trees. Although native bees made hives in a wide variety of different tree species (one exception to this seemed to be mulga), hives in softwood species, for example the Eucalyptus sp., were easier to remove because the wood of those trees was less difficult to chop. It was quicker to cut a hive from a softwood tree than from a hardwood type such as gidgee (Acacia georginae). As an indication of the difference: three women took 45 minutes (total) to expose a hive in a gidgee tree whereas it took two women nine minutes (total) to reach the hive in a softwood unityiye tree (Hakea chordophylla). In the creek floodouts near Eniltyiye were large stands of the softwood coolibah (Eucalyptus microtheca) which were favoured honey foraging locations for women there. Women from Three Bores more often chose to gather honey in stands of gidgee, frequently commenting on the relative hardness of the wood as they chopped. The difficulty they expressed, however, did not dampen their enthusiasm to search for honey.

In regard to **ngkwarle** it was Angkwele that produced a different pattern. Women there produced only 193 kJ/wh of energy from honey - a substantially lower rate than the other locations. I suggested that higher rates of energy production from **merne** at Eniltyiye were not necessarily indicative of a greater interest in plant foods. Similarly, the low returns from honey at Angkwele did not indicate any less interest in **ngkwarle** as a resource, but rather reflected the availability there of honey ants. These only occurred in dense groves of mulga which were uncommon in the vicinity of Eniltyiye and Three Bores but surrounded Angkwele.

At all locations, the collection of **tyape** had a low profile although women regularly gathered small numbers of them as described in the earlier account. For this food class too, Eniltyiye achieved higher return rates than either of the other two locations. The Eniltyiye environment may have had a more abundant grub supply as well, but I have no evidence to support that. On 27th December 1982 women from Eniltyiye went on a long journey to collect **tyape**. The 65 km trip to a distant, infrequently visited area took 4.5 hours (there and back). For an additional 3.7 hours, five women and five adolescents collected **tyape tnyemayte** (witchetty grubs). At the end of the day they had a total of 4.39 kg of **tyape**. This was the only trip recorded where women concentrated exclusively on **tyape** for the entire foraging period and produced such a large quantity; it probably accounts for the Eniltyiye figures.

Plant foods contributed substantially to the higher rate of energy production achieved by women from Eniltyiye, enabling them to achieve a mean total production rate that was greater than the other locations. Women from Angkwele and Three Bores, on the other hand achieved their highest rates of energy production from the flesh and fat of animals. (I use the term "animal foods" to indicate animals encompassed by the Anmatyerre category **kere** - animals with flesh considered edible.) The women of Angkwele produced energy from this source at rates higher (973 kJ/wh) than both the women of Three Bores (830 kJ/wh) and Eniltyiye (770 kJ/wh). But although the energy production rate derived from the category **kere** was higher at Angkwele than other locations, the mean total energy production there (1689 kJ/wh) was lower than at other locations. Women from Angkwele captured more animals and this was reflected in their rates of protein production (Figure 4.3). A similar situation prevailed at Three Bores. Although the mean energy production rate there (2023 kJ/wh) was higher than at Angkwele.

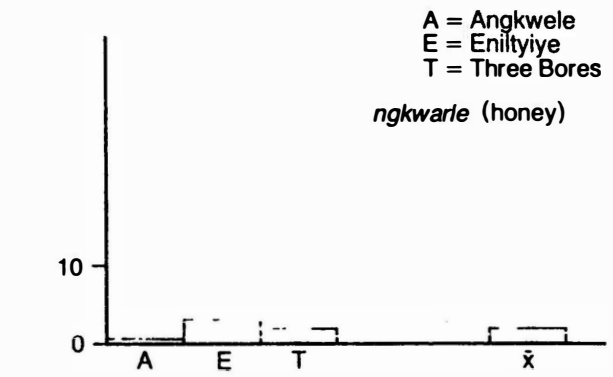
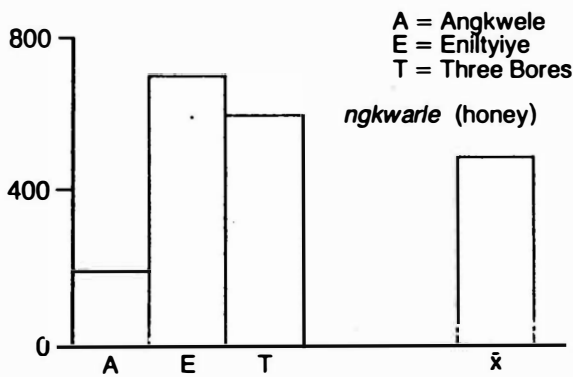
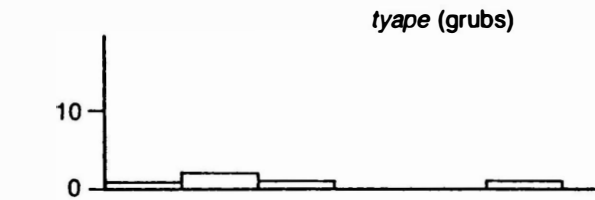
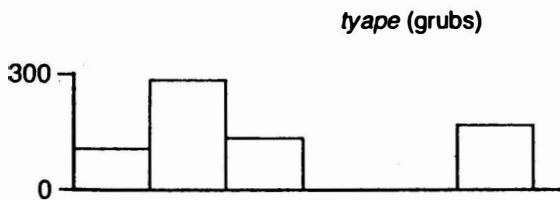
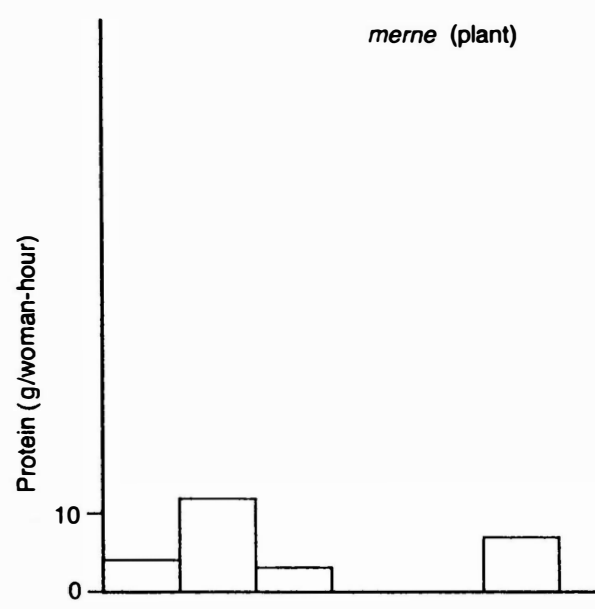
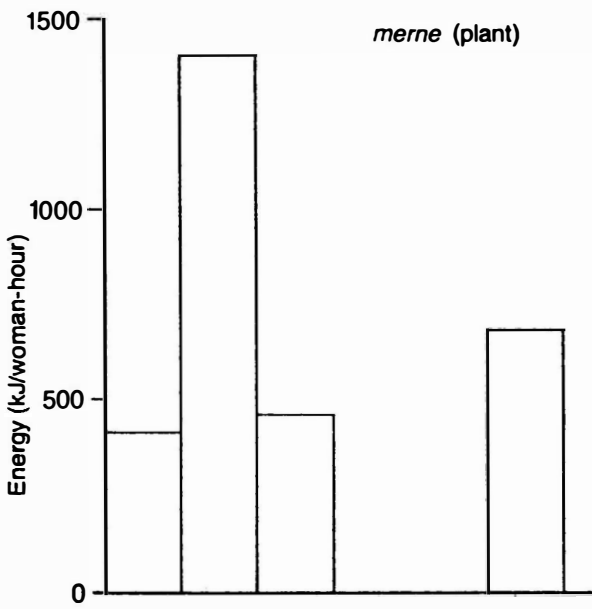
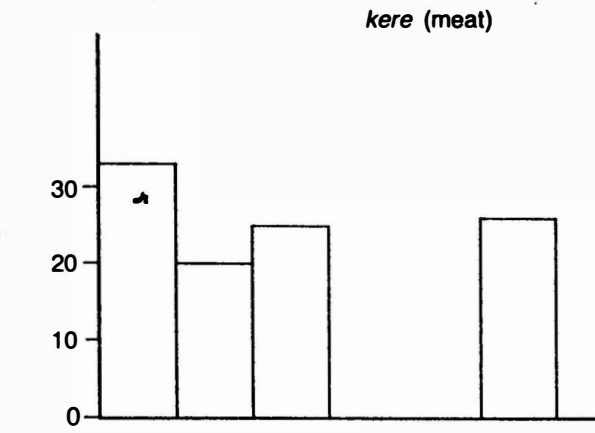
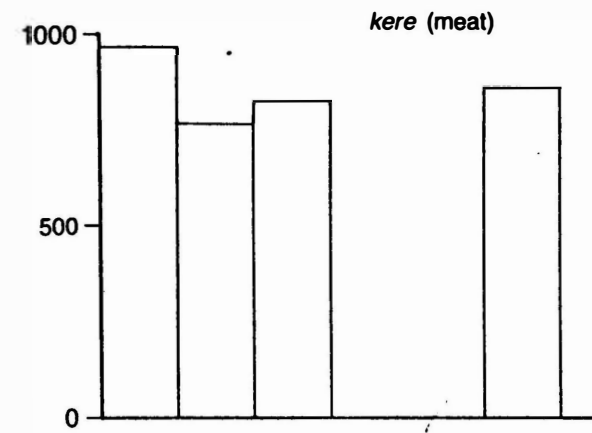


Figure 4.2: Rates of energy procurement by female foragers from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

Figure 4.3: Rates of protein procurement by female foragers from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

Animal foods are primary sources of protein so it is not surprising that women achieved their highest rates of protein production through the exploitation of the food category **kere**. However the importance of that category **kere** was underscored by its high profile in energy production rates as well. These were also highest (mean rate over three locations of 863 kJ/wh) from the category **kere**.

Frequency

A second aspect of the pattern of foraging was the frequency with which women at each location exploited each of the resource categories (Figure 4.4). For all locations the most frequently collected food category was **merne**. On 37% of all foraging occasions some plant food was gathered. Only slightly less frequently (33%), women captured **kere**, while their collection of **ngkwarle** and **tyape** were less regular, at 17% and 13% respectively. The variations to this pattern at each of the study locations are considered below. However, considered in combination with the data on return rates, the category of food collected most frequently was not the most productive of energy. Food plants were gathered often but the quantities gathered were insufficient to produce large amounts of energy. On the other hand **kere** was a slightly less frequently exploited resource but it contributed more to the rate of energy production. Each event of capture provided a larger energy return than did each event of gathering. **Ngkwarle** was collected only about half as often as plant foods but in sufficient quantity to contribute substantially to the overall energy production. **Tyape**, gathered on 13% of occasions, provided a small proportion of energy.

Angkwele

Women of Angkwele captured **kere** marginally more frequently (36%) than they gathered **merne** (34%). However, the energy

production rate that they achieved by capturing **kere** was twice that from plant foods, indicating that the quantities of plant foods they gathered were mostly small. The data on frequency of collection emphasised the role of **ngkwarle** (honey) at Angkwele. It was collected more frequently (20%) than at any other location. Grubs were gathered least frequently (9%). Nutritional analysis indicated that **tyape tnyemate** were rich in both total energy (1760 kJ/100 g) with fats comprising 37.5 g/100 g, and in this respect they were similar to **kere**. That Aboriginal people also shared this perception was confirmed by **Artwe ambwe** who remarked as we left on a foraging trip,

We'll look about **kere** kangaroo and if we can't find it, well, we'll get **tyape**, he's like **kere** again.

Angkwele people as a group were well supplied with fresh meat (Table 4.3) and their interest in grubs was more as a source of variety than an essential food source. The returns of women's foraging reflected this.

Three Bores

Women from Three Bores exploited the food classes of **merne** and **kere** equally frequently. On 32% of all occasions which they captured animals they also collected plant foods. As for Angkwele though, the high frequency of collection of **merne** was not reflected in its energy contribution (461 kJ/wh) which was less than that of **kere** (830 kJ/wh). This, despite the resource categories being collected with the same frequency. **Ngkwarle** (honey) was gathered on 16% of all occasions. Although much less frequently collected than either plants or animals, this resource category was a substantial source of energy production. Concentration was on native bee honey. The category exploited more frequently by women from Three Bores than at other locations was that of **tyape**.

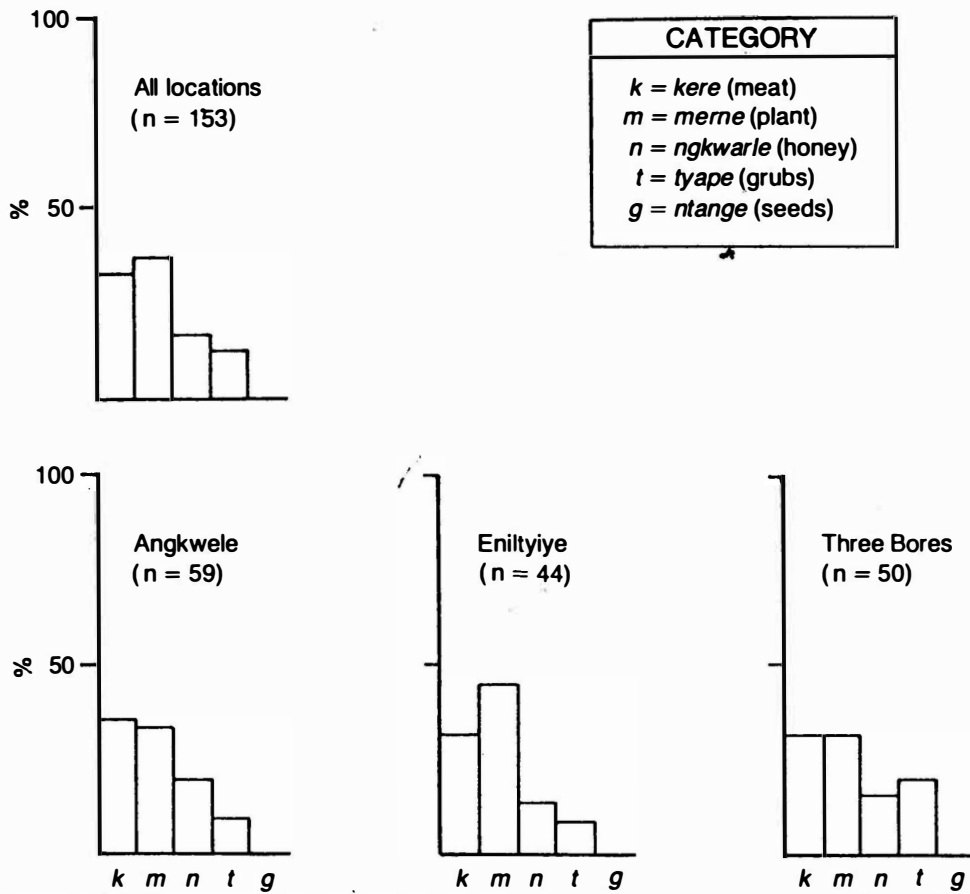


Figure 4.4: Frequency of collection of resource categories by women from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

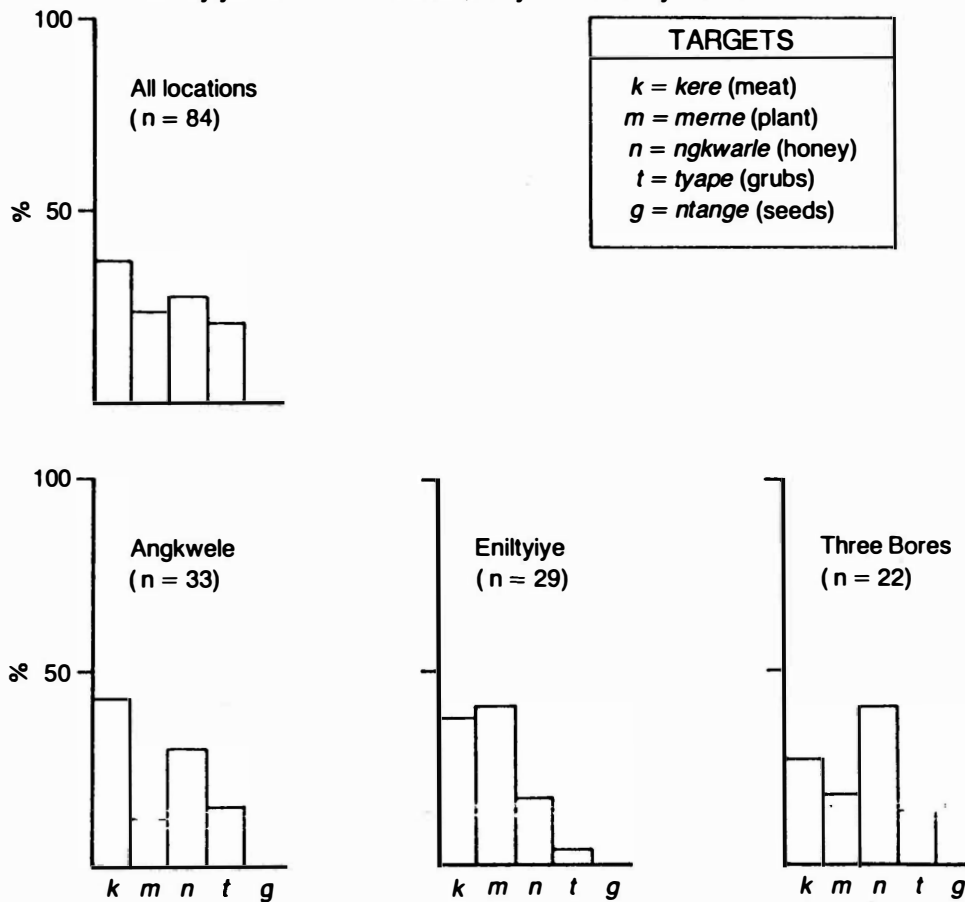


Figure 4.5: Initial targets of foraging trips by women from Angkwele, Eniltyiye and Three Bores May 1981 – May 1983.

This they gathered on 20% of all occasions. Its energy production rate was less than any other resource category despite its frequent collection because, like plant foods, it was collected in small quantities.

Eniltyiye

At Eniltyiye, merne was by far the most frequently exploited category (45%) - a more intensive level than at either Angkwele or Three Bores. As noted already, the abundance of one particularly favoured item accounted for much of the gathering, nevertheless women gathered it often and in quantity. It was usual for Eniltyiye women to return to the outstation from a day's foraging with some plant foods for distribution. They captured animals on 32% of foraging occasions but these figured less prominently than plant foods in their total energy production rates. They collected honey less frequently (14%) than either Angkwele women (29%) or Three Bores women (16%) but more productively (699 kJ/wh) than either. Possible reasons for this difference were their proximity to honey caches in softwood trees as suggested in the previous section. The pattern of gathering grubs was similar: they exploited them less frequently (9%) than elsewhere, but more productively (286 kJ/wh).

Targets

On most foraging trips women specified at the outset which resource category they hoped to procure. I refer to that nominated category as the foraging target. A target was specified either by naming it directly or, the target resource was inferred from the location, for example, a choice of several low stoney outcrops indicated a search for the echidna which frequent such places. The data on initial trip targets (Figure 4.5) distinguished the interest women had in obtaining particular food categories from their success in procuring

them. The comparison of target patterns with frequency of procurement and the data on returns also indicated the degree of success women achieved in attaining their expressed goals. Sometimes women seemed undecided as to the target. For example on 16th August 1981, a group set out from Three Bores to get native bee honey or so I thought, but when the first hive was located I discovered that no-one had brought an axe. Trips with an initial target reflected both the desire of the foragers at that time as well as their information regarding the potential of the chosen site. However throughout a day, foragers, individually and collectively, assessed their own performance as well as the productivity of the resource base. They re-adjusted their foraging targets accordingly. Sometimes the initial target proved unattainable, or a better opportunity arose during the course of the foraging day or other events caused a change of plan. For example, on a trip to collect **akatyerre** on 3rd July 1981, after an hour of fruit collecting the women moved to a nearby mulga area where those fruits were unavailable. There they searched for honey ants as well as digging lizard burrows they found. Multi-targets and shifting targets were part of women's foraging pattern.

Over all locations, the most frequently nominated foraging target was the category **kere**. It was sought on 37% of all occasions. Using energy production as a unit of comparison women were relatively successful in pursuing their interest since their energy production from **kere** was greater than from other food categories. The next most frequently nominated target was **ngkwarle** which women sought on 28% of occasions. But, in contrast to **kere**, they did not succeed in procuring it as often as it was targetted. Women gathered honey less frequently than either of the categories **kere** or **merne**. Both **kere** and **ngkwarle** were resource categories with a greater element of associated risk than was **merne**. For both categories it was common for foragers to fail in their

search. For most plant foods though, success was ensured once they were located. The greater risk of failure associated with procuring either **kere** or **ngkwarle** was indicated by the differences between their target occurrence as (37% and 28% respectively) and their lower frequency of collection (33% and 17%). Women did not capture animals or gather honey as often as they intended.

In contrast women gathered **merne** more frequently than their initial targets indicated. It was a target on 24% of occasions but was gathered more frequently (37%) than any other category. This confirms the trends of previously presented data that plant foods were taken if encountered. The least frequently named target was **tyape** (11%); it was also the least frequently collected and contributed a lower rate of energy production.

Angkwele

The target pattern of women from Angkwele reflected an orientation to the food categories **kere** and **ngkwarle**. They were targets on 43% and 30% (respectively) of all trips. But Angkwele women achieve a higher level of success because they also procured **kere** more frequently than any other resource category (36%). **Merne** constituted their least frequently nominated target (12%) but was collected almost as frequently as were animals (34%). From the consideration of targets, Angkwele women were most interested in **kere** and **ngkwarle** and least in **merne** and **tyape**. There was a distinct consistency in the foraging pattern of women from Angkwele. Their orientation to **kere**, was reflected by its high profile in all aspects: women nominated it most often as a target; they captured it more frequently than other categories and it provided their highest energy production rates.

Three Bores

Women from Three Bores targetted **ngkwarle** most frequently (41%) but it was their least frequently collected resource category (16%). They either did not pursue the resource as often as they initially intended, or their skill was insufficient or a combination of these circumstances could account for the difference. They specified **kere** (27%) and **ngkwarle** most frequently as targets. Most frequently they procured **kere** and **merne**.

Eniltyiye

For women at Eniltyiye, **merne** was the most commonly proposed target (41%); in contrast to the other two locations however, it was as well, their most frequently collected category (45%). **Kere** was both a frequently nominated target (38%) and a frequently collected one (32%). **Tyape** (4%) and **ngkwarle** (17%) were, the least frequently targetted resource categories. Women from Eniltyiye demonstrated a consistent focus on the category **merne** similar to that of Angkwele women to **kere**; it was their highest energy producer, they also targetted it and collected it most frequently.

Selection

An examination of the range of items that women procured from each resource category completes the data on foraging patterns (Figures 4.6, 4.7, 4.8). For example, within the resource category of **kere** women captured seven different animal species. Dragon lizards constituted 22% of the gross weight of these animals. This arrangement of foraging data highlighted environmental differences between the locations where it indicated that an item commonly procured in one area was absent from the inventory of a second area.

The category **kere** was represented in the contemporary inventory by seven different items. Almost half (46%) of the total weight of animals taken was comprised of one type of goanna (**lewatyerre**, Varanus sp. Plate 7.25). It was a small (mean weight 0.48 kg) animal but one highly favoured for both its flesh and fat. The much larger goanna (mean weight 4.7 kg), the **perenti**, (Varanus giganteus, Plate 7.24) was captured infrequently though often sought. It accounted for 11% of meat weight. The small dragon lizards Amphibolurus barbatus (mean weight 0.39 kg Plate 7.25) consisted 22% of animals captured. Another goanna named **arramaye** (Varanus sp.) which was larger than but less often caught comprised 3% of meat weight. The importance of lizards as a meat source for women is highlighted by this data: 83% of the weight of all meat procured was from lizards, including the goannas and **perenti**, bearded dragons and blue tongue skink (Tiliqua scincoides). Echidna (Tachyglossus sp.) and one kangaroo (Macropus rufus) were the other animals hunted by women.

Women collected seven different items within the category **merne**, but two, bush raisins (Solanum centrale) and bush bananas (Leichhardtia australis), accounted for 77% of the total weight. The range of items included fruits, the two above-named, as well as Capparis mitchellii and C. loranthifolia; it also included tubers - bush potato (Ipomea costata), a small yam (Vigna sp.) and a peanut-sized tuber (Cyperus bulbosus). Bush potato flourished in the sand-plain country. It was frequently sought by women of outstations north and east of Eniltyie.

The resource category **tyape** was represented by a single type of grub found in the roots of the witchetty bush (Acacia kempeana). Although women obtained two types of honey (native bee and honey ant) that of the native bee was collected in greatest quantities, constituting 94% of the total weight of honey.

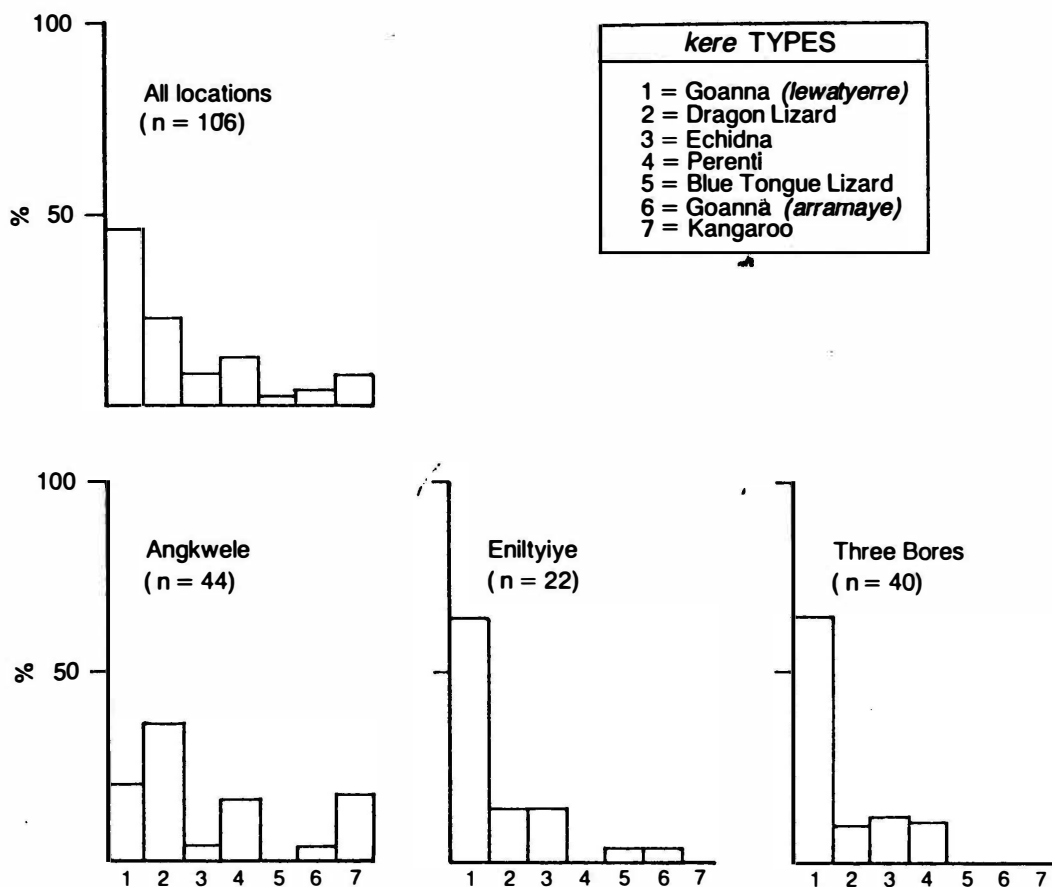


Figure 4.6: Weight (kg) of types of the resource category *kere* (meat), procured by women from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

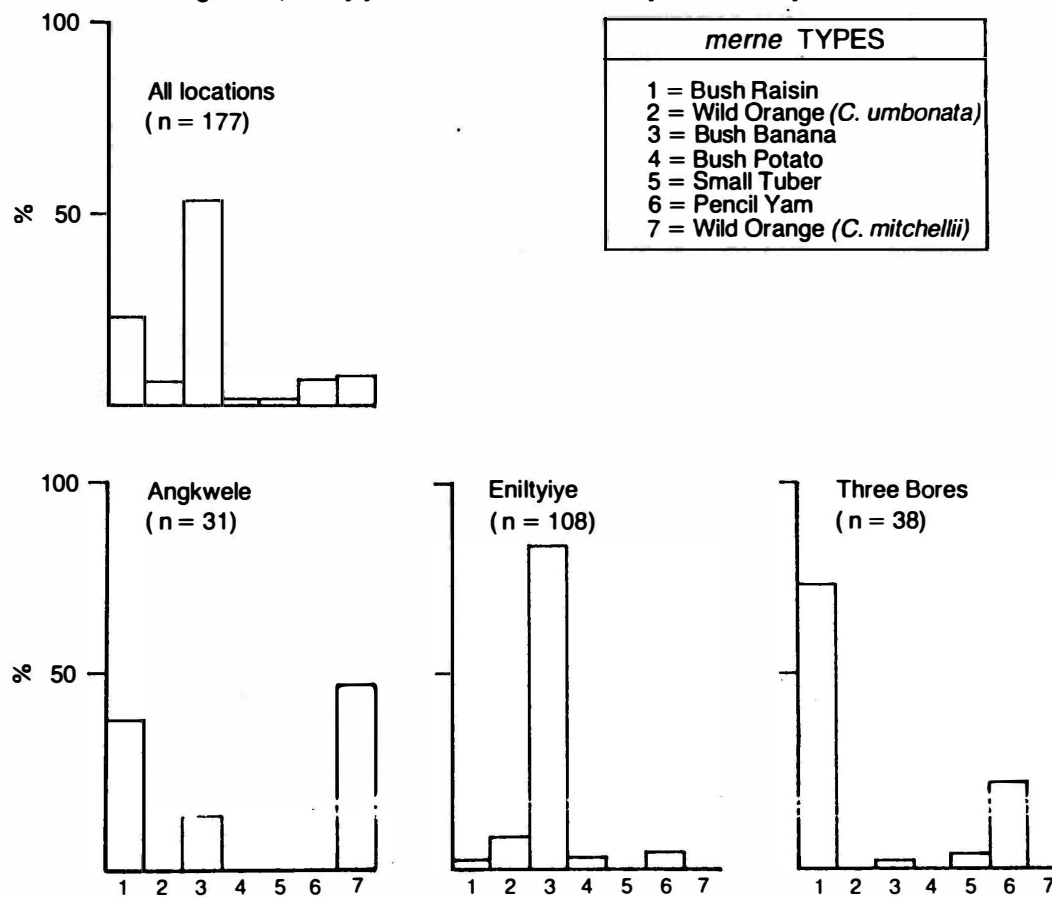


Figure 4.7: Weight (kg) of types of the resource category *merne* (plants), procured by women from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

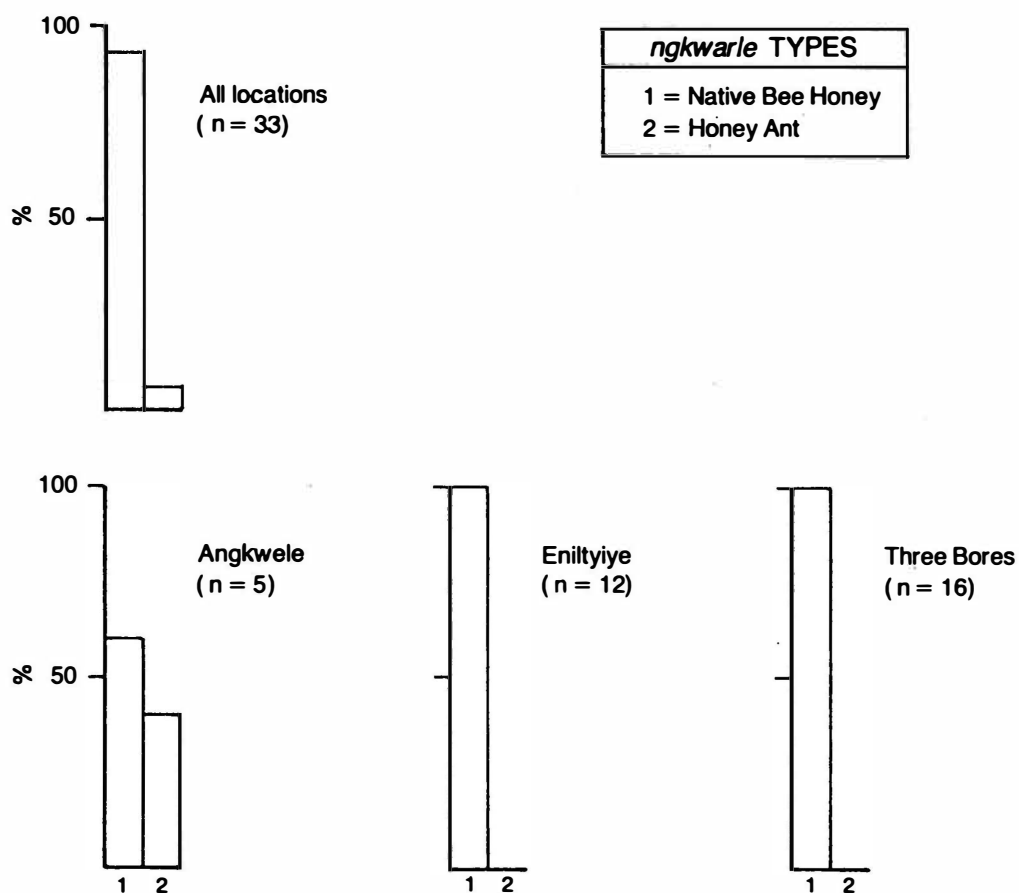


Figure 4.8: Weight (kg) of types of the resource category *ngkwarle* (Honey), procured by women from Angkwele, Eniltyiye and Three Bores, May 1981 – May 1983.

Angkwele

Women from Angkwele hunted six of the seven items of the *kere* category. The lizard comprising the bulk of their catch was the dragon lizard, a slow moving animal that was easily captured. The *perenti* constituted a substantial portion (16%) of their meat intake - higher than at the other locations. Women at Angkwele did not hunt blue tongues - they considered them inedible.

Neither the larger wild orange (Capparis loranthifolia) or bush potato grew in the vicinity of Angkwele. Of the other available plant species, they harvested three: bush raisins, the smaller wild orange (C. mitchelii) and bush bananas. The latter were harvested most frequently even though they constituted a smaller proportion of the total weight gathered. The women at Angkwele were the only group with convenient access to honey ants. They exploited two types of **ngkwarle** but had a particular preference for honey ants which provided them with extremely low returns of both weight and energy. They acquired honey from ants in sufficient quantity to constitute 40% of the weight of honey (5 kg) they gathered, yet they produced it at the lowest rate - less than 0.02 g/wh. They had thus spent at least 100 woman-hours acquiring honey from this source.

Three Bores

The range of items taken from each food category by the women from Three Bores was less than other locations. These few items were intensively exploited. The smaller goannas constituted 65% of their total meat intake; two other lizards and echidna made up the remainder. Within the category **merne**, they collected four different varieties but one, the bush raisin, accounted for 74% of the total weight collected.

Eniltyiye

At Eniltyiye there was a similar concentration, within the category of **kere**, or goannas. These comprised 64% of their total meat weight. Only at Eniltyiye did women take blue tongue lizards. It was an infrequent occurrence and made up only 4% of the total meat weight. The pattern of **merne** collection indicated a level of exploitation of one species, (bush banana) that was significantly higher than at other locations. This one item accounted for 83% of the total

weight of **merne** gathered. This degree of specialisation produced a distinctive foraging pattern at Eniltyiye such that it consistently appeared as an area in which women focused on the resource category **merne**. Their narrow selection of items within this category however made this less certain. The data suggests that they focused on bush banana rather than the resource category **merne**. Eniltyiye can be contrasted with Angkwele in this respect. The foraging pattern of women at Angkwele consistently indicated an orientation to one resource category: **kere**. However the range of items they selected from within that category was broader than any other location and the level of concentration on a particular species, less pronounced. They were, interested in **kere** as a food category and they expressed that interest by pursuing a variety of types; some, such as the bearded dragon were easily procured, others like echidnas and perenti, much less so.

Comparing the inventory of known resources (Table 4.5) with the information concerning foraging patterns (Figures 4.6, 4.7 and 4.8) indicates the reduction in the contemporary inventory relative to that of earlier times. The exploitation levels (Table 4.5) included two items taken by men (bustard and kangaroo) as well as some plants taken in very small quantities. It is thus a considerably broader contemporary inventory than that shown in Figures 4.6, 4.7 and 4.8 but clearly distinguishes items frequently taken (use level 3) from those rarely taken (use level 1).

FEATURES OF THE CONTEMPORARY PATTERN

The pattern of resource use described had a number of distinguishing characteristics; it was oriented to hunting animals and gathering honey; it comprised a much reduced set of items relative to that known of by the foragers; it highlighted the importance of taste preference in the contemporary selection of resources.

The importance of meat, fat and honey

Women's foraging showed, by all measures, an emphasis on the hunting of meat and the gathering of honey. A strong preference for meat among hunter-gatherers is widely reported (Hayden 1981:394), and is also well documented for Australia (Gould 1980:75; Jones 1980:134). However comments to date have related to the importance of male hunting. The data from Utopia demonstrated the importance of meat and fats as targets of women's foraging and suggested that men and women shared similar foraging orientations. Although women obtained smaller absolute quantities of meat, both women and men were active, regular hunters. For both, meat formed a principal foraging target.

People placed a high value on fresh meat. After camping at Three Bores for a week or so, one of the Angkwele women agitated for a return to the outstation, complaining of being "starving for kere". While at Three Bores they had depended more on purchased tinned meat. This was most unsatisfactory - it was described as "dry" meat. Hunger was best assuaged through the consumption of fresh meat. As a result, there was a high degree of persistence in the pursuit of large animals.

In the last light of an afternoon's foraging on February 2 1982, Paddy wounded a perenti. It staggered off into nearby long grass and could not be located. We returned to the outstation. The next morning, Ada, Artwe ambwe, Hilda and her two younger brothers and I returned to where the perenti was last seen. We arrived at 11.45 a.m. By 12.15 p.m. Ada had searched the area thoroughly and found a small blood spot at the entrance of a nearby rabbit burrow. The site was totally unshaded, the ground rough and stoney, but Ada set to work to dig into the burrows to locate the perenti. Using a crowbar and shovel she dug trenches between burrow entrances hoping to find either the animal or traces of it. Hilda and I were able to shovel dirt, but the planning and about four fifths of the labour was carried out by Ada alone. She continued at the task from 12.20 p.m. until 5.15 p.m. with a short break for tea at 2 p.m. After almost five hours of continuous digging in the midday summer sun, she declared the lizard not there. As we walked back towards the vehicle, she saw a tree with a

bee-hive in it. Between 5.55 p.m. and 6.15 p.m. she chopped into the tree to retrieve 720 g of honey.

Fat was at least as important as the animal flesh. Every animal killed was immediately checked for fat content and there was expressed disappointment if they were "boney ones", carrying little fat. At certain times lizards accumulated large pads of fat on the under-belly and along the tail. On capturing a lizard in this condition, the fat of the under-belly was removed after cooking and distributed separately (Plate 7.28). On one occasion, 24 September 1981, 14 lizards were caught. There was plenty of fat from such a large number of animals. The fat of the goannas was eaten and that of the dragon lizards, a bright yellow fat, was rubbed on their chests and faces. It was considered as having medicinal properties as well as being edible. Animals without fat were less sought. A woman rejected an offer of small lizards that she thought "too boney". Although larger animals, such as kangaroo, were rarely rejected on this account, I was told of one occasion on which a perenti was left. The fat of cattle was similarly highly regarded, although I noted little interest in sheep fat on the few occasions it was purchased. Beef fat was reduced for use as a frying medium and as a base for certain medicinal plants that were then smeared on the skin.

The high value placed on meat was not a recent development. It was regarded traditionally as sufficiently prestigious to form the basis of payment by a young man to the elders in return for teaching him the Law.

Physical strength and hunting prowess merely made it easier for a man to provide the gifts of meat with which to "soften" or "loosen" the resisting aged guardians of the traditional mysteries, so that they would pass on their secrets to him. (Strehlow 1971:677)

A second important focus of Utopia women's foraging was honey. This is also a widely reported feature of the diet of Aborigines (Chewings 1936:27; Meggitt 1962:Table 2; Akerman 1979; Levitt 1981:42; Meehan 1982:148) but one that has received little attention so far. In the earliest dietary survey, McArthur's (1960:150) data indicated that people at one study location in Arnhem Land collected honey on 67% of the (15) observation days. She commented:

Being the only really sweet item in their diet, apart from some fruits, it is very sought after, and often the energy expenditure and the time consumed (up to one hour) in cutting out a hive is out of all proportion to the food obtained. (McArthur 1960:110)

At Utopia, women spent many hours retrieving honey from the hives of native bees (Plate 7.26) and from the underground chambers of honey ants (Plates 7.10, 7.11). The time and labour they allocated to this pursuit were large, relative to the quantities of honey that they obtained. Like the value of meat, there is evidence that the enthusiasm for sweet tastes has not arisen recently. Finlayson (1935:64) for example, observed that:

A sweet tooth is a leading characteristic of both sexes at all ages, and the gins [women] go to infinite trouble to get honey and other local sweets, like the sugary exudation of the mulga twigs and the honey-ant. The latter is relished exceedingly.

Meat and honey were both important items within the foraging pattern of contemporary women. Not only did women show a strong desire to obtain these items, they consumed considerable quantities of each, and spent a large amount of time procuring them. An important difference existed between the role of hunted meat and that of bush honey. There was no available market substitute for hunted meat whereas there were market alternatives for honey. People were unable to buy

fresh meat, so they hunted. They bought treacle and similar products as well as procuring honey from the bush. The selection pattern of women highlighted the value they placed on meat, fat and honey. Although men's hunting supplied large quantities of fresh meat, and the store supplied honey, women pursued both items as priorities.

