the insistence that the 'strength of ecological ideas' has nothing to do with real-life problems that is the central fallacy of her book. No body of political ideas has been more based on what is happening in the world. At the individual level of, say, a pesticide allergy or lost hedgerow to the global catastrophe of Chernobyl, the springboards for Green political consciousness are not only 'actual problems' but actual experiences, which lead to a real, often physical understanding of the interconnectedness of life. If one wished to conceptualize, this 'greening' could be seen as a sophisticated form of biological feedback.

Perhaps the most significant of these experiences was the image of planet Earth from space, which the biologist Lewis Thomas described as being like the vision of a single cell. Dr Bramwell asserts that "American ecologists... have ignored their ancestors", and then ignores them herself. It is a strange claim, given the depth and realism of the New World tradition, but perhaps it is their very rootedness in real problems that causes Dr Bramwell to omit them — the English-born Charles Waterton's passionate defence of the South American rain forests in the 1820s; John Muir's writings on the value of wilderness; Aldo Leopold's 'land ethic', which is the single most influential idea in the whole ecological canon; Barry Lopez on the political ecology of the Arctic.

It is these sensible biologists, as well as the more overtly political thinkers who have found a congenial home with the Greens, that stand accused by Dr Bramwell's astonishing and at times barely coherent outburst in her closing pages: "[the movement] still carries the burden of its heritage, the legacy of the crucifixion, symbol of death, suffering and self-surrender... their hope of regeneration presupposes a return to primitivism... the burning before the replanting". This is the language of the witchhunt, and it is strange to find it let loose on a movement most of whose followers view its philosophy more prosaically, as an extension of the principle of the bottle-bank.

It is sad that the book ends in this way. because Dr Bramwell does begin to touch on many of the shortcomings of the organized Green movement. Like all minority groups that have not experienced political power, it does have a tendency towards authoritarianism, to wagging a theoretical finger at the messy complexity of human affairs. There is a residual puritanism, too -- traceable back to the English Revolution, if it does have historical roots — in a distaste for private property and a belief in the redemptive as well as economic value of manual work. (A recent editorial in Environment Now described labour as "the ultimate renewable resource.") And although Dr Bram-

well's jibe of primitivism is plain silly, a similar confusion between aesthetic and strictly ecological considerations is the Greens' main weakness when it comes to the contentious issue of economic growth. A distaste for rampant consumerism becomes inflated to a belief that the Earth's resources are static - which of course they aren't. Although its living space and basic elements may be fixed, its energy levels are not, and the ecosystem's great strength has been to find an infinite variety of ways of rearranging these. The game of economics can be played within these constraints; and no one would say, for instance, that the economic growth represented by massive reafforestation would be ecologically undesirable.

Dr Bramwell's concluding argument is so strident that one begins to ask questions about her own intellectual pedigree. Her writing is something of a paradox: seemingly meticuously researched, yet riddled with small errors in spelling and naming (the English rural writer Harold Massingham is conflated with his editor father Henry, and newly christened 'Hugh' for instance); elegant and sympathetic when dealing at length with a real person such as Henry Williamson, yet often turgid and barbarous when bent on generalizing argument ('autarky' used for self-sufficiency). Yet there are clues to the author's motivation in the text. In her preface she talks elegiacally of a period of her life spent on a Herefordshire smallholding and of the lost "yeoman spirit". Later she applauds the English landowning tradition, and in a revealing passage writes that "the nurture of the countryside is the first long-term aim of those who live in it, belong to it and wish to transfer it intact to their heirs. Whether a new rural proletariat, previously unemployed in the towns, inhabiting small, nationalised units of land, working farms organically, would offer such a nurture seems to me doubtful".

The familiar tones of 'Indignant, Hereford' can't be disguised any longer, and behind the stern intellectualism of Dr Bramwell's early chapters and the tirades of her coda, there lurks an old style patrician, who cannot bear to think of the old order, and its traditional flow of energy and authority, being disrupted. As she says in her concluding sentence, "The father of the movement is an utter rejection of all that is, and for at least three millennia all that was", a complaint that in the turbulent atmosphere of 1989 is a misplacement of blame of global proportions.

Richard Mabey, 10 Cedar Road, Berkhamsted, Hertfordshire HP4 2LA, UK is a writer specializing in environmental issues and literary history. His biography of Gilbert White won the 1986 Whitbread Biography Award. He runs a community woodland in the Chilterns and votes Green.

Now it can be told

Vera Rich

Uncovering Soviet Disasters: Exploring the limits of *Glasnost*. By James E. Oberg. *Robert Hale: 1989. Pp.317. £14.95.*

IN many respects, this book is a development of Oberg's earlier work *Red Star in Orbit* (Random House, 1981). Described as an "overview" of its subject, the "result of nearly a lifetime's interest and a full decade's active research", *Red Star in Orbit* was not a straightforward history of the Soviet space programme, but an exposé of Soviet secrecy and cover-ups, particularly as regards set-backs, accidents and loss of life or spacecraft. Uncovering Soviet Disasters is essentially a general application of the same approach.

With one notable exception (the loss of the prototype aircraft Maksim Gor'kii in 1935), Oberg confines his investigations to the period after 1950. He concentrates on mechanical failures and human error, aircraft and rail crashes, the loss of ships and submarines, nuclear accidents and — of course — space disasters. He ignores, however, natural disasters and neardisasters such as earthquakes and mudslides, even when there is evidence that human error or bad planning compounded the damage and death toll.

