M. Jurík: Bionomics of fleas in birds'nests in the territory of Czechoslovakia, *Acta. Sc. Nat. Brno 8 (10): 1-54, 5 Figs., 16 Tab., 1974*

Despite the fact that the research of fleas has been paid great attention, there are so far scarce data on the fleas of birds and their nests. The author presents in his work many important bionomic data on fleas of birds nests in Czechoslovakia and partly fills up the gap in our knowledge on this problem.

54 pages of text, well complemented by 16 Tables and 5 Figures, contain the results obtained in the research of fleas of birds' nests and concerning the following species: *Ceratophyllus gallinae, C. pullatus, C. fringillae, C. rusticus, C. hirundinis, C. styx, C. vagabundus, C. garei, Dasypsyllus gallinulae* and some mammalian flea species. The material includes 15001 fleas collected from 732 nests of 69 bird species, nesting in the territory of Czechoslovakia. A total survey of the material studied is presented in Table 1, comprising 6 pages.

The most extensive part of the book is devoted to the species *Ceratophyllus gallinae*, representing one half of the whole material. Following the notes on the distribution of this species in this country and on its hosts there are detailed data on the development of *C. gallinae* in the nests of *Passer domesticus* during the year. There are also the results obtained by studies on the hibernation of *C. gallinae* and influence of nesting biology of host on the number of generations of this flea during the year. A comprehensive chapter is devoted to the dependence of *C. gallinae* development upon the nest biology of host. In the chapter on the migration of *C. gallinae* published data are discussed and the results proper are dealt with in three parts. The discussion on bionomy is closed with data on the sex ratio in *C. gallinae* with different host species during the year. The results of studies on the bionomy of *Ceratophyllus fringillae* are presented in four parts: hosts, development, migration and hibernation. With some other species of bird fleas the author compiled a new store of knowledge on their bionomy and compares them with the existing data. Mammalian fleas found in studied nests, namely *Monopsyllus sciurorum*, are discussed in conclusion.

Despite the high quality of the reviewed volume based on a very extensive material, some criticisms are inevitable: on page 6 in the list of species found all names of authors and description data are given in brackets, and as regards the species *C. pullatus, C. rusticus, C. styx* and *C. garei* this is in discrepancy with paragraph 51b) of International Codex of Zoological Nomenclature. The same mistake appears in the titles of chapters on pages 35, 43, 45 and 47. With three flea species incorrect years in description are given: *C. vagabundus* (Boheman, 1866), *N. fasciatus* (Bosc, 1800) and *M. sciurorum* (Schrank, 1803). Page 14, 7th line from above it is said: "*C. tribulis* (the nominate form and ssp. *dilatus*)", but *dilatus* is a synonym of *C. tribulis*, see Peus (1967). In chapters dealing with the migration of *C. gallinae* and *C. fringillae* an incorrect term phoresia is used for the transfer of fleas from nest to nest by birds, as this term is understood as a special case of closer commensal association — see Zlatník et al. (1973) etc. In the above mentioned case we have to do with transport of parasite by its host. With the species *C. pullatus* (p. 36 above) 8 bird species are missing in the list of hosts, see Szabó (1966), Peus (1968). The data on p. 46 concerning the priority of the author's finding of *C. vagabundus* in Central Europe are in discrepancy with the finding of Peus (1968) who has found both sexes as well as larvae of *C. vagabundus* in the nests of *C. monedula* in Schwerin (Mecklenburg). Some other minor errors have been apparently caused by misprinting, e. g. on p. 17, 12th line from below there is an incorrect date concerning the citation Bacot, in the list of literature cited incorrect number of pages is given with Hicks etc.

The above critical notes by no means eliminate the considerable asset of the results presented. The book will certainly arouse a positive response among specialists engaged in the studies of fleas and will be an impetus for further research of bird fleas.

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