

line 18 (p.106) repeated, Table 9.2 (p.112), roosts (p.156), section 6.4.2 (p.194), columbarius (p.204), Rhynchophthirina (p.230), eyeball (p.251) proportion (p.341), Chagas's (p.355), typhus (p.359), plague (p.381), Crypturellus (p.449), no caption on lower right specimen in Fig. 1.5, Table 2.1 not mentioned in text.

Despite the various opinions and editorial comments presented above, I view Marshall's book as a very readable, fine work that will benefit researchers and teachers as a valuable source of information and references (some as late as 1981) on many specific topics about the biology of ectoparasitic insects. Marshall's style is sometimes surprisingly popular, i.e. "the use of soap and water, unless very hot [for controlling lice], just means cleaner lice" (p.378), and many entomologists will rally behind his plea: "... can anyone assist us mere mortals with the creation of a basic key to the biting lice?" (p.382).

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BARK BEETLES IN NORTH AMERICAN CONIFERS. Mitton, Jeffrey B., and Kareen B. Sturgeon, eds. Austin, Texas: University of Texas press; 1982. 527 pp.

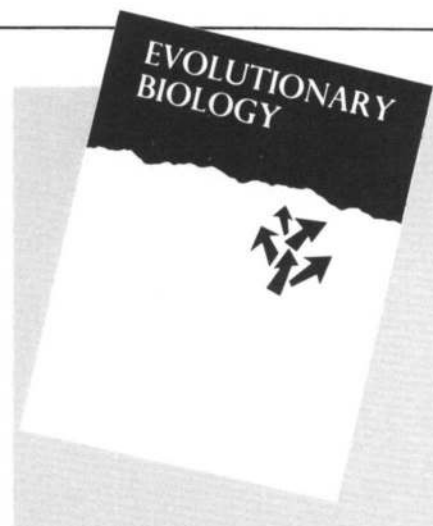
It is refreshing to read a book that treats a group of important forest insects as biological entities rather than as pests. *Bark Beetles in North American Conifers* presents a synthesis of information about both bark beetles and their host trees to show the intricate webs that constitute a coevolutionary system. Despite the extensive number of publications that have reported on various specialized aspects of bark beetle and host tree biology, this volume should convince most readers that research still to be done is virtually unlimited.

Mitton and Sturgeon concisely state their theme and perspective in the first chapter concerning biotic interactions in relation to evolutionary change. The overview of natural selection and coevolution provided is lucid without being either overly simplistic or overly detailed. Both theme and perspective are admirably maintained throughout the subsequent specialty chapters. Thus, the life cycles and ecology of bark beetles are described by R.W. Stark in the framework of their role in the forest ecosystem. The subject of taxonomy and geographic variation is presented by M.W. Stock and D.W. Bright as an interesting and dynamic research area in which the subjects of evolution and coevolution have just begun to be addressed. Subsequent chapters by Borden, Dahlsten, and Whitney provide overviews of aggregation pheromones, natural enemies, and symbiotic organisms from an evolutionary perspective. Berryman's treatment of population dynamics is particularly excellent, as is the discussion of integrated management by Coulson and Stark.

The discussion of host resistance and susceptibility by Cates and Alexander is the only part of the book that tends to stray from the overall theme; the authors wander through examples of plant-insect interactions in agriculture before narrowing their focus to the beetles and the trees. Although some of this background is relevant, much of it is distracting.

The final chapter on evolution of bark beetle communities by Sturgeon and Mitton is largely theoretical and may be criticized by some bark beetle specialists for that reason. However, few studies have been done which pertain to this subject; information and data from other areas of biology must be used to formulate models of speciation and coevolution from which testable hypotheses can be formulated.

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EVOLUTIONARY BIOLOGY, Vol. 14, Hecht, M. K., B. Wallace, and G. T. Prance, eds. New York; Plenum Press; 1982. 445 pp. \$39.50.

This, the fourteenth volume in the series, maintains the high standards of thought, writing, variety, and interest of its predecessors. I shall not review the book in detail, but shall merely sketch the contents of its six chapters and suggest their interest to members of the ESA.

1. *Genetic Relationship and Evolution of Human Races*, by M. Nei and A. K. Roychoudhury. Pp. 1-59. So many entomologists are human beings that nearly all should find this article of interest. Its authors conclude from a study of gene frequencies that (1) of the three major races, the Negroid diverged from the Caucasoid-Mongoloid some 110,000 years ago, and the last two diverged about 40,000 years ago; (2) Amerind Mongoloids are not especially close to those of Asia; (3) South American Amerinds differ from North American, but in each the tribes differ much from one another; (4) the various "nesian" groups of Oceania are closer to Asian Mongoloids than to the Australoids; and (5) genic differentiation does not necessarily follow or mirror morphological differentiation.

2. *Classification of Selection-migration Structures and Conditions for a Protected Polymorphism*, by S. Karlin. Pp. 61-204. The author examines mathematically the relationships among genetic diversity (at the population level), environmental heterogeneity, and migration. How well he succeeds I am not qualified to judge. Yet the abundance of insects, as species and as