The chapter on "super-projects" confines itself to aircraft (the TU-144 Concordski), space (the aborted Moon and Mars programmes) and, somewhat strangely, the 600-cm Big Alt-Azimuth Telescope in the Caucausus, which is a disaster only in the sense of having failed to justify its enormous cost and advance publicity. But if the telescope finds a place in this book, why not the collapse of the Kodar tunnel on the Baikal-Amur Mainline railway a few months before it was due to open? Or the Kara-Bogaz-Gol barrage, which effectively destroyed the brine feedstocks of the Turkmenian chemical industry? Or the high dams of the Vakhsh valley, which, in that highly seismic area, can never be safely filled to capacity? Or the destruction of the Aral Sea by massive irrigation schemes? All these, in their time, were super-projects. And if loss of human life is the prime criterion for inclusion, why not a mention at least of the final disaster of the Stalin era, the stampede at the leader's funeral, due to poor policing, which crushed scores of people to death?

Furthermore, although Oberg subtitles his book "Exploring the limits of *Glasnost*", the revelations of *glasnost* have inevitably overtaken him. The book gives no cut-off date; however, the last entry in the appended "disaster chronology" is a train crash

BOOK REVIEWS

on 7 August 1987. Since then, the Soviet press has carried several retrospective accounts of past accidents, from the Siberian nuclear explosion in 1958 to a 'Hillsborough'-type disaster at a football stadium eight years ago. Fall-out maps from Chernobyl have been published - likewise an account of the special "Chernobyl committee" set up in Estonia to care for national servicemen retained on clean-up operations long past the safety limit, all outdating Oberg's discussion. The Spitak earthquake, the Tajik landslide and the Urals train crash have all taken place in the eye of world publicity, making Oberg's work seem somewhat dated.

A more serious criticism may be applied to Oberg's methodology. Uncovering Soviet Disasters is a major improvement on Red Star in Orbit in that Oberg now cites his sources, which turn out to be limited. Citations from the Soviet press come almost entirely from the central newspapers Pravda, Izvestiya and Krasnaya Zvezda. One reference to Pravda Ukrainy comes via the FBIS-SU monitoring reports, but otherwise, Oberg seems to have made little if any use of local or republic papers. Nor are Soviet scientific and technical journals cited. Yet such sources are often a far more prompt and fruitful source of information on accidents than the central press, even in the era of glasnost. Thus the disastrous fire at the Leningrad Library of the Academy of Sciences in February 1988 was reported in Leningradskaya Pravda the following day, whereas the All-Union Pravda took up the story only several weeks later. And some Brezhnev-era disasters, like the 1973 mudslip which almost wiped out the city of Alma-Ata (the protective mudtraps were badly designed), were widely discussed at the time in engineering journals though not in the general media.

Oberg's assertions or implications that such an event was not reported in the contemporary Soviet media have to be taken with caution. Confidence is not restored by the occasional elementary error: he refers to the "Red Army" museum in Beijing instead of the "People's Liberation Army" ("Red Army" denotes the Soviet army; the Chinese do not use that term); or to the newspaper of the British Communist Party (in 1961) as the Daily World instead of the Daily Worker.

Perhaps more worrying is the case of the ship which Oberg calls the *Eshghabad*. One virtue of Oberg's previous book was his debunking of the many unsubstantiated Western rumours about unreported Soviet space disasters. The same scepticism is applied in the current work to the *Eshghabad*, reportedly lost with 270 passengers and crew in a storm on the Caspian on 14 May 1957. The Associated Press report of the sinking (from Iranian sources and, AP claimed, a confidential telegram from Baku) were never corro-



Spot the difference: although clearly visible in an earlier Soviet space photo (top), this "missing cosmonaut" was erased from later official editions of the same photo (bottom) — and replaced with fake shrubbery — after his expulsion from the space programme "due to an unpardonable act of arrogance".

borated further, Oberg says, although the disaster was incorporated into general Western reference books. Oberg doubts the story on the grounds that "The name 'Eshghabad' is not a proper transliteration of any Cyrillic spelling and it is strange for a Soviet ship to carry a Moslem name. The name may actually be somehow connected to the small village of Eshaqabad, southwest of Mashhad. Meanwhile, there is no Eshghabad (or any similar name) listed in the 1957 edition of Lloyd's Register of Shipping. . .". In fact it is no more strange for a Soviet vessel to carry this particular 'Moslem' name than it would be for a US vessel to bear a 'Hispanic-Catholic' name such as San Francisco or Sacramento. "Eshghabad" is simply an Iranian transcription of "Ashkhabad", capital of the Turkmen SSR. Oberg's rejection of the incident may well be valid, but his failure to recognize the name suggests that his general Soviet knowledge (as opposed to his specialized knowledge of the space programme), is limited.

The book is nevertheless fascinating. It presents an overall picture of a bumbling, hidebound bureaucracy, committed to scientific and technical progress, but unable to cope with and unwilling to admit to the inevitable set-backs. There was, for example, no disaster rescue service apart from the army — a fact which, as Oberg rightly notes, has led certain events, such as the anthrax outbreak of 1979, to be wrongly given a military dimension by western commentators. (The establishment of a specialized civil disaster service was one of the first concerns of the newstyle Supreme Soviet this June.)

Oberg's picture, which will not appeal to opponents of glasnost, records with pardonable pride the chagrin with which some Soviet space officials received his former revelations, in particular the celebrated pictures unearthed from newspaper files of trainee cosmonauts later airbrushed out of the group when they were dropped from the programme. To supporters of the Gorbachev reforms, however, Oberg's book will undoubtedly be yet further evidence of the need for glasnost - if only to forestall more Western exposés. Would the "flagship" journals of glasnost - Moscow News (say) or Ogonek - go so far as to review it favourably, or even reprint extracts not already outdated by Soviet revelations? In the current Soviet political climate, even this does not seem impossible. Π Vera Rich is a Sovietologist and a freelance contributor to Nature.