Reduced inventory

The range of food items obtained from the bush by women of the Utopia region is much reduced relative to the range of items they know to have been used in even the recent past. The local food classification system identified five major categories of food: **kere** (animals), **merne** (fruits, yams), **ngkwarle** (sweet substances), **tyape** (grubs) and **ntange** (seeds) from which the contemporary inventory is drawn (Table 4.5). Of the five food categories, four were part of the regular inventory of modern foragers and one, **ntange** (seeds) was consistently ignored as a food source. Women collected seeds to demonstrate the traditional processing techniques and on one or two occasions, gathered them for sale. To my knowledge no women possessed grindstones and to demonstrate seed processing they used those that I had found as well as fresh pieces of stone.

Items from the four categories were selected on the basis of their taste appeal, abundance and size. For sweet substances, only the two most abundant and concentrated sources of honey (hives and ants) were actively sought; blossoms, lerps and gums were rarely collected and then only if encountered. In the category **kere**, with exception of the bustard and emu (both hunted by men) all birds were ignored. Animals hunted were those which were larger or readily available. Lizards were particularly valued as sources of fat and were an important item in the contemporary inventory of women. Fruits regularly exploited were either large relative to others in the

category, like **anaty** (*Ipomea costata*), **alangkwe** (*Leichhardtia australis*), and **akarlitye** (*Capparis umbonata*) or easily gathered in abundance, as are **akatyerre** (*Solanum centrale*) and **irriyakwere** (*Cyperus bulbosus*). Those like the yams **alatyie** and **atnularre** (*Vigna sp.*) were sometimes sought, but only when they were known to be tasting their best. They appear in Figure 4.5 among a group of other similarly infrequently gathered plant foods. All plant foods currently exploited offered either sweetness or a succulence that women described as tasting "sweet".

Influence of taste preference

In the contemporary situation a minimal food supply was assured because people had regular access to store foods. While the range of available store foods was not all that people desired, its reliability relieved them of the necessity to forage in order to survive. With survival guaranteed, there was an opportunity to concentrate on more favoured items. The selection of one item rather than another is now based as much on taste as on hunger appeasement. Women's foraging patterns and the processes of selection that those patterns illustrated reflected to a large extent their taste preferences.

The strongest taste preferences indicated by women were for meat, fats and sugars. They accordingly selected items from the traditional resource inventory according to their potential fatness or sweetness. Each resource category had comprised items with varying potentials to satisfy either of the two dominant taste preferences. The categories containing animal foods (**kere** and **tyape**) offered fatness, those containing plant food and honeys offered sweetness (Table 4.7).

TABLE 4.7: POTENTIAL OF ANMATYERRE RESOURCE CATEGORIES TO SATISFY TASTE PREFERENCES

FOOD CLASS	QUALITY	
	sweet	fat
kere (animal)	0	+
tyape (grubs)	0	+
merne (fruits)	+	0
ngkwarle (honey)	+	0
ntange (seeds)	0	0

+ = presence of quality
0 = absence of quality

It is significant that **ntange** was the only food class that did not offer either taste preference and indicated perhaps why this particular category of items was entirely ignored by modern foragers. Women exploited a reduced number of items from within each of the other four categories, but seeds was the only category which they completely bypassed. Whilst the level of work required in the processing of seeds was surely a decisive factor, the persistent interest in other equally time-consuming and laborious activities such as honey ant collection indicated that other factors might also be influential.

Two further points should be considered. The preferences that have emerged as critical dietary influences are not themselves a consequence of changing dietary habits. Preferences for meat, for fat and sweet substances have a high profile as influences on modern diet, but the ethnographic evidence available suggested that they were part of the traditional dietary values of the area. They are not of recent origin

though their influence in shaping the total diet has probably increased in recent times. Secondly, recorded taste preferences were not sex-specific. Men and women shared a preference for meat, fat and honey. The total diet recorded at Angkwele reflected that pattern of preference and although women's contribution to the diet through foraging was relatively small, it nonetheless reflected similar trends.

SOURCES OF VARIATION

The foraging pattern was subject to variation through seasonal changes associated with temperature and rainfall.

Seasonality

Local environmental differences emerged in the patterns presented - the occurrence of some resources in one locale but not another, or the use of one item by one group and not another. Further sources of potential variation were the cultural regulations associated with food use, and, the consequences for women, of the dependence on motor vehicles.

Years during which the research was conducted were good - rain fell at the expected times in both the summer of 1981 and 1982. At least two of the recorded rain periods were sufficiently widespread and heavy to cause the Sandover River to flow. The intensive harvesting of bush bananas at Eniltyiye during the late summer, February, March and April 1983 followed early summer rains. Similarly, there were intensive collections of desert raisins during May 1982 after heavy rains in the preceding February. Generally speaking, however, seasonal patterns associated with rainfall were impossible to detect from contemporary foraging. Plant foods, the strongest indicators of seasonality were least relied on by contemporary foragers. The plant foods collected at Angkwele, for example, were in such small quantities relative

to other food types that their contribution to the total diet was almost negligible. In addition, women as a group foraged too infrequently to detect the seasonal constraints on their foraging pattern. At Eniltyiye, where plant foods were a more significant food source, the women restricted their collection to one species, making the broader seasonal pattern of plant food use impossible to chart. The effects of temperature on foraging practices were outlined in Chapter 2.

Firing

Firing, as a technique of resource management had all but ceased due to opposition of European pastoralists. After good rains the grass growth was prolific. **Artwe ambwe** complained that though it was difficult to either track or even see animals, he could not fire the area since the major portion of it was under a pastoral lease. The pastoralists' view had been well impressed on Aboriginal people, and I saw great care taken with fires at times of high fire risk.

On 18 June 1981 we travelled along the MacDonald Downs road. In the cabin was a woman and her teenage son who was smoking a cigarette. He threw the butt out of the window when he had finished. Within a few minutes his mother asked me to turn back. On reaching the place where the boy had thrown out the cigarette end, we stopped and his mother asked him to retrieve it, which he did. As we drove away she said that she did not want the foraging party to start a bush fire.

At other times, women covered fires with dirt, or made them in shallow pits to minimise the blowing of sparks. If, as Latz (1982:123) argued, "the judicious use of fire was the single most important aspect of the desert Aborigines economy", then contemporary people were no longer able to realize the potential abundance of their environment.

vehicle access

"No car, no kere" complained Emily Kngwarraye once. She succinctly described the importance of vehicles in contemporary foraging for both men and women. Without access to a vehicle, foraging was restricted to areas near outstation camps, areas which had usually been heavily exploited. I recorded data concerning women who foraged from a vehicle (mine) which they controlled as far as destination, duration of stay and participants. . The extent to which the resultant foraging pattern may have resembled that from undertaking a survey of women sharing cars with males is unknown. Where women shared cars or had to negotiate access, their degree of control over the vehicle was diminished (see chapter 7).

Taboos and restrictions

I was told that traditional rules regarding the division of game no longer operated and that people took what portions they wanted. That was the case for the majority of distributions that I observed. But since these were carried out within a small family group, formal rules may have been waived more easily. Certainly none of the restrictions described by Spencer (1969:472) for either uncircumcised youths or girls and young men were still complied with. For example, children argued for the best part of the kangaroo tail, they ate bush turkey, perenti and echidna all of which were forbidden them according to Spencer.

Some food items, though, had particular conventions associated with them. For example, honey ants required to be treated with care: people should work quietly to retrieve them; they should handle them gently and when collected the ants should be covered with a switch of mulga to keep them shaded. The fruit **ahakiye** (Canthium latifloium), of special significance to the Angkwele group, was collected initially by **Artwe ambwe**

in specially made wooden dishes (**lengarre**) prior to other people in the area collecting it. **Ahakiye** was described as a "shy" or "timid" bush which when being stripped of its fruit had to be treated quietly and respectfully or it would disappear. Green (1985:60) recorded an instance of a woman being disturbed by her preparation of **anwekwetye** (Carissa lanceolata) in a non-traditional way. At the same time some innovation in food use was evident. For example, people regularly re-fried kangaroo meat with onion and ate it garnished with salt and occasionally sauce.

SUMMARY

Foraging by groups of women contributed, by measures of weight, energy and protein, 5% or less of the daily per capita bush food intake of one outstation group. Of the total daily per capita food intake it was less - not more than 2%. Despite this, foraging groups comprised of women (and children) were a regular occurrence. The data on the pattern of women's foraging has suggested some reasons why that was so. Women have selected, from the known traditional resource inventory, a number of items which they value highly in terms of taste: meat, fats and honey. They concentrated their foraging efforts on those species. The value placed on these items was a strong inducement for women to continue foraging. They continued to engage in activities that were both laborious and time-consuming as they searched out particular preferred items. The data in this chapter identified women's preferences and their role in the contemporary selection of resources. The issue of the persistence of women's foraging will be further considered in the following chapter. Contemporary women's foraging was shown to conform to the conventional anthropological view of hunter-gatherers (in both Australia and elsewhere) as having a dietary preference for meat. I argued that this preference is not a recent one, or a development of recent dietary

changes. It suggests that women's foraging interests converged with those of men. A division of tasks and methods was not necessarily indicative of any difference in subsistence goals.

The role of plant foods in contemporary foraging required consideration. This category of food contributed less to energy production than did meat. However plant foods were gathered by women on more occasions than any other resource category. This regularity of consumption of fresh sources of vitamins, minerals and other nutrients, albiet in small amounts, must have nutritional benefits not apparent in this kind of analysis (O'Dea 1983; O'Dea, White and Sinclair 1988). This is particularly so in localities such as the Sandover River area where alternative supplies of fresh plant foods are erratic and expensive.

CHAPTER 5

A REVOLUTIONARY INFLUENCE

One of the most revolutionary influences in bringing about a change in the way of life of the Aborigines has been, and is, the introduction of flour and to a less extent other foodstuffs of civilization. (Rose 1965:31)

The adoption of European flour was a critical event in its consequences for women's resource use and the diet of Aboriginal people. The pattern of foraging that was described in the previous chapter has developed largely as a response to the ready availability of food supplies brought by Europeans. Although many such foods were adopted in time, flour was among the earliest that was widely available. Among the resources abandoned on adopting flour was the food category *ntange* (seeds) which had been primarily the foraging responsibility of women. An account of seed processing, the "tedious game" (Chewings 1936:4), made redundant by Aborigines' adoption of refined wheat flour will clarify the basis of their choice.

Seed processing was a labour-intensive task. On each occasion that I observed it, several women carried out different tasks simultaneously. One or two collected seeds, another winnowed, another threshed and so on. They changed tasks as required. Even though there was no pressure on the group to produce according to a schedule, they worked briskly and efficiently. The younger women, 20 to 30 years of age, carried out the less-skilled tasks such as gathering seeds and hand winnowing, but they showed great interest in the more difficult steps performed by the older women.

SEED USE AT UTOPIA

Seed processing was the most complex of the repertoire of women's traditional subsistence activities. It required a set of specialised stone implements as well as wooden dishes and improvised tools. The stone implements included: an upper stone or muller called by Anmatyerre, **tyenge**; an upper pounding stone or pestle, (an **alyere**) and a larger base stone, (**athere**). (See Smith 1985 for descriptions of stone tool types). Shallow wooden trays called **panthe** (Anmatyerre) or **alengarre** (Alyawarre) were used as containers for the milled seed paste. The improvised tools included a range of short beating sticks, small bark spatulas or shovels, bark dishes and large branches for support during the foot-threshing phase. Most women knew something of seed processing but only those over the age of 45 years had all the skills necessary to complete the process. There were eight main processing stages; collecting, threshing, winnowing, yandying, parching, pounding, grinding and cooking (Table 5.1); each of these stages required certain skills. I observed all stages of processing except cooking - the final and optional stage. The processing sequence varied slightly according to the seed type being prepared and to the individual skills and requirements of the preparer.

Collecting

The women inspected patches of grass to determine whether the seed head was sufficiently dry for easy collection and processing. Grass was gathered by hand into a bunch over the collecting dish and the seed heads pulled downwards into the dish (Plate 5.1). Traditionally a wooden collecting dish (**panthe**) was used for this. For some tree seeds this method also applied, but for others, small branches bearing seeds were broken off and collected (Plate 5.3).



Plate 5.1: Myrtle Pityarre gathers the seed heads of Woollybutt grass (*Eragrostis eriopoda*).

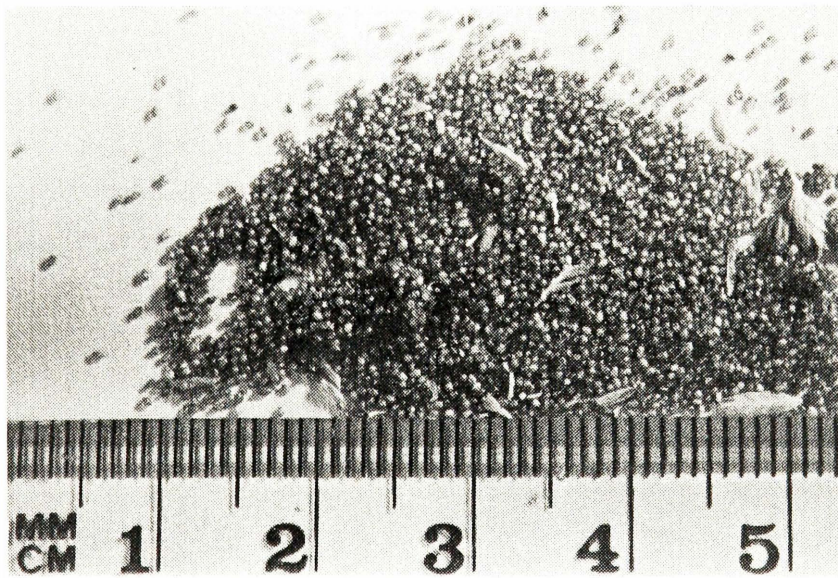


Plate 5.2: Seeds of Woollybutt grass.

Threshing

Grain was separated from the seed husk in several different ways. The larger seed bearing pods, like Acacia coriacea and Brachychiton gregorii, were heaped up in a shallow pit approximately 5 cm deep and 45 cm in diameter on an area of swept ground. They were then beaten with short sturdy sticks to break open the dry pods. As the pods broke, the seeds fell from them and, with the continual beating, collected at the bottom of the pile. Periodically women removed the accumulated debris of broken seed pods. The beating sticks were fashioned from wood available at the collection site and discarded on completion of the task; they were between 40 cm and 60 cm in length and 2-3 cm in diameter (Plate 7.19).

Another method of threshing involved women using their feet to release the seeds. A 1.7 m dry branch of a tree was placed upright and buried firmly in the ground. A pit, 20 cm deep and 35 cm in diameter was dug approximately 40 cm away from the base of the branch. Traditionally the walls of the pit were dampened to make them firm but these days a blanket was placed in the pit. The pit was filled with the grass seed. A woman then placed both feet into the pit full of seed and, using the large branch to steady herself, moved her feet in a rapid circular motion (Figure 5.1). Periodically she stopped to allow the others to remove the broken seed husks from the pit.

Winnowing

Winnowing was the final stage in collecting the seeds. Women, using their hands, took quantities of chaff and seed and dropped them from a height of about 30 cm (Plate 5.5a). The seed fell to the pile while the chaff was blown aside. The last remaining chaff, particularly the heavier debris from tree seeds, was removed using a wooden peatke and yandying.



Plate 5.3: Myrtle with a load of green *Acacia coriacea* seed pods. These were lightly steamed and the seeds eaten immediately.

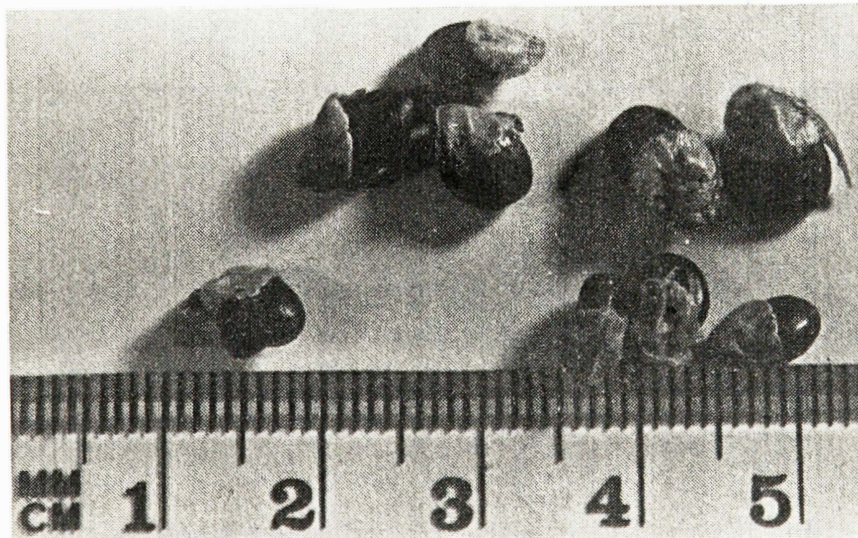


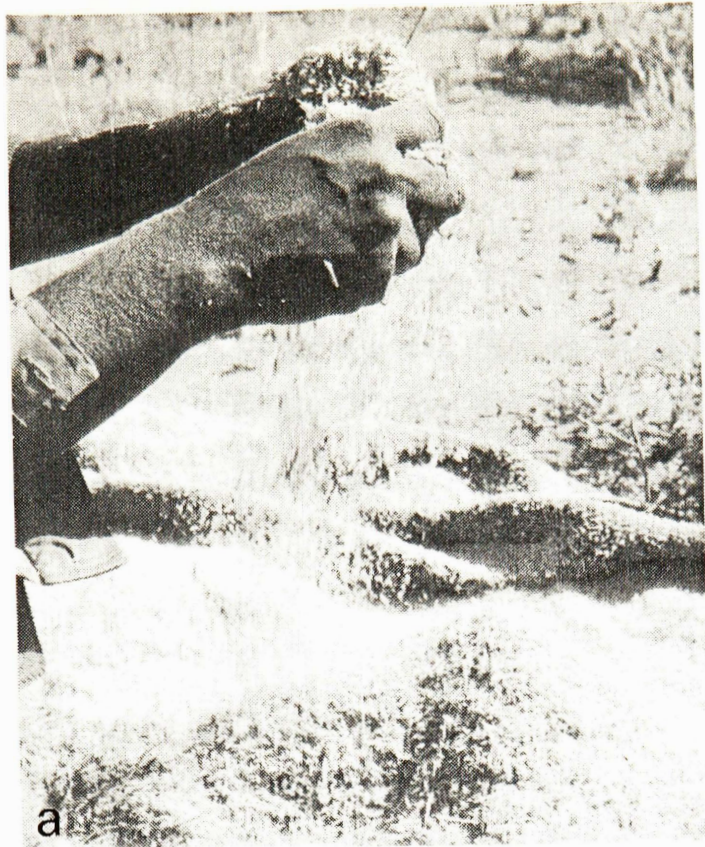
Plate 5.4: The dried seeds of *Acacia coriacea* were processed to produce meal.

TABLE 5.1: STAGES, SKILLS AND EQUIPMENT IN SEED PROCESSING

STAGE	PURPOSE	SKILLS	EQUIPMENT
1. collect	gather quantity of seed	1. hand picking 2. selection	wooden dish (panthe)
2. thresh	separate grain from husk	1. beat with sticks 2. rythmic foot movements 3. separate by hand	improvized
3. winnow	remove husks	1. by hand in the wind 2. rhythmic dish movement	wooden dish (panthe)
4. yandy	remove dirt, ash, coals	rhythmic dish movement	wooden dish (panthe)
5. parch	dry seed case (tree seeds only)	hand action	wooden dish (panthe) spatula
6. pound	break hard case (tree seeds only)	hand action	stones (alyere & athere)
7. grind	produce wet seed meal	hand action	stones (alyere & athere)
8. cook	cook prepared wet seed meal	-	fire



Figure 5.1: Foot threshing of grass seed.



a



b

Plate 5.5: Stages in seed processing. (a) Wind winnowing
(b) yandying demonstrated by Maggie Perrurle.

Yandying

The term "yandy", is an English expression to describe the process of separating seeds from other material such as sand and chaff by rhythmically rocking the mixture in the shallow **panthe** (Plate 5.5b). Women referred to this as "cleaning" the seed. There were three variations of the rocking action according to whether one was separating seed from chaff or sorting heavier residue such as soil, from seeds. If sorting heavier materials from seeds, women were able to sort into either two or three separate heaps on the coolamon.

The most basic yandying movement, called **ilpeme**, entailed moving the coolamon briskly up and down. This movement was used for the coarsest types of mixtures such as dried fruits mixed with leaf and twig fragments. Under this action the material divided into two piles. Performed in windy conditions, some of the lighter debris was also blown away. The second movement, **aynperneme**, combined a less pronounced vertical movement with a rolling motion. This divided the coolamon's contents into three discrete piles according to their varying weights. Thirdly, **irriketetiwyeme**, the most complex yandying movement, involved both a vertical motion and a rolling horizontal motion, combined with a regular, rhythmic, one-handed knock on the coolamon. This combination of movements also resulted in a three way division of the contents.

These complex yandying techniques were only performed by women over the age of 50 years. However the technique, itself, was vital in the preparation of seeds for consumption - without yandying skills the process cannot be completed. I gather that the laboratory to which I sent unprocessed seeds for analysis had great difficulty separating crushed seed from residue (J. Brand pers. comm.) and were most interested in how it had been achieved traditionally. Date (1982:121) in

commenting on the technique of yandying also emphasised its special importance within seed processing technologies.

Parching

Some larger tree seeds had extremely hard outer cases. Before pounding, these were parched to increase the brittleness of the casing. These were then easier to break open with the pounding stone. Small quantities (200 g) of cleaned seed were placed on the coolamon. Using an improvised bark spatula (*tyerrekere*), 10 cm x 4 cm, women shovelled hot soil, ash and coals from the fire to cover the seeds; they stirred the hot material through the seeds for a few minutes. Seeds that were parched then required additional yandying to remove the soil ash and charcoal.

Pounding

Using the upper pounding stone, (*alyere*) and the lower grinding stone, (*athere*), large seeds were pounded into coarse fragments. Because seed fragments tended to scatter across the lower grindstone at the impact of the pounding stone, only a small handful were pounded at a time. I was shown a technique whereby a barrier of several strands of string was placed around the perimeter of the grindstone to control the scattering of the large seed fragments. On the days of processing, however women preferred to use one hand to continually sweep scattered fragments back to the centre of the lower grinding stone. After the seed *A. coriacea* was pounded, it was yandied again to remove some of the larger fragments of seed casing.

Grinding

The muller, (*tyenge*), and the lower grindstone, (*athere*), were used to produce a coarse paste from the seed. By placing one

or two small stones underneath the grindstone at the edge nearest the processor, it was given a slight slope away from the operator. A coolamon wedged under the lower edge of the grindstone collected the ground meal. Women used a motion which simultaneously ground the seed and pushed it towards the lower edge of the grindstone. A gradually accumulating mass of wet seed meal trickled over the edge of the grindstone into the coolamon below (Figure 5.2). Water was trickled onto the muller rather than directly added to the ground seed.

Cooking

The method of cooking was described to me. The wet seed cake was laid in a shallow trench at the edge of a fire. Small burning or glowing fire-sticks were arranged across its upper surface to dry it out before it was covered with hot soil and left to bake. The method was also recorded on film at MacDonald Downs among the Alyawarre by Tindale in 1930 (Tindale 1977:347). Cooking was optional though, and in each of the demonstrations, those present consumed the seed meal as a wet paste, scraping it up off the collection dish on their fingers.

Grass seeds and Tree seeds

In the Sandover region women used grass seeds as well as tree seeds. They processed both types with a wet-grinding method. This involved the addition of water at the grinding stage to lubricate the grinding stones. As well, the water facilitated the movement of the ground seed meal across the grindstone.

The processing of tree seeds was more complex than that of grass seeds. I compared the processing of one tree seed type, Acacia coriacea, with that of a grass seed type, Eragrostis eriopoda, (Table 5.2).

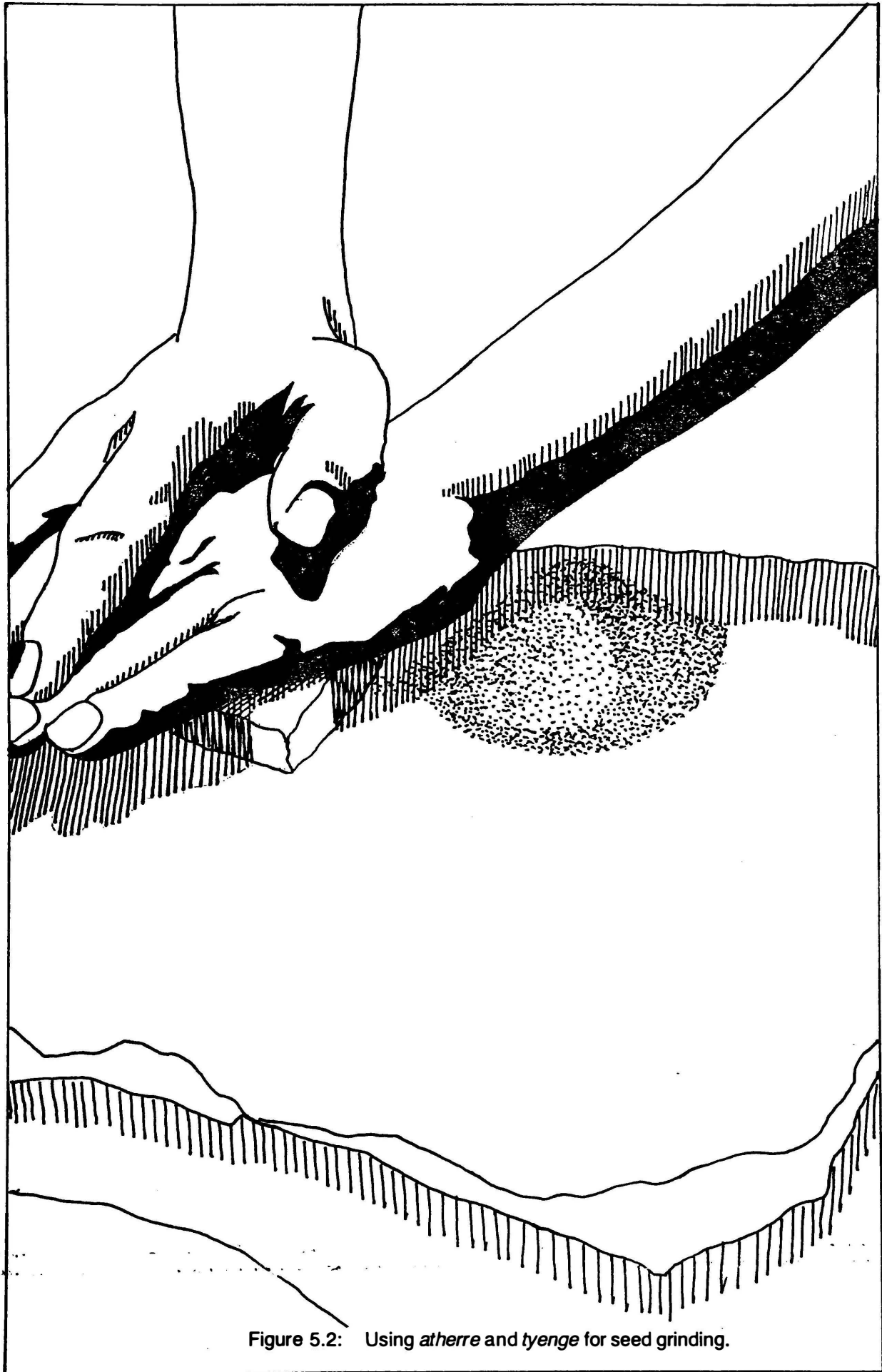


Figure 5.2: Using *atherre* and *tyenge* for seed grinding.

The time allocated to the different stages of processing is also compared. Despite a difference in complexity however, the tree seeds were processed more quickly (5.7 h/kg) than were grass seeds (8.4 h/kg). The dominant impression from the processing demonstration was of the lengthy procedures required to prepare tree seeds. I therefore expected their production to be more time-consuming than the grass seed. Comments by women that the preparation of grass seed was "a little bit quick" relative to that of tree seeds indicated that they shared this perception. Given a choice between preparing grass seed or tree seed, women's perception of the productive efficiency of grass seed may have led them to favour it over tree seeds. Processing time differences were greatest in the collection stage. Grass seed was extremely time-consuming (6.3 h/kg) to collect compared with tree seed (0.4 h/kg). Tree seeds are large and easily gathered in quantity (Plate 5.4), while grass seeds are extremely small and time consuming to gather in quantity (Plate 5.2). The collection of tree seeds accounted for only 7% of the total processing time; for grass seeds, collection constituted 75% of the total processing time. The intricacies of parching, pounding, grinding and repeated yandying were accomplished at a rate of 5.3 h/kg for tree seed compared with the faster rate of 2.1 h/kg for grass seeds. As well, processing A. coriacea produced more energy per unit weight (2230 kJ/wh) than did E. eriopoda (1600 kJ/wh). Although the energy content of A. coriacea (1240 kJ/100 g) is slightly less than of E. eriopoda (1333 kJ/100 g) the greater processing rate of tree seeds provided a higher energy production rate.

Whether the processing of all tree seeds was more productive of energy than all grass seeds is a question requiring further research. Some tree seeds for example, A. anuera, were ground without prior pounding, and some grass seeds such as Portulaca sp. did not require foot-threshing or winnowing.

TABLE 5.2: COMPARISON OF THE PROCESSING OF GRASS SEED AND TREE SEED

GRASS SEED		TREE SEED	
<u>Eragrostis eriopoda</u> (alyatwerenge)		<u>Acacia coriacea</u> (ntyerreme)	
Stage	Rate (h/kg)	Stage	Rate (h/kg)
collect	6.3	collect	0.4
thresh with feet winnow		beat with sticks remove husk by hand	
		yandy to separate seed from aril and husk fragments	
yandy to separate seed from dirt	0.1	seeds covered hot soil ash, coals	0.2
grind with tyenge and athere using water	2.0	yandy to separate seeds from ash, soil and coals	
eat wet paste		pound with alyere and athere	5.1
		yandy pounded seed to remove seed case fragments	
		grind with tyenge and athere using water	
		eat wet paste	
TOTAL	8.4		5.7

The seed of A. coriacea and some other tree seeds, for example, A. victoriae, were edible in their unripe, as well as their ripe form. The A. coriacea pods were picked green (Plate 5.3), placed in bunches on grass fires and peeled. The large green seeds were easily removed and eaten without further preparation. In addition, dried A. coriacea seeds were soaked in water to remove the arils (a small orange-coloured cap) and produce a milky white liquid which people enjoyed as a sweet drink. Spencer and Gillen (1969:22) were probably referring to A. coriacea in the following account:

Very often large quantities of the pods of an acacia will be gathered and laid on the hot ashes, some of which are heaped up over them, and then the natives simply sit round, and "shell" and eat the seeds as if they were peas.

Tindale (1977:349) distinguished the wet-grinding of grass seed from that of the processing of tree seeds and fruits which he described as being dry-pounded, ground and pulped. He suggested that the wet-grinding of grass seeds, (a subsistence technique, which he termed the Panara culture), represented a special technological advance in the incorporation of seeds into the subsistence economy of arid areas. The data from Utopia showed that the processing of both tree seed and grass seed involved wet-grinding and at least in some areas, the use of both was commonplace before the introduction of flour. O'Connell *et al* (1983:86) recorded the use of both at MacDonald Downs among the Alyawarre. Based on a demonstration of processing techniques, they computed a similar production rate for A. coriacea (5.25 hr/kg).

Reliability and convenience

In the traditional economy seeds were a resource which offered both reliability and convenience to female foragers. Both men and women knew the locations of seed-producing plants, so that given proper seasonal conditions, they are able to visit those

areas to harvest them. Even though women no longer gathered seeds for consumption, they knew the whereabouts of several patches of seed-bearing grass. When they first suggested that I record seed processing one woman said that she had noticed some **alyatywerenge** (woollybutt grass, *E. eriopoda*) plants that were ready to collect. They travelled to those areas and checked individual patches for harvesting on the morning of the demonstration. Women were guaranteed of success in collecting seed and they were able to regulate their own levels of collection.

Seed collection was also compatible with child-care responsibilities. On the day women demonstrated the processing of woollybutt grass the group consisted of five related adult women, three children and two infants (Figure 5.3). The older women, Maggie and Myrtle, undertook the specialised tasks of foot-threshing and yandying. Glory played a co-ordinator's role, directing her mother and sister, as well as winnowing seed herself. The youngest woman and her mother gathered seed for short periods, but Barbara also watched over her own and her mother's children. The two girls, Rita and Elizabeth, played together within sight of the working group. They occasionally took an interest in the processing but later left the group to forage nearby. They returned with a large, green edible melon of European origin which was shared. During the afternoon, Maggie, Barbara and their children also foraged in the surrounding area. The group remained in one location to carry out collecting and cleaning. Although Glory co-ordinated the procedures to some extent, women did not undertake tasks in any rigid order nor did each remain at the same task or complete one task before trying another. Stages in the processing sequence could be interrupted without loss so that women at all times were able to attend their children's needs.

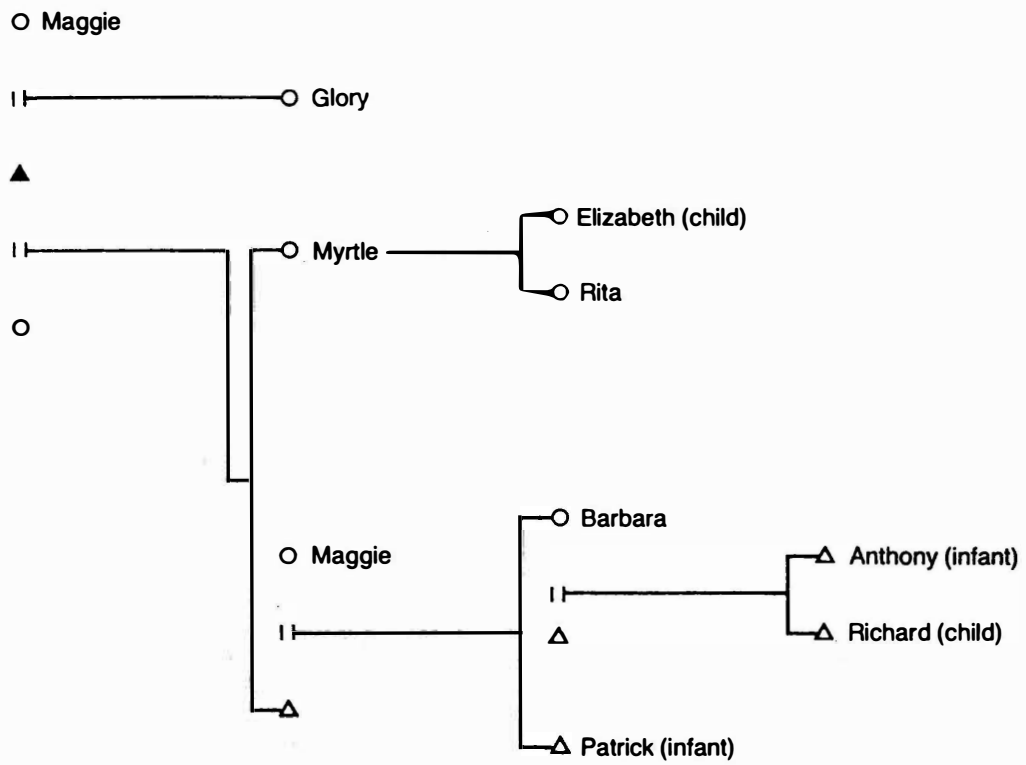


Figure 5.3: Kinship relationships of women processing grass seed, 16 May 1982, on Waite River Station.

Dietary role

Knowledge of early Aboriginal subsistence patterns in the region is insufficient to allow any but the most general comments on the role of seeds in the overall diet. My enquiries about past practices were inconclusive but the equal importance of yams in addition to seeds was clear. In the context of a demonstration of seed processing I was told that **atnularre**, **alatyiye**, (Vigna sp.), **anatye** (Ipomea costata), all of which are yams, and **kwatye** (water) were "main foods for olden-times". Women preparing to eat **atnularre** remarked on its importance as a principal food in earlier times. To a specific enquiry about the role of seeds relative to yams, people said that they liked to get both seeds and yams: "to mix 'em up, sometimes **alatyiye**, sometimes **ntange**."

I have interpreted the description of seed processing as "number one women's work" as a reference to it being a task specifically performed by women rather than one which pre-occupied them. Seed processing required specialised implements and techniques which marked it as women's labour in a way which digging yams was not. All one required to obtain yams was a digging stick, easily improvised, used and discarded, by either men or women.

Knowledge of storage practices might also have indicated the extent of dependence on seed in the past. One older woman told me that people had sometimes stored seeds in the caves of hills near **Eniltyiye**, and another said that seeds were occasionally covered with bark and left for later use. It was my understanding that storage was an occasional rather than regular practice; one carried out on a small scale among the people of the Sandover River area.

Among the Alywarre records of storage practices are similarly sparse. O'Connell and Hawkes (1981-1982) reported that

Aborigines in that area did not store any of their traditional foods, "with the exception of some fruits which were occasionally kept dried in small quantities for brief periods". But a more recent paper, (O'Connell et al 1983:93) noted that a European informant stated that "grass and herb seeds were sometimes stored for indefinite periods under traditional conditions". Lawrence (1968:57), in a review of historical literature found no references to grain storage in Central Australia although he noted that further east, north of Lake Eyre, it was practised.

One early report (Ashwin 1930:64) of a huge grain store near Newcastle Waters is often cited as evidence of storage practices (Allen 1974:314; Satterthwait 1979:353; Flood 1983:229). Ashwin, travelling in 1870-71, came upon a store containing about a ton of grain in 17 large (five feet long) wooden dishes. He commented on the unusual nature of the find by contrasting the practices of people of that area with those other inland groups "who rarely, if ever, make any provision for the future" (Ashwin 1930:66). Ashwin's observation appears by his own comments, to be an anomalous report for Central Australia. No similar observations have yet appeared. Cane (1984:76) believed, however, based on the oral testimony of Aboriginal people in the Balgo region of north western Australia that seed "storage was a very important aspect of the economic strategy in an area on the margins of the Tanami and Great Sandy Deserts".

The dependence on and use of seeds in pre-European times was probably less important than in some other areas, for example, the Darling River in western New South Wales or the Cooper's Creek area (Allen 1974). While that environment like the Sandover River area is also characterised by aridity and climatic uncertainty, flooding associated with the river system provided a seasonal periodicity unknown in the study area. Allen (1974:312) proposed a regular seasonal movement

by which people congregated along the rivers and lagoons during spring and summer and dispersed into the hinterland during the winter months. They harvested seeds during all seasons but were particularly dependent on them during the dry winter months. Early observers in that region reported the Aboriginal practice of gathering unripe grass into small haystacks so that it ripened and dropped its seed conveniently for collection. Allen (1974:313) quoted the explorer Mitchell who noted as he travelled down the Darling River that "the ricks of haycocks, extended for miles...". Nothing on that scale has been reported in the Sandover River region or in other parts of Central Australia for that matter. The pattern of seed exploitation in the Sandover River region appears to have contrasted with that of the Darling River. In the former roots, tubers and yams were gathered along with seeds. This suite of plant foods rather than seeds alone provided a reliable vegetable base for the diet.

It is most probable that several patterns of seed use co-existed in arid Australia. In addition to their nutritional content, seed-meal, roots and tubers contributed essential bulk in the Aboriginal diet. The relative roles played by these foods can best be assessed in the context of the specific environmental conditions and cultural practices of each region.

THE ADOPTION OF FLOUR

Historical reports (for example, Horne and Aiston 1924:64; Gillen 1968:51,53,74) of the early contacts between Aborigines and Europeans indicated that flour was a prestigious gift - sometimes given in payment for artefacts or for attendance at ceremony. Later, it was included as a basic item in the compulsory rations of food received in lieu of wages (Stevens 1974:85). Flour was preferred over locally available resources. People not only received what was given them, but

often actively sought supplies of it. Observers from many localities report that European foods and materials similarly attracted Aboriginal people. Glory Pityarre's account of her early life during the 1940s and 1950s (Chapter 2) indicated that Aboriginal people in the Sandover River region pursued a lifestyle that combined regular access to flour and other introduced foods with a continuing, but presumably reduced, exploitation of bush resources.

Flour produced a damper similar to that of the traditional method but without the labour-intensive activity of first collecting and processing seeds. Adopting flour allowed women (or men) to provide a comparable dietary component in terms of food bulk. No extra equipment was required for the preparation of damper from flour; it was a dry food, easily stored and transported either in bags or tins; and, as a staple item of European food in frontier locations it was widely available. Flour was compatible with the existing lifestyle of Aboriginal people and was readily incorporated into their diet. The specialised toolkit of seed preparation became redundant and the particular processing techniques, unnecessary.

Glory and other women of her age no longer possessed the yandying or threshing skills necessary to process seeds. Her older sister and her mother both did. Seed use did not end abruptly. Rather, it declined gradually as flour became more readily available and foragers ceased to learn the necessary skills. According to Glory Pityarre when people worked for rations women also gathered seeds if they encountered rich areas of it. During the 1940s and 1950s, people of the area ceased to regularly use seed and became dependent on flour.

FLOUR IN CONTEMPORARY DIET

A prominent geologist and explorer, Madigan (1936:94) described those areas of Central Australia that were beyond the reach of the motor-car as "damper country" because flour there was such a staple item. By the 1980s the motor-car was ubiquitous but the study area was still very much damper country.

