

Dondale, Charles D., and James H. Redner. 1982. The Insects and Arachnids of Canada. Part 9. The Sac Spiders of Canada and Alaska (Araneae: Clubionidae and Anyphaenidae). Agric. Can. Publ. No. 1724. 194 pp. (\$8.95 in Canada, \$10.75 elsewhere). Available from Canadian Government Publishing Centre, Supply and Services Canada, Ottawa, Ontario K1A 0S9.

Ecological, physiological, behavioral, biogeographical, and other works in biology can only be as good as the identifications of the organisms on which they are based. Biologists depend on systematists and systematic publications for their identifications. All arachnologists, then, regardless of their specialties, should welcome this second volume on the spiders of Canada and Alaska. This work covers two families of two-clawed hunting spiders, Clubionidae and Anyphaenidae.

The organization and format are similar to those of the previous contribution on the crab spiders (Dondale and Redner 1978). The section on anatomy (1 1/2 pp.) largely repeats the anatomy section in "The crab spiders. . ." but deals more specifically with sac spiders. Some detail on the families and genera is deferred to discussions of those groups. Inclusion of this section should be valuable for the novice who may not have the previous volume on hand. Sections on techniques, classification, and a key to families are omitted.

Keys are provided in both English and French to the eight genera and 66 species of Clubionidae and three genera and six species of Anyphaenidae found in Canada. Descriptions of the families, genera, and species are clearly written, but I found the diagnoses (under "Comments") redundant, repeating the information in the keys. The 339 figures (black and white line drawings) by Redner are large, clear, and well labeled. These include ventral and lateral views of male palpi and external and internal views of epigyna. Internal views were often omitted in older works, so these, especially, should aid identification of these species. Geographical ranges in and near Canada are illustrated on 52 maps, and complete ranges are given in the text. A glossary (5 pp.), lists of references (5 pp.), and index to names (2 pp.) complete the volume.

Editing and printing are generally well done; I am aware of only one misspelling in the text (I'm not going to tell you where). Figures 258-265 are out of order (following 266-274), an incorrect symbol for *Anyphaena pectorosa* appears in the caption to Map 51, and the dots on Map 52 are unnecessarily small. Although these are minor irritations, they cause no confusion.

What this reviewer misses, however, is a more critical discussion of the characters that define these families. The definition of sac spiders (p. 10, paragraph 3) includes seven characters, all primitive for the group; in other words, sac spiders are defined by the derived characters they lack! Anyphaenidae is well defined, following Platnick (1974) and Platnick and Lau (1975), by the advanced placement of the tracheal spiracle, the large tracheal trunks with tracheae extending into the prosoma, and the lamelliform claw tuft setae, but a critical definition of Clubionidae is needed. Is Clubionidae a polyphyletic group as suggested recently (Lehtinen 1967, Forster 1970, Platnick 1974, Platnick and Lay 1975)? Or, if the clubionids form a monophyletic group, what derived character do they share? These questions go unanswered here and elsewhere.

Even if these questions of classification were answerable, an identification manual is not the best place to introduce a new classification. As an identification manual this book succeeds very well. Every arachnologist working in Canada and the northern U. S. should find it valuable.

LITERATURE CITED

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