

Geography of the sibling species related to *Drosophila willistoni* and of the semispecies of the *Drosophila paulistorum* complex. *Evol.*, 25: 129-143.

STURTEVANT, A. H. 1921. The North American species of *Drosophila*. Carnegie Inst. Washington Publ. 301, pp. 1-150.

SCIENTIFIC NOTE

Speculation on the distribution of the Southern California species of *Cafius* with a new record from the Salton Sea (Coleoptera: Staphylinidae)

—Members of the genus *Cafius* are found throughout the world along the seashore and on the banks of rivers near the sea. Of the seven species of *Cafius* known from southern California, one (*C. canescens* Mäklin) is abundant, three (*C. seminitens* Horn, *C. lithocharinus* LeConte and *C. luteipennis* Horn) are sometimes common and three (*C. sulcicollis* LeConte, *C. opacus* LeConte and *C. decipiens* LeConte) are rare. *Cafius canescens* is known from Alaska to Baja California, *C. seminitens* and *C. luteipennis* from British Columbia to Baja California, *C. lithocharinus* from Washington to Baja California, *C. sulcicollis* from southern California and Baja California and the very rare *C. decipiens* has been recorded only twice from San Diego (LeConte 1863, *Smithson. Misc. Coll.*, 167: 1-92; Casey 1885, *Bull. Calif. Acad. Sci.*, 1: 285-336). *Cafius sulcicollis*, recorded from Magdalena Island, Baja California (Horn 1894, *Proc. Calif. Acad. Sci.*, 4: 302-449), is the only species known to occur in the southern part of the poorly explored peninsula of Baja California. On March 3, 1968, Kenneth W. Cooper collected three specimens of *C. sulcicollis* at Desert Beach, Salton Sea, Riverside County, California. These specimens are in the collection of the University of California at Riverside. To our knowledge, this is the first record of any species of seashore beetle from the shores of the Salton Sea. *Bledius ferratus* LeConte, a coastal species which has been reported from the Salton Sea (Herman 1972, *Bull. Amer. Mus. Nat. Hist.*, 149: 113-254), lives in salt marshes, not on sea shores, and is widespread in the deserts of southern California. It probably inhabited those areas long before the formation of the Salton Sea.

The Salton Sea was formed in 1904, when the Colorado River overflowed its banks. It is located 235 feet below sea level, in the Colorado Desert about eighty miles inland from the Pacific Ocean over a mountain range whose lowest pass is 2600 feet, and about 100 miles north of the Gulf of California. Its present salinity is slightly greater than that of sea water. The shores of the Salton Sea provide a habitat more like that of the large enbayments of southern Baja California than that of the sea beaches of southern California. The climate of Baja California is semi-desert in the northwest, becoming progressively more arid to the south until that of the middle of the peninsula is similar to the climate of the Colorado Desert except for heavy fogs along the Pacific Coast. It seems likely that *Cafius sulcicollis* (along with *C. decipiens* and *C. opacus*) is distributed along the Pacific shores of southern Baja California, and is uncommon in southern California because that region is at the northern extreme of its range.

Species of *Cafius* are known to feed at least in part on larval Diptera in decaying seaweed (James, Moore and Legner 1971, Trans. San Diego Soc. Nat. Hist., 16: 279-289). Some areas of the collection locality at Desert Beach were covered with a layer of decaying tamarisk needles containing dipterous larvae which could have provided suitable food.

How *Cafius sulcicollis* came to the Salton Sea is a matter of conjecture. This species is a strong flyer which sometimes swarms along the beaches (Leech and Moore 1971, Wasman J. Biol., 29: 65-70). Gravid females possibly could have been carried over the mountains during storms, or they might have been trailed to the Salton Sea in boats. It is unlikely that the species was introduced from the Gulf of California as no member of the genus is known from the northern part of the Gulf.—IAN MOORE AND E. F. LEGNER, *Division of Biological Control, University of California, Riverside, 92502.*

BOOK REVIEWS

THE INSECTS OF AUSTRALIA. Edited by I. M. Mackerras. Melbourne University Press. U. S. Distributor: International Scholarly Book Services, Inc. 1029 p., 704 figs., 8 color plates, Color frontice plate. 1970. \$22.50 (U.S.).

The days are past in which a single author can produce a comprehensive textbook in general entomology with an up to date coverage of the higher classification of insects to the family level for any major region. Thus the present book is a product of the efforts of 30 entomologists with diverse specialties. However, this type of approach also has its problems, especially in providing a uniform, coordinated and yet sufficiently concise treatment to fit into a single volume. The efforts of the editor, I. M. Mackerras, and of D. F. Waterhouse, Chief, Division of Entomology, CSIRO who coordinated many of the activities involved, have been highly successful in providing us with a well balanced product. Both men and all the contributors are to be congratulated for their efforts.

This tome of over 1,000 pages is extremely impressive not only in its size and weight, but in the nature and quality of its contents. The first nine chapters of about 200 pages provide a general treatment of the morphology, physiology, cytogenetics, developmental biology, natural history, phylogeny, systematics, and zoogeography of insects. The next 28 chapters of about 750 pages present the systematic treatments of each of the classes of hexapods and orders of insects.

The difficulties of one author producing a comprehensive treatment of general entomology are akin to the difficulties of one reviewer trying to evaluate the efforts of 30 authors. So I will concentrate on the broader aspects of the volume and leave the detailed criticisms of specific chapters to experts in those areas.

The first nine chapters provide an excellent coverage of the basic aspects of insect structure, function and biology. However, those interested in the applied aspects of entomology will undoubtedly be disappointed in the lack of coverage given to agricultural, medical and forest entomology and biological control. One finds only brief references to the importation of *Cactoblastis* for the control of *Opuntia* and the export of *Rodolia* to California for the control of *Icerya*, both