Dietary role

Flour was consumed either as bread or more commonly as damper, a flat cake that was prepared at the hearth. People consumed 65 g of bread and 155 g of flour per person each day. This provided 7% and 25% respectively, of their total daily energy intake. Together, flour and bread provided 32% of the daily energy intake (Table 5.3). Bread, in unsliced loaves, was only available once per week when the hawker visited. It was rapidly consumed, usually within the day following purchase. People then used flour to prepare damper. Although bread was more convenient because it was available for immediate consumption, it was relatively expensive and had several disadvantages. One woman described them: bread was too "soft" - it disintegrated when dipped in tea; it failed to satisfy hunger; it was used up too rapidly. She said that she preferred damper, however she continued to purchase bread regularly. Without proper storage facilities in such a dry climate, bread rapidly dried out to become hard and inedible - or it was eaten by camp dogs.

Flour, on the other hand was purchased in well-sealed 16 kg steel drums (Plate 7.9e) that protected it against dogs, other animals and the weather. It was taken from the drums as needed and made into dampers.

TABLE 5.3: FLOUR AND BREAD CONSUMPTION AS A PROPORTION OF DAILY PER CAPITA ENERGY INTAKE OVER A 53 DAY PERIOD AT ANGKWELE

	DAILY PER CAPITA VALUES		
	Wt (g)	Energy (kJ)	% Total Energy
Flour	155	2350	25
Bread	65	680	7
TOTAL	220	3030	32

Damper combined with tea constituted a complete meal although people preferred to combine it with other processed foods such as treacle or tinned meat. In all I recorded six variations in damper preparation - all except one were called *merne*.

Damper preparations

Type A: The most commonly prepared form of damper was made as follows. Flour was mixed with baking powder and water into a soft dough which was then kneaded out into a large, flat circular cake. The quantity of flour varied according to the size of the damper required. A large damper was about 30 cm in diameter and 4 cm thick. It required between 1.2 kg and 1.5 kg of flour. The cook used a stick or shovel to scrape back coals and flaming wood from the fire. She then laid the dough on the exposed hot earth (Plate 5.6a). Hot soil, ash and coals were then shovelled over the top surface of the dough (Plate 5.6b). After 10 or 20 minutes the damper was exposed and turned over. The time of cooking depended on the heat of the fire and the size of the damper. When cooked, the



Plate 5.6: Preparing a damper. (a) Placing the dough on hot coals (b) covering the damper with hot coals, soil and ash.

damper was taken from the fire, rested lightly on its edge and slapped several times on both sides with the palm of the hand to remove any debris that had adhered to the surface.

Type B: A second preparation method entailed mixing a dough as described above, but it was cooked in a camp-oven. A camp-oven is a heavy metal cooking pot with a close fitting lid which was placed in a shallow pit in the centre of the fire (Plate 7.9c). Coals and hot soil were shovelled into the pit, heaped around the oven and onto its lid. This was a slower cooking method, taking between 50 and 60 minutes. It produced a favoured form of damper that had a bread-like crust and rose well. However the requirement for special equipment and a large bank of hot coals limited the frequency of its production.

Type C: The same dough was used in this third recipe. Handfuls of dough were then separately kneaded to form small, thin oval-shaped cakes, each about 15 cm long and 2 cm thick. These were cooked either on a wire grill set low over the coals or, if the coals were not too hot, directly on them. They were turned after four or five minutes.

Type D: This type of damper was prepared as the previous one but instead of the dampers being cooked on the coals they were deep fried in a pan of beef dripping.

Type E: When food was needed urgently a thick paste called **atnwerrenge** was prepared using 200-300 g of flour to which was added either boiling water or tea. The paste was quickly stirred, sprinkled with sugar and eaten hot. It was immediately consumed because it became very hard as it cooled.

Type F: The most complex preparation of flour involved a commercial bread mix that included yeast. This process required repeated kneading for preparation of the yeast. When

the dough was ready it was cooked in a camp oven. I saw this prepared only once. It took almost two hours and although the final product was appreciated, the time required for preparation was prohibitive.

Women chose to prepare a particular type of damper according to the anticipated number of consumers, their appetites, the time, and the availability of ingredients or equipment. The most frequently prepared damper was that described as type A; 65% of all the preparations were of this type, with the next most frequent type being the small individual dampers (Figure 5.4). These were most regularly prepared and eaten because they required neither equipment nor special ingredients. All types, except *atnwerrenge*, were eaten either hot or cold; plain or spread with jam, syrup or with tinned meat and sauce. Damper was always consumed with tea.

A number of factors influenced the size of the damper. On a day when little other food had been consumed and a woman anticipated a number of participants, she prepared a large damper. However if the cook was preparing food primarily for herself and her own dependants she usually chose to prepare the smaller, quicker varieties. The final choice was also dependent on the fire: if it had sufficient coals, how hot it was and whether there was wood available. Angkwele outstation was surrounded by mulga, a high quality firewood which was collected within minutes. At Eniltyiye, the closest wood to the camp was predominantly a fast-burning Eucalyptus species. More of this wood was required to produce sufficient coals. During the hottest periods of summer, most cooking was carried out either in the morning or the evening because manipulating a fire was unpleasant during the heat of the day.

A task for women

Women usually bought flour and prepared dampers because they were largely responsible for ensuring that children were fed. However adult men, too, were able to cook damper and occasionally purchased flour for the household. Damper preparation, (along with tea-making) was an essential domestic skill of modern outstation life. Children learnt them from an early age. **Artwe ambwe** frequently prepared a damper in the morning; Lindsay did sometimes. The distinction between the purchase of flour and the preparation of damper was important. Flour was not an immediately accessible food - it required further labour before it could be consumed. Although men sometimes purchased flour, they infrequently prepared damper. They depended on women to provide them and their children with adequate supplies of damper regardless of who initially provided the flour.

On average, a women with dependants made at least one damper each day. Fresh damper was usually made for breakfast - 57% were cooked before 10 a.m. (Figure 5.5). Early in the morning, household members waited together at their hearth until the damper was cooked and divided. During the rest of the day the pattern of eating was unpredictable. Families left the camp. Other meals took place elsewhere. Towards evening, household members again gathered near their hearth, when they sometimes shared another meal of damper and tea. The time spent preparing damper varied according to the recipe chosen. **Atnwerrenge** (type E) took the least time (less than 10 minutes) while campoven damper (type B) required an hour if the fire was adequate.

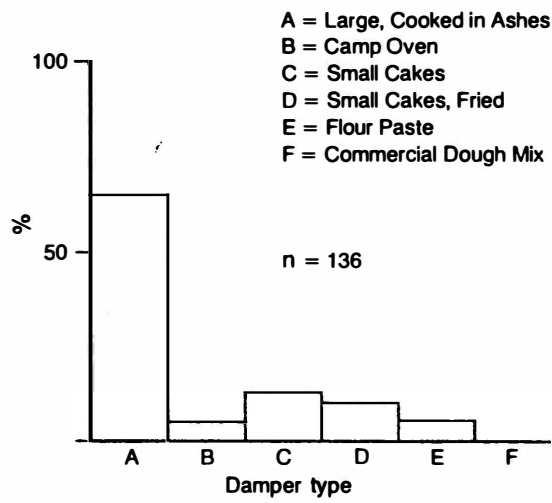


Figure 5.4: Frequency of preparation of damper types.

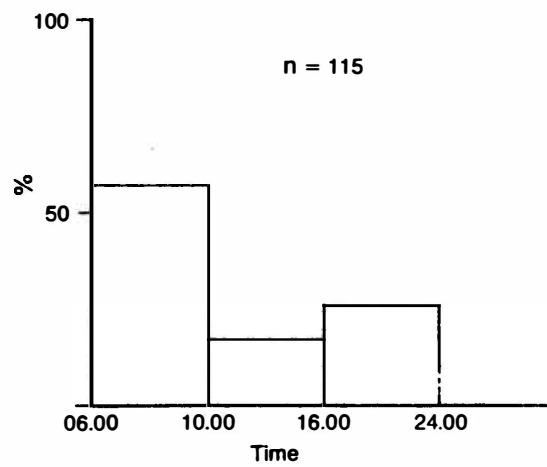


Figure 5.5: Damper preparation by time of day.

THE IMPACT OF FLOUR

It is now difficult to assess the degree to which the contemporary diet structure resembled that of traditional times. Was energy drawn from resources in the same proportions as now or did a different balance pertain? Evaluating the impact of flour on women's foraging patterns is therefore difficult. In the following calculations I have assumed, initially, that contemporary and traditional diet were of a similar structure.

Currently, 61.3% (5687 kJ) of the total energy intake was derived from purchased non-animal foods (Table 4.1). Assuming that at least that proportion of energy was traditionally provided by women, the foraging hours required to provide an equivalent amount of energy from bush plant foods can be calculated (Table 5.4). The hours required are calculated according to several production rates. The first, (1600 kJ/wh), is based on energy production from woollybutt grass seed; the second, (2230 kJ/wh), is based on the production of energy from the tree seed Acacia coriacea. The third rate, (3150 kJ/wh), is the highest rate achieved by contemporary women (Table 4.6). They also show a range of dependency ratios - a measure of the number of persons each woman can provide for in addition to herself. The highest ratio (4.4) represents the contemporary situation at Angkwele. Of a total population of 22 individuals, five were fit adult women (Figure 2.8). Traditionally, energy was drawn from a variety of plant resources, but these seeds provide a useful indication of energy production rates. At Rate 2 production (2230 kJ/wh), a women could provide for herself and one dependant with 5.1 hours of foraging work. With 7.6 hours she could provide for 2 dependants. However as the dependency ratio increases to the contemporary level of 4.4, the hours required of women increase to 11.2.

TABLE 5.4: FORAGING HOURS REQUIRED TO PRODUCE ENERGY EQUIVALENT OF PURCHASED NON-ANIMAL FOODS

DEPENDENCY RATIO	TOTAL ENERGY REQUIRED (kJ)	HOURS REQUIRED		
		*Rate 1 1600 kJ/wh	**Rate 2 2230 kJ/wh	***Rate 3 3150 kJ/wh
1	5687	3.5	2.5	1.8
2	11374	7.1	5.1	3.6
3	17061	10.6	7.6	5.4
4	22748	14.2	10.2	7.2
4.4	25022	15.6	11.2	7.9

* 1600 kJ/wh. Based on production rate of E. eriopoda (grass seed)

** 2230 kJ/wh. Based on production rate of A. coriacea (tree seed)

*** 3150 kJ/wh. Actual production rate of contemporary women from Eniltyiye incorporating all food categories.

That number of foraging hours would be impossible for each woman to sustain on a daily basis. At the lower production rate (1600 kJ/wh), the hours required (10.6) of each women are also beyond daily achievement for a woman with 3 or more dependants. Assuming a dependency ratio of between two and three, rather than the higher modern levels, the foraging hours required of women ranged from five hours to more than 10 hours.

Contemporary women who had abandoned these most time-consuming plant processes foraged at rates of between 2000 and 3150 kJ/wh. Over all types of resources and all study locations they achieved a mean production rate of 2200 kJ/wh (Table 4.6). Women from Eniltyiye outstation, who were the most

frequent collectors of plant foods, attained a substantially higher rate of 3150 kJ/wh. Thus using either contemporary or traditional technology, it may be that 3150 kJ/wh is near the maximum rate at which women could produce energy through foraging. At this highest rate, women working for 7.9 hours per day could theoretically have produced 61.3% of requirements even with the highest dependency ratio of 4.4.

A production level of 7.9 hours per woman per day assumes that every woman was available every day. Since this would not be so (through pregnancy, illness or other commitments) some women would be required to work much longer than 7.9 hours on some days. So, for example, for a woman to provide the vegetable equivalent of 61% of energy requirements for herself, her husband and two children would have required 7.2 hours every foraging day. The data indicates that the hours of labour required of women in arid areas under traditional times were substantial. As other researchers have also suggested (O'Connell and Hawkes 1981, Altman 1984) the "original affluence" of hunter-gatherers may not have been as great as thought by Sahlins (1972).

These calculations assumed a traditional dietary structure identical to the contemporary one whereby 61.3% of energy intake or 53.8% of food weight consumed was drawn from plant foods. A woman foraging at peak production level (based on the contemporary pattern) needed to work between five and seven hours to provide that amount of food. If the proportion of vegetable food required was at the level of 70 - 80% of food weight or energy as has been proposed (Meggitt 1957), it is difficult to envisage how women would have achieved the necessary extra production.

The availability of flour relieved women of a considerable amount of essential, constant work effort. The energy that they provided traditionally through foraging, they now provided through the purchase and preparation of market foods.

PERSISTENT FORAGERS

It is worth asking why women continued to devote considerable time to foraging despite the availability of prepared market foods and despite the modest returns from their foraging labours? Previous considerations of subsistence transformation have centred on the cessation of women's foraging practices rather than the existence of continuing, albeit different interests. They have concentrated on what women were **not** doing rather than what they were. For example O'Connell et al (1983:88) recorded a level of female foraging activity among the Alyawarre that was similar to that documented at Utopia.

Women's contribution from hunting and gathering was much less [than men's], probably no more than 5% of total diet, even though women in households foraged as often as once or twice a week.

The authors did not pursue the question implicit in their observation, but their data indicated that during the 1970s Alyawarre women foraged in much the same manner as those at Utopia.

The pattern of contemporary foraging provided a partial answer (see Chapter 4). The adoption of flour removed the uncertainty from subsistence endeavours and enabled women to seek only those items which they most preferred. The lack of alternative fresh meat sources also underlay women's continuing foraging activities. Men regularly provided quantities of hunted meat but women's foraging provided themselves and their dependants with additional small quantities of a variety of meats and fat. The marked preference of everyone for fresh meat motivated both men and women to persist in hunting animals.

Cultural satisfaction

Another important dimension to the persistence of women foragers is best illustrated by considering their interest in honey.

Contemporary women had more time to devote to the pursuit of time-consuming resources but the continued (or even increased) interest in honey (which was regularly purchased as well) demonstrated that foraging choices involved more than considerations of necessity and efficiency. I concluded that the motivation for persistent foraging must include another element - one that I have termed cultural satisfaction. Women enjoyed the activities of foraging. They derived a sense of achievement from successful ventures and satisfaction in performing the tasks necessary for success. The voluntary organisation and demonstration of seed processing by women was an expression of pride in their breadth of subsistence knowledge. It drew attention to the role of cultural satisfaction as an important element in foraging activities. What was the basis of such cultural satisfaction? What contributed to women's enjoyment apart from their evident enjoyment of particular food items?

The foods that women concentrated on represented the high-risk category of their traditional resource base. Most plants only had to be located to be collected. Animal foods, underground plant foods or otherwise concealed items involved an increased risk of failure. The high-risk items presented a challenge to the forager - testing her skill in a way that the more repetitive collection of other foods did not. The excitement of successful animal capture, for example, was tangible: in the concentration during pursuit, the gleeful shouts of children on success and the enjoyment of consuming the animal.

Foraging also presented opportunities for women to travel. This was a major factor in its appeal. Whilst on foraging expeditions women travelled away from their usual home-base and traversed the country. They were able to monitor tracts of country and the condition of resources; they noted items for future use and signs of recent activities by other people. Women also used foraging time to educate younger women and children about the country. On excursions, participants noted the sites of previous dinner-camps, of vehicle breakdowns, successful hunting events, sites of wasted labours and other events. This was in addition to place names, soakage locations, places of personal associations and the like. The landscape was a living one that contained part of the social and cultural history of those travelling through it. Foraging and related activities can be seen as an important aspect of "looking after country" because through them the links between people and the country were maintained.

An explanation of the persistence of female foraging activity incorporates elements such as necessity, dietary preferences and what I have termed the cultural satisfaction that is inherent in the activities. Meehan (1977) concluded similarly that shellfish gathering among the Anbarra had an importance beyond its nutritional contribution. She suggested that a fuller appreciation of its significance lay in examining "the wider cultural context" (Meehan 1977:524) of shell-fishing activities. Only in this light could its persistence through history be understood.

SUMMARY

The adoption of flour marked the beginning of dietary change and of altered subsistence routines. Women were relieved of the burdensome task of processing seeds.

Calculations based on the energy production rates of seeds, and of contemporary women indicated that traditionally women would have worked between five and 10 hours per day. This would provide the energy equivalent to that now acquired through purchased foods (61.3%). To produce greater proportions of either weight or energy from plant foods would have entailed unsustainable levels of work from women. The data do not support the conventional view that women in this area traditionally provided 70 - 80% of the diet primarily through gathering. However, women were not simultaneously relieved of the need to engage in subsistence work of any kind. Women continued to forage and as well, provided the major share of prepared foods, particularly tea and damper. This constituted at least 25% of the daily energy intake. The persistence of foraging as a regular part of contemporary women's subsistence activity despite the availability of flour and other substitute foods drew attention to the importance of elements such as dietary preference and cultural satisfaction in understanding contemporary subsistence routines of women.

CHAPTER 6

WOMEN'S FORAGING STRATEGY

Foraging has been described in terms of the resources that women were able to obtain (Chapter 5). A complementary aspect concerned the manner in which women organised to carry out these activities. In particular, what effect child-care responsibilities had on their organisation and productivity.

A FORAGING DAY

It was April 12, 1983. The residents of Angkwele had been confined to camp for two cold, wet days but this day was clear and sunny - good for foraging. Lindsay and Mavis early on suggested that the day be spent collecting *tyape* (grubs). No-one seemed interested in capturing kangaroo since one was brought in the previous evening. After an hour or so of discussion the camp divided into two groups, both of which left for the day.

Around 10.30 a.m. one group travelled to the main road in my vehicle and followed it southwest for about 45 km. It was a small group: Lindsay, his wife Mavis and their two young daughters Jessie and Rosie, Ada and her adult daughter Hilda. The equipment the foragers brought included: four crowbars, an axe, a short-handled shovel, billycans, some blankets, water, tea, sugar, and a half loaf of bread. Ada and Hilda shared the cabin with me, while Mavis, her husband and children sat in the back with the equipment.

The vegetation along the roadside was predominantly mulga. At 11.25 a.m. Ada directed me to pull off the road near a particularly dense stand. The party divided into two groups: Mavis, her husband and children, and the second group of Ada, Hilda and myself. Mavis' group moved off in a northerly direction while Ada, Hilda and I set off towards the south. Ada led the way at a brisk pace, carrying with her a billycan, crowbar and the short-handled shovel. Moving through the mulga she scanned the ground around the base of the trees for signs of honey ant nest entrances. Hilda searched too, covering a different area but remaining in our view most of the time. After 30 minutes Ada concluded that there were no

ants in this area so we returned to the vehicle. The other group had reached the same conclusion for they were already back at the vehicle. The group directed me to retrace our route along the road.

We left our first stop at 12.05 p.m. returning 6 km to the northeast where we stopped again at 12.15 p.m. We were now out of the dense mulga scrub and in mixed, open woodland of mulga (Acacia anuera), bloodwoods (Eucalyptus terminalis), and the shrub, witchetty bush (A.kempeana). The country was flat, with patches of dry grass covering the ground - pleasant to walk through on this cool autumn day. The party again split into the two groups, but this time Ada took the axe and a crowbar saying that this country had "too much sugarbag" - the honey produced by native bees.

At 12.20 p.m. Ada sat to dig into the roots of a witchetty bush seeking the grubs. Using her crowbar with one hand to loosen the damp, red soil she deftly scooped it up and tossed it to one side with her free hand. Within minutes she exposed the shallow root of the shrub. She broke it off by using the crowbar as a lever underneath it to prise it up. Pinching the skin of the grub she pulled it from the swollen section of root. Two grubs were taken from that tree. Ada moved on again in a southerly direction, checking the ground for fresh goanna burrows, trees for the presence of native bees, witchetty bushes for the cracks in the soil that indicate a supply of grubs. As well she scanned the surrounding vegetation for bright green, pear-shaped bush bananas that hang from vines looped through the branches of mulga trees.

Hilda moved in and out of view, always within earshot, searching another area of ground. I kept Ada in sight, both to record details of her foraging activities and out of fear of getting lost. (I realised later that while I might lose Ada, she would never lose me).

Between 12.20 p.m. and 1.50 p.m. Ada searched for grubs at the base of six different trees. At the fourth and sixth trees Hilda joined the search by digging on the other side. Returns were small - 16 grubs weighing 85 g. Ada and Hilda collected 25 large bush bananas (625 g) and Ada killed two small dragon lizards weighing 142 g and 130 g respectively. No sugarbag was sighted. We inspected several patches of dense, green mulga - the type in which we had begun the day's foraging. In each patch Ada again looked for honey ants but found none. We moved in an arc, gradually changing our direction northwards, heading towards the main road and the vehicle, which we reached at 2 p.m. Within a few minutes, Mavis and the others emerged from the low shrub across the road and after loading

people and gear into the vehicle we returned northeast along the main road. On the Angkwele road we stopped about 6 km north of the outstation. It was 2.45 p.m.

Mavis spread a blanket on the ground then began collecting wood for a fire while Lindsay kept watch over their two daughters. Ada, carrying her crowbar, walked away towards the nearby mulga scrub where she foraged alone. Hilda collected wood for a second fire which she built about two metres away from that made by Mavis. Here she boiled a billy for tea, and cooked the two lizards and the grubs that she and Ada had collected.

Mavis and Lindsay had been extremely successful, collecting 60 grubs (465 g) - all from one bush. We sat around the fire chatting, eating and drinking until Ada's return at 3.40 p.m. She had caught another of the dragon lizards, a larger one this time which weighed 465 g. She took the two cooked lizards from Hilda's fire and gave them to Jessie. She put the larger lizard on to cook but was later disappointed to find that it contained only a small amount of fat. She gave this lizard also to Mavis and Lindsay, saying that she intended to hunt again, to follow the track of a large goanna that she had seen earlier. At 4.10 p.m. Ada, Hilda and I began foraging again.

Ada quickly picked up the track of the goanna, followed it for twenty minutes, then abandoned it when it became too difficult to follow the track over hard ground. A further 15 minutes search located an old honey ant excavation site which she worked at for five minutes - there were no ants. We then returned to the vehicle, reaching it at 5 p.m. The afternoon had grown chilly and we found Lindsay, Mavis and the children sitting close to their fire. Mavis took the remainder of the cooked grubs home in an empty billycan. Within five minutes we had driven the last few kilometres into the outstation.

Foraging organisation

Both this account of a foraging day and the earlier description of a day with the women from Three Bores (Chapter 4) illustrate a pattern of constantly changing organisation within the foraging party as the day progressed. Lindsay, Mavis and their children remained together for the day, Ada and Hilda were sometimes together, sometimes apart; foraging sometimes co-operatively, other times independently. The

women from Three Bores formed similarly variable foraging sub-groups from their full party. For example, Glory and Lena set out together, soon separated then later re-grouped with Myrtle. Later again in the same day they were all part of a larger group which worked together for a short time.

Although I did not work with Lindsay and Mavis on the day described, on other occasions I observed their foraging practices. Lindsay did much of the child-minding while Mavis foraged, but they stayed together as a group. Had Lindsay not been present, Hilda would probably have spent the day with Mavis to help with the two children.

As well as forming a number of foraging groups during the day, the accounts illustrate the manner in which foragers switched rapidly from target to target. Ada tracked a lizard for twenty minutes, spent five minutes digging a honey ant nest, collected bush bananas and searched for native bee honey. She killed two lizards in a half hour period during which time she also dug out a small number of grubs. The women from Three Bores concentrated more on honey, but there were short interludes when Glory and Myrtle searched successfully for grubs and goannas.

Constantly changing foraging groups and the shifting of targets were both features of women's foraging strategy. This flexibility allowed them to respond quickly to a variety of situations. For example, on that occasion Glory found several bee hives but was without an axe. She relied on meeting the women with the axe to retrieve them. When the group from Angkwele sat to cook and eat their food, Ada left Hilda to cook while she continued foraging. Women tracked as they walked; they began a task but left others to complete it; they worked co-operatively on some tasks but not others. Foraging was rarely a sequence of discrete activities.

Travel over the land either on foot or by vehicle provided an opportunity to monitor resources, a practice which influenced future foraging plans. Foraging from a vehicle was a skill of both men and women. Whenever people travelled by vehicle, they scanned the road and surrounding country for food. Some items were not considered sufficiently important to warrant stopping but goannas and larger animals were rarely passed without at least an attempt being made to capture them. The problem was to decide exactly what constituted a foraging trip when it could reasonably be said that most travel included foraging. Foraging trips were defined as those on which people had set out specifically to collect bush foods.

DATA ORGANISATION

I considered that foraging began when a vehicle reached the first chosen location. I recorded the names of all participants including children and assigned each of these to a particular foraging unit. Women and children who worked in sight of each other constituted a foraging unit. I am not included as a member of any foraging unit. For example, even though I accompanied Ada and Hilda, I do not appear in the records on Table 6.1. I considered that my presence was insignificant from the point of view of returns: I was an unproductive though willing forager. On those few occasions that I was successful I kept my returns separate until the accounting was completed.

The duration of foraging was the length of time for which that group remained together. It excluded time spent at the dinner-camp. For animals killed at the roadside (roadkills), I designated the person who left the vehicle to procure the animal as a single person foraging unit. The duration of these events was usually short, between 0.05 and 0.1 hours.

For example, on the Angkwele outing a total of six participants formed three foraging units which consisted of one, two and four individuals respectively (Table 6.1). The foraging unit comprising one woman expended 0.9 forager-hours (fh); the unit of two persons expended 6.2 fh and so on.

Observer bias and other problems

Generally speaking, women avoided lengthy periods of lone foraging. They compromised constantly between foraging alone, covering untried areas to increase their chances of success and foraging in the company of other women to minimize threatening bush encounters. Women were more comfortable in company of others but also wished to maximize their chances of success in the food quest. Faced with this dilemma, a reasonable solution was to take along an anthropologist who provided company but not competition. On these occasions I might have provided an opportunity for single foraging that might not have otherwise occurred.

Children contributed as scouts, as collectors of fruits and sometimes as lizard trackers, but their contribution was difficult to quantify because it was intermittent, and for present purposes, insignificant. (On this point see also Draper 1976:216). Hence, for the calculations of total forager-hours, I excluded persons younger than fifteen years unless the foraging unit was composed only of children.

FORAGING UNITS: SIZE, DURATION AND AGE

Using the procedure outlined, 322 foraging units were defined. The largest foraging unit consisted of a group of 15 people; the smallest, of a single forager (Figure 6.1). Vehicle size set an upper limit to foraging-unit size irrespective of the desires of women.

TABLE 6.1: EXAMPLE OF DATA ORGANISATION USING RECORD OF TRIP ON 12.4.83 FROM ANGKWELE OUTSTATION

UNIT	NUMBER OF PARTICIPANTS	DURATION (hr)	FORAGER-HOURS (fh)
1	1 (Ada)	0.9	0.9
2	2 (Ada, Hilda)	3.1	6.2
3	4 (Lindsay, Mavis, two infants)	2.1	4.2
TOTAL		6.1	11.3

Smaller units were more common than larger ones, with 77% of all units formed consisting of four people or less. The unit most frequently formed (31% of all occurrences) was that of the single forager while the largest units of 14 and 15 people respectively were formed least often (0.5% of all occurrences).

Foraging units formed for varying periods of time (Figure 6.2). For example, the duration of the foraging unit comprising Ada and Hilda (Table 6.1) was 3.1 hours and that of the four person foraging unit, 2.1 hours. The largest units worked together for the shortest periods of time (0.5 - 1.5 hours). Contrary to my expectations, the smallest units, however, did not forage for the longest periods. Those units with between five and nine participants stayed together for between 1.8 and 2.3 hours and were the most stable of all units. Foraging units of two, three and four people worked together for between 1.5 and 1.8 hours, while single foragers, spent 1.5 hours working alone.

A comparison of the median age of foraging with unit size (Figure 6.3) indicated that decreasing age accompanied increasing unit size - the larger foraging units contained more children than did the smaller ones. Foraging units increased in size through the inclusion of more children rather than more women. The median age of units of more than five people was low - 12 years, while that of single forager units was 32 years. This reflected the age distribution of the group from which all foraging units formed (Figure 4.1). Of that group, 43 women were over 20 years of age; 26 people were between 10 and 20 years of age, and there were 33 children under the age of 10 years. The median age of single foragers was low also because 15% of those units comprised a child.

Taken together the data (Figures 6.1, 6.2 and 6.3) showed that smaller foraging groups occurred more frequently, were composed of more adults and worked together for longer periods of time than did the larger units. Single foragers constituted the most frequently formed unit. These units of one person were mostly older women who worked independently for 1.5 hours, a shorter period than foraging units containing more people. Units of six or more participants contained a majority of children. There were three distinct patterns of unit formation:

- (a) older women who frequently foraged alone for substantial periods of time;
- (b) stable groups of up to five members, comprised of women and children, which worked together for the longest periods;
- (c) larger, unstable groups dominated by children which formed infrequently and worked together for the shortest periods of time (< 1.5 hours).

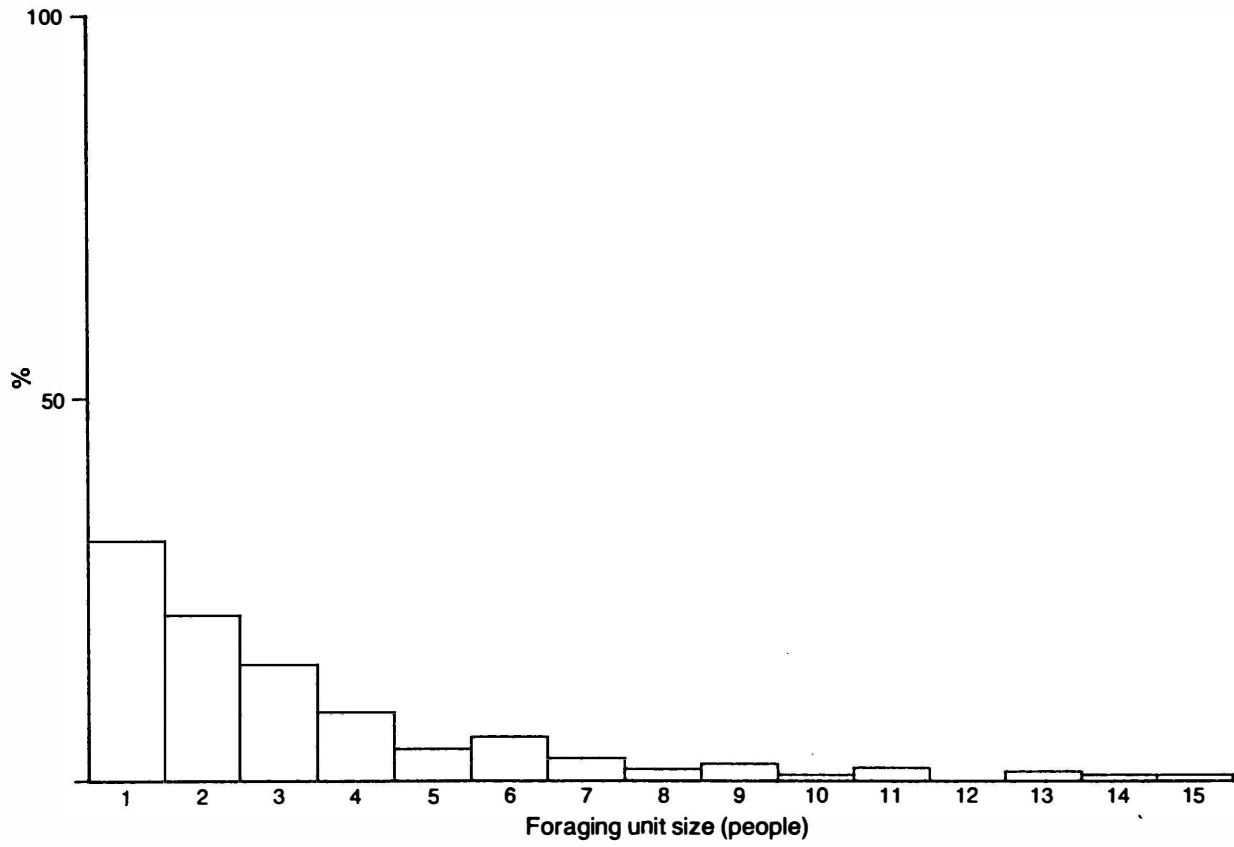


Figure 6.1: Frequency of occurrence of foraging units.

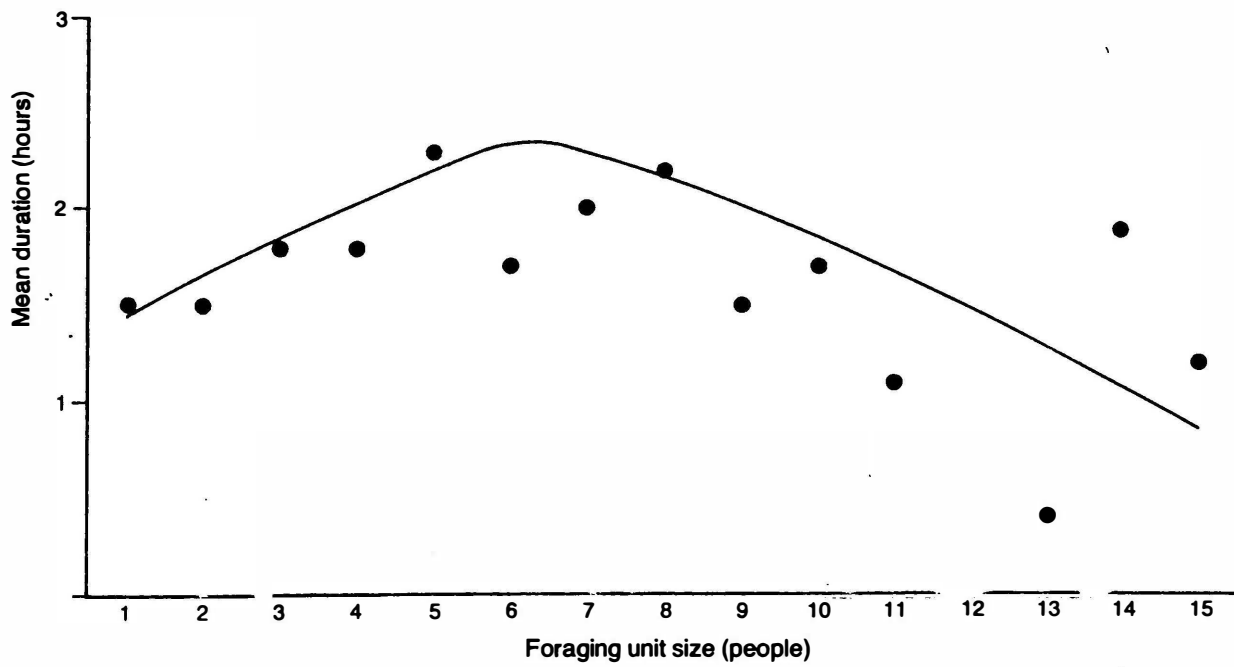


Figure 6.2: Mean duration of foraging activity by unit size.

Unit size and foraging returns

I compared the foraging returns, by resource category, for each foraging unit size (Figure 6.4). Single foragers procured the greatest amount of **kere** (meat), accounting for 38%, by weight, of all animals killed. As well, they procured the greatest quantity (36%) of **merne** (plant foods). For each of the four resource categories, smaller units were more productive than the largest units. Units of four people or less, procured 81.2% of all **kere** taken, 67.8% of **merne**, 65.7% of **ngkwarle** and 100% of **tyape**. In the case of **tyape**, no units larger than four people procured them at all. At the other end of the scale, the largest units (nine or more people) procured 5.9% of **kere**, 11.4% of all **ngkwarle** and 28.2% of **merne**. The largest units were more successful as gatherers of plant foods than either of the other categories.

The pattern highlighted the influence of children on the productive ability of foraging units. As the units increased in size the median age decreased to the point where units of six or more people had a median age of between seven and 12 years. These larger units often comprised one or two of the youngest women and all the children accompanying the expedition. Plants that these large units collected were mainly the fruits, **akatyerre**, (*Solanum centrale*) and **alangkwe** (*Leichhardtia australis*). Once located, these fruits only required picking. The small, easily acquired tuber of *Cyperus bulbosus* was dug with a stick from sandy soil. Women valued the assistance of children in the collection of several varieties of wild orange (*Capparis* spp.) which grew on relatively tall trees. Children enthusiastically climbed them and stripped them of ripe fruit.

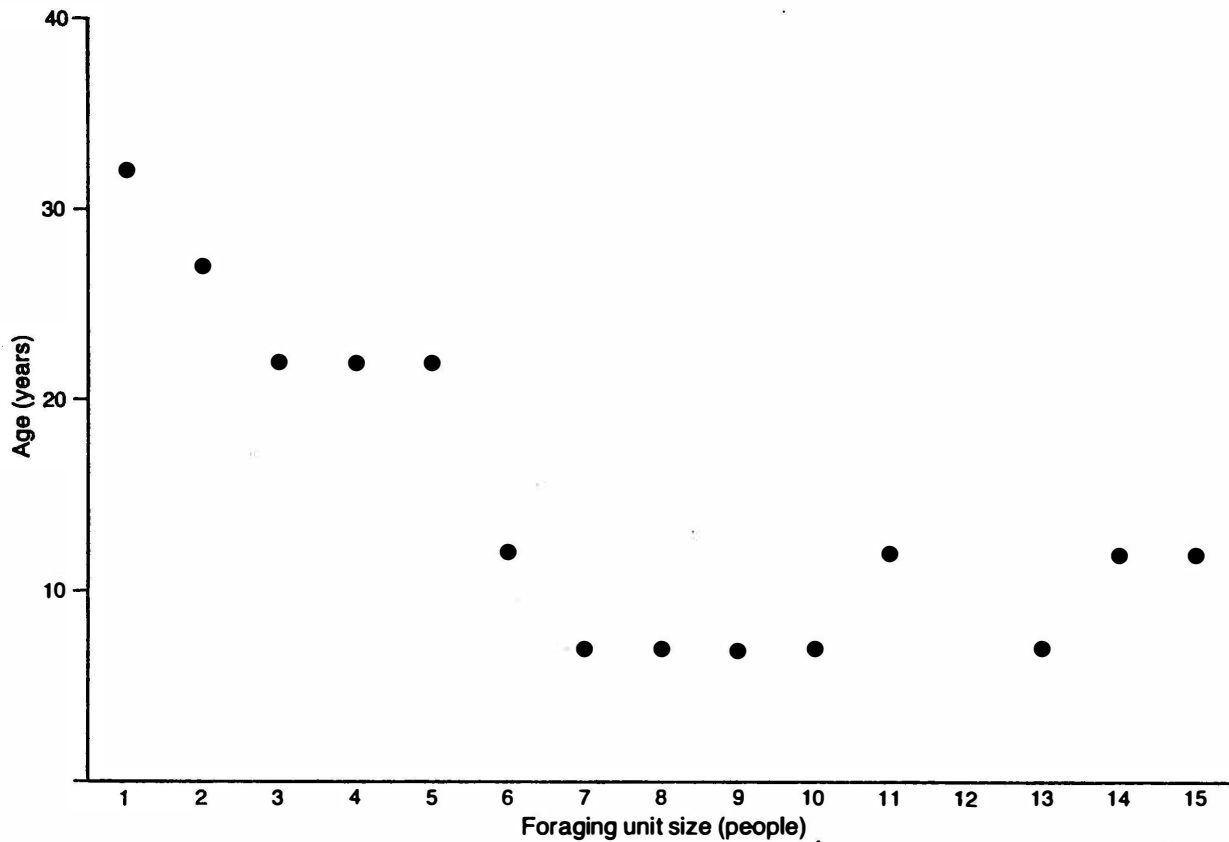


Figure 6.3: Median age of foraging units.

Children sometimes found bee hives, but were unable to use axes sufficiently skilfully to retrieve them. Neither were they able to gather honey ants. The productivity of the larger units in honey collection was not a result of the contribution of children. Such units usually consisted of one or two women who located and collected the honey while a large group of children followed them, eating the honey immediately it was collected. Children did not necessarily impede honey gatherers but were themselves unable to contribute.

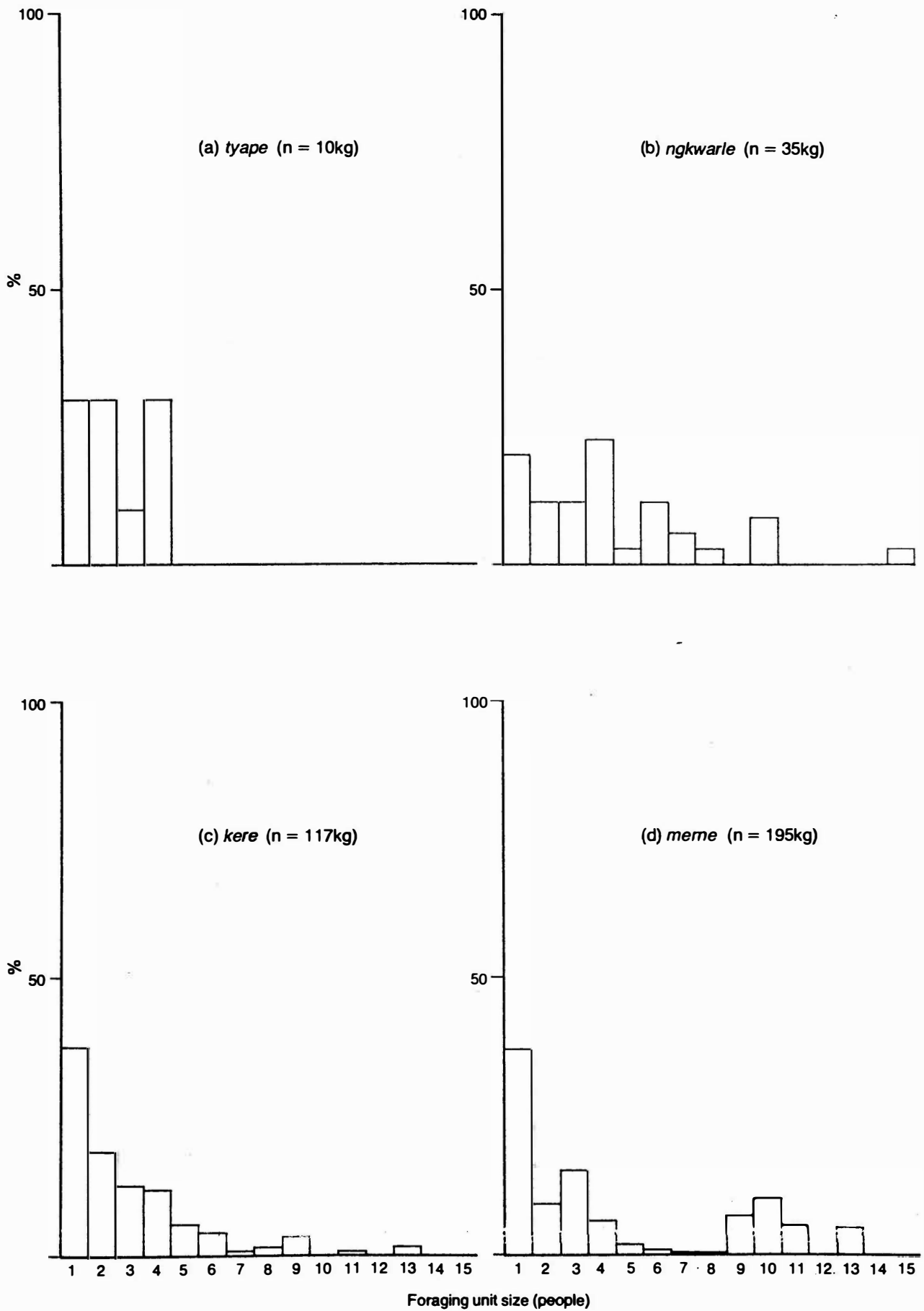


Figure 6.4: Returns of foraging units (a) *tyape* (grubs), (b) *ngkwarle* (honeys), (c) *kere* (meat), (d) *meme* (plants).

