webbed feet, which usually accompany a swimming or aquatic mode of life have been erroneously accorded a similar importance in classification. Yet the altricial Natatores, the Laridæ especially, and preëminently the Lestriulineæ, have the most positive affinities with the Raptoreæ, of which they are really the aquatic or natatorial form. However valuable such features may be in determining the limits and relations of families, and of groups next above families, modifications of the locomotive organs can hardly be considered as a proper basis for subclass or even ordinal divisions.—J. A. A.

THORELL'S EUROPEAN SPIDERS.*—The character and extent of this work, which is invaluable to students of spiders even in this country, can not be better stated than in the words of the author (pages 18 and 19):

"I have first made up a systematical list or review of the suborders, families, subfamilies and genera of European spiders recognized by me. Each generic name is accompanied by the name of the author who first published it, and the year when this took place, moreover by its etymological derivation, its synonyms and the name of the species that typifies the genus; and lastly are subjoined such synonymical and critical remarks as I have thought appropriate. In almost all the genera which I have had the opportunity of examining, I have subjoined a short description of the form and armature of the tarsal and palpal claws, which organs have not yet attracted all the notice they appear to deserve. Under the head of each family I have introduced a short account of the characteristics of the subfamilies and genera it comprises. These characteristics I have endeavored as far as possible to derive from the number and position of the eyes and the form of the organs of the mouth, partly because such distinctive features are easily verified, partly because they are most generally (often too exclusively) used, at least in determining the limits of the generic groups. But I have also endeavored to make use of the different forms and numbers of the spinners, of differences in the conformation of the cephalothorax and abdomen, in the relative lengths and armature of the legs, the number of claws on the tarsi, etc. Genera which rest exclusively on such characteristics as belong only to one sex leaving the other undetermined, I have not adopted, but consider that they ought to be unreservedly rejected. I ought to call especial attention to the circumstance, that exotic forms have not been taken into consideration in the formation of these schematic reviews, which accordingly can be used as a clew in classifying such only as belong to the European fauna. The characteristics of the sub-orders, as they cannot be expressed in a few words, and indeed may be considered as generally known, I have not thought it necessary to repeat, but refer for them to e. g. Latreille's, Sundevall's, Westring's and Oliert's works.

In the catalogue of arachnological literature, with which I have opened this treatise, I have included all the works known to me on now existing European spiders, of a descriptive, systematical and zoö-geographical character, with the exception of such writings as belong to the pre-Linnean period, of which only a small number of works, referred to in the following pages, have been admitted."

The catalogue contains the titles of nearly four hundred works, arranged alphabetically, according to their authors.

After a discussion of the principles of zoological nomenclature and a statement of those which he has followed, the author proceeds to review the three principal works on European spiders: Westring's "Araneæ Sueciae,” Blackwall’s "History of the Spiders of Great Britain and Ireland,” and Eugene Simon's "Histoire Naturelle des Araignées,” and to compare the spider fauna of Scandinavia with that of Great Britain and Ireland.

In regard to the classification of the spiders, he says:

"Whether we endeavor to arrange the families and genera of spiders in a continuous series, from that group which is looked upon as the most perfect down to the lowest, or vice-versa, or whether we arrange them according to some other principle, we are soon met by the same difficulties, which present themselves, whenever we endeavor to arrange in such a manner any class or order whatever of the productions of nature. As regards the larger groups of spiders, the suborders and the families, the reasons for the order of arrangement we have chosen will, we hope, easily be seen if one casts one's eye on the accompanying diagram, which gives a view of the connection founded on real affinity, which the families of the spiders adopted by us, according to our opinion, have to each other."

Fig. 177.

In a note, the author expresses his belief with Darwin, that "propinquity of descent is the hidden connection which our classifications attempt to find and express.

The work closes with a list of the genera of fossil spiders found in Europe, compared with living genera. — J. H. E.

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