



The Lemurs of the Comoro Islands

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The Comoro lemurs, the only wild lemur populations outside Madagascar, are protected and seem secure. But after spending seven months in the islands the author believes that they could become threatened if forest destruction, particularly of the protected forest, continues at the present rate. He urges the need to enforce both forest protection and the hunting laws.

The Madagascar lemurs have received considerable attention, but few people realise that there are lemurs also on the Comoro Islands, although they are the only other wild lemurs in the world. With pressures on the Madagascar lemurs intensifying – thanks to a burgeoning human population, habitat destruction, hunting, and the breakdown of traditional taboos on killing certain species – the Comoro lemurs should be of considerable concern. These notes are the result of fieldwork November 1974 to June 1975.

Two wild lemur populations are established in the islands, both of the genus *Lemur*: *L. mongoz* (*L. m. mongoz* of most recent authors) and *L. fulvus*. The former, which is also found in north-west Madagascar, occurs on Mohéli (290 sq km) and Anjouan (424 sq km). The subspecies *L. f. mayottensis* is unique to Mayotte (375 sq km); in appearance it is very like *L. f. fulvus*, also found in north-west Madagascar, from which it is probably derived. These three islands are all more or less well watered, but Grande Comore, the largest island, has virtually no permanent water, and the few lemurs in its forests (all of Comorian subspecies) are captive animals that have escaped or been set free. It is impossible to be certain when or how lemurs were introduced to the Comoros from Madagascar; they could well have arrived by rafting on the floodwaters of the Betsiboka River; equally, of course, and perhaps much more plausibly, they could have been introduced by man,



Left Female lemur *Lemur fulvus mayottensis* grooming a male
Right Female *L. mongoz* on Anjouan

which would date their arrival within about the last thousand years or so, and probably well within.

Current Status

L. mongoz is abundant all over Mohéli, even though the vegetation is almost entirely secondary, much of it coconut plantations. This may be related to the relatively small human population, averaging about 40 per sq km; in comparable vegetation zones on Anjouan, where human density averages over 250 per sq km, this lemur is much less abundant. Its highest density is probably in the rain forest of Anjouan's central highlands, although no precise figures are available. But there are many parts of this island where it is completely absent due to extensive forest clearance.

L. f. mayottensis is found in Mayotte wherever there is forest, although above 400 metres numbers are low. A forest census near Mavingoni yielded an average density of about 10 individuals per hectare, a figure comparable to the highest recorded densities for *L. fulvus* in Madagascar. The carrying capacity of that particular forest was relatively high, but the average for all kinds of forest is not likely to fall below five per hectare. On the conservative assumption that a quarter of the island is covered by forests that support lemurs, the minimum population of this subspecies would not be far short of 50,000, and the actual figure may be higher.

The short-term future of the Comorian lemurs appears secure, but there are considerable grounds for disquiet over their long-term prospects. Although there is very little hunting of *L. mongoz* on either Mohéli or Anjouan, local children commonly catch infant lemurs, often by killing the mother. Even more serious, however, is the accelerating rate of vegetation destruction, especially on the overpopulated Anjouan, where extensive areas of the lower-lying coastal regions have been cleared and serious inroads made in recent years into the magnificent rain forest of the central massifs. Slopes of up



to 60° are cultivated during the short period between clearance of the trees and the washing-away of the exposed soil, whereupon new slopes are cleared. Once the topsoil has disappeared, secondary regrowth cannot establish itself. If present trends continue, the prospects are bleak, not only for the primary vegetation, but for almost any vegetation at all in this steep and rugged island.

In Mayotte, where Malagasy influence is strongest, lemurs are hunted for food and sport in addition to the children's depredations, but although increasing, this has not yet become sufficiently widespread to be a serious threat to *L. f. mayottensis*. But, as in the other islands, thoughtless clearance of the vegetation is creating acute problems.

Recommendations

1. The Comorian lemurs already enjoy some legal protection; the problem is primarily one of enforcement. Since early 1974 it has been illegal to kill lemurs or to keep them without a licence, and exports are restricted to a maximum of ten females and twenty males annually. Ideally, the law should be more restrictive, but more important considerations are that very few Comorians are aware of its provisions at all and virtually nothing has been done to enforce it. Direct enforcement, however, is rarely effective in conditions such as exist in the Comoros, and propaganda would undoubtedly be more effective. Through schools and radio the Comorians could be made aware that the lemurs they take so much for granted constitute a unique national heritage. As a result of the efforts of M. Swabahaddine Ben Said Mohamed, several broadcasts have plugged this theme.
2. Legal restraints also exist on the destruction of vegetation within 15 metres

of a watercourse. Enforcement of these would probably ensure an adequate habitat for the lemurs, and would certainly do so if the limit were doubled to 30 metres. But in many areas forest has been destroyed right up to the water's edge, with the result that many streams which formerly ran throughout the year are now only seasonal. Obviously both economic and conservation interests would be equally well served by the protection of the forests, especially in the Anjouan highlands where the humid forests attract and conserve precipitation, and control its drainage, thereby protecting the lower slopes from large-scale erosion while providing their cultivators with an adequate year-round supply of ground water. But they are rapidly disappearing. Prohibition of forest clearing in the central massif above, say, 800 metres, is clearly essential, and the same recommendations apply to other high areas, for example above the 500-metre contour in Mohéli and the elevated regions of Benara and Majimbini in Mayotte.

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Note

Since this report was originally prepared, considerable political changes have taken place in the Comoros. The islands of Grande Comore, Anjouan and Mohéli now constitute an independent republic, while Mayotte remains French and will become an Overseas Department of France. Representations about the protection of the lemurs are currently being made to both sets of authorities.

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Climate and Conservation

Until recently climatology has been one of the most neglected aspects of the data needed for adequate conservation research, but fortunately the deficiency is becoming generally recognised. *Climates of the States*, in two volumes, by Officials of the National Oceanic and Atmospheric Administration, is described as 'a practical reference containing basic climatological data of the United States'. It is published by the Water Information Center, Port Washington, NY 11050, \$45. Reference works such as these should be on the shelves of all important conservation libraries. The two volumes (split east/west) give a full range of rainfall and temperature statistics, together with much background material, including not only Alaska and Hawaii but also Puerto Rico and the Virgin Islands. Only the District of Columbia appears to be missing. The desirability of compiling similar volumes for Europe and Africa may be commended to the Council for Europe and the OAU.