The collection of **tyape** (grubs) was unsuitable for child foragers. It involved locating grubs within underground roots, strenuous digging and precise crowbar use. Women accompanied by children were not necessarily less productive, but this item was not gathered by large foraging units. Unlike honey, which was often consumed at the collection site, grubs were cooked prior to eating. Children waiting at the dinner camp were therefore at no disadvantage and were less anxious to follow the adults.

The most dramatic relationship between foraging unit size, composition and productivity was for the resource category of **kere**. Hunting required considerable skill and in the case of the perenti (Plate 7.24) a degree of daring. When the foraging unit was large and composed of many children, women were unable to concentrate fully on the animal; tracks were disturbed and the group's noise alerted animals to the hunters' approach. Foraging units of more than about four members were unable to move quietly and quickly enough through the bush. Their success rate in capturing **kere** was consequently much less than for either small units or individual foragers. The largest units were the least productive foragers for **kere**.

The account of the foraging day with which I began this chapter illustrated these trends. The unit of four people included two children. They foraged for less time than did either Ada alone or Ada and Hilda together. Whereas Ada killed three lizards and collected fruit with Hilda, the larger unit collected grubs. Initially Ada worked in company with Hilda but later, when an opportunity arose, she left the others to forage alone in the nearby area. A similar pattern was evident in the outing with the women from Three Bores. Most women foraged alone for at least some period although none worked alone for the entire time. Women achieved a compromise between the desire to forage without competition

and their vulnerability when working alone by periodically leaving the unit they were working with to forage alone, for short periods. The success of this strategy is evident in the quantity of foraged foods single foragers procured relative to other sized foraging units. Despite single foragers working for less time than larger sized units they were, on the whole, more productive.

THE INFLUENCE OF CHILDREN

Researchers have long recognized the particular problems faced by female foragers. Lee (1979:309) explained:

Pregnancy, childbirth, lactation, and the need to care for and carry the young infant tend to draw a woman toward the home and to reduce her mobility. Women are thus at the intersection of two critical systems within the foraging economy: the productive system and the reproductive system, each with its conflicting demands. The one necessitates mobility and the other penalizes it. In hunting and gathering societies there is a tight articulation between these two systems...

At Utopia too, the foraging productivity of women was markedly reduced when they had also to mind children. The presence of children in a foraging unit altered the prospects of women procuring certain categories of food, particularly *kere*. It also altered their efficiency in procuring particular foods. For example, although foraging units which included children gathered plant foods, they were less productive than were single foragers. The fluidity of women's foraging units provided a strategy which effectively modified the influence of children. Sometimes women foraged in company with children, sometimes they did not. There were some instances when individual women were unable to leave their children. A brief outline of the particular child-care practices of women in the Sandover River region provides a context for the

preceding data. It augments a more specific study on infant transport by Denham (1974). For a detailed account of child socialisation in a northern Australian Aboriginal community see Hamilton (1981).

WOMEN AND CHILD-CARE

From birth until about eighteen months, a child was in the constant care of its mother. Children were breastfed until they were about one year old. They were then given additional supplementary solid foods. This pattern continued until the child was between two and three years old, and meant that an infant was usually in the company of its mother. For short periods others, including its father, looked after it. There were no bottles, prams or nappies in regular use and young children wore clothes irregularly until they were about five years old. With simplified baby-care routines, women carried out necessary tasks almost anywhere with a minimum of equipment.

Women from Utopia used the traditional wooden tray or coolamon (**lengarre** or **panthe**) to carry children up to 12 months of age - or older if the child was small enough (Plate 6.1). The **lengarre** was gently curved in transverse and longitudinal cross sections and a blanket or a sheet was placed on it to create a comfortable and convenient way of transporting infants (Plate 6.2). The child was usually completely covered to protect it from flies and direct sun in the summer heat and to provide warmth in winter. When walking, a woman supported the tray on one hip and held it with one arm or she put a strap under the tray and over her shoulder (Plate 6.3). The carrying method was convenient but the load was heavy. Glory Ngale carried an infant in a **lengarre** during 1983 and several times on trips when foraging prospects appeared poor the extra load was sufficient deterrant for her to abandon the search. When foraging, a woman with an infant still required another



Plate 6.1: A wooden carrying tray (**panthe** or **lengarre**) used to carry infants and occasionally as a food container.



Plate 6.2: Mavis Bird carries baby Rosie on a **panthe** covered with a blanket and sheet.

person to look after the child if she engaged in activities which exposed it to danger or discomfort - even in a **lengarre** children were only placed on the ground for brief periods.

On 21.3.83, Glory Ngale, carrying her baby daughter in the **lengarre**, walked several metres ahead of me as she searched for animal tracks on the sandy ground. Out of sight, but following us were Emily and Polly, who were older and walking more slowly. Without a warning sound Glory suddenly began to run ahead. The child was visibly bouncing in the **lengarre**. I ran to catch up with her to discover what she had sighted. She had stopped about 3 m from two bushes. She immediately handed me the **lengarre** and child and searched for a large sturdy branch. Standing up, absolutely still, under the bush in front of us was a large perenti. Glory shouted for Emily to hurry. The other two women arrived out of breath and while I stood back (with Polly) holding the child, Glory directed Emily to a position behind the lizard. She moved in closer, finally clubbing the animal heavily with the branch.

From about the age of three years, other people sometimes minded a child for longer periods, but it continued to spend the major part of its time within view of its mother. By the time a child was five or six years, it determined its own daily activities, spending much of the day with a peer group. They frequently travelled with other adult relatives. After seven years of age, the orientations of male and female children diverged noticeably. Boys spent more time away from their mothers and the household than their sisters. They were rarely requested to perform household tasks or baby-sitting chores. There was no rigid or imposed sexual separation but it developed perhaps with the awareness that by adolescence a boy would no longer reside in the same household as his mother nor would he speak or deal directly with her.

When children were older, up to about five years of age, they usually had to be carried at some stage during an expedition. Small children complained of tiredness, thirst, prickles or hunger; they distracted their mothers, interrupting and interfering with their activities. Expeditions were sometimes curtailed because the complaints of



Plate 6.3: Glory Ngale uses a shoulder strap to support the **panthe**. Her infant daughter is covered with a blanket.

a child made it impossible to continue. This is not to say that women necessarily responded with equanimity to all their children's demands. Infants under the age of twelve months were less demanding and were quite readily taken on foraging trips but children older than this were more unpredictable and their presence more disruptive. Women tried to dissuade them from accompanying them or they manipulated circumstances to create opportunities to forage alone for at least some time.

All the households from Angkwele were on a joint foraging expedition on 21 September 1981. June and Pansy had left the dinner camp at 2.45 p.m., and at 3.45 p.m. Ada and Hilda decided to check an echidna track that Ada had seen earlier in the day. Four boys aged between seven and 13 years and myself accompanied them. On reaching the site of the tracks, Ada constantly exhorted the boys to stay away so that she could study them. But they were enthusiastic and excited trackers, running from place to place, slowly disturbing the track and making Ada's task impossible. She began to chop a log in which she thought the animal might be whilst the boys hurried away to where they had seen June. Shortly there were shouts from that group for Ada to come quickly because they had a perenti trapped in the long grass on the creek bank. When Ada finally joined them to investigate, they informed her that there was also an echidna a few metres away trapped in a hollow log. Ada directed everyone towards the log - away from the dangerous perenti which she and June would deal with. Hilda, Pansy and I moved to the log as did the excited group of boys. Hilda began chopping into the log to a chorus of instruction from the boys. I looked back to see what Ada and June were doing, to find that they had both slipped quietly away and were out of sight.

Younger women with small children foraged close to either the vehicle or the dinner-camp and other women encouraged their children to stay with that group. This strategy worked particularly well if the vehicle stopped near a patch of fruit of some other attraction such as a lizard burrow or a cache of honey. While younger women worked in company with most of the children, the other women moved quickly off into the bush. However, if a child insisted on following its mother, she usually complied.

Skill acquisition

Children at Angkwele accompanied adults on all foraging trips. They learnt of bush foods by searching for and collecting them. Their foraging skills were acquired in the process. Adults rarely gave children direct instruction on foraging techniques, allowing them instead to participate when and how they wished. Children collected fruits and were sometimes successful in capturing small animals such as the dragon lizard (Plate 6.4) or birds. As well as accompanying adults whose skills they observed, groups of children spent time on their own playing in the bush surrounding the outstation where they searched out and killed small animals.

Having acquired basic skills, each person became increasingly competent through foraging regularly. Children of both sexes spent much time observing and participating in the foraging activities of men and women so that by the time they reached adulthood, they had acquired a great deal of environmental knowledge as well as a detailed understanding of the complete spectrum of foraging practices. Men and women were probably not equally competent in all activities but they were familiar with the procedures. For example, women helped in kangaroo hunts although they rarely captured them; they also gutted and cooked animals caught by men. Several times when no adult males were present, June Bird took a rifle and stalked (unsuccessfully) both kangaroo and bush turkey. Men too, competently wielded crowbars whenever they joined honey ant or yam gathering expeditions.

In the contemporary situation, older women were skilled foragers. Many younger women were less skilled because foraging was no longer essential for them. Foraging skills included not only a knowledge of techniques and resources but, an ability to evaluate each situation: to know when to abandon a task as well as when to persevere; to deal with the



Plate 6.4: Children were competent foragers of fruits and some animals particularly the slow moving dragon lizards shown here captured by Anna and Desmond Bird.



Plate 6.5: Women most successfully combined child care with gathering activities such as yam collection, shown above.

extraordinary events as well as the ordinary. Such judgement was a critical component of foraging skill and one acquired only through experience.

PERSISTENT AND INTERMITTENT FORAGERS

Some women foraged regularly (persistent foragers), others only occasionally (intermittent foragers). Persistent foragers tended to be more skilled, more productive and more single-minded than women who foraged only occasionally. They frequently worked alone. Meehan (1982:131) described a similar distinction when she discussed the "serious" gatherers of shellfish. At Utopia, women who were persistent foragers always owned at least one crowbar which they stored in their household and picked up at a moment's notice. Some had different crowbars for particular tasks. For example, Nancy Pityarre had one especially stong crowbar that she used for collecting honey. A good crowbar was an item of value to the most regular foragers. Intermittent foragers often did not own a crowbar or if they did, were uncertain of its whereabouts. I noted that women younger than twenty five years rarely possessed crowbars. Nor did the oldest woman, Polly Perrurle, who although she often accompanied foraging groups from Eniltyiye outstation was too frail to undertake extended digging sessions. Adolescents rarely carried crowbars at all on foraging trips though they periodically borrowed them from other women.

A DIVISION OF LABOUR WITHIN WOMEN'S GROUPS

Women usually prepared and ate the food they procured on foraging expeditions at the dinner-camp. They took home that which was either procured late in the day or was in excess of demands. This often comprised fruits, grubs or honey but less often, meat. Foraging units returned to the dinner-camp at various times throughout the day where succesful hunters

cooked and distributed their meat catches to other members of the party present. Women first gave food to their children or dependants before distributing it to other closely related adult women. Everyone received some food but the distribution was not necessarily equal. Women who did not engage in foraging waited at the dinner-camp and prepared tea on the return of the foraging parties. The regular distribution of foods at the dinner-camp was a strong incentive for the younger women to co-operate in enabling skilled, mature women to forage alone or as members of small foraging units. Adolescents and young mothers looked after older women's children because it increased the possibility of sharing the returns of successful foragers. Also underpinning their co-operation were obligations of kinship and a degree of deference that was accorded the demands of senior women.

These practices indicated that a division of labour existed within female groups; between the more and the less skilled foragers; between older and younger women and between those with and those without dependants. It was a division based on age, experience and skill. Incorporating such a division into foraging organisation enhanced the prospects of success for all. The division of labour affected individual women differently throughout their life. Each woman spent her earliest foraging life carrying out unskilled work; she spent later years as a mother of young children when foraging was sometimes intermittent; finally she entered a period as a highly skilled food producer on whom other women and children depended. There was some parallel between the division of labour within women's groups and that which existed between men and women. In both cases the division released one set of workers to obtain resources that were highly desired by all.

SUMMARY

Women regularly foraged in company with other women and children. A prominent feature of their organisation on those occasions was the formation of small groups of various composition and size during the course of a day. An analysis of the composition of these groups, termed foraging units, indicated a number of regularities. The largest units were comprised of the youngest people. Conversely the units comprised of one person had the highest median age. There were variations in the productivity of foraging units and in the categories of food they were able to procure. For all types of resources, the single foragers were the most productive; the largest groups were the least productive. The difference was least marked for the category of **ngkwarle** and most apparent for **kere** and **merne**. Foraging units also varied with regard to the duration of foraging activity. The largest units worked together for less time than did the smaller units. However units comprising one forager worked for shorter periods of time than did units of between two and five members. I have interpreted the data as indicating a division of labour within groups of female foragers. The flexible arrangements of unit formation provided an effective way of modifying the restrictions of child-minding responsibilities. At the same time it enhanced the productivity of the entire group by enabling older, more experienced women to forage periodically unrestricted by children. This flexible organisation was an important component of the foraging strategy employed by women.

CHAPTER 7

TRAVELLING LIGHT : CONTEMPORARY TECHNOLOGY

All these societies [hunter-gatherer] are nomadic and positively value movement. They do not accumulate property but consume it, give it away, gamble it away or throw it away...they tend to use portable, utilitarian, easily acquired, replaceable artifacts - made with real skill but without hours of labour - and avoid those which are fixed in one place, heavy, elaborately decorated, require prolonged manufacture, regular maintenance, joint work by several people or any combination of these. The system is one in which people travel light, unencumbered, as they see it, by possessions and by commitments (Woodburn 1980:99).

Female foragers in the study area abandoned their most complex subsistence technology when they adopted flour and other processed foods. Additional techniques accompanied the incorporation of new foods, while new materials such as iron, offered improved efficiency and diversity in the tool-kit. But to what extent were the constraints on property accumulation and the traditional hunter-gather preference to "travel light" as described by Woodburn still apparent?

WOMEN'S FORAGING IMPLEMENTS

Crowbars were the principal implement of women's foraging technology. Made from steel, these implements had a diameter of between 1.2 and 2.3 cm with a flat blade on one or both ends (Plate 7.1, Figure 7.1). The (mean) dimensions of a crowbar were 1.2 m in length, 1.7 cm in diameter; and 2.1 kg in weight. The width of blades varied considerably, from 2.1 cm to 4.1 cm, with a mean width of 2.9 cm (Table 7.1).

TABLE 7.1: DIMENSIONS OF METAL CROWBARS

	LENGTH (m)	DIAMETER (cm)	BLADE WIDTH (cm)	WEIGHT (kg)
Range	0.9-1.6	1.2-2.3	2.1-4.1	1.0-3.7
Mean	1.2	1.7	2.9	2.1
Number measured	30	28	32	28

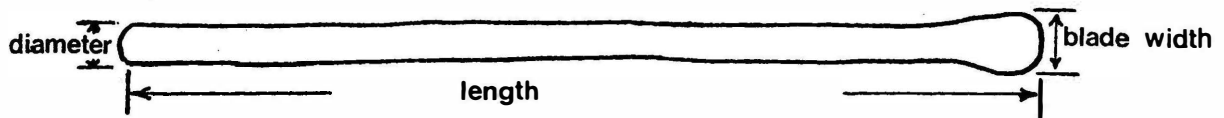


Figure 7.1: Crowbar dimensions.

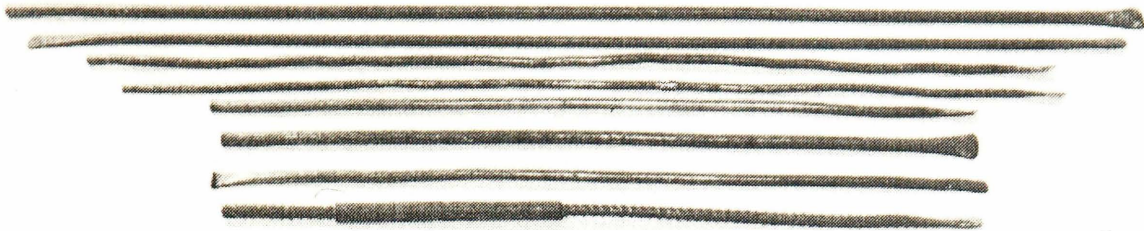


PLATE 7.1

Plate 7.1: A selection of metal crowbars owned by women. The set includes double and single-bladed crowbars, and one crowbar made from threaded iron over which a section of plastic garden hose has been placed as a protective hand cover.

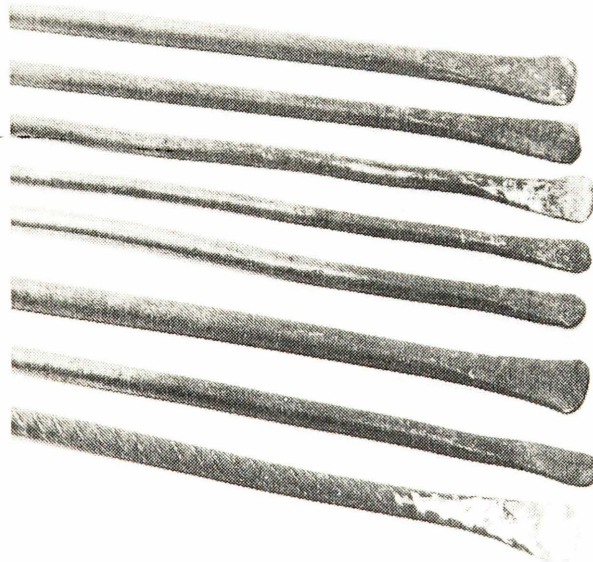


PLATE 7.2

Plate 7.2: The range of blades found on the set of crowbars shown in Plate 7.1.

Crowbars were made from scrap iron, some of which produced a better quality tool than others. For example, some women made crowbars from steel which had a spiral thread (similar to a screw thread). Continual use of that crowbar produced blisters. One remedy was to place a section of plastic garden hose over part of its length (Plate 7.1).

A crowbar functioned primarily as a digging implement. Holding a crowbar in one hand about 15 cm up from the blade, a woman stabbed sharply into the ground to loosen the earth which she then rapidly removed with her other hand. Working rhythmically and consistently in this fashion, she was able to quickly remove large quantities of earth (Plate 7.10). Less often, women gripped a crowbar with both hands about 20 cm apart, loosened the earth, then pushed it aside with the crowbar.

Woman either sat or knelt in one of several positions (Figure 7.2) when digging with a crowbar. If they anticipated only brief excavations, kneeling or squatting was usual; where the expectation was of extensive digging at one site, women chose a more relaxed posture with their legs extended. The position adopted varied during the course of the excavation. In addition to its function as an excavating tool, a steel crowbar was employed in several other ways.

A probing action (Figure 7.3), *tywekwentweme*, was used when a woman investigated a fresh lizard burrow. Using a two-handed grip as shown, she traced the extent of the burrow by stabbing the crowbar through the ground into the hollow cavern below. Using a similar technique, usually with one hand she probed the earth beneath the witchetty bush in order to locate grubs. As the crowbar struck infested roots it produced a distinctive sound.

Used with control and accuracy, a crowbar also functioned effectively as a crude chopper. Having exposed the roots of the witchetty bush, the grub-infested sections were either broken off or chopped with the crowbar, then split lengthwise, again with the crowbar, to reveal the grubs inside. On the softer wood of trees like Grevillea sp. women sometimes used a crowbar to retrieve honey. Through a combination of chopping, gouging and prising, they removed sections of tree trunk until the hive was accessible. Large animal carcasses such as kangaroo and perenti were divided using a crowbar as a chopper if a knife was unavailable. Tin cans could be opened. When used this way, a crowbar was held close (within 10 cm) of the blade with one hand and a degree of skill was required to accurately direct each blow.

In addition a crowbar was used as a lever to prise up tree roots, to move boulders and sometimes animals; as a club for killing animals or alternatively dashing the animal's head against, and as an adze-like implement to shave the quills from an echidna in preparation for cooking.

Women used scrap iron to make their own crowbars. They built hot fires of gidgee (Acacia georgina) in order to heat, then work the iron. They shaped the blades by pounding the red-hot iron rod with a hammer or the back of an axe-head. A second axe-head laid flat or a stone served as an anvil. The task took between 2.5 and 3 hours as the iron rods were repeatedly placed in the fire, removed and worked. An overly long piece of iron was trimmed by first heating it to red heat, placing it across the blade of an axe-head that had been buried vertically and hammering the hot iron down onto the axe blade. After manufacture, women rarely sharpened the blades; when they did they used a metal file.

Metal crowbars have largely replaced the traditional-wooden digging stick or atneme but women (and men) occasionally

manufactured an improvized wooden one (Plate 7.4). These were thicker in diameter than metal crowbars and with differently shaped chisel-like blades. Improvized digging sticks were made hastily and discarded at the end of the day before leaving the foraging site. Those that were made to demonstrate traditional methods (Plate 7.5) were straighter and less knobbed than the improvised type. Over time, such digging sticks acquired a use-gloss described by Thomson (1964:408) as glass-like:

The very old implements that I saw, polished by use, had seen long service and were treated as if they had a personal value. An old *wanari* [digging stick] acquired almost a glass finish by the constant friction of the hand, and the oil and sweat with which it was gradually impregnated.

A crowbar was the single most important implement in the modern women's toolkit and the skill of using it effectively was fundamental to most foraging activities. The same skills were sometimes used in other contexts too. For example, women used crowbars in shelter construction. First and foremost however, the crowbar was a foraging implement - one which offered great versatility when used by an experienced forager.

Axes, purchased from the mobile store, were less frequently owned by individual women, but women in a foraging party often shared one. They were mainly used in the collection of honey and were essential if honey was gathered from hard-wood trees like gidgee (Plate 7.26). As was the case with crowbars, women rarely sharpened axes before use but if they did so, they used a metal file (Plate 7.7). Broken handles were either bound with wire or replaced with locally manufactured ones. The back of an axe-head regularly functioned as a hammer or pounder. Laid flat, they served as anvils (Plate 7.8).

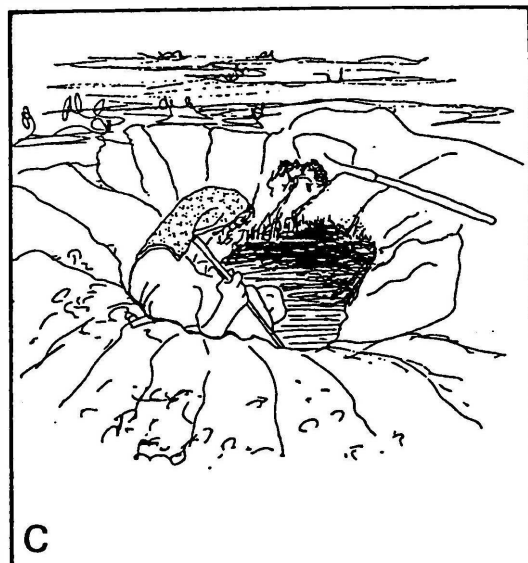


Figure
7.2: Positions adopted for excavation with a crowbar, (a) cross-legged while excavating in front of self (b) one leg extended while excavating to side of self (c) seated within deep excavation pit.



Figure

7.2 (cont):— Positions adopted for excavation with a crowbar, (d) kneeling on one knee (e) kneeling on both knees (f) seated, with both legs extended while excavating to side of self.



Figure 7.3: A crowbar used as a probe, (a) two-handed (b) one-handed.

At Angkwele women always had shovels. They were the only women who regularly sought honey ants which were deep underground and required extensive excavation. Their foraging equipment usually included both a crowbar and a shovel (Plate 7.3). I saw various shovel types (Plate 7.12) but because much of the digging took place within a confined pit, women preferred smaller shovels to larger ones. They used shovels in a sitting position as often as they used them while standing. Whether sitting or standing, they worked towards their body, gripping the shovel rather like one would a canoe paddle (Plate 7.11). At some stages in excavation, the shovel was held close to its head with one hand and used in much the same manner as a crowbar (Plate 7.11a).

In addition to a crowbar, the most commonly used item in foraging was a billycan (Plate 7.9d) in which women carried the foods they had procured. These were available in various sizes, 1.1 litre, 2.5 litre, and 4.25 litres from the local store. Containers served as shovels when an extensive excavation was undertaken. The smaller billycans were favoured for honey and grub collecting expeditions. Larger containers such as flour drums, plastic buckets or pieces of cloth were used to carry quantities of fruits or seeds.

TECHNIQUES EMPLOYED

Women used a number of techniques in food production (Table 7.2). By techniques I refer to the specific set of handling procedures associated with the items they procured. These included methods of catching, gutting and cooking. As well, foragers employed fire management skills in most aspects of food production.



C
Plate 7.3: Women carried foraging tools in several ways. (a) Ada Bird rests a crowbar across her lower back holding it firm with one hand and carrying a shovel in the other (b) Lena Perrulle carries the crowbar at her side with one hand and carries an axe and a billycan in the other (c) Pansy McLeod and June Bird rest crowbar and shovel on their shoulders.



Plate 7.4: Jean Pityarre uses an improvised digging stick to collect yams.

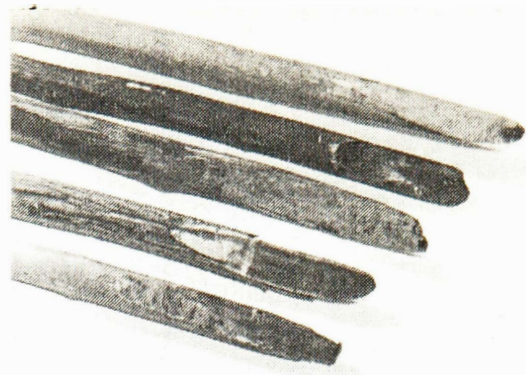


Plate 7.6: The blades of the digging sticks shown in Plate 7.5.

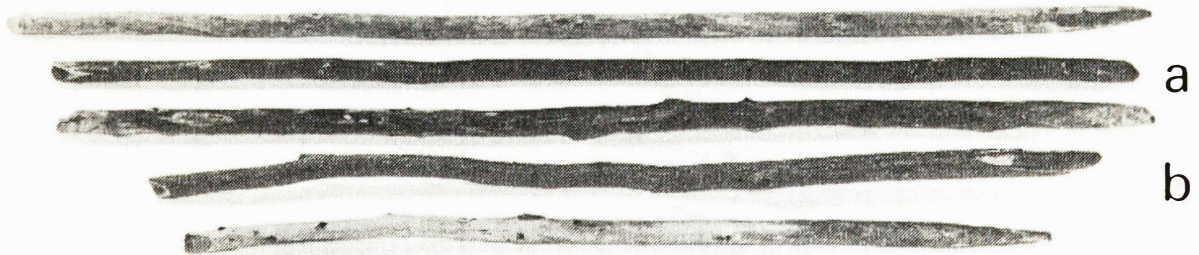


Plate 7.5: Wooden digging sticks, *atneme*. (a) Traditional Mulga digging sticks made for collection by **Artwe ambwe** (b) improvised wooden digging sticks that were discarded at the foraging site.



Plate 7.7: Myrtle Pityarre uses a metal file to sharpen an axe prior to a foraging trip. Such maintenance was infrequent.

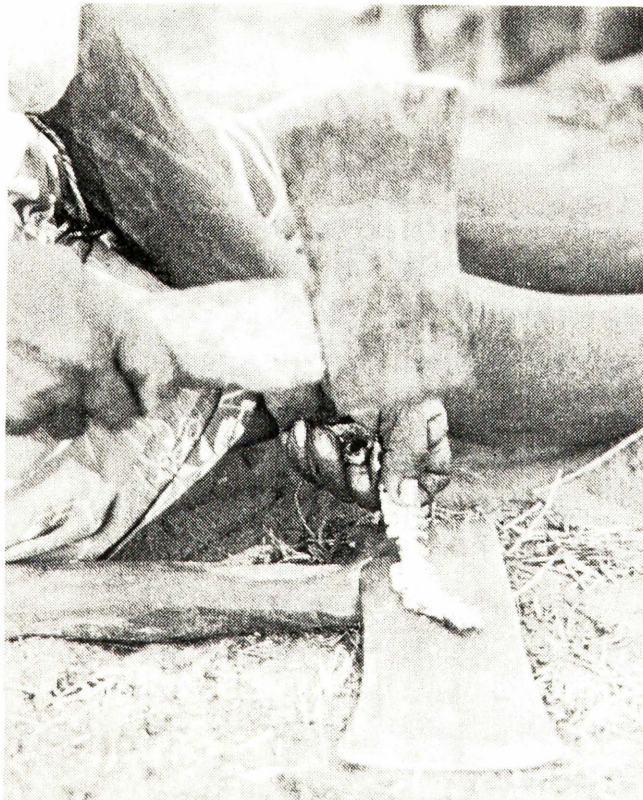


Plate 7.8: Tools were multifunctional. Emily Kngwarraye uses one axe-head as a base and another axe-head to pulverize the backbone of a goanna.

Merne

Within the resource category of **merne** (plant foods) women gathered at least seven different items (Table 4.5) but the three most commonly gathered were fruits (Solanum centrale, Leichhardtia australis, Capparis umbonata). These were eaten immediately they were collected. Women demonstrated the method of pulping dried S. centrale into small cakes but the procedure was not now in use. Bush potato (Impomea costata) was gathered more frequently in the most northerly region of the study area where it was more abundant. Deep excavation was required to locate and retrieve the tubers which were then cooked in a shallow fire pit before eating. Other yams (Vigna sp., Plate 7.20) and the small tuber, **irriyakwerre** (Cyperus bulbosus, Plate 7.21) were cooked lightly or eaten raw if they were succulent. The plant foods that contemporary women collected were those which could be eaten immediately without processing. O'Connell et al (1983) described contemporary plant collection at MacDonalld Downs where a similar trend was evident.

Kere

Lizards were the animals most frequently taken by women. Of these, the goanna and perenti were preferred for both their meat and the fat they carried in good season (Plate 7.28). Women came upon lizard tracks in the course of foraging for other foods or found burrows that showed evidence of recent activity. All were checked. The following is an account of a lizard capture from a burrow. The figures contained in brackets give the time and the letters relate to Figure 7.4.

TABLE 7.2: NOTES ON CONTEMPORARY FORAGING TECHNIQUES

ITEM : **amwelye** (Amphibolurus sp.); a small dragon lizard, mean weight 0.4 kg (Plate 7.25).

CAPTURE: The animal was easy to kill because of its habit of becoming motionless when threatened. It was not valued highly enough to warrant extended search time; tracking was limited to large specimens. Killed by either clubbing on the head, or breaking the neck.

PREPARATION: **amwelye** was not gutted, but singed before being placed in a shallow depression at fire's edge. Covered with hot soil, ash and coals. Cooked in about 15 minutes.

DISTRIBUTION: Lizard was pulled from the pit, slapped sharply several times to remove adhering ash and soil, placed on a mat of freshly-picked leafy switches. The jaws were forced open, the skin below the throat was pinched and torn down revealing bright yellow fat. Fat and liver taken for distribution, other internal organs discarded. The tail, with back legs attached was broken from the trunk and eaten. The head discarded and sometimes trunk also. The skin was not eaten. **Amwelye** fat was highly regarded for its medicinal properties. As well as eating it, people rubbed it on their bodies, particularly of babies.

ITEM: **lewatyerre** (Varanus sp.); sand goanna (Plate 7.25), mean weight 0.5 kg. Highly regarded especially if fat laden. **arramaye** (Varanus sp.), sand goanna, weight 1-1.4 kg (uncommon).

CAPTURE: **Lewatyerre** and **arramaye** were found in trees, burrows, on roads, or feeding in the open. Difficult to capture because after few seconds pause they escape at great speed. If in a tree, people gathered short, sturdy lengths of wood, between 30 and 50 cm long and hurled them at animal's head. When it fell to the ground, stunned, it was clubbed. Women also excavated burrows.

PREPARATION: Goannas were gutted and singed. Stomach removed through the mouth with hooked stick (**ulyengke**), lower intestines removed through anus. Cooked in a shallow pit, turned halfway through cooking time. **Lewatyerre** cooked within 30 minutes. Cleaned of hearth debris and put on leafy mats.

TABLE 7.2(contd.)

DISTRIBUTION: Head broken off and discarded. The belly skin broken and two pads of white fat distributed; liver eaten. The tail broken off, generally sub-divided into two or three smaller sections for re-distribution. Back legs pulled off. Remaining trunk and forelegs given away as a single piece. Flesh carefully picked from the bones, skin was eaten.

ITEM: ilkwerte, (Varanus giganteus), perenti, large carnivorous lizard, weighing up to 7 kg. (Plate 7.24).

CAPTURE: As for other Varanus sp. but men used .22 calibre rifle.

PREPARATION: Ilkwerte cooked in pit approximately 50 cm long and 15 cm deep. Large fire lit at the edge of pit. The animal was gutted as other lizards and singed. Charred skin scraped off with a knife. Back legs skewered together, tail folded in under the back legs. Cooking time was approximately 50 minutes; lizard was turned during this period.

DISTRIBUTION: Cooked lizard was cleaned. With a knife, axe or crowbar it was cut down either side of the backbone, smashing through the ribs. The tail and back legs cut off and sub-divided. Backbone pulled free of carcass; fat pads removed from belly and each front leg with part of the upper trunk attached cut from the trunk. The liver was eaten.

ITEM: inape (Tachyglossus sp.), echidna, mean weight 3.9 kg. Much sought, infrequently taken (Plate 7.23).

CAPTURE: Slow moving animal, once located unlikely to escape. Occasionally dug from burrow, but often found in crevices of boulder strewn hills. Extraction was time-consuming. Echidna turned on its back, killed with a blow to the unprotected underside.

PREPARATION: Quills softened by soaking the animal, belly up, in a shallow wet depression for 15-20 minutes. Intestines removed through small incision in the belly later closed with a wooden skewer.

TABLE 7.2 (contd.)

Cooking pit prepared with large fire at its edge. Echidna thrown onto the fire for few minutes to burn down the quills. Quill stumps removed using crowbar, jabbing at the quills to remove them. People also use axes, knives, pliers and fingers. Task took about 30 minutes. Cooked for about an hour.

DISTRIBUTION: Animal placed on its back on leafy mat. Two incisions made along its length. The boney rib cage and trunk was removed in one piece from inside the thick, tough, fat-covered skin. Skin was the preferred portion of the animal. Juices were tipped from the skin and shared, then skin cut up.

ITEM: **tnyemayte**, witchetty grubs. This was the main grub species collected from roots of Acacia kempeana bush (Plate 7.22).

COLLECTION: A woman searched the ground around the base of shrub, checking for indications of grub infestation - fine cracks in the ground from swollen roots, fragments of casing from developed moths and characteristic sound of crowbar striking hollow roots. She sat and dug rapidly to expose root; levered the root upwards, broke it off and removed the grub(s) inside.

PREPARATION: Grubs laid on the ground at the edge of a fire and covered with thin layer of hot soil and ash for few minutes.

ITEM : **arwengarkere**, native bee honey (Plate 7.26).

COLLECTION: Located by seeing either the bees or nest entrance on the tree. Formerly people searched around the base of trees for tiny specks of dropped pollen. Honey exposed by removing a 30 cm section of trunk above the hive opening. Pollen and honey removed. Wax discarded after honey sucked from it. Honey eaten at site or collected.

TABLE 7.2 (contd.)

ITEM:	yirrampe, (<u>Camponotus</u> sp.), honey ants (Plate 7.18).
COLLECTION:	Found only in mulga woodland and required extensive excavation to depths of up to a metre (Plate 7.10). Women searched for either the nest entrance or ants on the surface. They excavated to seek the underground chambers that house the honey-filled ants (Plate 7.11). Ants were removed and placed on freshly turned soil at the excavation pit edge. Honey-filled segment bitten off and eaten, head and legs of ant discarded.

Mary and Queenie were foraging in an area of low shrubland on a cool July afternoon in 1981. Mary found a fresh burrow opening that was partly concealed by the branches of a fallen dead tree [4.25 p.m.]. The entrance (A) was 10-15 cm across it was topped by a mound of freshly turned earth. The women dragged the tree clear of the burrow [4.27 p.m.] and Mary began testing an area about 1.5 m behind the entrance (B). She probed the earth at various points with a crowbar, watching where it went in to the greatest depth to check the direction of the burrow. Once satisfied of its direction, Mary sat at the entrance, (A), and started excavating rapidly [4.30 p.m.]. As she dug she watched the collapsing burrow and constantly probed the ground ahead. At this time Queenie probed the area (C) with a crowbar [4.39 p.m.] and sat down at (D) where she began digging towards Mary [4.41 p.m.]. They dug until they were separated by only 30 cm then both abandoned excavations [4.42 p.m.]. There was no sign of the lizard. Mary then sat to dig at (E) [4.43 p.m.] working in towards the suspected burrow. Almost immediately she dragged a lizard (560 g) from the ground [4.44 p.m.].

The two foragers were both middle-aged women of long experience. I recorded occasions when less experienced younger women dug until the burrow and its surrounds were lost in a confusion of excavated soil and holes, something June Bird described in frustration as "just making mess".

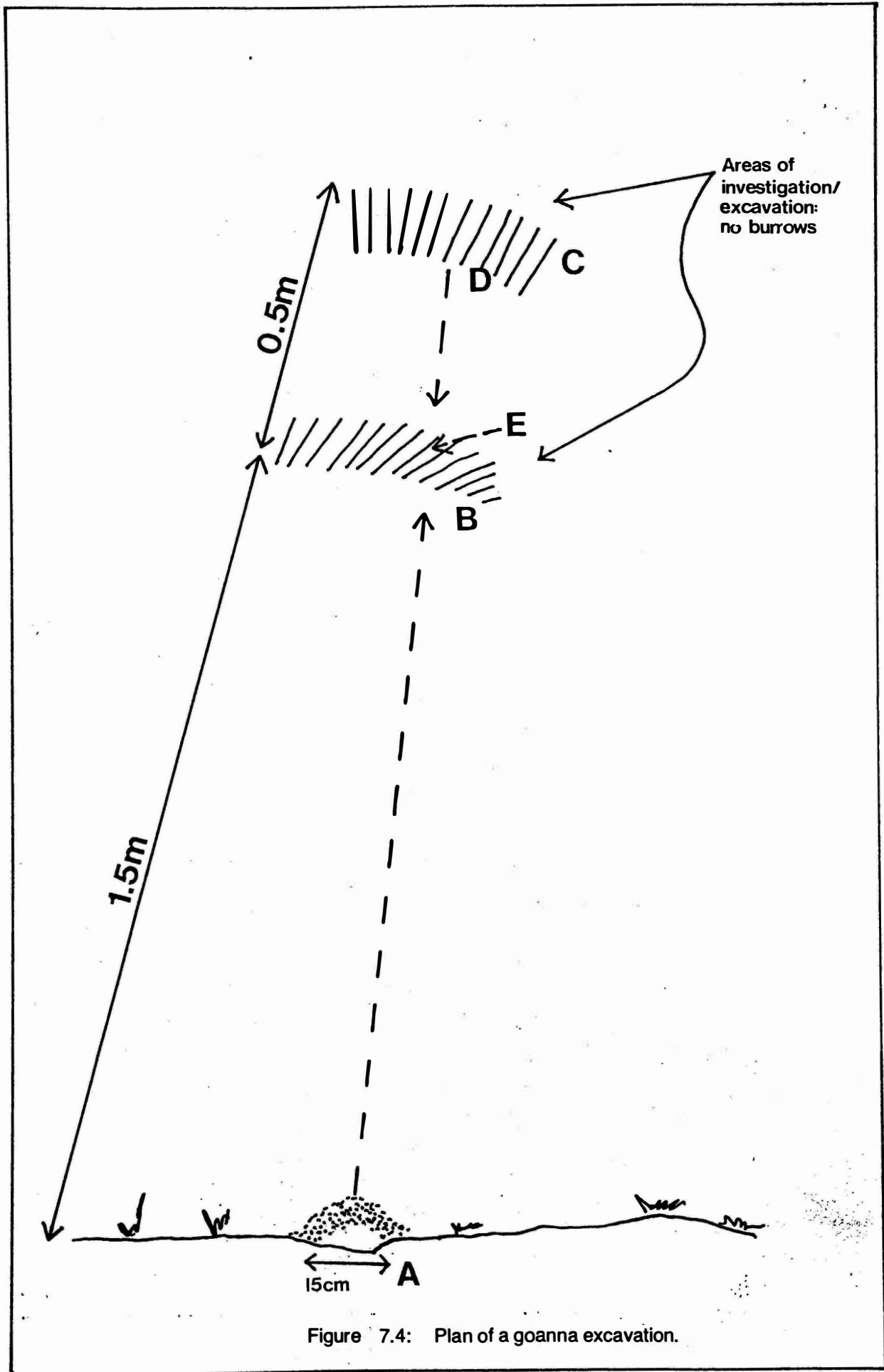


Figure 7.4: Plan of a goanna excavation.

