

Coddington, J. A. (Ed.). 1989. Spider literature: a computer bibliography, version 1.0. Available from the editor at the Department of Entomology, National Museum of Natural History, Smithsonian Institution, Washington, DC 20560 USA.

Arachnology, like many other endeavors, is being tremendously advanced by the application of affordable and approachable microcomputer technology. The bibliographic tool provided by this compilation is a superb case in point. Spiders, and collections of them, are myriad; the problems arachnologists face in dealing with tens of thousands of specimens and taxa are enormous. The difficulties added in dealing with an explosively enlarging literature are equally acute. Various aids exist, of course, including catalogs of taxa and indices of publications, such as the annual compilations provided by the Zoological Record and the Centre International de Documentation Arachnologique. Those aids suffer, however, from limitations imposed by the printed form in which they are distributed. Most notably, they individually cover limited time spans, and permit efficient searching through relatively few (and predefined) routes.

In this computerized bibliography, most of those limitations are overcome. This first public release includes over 11,000 citations to published papers, mostly from 1965 to date (although the complete bibliographies of Brignoli's catalog, extending back to 1940, as well as more recent supplements to it, are included). All post-1965 publications cited in the CIDA lists and all post-1977 publications cited in the Zoological Record (and many omitted by both those sources) are included. The bibliography is distributed in the form of ASCII files on floppy disks. It is most readily obtainable for MS-DOS systems, as the convenient IBM extended character set, including many frequently encountered accented

characters, is used. The files can easily be moved to other hardware systems, however, with special editing required only for those accented characters.

One could use these files as normal word-processing documents, and simply search repetitively for particular combinations of characters (names of authors, taxa, or places, for example). But they gain maximal utility when imported into modern database software, including text-based systems (such as AskSam, by Seaside Software), full relational databases (such as R:BASE, by Microrim), or specifically bibliographic software (such as Paperbase, by Wight Scientific). Importing the files usually requires minimal editing; for example, I was able to import the full 1.8 million characters into R:BASE in less than 30 minutes, using a powerful ASCII text editor (XyWrite III Plus, by XyQuest) to globally change the characters marking the ends of each field and record. As distributed, each reference includes three fields: one for the author(s) and year of publication, one for the title, and one for the journal reference (or publisher) and keywords (if available). Text-based software can absorb these fields directly; relational database software may require users to specify a maximum number of characters per field (which can waste much disk space), and deal individually with overly long entries. Some relational databases, such as R:BASE, have a field type that is flexible in size and can therefore handle all these references automatically, using minimal disk space. The files are in native Paperbase format, and that software (obtainable at a discounted price with the files) allows flexible output (in the formats specific to particular journals) as well as multiple string searches and easy file editing, indexing, and maintenance.

Once imported, one can easily obtain lists of all papers whose titles or keyword references include any string of characters. Thus, one has at one's fingertips citations to all papers that meet a specified criterion: all papers authored or coauthored by a given individual, for example (I've noted problems only in alternative transliterations of author's names from non-Roman—especially Russian—alphabets), or all papers whose titles or keywords include a given taxon name and/or geographic area (with allowances for linguistic differences, e.g., Brasil or Brazil), or all papers published in a given journal during specified years (here again, standardization of journal abbreviations is occasionally a problem).

Coddington has recruited an international coterie of collaborators who are hard at work extending the bibliography back in time (primarily through incorporating the bibliographies in Bonnet's catalog and similar sources), and annual updates are planned. The compilation and updating are far from simple processes; because of the variety of sources involved, discrepancies in format and duplications of titles require careful attention—byte by byte, character by character—to each entry. Persons wishing copies of the files can obtain them merely by agreeing to help with these efforts.

The usefulness of this database cannot be overestimated. To give just one example, I've recently been concerned with some kleptoparasitic spiders of the family Mysmenidae; by merely searching the title and keyword fields for all references that include the character string "klepto" I was able to find several important papers that might otherwise have been overlooked.

In short, Coddington has provided arachnologists with an enormously powerful tool that should do much to overcome the hazards of the modern "information explosion." That he has done so within an academic framework not yet prepared to reward such "electronic" publications is even more laudable. The advent of

such powerful handles on the literature makes it imperative that authors devote some effort to incorporating, in their titles, taxon names and keywords that will allow citations to be retrieved efficiently (hopefully, the days of "One Hundred New Species of Spiders" are long gone!).

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