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BOOK REVIEW

Platnick, N. I. 1993. *Advances in Spider Taxonomy 1988-1991 With Synonymies and Transfers 1940-1980* (edited by P. Merrett). The New York Entomological Society, New York.

Ask any reasonably competent biologist and you will be told that evolution is change or advance but that change does not necessarily equal progress. Advances may be made to the rear. Science has evolved (advanced) by leaps and bounds sideways, backwards, tangentially, and occasionally (but generally, I believe) forward over time. This evolution has been guided in part by the blinders of religious and political ideologies and the vagaries and frustrations of funding, peer review, turf wars, hidden agendas, and a bewildering array of "refereed" publications. Thus have spider taxonomy and systematics evolved over the last two centuries: a generally progressive trend emerging from apparent chaos as myriads of independent workers have pursued their independent taxonomic agendas under the one common (but vague) guiding principle of discovering (real or imagined) order in the confusing profusion of life forms. Battles rage, die, and then flare up again over species concepts and systematic methodologies but some constants remain. First a species is whatever a researcher can convince his or her colleagues it is. Second, and more important, at the roots of all good biology are good phylogenies. Third, and most important, good phylogenies are rooted in good taxonomy. The end result of all this is names and publications. Many, many names in many, many publications. That advances (progress) have been made at all in spider taxonomy and systematics is, at least in part, due to the unique and increasingly useful and user-friendly series of spider taxonomic catalogues culminating in the most recent volume by Norman Platnick.

Others have discussed the merits and shortcomings of the araneological catalogues of Bonnet, Roewer, and Brignoli. In spite of the serious problems caused by Brignoli's omission of synonymies and transfers of pre-Roewer names these works have been of immense value. Platnick's two volumes have continued and improved upon the works of his predecessors. The first, *Advances in Spider Taxonomy 1981-1987* (1989), kept abreast of post-Brignoli developments listing citations of illustrated taxonomic works and cataloguing new names, synonymies, and transfers published from 1981 to 1987. The second (current) volume does the same for the period 1988 to 1991 with the added bonus of listing all the synonymies and transfers omitted by Brignoli (1940–1980). It is now possible, as Platnick (with some modesty) points out in his introduction, ". . . using Roewer and the three supplemental volumes [of Brignoli and Platnick], to determine what genera belong to each family (along with their synonyms) and what species belong to each genus (along with their synonyms)". This has been no mean feat but the catch-up job remains incomplete in one area. Still lacking are the citations for the post-1940 literature containing illustrated redescriptions not involving transfers or synonymies. It is hoped that this data (*circa* 1.5 megabytes) will be presented in the next supplement (Platnick, pers. comm.), pending adequate funding. *Stet fortuna domus.*

The current catalogue is a weighty tome (846 pages) and much less visually exciting than the most recent catalogue from L. L. Bean. However, unlike the latter, the usefulness of *Advances in Spider Taxonomy 1988–1991* is not time constrained and I noted no apparent errors within it, typological or otherwise. A short tribute to the long standing, competent, and quiet technical support of Louis Sorkin is an appropriate opening to the volume. Following this, the Introduction outlines Platnick's rationale for deciding what to include in, what to omit from, and the presentation format of his treatment. Platnick notes that the material presented is split roughly in half between new literature published from 1988 through 1991 and the synonymies and transfers missed in the previous catalogues. An effort has been made to avoid repetition of material sufficiently treated in the previous works. This has kept the published bulk to a manageable size but also means that researchers still need a complete set of Roewer (and/or Bonnet), Brignoli, Platnick, and Platnick to have as thorough a treatment of the taxonomic picture as is probably possible. Formatting of *1988–1991* follows the style of *1981–1987*.