In contrast to the trend of selection in plant foods, there was no evidence that women concentrated on animals that required the simpler handling techniques. In the case of echidna, for example, the removal of the quills and preparation of the animal for cooking was time-consuming and sometimes difficult yet echidna were highly favoured and regularly hunted (Plate 7.23).

Tyape

Many types of edible grubs were known to women (Table 4.5) but they concentrated their efforts on one type, **tyape tnyemayte**. I was shown how several other types were collected. In each case, the grubs occurred singly rather than in clusters as did **tyape tnyemayte**. Although the collection of some grubs, for example, **tyape ingweninge**, which were pulled from holes in the trunk of the river red gum (*Eucalyptus camaldulensis*) was less time-consuming than that of **tyape tnyemayte**, they were less abundant in any given area. Grubs were lightly cooked before being eaten, but could be eaten raw. Those that were damaged during collection were sometimes eaten raw.

Ngkwarle

The techniques of gathering two regularly taken sources of honey were different (Table 7.2). Honey ants were taken from their underground chambers which were excavated with crowbars and shovels. Native bee honey was collected from tree trunks and branches using axes (see accounts of gathering honey in Chapter 4). Neither type of honey was eaten with other foods or prepared prior to eating. Although more intensive labour was required to procure them, honey ants and native bees were more productive honey sources than were others such as blossoms.

Dogs

When women walked out from their base camps to forage, they were accompanied by several dogs. Angkwele women regularly took one favourite small dog, Cindy, that they said was an excellent tracker of animals. Less often the larger dogs also came along. Dogs seemed to make little appreciable difference to foraging success at Angkwele. At times when they barked and alerted animals to the forager's presence, they were a positive hindrance. June occasionally tried to capture kangaroo by sending her dog after it, but always without success. They were most effective if the animal had first been wounded. They prevented it then from continuing to escape.

Fire

The skills of fire manipulation were learnt early and from the age of five years most children were able to set a fire and boil tea. Every household had at least one hearth for cooking. A fire was the physical focus of much social activity, marking an area where people gathered to either prepare or distribute food. In the evenings, fires marked household sleeping areas, providing light, warmth and comfort.

Wood was gathered daily for household requirements and mostly by women. When large quantities were needed, such as for all-night winter fires, or for cooking kangaroo, men assisted to bring in loads of wood in vehicles. People preferred harder wood types such as mulga or gidgee as these burned more slowly. At Eniltyiye, these were not available within walking distance, so for daily chores people used blue mallee (Eucalyptus gamophylla) or dogwood (Acacia coriacea). Wood was not chopped. Long pieces including whole tree trunks were continually moved into the fire as they burned. In summer people built small fires which were used mainly for

cooking and light. Wood collection was less frequent then and the quantities involved, small. During winter, when night temperatures reached freezing point, a fire burnt at every household from about 4 p.m. onwards. Large logs were collected before dark and a slow fire burned throughout the night. People awoke frequently to tend their fires, re-arranging logs or re-kindling fires that had gone out. In winter people relied on fire for warmth rather than the one or two blankets that they used. There were several distinct types of fires. In practice, one type was often converted into another.

Cooking fire: Cooking fires were set to produce a store of coals as quickly as possible. The actual fire size depended on the cooking task but heaps of solid sticks, branches and thinnish logs were chosen. The flames were intense but short-lived, and the burning produced a bank of coals.

Sleeping fire: Sleeping fires were built from substantial logs, or even whole tree trunks. These were burnt at one end producing a small fire for many hours. The wood from these fires was generally completely reduced to ash.

Work fire: A different type of fire was built to heat water for washing or work steel. A compact heap of large, hardwood logs was set; it had a slow, hot fire which produced a bank of coals sufficient to maintain high temperatures.

Smokey fires: When flies were annoyingly numerous people sought relief from them by creating clouds of smoke. They threw leaves, twigs and surface litter onto flaming logs to extinguish the flames and produce smoke. Sometimes they dragged one log a short distance from a fire, leaving it to smoulder.

Light-producing fire: Flaming firesticks were used to provide brief periods of light at night - to search for missing items or check around the household for tracks.

Hearth maintenance

Household fires were not left burning unattended. Burning logs were separated or covered with dirt. Because foods were cooked in the ashes of fires, hearths were kept free of all rubbish, including paper, and cigarette butts. Food scraps were either dropped beside the consumer, or thrown a metre or so away, eventually to be eaten by dogs or raked to the perimeter of the household living area.

Hearths were cleaned of accumulated ash. At Angkwele, the most frequently used hearth became a scoured oval-shaped pit, 15-20 cm deep. Cooking sites for large animals rapidly developed into substantial craters. Whenever possible, animals were cooked in the bush where wood supplies were also more convenient. At Eniltyiye, where the soil was sandy, ash was removed and the resulting pit refilled with fresh sand, maintaining the hearth at surface level. Hearth location changed constantly, even within the space of a few square metres to avoid the formation of excessively deep craters.

HOUSEHOLD BASED SUBSISTENCE

The preparation of food was regularly carried out at each household shelter. Cooking took place on an open fire and involved a small number of utensils. Tea was boiled in a billy; meat and other foods were fried or boiled in a pan placed directly on the coals or they were cooked in an earthoven. Tinned foods were opened, heated on the fire, then eaten directly from the tin or placed on damper. With the exception of damper, most purchased foods were cooked without further preparation. Occasionally women prepared meat-based stews.

Utensils

The most commonly used container in hearth cooking was a 4.25 litre billycan in which people boiled tea, and a shallow basin for the preparation of flour dough. Less common were saucepans and frying pans or the versatile camp-oven (Plate 7.9). Comprising a deep base and a close fitting lid and made from heavy iron, this container could be placed within a hearth and completely covered with coals. The lid served also as a frying pan. People used large (500 ml) metal pannikins for drinking tea, or they improvized with clean, empty tins. Another commonly owned utensil was a butcher's knife (Plate 7.9c). These were in constant demand for food-cutting tasks, for manipulation of food on the fire, and opening tins. They were taken on foraging trips to butcher large animals.

A characteristic of household utensils was their large size. For example, while large butcher's knives were commonly owned, smaller-sized table knives were uncommon. The large billycan was the favoured utensil for boiling tea, while the smaller, less commonly owned ones (Plate 7.9d) were preferred for foraging or use as pannikins. Improvized utensils, especially twigs and sticks, were also an important component of the material culture of hearth-based subsistence activities.

Plate 7.30 showing a group of women preparing food at a large hearth illustrates several of the points made above. The activity was carried out on the ground. Ada (back to the camera) prepared damper dough in a shallow basin, while a cooked damper lay partially buried in the coals. Two cooked dampers were stored in the cardboard box. On the left of the hearth, Hilda sliced beef from a larger piece which rested on a layer of fresh leaves. The beef was cooked in the two saucepans to her right. They were set above the coals on empty tins. Three standard-sized tea containers are immediately in front of her.



d 



e 



c 



b 



a 

Plate 7.9: Commonly owned subsistence equipment. (a) An axe (b) butchering knives (c) a camp oven which served also as a saucepan and the lid as a frying pan (d) billycans — the larger one for brewing tea and the smaller one for a pannikin or general container (e) flour drum used as a storage container.



Plate 7.10: The skill and efficiency with which women wield crowbars is demonstrated by the extensive excavation June Bird performed in her search for honey ants in the hard, red clay soil of the mulga woodland.



Plate 7.11: June Bird uses a shovel to excavate for honey ants (a) She grips the shovel immediately above the head as she creates a profile from the surface (b) as the hole deepens she alters her digging position and the manner of gripping the shovel. She continues to move the shovel towards her body.

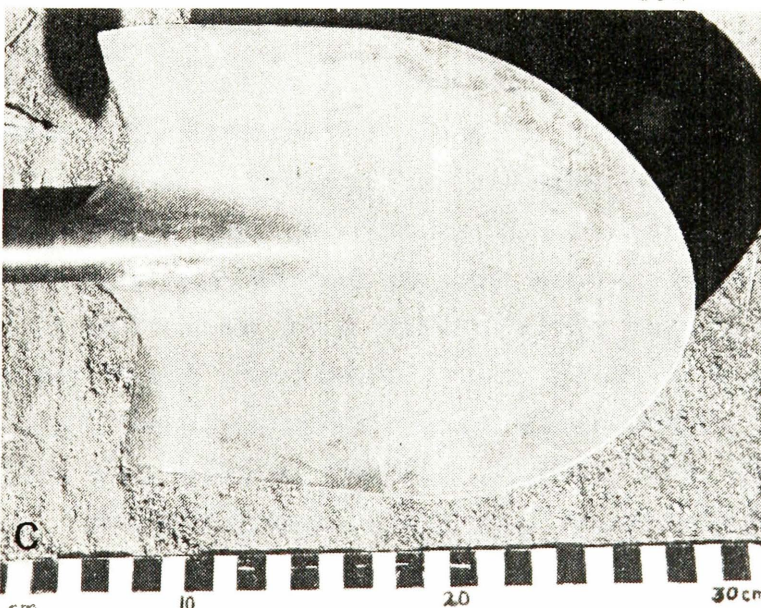
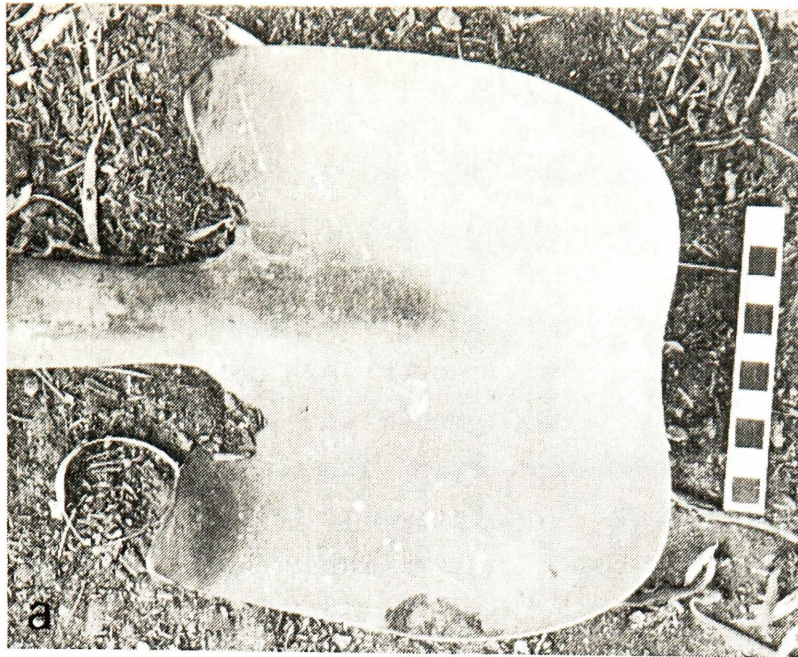


Plate 7.12: Various types of shovels were used. (a) This type was favoured although it was uncommon (b) this type was awkward to use in narrow excavations (c) this shape was also convenient.

A woman without essential utensils borrowed from other households. Items were "owned" by the original purchaser but those used in food preparation circulated so freely between neighbouring households that ownership became irrelevant. Utensils with an unknown history however, were discarded. Occasionally when the camp was cleaned, many items merely in need of cleaning were put in the nearby rubbish tip. This was a protection against possible harm caused by strangers tampering with one's personal possessions. The practice also precluded accidentally using utensils that dogs had used.

Items that were in daily use such as billycans, mugs, saucepans and knives, all had short use lives. Each household rarely kept individual items longer than a few weeks. The most commonly owned utensils (Table 7.3) were continually lost, borrowed, used for non-subsistence purposes, broken or discarded. However they were essential and required constant replacement. Thus people repeatedly replaced similar utensils used in the subsistence activities of every day. They did not accumulate a range of increasingly diverse ones.

Food storage

Food storage was principally a means of keeping food remains safe from predators, especially dogs. Tins of food were always consumed at one sitting; condiments were taken from household to household and were thus also rapidly consumed. Cooked meat or damper was placed on the roofs of shelters, in trees, or left in the ashes of a fire. Flour was purchased in strong 16 kg drums which when empty, were used to store bread, fresh fruit, sugar, tea and other foods (Plate 7.9e). Some use was also made of the health service caravan and vehicles as storage places. Nevertheless, food was regularly stolen by dogs, cats and at Angkwele, even horses.

TABLE 7.3: OWNERSHIP STATUS OF HOUSEHOLD ITEMS**A: SUBSISTENCE-RELATED ITEMS**

Common	Less Common	Uncommon
billycans	saucepan/frying pan	plates
butcher's knife	camp-oven	knives (table)
rifle	axe	spoons
crowbar	shovel	
flour drums	pannikins	
basin	wire mesh	
water container	vehicle	

B: OTHER ITEMS

Common	Less Common	Uncommon
blankets	car tools	scissors
mattress	rake	suitcase
pillows	radio/casette	children's toys
tarpaulin/campsheet	car tools	wooden dish
clothing	brush/comb	bed
assorted tin/boxes	needle/thread	
torch	batik equipment	
purse/handbag		
cards		
wooden weapons (traditional)		
tobacco container		

Household Inventory

Households (with the exception of **arnkentye**) owned a predictable range of items (Table 7.3). The majority of these were associated with subsistence, but people also had a range of other possessions such as mattresses, blankets and torches. Items typically owned by a household could be further distinguished according to whether they were a common

or uncommon element of the inventory. Those listed as commonly owned were relatively essential while the remainder were less so. Each household, however, rarely possessed the complete set of even the most commonly owned items at any one time. So for example, items considered essential for daily subsistence tasks such as a billycan, rifle or large knives were always owned by at least one household within the camp and were then borrowed by neighbouring households. Items described as uncommon, such as plates and spoons, were often unavailable at any household in a camp.

THE CHARACTERISTICS OF CONTEMPORARY MATERIAL CULTURE

Individual items were continually consumed in the manner described by Woodburn (1980:99). The pattern of ownership and consumption of household utensils meant that people repeatedly replaced a small set of essential items by either purchasing replacements or by improvizing them. For example, the billycans which were purchased were large with securely attached handles. Improvized billycans were made from empty milk-powder tins using wire strands for a handle. Although the purchased version was more robust, households alternated between ownership of the purchased item and its improvised equivalent. Improvization and re-cycling thus extended the functions of some items. Equally, it sometimes ended the subsistence life of some items. For example, using a billycan to carry petrol. Each household was thus involved in a process in which it continually acquired essential items and simultaneously divested itself of those same items through loss, breakage, borrowing or other means. The range of items in which people invested was constant; the inventories of individual households were not.

In emphasising the restricted range of material culture in current use and the way people extended function through improvization I do not mean to suggest that people were

uninterested in acquiring material goods nor that they selected only the more basic available technology. I found people to be avid but selective consumers. Constantly plans were made as to how certain highly desired and technologically sophisticated items such as cars, generators, refrigerators, tape-recorders and videos recorders could be acquired. Success always depended on cash availability and here too people had some innovative ideas.

On the third of February 1982, a group of women, children and myself set out in the research vehicle. We left the outstation unusually early: our target was old Australian pennies. Rumour had it that these were immensely valuable and that White people paid thousands of dollars for them. We travelled to an old campsite more than 50 km from the outstation, scouring the ground around the ruins of previous shelters, and searched the known rubbish dumps of local pastoral homesteads. The perseverance of the intensive searching paid off and the hunters found several pennies. Another party of penny seekers arrived and among their group was one man with a ragged copy of "The Collector's Guide to Pennies" which I was directed to consult and advise on the worth of our finds. In total, all our pennies were worth 50 c at most. The women tossed them aside in disgust.

On another occasion we spent a day looking for gemstones. The women used their crowbars to chip at a certain type of stone in the hope of finding the "good ones" that they could sell in Alice Springs. Few such cash-producing schemes were successful but failure did not appear to dampen enthusiasm for them.

Complex technology itself did not intimidate people. Certain of these items were highly desired. People considered for example, that a vehicle or video improved the quality of life. But such items were both scarce, costly and unable to be improvized. They had to be acquired through ownership rather than borrowing. This contrasted to most other utensils and equipment. With the exception of a rifle, the material culture associated with subsistence (Table 7.3) could be borrowed, improvized or temporarily foregone. There was

little apparent interest in the technological elaboration of this sphere of material culture.

IMPROVIZATION

People manufactured a number of implements only when they needed them. So many essential tasks depended on the use of these quickly produced items that they constituted an integral component of contemporary material culture. The artefacts themselves however had an ephemeral quality. Gould (1980:72) reported briefly on this practice among the Western Desert people, describing implements made this way as "instant tools" - items that were fashioned rapidly from materials at hand and "discarded whenever and wherever their useful life is over".

Specialised instant tools for foraging

Two specialised instant tools were made and used regularly (but not exclusively) by women. A class of variously sized hooked sticks named **ulyengke** served many purposes including the gutting of lizards (plate 7.13). All goannas were gutted through the throat, obviating the need for an incision. A thin branch of suitable foliage (usually mulga) was trimmed to produce a stiff hooked stick 15-25 cm long - longer for gutting a perenti. The stick was forced, hook first, down the throat of the lizard, twisted once and drawn back up, bringing the stomach with it (Plate 7.16). The largest **ulyengke**, up to 2 m long, were used to pull fruit and seeds from high branches or to reach inaccessible animals (Plate 7.15). The smallest **ulyengke** that I recorded was made from a stiff, branching grass **thwenpere** (Enteropogan acicularis) that was trimmed to form a delicate tool for hooking grubs from holes in tree trunks. A different tool was the **angkwert-angkwerte**, a gently curved twig about 15 cm long (Plate 7.14) which was used in the collection of honey ants (Devitt 1986).

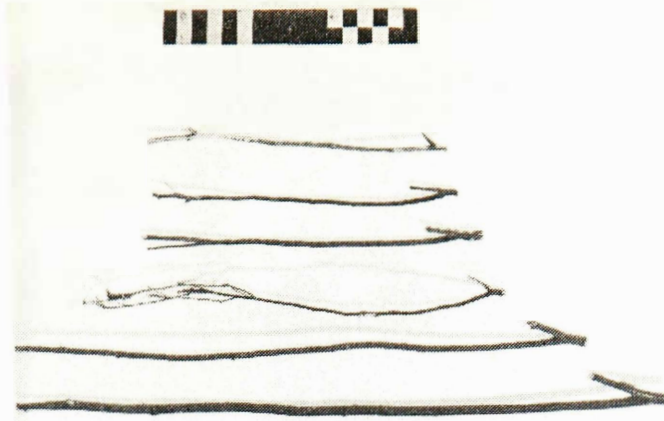


Plate 7.13: A set of variously sized **ulyengke**, or hooked sticks that were used to gut goannas and perenti.



Plate 7.14: A set of curved twigs (**angkwerte-angkwerte**) that were used in the collection of honey-ants.

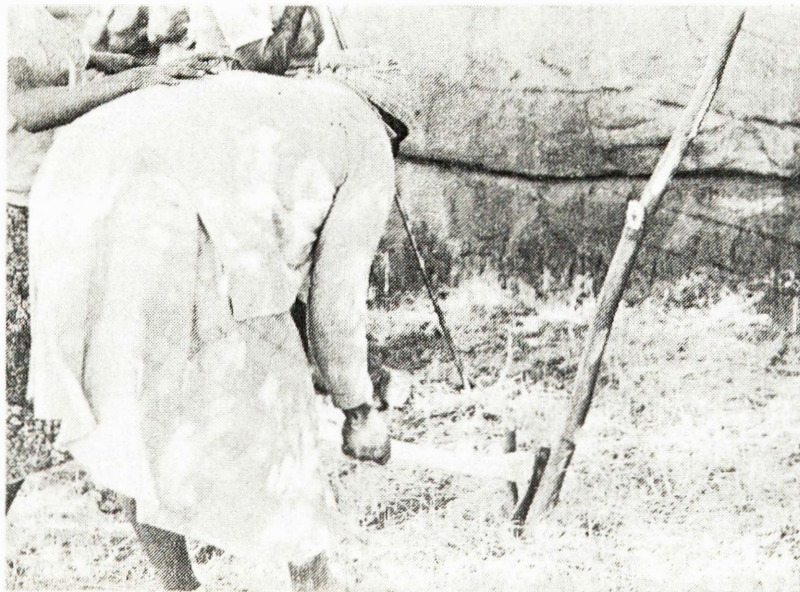


Plate 7.15: Lene Perrurle making a large **ulyengke** to assist in dislodging a perenti from a rock crevice. **Ulyengke** of this size were also commonly used to pull fruit-laden branches close to the collectors.

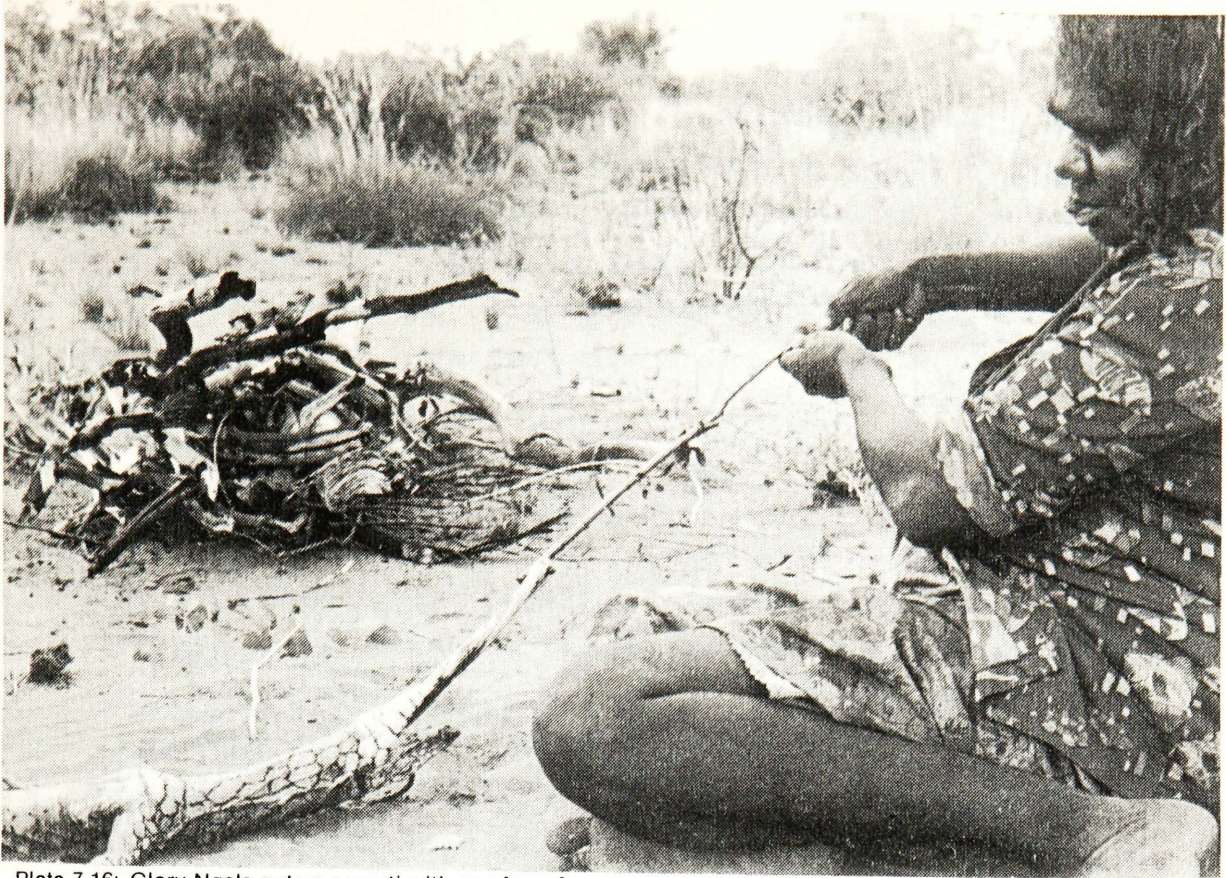


Plate 7.16: Glory Ngale guts a perenti with an ulyengke.



Plate 7.17: Glory uses a long stick to manipulate the fire for cooking the perenti.

These tools were required at a particular stage in the foraging sequence - their manufacture and use was predictable. To my knowledge, substitute materials such as wire were never used to fashion them. Unlike other tools in use, they were extremely function-specific, being used once only for a particular task then discarded at the work site.

Other instant tools

In addition to the specialised items above, a variety of improvised equipment was fashioned from either European or bush materials. For example, people used sticks, stones, tyre levers or shanghai's to dislodge lizards that escaped into the highest branches of trees; they carried honey on a woodchip, in a billycan or in plastic containers. The use of these items was less predictable and people manufactured them from any suitable material at hand. The following list, while not exhaustive, indicates the role of non-specialised instant tools in a range of tasks.

- (a) long and short sticks:- used to club animals and to thresh larger seeds (Plate 7.19)
- (b) throwing sticks:- short, (30-50 cm) heavy sticks thrown to dislodge lizards from trees
- (c) fire manipulation sticks:- for preparing cooking areas in the fire and arranging food (Plate 7.17)
- (d) "cutlery" twigs:- used as skewers to pick up hot foods; for stirring tea; a spatula type twig served as a spoon for honey
- (e) bark and wood chip plates:- for carrying small quantities of fruits, honey, etc (Plate 7.18)
- (f) bush brooms:- dry, leafless branch, bound tightly used as a stiff broom
- (g) foliage switches:- short switches of foliage used to protect food from flies and to clean cooked carcasses; used as mats under cooked food

- (h) flat stones:- for grinding medicinal mixtures, ochres
- (i) empty tins:- used as pannikins for tea; as rests for pots on fires (Plate 8.4).

The importance of improvization

The skill of improvizing tools and equipment from available materials enabled people to limit household utensils and subsistence equipment to a minimum, yet continue to carry out necessary tasks. The frequency with which they produced a wide range of non-specialised instant tools reflected their reluctance to accumulate and curate a stock of infrequently used implements. Innovative solutions to problems were common place. For example, when a basin was unavailable for clothes washing, one solution was to scoop a shallow hole in the ground, place a piece of plastic or canvas over it and fill it with water. If a bowl was unavaible for making damper, women prepared it successfully on top of the flour that was stored in the large drums. Tins were opened with axes, large butchering knives or perhaps a crowbar - tin openers were known but not required. The ability of people to improvize with regard to motor vehicle repairs was astonishing, both at Utopia and elsewhere (see also Nash 1985). Improvization also involved re-cycling both European and bush materials. For example, a large plastic water container which had split was cut in half and the side without holes used as a washing basin; freshly opened tins were immediately used as tea pannikins. Empty flour drums had numerous uses - for storage, for washing, cooking, as bedsteads and seats. When women at Angkwele relocated the **alwekere** they removed all posts, tarpaulins and other construction materials from the old site to set up at the new location.

A reliance on the skill of improvization and imaginative recycling of many items enabled people to limit subsistence equipment and household utensils to a minimum. Those that



Plate 7.18: Ronald Bird carries an improvised bark container of honey-ants.



Plate 7.19: Polly Perrurie uses a short, sturdy stick as a beating implement to release Kurrajong seeds from their pods.



Plate 7.20: Pencil yams, **atnwelarre** (*Vigna lanceolata*).

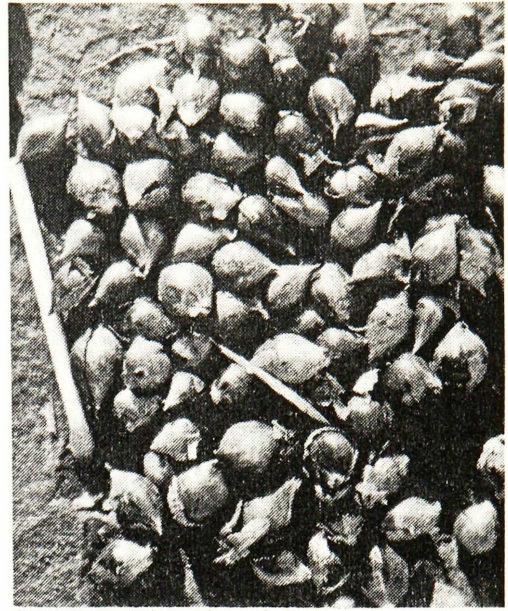


Plate 7.21: Wild onions, **irriyakwerre** (*Cyperus bulbosus*).

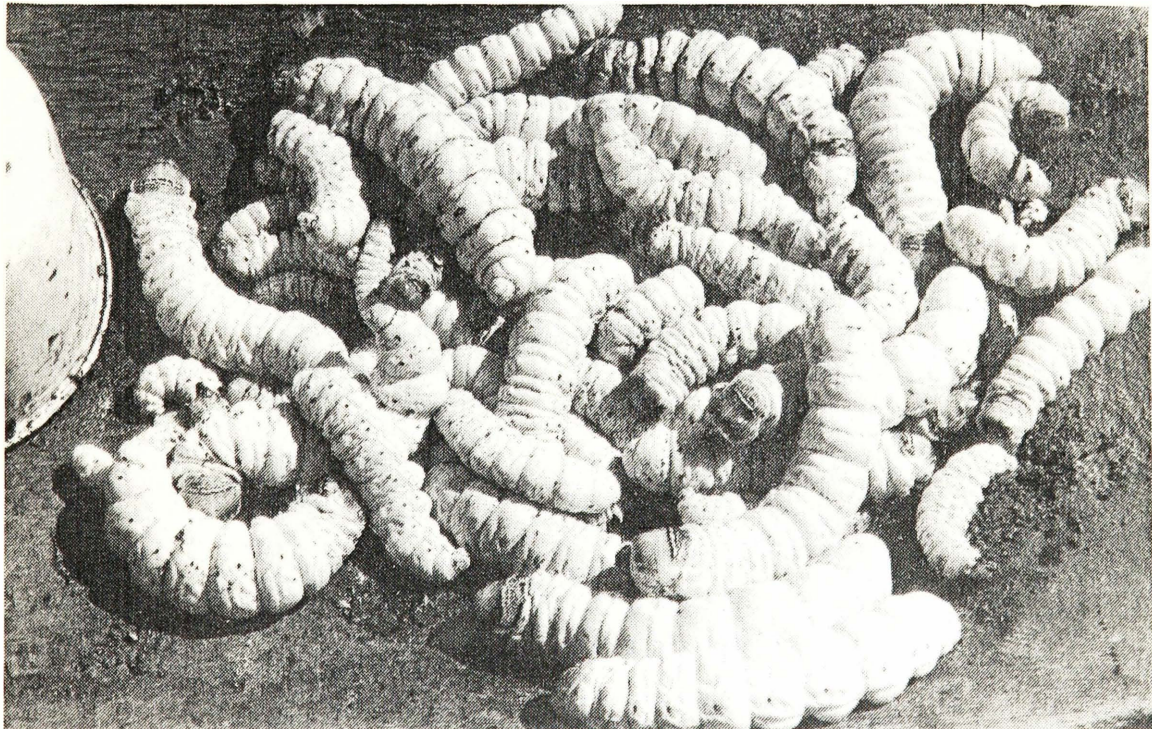


Plate 7.22: Witchetty grubs (**tnyemayte**) found in the roots of *Acacia kempeana*.



Plate 7.23: Rosie, Maggie and Kwementyaye Bird hold an echidna.



Plate 7.24: Glory Ngale with a perentie (*Varanus sp.*) captured by the women.

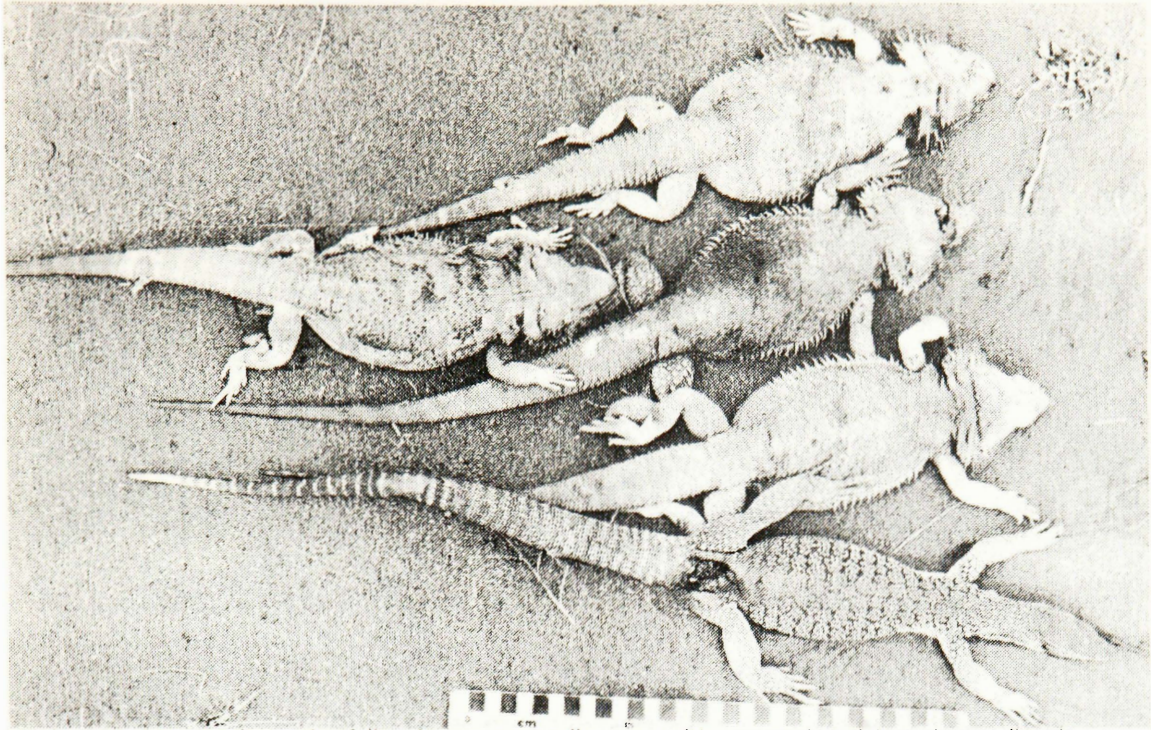


Plate 7.25: A woman's catch of lizards — one small goanna (*Varanus* sp.) and four dragon lizards (*Amphibolurus* sp.).



Plate 7.26: A woman uses a small stick to scrape a cache of native bee honey from a Gidgee tree into a small billycan.

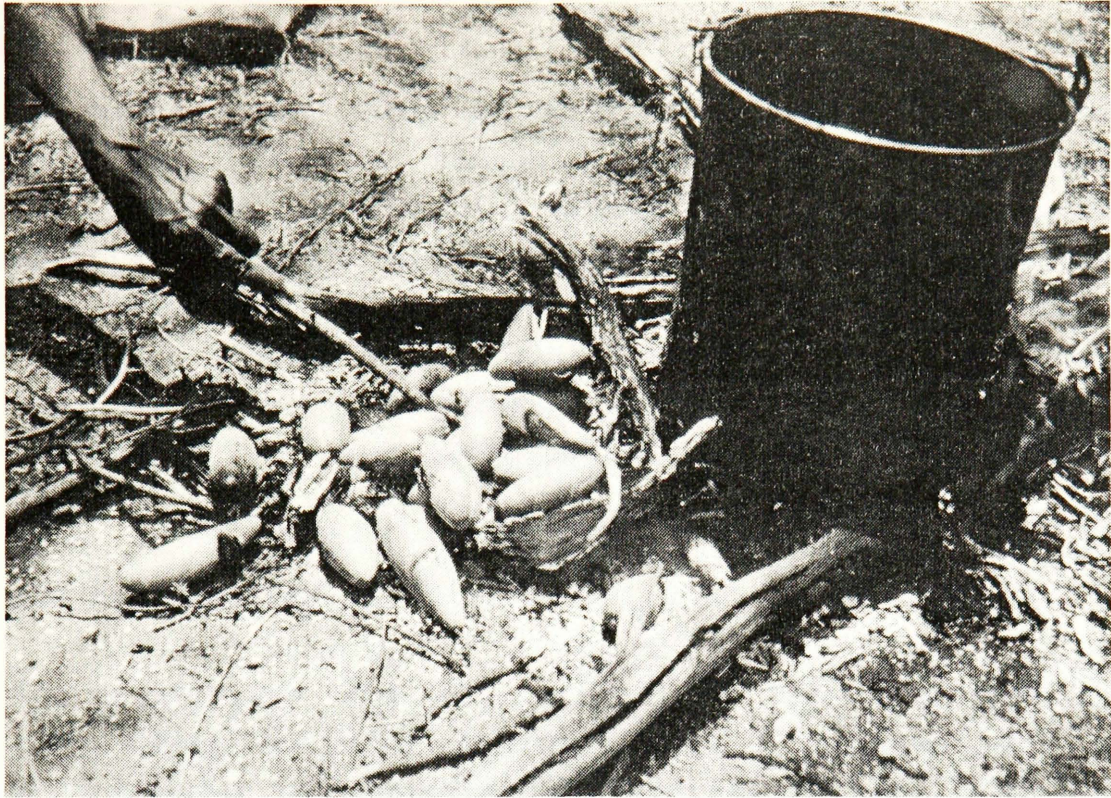


Plate 7.27: A light roasting softened the tough older Bush Bananas **alangkwe** (*Leichhardtia australis*).



Plate 7.28: A portion of the fat removed from goannas is shared separately from the flesh.

they commonly owned such as billycans, pots, knives and crowbars, were few in number, portable, and robust in design. In selecting equipment from the array now available, contemporary outstation dwellers had the preferences Woodburn (1980:99) described. They sought to "avoid those which [were] fixed in one place, heavy, elaborately decorated, require prolonged manufacture, regular maintenance, joint work by several people or any combination of these" (Woodburn 1980:99).

MOBILITY AND VEHICLES

Foraging activities and all travel in the area was by privately owned vehicles (Plate 7.29). Vehicles were a central component of contemporary material culture. Of all foraging trips, 91% made use of motorised transport. The sighting of kangaroos, the chase and the capture were often carried out from a vehicle (for a description see O'Connell 1984). Women too, depended on transport to reach foraging sites although they foraged on foot once they reached their chosen location.

Vehicle use

Most family groups wished to own a vehicle. When they had acquired it, they then spent a large amount of time maintaining it. There were no maintenance facilities in the surrounding 250 km, so owners performed all necessary mechanical work with the limited number of tools they owned. Supplies of petrol, oil, tyres, tubes, patches and spare parts were scarce and the development of major mechanical faults was a constant problem. However the material difficulties associated with vehicle ownership were less problematic than the social strain involved in managing them. Always there was a shortage of vehicles. Owners were thus forced to rationalise competing and insistent demands on the use of their vehicles and their mechanical supplies.

Vehicles were constantly purchased and sold at Utopia. Men bought inexpensive second-hand cars in Alice Springs then offered them for sale within an extensive local network. Although vehicles were more expensive in Alice Springs and usually in better condition, arrangements for payment were more suitable within the local market. In Alice Springs people bought cars with immediate cash payment whereas they could arrange long term payment or partial barter when they dealt with kin at Utopia. Vehicles were the focus of much entrepreneurial activity - they were bought then re-sold to acquire cash; there was bartering and bargaining for their engines, bodies or individual parts.

Vehicles at Angkwele

Between May 1981 and January 1983 I was able to record details of eighteen vehicles that passed through the Angkwele community (Table 7.4). "Ownership" was calculated as the number of days between the first and final dates on which I recorded a vehicle present at the outstation. Visitors' vehicles and borrowed cars were not included. "Days not in use" refers to those periods of time that the vehicle was at the outstation but in need of repairs. For example, a white Ford F100 small truck (Vehicle 1), was put on blocks and served as both a storage area and a shelter for many months before it was finally sold. Three vehicles were in the possession of the Angkwele residents for over six months. Vehicle 13 was still in their possession when I visited in December 1985. This was an unusually lengthy period of possession relative to other vehicles. That particular vehicle, a white Datsun four-wheel drive, was received new as an aid grant from the Aboriginal Benefits Trust Fund. Under the grant conditions the owners were unable to sell the vehicle for profit. Apart from vehicles 1, 2 and 13, the duration of ownership for a vehicle was quite "SHORT" (Figure 7.5). Of the 16 vehicles, six were owned by residents of the



Plate 7.29: Aboriginal people of the area travelled in conventional drive sedans such as this one which was purchased locally.



Plate 7.30: Women preparing damper, tea and beef at a large hearth. A damper is partially visible in the coals, tea brews in the billycans and the meat is fried in the two saucepans on the left. Ada Bird (right) is mixing dough for another damper.

community for less than 30 days. The majority were owned for less than 60 days.

Vehicles were individually owned. They were not considered the collective property of the outstation, although other households had access to them. Non-drivers, usually older men or women, also owned vehicles. During the months of recording, the outstation was never without a functioning vehicle. On average there were three available (Table 7.5). But although vehicles were relatively numerous, residents still had unpredictable access to them because those available were unreliable and sometimes particular households monopolized their use.

