

THE SWIFLETS (COLLOCALIA, APODIDAE) AS HOSTS OF HYPODERATID HYPOPI

In his monograph of the family Hypoderidae Fain (Bull. Inst. r. Sci. nat. Belg. 43, 4: 1–139, 1967) mentions the following bird orders as to be parasitized by the hypopial stages: Pelecaniformes, Ciconiiformes, Anseriformes, Falconiformes, Gruiformes, Columbiformes, Psittaciformes, Cuculiformes, Strigiformes, Coraciiformes, Piciformes and Passeriformes. Later, Fain et al. (Rec. West. Aust. Mus. 7: 1–8, 1979) added Caprimulgiformes to the list of host orders. (According to O'Connor (J. Med. Entomol. 22: 324–331, 1985) the correct name of this family should be Hypoderatidae). I would like to draw the attention to a publication which was not included in the references of various authors dealing with this family and which contains data about records of mites found in the species *Collocalia esculenta* (L.) and *C. nidifica* Gray [= *C. fuciphaga* (Thunb.)] (Apodidae) originating from Java. It is a paper by H. A. Bernstein entitled Beiträge zur näheren Kenntnis der Gattung *Collocalia* Gr. (*Cypselus esculentus* & *nidificus*) (Verhandl. d. Kaiserl. Leopold.-Carolinischen Akad. d. Naturforscher 26, 1:

13–31, 1857). It is devoted to the osteology and splanchnology of *Collocalia* with an appendix on pages 28–30 in which the author reports about his findings of large numbers of small mites, called by him *Acarus Collocaliae*, on arteria anonyma, subclavia dextra and carotis, in pericardium and in the anterior air sac (cella thoracica anterior). All four *Collocalia esculenta* and three *C. fuciphaga* examined were found to be infested.

The parasites have been described and figured. The author considered them to be adult females. From the two figures it follows without doubt that the mites are hypopi belonging to the family Hypoderatidae. The hypopi have long sternum, long genital sclerite with anterior and posterior bifurcation and long non-diverging genital discs. In spite of the schematic illustrations, it may be presumed that they represent probably a new genus of Hypoderatidae. However, additional material is needed for precise classification.

Consequently, Apodiformes are another bird order parasitized by members of this family.

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