A list of families shows we are *status quo* with respect to the number (105) listed in *1981–1987*. A comparison of the two lists reveals minor changes including three new families (Synotaxidae, Trechaleidae, Lamponidae) and two resurrections (Zoropsidae, Prodidomidae) balanced by five sinkings (Loxoscelidae, Hadrotarsidae, Dolomedidae, Platoridae, and Aphantochilidae absorbed by Sicariidae, Theridiidae, Pisauridae, Trochanteriidae, and Thomisidae, respectively). Families are listed in a one-dimensional reflection of the current consensus of opinion on classification. The family lists of Brignoli and *1981–1987* reflected the major upheavals in spider classification resulting from the 1967 trashing of Cribellatae by Lehtinen and the general acceptance through the 70's and 80's of cladistic methodology as the best way to divorce art from science in classification. It is somewhat of a relief to see no evidence in *1988–1991* of new major changes. Advance (progress) in spider higher classification during this short period has been limited to the support by Platnick et al. of the monophyly of Haplogynae (16 families from Filistatidae to Orsolobidae). This leaves only the question of the monophyly of the major (and troublesome) "RTA clade" (43 families from Lycosidae to Salticidae) unanswered (in spite of some excellent work within this group by Griswold, Platnick, Sierwald, and others on "dictynoids", gnaphosoids, "amaurobioids", and lycosoids). Life continues.

The Bibliography lists by year approximately 1700 publications referenced in the text. A small handful (38) covers works from 1867 to 1939 missed or with material excluded from the previous catalogues (or otherwise needing repetition). Over 900 entries relate to the synonymies and transfers from 1940 to 1980 omitted by Brignoli. Some 73 references from 1981 to 1987 cover mostly material missed by *1981–1987*. The remaining 653 references (averaging a fairly consistent 160 per year) are the new taxonomic publications appearing around the world from 1988 to 1991. From there we go into the meat of the matter.

Sanity constraints dictated that I concentrate my review efforts upon a particular aspect of the approximately 750 pages of the Catalog of Genera and Species. Synonymies of genus names and transfers and synonymies of species names are adequately cross-referenced under the appropriate family and genus headings. Every currently valid genus name is presented. All this is immediately evident from a casual inspection of the listings and is also explained in the Introduction. In my review of this section I did not make an attempt to keep track of the new sinkings and other changes but concentrated on tallying up new species and genus names appearing from 1988 to 1991. This process was logistically simple, was an adequate indication of in what groups research is most active, and gave me an idea of how close we have come to the mythical figure of 40,000 described spider species.

Roughly 180 new genera and 2070 new species were described during the four year period 1988–1991. In comparison to Coddington's counts of 230 and 2581 for new genera and species described in the preceding seven year period there appears to be some consistency in a new species to new genera ratio of about 11:1 coupled with a substantial upswing in the curve of descriptive activity. Obviously there are still lots of spider species out there to be described and the reduced cadre of professional taxonomists is working harder than ever on the task. Further comparison of these figures with Platnick's earlier estimate of roughly 3000 and 34,000 described genera and species in total shows the 11:1 ratio also is consistent with the historical trend in spider taxonomy. Without considering new synonyms about 36,000 spider species have now been described. Coddington and Levi recently presented statistics in support of an estimate of approximately 170,000 extant spider species. In a world reluctantly coming to acknowledge a) the cardinal importance of arthropods in the faunal component of all ecosystems and b) the historical "megafaunal" bias in zoological inquiry (discussed by Platnick elsewhere), perhaps there is cause for renewed hope for the future of spider taxonomy. What could we do with some serious funding for baseline "biodiversity" inventories?

All the following species and genus numbers above 50 are approximate and rounded to the nearest 10. Not surprisingly, new genera and species in the suborder Opisthothelae (104 families, 180 new genera, 2060 new species) vastly outnumber those in Mesothelae (1 family, no new genera, 14 new species). Similarly the bulk of new descriptions in Opisthothelae are in Araneomorphae (89 families, 180 new genera, 1960 new species). Mygalomorphae (15 families) has 5 new genera and 90 new species. Further down the araneomorph classificatory trail it is hardly surprising there has been no activity among the paleocribellates (I mean, how many new hypochil-

ids do you expect there are left to find?) or the austrochiloid neocribellates (ditto).

