ADDITIONAL RECORDS OF *APHODIUS* FROM POCKET GOPHER BURROWS IN TEXAS (COLEOPTERA: SCARABAEIDAE)

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Abstract

Collections of *Aphodius* from nests and refuse chambers of the pocket gopher, *Geomys bursarius brazensis* Davis, at College Station, Brazos County, Texas, during 1976-78 yielded specimens of 2 species not previously reported from this area. One of these, *Aphodius oklahomensis* Brown, has not been reported previously from pocket gopher burrows in Texas.

Species of *Aphodius* living as inquilines in the burrows of pocket gophers in Texas have been reported by Blume and Aga (1975), Brown (1928), Cartwright (1944), and Robinson (1948). Additional collections of beetles made during 1976-78 at College Station, Brazos Co., increased the number of species of *Aphodius* known to live in the nests and/or refuse chambers of the pocket gopher, *Geomys bursarius brazensis* Davis to seven. Two of these, *A. sepultus* Cartwright and *A. oklahomensis* Brown, have not been previously recorded from Brazos County, and one species, *A. oklahomensis,* has not been previously reported from Texas.

Species of *Aphodius* collected were as follows (number of specimens in parenthesis): *Aphodius atwateri* Cartwright, 13-I-76(5), 13-IV-76(1); *Aphodius haldemani* Horn, 13-I-76(2), 29-I-76(2), 28-II-78(12); *Aphodius insolitus* Brown, 13-I-76(4); *Aphodius kirni* Cartwright, 29-IV-76(3), 21-X-76(13), 4-II-77(1), 7-III-77(1), 15-III-77(1), 28-III-77(1); *Aphodius oklahomensis,* 13-I-76(15), 28-II-78(13); and *Aphodius sepultus,* 13-I-76(1), 28-II-78(4).

Two species of *Aphodius* previously known to be associated with pocket gophers in Texas were collected in Gillespie County, Texas. The species and collection data are: *Aphodius kirni,* 17-VI-77(1), 12-VIII-77(1), and *Aphodius acuminatus* Cartwright, 10-IX-77(3). However, these specimens were collected in pitfall traps baited with swine feces and in cone-type emergence traps placed over bovine manure rather than from pocket gopher burrows. This was in an improved pasture in which pocket gophers were very active. The pocket gopher known to occur in this area of the Edwards Plateau is reported by Hall and Kelson (1959) to be *Geomys bursarius llanensis* Bailey.

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References

Blume, R. and A. Aga. 1975. *Aphodius* from burrows of a pocket gopher in

Brazos County, Texas (Coleoptera: Scarabaeidae). Coleopt. Bull. 29:161-162.

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HALL, E. R. AND K. R. KELSON. 1959. Geomyid rodents. Vol. 1:411-472. *In* E. R. Hall and K. R. Kelson, eds., Mammals of North America. Ronald Press Company, New York (2 vols.).

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BOOK REVIEW

Insect ecology, by E. G. Matthews. 1977. University of Queensland Press, c/o Technical Impex Corporation, 5 South Union Street, Lawrence, MA 01843. Paper, 226p., $11.50.

This title, the second in the "Australian Ecology Series," contains a brief but informative discussion on some general principles of ecology and a more detailed treatment on the biomes of Australia. Some attention is given also to inland waters, marine waters, caves, and high mountains. Matthews does an excellent job of reviewing the principles of r and K selection early in the volume, and he then frequently calls attention to these strategies throughout the book as various species of insects are mentioned in relation to their environments. The author also, in the first chapter, gives special attention to predation and to coevolution of insects and plants. He closes the chapter with a discussion on tactics in the strategy of speciation. Entomologists interested in taxonomy, biology, ecology, or biogeography of insects will appreciate these first 47 pages.

Although the remainder of the volume is devoted to the biomes and other environments of Australia one need not be an Australian ecologist or entomologist to thoroughly enjoy reading about the country's insects and how they are adapted to its deserts, culture steppe, forests, and other environments. Matthews cites and discusses valuable references to studies conducted in other parts of the world also. More than 400 papers are cited and over half of them are papers that have been published during the last 10 years.

There are 31 illustrations, more than half of them in color. A Glossary of about 120 terms makes it possible for the neophyte to look up important ecological terms used throughout the text. A few of these terms are not yet in common usage in American journals and textbooks. *Insect Ecology* is not a textbook, but it *is* an excellent supplement for textbooks in general entomology and in insect ecology courses. It is the kind of a book that probably will be read by students and professors, ecologists and entomologists, professionals and amateurs.

—P.P.S.

LITERATURE NOTICE

My friend Pedro Reyes-Castillo recently sent a copy of Folia Entomologica Mexicana, Number 38, October 1977, to note three articles on Coleoptera: C. Huerta (Espermatoforo de *Canthon cyanellus cyanellus* LeC. (Coleoptera, Scarabaeidae, Scarabaeinae), 38:13-16); M. A. Morón R. (Redescripcion de *Cyclocephala jalapensis* Casey (Coleoptera, Melonthidae, Dynastinae), 38:17-28); and G. Halffter and A. Martínez (Revision monografica de los Canthonina Americanos, IV parte. Clave para generos y subgeneros, 38:29-107).

—DRW