

**M. S. Gilyarov (Ed.): Opređelitel obitayushchikh v pochve kleshchey, Trombidiformes (Key to the soil mites, Trombidiformes). Publ. House Nauka, Moskva 1978, 271 pp., 518 Figs. Price 4.20 R.**

The third (and last) volume of the Key to the soil mites, Trombidiformes, published under the editorship of M. S. Gilyarov, was compiled by a large collective of Soviet acarologists: B. A. Vainshtein, V. I. Volgin, D. A. Krivolutsky, N. N. Kuznetsov, I. Z. Livshits, V. I. Mitrofanov, V. D. Sevastyanov and E. F. Sosnina. Both in its concept and standard of preparation this volume considerably differs from the previous two parts, devoted to the mites Sarcotiformes and Mesostigmata. This is due to the fact that Trombidiformes, mainly the section concerning the cohort Prostigmata, belong to the least treated mite groups not only in the Soviet Union, but in the world literature in general. This is concerning not only faunistics and taxonomy at the level of species, but mainly the solution of problems of interrelations at the level of higher taxa, which would make it possible to elaborate a generally acceptable structure of natural system, to revise the extensive, mostly obsolete and confusing bibliography and thus to break a trail through the jungle of erroneous data. In this sense the third volume leaves much to be desired. This was pointed out by the head of the author's collective, Academician M. S. Gilyarov himself, who wrote in his introduction that the present volume was not the result of research, but should be rather a basis, stimulus and inspiration of such a research. Indeed, if we compare with it the previous two volumes (also reviewed in *Folia parasitologica*), primarily the second volume devoted to Mesostigmatic mites which belongs to the top of the acarological literature in the world, only some sections of the third volume are comparable, e.g. the family Cheyletidae (compiled by V. I. Volgin who already published an excellent monograph about this family in 1969), or the family Bdellidae, prepared by four authors who could use as a basis their own original works.

Other groups included in the cohort Prostigmata cannot be evaluated in such a favourable light. The very division into phalanges is disputable; its use in the key is superfluous, makes the key less lucid and consequently less applicable. The reader will find the following keys one after another: 1) Key to the fauna of the cohort Prostigmata, 2) Key to the superfamilies of Prostigmata, 3) Key to the families of Prostigmata and then 4) Keys to the superfamilies and families within the framework of particular phalanges. However, in this manner the path leading to the determination of the basic taxon is many times repeated, the text is lengthy, unclear and primarily it does not meet the main requirement of the keys: to reach a correct determination as quickly as possible.

The elaboration of the cohort Parasitengona is the weakest point in the Key. It is true that e.g. the distribution of the family Erythraeidae is cosmopolitan (this fact being nothing exceptional with mites), but it certainly cannot be the ground for including genera known only from South Africa, Australia, Central America, New Zealand etc. in a key designed for the Palearctic region (e.g. of the 25 genera listed in the family Erythraeidae 13 are known only outside the Palearctic region). Should young inexperienced acarologists use this key, we might anticipate surprising zoogeographical discoveries. The treatment of the family Trombiculidae also deserves criticism. It is true, that most species of this family are known in larval stage only, but they are the object of parasitological research and a soil zoologist has almost no opportunity of encountering them during his studies. The soil samples, however, include adults and nymphs of these mites, many of which are known, but they are entirely overlooked in the key. Instead, included is the key to the genera of larvae, valid allegedly for the whole Palearctic region, which not only fails to comprise the most widespread Palearctic genus *Neotrombicula*, but other genera known from the USSR territory as well: *Myotrombicula*, *Hoffmannina*, *Hexidionis*, *Hirsutiella*, *Lacertacarus*. Other taxa are listed under incorrect names, e.g. *Chelodonta* (instead of *Cheladonta*), *Guntheriana* (instead of *Gunthera*) and the subfamily Gahrlepiinae (instead of *Gahrlepiinae*). Moreover, the rapid advance of knowledge about this mite group in the last 10—15 years is disregarded here and makes the key useless.

The book closes with a comprehensive, interesting chapter about the system, evolution and phylogenesis of trombidiform mites, which would have surely served as a suitable introductory part. In conclusion, there is a chapter about the use of data on soil mites as indicators of changes occurring in the soil. The last six pages constitute an appendix devoted to the order Opilioacarina, forming in this untraditional way the end of the book.

The reviewed volume completes a series which will certainly hold an important position in soil zoology and in acarology in the future. A large team of Soviet acarologists has presented in it not only a survey of the present store of knowledge, but also reflected all present shortcomings, showing the gaps and the urgent need for basic work in some lines of research. These conclusions apply not only to the territory of the Soviet Union, but may be also applied to the entire Palearctic region in general.

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