Within Araneomorphae (and Araneae in general) Araneoclada is where the action is hottest and some observations of descriptive trends within this grouping (note that four genera account for well over 10% of all new spider species described) have prompted my proposal for a series of awards suggested below. The newly verified group Haplogynae (16 families) shows five new genera and 120 new species (nearly 90 of which are in the two dysderid mega-genera *Dysdera* and *Harpactea*). Entelegynes, of course, account for all the rest. Most activity was registered in Araneoidea (11 families) with nearly 130 new genera and 1060 new species. Paramount in this superfamily are the linyphiids with over 80 new genera (many of which are monotypic) and nearly 560 new species. This accounts for close to half of all new genera and over one quarter of all new species in the entire order Araneae. Other notables within Araneoidea include the synotaxids (10 new genera, 50 new species), theridiids (3 and 52), anapids (21 and 60) and araneids (6 and 300). Fully two-thirds of the araneid new species are in the two mega-genera *Araneus* and *Alpaida*. One can only hope that with this level of activity we must be getting close to resolving the familial relationships within Araneoclada.

The "RTA clade" has been relatively quiet (44 new genera, 740 new species) given its size (43 families). Salticid descriptions account for about a quarter of the new names with 11 new genera and 180 new species. Zodariids have 14 new genera and nearly 90 new species; amaurobiids have 7 and 110 (with over 60 new species in *Coelotes*). Clubionids and gnaphosids each have one new genus and over 50 new species (49 in *Clubiona*); thomisids have over 50 new species as well. "Also ran" RTA's include the lycosids (1 new genus, 39 new species) and heteropodids (3 new genera, 30 new species).

For some years the araneological world has been poised, somewhat breathlessly, awaiting new revelations into the nature of the RTA clade (is it real or just an infatuation?) and its putative major sub-groupings Dionycha (22 families) and the "dictynoids" (7? families), "amaurobioids" (4? families), and lycosoids (10? families). Dictynoids and amaurobioids, with their tattered and torn remnants of many of the old, pre-Lehtinen cribellate groupings, pose the biggest problems for systematists (just what is a cybaeid, a dictynid, a hahniid, an agelenid, or even an amaurobiid anyway?) and yet *1987–1991* shows very little work (with the exception of Amaurobiidae) in these groups. The calm before the storm. . .?

Concluding the Catalog is a short listing of all new nomenclatorial changes to be found in the previous 750 pages. Surprisingly there are very few and wherever possible Platnick has used new names provided by the original authors. Thus there are nine and 11 new synonyms, replacement names, or transfers of genera and species respectively. All the specific synonymies are from Platnick's own work with gnaphosid type material.

At this point, with tongue firmly planted in cheek (and hoping none take offense), I would like to propose the creation of the R. V. Chamberlin Araneological Olympics with awards presented to recognize conspicuous advances in araneological taxonomy. For the first such Olympics I have identified a small number of competitive categories and chosen award winners from the listings in 1988–1991. Certainly someone with a more active imagination and better database skills than I could expand upon the following. For "Most Species Described in One Genus" the gold medal goes to the United States for H. W. Levi's work with *Alpaida* (94 new species), the silver goes to England (A. F. Millidge, 79 new species in *Dubiaranea*), and the bronze to the United States (H. W. Levi again, 71 new species in *Araneus*). For "Most Monotypic New Genera in One Family" the gold medal is awarded to England for A. F. Millidge's 25 new genera in Linyphiidae (no silver or bronze medals were awarded in this category). For "Most Species Transferred to Other Genera" the clear winner of the gold medal is *Araneus* (363 transfers). In a distant second place the silver medal winner is *Dendryphantes* (210 transfers). Finally, there is one award to be presented in the N. I. Platnick Araneological Special Olympics for "Best New Name." This category has been inspired generally by the evidence of subtle taxonomic humorists among our ranks and specifically by the spooneristic, cinematically inspired name *Apopyllus now* ("an arbitrary combination of letters" indeed). Undoubtedly the following presentation is debatable, based as it is upon the decision of one judge, but for the period 1988 to 1991 the winner is Poland for W. Zabka's new genus and species *Abracadabrella birdsville*. Congratulations to all.

In closing I do not apologize for quoting from

Coddington's review of the previous volume. "... *Advances in Spider Taxonomy [1988–1991]* is a splendid volume. I do not have to recommend that you buy it, because you already know that it is indispensable. Arachnologists and beyond owe Platnick a fervent thanks, because few works are as critical to good biology as nomenclatorial catalogs. If taxonomy is the *sina qua non* of all biological science, it is because of works such as this." Here is an advance that definitely equates with progress.

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