The arrival of a new vehicle (Vehicle 13 in Table 7.4) enabled me to record reliable information on the distances that people had travelled. For the 196 days of records, the vehicle travelled a mean distance of 158 km per day. The owner decided that the vehicle would not be used for hunting while it was new: it was to be driven only on the better roads. It went many times to Alice Springs - a round trip of 500 km - because it was roadworthy and therefore unlikely to attract police attention. Vehicles that were bought cheaply usually did not conform to the legal standards of roadworthiness and Aboriginal people feared confrontation with the police over the matter. Thus the 158 km/day that vehicle B travelled were trips for shopping, business or social activities. These figures highlight the intensive use made of vehicles. The mean (total) distance people from Angkwele travelled on a foraging trip was 54 km, considerably less than the daily distances travelled in Vehicle 13. There may have been unusually intensive use of this vehicle because of its uncharacteristic reliability, but, I think, many other vehicles travelled equally long distances.

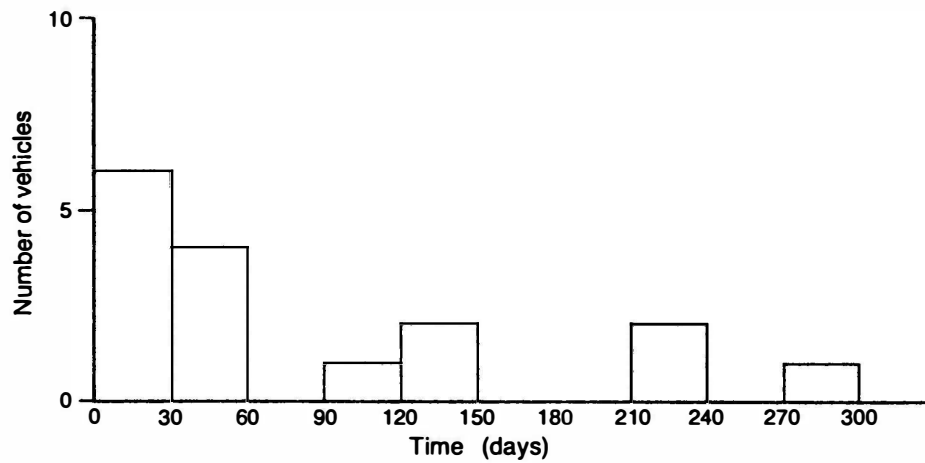


Figure 7.5: Duration of vehicle ownership at Angkwele, 1981-1983.

TABLE 7.4: RECORDS OF VEHICLES PRESENT AT ANGKWELE OUTSTATION, 1981-1983

VEHICLE	FIRST RECORD	LAST RECORD	TOTAL	DAYS NOT IN USE
1	27.05.81	26.01.82	224	217
2	02.07.81	20.05.82	298	47
3	03.07.81	02.08.81	28	0
4	25.07.81	24.08.81	28	0
5	27.07.81	08.12.81	121	2
6	23.08.81	03.09.81	8	7
7	24.08.81	08.12.81	96	0
8	17.12.81	26.01.82	37	0
9	06.03.82	25.03.82	19	0
10	27.05.82	11.10.82	124	-
11	27.05.82	-	-	-
12	27.05.82	-	-	-
13	11.10.82	17.06.83	224	0
14	11.10.82	30.11.82	41	0
15	11.10.82	05.12.82	40	0
16	21.11.82	30.11.82	9	8
17	09.12.82	20.01.83	39	0
18	19.12.82	20.01.83	29	0

My vehicle travelled about 300-350 km per week (about 50 km per day), and most of the outstation vehicles travelled at least as much as I did, probably more.

Women and vehicles

There was no cultural proscription against women using vehicles. Both June and Hilda were regular, competent and public drivers. In doing so, they were unusual among women. While it was not common for women to drive, most of those under the age of 35 years had rudimentary driving skills but lacked the confidence to perform in public. At Eniltyiye two adolescent girls enjoyed driving their family car a few kilometres to collect wood but did not drive elsewhere. When a woman drove a vehicle the passengers were usually other women and children or occasionally an older man who did not drive. Most travel in the Utopia area involved use of the Sandover Highway, a public but remote road, that many people were apprehensive about. They frequently spoke of the possibility of meeting "whitefella crooks" on their journeys. Cars containing only women and children travelling alone were considered to be particularly vulnerable.

On 18.9.81 a group of four women and six children set out from Angkwele for a day of foraging. About 24 km from the outstation, travelling along a bore track, we passed a young European man travelling alone in the opposite direction. There was a long discussion about his identity and the women concluded that he was an employee from a nearby station. Shortly after meeting him we turned off the track, drove 5 km into the bush and parked the vehicle. June had brought her father's rifle and was keen to work without being accompanied by children. She persuaded her own children to stay with her sister while she, Topsy and I went off alone. We had walked only 15 minutes when we heard the other group shouting for us to return. We did so. They had been thinking about the man we had passed and were too nervous to stay alone.

When either June or Hilda drove a vehicle on a foraging trip, they were usually accompanied by another vehicle and were part of a group that included both men and women. Artwe ambwe cautioned me about stopping on the Sandover Highway while travelling between Angkwele outstation and Three Bores. When his daughters accompanied me they sometimes brought a .22 rifle with them. On other occasions the men waited for our vehicle so that we could travel safely in convoy.

A woman whose husband owned a vehicle had regular access to it. Women whose fathers, sons or sons-in-law were vehicle owners also had regular access but were less directly involved in the travel plans. They tended to adjust their own requirements to plans already made. In any event, it was those who actually stayed with the vehicle who ultimately decided on its use. Women were sometimes excluded from a car that was carrying only male passengers, but they were quick to denounce publicly those uses they judged to be illegitimate. For example, the transportation of alcohol to the outstations or prolonged journeys by men (without their families) to Alice Springs. Generally speaking, access to, and control of vehicles was a vexatious issue for all.

I concluded that neither women nor men thought it a safe practice for women to drive themselves around the country. Women were reasonably competent mechanics and knew the country as well as men. Their vulnerability appeared to be related to the possibility of meeting "strangers", either Black or White. So while women could both own and drive vehicles independently of men if they wished, they rarely chose to do so.

TABLE 7.5: FUNCTIONING VEHICLES OWNED BY ANGKWELE COMMUNITY MEMBERS, 1981-1983

YEAR	MONTH	VEHICLES
1981	July	4
	August	5
	September	3
	October	3
	November	2
	December	4
1982	January	2
	February	no record
	March	2
	April	1
	May	4
	June	no record
	July	no record
	August	no record
	September	no record
	October	5
	November	4
	December	4
1983	January	3
MEAN		3.2

Table 7.6: DISTANCE TRAVELLED BY ONE OUTSTATION VEHICLE, ANGKWELE 1982-1983

	DATE	DISTANCE (km)
October	1982	0
November	(20.11.82)	8,079
December	(25.11.82)	15,144
January	(22.01.83)	20,140
February	(07.02.83)	23,142
April	(14.04.83)	30,883
TOTAL	196 days	30,883
DAILY RATE		158 km/day

They balanced the benefits of owning and managing a vehicle against the hazards of driving without male company. Co-ownership of a vehicle with a spouse or other male relative offered a partial compromise. They could claim access to a vehicle without forfeiting their security. For these reasons, contemporary women who either owned or drove vehicles, did so in collaboration with men.

The incorporation of vehicles into foraging activities has introduced an element of dependence of women on men which was not present traditionally when all parties foraged on foot. At times when no vehicle was available, women's only option was to forage in the vicinity of the camp - the most frequently exploited and therefore least productive resource zone. But men hunted regularly to obtain fresh meat, thus women also were able to forage regularly if they co-ordinated their plans with those of male hunters. There was consequently a close relationship between the frequency of male and female foraging.

Myers believed that since vehicles became commonplace women have become less mobile than men and that they may even be less mobile than they were traditionally. He said:

Among a people who grant a high value to mobility it is a sign of male dominance that women have less access to motor transportation than men. (Myers 1976:119)

At Utopia, I believe, the issue of access was more than a matter of male dominance. There, women compromised between independent access to vehicles and security in a way which entailed collaboration with men. Nevertheless, despite the reasons, a trend towards greater mobility for males was also evident at Utopia. The contrast in male and female mobility patterns was greatest between young single men and young single women. Young men owned cars, young women did not.

These women had always to negotiate access to the transport of others and to accommodate the arrangements of others. Single men thus spent much of their time travelling freely from place to place whereas their female counterparts spent their time in camps with their relatives. For example, Hilda, who was unmarried and without dependants, spent 99% of a set of observation days (67) at her parent's camp at Angkwele. Her younger brother, also unmarried and without dependants, spent 72% of those days at Angkwele. For the remainder, he travelled in the company of his peers to other camps in the district.

On the other hand there was some difference in the mobility of women on smaller outstations like Angkwele compared with those of the larger outstations like Eniltyiye. At Angkwele, if households which owned cars excluded **alwekere** residents from their travel plans, it meant that one or two women and their children would remain alone at the outstation - an undesirable situation for all concerned. On a larger outstation like Eniltyiye with its four **alwekere**, there were always several women in camp. An individual woman could, without fear for her security, be excluded from travel arrangements. The four stable households at Angkwele possessed at least two, and sometimes three vehicles and it was possible for everyone to travel together. On larger outstations this was not the case; fewer vehicles were owned by more households and it was women rather than men who remained behind. At Angkwele, for example, there were usually three adult men and five women resident. At Eniltyiye, there were five men and 14 adult women. In addition, women in the smaller outstation were more actively involved in the travel plans and were less hesitant to voice their views.

Ada decided that the day (11.05.82) would be devoted to foraging for honey-ants. She particularly wished to try a distant location beside the Sandover Highway. **Artwe ambwe** thought it was too far but Ada insisted. The site was 80

kilometres from the outstation and within an hour's driving of Alice Springs. The group of foragers included Ada, **Artwe ambwe**, June, Hilda, Pansy and three children. We arrived at the site just before 1 p.m. The women dug for ants for about an hour then everyone returned to the vehicle for tea. During this break, I suggested to **Artwe ambwe**, who had no bullets for hunting, that since we were within a short distance of Alice Springs I could drive in and pick some up for him then return about 5 p.m. to pick up everyone. He agreed and we compiled a short shopping list. The younger women had by then left the dinner camp and returned to the bush. When they heard the vehicle engine they came hurrying back, shouting at me to stop immediately. I did so. June was most annoyed that her father and I should have collaborated in a plan which would leave the rest of the group without transport at such a distant place. The two younger women spoke angrily for quite a while but **Artwe ambwe** quickly left the dinner camp for further honey ants searching with his wife. I did not go into Alice Springs.

The pattern I observed at Angkwele was perhaps one of unusual egalitarianism in regard to vehicle use since, only there, were women competent regular drivers. However, they did not often use vehicles independently of men. Married women expected to participate in everyday life to the same extent as their partners and they reacted strongly against enforced sexual separation. While women continue to assert this as their right they will counteract the potentially divisive influence of vehicles controlled by men and used exclusively for men's interests.

The influence of mobility

The intensive use of motor vehicles allowed people to pursue a lifestyle in which their desires to travel could be fulfilled. Travel involved daily excursions from the outstation camp. As well, households or individuals re-located themselves at other outstations for varying periods of time. For example, during March 1982, two families left Angkwele for 16 days. In addition the outstation was deserted for 12 days when every household temporarily moved to Three Bores (Table 2.3). These temporary absences reflected a willingness to abandon not only

shelters and equipment but other kinds of commitments, such as gardens which were established at the outstation. Angkwele's small garden was, as a consequence, both regularly tended and repeatedly abandoned. Once during the prolonged absence in March, a small group of women and children returned to Angkwele to check on their dogs and two fowls. This was an unusual degree of concern. More often dogs were left to fend for themselves. During relocation periods people took only the most essential items - swags, billycans, knives, rifles and perhaps some food items. All items that were conveniently transported in a vehicle. Once established at the new location, the process of acquiring additional items continued. Over a period of three or so weeks, a wider range of equipment and utensils had again been accumulated.

In a lifestyle in which mobility was so highly valued, the possession of a large number of household effects was futile. They were repeatedly abandoned as people spent time at other locations. The existing household subsistence regime was easily accommodated within a lifestyle in which frequent travel was the norm. Contemporary material culture demonstrated the effects of two powerful but opposing pressures: the need to keep possessions to a minimum as demanded by a mobile lifestyle, and a developing interest in acquiring particular items. The result is a material culture inventory that combined a predictable range of basic, multi-functional technology with an unpredictable range of sophisticated, specialized technology. Within this total inventory of items those associated with women's subsistence practices were of the former type - unspecialized and readily improvised.

LINKS TO THE PAST

The range of traditional women's technology in the study area is poorly documented, but Spencer (1969:26) stated that a

wooden container or **pitchi** and a wooden digging stick were the only foraging implements carried about by women. Woven bags were not used (Spencer 1969:30).

A women has always a **pitchi**, that is a wooden trough varying in length from one to three feet, which has been hollowed out of the soft wood of the bean tree (*Erythrina vespertilio*), or it may be out of hardwood such as mulga or eucalypt. In this she carries food material, either balancing it on her head or holding it slung on to one hip by means of a strand of human hair or ordinary fur string across one shoulder. Not infrequently a small baby will be carried about in a **pitchi**. The only other implement possessed by a women is what is popularly called a "yam stick", which is simply a digging stick or, to speak more correctly, a pick. The commonest form consists merely of a straight staff of wood with one or both ends bluntly pointed, and of such a size that it can easily be carried in the hand. When at work, a woman will hold the pick in the right hand close to the lower end and, alternatively digging this into the ground with one hand, with the other she scoops out the loosened earth, will dig down with surprising speed... Very often a small **pitchi** will be used as a shovel or scoop, to clear the earth out with, when it gets too deep to be merely thrown up with the hand, as the women goes on digging deeper and deeper until at last she may reach a depth of some six feet or more. (Spencer 1969:26)

Spencer (1969:607-610) described the various forms of **pitchi** in detail. He distinguished between the shallow varieties made from a hardwood and the deeper trough-like specimens made from softer woods. All were used as food or water containers. Traditionally, **atneme** (digging sticks) in the Sandover River area were made from mulga (Plate 7.5) and the improvised digging sticks made by contemporary women were of a similar form to those described by Spencer. Thomson (1964:407-9) as did Spencer, described the digging stick and wooden dishes as the principal items of Pintubi women's portable foraging toolkit. In addition, women used stones for pounding and grinding seeds (Spencer 1969:22) pulping fruits, preparing tobacco and other tasks. These were not part of the portable toolkit but were used on site or at the camp.

The foraging implements used by contemporary women closely resembled those used traditionally. The crowbar was a metal version of the digging stick and was used in an almost identical manner. It may have marginally improved the efficiency of women's foraging. Its greatest advantage lay in its increased durability and consequent versatility in functioning also as a chopping implement. According to women this was not done with the *atneme* (digging stick). Shovels or billycans were used in place of the wooden *pitchi* described by Spencer. Steel axes offered the greatest technological improvements in foraging efficiency. A woman once commented, while on a honey collecting expedition that such activities were a great deal more difficult in "olden times" when people used sharp stones and wedges to expose the hives. Nonetheless, the contemporary women's essential foraging equipment was a hand-held digging implement, as it was in the past. For those items which women continued to procure there was little evidence that methods of procurement had changed. Certainly there has been no modification of techniques comparable to that which has occurred in men's foraging with the introduction of guns and motor vehicles to hunting.

In abandoning seed processing, women abandoned their most complex and onerous traditional subsistence technique - one that required specialised equipment and had an elaborate preparation sequence. In this respect, the range of foraging techniques currently in use had simplified from those of the past. The simplification was achieved through a total abandonment of the particular resource rather than through any modification of the techniques of production. A similar simplification has occurred with the abandonment of a number of other items within the food categories (Table 4.5) that women continued to exploit.

New techniques such as boiling and frying were associated with the introduction of metal containers. However, many purchased

foods were prepared by placing them directly on the fire. Fire management itself remained an essential subsistence skill. The preparation of damper was perhaps the most specialized new subsistence technique that women had adopted.

SUMMARY

The high value that people placed on mobility and the frequency with which they travelled placed strong constraints on the material culture and technology of subsistence. The implements used in contemporary subsistence were few in number, simple, multifunctional and portable. There was a reliance on improvization. Instant tools, rapidly manufactured and discarded after use, were as much a feature of household-based subsistence activities as they were of the foraging activities. The relationship between people and property continued to be strongly influenced by traditional hunter-gatherer values.

Household based subsistence activities carried out by women involved a limited range of equipment and the techniques of food preparation reflected traditional practices. Women's foraging techniques have been little affected by technological change. The principal foraging gear, the crowbar, closely resembled traditional equipment in function. However, the total reliance on vehicles has introduced an element of dependence of women and men on them. Most women had less access to vehicles than men, a situation which may create social and sexual divisions.

CHAPTER 8

SUBSISTENCE AND HOUSEHOLD WORK

In sheer quantity, household labour, including child-care, constitutes a huge amount of socially necessary production. Nevertheless, in a society based on commodity production, it is not usually considered even as "real work" since it is outside of trade and the market place. (Benston quoted in Dixon 1969:194)

Changed subsistence practices have transformed the foraging role of Aboriginal women. Observers of that transformation have frequently presented it within a context of loss and degeneration (see Chapter 1). The contemporary situation is contrasted to that of tradition, when women were "the economic backbone of the Aboriginal group" (Boyle 1983:44). Underlying this view is an assumption that when women ceased hunting and gathering, they ceased to undertake any subsistence work. It implies too, that in traditional times, foraging constituted the entirety of women's productive work. Hence when foraging was abandoned or reduced, women's productive role ended. The activities associated with subsistence however were part of a range of domestic work undertaken by women. In this brief account my intention is to outline the range of productive work undertaken by contemporary women. This relates subsistence work to the other domestic work they performed. Categories of work are described and compared using time as a measuring unit. I have taken a broad view of work, considering any activities in which women expended effort to provide a particular product or effect as a form of work. This is necessarily an outsider's view since it excluded some activities such as gambling which may have been construed as work by the participants.

CATEGORIES OF WORK

Women's work fell into five categories: subsistence, child-care, household tasks, craft, and paid employment. All women, sometimes from the age of six or seven years were involved in child-care, subsistence and household tasks to varying degrees. Craft work, (the production of batik), was voluntary and paid employment was limited on outstation communities. These kinds of categories were analytically useful, but they do convey an impression of orderliness which was absent in daily life. For example, child-care was a continuous task within which specific activities were only part. As well, it was often carried out simultaneously with other kinds of work. Some tasks or activities were associated with more than one work category. For example, firewood collecting was sometimes for subsistence purposes, sometimes for batik production and other times for washing. Wood gathering and water collection were included as subsistence work because they were most commonly associated with that.

Subsistence work comprised two identifiably different kinds of production; that associated with market foods and that of foraging. The division did not necessarily have any significance for householders. The essential daily task was to provide sufficient food either by foraging, purchasing, preparing previously purchased foods or some combination of all of these. People did not, in any practical sense, endeavour to maintain a division between foraging and other subsistence activities.

People purchased food each Saturday at the local shop or itinerant hawker. It was a leisurely activity that continued over four of five hours and provided people with a chance to enjoy unusual foods such as fresh fruit, soft-drinks and sweets. Men and women shopped separately and both made repeated purchases (Plate 8.1). For a Saturday shopping



Plate 8.1: Women purchase supplies from the mobile store known locally as the hawker.



Plate 8.2: A quiet afternoon at the alwekere. Hilda Bird sits in the shade of a tree sewing while Pansy McLeod is washing. She has a supply of water in the array of containers surrounding her.

session I allocated 2 hours. For occasional visits to the small local shop at Three Bores I allocated 0.5 hours. In neither case was travel time included. Women of each household bought the bulk of their requirements of bread, flour, tea and sugar while men acquired bullets, petrol and some larger household items. Individuals bought their own tobacco. Purchasing activities were interspersed with socialising, visits to the health clinic and administrative business.

While women purchased supplies of food for their dependants, (including their husband), prevailing social values were antagonistic towards the accumulation of goods. An individual's purchases were often requested later by either co-residents or other household members. An individual woman therefore distributed purchased foods beyond her own household as she provided food on request to other households or, as she shared prepared foods with members of other households. This process of sharing and distributing was continuous and reciprocal although people occasionally complained privately about households that depended too frequently on others.

Women prepared or provided food when their children or husbands demanded it and, in addition, children helped themselves to food supplies belonging to their parents or guardians. Whenever adults initiated the preparation of food to satisfy their own needs others invariably joined them when the food was ready. With the exception of breakfast, there were neither regular meal times nor regular meal places. Similar patterns of food consumption were recorded in Arnhem Land by McArthy and McArthur (1960:150) and Hamilton (1981:52).

Women's foraging work was another aspect of their subsistence contribution. They worked regularly at this and the foods they provided were an important component of the diet.

Whenever possible they used vehicles for foraging trips but occasionally they walked out from their home camps. For this chapter, I have simplified the quantification of foraging time. It was taken as the time which elapsed between a woman leaving the household (either on foot or by vehicle) and her return. During that time women engaged in a range of activities - child-minding, food preparation and so on, but for this section I have not attempted to sub-divide a foraging day.

Specific tasks associated with the care of young children (Plate 8.3) were not necessarily either time-consuming or difficult. However the most onerous aspect of child-care lay in the constraints that it put on women's other activities. It was a responsibility from which there was little relief (see Hamilton 1981:131). Child-care was difficult to describe quantitatively as a category of work distinct from other categories because it was most often integrated with them.

Members of a household dwelt in either temporary or permanent shelters. The latter were built at the location where household members spent most time. They were more elaborate structures than the temporary type (Plate 9.2). Each permanent household comprised a covered shelter for the storage of goods, a hearth area, and in the summer, a shade area situated two or three metres from the hearth. O'Connell (1979) reported, in more detail, similar types of construction among the Alyawarre. The construction of a shelter required a co-operative effort between household members, to cut posts, hoist poles, tie down canvas and so forth. In all households (except the **arnkentye**) women tended to take responsibility for subsequent maintenance and alterations. Women resident in the **alwekere** constructed and maintained their own shelters (Plate 8.5). Periodic tasks associated with household maintenance included removing accumulated ash and rubbish from the hearth, preparing sleeping areas each evening, collecting firewood and

water and managing household utensils. As well there was clothes washing - an infrequent but time consuming activity carried out in drums over open fires (Plate 8.2).

In 1976 a small batik cottage industry was introduced at Utopia. The women took it up enthusiastically (Green 1985). Except for one or two individuals, men were not involved in batik production nor did they have any other craft industry. During my fieldwork the women from Angkwele outstation did not work with batik but those from Eniltyiye were regular batik producers (Plate 8.4). The project was co-ordinated by a non-Aboriginal woman who travelled regularly to the outstations supplying the materials necessary for production and purchasing completed work. The marketing of the batik in the broader Australian community was also her responsibility. Women worked when it was convenient; the craft production technology was simple and they worked at or near their own households. They were paid in cash as they completed each item. The activity was particularly suited to the needs of women on outstations. It provided a small additional income and an opportunity to develop their creative skills.

The Urapuntja Council employed one woman on each outstation as a health worker. She took responsibility for communications on medical matters between the central base medical centre and the outstation residents. Each outstation had a caravan to house both the radio and a range of basic medicines. The health worker was responsible for its maintenance. She was expected to be present at the time of routine medical visits by clinic staff and to attend in-service training. The work that these responsibilities generated however, varied greatly. Sick people were often taken straight to the medical centre and other adults often did the radio reports. On the larger outstations, kinship relations influenced the degree of interaction between the health worker and residents. There was no other employment available on outstations.



Plate 8.3: Mavis Bird gives her daughter, Jessie, a bath using rainwater collected from a soakage in the river bed.



Plate 8.4: Glory Ngale and her adolescent daughter work on batik. The molten wax is taken from the pan set over a low fire.



Plate 8.5: Hilda and June Bird construct a new *alwekere* at Angkwele outstation.



Plate 8.6: June Bird sets off on a hunting expedition in company with her two children and taking a .22 rifle. It was unusual but not proscribed for women to use rifles.

A QUANTITATIVE DESCRIPTION

The data was collected over two periods of three months. During that time I monitored the activities of one woman for 46 days in September 1981, December 1981 and March 1982. The woman was single with three children who lived with her in the **alwekere**. She was not involved in craft production. I recorded the time she spent on each work category (Figure 8.1). In all, the woman worked for a total of 224 hours during the observation period and had therefore a relatively short work day of 4.8 hours. Aside from child-care, the largest proportion, by far of this time, 81% or 3.9 hours per day, was taken up with subsistence activities. This included foraging, food purchasing and food preparation. This accorded well with a general impression that the practicalities of subsistence were a daily pre-occupation. In contrast, household tasks occupied 14% (0.6 hours) of the total time. Not only did subsistence activity dominate women's work time, it was clearly distinguished from other types of work. Women carried out subsistence work more regularly and with comparative predictability. Every day they performed at least one and often all three tasks associated with subsistence - foraging, preparation or purchasing. Other categories of work were less predictable. They tended to be undertaken in infrequent but extended bursts of activity. So for example, while one or two women raked rubbish from the hearth each day, most engaged in less frequent but more protracted clean ups.

Of the subsistence work, foraging accounted for 69% of subsistence work time, food preparation, 20% and purchasing, 11% (Figure 8.2). In the 4.8 hours of work per day, therefore, a woman spent 2.7 hours foraging, almost an hour (0.8 hour) preparing food (including the collecting of wood and water), and 0.4 hours in purchasing it. It is important to recognise the essential labour component involved in the preparation of purchased foods into edible products. This was

particularly so in the case of flour and tea - two major dietary items. Unprepared flour is inedible, as is tea - neither are available for consumption without further work. That work is carried out mostly by women.

For 39 days in March, April and May 1983 I compared the foraging and batik activities of another women. Her household comprised herself, her husband and their infant child. On 13 of the 39 days the woman neither foraged nor engaged in craft work; on two days she carried out both activities and on the remaining 24 days she undertook one or the other tasks (Figure 8.3). That these activities occurred on the same day only twice (on day one and day three) indicated a preference to pursue either one or the other for substantial periods of time. Batik was an activity most conveniently undertaken at the camp; it required access to hot wax, water, dyes and soap powder. The woman I monitored spent on average, 1.8 hours per day engaged in batik production. Foraging required women to leave the camp. The two activities were incompatible and there was a considerable decline in foraging frequency for women engaged in batik production. The craft producer foraged for 2.1 hours (on average) on 35% of the available days (39) while the non-craft producer did so for 2.7 hours on 50% of available days (46). It was common for women to be both industrious batik producers as well as persistent foragers. The total work period for women who regularly pursued both activities was greater than the 4.8 hours calculated above - I would estimate it to be closer to 6 hours per day.

Both women I monitored were health-workers for their respective communities. A health-worker's daily work schedule was unpredictable and, like child-care, more a responsibility than a regular daily labour. I included (Figure 8.1) a component for the regular task of radio reporting but did not further quantify paid work.

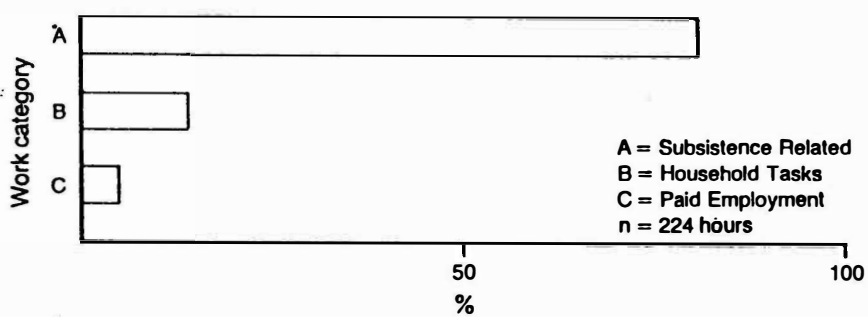


Figure 8.1: Time allocated to some categories of work on 46 days during September, December 1981 and March 1982, at Angkwele.

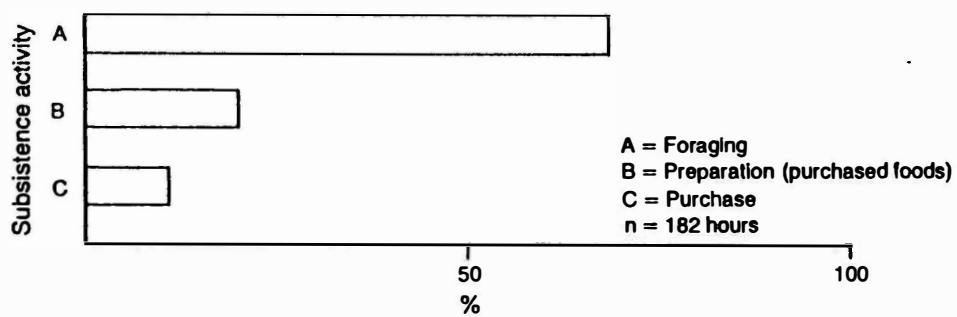


Figure 8.2: Time allocated to subsistence activities on 46 days during September, December 1981, and March 1982, at Angkwele.

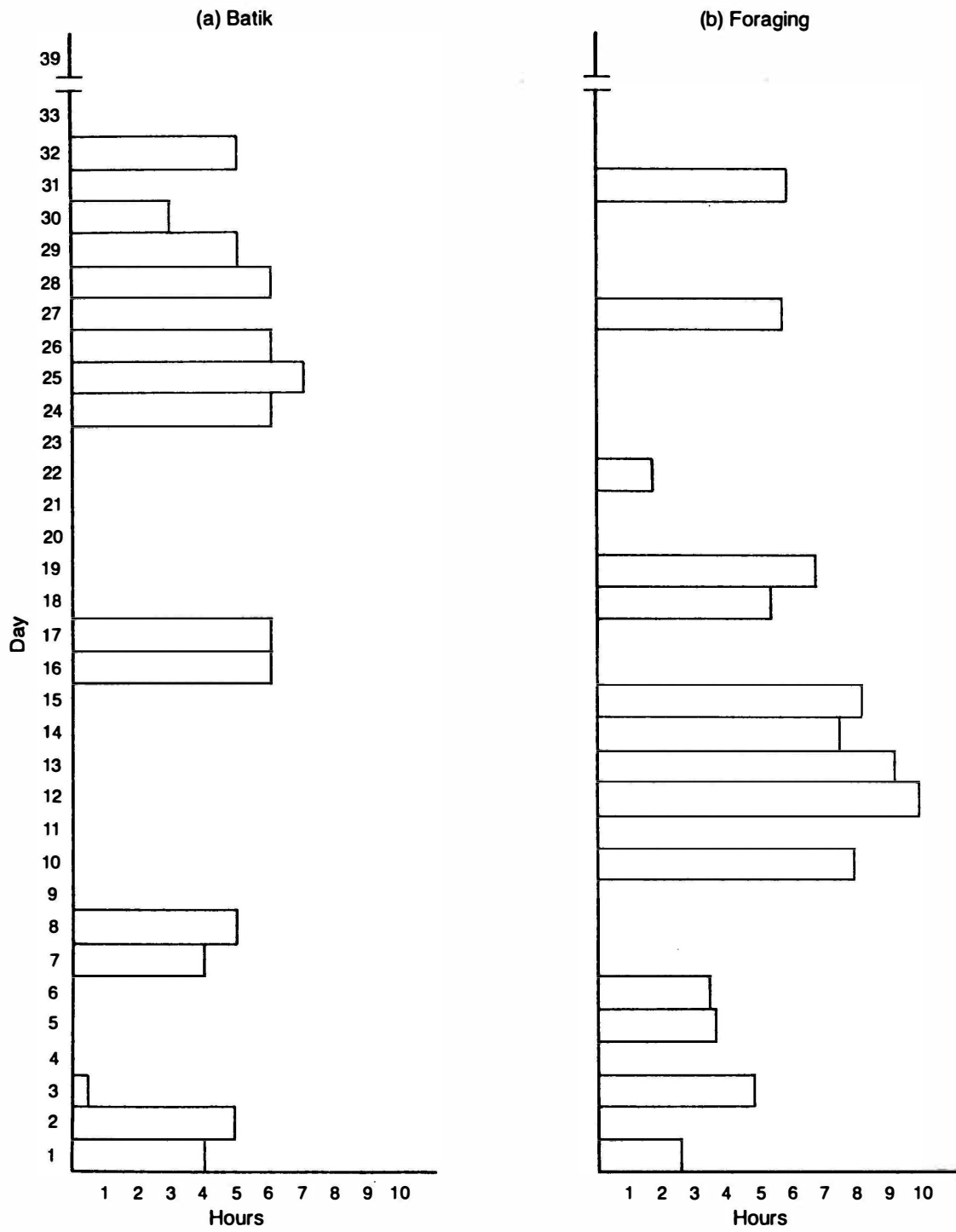


Figure 8.3: Foraging work time compared with batik work time on 39 days during March, April and May 1983, at Eniltyiye.

During the survey month of March 1982, the woman whose work schedule I described, spent five days away from the outstation attending a health-worker training course in Alice Springs. She left her children in the care of her former husband.

This schedule has an interesting omission: the production and maintenance of tools (see, in contrast Lee 1979:272). As a rule, people were unconcerned about the condition of tools and utensils until a particular item ceased to function. Hence women persevered with blunt axes and crowbars in preference to sharpening them. During twenty months, I recorded only two occasions on which crowbars were sharpened and one of crowbar production. Axes were also sharpened only rarely. Men manufactured the wooden **panthe** used by women to transport infants. When a child had outgrown it, the **panthe** was passed on to another woman.

The significance of women's subsistence production

Returning briefly to Altman's (1982:134) findings on work time, it is evident that the segment of women's work which he deemed insignificant, namely the preparation and purchase of store foods, took up 1.2 hours each day and represented 25% of women's work time by my calculation. People at Angkwele outstation and Momega outstation in Arnhem Land prepared purchased foods in a similar manner - flour, in the form of damper, and tea were important staples and cooking was carried out on open fires. It seems likely therefore that women in both areas spent similar amounts of time engaged in these activities. On this basis there is little justification for excluding it as productive work since it would represent 35% of Altman's (1982:138) final figure of 3.4 hours per day of productive work for women. Adding my estimate of time allocated by women to non-foraging subsistence work (1.2 hours per day) to his 3.4 hours per woman per day gives a total productive work time of 4.6 hours per day, a figure that is

close to my own calculation (4.8 hours per day) arrived at by a different method.

Aside from the demonstrably significant period of time which women allocated to non-foraging subsistence tasks, their central importance in both diet and social interactions is overlooked in his scheme. The provision of prepared tea and damper by women to households other than their own was a feature of everyday life. The labour input of women was, for Altman, invisible, much as Dixon (1969:194) claimed for the same category of women's work in western industrial society.

THE SEXUAL DIVISION OF LABOUR

With few exceptions, women took responsibility for the care of young children and the domestic tasks associated with daily household maintenance. But the division that was apparent did not arise out of any rigid apportioning of tasks that were characterised as either women's work or men's work. Women rarely requested men to carry out domestic chores, and they were much more likely to request the assistance of their female than their male children. For the most part they were not overtly compelled to undertake domestic work by their partners, dependants or other relatives, but they did take responsibility for it. While compulsion was rare, there was nonetheless a social expectation that women would do certain kinds of work.

Anna and Maggie, two nine year olds, were playing together at the back of the **alwekere**. Each of them was wearing a scarf tied in the manner of adult women. They had excavated a small shallow pit, covered it with an old piece of plastic, filled it with water and soap and were washing one or two items of their own clothing while they sat chatting.

These children at play had already formed ideas of what constituted women's work.

The constancy of women's role in child-raising was an important factor in their active role in household management. Ensuring that children had adequate food, shelter and comfort involved most women in subsistence and household work. The benefits of this work were enjoyed by all household members. The establishment of substantial, permanent household dwellings has, however, created a particular physical domain within which women usually carry out these tasks. It has, I believe, reinforced the association of women with domestic affairs and household management.

On the other hand, aside from subsistence related tasks, "house-keeping" itself was a topic of scant interest to either men or women. Whether or not a woman performed domestic tasks at all and the state of order of her household was not a subject of public comment. The tasks carried out in relation to household maintenance took up less than an hour a day and in normal circumstances were given a low priority. Women did not feel obliged to undertake such tasks if opportunities to engage in other activities arose.

The comfort of a household was largely a consequence of women's efforts. They organised children, bedding and fires on most evenings; they kept track of household equipment; they washed clothes; carted water and gathered firewood. Perhaps the strongest evidence indicating the magnitude of their contribution was the sparseness and lack of material comforts to be had in most single men's camp. The **arnkentye** were invariably bare of equipment and consisted of rudimentary windbreaks. Shelter for unmarried men in rainy weather was usually an old car or a caravan, if available. Both were less comfortable than other shelters because no fires could be lit in them. No arrangements existed for the safe storage of flour and other staples, and rarely were cooking utensils available. Except for meat provided through hunting, men living in **arnkentye** were dependent on female relatives

resident in neighbouring households to provide their daily needs.

I visited the **alwekere** at Three Bores briefly on 18 January 1983. The women sitting there were eating fried beef from an animal killed by the son-in-law of one of the residents. About 25 m away, in sight of the **alwekere** at the edge of the main track which ran beside it, a man sat alone. He was the brother of the man who had killed the bullock and a resident in the **arnkentye**. Shortly one of the children took some cooked beef to him.

The example highlighted the role women played in food preparation and household management. The distinction between purchased foods and prepared edible food was important. My awareness of the distinction was reinforced by my own dependence on women. In the earlier days of fieldwork I was unable to make damper. Although I bought flour and provided that to my host, I was nevertheless, dependent on her for a major component of my daily diet.

A sexual division of labour existed in foraging activities. Men provided hunted fresh meat from large animals while women concentrated on smaller animals such as lizards, echidnas and grubs, as well as honey and plant foods. The division was not strict and no restrictions prevented women using the technology of hunting - cars and rifles. I recorded several events in which a woman, using a rifle, attempted to take animals usually taken by men (Plate 8.6). Conversely, I observed men using digging sticks to collect honey ants and yams, or gathering fruits and tracking small lizards. Nevertheless, a division was evident. Men provided, by far, the major share of hunted meat (Table 4.2) and provided it in quantities which satisfied the needs of one or more related households. For example, an average-sized kangaroo (25 kg) provided at least 20 kg of meat - enough for all the households at Angkwele for approximately two days. The high preference for meat and fats in combination with the lack of

an alternative fresh meat supply meant that all requirements were met through hunting. Men thus maintained their traditional role as hunters of large game. Although women's foraging was similarly oriented towards animal foods; the species they commonly took were adequate for the requirements of fewer people but provided welcome variety. Women and children were thus dependent on men for adequate supplies of fresh meat. The strong desire of both men and women to consume fresh meat however created a constant pressure towards exchange. Women regularly provided men with highly-prized bush-foods such as honey ants, fruits, and lizard meat in return for larger quantities of meat (Figure 8.4). Much as people valued regular supplies of fresh meat, it constituted only part of their dietary requirements. All bush foods represented 31.9% of the daily per capita energy intake - the remaining 68.1% was derived from purchased foods of which the bulk, (53.2%) consisted of flour, sugar and one or two vegetables. This was the sector of the diet which women dominated. They purchased, managed, prepared and distributed these resources to their spouses, dependants and other relatives. Where men received the household income, they either gave money to their wives, or less often, purchased the household requirements themselves. Still, the organisation of purchase, management of meals and of preparation was undertaken by women.

SUMMARY

The adoption of processed foods transformed women's role, but their contribution to subsistence requirements continued. Fresh meat was highly desired and most conveniently procured in quantity by men. Consequently a household without access to the production of both active men and active women was poorly provided for.

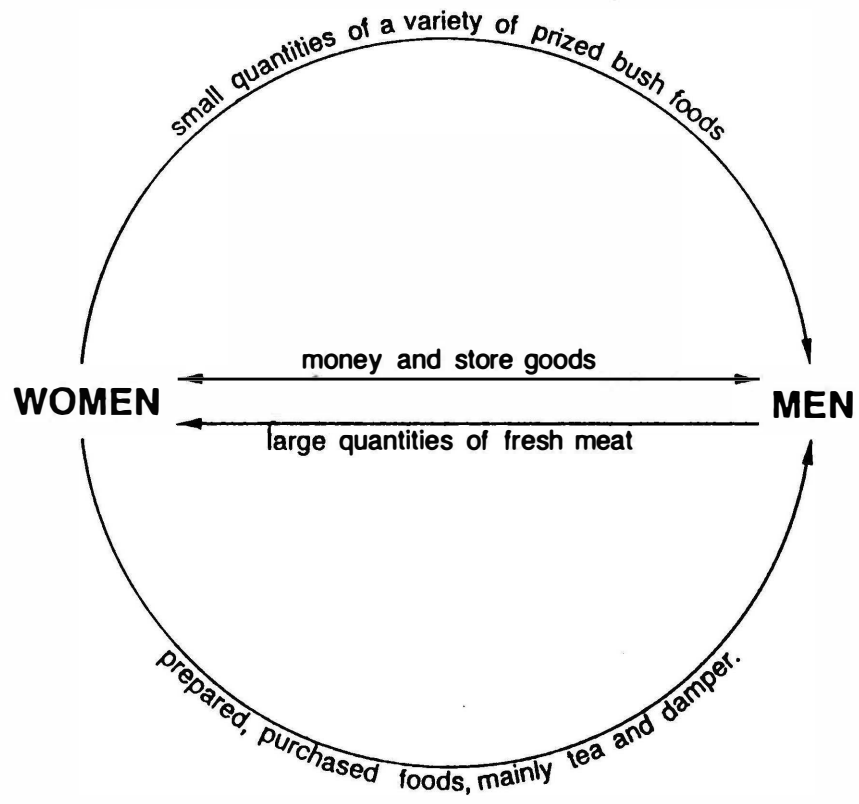


Figure 8.4: Contemporary subsistence exchanges between men and women.

The contemporary division showed a complementarity of male and female production that preserved a similar feature of traditional economic arrangements (Kayberry 1939:27). It may be that the necessity for men to hunt set up an expectation, by both sexes, that the remainder of subsistence work be undertaken by women since a complementarity of roles was the familiar model.

