REVIEW

The Dynamic Partnership: Birds and Plants in Southern Australia. Edited by H. A. Ford and D. C. Paton, 1986. The Flora and Fauna of South Australian Handbooks Committee: Adelaide. 199 pp, 38 tables, 23 figures, eight colour plates. $Au15.50.

The Dynamic Partnership is a collection of 16 papers, by 13 authors, which review what is known about bird-plant relationships in southern Australia. The papers cover the range of interactions between plants and birds. These include the direct mutual benefits of pollination-nectarivory by birds; indirect benefits of plants as habitat for birds; birds as possible controllers of herbivorous insects, and the less equal partnerships of birds as "predators" of plant products.

After a brief introduction outlining the contents of the book, the first six papers examine bird-flower and bird-fruit interactions. Three papers describe various aspects of bird pollination (its extent and evolution) and the speciation of bird-pollinated plants. Interesting insights into this mutualistic relationship include how plant species may compete with each other for bird pollinators, and how bird species, mostly honeyeaters, compete with each other for the nectar offered by the plants. Three papers deal with the much neglected interaction between birds and fruits. The extensive list of temperate plants whose fruits are eaten by birds indicates that frugivory is quite common but mostly of an opportunistic rather than obligate nature. The brevity of the paper covering the use of nectar and fruits by birds in rainforests reveals the need for more research in this threatened habitat. In contrast, the study of the mistletoe-mistletoebird relationship demonstrates the wealth of information that can be gathered by detailed observations. The mistletoe is probably the finest example of bird-plant interdependence, with the plant providing nectar and fruits while the birds act as both pollen vectors (honeyeaters) and seed dispersers (mistletoebirds).

The next seven papers focus attention on birds as users of plants, either as sources of food or as somewhere to live. Besides producing nectar, pollen and fruits, plants also provide seeds and shoots that are consumed by birds. What species of birds inhabit given vegetation types often depends on the structure and composition of that vegetation. Such plant components vary with respect to both abiotic factors (e.g. climate, soil, fire regimes) and biotic factors (e.g. patch size of habitats and whether the plants are native or exotic species). A comparison of similar habitats in southern Australia and South Africa illustrates the importance of abiotic factors in determining the types and extent of the bird-plant relationships that are present. The recent study of birds and eucalypt dieback in eastern Australia suggests that insectivorous birds may play a vital role in controlling the numbers of herbivorious insects. The birds, through their foraging activities, could be indirectly maintaining the health of their habitat.

The editors, Hugh Ford and David Paton, are to be commended for their efforts in organising and presenting such an array of informative papers. However, the book, which is really more a series of papers than a book, seems to lack a real synthesis of the information presented. Perhaps more basic data are necessary before a detailed synthesis can be attempted. As the papers are written and generally structured in the style of a scientific journal, the book will probably only appeal to the professional biologist and serious amateur ornithologist. If this was the intention of this treatise then description of the methods used by each author should have been included. Only a few minor printing errors were encountered and this is a credit to both the editors and the authors.

I would like to make two final points about the book. Firstly, most of the papers appear to be written by zoologists (in which case some background information about the authors would have been useful) with few views expressed by persons with more botanically oriented perspectives. Secondly, as indicated by the book's subtitle, there is a lack of information concerning bird-plant relationships in the habitats of northern Australia, e.g. tropical rainforest and monsoon woodland. Both of these observations are not faults of the book but may simply reflect the low numbers of researchers in these areas. The 'Dynamic Partnership' provides a platform of basic data upon which new studies can be developed and so add to our knowledge and our ability to conserve Australia's bird-plant relationships. It is my hope that this book will stimulate future interest in understanding such interactions.

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New Members

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