

Plant Extinction: A Global Crisis (2nd edition)*H. Koopowitz and H. Kay*Edited by *S. Knees*Christopher Helm, London
1990, 208pp., £11.95

The title proposes a scenario of doom and the text clearly gives the reasoning for this. It is certainly more of a compendium of facts on plant extinction than an account on the causes.

There has been so much said and written on rain-forest destruction, desertification and the greenhouse effect that we are in danger of thinking that all the world, or at least the western world, is now tinged with a little green. Ignorance is unfortunately becoming replaced by myopia as the general public's ideas on looking after the environment become centred upon the recycling of paper, bottles and plastic, litter control and on saving the whales and elephants. Both ignorance and myopia should be fought with facts and this book can definitely help here.

After posing the basic problems, the authors proceed to detail our dependence on plants for medicine, food, plant products, fuels, fibres and our desires to possess them for their intrinsic beauty. They then consider the effects that man is having on the floras of the tropical rain forests, island floras rich in endemics, deserts, temperate forests and prairies. Examples are given of past and likely future extinctions and the shortcomings of our attempts to combat them. Even if much of this seems all too familiar to the reader, the book will be a handy reference source for details that are not always so easily recalled.

The following section explains the value of seed banks and plant collections and gives examples of their useful-

ness, but it is a depressing thought that species or even whole plant communities might be reduced to collections of frozen seeds in some far away land. Here again we must be aware of the dangers of public perception. How easy it might be to forget the living ecosystem and the interrelationships of plants with animals. Saving a species from extinction through cryogenetic preservation may be easy, but the recreation of the ecosystem is impossible.

The authors then dwell on the role of plant societies in conservation and rightly show that we still have a long way to go in influencing both those people who have vested financial interests and those who collect for personal gratification. Legislation attempts to limit international trade in endangered species and the roles of WWF, IUCN and CITES are outlined, although the account is far too brief. Also there was not even a hint of the many national laws that protect plants.

The authors say quite clearly that they are offering a gloomy prognosis and that the percentage of endangered species saved will be small. They also hope that they will be wrong. We can all agree with that sentiment but the majority of people need to be given some hope that actions will produce results. My criticism, therefore, is that the book does not do this. The six pages on getting involved hardly fire the reader's enthusiasm and the Prognosis followed by 19 case histories of near extinction combine to fill the reader with gloom. Nevertheless, the facts are there and it is a brave attempt to be taken seriously. The book should be on your shelf. Buy it!

Barry A. Thomas.

The Natural History of China*Zhao Ji, Zheng Guangmei, Wang Huadong and Xu Jialin*
Collins, 1990, 224pp., £14.95

The Natural History of China is somewhat unusual in its class in that comparatively few of its readers are ever likely to experience at first hand the wild life it portrays. Even those that do could hardly hope to see more than a fraction of the variety of habitats, flora and fauna. And what a variety it is! Most westerners have little idea of the vast size of the country and the consequent wide range of climate and vegetation—we tend to think of the Chinese countryside as endless flat paddy fields on the plains and endless terraced paddy fields on the hillsides, with an overwhelming pressure of human population. No doubt this is true for many parts, China's 114 people per sq km is about three times the world average. Yet in comparison the UK has more than twice the population density of China, and Holland even more—something like four times as much. Given that such places as the Yangtze and Yellow river basins do accord largely with the popular western belief, the map shows vast tracts of mountain, desert and steppe that are less heavily populated—some no doubt with a population sparse by any standards, although even in such places there has often been considerable human impact on the environment. After the Introduction comes an instructive chapter on the geography of China, which addresses geological history and evolution as well as present day land forms.

The next chapter, Forests, is the longest. The forested areas are comparatively limited, comprising but 13 per cent of the country, yet we learn that only

seven countries have more forested land. In the far north is cool-temperate forest, part of the vast north Eurasian coniferous belt. At the other extreme there are in the south tropical monsoon and rain forests. These forests are comparatively small—only three per cent of the country being in the tropics at all and only limited parts of that still forested. Nevertheless this zone has, like rain forests in other parts of the world, a great diversity of vegetation—there being well over 7000 species of higher plants including many endemics. Between these extremes are temperate coniferous and deciduous broad-leaved mixed forest, warm-temperate deciduous broad-leaved forest, subtropical evergreen broad-leaved forest, and finally north-western mountain forests of mainly spruce and fir, which are in the north-western arid zone but where there is, nevertheless, sufficient rainfall in places to support trees. It is interesting to learn that China has 30 genera and some 300 species of bamboo, widely distributed over much of the country, though mainly of course in the tropical and subtropical parts.

Following the description of the forests the animals occurring in them are noted. If asked, most people would probably be able to name the giant panda among the mammals of China, but how much farther would they get? No fewer than 11 primates are mentioned—the slow loris, two macaques, five langurs (though two may be no more than subspecies) and three gibbons. To these may be added the Assamese macaque, which occurs in a limited part of south western Yunnan near the Burmese border, and the Taiwan macaque, both listed in the Appendices. Carnivora

include brown and black bears, wild dog, tiger, leopard, clouded leopard, three smaller cats and some civets. The book is intended for the general reader and many mammals are omitted (though listed in the Appendices). I would have thought that such a well known species as the wolf would merit mention. There are several species of deer, gaur, and elephant, formerly fairly widespread in the south and surviving in limited numbers in the Xishuangbanna area of extreme southern Yunnan. The section on birds is somewhat longer than that on mammals and largely taken up by the Phasianidae of which China has 49 species, ranging from the temperate zone capercaillie and black grouse to the tropical grey peacock-pheasant and green peafowl. The chapter concludes with a very brief paragraph on reptiles, amphibians and insects. Similar chapters follow on Rivers, Lakes and Sea coasts, Mountains, Grasslands, and Deserts.

In the final chapter, Conservation and Nature Protection, it is not surprising to learn that the familiar spectres of soil erosion, water loss, land degradation and desertification, deforestation and pollution are also problems in China. What will pleasantly surprise many readers is the extent to which this has apparently been recognized (albeit, as so often elsewhere, much later than it should have been) and corrective measures instituted. Current land management, largely aimed at safeguarding productivity of agricultural land, planting (or re-planting) forests, and protection from pollution (including for example treating coal to remove sulphur before it is burnt) are mentioned. The remainder of the chapter deals with nature

conservation *per se* including protection of rare species, nature reserves, and captive-breeding programmes. Three maps show the location of 219 nature reserves in the south-east, west and north-east. Short accounts are given of a few reserves, including Xishuangbanna, 2000 km, which in addition to the elephant has more than 4000 angiosperm species including 50 per cent of China's legally protected plants. One can only hope that the stated conservation measures are being implemented in practice. Appendices list, with scientific as well as English names, typical mammals, birds, and reptiles of the major natural regions.

The numerous colour photographs, reproduced to a uniformly high standard, are the most impressive feature of this beautifully produced book. Most of the birds and mammals depicted appear to be genuinely wild—only a few are obviously captive. The pictures taken by Zhang Cizu of several cats, a young takin and a red goral are particularly good. I cannot understand why it was thought necessary to split the photos of the clouded leopard and tiger between two pages.

The book gives an interesting insight into the habitats, fauna flora of China hitherto unknown to the vast majority of people outside the country. V. F. H. Ansell.

Animal Reintroductions: The Arabian Oryx in Oman

Mark R. Stanley Price
Cambridge University Press,
1989, 291pp., HB £17.50

It is a sad fact of the modern world that more and more animals and plants are on their way to extinction, and most of them are only likely to be saved