In addition to subsistence work, women undertook other tasks which contributed to the maintenance of their own and related households. The domestic work of contemporary women at Utopia (excluding that relating to child-care) occupied at least 4.8 hours per day. The importance of their contribution is only partially reflected when framed solely in terms of time or efficiency. Its essential quality is then easily overlooked. Interpretations of change that incorporate a model of the collapse of women's productive role (Bell 1983a; Altman 1984) ignore the significance of all other productive (and reproductive) labour which women carry out within the household or domestic sphere. The perception that women's household labour does not constitute real work has long been a target for feminist criticism (Dixon 1969:194). Although anthropologists, particularly those interested in women's role, have taken issue with (male) characterisations of traditional women's work as "pedestrian" and "menial" (Maddock 1974:25), considerations of the changed situation of Aboriginal women have tended to overlook the significance of their domestic work. Is it because it is "too basic" (Berndt 1981:182)?

CHAPTER 9

LABOUR AND DIVISION IN DOMESTIC LIFE

A division of labour based on sex was evident in the activities carried out on the outstations. In addition there were arrangements for some men and women to live separately within each camp in the **arnkentye** and **alwekere** respectively. Taken together, can these features be seen as providing the basis for a society in which sexual separation is the dominant mode of daily organisation? To what extent did the existing division of labour, in conjunction with a sexually linked residential division represent "the extreme separation of male and female" (Hamilton 1979:ix) which is proposed as characteristic of desert groups (White 1975)? The role of the **alwekere** in day-to-day life is central to the proposition of separation. Bell (1983a:17) for example, suggested that it "provides visible proof in the wider society of women's separateness and independence". The composition and role of the **alwekere** at three different outstation locations, Angkwele, Eniltyiye and Three Bores formed the basis of my investigation.

ANGKWELE

In December 1981 there were five households at Angkwele, including one **alwekere** and one **arnkentye**. The total population was 11 adults (including me) and 13 children.

Alwekere: structure and membership

The **alwekere** at that time was composed of four distinct areas - a central covered storage shelter, a small semi-circular covered ablution area about three metres behind the

central shelter on its eastern side, a leafy-bough shade about nine metres away to the south, and a set of improvised beds set up in the open about four metres in front of the central shelter (Figure 9.1).

The covered shelter was a solid structure of posts and rails tied together with wire, rag and sometimes bandages (similar to that shown in Plate 9.1). It comprised a roofed section large enough to sleep two adults and three children, and an open section where there was provision for a fire-place and my sleeping area. The **alwekere** was re-located within the camp area frequently at Angkwele - eight times during my stay. This particular site was a relatively recent one, approximately 15 m further back on the eastern side was the site of the previous shelter which had been vacated two weeks earlier. Little remained at the old site. Hilda and June had removed useful timber to the new site and the dried branches which had formed the previous shelter wall were gradually being stripped away for firewood. A shade, at the northern end of the old shelter site, which had been built by a woman resident who had since left, had fallen into disrepair.

The **alwekere** was the only household with an ablution area. It was constructed from a frame of inward leaning branches about 1.5 m high which had been set in the ground in a semi-circle. Blankets were slung over this frame to provide privacy. The opening to the structure faced away from the central camp area. Women and children filled buckets of water and took them inside this small shelter to wash.

As the weather warmed camp residents built bough shades. They placed sturdy, forked posts of mulga in the ground. Roof rails were set in the forks and three or four additional rails provided support for the leafy branches which were piled up to form the roof. Sometimes the western wall of the shade was covered with a screen of either canvas, or more usually, leafy

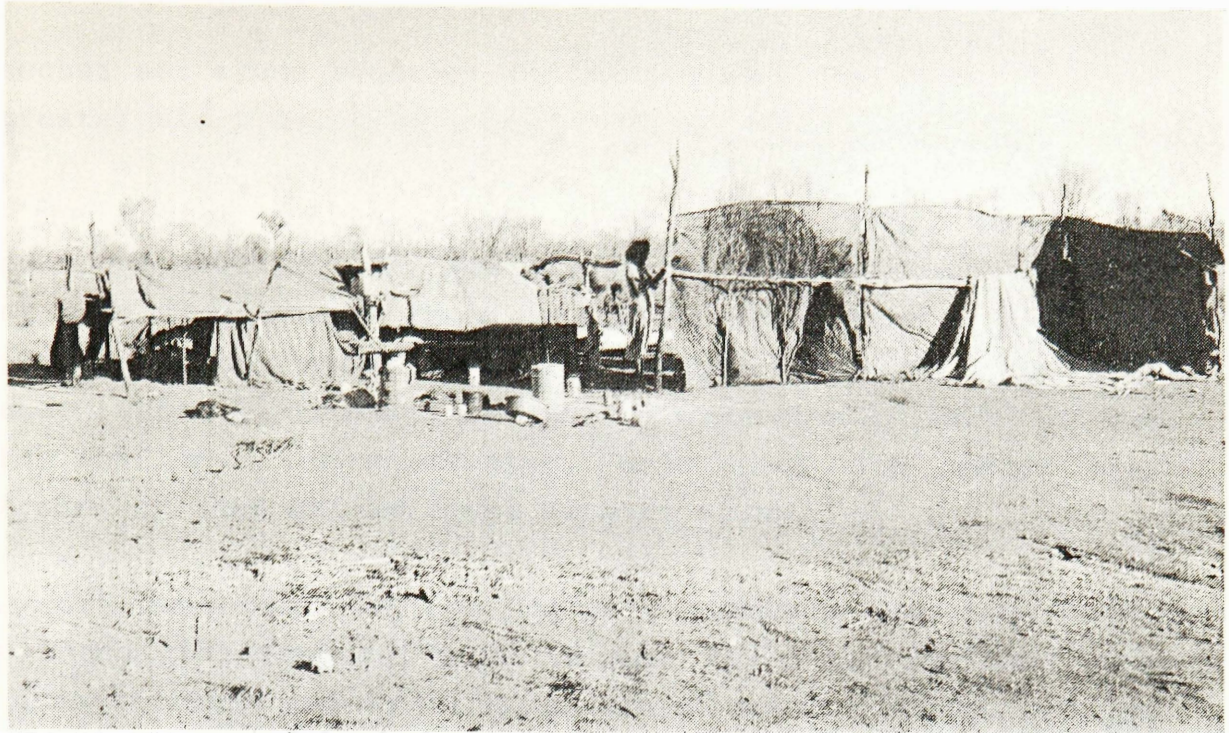


Plate 9.1: Hilda puts the final touches to an unusually high windbreak constructed beside the covered shelter of the **alwekere**.

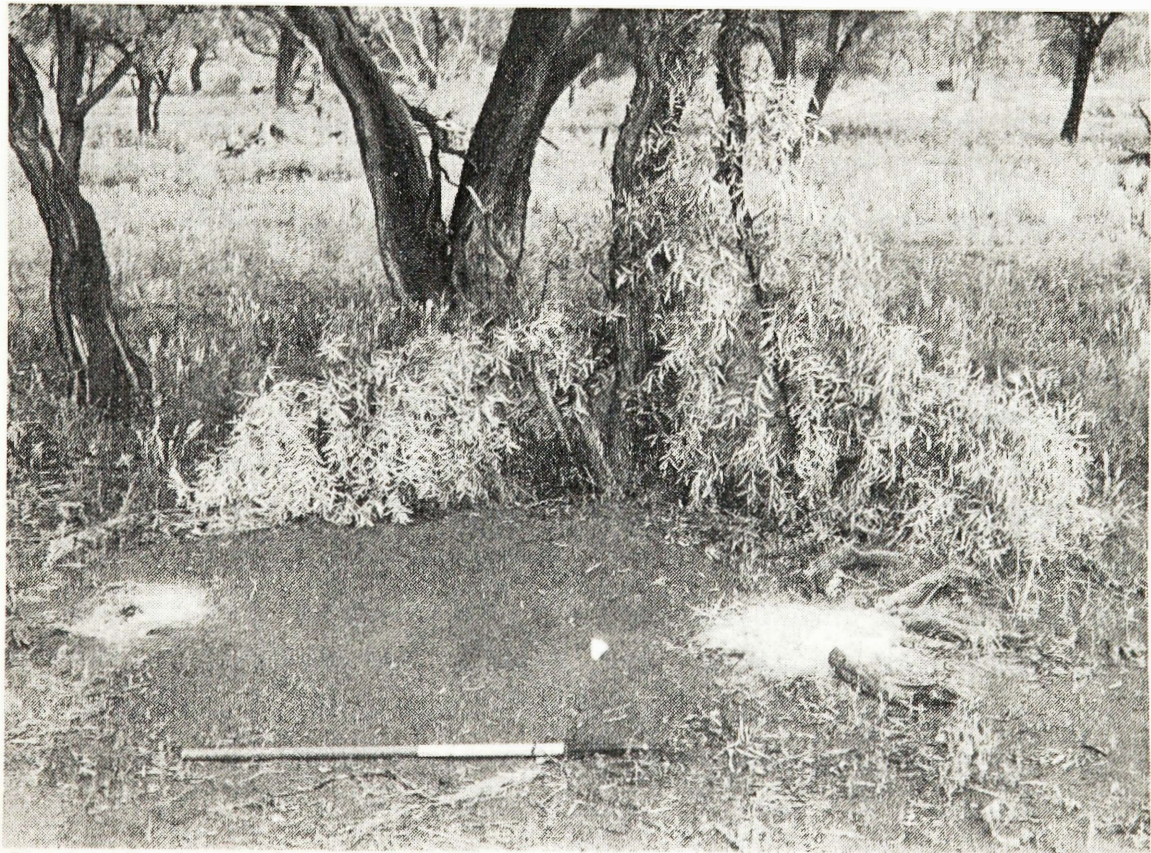


Plate 9.2: People regularly constructed temporary shelters in the traditional style using bush materials.

branches set close together in the ground. The latter allowed a greater air flow.

In the hotter months people preferred to sleep above the ground, if possible, in case of snakes. Few beds were owned - most were improvised. Ours were constructed from a number of flour drums on which rested a large iron and wire mesh frame. These platforms were placed about 4 m in front of the main shelter. Each evening, mattresses and swags were arranged on them and we slept without fires.

The core membership of the Angkwele **alwekere** comprised June, her three children and Hilda (Figure 2.2), but visitors were frequent. These mainly included Mavis' mother, Topsy, her two adult daughters and sometimes her sons (who stayed at the **arnkentye**). So, for example, they lived in the **alwekere** for three weeks in September 1981; not at all in December; for one day in February 1982 and for three days in March 1982. The change in membership affected the physical location of the **alwekere**. When its membership was limited to June, Hilda and the children, its location varied from a position near the edge of the camp (Figure 2.4) to one within a couple of metres of their parents' dwelling. But on the arrival of Topsy or other female visitors, the **alwekere** was sited at the periphery of the camp area.

When Topsy and her daughters arrived they set up another hearth and slept in a separate section of the **alwekere** from June and her family. They stored their food separately and cooked at their own hearth. The **alwekere** then had a membership of six women and three children. But the establishment and maintenance of two separate hearths, two living areas and shades **within** the area of the **alwekere** clearly marked a separation of its membership into two groups (Figure 9.2). All were residents of the same **alwekere**.

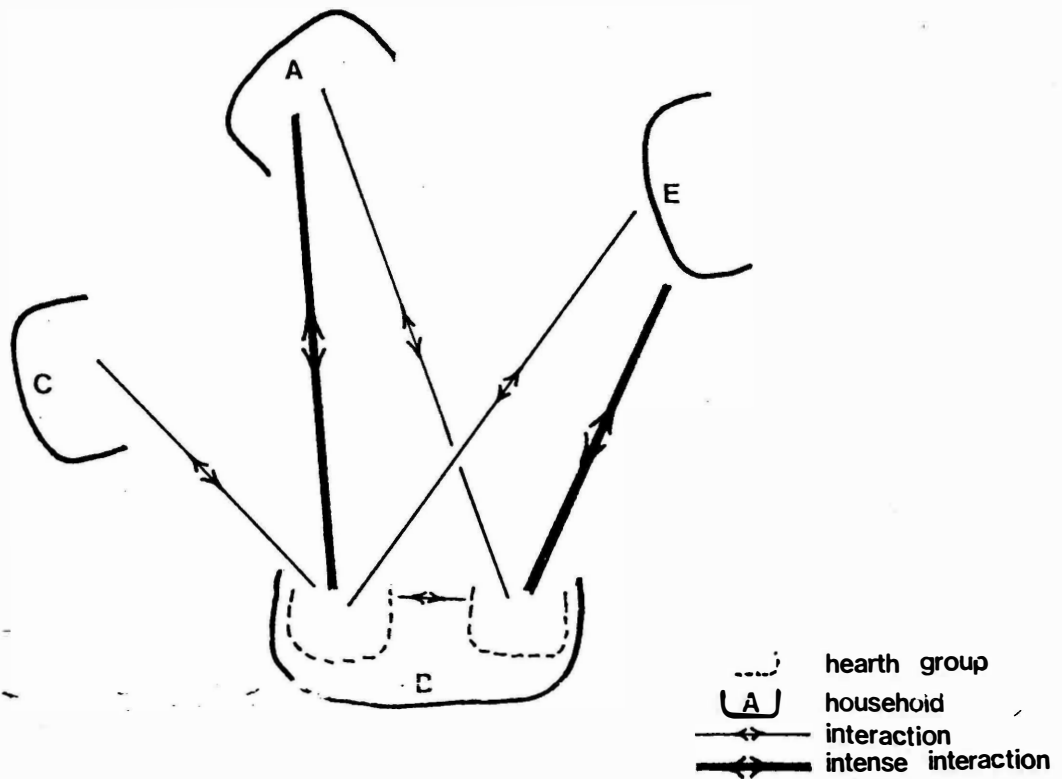
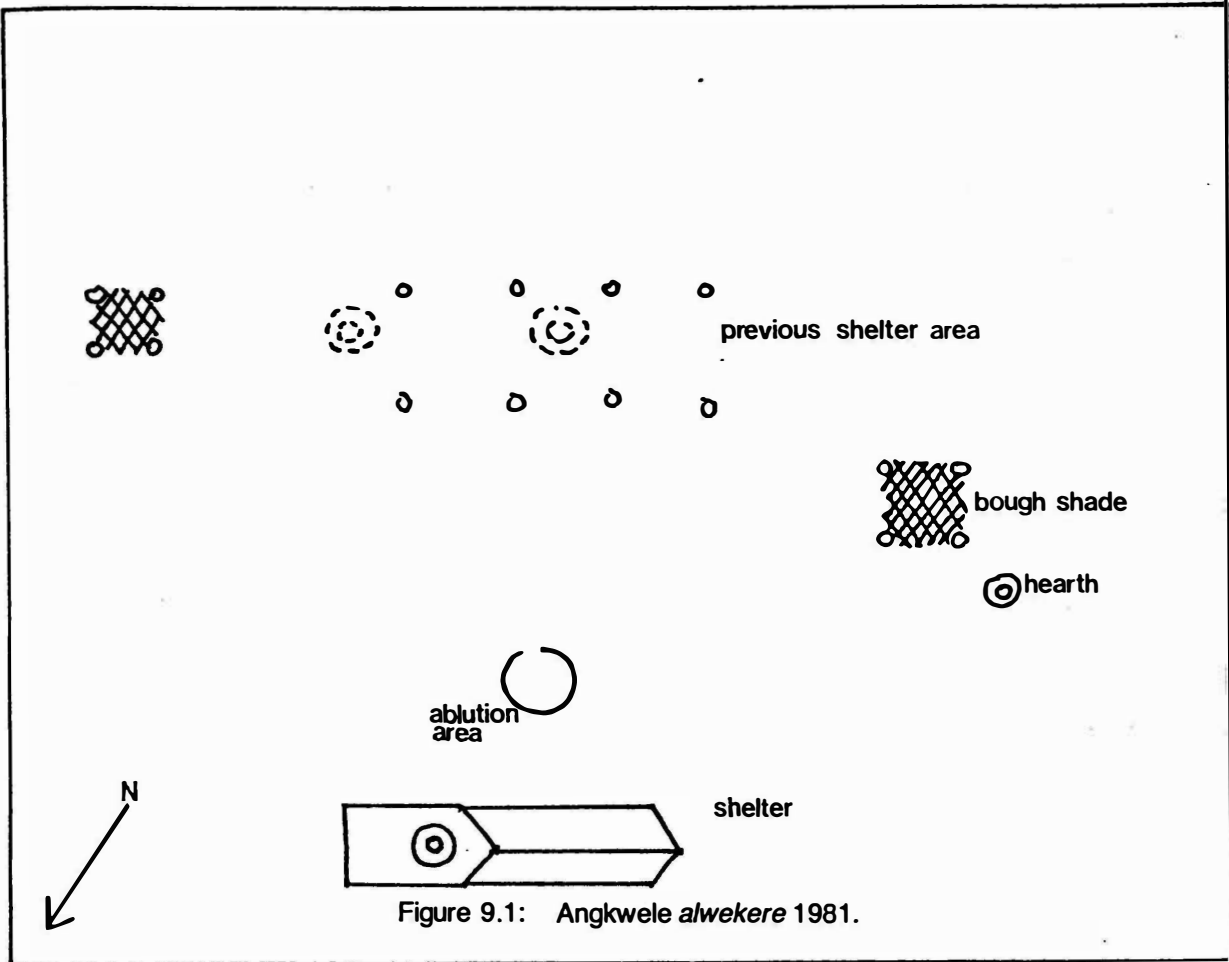


Figure 9.2: Interactions between *alwekere* residents and other household at Angkwele, 1981.

However, they operated not as one group but rather as distinct hearth groups. These two **alwekere** hearth groups also focused on different households within the camp. The primary focus for Topsy and her daughters was Mavis and Lindsay's household; June and Hilda continued to be more closely linked to their parents' household. The hearth groups within the **alwekere** sometimes went on joint excursions and the three youngest women (June, Hilda and Topsy's daughter, Pansy) spent a good deal of time together.

Topsy was Lindsay's actual mother-in-law and classificatory mother-in-law for **Artwe ambwe**. In each case all parties maintained strong avoidance behaviour. Topsy confined her movement to the immediate vicinity of the **alwekere** and the bush area to the south and east - never crossing the central camp area. Her daughters moved freely about the camp area, spending time away from the **alwekere**, mainly at their sister's household. Since Topsy could not actually visit her son-in-law's household because of the avoidance relationship, her daughter, Mavis, frequently visited the **alwekere** bringing her infant daughters with her. Although Topsy's movements were restricted within the camp area, she regularly provided and prepared food for her adult children.

On 3 October 1981, Topsy's son was a resident in the Angkwele **arnkentye** and she, of the **alwekere**. One evening after dark the single men returned to camp with uncooked beef. It was sent to Topsy who put some aside for herself, then fried the remainder with onion and had her daughter take it back to the **arnkentye**. The following morning she prepared a damper and tea, sending half of each across to the **arnkentye**; as well she gave a small portion of cooked beef to myself, June and Hilda. The day threatened rain and when the single men had left the camp, Topsy sent her two daughters over to erect a nylon tent under the delapidated **arnkentye** shelter.

The **alwekere** was a distinct household within the camp (Figure 9.2 household B) but within it there were two separate hearth groups each of which had different orientations in the camp

(households A and E). Household C interacted with both **alwekere** hearth groups less often than the other households. The frequent interaction between the **alwekere** hearth groups is also indicated. **Alwekere** residents shared one large shelter and a defined space comparable to other camp households at Angkwele. However, socially and spatially, divisions within this household were more complex than those of other households since only the **alwekere** encompassed multiple hearth groups.

Arnkentye

Unlike the **alwekere**, the **arnkentye** was only occasionally a functional household in the Angkwele camp. It usually consisted only of a brush windbreak and fireplace. There were rarely rainproof areas, shade or domestic utensils. When it rained, the occupants of the **arnkentye** slept in their cars or in the health clinic (a caravan). I obtained minimal information about the lifestyles of the young men apart from observations made from a distance as a member of an **alwekere**. However, young men were an exceptionally mobile group. Denham commented that the Alyawarre mobility among the 'ungundya' residents was so high that he was unable to record data to compare their household with other household types. He said of them:

Their sexual maturity and social immaturity, their high mobility and the very low frequency with which they interacted with women and children made them a most distinctive class of Alyawara (Denham 1975:142).

It was 9 December 1981 and hot. Day temperatures were around 40°C, skies were cloudless and the ground was burning hot. The sound of children began to fill the camp by about 7 a.m. At the **alwekere** no fire had yet been lit. As we woke we moved over to Ada's and **Artwe ambwe's** household where a billy of tea was available. Mavis sent us a piece of damper. Both Hilda and I contributed a tin of meat to the meal. Breakfast was over within half an hour but the adults lingered on planning the day ahead. It was decided that I would take some people hunting in my vehicle.

Colin, Ronald, Johnny, Paddy and his two young sons, went to Three Bores on unspecified business, while Lindsay, Mavis, their two children, and Anna travelled to nearby Bushy Park Station to shop and to visit relatives. In my vehicle were **Artwe ambwe**, Ada, Steven, June, Kwementyaye, Desmond, Hilda, Eileen and her four youngest children. By 10.30 a.m. the camp was deserted.

The hunting party headed in a north-easterly direction from the outstation along a track that ran beside a fence. The first stop occurred 11 km from the outstation where everyone dispersed into the surrounding scrub to collect and eat **alangkwe** (bush bananas) for about half an hour. These were plentiful and particularly succulent because of recent rains. All were eaten as we continued. During this stop, Steven killed one small dragon lizard. After a further 10 km, we stopped again to check a fresh perenti track on the road. **Artwe ambwe** and Ada tracked, located and excavated it from its burrow. Ada clubbed it to death with a crowbar. Just after midday we travelled another 14 km to a dinner camp where we stayed for almost three hours.

Artwe ambwe, Ada and Steven left our group at this time, taking the rifle and crowbar to seek kangaroo. The old man gutted the large lizard before they left and in their absence Hilda dug a fire pit and cooked it. June, usually a keen forager, had a sore arm and was unable to use a crowbar. Eileen had a three month old baby and another infant under the age of two so her movement was also curtailed. The day was extremely hot so we sat under some shady trees, chatting and waiting for the lizard to cook. In the meantime Hilda made a damper and a billy of tea. Two hours went by before the others returned. They returned, with Steven shouting triumphantly about the two kangaroos that had been shot and left some four kilometres away. The lizard was removed from the oven and shared up quickly by June. Eileen and her children sat a little to one side. Her eldest daughter, Maggie, carried a leg, a portion of the trunk, ribs and fat to her mother's family.

On our way to pick up the kangaroos we called into a nearby bore for water, then continued travelling another 8 km before we stopped to cook the kangaroos. This took about two hours and we left for home about 6.30 p.m. I left the group and on my return found them enjoying a "sugarbag" (wild honey) which had been collected from a nearby tree. The cooked kangaroos were put (unbutchered) in the vehicle on a pile of fresh, green leaves. On our homeward journey, two kangaroos were spotted in the bush. Steven insisted on shooting them but missed. ~~**Artwe ambwe** took the rifle and wounded one that the dogs were then able to capture.~~ The old man decided to walk

while the rest of us went to pick up the carcass. Ada quickly gutted it and it was placed on the back of the vehicle. By then the light was fading and we did not stop again until we reached the outstation at 8.30 p.m.

When we arrived home, those who had gone to Bushy Park had also returned. I stopped briefly to let **Artwe ambwe** and Ada out at their household, then drove across the clearing and parked the vehicle beside the **alwekere**. I, together with the other adults from the **alwekere**, later joined Ada and **Artwe ambwe** at the household belonging to Lindsay and Mavis. They discussed the day's events and shared the soft drinks purchased at Bushy Park Station store. An hour or so later the smaller children grew sleepy and made their way to their own family hearths. June, her children and I returned to the **alwekere** where, after arranging the bedding she laid down with them. I could hear the other members of the camp still talking as I drifted off to sleep.

That day was typical of many spent at Angkwele and exemplified some important features of domestic life in this small group. The dominant impression was of the centrality of family ties. While residents of the **alwekere** maintained a separate dwelling to which they retired each evening and at which at least some time was spent during the day, the social focus of daily life for the **alwekere** was the household of Ada and **Artwe ambwe**. **Alwekere** plans were made in conjunction with theirs. This often resulted in joint activities but insured that each knew of the others plans and whereabouts. The **alwekere** women were a distinct group, nevertheless other households were concerned for their welfare.

One Saturday evening (21.11.81) after shopping, a film was shown. The people from Angkwele had stayed on to see it. The film finished about 11 p.m. The **alwekere** residents were travelling in my vehicle, the other two households in another one. Because I had arranged to give another person a lift home, our vehicle was delayed a short while. Later, near the main crossing, 7 - 8 km from Three Bores, we found the other Angkwele vehicle waiting for us and we travelled the remaining 60 km in convoy. The old man explained that he was worried because there had been European strangers around during the day and we women were travelling alone.

There were strong economic ties between the two households. **Artwe ambwe** and to a lesser extent his sons provided the **alwekere** with regular supplies of fresh meat. Women and their children from the **alwekere** ate at their parents' hearth as often as they ate at their own. As in the account above, this was often for reasons other than economic necessity. These two households maintained some separate stocks of food but the women from each household were aware of each other's purchases and borrowed freely from them as the need arose. They exchanged food and other goods constantly. The intensity of this household interaction was based on the close actual kinship ties (parent-child) that existed between the two households and was restricted to those particular households. Relations between the **alwekere** and the other households were less intense but by no means restricted or formal.

The **alwekere** and the **arnkentye** were treated as the preserves of women and men respectively. Children freely visited the men's and women's households, to eat, play and talk or carry messages and requests. This freedom also extended to a male of about 18 years who was thought to be retarded. His occasional presence in the **alwekere** during the day caused no alarm. But when **alwekere** membership was at its smallest, with only **Artwe ambwe's** two daughters and myself, social regulations were less rigidly interpreted.

Kwementyaye had been sick for two days, vomiting and unable to eat. On the evening of the second day, as he lay with his mother on their mattress in the **alwekere**, **Artwe ambwe** appeared. He sat down beside the two and began to sing quietly over the boy.

There were several such visits. Most were associated with mundane matters such as the retrieval of cooking utensils or the collection of cooked meat. Younger men, married or single never visited the **alwekere** or its environs.

Within the small population at Angkwele there were usually four and sometimes five physically discrete households. They were the most immediately obvious aspect of camp organisation. Each had its own area of privacy. In addition, there was a marked separation between the households of unmarried men and those of unmarried women. However in the conduct of everyday life this level of organisation became less obtrusive and the strength of ties **between** households took on primary significance. The residents of separate households spent most of their time jointly involved in activities in which residence was of less importance than the relationships between participants. In this context, sex-based groups were less important than those based on family ties.

ENILTYIYE

Of the 12 households at Eniltyiye, four were **alwekere** (Figure 2.6 E,D,K and H) and there was sometimes an **arnkentye** (Figure 2.6 C). The kinship relationships of household residents are shown in Figure 2.5. The **alwekere** there were constructed much as were those at Angkwele, using a combination of leafy boughs, wooden posts, canvas, plastic and iron. During my stay none of the households at Eniltyiye re-located their shelters within the camp area.

Alwekere

The core residents of alwekere E were four women ranging in age from about 16 to 35 years. Their main shelter was an iron windbreak 4 - 5 m in length which was made waterproof by the addition of a large tarpaulin slung over an iron rail. The central shelter was an extremely sturdy construction and alterations were made only to extend it. Regular residents slept here. They used either a hearth in the windbreak or one situated on the southern side of the small bough shade which

stood about 3 m away on the western side of the windbreak. The windbreak was extended on the southern side to accommodate the visitors. They made additional hearths within the area of the windbreak. At these times the **alwekere** comprised multiple hearths. **Alwekere E** stood 5 m north of the household A where the senior landowner, the father of two **alwekere** residents, lived. The adolescent daughter of Glory Ngale (Household B) was the other core resident of **alwekere E**.

West of the bough shade of **alwekere E** three frail, elderly women lived in a canvas tent (**alwekere D**). Only one of these women was active and she carried out many of the tasks of the household. They cooked at a hearth at the open western entrance to the tent. Except for the most active women, the members of this household spent almost all of their time within the confines of their own **alwekere**.

On the other side of the camp thoroughfare, east of the other **alwekere**, another woman, in her 60s, lived alone with her dogs (**alwekere K**). She lived in a large tent and used a hearth at its southern end. Although every household had dogs, few had as many or gave them as much care as this woman.

On 25 April 1983 I visited Emily's **alwekere**. Inside, a small section was partitioned off with old pieces of blanket. Here the oldest, sick dog which was almost devoid of fur lay beside its own sleeping fire. Other dogs were kept away both from the dog's area and its food.

The **alwekere** at H was associated with the households I, F and G. I rarely visited this more distant cluster of families because my patrons at Eniltyiye lived in household B. Consequently I knew little of **alwekere H**. Households I, F, G and H (Figure 2.6) were located approximately 100 m from B - almost out of sight over the edge of the large dune on which the camp was located. The core residents of H were four women aged from 16 to 20 years of age they were most closely related to the couple in household I (Figure 2.5).

Arnkentye

The main shelter of the **arnkentye** (Figure 2.6 C) was an old car body. Its most regular resident was Michael's older unmarried brother, Kubitji, a man of about 45 years of age. Michael and Glory's other sons lived away from Eniltyiye at that time. Kubitji did not prepare food at his own household but ate most meals at household B. Occasionally there were other men in the **arnkentye** and Glory prepared tea and damper which was taken to them. Kubitji was absent for long periods and his relatives often worried about his welfare during those periods, particularly if he had gone to Alice Springs to get alcohol.

One evening (28.3.83), Michael decided that perhaps Kubitji was lonely in the **arnkentye** and that if he had more company he would stay longer at Eniltyiye. So he shifted over there himself for the night, asking me to keep Glory company and sleep at their hearth instead of at the **alwekere**.

Household interactions

The households A, B, C, D, E and K had strong social and economic links. The senior landowner, crippled and unable to walk, lived in household A. His wife remained constantly with him. Their two daughters from household E purchased necessary supplies for them unless the hawker travelled to the outstation. Productive hunters of household B, K and I sent meat and other bush foods regularly to household A. As well there was a constant flow of prepared foods between households E, A and K, as for example, I noted on 25 April 1983.

The day was cold and rainy. Soon after waking, I realized that there would be no tea for breakfast since our household had no sheltered fireplace. We sat, cold and glum, in the health caravan. Shortly a billy of fresh tea arrived from Emily (**alwekere** K). Later in the morning I sat with her. We were able to continue batik production in her well-sheltered **alwekere**. During the afternoon and again at sundown, she made a thin stew from beef, onion, a potato, salt and curry

powder. Rosemary (**alwekere** E) who had been fetching some of the ingredients as well as assisting Emily with her batik, took some of both batches of the stew back to her mother at household A.

The two oldest women in **alwekere** D were dependent on their active co-resident who prepared food or procured it from other households. She also provided occasional items of bush food. Neighbouring households, particularly B, supplied them with adequate firewood and maintained their shelter. All three women received pensions but needed someone to purchase food and other goods for them. It was my impression that requests for these old ladies' provisions were at times relentless but that reciprocity in kind to them was irregular. Their most frequent visitors were the middle-aged married women of the camp.

Household E was home for a younger group of women. With the exception of one widow, the core residents were unmarried and in their late teens. Their peers from household H often visited them to chat and listen to radio or taped music. This group depended on their parents' households (A, B and I) for their daily food needs although they each received a regular unemployment benefit. They themselves had few responsibilities. They accompanied the older women on foraging trips but their inexperience and consequent lack of foraging skills meant they contributed little.

I was approached by Emily about going out hunting on 8 April 1983. She said to me quietly that the group should only include herself and the old woman from **alwekere** D because those 'young girls just follow 'em about'. The preceding day a large group of six women, five young children and four adolescents had been out. The meagre foraging returns did not go far when distributed among so many.

Unlike the residents of the Angkwele **alwekere**, the women of Eniltyiye neither owned nor drove vehicles. They were reliant on other households with vehicles for transport.

As elsewhere, men supplied the major portion of fresh meat. Thus households without an active male hunter were linked to those that had. The residents of **alwekere** D, E and K, and household A looked to household B, and to a lesser extent to C and I, to provide their hunted meat requirements:

Around lunch time on 14 March 1983, Michael (household B) and three other male visitors left in his vehicle to go hunting. Myself, Michael's wife Glory, her infant and adolescent daughters (the latter from household E), Emily (household K) and two adolescents. Maureen and Jedda (household H) went out to gather bush bananas which were at their best after recent rains. Kathleen Kamarre had gone out on foot earlier. Our group gathered 6.5 kgs of the fruit, most of which was taken back to Eniltyiye. Kathleen had three goannas which she took to her household. About 4.30 p.m. the men returned. They had a bush turkey and a large kangaroo. Both animals were cooked in one pit on the western edge of household B. The bird was removed before the kangaroo. Glory prepared, cooked and butchered the bush turkey. Michael prepared and cooked the kangaroo, but his wife butchered it. By 7 p.m. the cooking was complete and a small group of women gathered to collect portions of meat to take to their households. Every household, except J and C which were unoccupied at the time, received meat from the division. The visiting group which included three of the male hunting party took parts of both animals as did households B, A and I; the others received kangaroo only.

It was unusual for the hunters of either household B or C to procure large quantities of meat and I observed few formal divisions such as this. For example, these men obtained meat on eight of the 33 days on which bush food was procured. In the interim other households sent them portions of cooked meat. The exchanges which took place were a constant part of day-to-day life.

I was out with Emily (household K) and Polly (household D) on 8 April 1983. Late in the afternoon we sat waiting for the two lizards that they had caught to cook. Near 6 p.m., Glory, Michael and their infant returned and sat down 10 or so metres away from us where they made a separate fire. Shortly Emily gave me one cooked lizard to take across to them. They had also caught two lizards (of the same type as Emily) and as soon as these were cooked, Glory gave Emily a section of body and some fat from one of them.

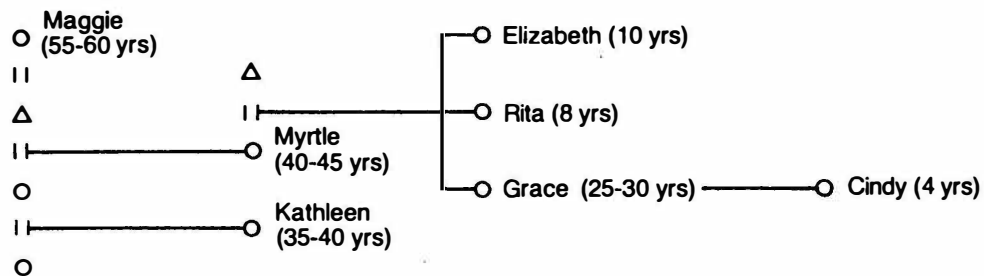


Figure 9.3: Kinship relationships of core residents of one *alwekere* at Three Bores, 1983.

At Eniltyiye, unmarried women had set up several *alwekere* based on a number of criteria: kinship relationships, age and idiosyncratic preference. The oldest women chose to live separately from younger ones; small groups of closely related women, set up separate households and one woman lived alone with, or, as she explained, because of, her many dogs. Each of these *alwekere* was oriented to one or more marriage-based households with whom they maintained strong social and economic links.

THREE BORES

The population of Three Bores fluctuated, but at the time of fieldwork was between 100 and 200 people - considerably larger than that of either Angkwele or Eniltyiye. There were at least three *alwekere* but since I was never a resident of the Three Bores camp my information is incomplete. My kinship affiliations meant that when at Three Bores I associated with one particular *alwekere* whose core members (Figure 9.3) were closely related to senior women at both Angkwele and Eniltyiye (Figure 9.4).

(A) = Angkwele resident
 (E) = Eniltyiye resident
 (T) = Three Bores resident

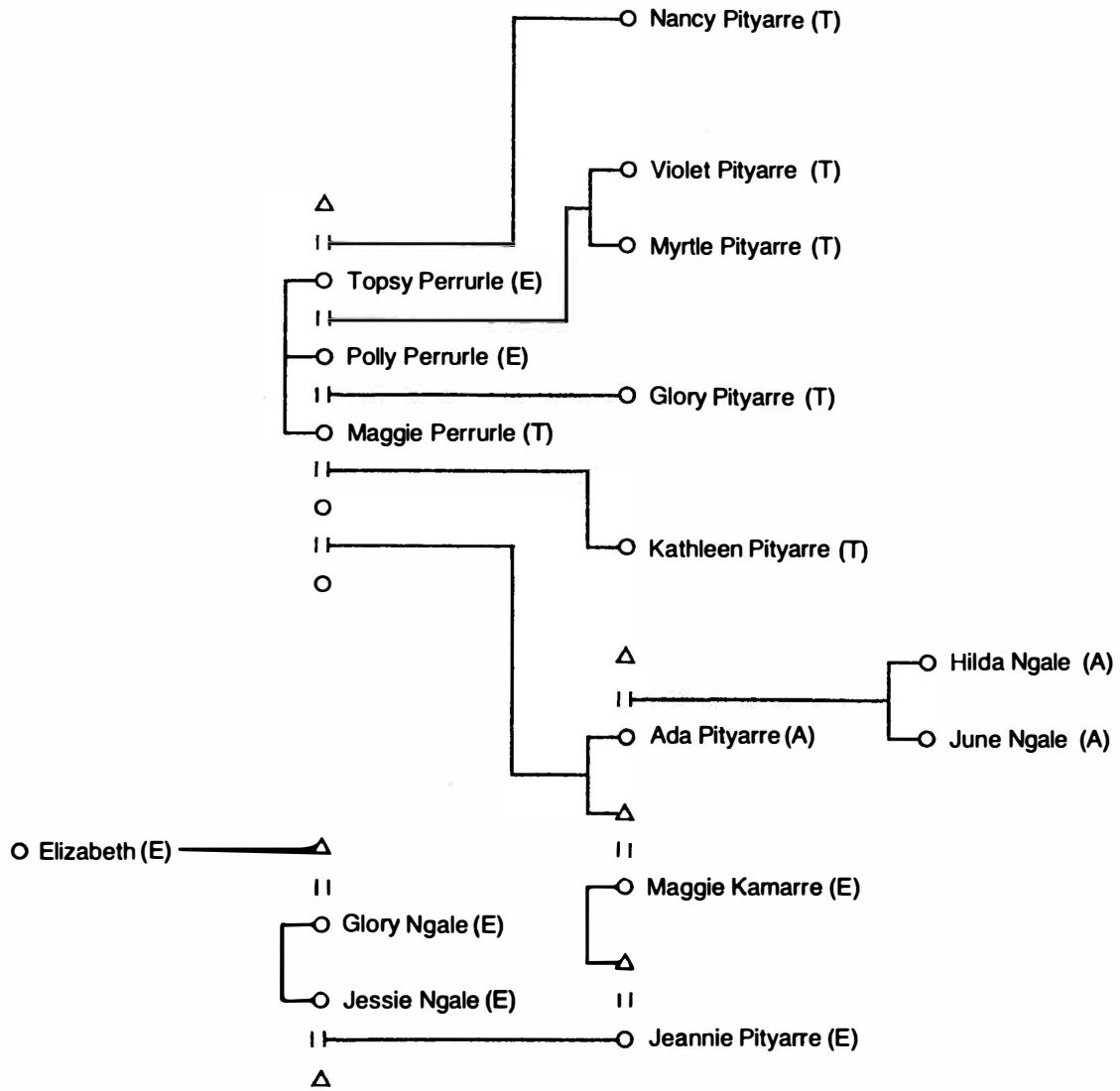


Figure 9.4: Kinship links between senior women residents of Angkwele, Eniltyiye and Three Bores.

Alwekere: structure and membership

The **alwekere** was sited 30 - 50 m from neighbouring households. It was large in area comprising a substantial windbreak, a tent, a bough shade, a large firepit and a collection of personal belongings such as suitcases, boxes and flour-drums (Figure 9.5). The membership of this **alwekere** was different from those at either Angkwele or Eniltyiye. The majority of its regular residents were mature but active widows - women between 35 and 50 years of age. The women, being widows, received independent incomes. As well they were experienced foragers and were usually successful when they searched for bush foods. The women had with them in the **alwekere** school-aged children and some grandchildren. Together with their friends this combination created a lively social atmosphere. Membership of this particular **alwekere** changed more frequently than most. The clinic, store, school and administration office were located at Three Bores and attracted a constant stream of people attending to business. On occasions women from other locations had to stay at Three Bores alone, whereupon many of them moved into this **alwekere**. The regular residents often provided for these temporary visitors in addition to fulfilling their obligations to kin in neighbouring households. It seemed to me that this **alwekere** was more self-contained than the smaller ones at both Angkwele and Eniltyiye. Its large size, its distance from other households, the seniority and skill of its residents, and their financial independence, combined to create a household which was relatively less dependent on neighbouring households. Nevertheless, as in the other locations, the women of this **alwekere** were also reliant on male hunters of other households to supply them fresh meat, and they had only irregular access to vehicles.

