

- Frison, Theo. H. 1925. Contributions to the classification of the Bremidae (bumble bees) of Central and South America. *Ibid.* 51:137-165.
- Hazeltine, W. E. 1962. The comparative morphology of the male and female genital segments of the Bombinae (Hymenoptera, Apidae). Unpublished Ph.D. thesis, Purdue University Library, Lafayette, Indiana.
- Medler, John T. 1962. Morphometric studies on bumble bees. *Ann. Entomol. Soc. America* 55(2):212-218.
- Milliron, Herbert E. 1961. Revised classification of the bumble bees—a synopsis (Hymenoptera: Apidae). *J. Kansas Entomol. Soc.* 34:49-61.
- Mitchell, T. B. 1962. Bees of the eastern United States. Vol. 2. North Carolina Agric. Exp. Sta. Tech. Bull. 152:1-557.
- Moure, J. S. and S. F. Sakagami. 1962. As mamangabas sociais do Brasil (*Bombus* Latr.) (Hymenoptera, Apoidea). *Studia Entomol.* 5(1-4):65-194, 19 tx. figs., 5 maps, 12 tab.
- Richards, O. W. 1927. The specific characters of the British humble-bees (Hymenoptera). *Trans. Entomol. Soc. London* 75:233-268, pls. 22-25.
- Tkalcu, B. 1962. Contribution a l'etude des bourdons du Japon. *Bull. Soc. Entomol. Mulhouse* (Nov.-Dec.):81-100.

BOOK REVIEW

The Ants of North Dakota. George C. Wheeler and Jeanette Wheeler. University of North Dakota Press. 1963. viii + 326 pp., copiously illustrated. Paperback, \$4.50.

"This handbook is intended for anyone interested in ants of the northern plains, but it is especially designed for amateurs." After the preface, there are five sections: I. Ants in general. II. Methods of studying ants. III. North Dakota. IV. The North Dakota ant fauna. V. Biogeography of the ants of North Dakota. Also appendices and index.

About two thirds of the volume is occupied by a list of the ants of the state, with handily-illustrated keys to the species, distribution maps and other information about biology, etc. The taxonomy is founded primarily on Creighton's "Ants of North America," a book which in 1950 flushed out the old hopeless stagnation of ant systematics, but in doing so hastened its own obsolescence. The revision of the North American ant fauna has become a revision of Creighton's book. Unfortunately, both Creighton's work and its regional reflections, of which the book under review is an example, tend to give the impression that they are built upon the foundation of massive prior revisionary efforts, made genus by genus through the fauna. This impression is an illusion that needs to be dispelled.

Of the major genera occurring in North Dakota, two of the biggest, *Formica* and *Myrmica*, provide a backdrop of taxonomic chaos against which the Wheelers' tidy keys to species may be admired first of all for their bravado. As an example, the *Formica sanguinea* group had 17 species in Creighton's revision, and still contains 12 in the Wheelers' view, although Wilson and Brown, in their revision of the group in 1955, could distinguish only two solidly based species in the group, plus three little-known doubtful species. So far, the Wilson-Brown revision

has not been challenged by work of similar scope and detail, and the evidence it presents for the synonymy of most of the old species has, curiously enough, been ignored by the Wheelers. As another example of this sort of thing, the Wheelers continue to use the name *Leptothorax canadensis* for the circumpolar *L. muscorum*.

Though one can argue the personalized taxonomy, all readers will be forced to admire the extensive and persistent collecting effort made by G. C. Wheeler and his students over the years; it has made North Dakota perhaps the best known state for ants. These collections contributed very heavily to the success of Wilson's revision of *Lasius*, and they will undoubtedly loom large in other revisions that remain to be initiated.

Apart from the taxonomic listing, some parts of the book are useful, while others are overbrief, essentially meaningless, or contain serious misunderstandings; all three faults are illustrated by this paragraph from page 9:

"*Communication.* Both ants and men can communicate with their fellows by direct transmission of excitement from individual to individual, *i.e.*, by evoking appropriate emotional responses. But communication of this sort does not convey information."

This book contains matter of value for those entomologists interested in ants, who presumably can use it with the necessary caution, and it may have limited value for the "amateur" who wants to start studying prairie ants. However, it also serves as a reminder that the "state list" type of publication, no matter how it is expanded, is only as good as the taxonomic system upon which it rests.

W. L. Brown, Jr.

NOTICE OF ANNUAL MEETING

The annual meeting of the Kansas Entomological Society (Central States Entomological Society) will be held on Saturday, May 2, 1964, in the International Room of the Student Union, The University of Arkansas, Fayetteville.