

ophidian natural history. Most of his remarks are well chosen but there are a few statements which might be disputed. It is questionable, for instance, whether the eyesight of most snakes is very poor, in the sense of their visual apparatus being inefficient, although it is probably true, as he says, that snakes react much more readily to the sight of moving objects than immobile ones. His book is valuable for its detailed firsthand observations, illustrated by excellent photos, with good accounts of feeding, courtship and sloughing, and of defensive behaviour. Some adder-bite case-histories, including a personal experience, are described. The author incised his wound with a razor blade and one would like more emphasis on the possible dangers of this very controversial first-aid measure.

Both authors draw attention to the decline in many snake populations, largely as the result of habitat destruction. By stimulating human interest in, and perhaps sympathy for snakes, these two books should help to promote the conservation of these fascinating though traditionally unpopular creatures.

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Ecological Isolation in Birds, by David Lack. Blackwell, £4.25.

This is a valuable contribution to scientific thought by a recognised authority. It is also of practical significance for us in that effective conservation measures must be based on sound ecological information. Its examples are taken from birds, on which most of the relevant research has been done; but, as the author ends his text by saying, 'ecological isolation is not just a problem for the ornithological specialist, but occupies a central position with respect to principles of animal evolution and ecology'.

The particular theme is stated in the opening sentences: 'Two species of animals can coexist in the same area only if they differ in ecology. Such ecological isolation, brought about through competitive exclusion, is of basic importance in the origin of new species, adaptive radiation, species diversity and the composition of faunas'. This principle of competitive exclusion, as it has come to be called, was mentioned by various authors long before its importance was widely recognised. It became firmly established, for birds, after Lack's work on Darwin's finches, published in 1944. Here he elaborates the whole case with a wealth of supporting evidence, some of the detail being conveniently summarised in appendices. He is chiefly concerned with competition between congeneric species, but a wider aspect is discussed in the final chapter.

The main facts are drawn from Europe, North America, Africa, Asia, archipelagos and remote islands. They relate to all the bird groups for which adequate data exist, so that the dangers of selection are avoided. Tits figure prominently, while nuthatches and white-eyes are both given whole chapters. Among others receiving close attention are birds of prey, brood parasites, and many tropical groups; nor are seabirds neglected. Of special relevance here is a chapter on the coexistence of European finch species in a man-modified environment. Of much interest are the European trans-Saharan migrant passerines, which are shown to be subject to quite different isolating factors in winter quarters from those operating in the breeding season; some of the facts come from the work, in part not yet published, of the late Reginald Moreau.

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