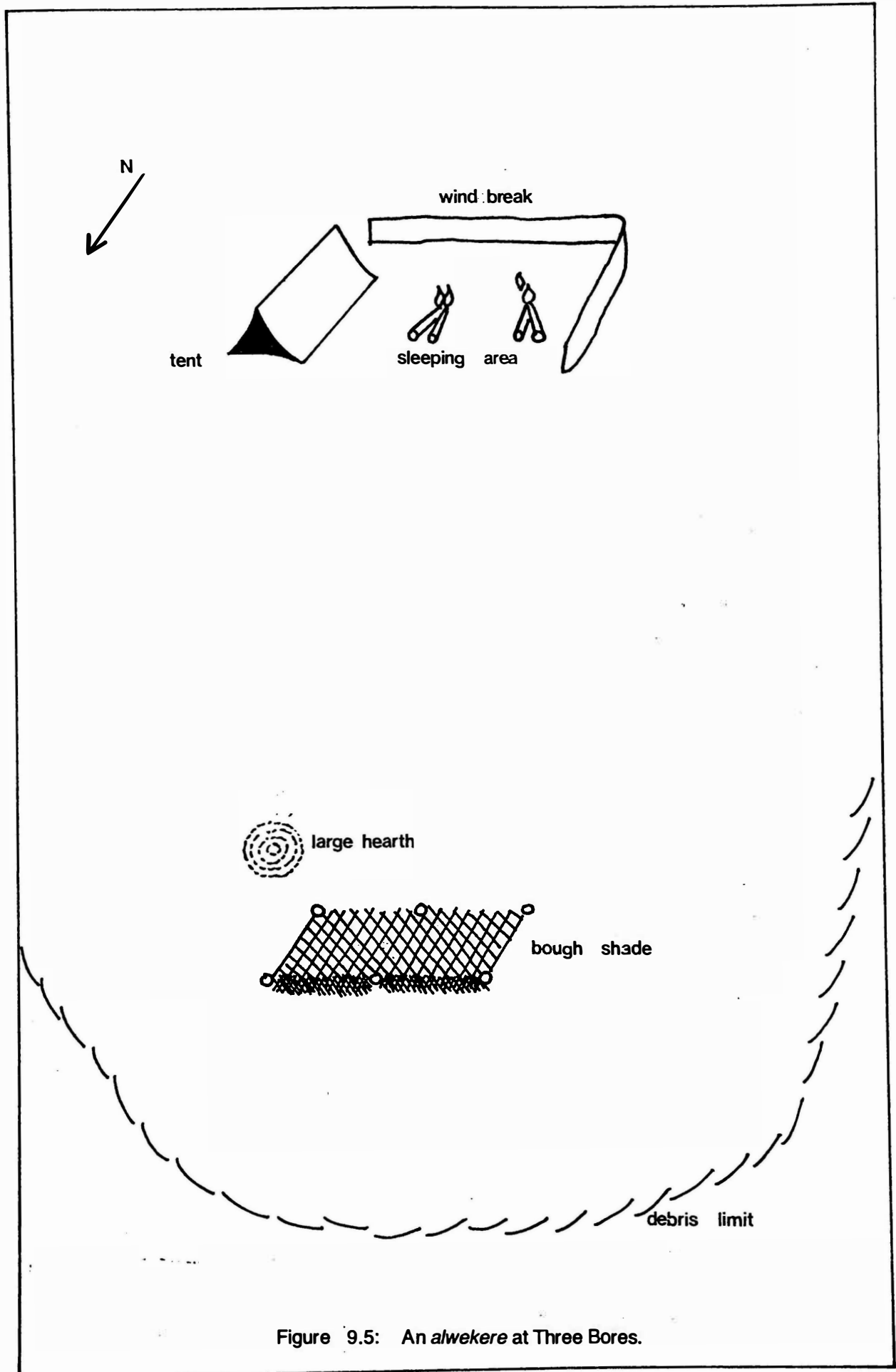


Figure 9.5: An alwekere at Three Bores.

CHARACTERISTICS OF ALWEKERE

All members of **alwekere** were women either temporarily or permanently without spouses. However, the form of any particular **alwekere**, its location, membership, stability and size, varied considerably. The most significant factor in determining an **alwekere's** form was the size and composition of the larger residential group in which it was part. The **alwekere** on the smallest outstation, Angkwele, had the smallest but most stable membership. Interaction between women in this household and other camp households was intense. Their separation as a group in daily affairs was minimal.

An increase in camp size saw a variety of **alwekere** forms emerge as groups of unmarried women further differentiated themselves. The differences related to kinship ties - close female kin co-resided; to age - older women separated themselves from younger ones and, to personal preferences. Within the larger **alwekere**, women again differentiated themselves on the basis of kinship affiliations to form distinct hearth groups. These hearth groups operated largely independently within the **alwekere**, often constructing individual sections of the **alwekere** shelter. The location of the **alwekere** was regulated by that of the marriage-based households with whom interaction was most frequent. Women established or joined an **alwekere** that were sited near close kin living in other types of households. Social and economic exchange between these households was continual and propinquity provided security for the female residents.

At Angkwele and Eniltyiye, the majority of the active, senior women were resident in marriage-based households while the **alwekere** accommodated both the oldest and the youngest women. At the largest **alwekere** at Three Borès, however, the core group included a number of senior women in addition to

the aged and young. This difference significantly influenced its status in the camp. That particular **alwekere** was larger and was relatively less dependent on other households than was the case in the smaller outstations.

Every woman spent at least some period of time during her life in an **alwekere**. Unmarried women periodically moved from one **alwekere** to another to visit relatives. As well, each woman moved out of the **alwekere** when she married but returned to it in the event of separation or the death of her partner. As a result, **alwekere** had frequently changing memberships and sometimes several hearth groups. The largest **alwekere** were the most unstable in terms of membership. A striking aspect of **alwekere** life was the autonomy of its members, particularly older women. They moved from one **alwekere** to another independently of their co-residents. This individual autonomy was also reflected in the separate household budgeting arrangements, and the absence of shared household routines. I concluded that it was a consequence of the strength of the links which drew individual adult women to households other than the **alwekere**. Thus, while **alwekere** was an identifiably discrete household for women it did not, I believe, represent the social separation of its members from the larger camp group.

SEXUAL SEPARATION IN DOMESTIC LIFE

Segregation in the smallest outstation was minimal and sex-based groups were least obvious in daily life. But when Angkwele residents travelled to Three Bores for shopping they became part of a much larger group and the male-female division became more evident. Angkwele women sat with their female kin from Three Bores while the men stayed with the vehicles or with groups of men. The congregation of many residents from different outstations brought together people with a wide range of kinship relationships including those

necessitating avoidance. I concluded that a separation into groups of men and groups of women on these occasions was an effective though temporary strategy to accommodate the requirements of kinship etiquette and was employed in formal situations such as large public gatherings or meetings.

While a sexual division of participants always accompanied large gatherings, a degree of formality could also be introduced within a smaller social group in certain circumstances. For example,

The community advisor (White, male) arrived at Angkwele on 2 February 1982, to finalize the arrangements for the new houses soon to be built. The men gathered together, close to the advisor and on the edge of **Artwe ambwe's** household. All the women sat four or five metres distant under a shade with their youngest children. They could hear, although not clearly.

On the other hand, sexual separation was not the only strategy employed to deal with unusual social situations.

One winter evening (May 1983) I invited all the Angkwele group to my base camp at Three Bores to view slides that I had taken. Because it was a confined area, I anticipated that men and women would sit separately and accordingly set separate fires. On arrival, however, the group divided into mixed-sex groups which also did not violate avoidance relationships. **Artwe ambwe**, his wife, and adult daughters formed one group. The other adults, including the unmarried son, grouped around the second fire and the children moved between the two.

SUMMARY

At Utopia residential arrangements divided households according to marital status. Households based on a marriage partnership were distinguished from those that were not. The latter were then further divided according to the sex of adult members into **alwekere** and **arnkentye** (Figure 9.6). No females lived in the **arnkentye** but male children up to 10 to 12 years of age sometimes lived in the **alwekere**.

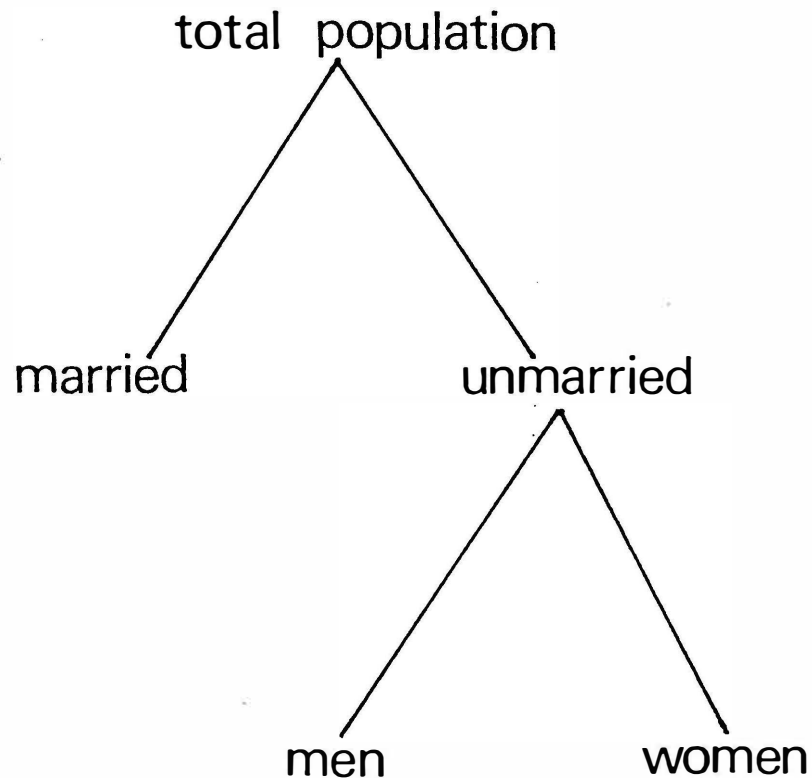


Figure 9.6: Residential divisions on Utopia outstations.

At puberty children moved away from their parents' household into either an *arnkentye* or an *alwekere*. They continued however to be dependent on their parents and close kin. A household thus contained a nuclear family only until the time that the first child reached puberty. Each family then was divided between households, but the links between these households were firmly established. While households were the minimal residential units, they were neither self-sufficient economically nor independent socially. Each constantly focused outwards towards other households which contained close kin. Family groups drawn together by these inter-household links were highly visible in every day life on outstations.

The organisation of **alwekere** at the three locations in which I worked highlighted a recurrent theme in social relations: the acceptance of individual autonomy coupled with a strong expectation of interdependence through obligation. The **alwekere** and **arnkentye** presented an opportunity for the establishment of socially independent sex-based households. However, powerful inter-sexual, inter-household kinship ties counteracted the development of any tendency towards household independence.

In situations involving smaller numbers of closely related individuals, increased familiarity reduced the need for formality. In these situations sexual divisions became infrequent and less predictable. The variability of male - female relationships was most apparent within the smaller groups. Thus while sexual separation was evident at times, it was not a constant nor the dominant feature of the day-to-day relations between men and women.

Sexual separation was one aspect of male - female relations - neither all-pervasive, nor ever-present. In accepting that view it is possible to reconcile seemingly contradictory propositions. For example, Hamilton (1979:xix) suggested that "extreme separation of male and female in the Central Australian areas" had been firmly established. But she also suggested that:

In Central Australia men and women were more relaxed with each other [than in northern Australia] and more considerate towards one another's needs...Men were openly solicitous towards their wives when they were ill, and would often be seen carrying small babies and children around (Hamilton 1981:77).

This last image, in my view, does not fit well a society also exhibiting "acute sexual separation" (Hamilton 1981:77).

The Utopia data indicated a need to refine current views of sexual separation and its operation in daily life in desert communities. There, it was a strategy of interpersonal relationships, sensitive to place and time, rather than a single mechanism which divided society into exclusive, independent groups based on notions of sexual solidarity.

CHAPTER 10

A HUNTING HERITAGE

Almost 70 years have elapsed since Europeans first annexed the traditional lands of Anmatyerre and the Alyawarre people of the Sandover River area. The consequences of the resulting degradation of the resource base by introduced animals, of the violently enforced restriction on access to land and resources, and the active preference shown by Aborigines for European foods and commodities have been far reaching. A change diet and new technology radically altered the context and the practice of traditional hunting and gathering. Foraging was no longer essential for survival. Instead Aborigines developed a subsistence pattern which combined elements of foraging practice with those of a market economy. The role of both men and women in subsistence has been, and continues to be, transformed by the interaction of their own choices with the rapidly changing circumstances in which those choices are made. Through an examination of women's contemporary subsistence role this study documented a previously little-researched sphere of Aboriginal women's life. Documentation of women and subsistence in the 1980s provided a vantage point from which to consider the impact of change. As well though, the modern data drew attention to the images of traditional women's economic life which prevail in anthropology. It highlighted the significance of a particular model of subsistence for the predominant view of women's life in Central Australia.

A persistent tradition

Contemporary women hunted, gathered, kept house, constructed shelters and engaged in craft work. They took primary

responsibility for young children. These tasks (excluding child-care) took up approximately 4.8 hours a day. The major part of this time (81% or 3.9 hours) was devoted to subsistence work. Of the time given to subsistence, 69% (2.7 hours) was spent foraging; the remaining 1.2 hours was allocated to the purchase and provision of other foods. Whilst women spent a great deal more time foraging than they did engaged in other subsistence activities, that component of their activities contributed but a small proportion of the total food intake. Measured as either weight, protein or energy, their contribution to the diet through foraging accounted for less than 5% of the total bush food intake. The ready availability of market substitutes for much of the bush food traditionally procured by women has reduced the necessity for them to spend long hours foraging. Nevertheless, foraging continued to be their most time-consuming subsistence activity. By a measure of time allocated it was by far their most significant activity: by a measure of energy contribution it was not so. When foraging, women selected resources from the traditional inventory on the basis of dietary preference. The resources most frequently sought and most procured, fat and meat, were also provided in large quantities by men. Another focus of their foraging was honey, a resource for which a processed equivalent was regularly purchased. But, irrespective of the overall predominance of meat and sweet foods (from other sources) in the diet, women concentrated their foraging efforts upon them. Women's foraging interests, despite modest returns, indicated a continuity of traditional dietary preferences, in this case meat, fat and honey, on the contemporary selection of bush foods.

The persistence of foraging drew attention to the level of enjoyment that women derived from these activities. This, in itself, may partly explain the persistence. I used the term cultural satisfaction to encompass those elements of foraging which were viewed positively by women. It included the high

value placed on the target foods, the enjoyment of travel, the challenge of the hunt, the social interactions which took place and the opportunities that foraging provided to maintain familiarity with a landscape rich in meaning. The importance of this dimension of foraging, though less tangible and less amenable to quantitative description, was a finding of this study and confirms that of others (for example, Meehan 1977).

Subsistence change

Although market foods reduced women's work effort they did not simultaneously obviate the requirements for food, for the management of new resources or the provisioning of dependents. Foraging requirements were reduced - subsistence needs were not. As Vachon (1982:478) said:

Certainly, a modification in Aboriginal patterns of consumption with a reliance on European foods has altered the emphasis placed on hunting and gathering activities. However, the fact that Western Desert people may eat more flour than mulga seeds is likely to have a greater effect on their health than on social relationships and conceptions.

This is not to say that dietary change and the transformation of subsistence practices have not affected social relationships. Rather, that some dimensions of life were (and are) more directly or more rapidly influenced than are others. Altman also considered the changed situation of foragers. He argued (1984:189) that traditionally, women's and men's subsistence contribution was more equitable than previously thought. He (1984:179) also concluded that "men's economic contribution today far outweighs women's". His conclusions derived from unnecessarily restrictive definitions of subsistence work. He (1982:134) defined the various categories of productive work which he used in his study. Of the essential daily tasks - meal preparation, wood and water collection, he wrote:

...I will examine some of the shortcomings of my methodology. Firstly, domestic activities ('inside the house') are not quantified. The two most important of these are the collection of firewood and water and cooking...Collection of these two items from my observation and experience took about 20-30 minutes per household per day. It was not significant enough to feature in my time unit quantification. Regular fetching of water and wood was predominantly...women's activity...Non-traditional cooking of damper, tea, rice and flour porridge is predominantly women's domain, and owing to its overall daily insignificance it is not quantified.

He described it as "insignificant" in terms of the time it took relative to the time taken to prepare and cook other foods. Altman described this as a methodological "shortcoming", not appearing to recognise its potential bias. Time allocated to the cooking of large game (mainly carried out by men) he recorded as productive labour, but that allocated to cooking purchased foods (mainly carried out by women) was undocumented. Under his scheme, daily tasks like making damper and tea, essential in the modern diet but principally undertaken by women, remain unrecognised as work at all.

The data from Utopia indicated that purchased foods constituted 68.1% of total daily per capita energy intake. Although it is not known precisely what proportion of that energy was provided by women and what by men, a minimum statement of women's contribution is possible. The preparation of flour as damper was undertaken almost entirely by women. Minimally, flour represented 25% of the total daily energy intake. The labour of women thus provided, a quarter of the daily energy intake. Regardless of who initially purchased the flour and whether the necessary preparation was time-consuming, it was the labour of women which provided an edible food from flour. The actual level of women's contribution to the daily energy intake was probably much higher, but the minimal figure is sufficient to indicate that

women's contribution, in a post-traditional situation was highly significant. The indices chosen by Altman however were inadequate to the task. Thus on the one hand, he categorised women's contribution through the preparation of purchased foods as insignificant by one measure time and on the other, commented (1982:269) that;

Sharing of market foods (particularly tea and damper)...had important symbolic meanings of sociability, friendship, alliance and at times kinship obligations that were extremely important to Gunwinggu social harmony and stability.

Scant attention has been given to women's productivity in non-subsistence activities, most notably, their contribution to the care of children. Women must accommodate the demands of caring for children with those of foraging and other domestic tasks. This remained necessary for contemporary women despite alterations in both their foraging and domestic work patterns. For women engaged in foraging activities, children were at least a distraction, and at worst, a heavy burden to be carried - literally. Aboriginal women foragers were similarly constrained by child-minding although Lee (1979:320) assumed that, unlike the !Kung, Aboriginal women were not accompanied by children on expeditions.

Women from Utopia were usually accompanied by children younger than five of age and always carried infants with them. In foraging activities a division of labour by age among women was evident. The younger women undertook the care of children belonging to older women for some periods of time. This enabled the older more experienced foragers an opportunity to work unhampered by children. These women were by far the most productive foragers. The regular practice of sharing the foods procured was an incentive for younger women to cooperate with older women in this endeavour. The pattern of an age-based labour division documented at Utopia may well

coincide with that of tradition. However the greatly changed role of the younger women made any definitive statement impossible. The youngest women who were involved in foraging expeditions - those between 13 and 20 years of age were the least active foragers as well as the least productive. In traditional times it is likely that the foraging capabilities of this youngest cohort would have been greater. The differences then in performance of younger women relative to older women would have been less striking.

Denham (1974) recorded that Alyawarre children in Central Australia were regularly carried up to an age of about six years; Hamilton (1981:131) commented of Arnhem Land that, "Anbarra women find children their most heavy and cumbersome burden", while Meehan (1982:137) said of the same people:

I have already hinted at the way in which small children dominated their mothers and influenced their foraging abilities. I need only reiterate here how this total dependence drastically inhibited the mother's ability to procure food.

In light of this it is difficult to accept an evaluation of productivity which regarded child-minding as a leisure activity (Altman 1982:134) within an analysis which then argued that women's productivity had declined (Altman 1982, 1984).

Child-care is both a significant factor in women's work patterns (Hurtado et al 1985) and, itself, a form of work. It varies in intensity and duration - but it is work nonetheless. It constituted a critical economic and social contribution which ultimately enabled the reproduction of the social group. While the full extent of child-care demands may be difficult to monitor quantitatively, their significance as an influence on Aboriginal women merits more attention.

Unlike the sedentized !Kung women at Mahopa (Draper 1975) I did not find that the work of post-traditional Aboriginal women had become "more specialised [and] time-consuming (Draper 1975:102). Women at Utopia had a decreased work load and a simplified subsistence routine as a consequence of the ready availability of processed foods. This was not accompanied however by a reduction in subsistence responsibilities. Their contribution remained critical to the maintenance of individuals and households.

The lack of reliable documentation of women's traditional foraging practices will forever add a speculative edge to comparisons of past and present. But the tendency to see women's subsistence role as the totality of their productive or economic role has produced interpretations of change which argue that women's productive role collapsed with the widespread adoption of processed foods in place of those traditionally obtained by foraging.

Woman the gatherer

The image of "woman the gatherer", a strong influence in the hunter-gatherer literature since the publication of quantitative descriptions of !Kung subsistence (Lee 1968, 1979) was an innovative view. It was the first which accorded women an economic presence in evolutionary history. Nonetheless it may become as constricting as it was constructive. This is particularly so when the equation of women, gathering activities and vegetable foods is consistently opposed to that of men, hunting and animal foods and the resulting two-sided scheme accepted as be an adequate model of Aboriginal subsistence. Despite its appealing elegance, the model is unable to account for all available data. Nor, does it provide an adequate basis to examine or understand the current foraging practices of women.

There is a curious discrepancy in the portrayal of the female foragers as being pre-occupied with the gathering of plant foods, while as Hayden (1981:395) has pointed out, hunter-gatherer groups in general show a distinct preference for meat and fats. It is worth asking then, why the portrayal of women foragers has diverged so sharply from that characterisation? For example, Lee (1968:41) highlighted the importance of animal foods for the !Kung when he said:

The totality of their [!Kung] subsistence activities thus represents an outcome of two individual goals; the first is the desire to live well with adequate leisure time and the second is the desire to enjoy the rewards, both social and nutritional, afforded by the killing of game. In short, **the Bushmen of the Dobe area eat as much vegetable food as they need, and as much meat as they can** (author's emphasis).

But if !Kung women were pre-eminently gatherers of plant-foods, what was the basis of **their** subsistence activities? Why did they not include animal foods in the resources they exploited? Did men and women actually have separate foraging interests? Was the division of labour so strict as to produce groups of men and women who not only engaged in different tasks, but were motivated by different views of subsistence?

The consumption of animal food on Angkwele outstation provided a high protein intake (approximately 2.5 times the recommended dietary allowance). Almost all of this was provided by men's hunting. Nevertheless, despite this regular provision of meat by men, women also concentrated on animals on their foraging expeditions. I have argued that this preference, was traditional, not a recently acquired. It indicated that the subsistence preferences of women and men converge much more than is conveyed by the anthropological images of "women the gatherer" and "man the hunter".

Labour divisions or social divisions?

The work of Lee and other researchers provided evidence of the importance of gathered foods; an idea quickly taken up in Australia too. But the complexities of the division of labour have received less scrutiny here. Lee (1982:40), for example, pointed out that !Kung men provided "almost a fifth of all the gathered food" and he also pondered the importance of meat to them.

In light of the greatest importance of gathered food in the diet it is curious that all !Kung, both men and women, value meat more highly than plant food. When meat is scarce in the camp all people express a craving for it even when vegetable foods are abundant (1982:40).

According to Lee !Kung men and women have a shared view of subsistence priorities even though a separation of tasks was evident in daily activities. In contrast to Australia, there was no suggestion that the !Kung sexually-based labour division was part of a wider social division that permeated everyday life and resulted in sex specific subsistence schemes.

Recall Hamilton's (1980:12) statement on the division of labour by sex in the eastern Western Desert of Australia:

...it is so thorough-going and complete that it can better be understood as two separate systems. The instrument of labour, the techniques used, the organisation of work, the means of re-distribution of the product, and the ideology governing these activities is notably different for men and women.

Such a degree of separation constitutes not division of labour but the division of society. A labour division presupposes the existence of a common purpose - in this case subsistence needs. The characterisation of a labour division as an all-embracing social division in the form of "dual social systems" obscures the essential interdependence of men

and women in the pursuit of a satisfactory diet. Although Hamilton (1980:12) distinguished production from consumption and briefly noted that the "...only point of intersection between men's and women's economic activities is within consumption..." it was the division or suggested duality which dominated her interpretation.

At Utopia a division of labour existed in the sphere of subsistence. It was reflected in a dietary structure in which men provided large quantities of one component (bush meat) and women added a range of items including both foraged and purchased foods. The complementarity of women's contribution lay in their provision of a different segment of the diet and in their providing it according to a different time schedule. Men hunted periodically; women prepared foods regularly and frequently. The contribution of both sexes was essential if all were to enjoy a satisfactory diet. From an analytical perspective, subsistence production could be characterised as a sphere of activity dominated by a division by sex - men provided one set of foods and women another. But from the perspective of daily subsistence activities, such a stark division is overdrawn. It conveys little of the pattern of interaction among outstation residents as they daily solved the collective problems of subsistence.

The interpretation of a division of labour as a broader societal division has been strengthened by a recent focus on the existence of separate residential arrangements for women (White 1975; Bell 1983a). Two features of social relationship - a labour division and a residential division have been firmly linked and presented as evidence for the separateness of women in desert communities. My experience within the small outstation communities of Utopia did not accord with that view.

The existence of households exclusively for women is a characteristic feature of Central Australian groups. So too, however, are households exclusively for men. Both are reported among the Alyawarre (O'Connell 1979; Denham 1975), the Western Arrernte and Luritja (Stoll, Ziersch and Schmall 1979), Pintubi (Myers 1986:9) and the Western Desert people (White 1975). At Utopia these were known as **alwekere** (for women) and **arnkentye** (for men). Although men's households operated differently from women's households, the basis of their formation was the same. That is, they represented a division of households on the basis of marital status. Married couples established separate households from those who were either temporarily or permanently without partners. The latter group were then further distinguished by sex to form separate male and female households. Each of the outstations had one or more **alwekere** which provided a secure and private base for women without partners. Like other households, it did not operate as an independent unit within the camp nor was it an isolated household. The number of residents in an **alwekere** changed frequently but the most intense interaction between **alwekere** and other households occurred when its membership was small.

I concluded that physically discrete households for men and women in this area reflected, not a fundamental division of society by sex, but rather a social recognition of marital status. The contrast between the view I have presented of the **alwekere** as a household that is integrated within a set of differently constituted households, and that of Bell (1983a:17) who regarded them as "visible proof in the wider society of women's separateness and independence" reflects in part, the different contexts of fieldwork. Anthropological commentators on the role of women have conducted fieldwork mainly within large communities and as Hamilton (1982:4) said:

conditions in camps today reflect not how things used to be normally but how they were on the infrequent but regular occasions when large numbers of people gathered together.

The present study, carried out with small outstation groups, emphasised the significance of residential group size. While there can be no certainty that the situation documented at Utopia is any closer an approximation of traditional times, it at least has demonstrated that the role of women and their relationship with the wider social group is significantly different within smaller family-based groups than that reported from larger settlements. Gould (1969b,1980), who worked with a group of less than twenty people living away from a settlement, similarly gave no indication that the separation of men and women was a remarkable feature of their social arrangements. As a resident of an **alwekere** on an outstation of five households, I neither observed nor experienced the degree of sexual separation in daily life reported in recent anthropological literature relevant to the area. My contrary view suggests, that current interpretations of male-female relations which stress sexual separateness, require re-assessment. In my view, there has been a tendency to transpose features of subsistence organisation, (or even limited aspects of subsistence), and features of residential arrangements into all-encompassing models of social relationships.

Subsistence was an aspect of daily life that involved the interaction of men and women. Some tasks were differentiated by sex. Equally though, the necessity for co-operation and reciprocity was evident. The result was a subsistence system that showed what Maddock (1974:66) called

the Aboriginal tendency ... to regulate sexuality, subsistence and ritual ... as to generate mutual dependence, the widening of sociality thus effected resting not on spontaneous generosity but on customary obligation.

This study has provided a different view. The influence of tradition on contemporary women's subsistence practices at Utopia was everywhere apparent. Their pride in tradition was repeatedly demonstrated by their desire to have me understand the extent of their knowledge as well as the range of current practice. But this influence did not equate to an "all-oppressive night-shadow". The subsistence choices made by contemporary women demonstrated a flexible, rather pragmatic approach to change.

This study has presented an account of contemporary subsistence with an emphasis on women's role. The effects of the documented changes are difficult to gauge in the short term, but it is already apparent that there are deleterious health consequences associated with them (O'Dea 1983; O'Dea, White and Sinclair 1988). Alleviating or preventing those problems will require research which further investigates the changes recorded in this study. In particular there is a need to examine Aboriginal perceptions of the changes that have enveloped them, of the relationship between diet and health, and on the nature or necessity of intervention.

The influence of tradition

Within a changed context, the influence of tradition on women's subsistence practices has remained strong. The multi-functionality characteristic of a hunting-gathering lifestyle was a dominant feature of women's subsistence technology. Improvisation, an essential skill, enabled people to perform diverse tasks with a limited range of implements. The simplification of subsistence practices has provided women with time to pursue other activities. Thus it is likely, though impossible to demonstrate conclusively, that contemporary women allocated more time to foraging for resources of preferred taste, like honey, than did their predecessors. It is also likely, though similarly impossible to demonstrate, that women now have more leisure time.

Women's subsistence practices showed a strong continuity with tradition but not through any marked aversion to material change or innovation. The profound dietary changes which have occurred in recent times are sufficient evidence of this. There is ample similar evidence in this study to refute any suggestion that conservatism was a dominant feature of the relationship between Aboriginal people and the material world. Strehlow (1947:35) by contrast, characterized tradition in Central Australia as an "all-oppressive night-shadow".

All occupations originated with the totemic ancestors; and here too the native follows tradition blindly: he clings to the primitive weapons used by his forefathers, and no thought of improving them ever enters his mind. In all his modes of living and in all his multifarious occupations, there is everywhere evident the same depressing inertia ... Nothing that the ancestors have done can ever be bettered by later craftsmen. In this respect, too, as in all others it is unfortunately true that Central Australia sleeps under the all oppressive night-shadow of tradition.

APPENDIX I

A GLOSSARY OF ANMATYERRE TERMS

agherre	red kangaroo, <u>Macropus rufus</u>
ahakiye	<u>Canthium latifolium</u> , a small black plum-like fruit
akatyerre	desert raisin, <u>Solanum centrale</u>
alangkwe	bush banana, <u>Leichhardtia australis</u> , a fruit found in mulga woodlands
alatyiye	pencil yam, <u>Vigna sp.</u>
alkwarrirre	bush banana, <u>Leichhardtia australis</u> a fruit found in sandy country
alyatywerenge	woollybutt grass, <u>Eragrostis eriopoda</u>
alyere	pounding stone
alwekere	women's household
amwelye	dragon lizard, <u>Amphibolurus sp.</u>
angkwerte-angkwerte	small curved twig used in collection of honey ants
arnkentye	men's household
Artwe ambwe	term of respect for senior men used in the thesis to refer to a particular deceased man
athere	lower grind stone
atneme	wooden digging stick
atnwelarre	small yam, <u>Vigna sp.</u>
atnwerenge	thick edible paste made from refined flour and boiling water or tea
aynperneme	a particular yandying movement used to sort materials with coolamon.
ilpeme	a particular yandying movement used to sort materials with coolamon.

irrykweteweme	a particular yandying movement used to sort materials with coolamon
kere	term for the group of animals which are hunted for flesh and fat; a general term for meat
kere tyampete	tinned meat
kwatye ngentye	water from a soakage
lengarre	shallow wooden tray or coolamon (term used by Eniltyie residents)
merne	the category of foods that includes edible roots, fruits and vegetables
ngkwarle	the group of foods that includes sweet substances
ntange	edible seeds
panthe	shallow wooden tray or coolamon (term used by Angkwele residents)
tyape	the category of foods that includes all edible grubs
tyape atnyemayte	edible grubs found in the roots of the witchetty bush, <u>Acacia kempeana</u>
tyenge	top grind stone
ultatyele	skeins of string used by women as a sling to support weight of coolamon or as an aid in seed grinding
ulyengke	improvised wooden hooked implement

APPENDIX II: RESULTS OF NUTRITIONAL ANALYSIS OF SOME BUSH FOODS COLLECTED BY WOMEN
IN VICINITY OF UTOPIA STATION, 1981 - 1983

Scientific Name	Aboriginal Name	Edible portion %	Energy kJ	Water g	Protein g	Fat g	Carbo- hydrate g	Fibre g	Ash g
KERE (Animal foods excluding insects)									
<u>Amphibolurus sp., (flesh)</u>	amwelye	58	906	58.8	28.7	11.3	0.0	0.0	1.5
<u>Amphibolurus sp., (flesh)</u>	amwelye	100	663	62.3	31.6	3.1	0.7	0.0	2.3
<u>Amphibolurus sp., (liver)</u>	-	100	1051	56.4	11.8	18.7	11.1	0.0	2.0
<u>Varanus sp., (fat)</u>	lewatyerre	100	3222	8.9	1.4	84.4	5.1	0.0	0.2
<u>Varanus sp., (flesh)</u>	lewatyerre	100	794	54.8	39.3	3.4	0.0	0.0	2.4
<u>Varanus sp., (flesh)</u>	lewatyerre	60	736	61.8	29.2	5.7	1.8	0.0	1.5
<u>Varanus sp., (liver)</u>	lewatyerre	100	554	74.6	18.9	6.3	0.0	0.0	1.2
MERNE (Plant foods excluding seeds)									
<u>Brachychiton gregorii</u>	ngkwiyanage	80	177	81.1	0.5	1.0	8.2	7.6	1.6
<u>Canthium lati folium</u>	ahakiye	80	334	41.6	2.8	0.1	48.9	4.5	2.1
<u>Capparis lasiantha</u>	-	100	343	54.1	10.1	4.9	18.9	10.2	1.8
<u>Capparis mitchellii</u>	atwakiye	100	500	57.9	7.3	1.5	20.0	11.4	1.9
<u>Capparis sp.</u>	-	100	647	42.0	3.7	4.9	25.2	21.7	2.5
<u>Capparis spinosa</u>	-	71	263	79.6	4.6	3.6	3.2	7.2	1.8

APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Edible portion %	Energy kJ	Water g	Protein g	Fat g	Carbo-hydrate g	Fibre g	Ash g
MERNE (contd)									
<u>Capparis umbonata</u>	akarlitye	100	619	51.5	8.8	1.8	25.2	10.9	1.8
<u>Carissa lanceolata</u>	anukitye	100	593	55.9	3.1	2.6	27.6	9.3	1.5
<u>Leichhardtia australis</u>	alangwe/alkwarrirre	100	165	75.2	2.6	0.5	6.4	13.3	1.0
<u>Leichhardtia australis</u>		100	215	83.5	2.0	0.4	10.4	3.0	0.7
<u>Leichhardtia australis</u> (leaves)	altyiye	100	504	60.4	3.3	2.9	21.3	8.0	3.9
<u>Ipomoea costata</u>	anatyē	100	N.R.	79.0	1.1	0.5	N.R.	2.8	N.R.
<u>Vigna lanceolata</u>	atmularre	100	325	72.9	1.7	0.3	17.8	5.9	1.4
<u>Vigna lanceolata</u>	alatyiyē	100	166	67.3	1.6	0.3	8.0	21.0	1.8
<u>Solanum centrale</u> (dried)	katyerre	100	1273	2.0	8.6	1.1	67.9	15.5	4.9
<u>Solanum centrale</u> (fresh)	katyerre	100	435	63.8	3.9	0.2	22.6	7.8	1.7
<u>Solanum centrale</u>	katyerre	100	672	22.6	7.4	1.3	31.1	13.9	3.7
<u>Vigna sp.</u>		100	254	77.2	1.5	0.2	13.8	4.8	2.5

TYAPE (grubs)

grubs (from <u>Acacia georginae</u>)	wurrinyngkayte	100	1744	36.6	18.6	34.4	7.8	0.0	2.6
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APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Edible portion %	Energy kJ	Water g	Protein g	Fat g	Carbo-hydrate g	Fibre g	Ash g
TYAPE (contd)									
grubs (from <u>Cassia sp.</u>)	apunhayte	100	1136	51.8	16.2	17.5	12.2	0.0	2.3
grubs (from <u>Atalaya hemiglauca</u>)	alperrayte	100	1045	54.4	12.6	17.2	11.1	0.0	4.7
grubs (from <u>Acacia kempeana</u>)	triyenayte	100	1730	40.7	8.7	34.9	16.0	0.0	1.3
grubs (from <u>Acacia kempeana</u>)	triyenayte	100	1760	36.9	17.6	37.5	6.9	0.0	1.1
NGKWARLE (sweet substances)									
<u>Acacia estrophiolata</u> (gum)	athengalpele	100	1429	7.1	0.2	0.0	89.1	0.0	3.6
honey (from <u>Inflatus sp.</u>)	yirrampe	100	992	37.1	1.1	0.0	60.8	0.0	0.1
native bee pollen	-	100	1739	3.6	22.3	10.6	60.5	0.5	2.5
native bee pollen	-	100	N.R.	4.0	22.0	10.2	N.R.	N.R.	2.4
native bee honey	arwengarlkere	100	1407	3.7	0.9	0.0	87.0	0.2	0.6
native bee honey	arwengarlkere	100	1435	6.8	10.8	3.5	70.1	5.4	3.2

APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Edible portion %	Energy kJ	Water g	Protein g	Fat g	Carbo-hydrate g	Fibre g	Ash g
NIANGE (seeds)									
<u>Acacia coriacea</u>	ntyerrane	100	627	56.8	23.7	3.3	6.4	8.2	1.6
<u>Acacia tenuissima</u>	antywelinye	100	1469	1.6	25.0	15.6	29.2	25.7	2.9
<u>Eragrostis eriopoda</u>	alyatywerenge	100	1333	5.2	17.4	2.3	58.2	13.2	3.9
<u>Portulaca oleracea/</u> <u>intraterranea</u>	ingwiytike	100	874	5.6	18.5	1.1	32.6	30.4	12.0

APPENDIX II: RESULTS OF NUTRITIONAL ANALYSIS OF SOME BUSH FOODS COLLECTED BY WOMEN
IN VICINITY OF UTOPIA STATION, 1981 - 1983

Scientific Name	Aboriginal Name	Na mg	K mg	Ca mg	Mg mg	Fe mg	Zn mg	Cu mg
KERE								
<u>Amphibolurus sp.,</u> (flesh)	amwelye	0	0	0	0	0.0	0.0	0.0
<u>Amphibolurus sp.,</u> (flesh)	amwelye	142	179	111	24	12.0	0.2	1.5
<u>Amphibolurus sp.,</u> (liver)	-	11	228	52	11	23.0	2.0	0.3
<u>Varanus sp.,</u> (fat)	lewatyerre	28	30	28	5	3.3	0.1	0.1
<u>Varanus sp.,</u> (flesh)	lewatyerre	113	337	159	18	22.4	6.5	0.3
<u>Varanus sp.,</u> (flesh)	lewatyerre	8	324	119	21	2.9	3.5	0.2
<u>Varanus sp.,</u> (liver)	-	180	194	27	12	34.2	1.4	0.5
MERNE								
<u>Brachychiton gregorii</u>	ngkwiyange	2	275	175	47	5.0	0.4	0.1
<u>Canthium latifolium</u>	ahakiye	6	420	61	22	11.2	1.0	0.6
<u>Capparis lasiantha</u>	-	3	421	58	60	1.2	0.9	0.4
<u>Capparis mitchellii</u>	atwakiye	1	580	25	63	0.7	0.1	0.3
<u>Capparis sp.,</u>	-	3	631	48	58	2.9	2.2	0.4
<u>Capparis spinosa</u>	-	18	383	28	39	0.9	0.4	0.1

APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Na mg	K mg	Ca mg	Mg mg	Fe mg	Zn mg	Cu mg
MERNE (contd)								
<u>Capparis unbonata</u>	akarlitye	1	580	75	67	0.8	0.1	0.2
<u>Carissa lanceolata</u>	anukitye	5	336	65	51	3.5	2.5	0.5
<u>Leichhardtia australis</u>	alangwe/alkwarrirre	4	245	22	31	0.9	0.7	0.2
<u>Leichhardtia australis</u>		2	217	15	21	0.6	0.8	0.1
<u>Leichhardtia australis</u> (leaves)	altyiye	5	158	16	198	5.6	0.1	0.1
<u>Ipomoea costata</u>	amatye	0	0	0	0	0.0	0.0	0.0
<u>Vigna lanceolata</u>	atnularre	6	219	79	40	32.8	0.6	0.2
<u>Vigna lanceolata</u>	alatiyiye	1	413	120	44	6.9	0.5	0.2
<u>Solanum centrale</u> (dried)	katyerre	4	1480	78	96	13.1	1.4	0.6
<u>Solanum centrale</u> (fresh)	katyerre	2	366	14	34	2.9	0.1	2.8
<u>Solanum centrale</u>	katyerre	9	1203	50	83	5.6	0.4	0.5
<u>Vigna sp.</u>		3	262	85	48	21.5	0.5	0.2
TYAPE (grubs)								
grubs (from <u>Acacia georginae</u>)	wurrinyngkayte	5	118	294	76	13.0	4.7	0.4

APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Na mg	K mg	Ca mg	Mg mg	Fe mg	Zn mg	Cu mg
TYAPE (contd)								
grubs (from <u>Cassia sp.</u>)	apunhayte	123	414	195	55	15.2	0.8	0.5
grubs (from <u>Atalaya hemiglauca</u>)	alperrayte	10	297	241	61	34.1	2.5	0.5
grubs (from <u>Acacia kempeana</u>)	tnyemayte	5	201	9	27	11.7	0.3	2.6
grubs (from) <u>Acacia kempeana</u>	tnyemayte	2	159	27	19	6.7	0.2	1.6
NGKWARLE (sweet substances)								
<u>Acacia estrophiolata</u> (gum)	athengalpele	6	721	587	37	0.9	2.6	0.4
honey (from) <u>Inflatus sp.</u>	yirrampe	4	42	4	4	1.5	0.6	0.1
native bee pollen	-	9	422	69	12	14.0	0.3	10.3
native bee pollen	-	6	512	114	82	8.1	0.7	1.6
native bee honey	arwengarlkere	1	172	19	12	2.3	0.0	0.1
native bee honey	arwengarlkere	5	222	56	50	31.0	0.1	0.5
NTANGE (seeds)								
<u>Acacia coriaca</u>	ntyereke	3	362	137	75	3.2	1.0	0.4

APPENDIX II: (contd)

Scientific Name	Aboriginal Name	Na mg	K mg	Ca mg	Mg mg	Fe mg	Zn mg	Cu mg
NIANCE (contd)								
<u>Acacia tenuissima</u>	antywelinye	5	678	144	118	6.8	3.2	1.4
<u>Eragrostis eriopoda</u>	alyatywerenge	5	237	235	156	31.0	5.0	1.3
<u>Portulaca oleracea/</u> <u>intraterranea</u>	ingwiytike	12	616	181	329	275.0	6.5	2.6

N.R. = No Record

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 C.S.I.R.O. Commonwealth Scientific and Industrial Research Organization.

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