

## West African Ornithological Society Société d'Ornithologie de l'Ouest Africain



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The Threatening Desert: Controlling Desertification, by Alan Grainger, 1990. Pp 369, ISBN 1-85383-041-0. Earthscan Publications Ltd, London. £9.95 softback.

Africa contains a greater area of dry lands than any other continent and it is in Africa that the effect of droughts and subsequent famine is most pronounced. The Sahelian drought of the 1970s prompted the United Nations Conference on Desertification in 1977 and the Sahel drought plays a central role in this book's discussion of desertification.

Long term climatic change is discussed with reference to global and local effects but the main focus of this book is on more immediate local causes of desertification and their control at national and local levels. Population growth and economic development are considered to be major driving forces leading to changes of land use in dryland areas; government policies on agriculture, trade and development bring this about at a national level and rural policies to concentrate dispersed populations do so at a local level. Desertification is then seen to follow as a consequence of poor land use—whether by overcultivation, overgrazing, deforestation or poor irrigation practices. All these causes are interlinked; an expansion of cash crop cultivation displaces traditional subsistence rain-fed cropping to less suitable and more arid areas. In turn that shifts seasonal livestock grazing to even more marginal land resulting in overgrazing and land degradation.

The second half of the book considers how desertification can be controlled by improving crop production, livestock raising and planting trees, in addition to farm forestry and natural woodland management. Finally soil conservation and land reclamation projects, together with afforestation, are reviewed with an assessment of their progress to date and their future prospects. The importance of involving local people, identifying their needs, and decentralizing management which now seem so evident were long overlooked in favour of large-scale prestige projects. There is clearly much to learn with regard to man's impact on arid land ecosystems and this book is an excellent starting point.

Roger Wilkinson

Homeward Bound: Problems Waders Face when Migrating from the Banc d'Arguin, Mauritania, to their Northern Breeding Grounds. Ed. by B.J. Ens, T. Piersma, W.J. Wolff & L. Zwarts, 1990. 364 pp. Ardea 78 (1/2), issue separately published by WIWO/RIN, Texel. ISBN 90-70202-131 (ISSN 0373-2266). Available from WIWO, Van Stuivenbergweg 4, 6644 AB Ewijk, Netherlands, for Dfl 55 paid to postgiro a/c 2666009, or by Eurocheque or postal money order (Dfl 70 by any other means).

This collection of refereed papers is based on Dutch work in Mauritania since 1980. The articles are mainly by various combinations of a small group of authors and focus

on eco-physiological aspects of migration, rather than orientational ones. They are grouped around five questions:

Section 1 (six papers) asks why the Banc d'Arguin is so attractive for waders. Benthic invertebrate density is very low compared with other estuaries but wader densities are among the highest recorded anywhere. Results prove inconclusive but many species appear to feed on very small prey, whose productivity might be unusually high. Section 2 (five papers) examines the migration patterns followed in space and time, asking where do Banc d'Arguin waders go to breed; biometric studies help with some species. Also explored is the question of when to time arrivals and departures at different stages of the migration, including decisions on whether to migrate further south in West Africa and whether to remain in Africa for the northern summer. Section 3 (two papers) investigates special social behaviour associated with migration; mainly premigratory gatherings. Section 4 (six papers) asks how the requisite nutrient reserves are acquired. Constraints on premigratory weight gain are examined, including physiological studies of assimilation efficiency and proportions of fat and muscle protein laid down, and behavioural-ecological studies into how the extra food is found. Section 5 (three papers) tries to determine the energy budget of a migrant wader. Departure weights are calculated from population measurements and constraints on flight range examined. One conclusion is that equations currently used to estimate flight range must be consistently under-estimating the latter. The volume contains several such new insights, and points out many unanswered questions. One particularly fascinating puzzle is how Oystercatchers Haematopus ostralegus manage to feed on Giant Bloody Cockles Anadara (Arca) senilis weighing as much as themselves; how they open the shells without getting their beaks trapped remains a mystery.

One tends to find that such a collection of articles usually contains a few gems, or at best that half of the papers are relevant to one's interests. In this case, however, I found 16 of the 22 contributions of direct use to me. This is certainly a book which any wader ecologist interested in Africa, or in migrations in general, will find an essential reference.

Alan Tye