

THE HYPOPI OF HYPODERIDAE (SARCOPTIFORMES) PARASITIZING CUBAN BIRDS

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Abstract. Five species and subspecies of hypoderid mites were collected from Cuban birds. Three of them, *Hypodectes propus similimus* ssp. n., *Phalacroectes punctatissimus* sp. n. and *Tytodectes glaucidii* sp. n. are described as new. A new subgenus, *Peledectes* sg. n. has been created.

During the parasitological investigations of Cuban birds made by the teams of specialists of Cuban and Czechoslovak Academies of Sciences seven species were found to be infested with hypopial stages of hypoderid mites. Since the last century, these developmental stages have been considered as deutonymphs of feather mites (Analgoidea) but in the recent papers FAIN (1966) and FAIN and BAFORT (1966, 1967) showed that they represent the hypopi of yet undescribed adults and belong to a new family of sarcoptiform mites — Hypodectidae (recently called Hypoderidae — see FAIN 1968). The monograph of FAIN (1967) summarizes the actual knowledge about this interesting group of bird mites. In the material the following species have been discovered.

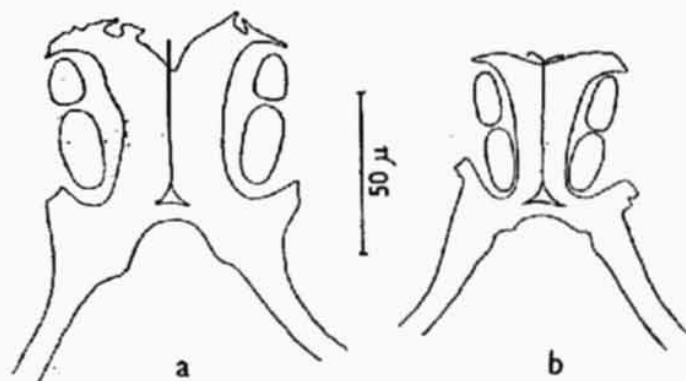


Fig. 1a *Hypodectes propus bubulci*, the region of genital suckers. 1b — *Hypodectes propus similimus* ssp. n., the region of genital suckers

1. *Hypodectes (Hypodectoides) propus bubulci* Fain, 1967

Fig. 1a

Material examined: 13 specimens from 2 *Ardeola ibis ibis* (Linné), Playa Baracoa, Prov. of Havana, 2. 12. 1964, on the breast; 19 specimens from *Florida caerulea* (Linné), Chiririco, Prov. of Oriente, 21. 1. 1965; 20 specimens from *Florida caerulea*, Cayo Win, Baracoa, Prov. of Oriente, 27. 1. 1965. *F. caerulea* was formerly reported as a host of hypoderid hypopi by LEIDY (1890) and BEEBE (1902).

2. *Hypodectes (Hypodectoides) propus similimus* ssp. n.

Fig. 1b

Material examined: 4 specimens from *Ardea herodias repens* Bangs and Zappey, Salinas, Ciénaga de Zapata, Prov. of Las Villas, 9. 1. 1965, under the skin; 13 specimens from *Casmerodius albus egretta* (Gmelin), Cabo Cruz, Vereón, Prov. of Oriente, 30. 3. 1965, on the breast.

The specimens of *A. herodias* and *C. albus* are very similar to the foregoing subspecies but differ from it in having the genital suckers of nearly the same size resembling in this respect the nominate subspecies.

Hypopus (holotype — Nr CU 870/1): Length 1528 μ , width 468 μ . Length of epimeres II 244 μ . Length of tarsi I—IV 28 μ , 33 μ , 72 μ , 14 μ , respectively. Apicotarsal spines I—II 32 μ and 35 μ long, without subterminal tooth. Genital suckers nearly equal, their length 19 μ and 16 μ . Genital sclerite 45 μ long.

Ardea herodias cognata Bangs from the Galapagos Islands is reported by FAIN (1967) to be infested with *Hypodectes propus bubulci* Fain.

3. *Neottialges (Pelecanectes) evansi* Fain, 1966

Material examined: 42 specimens from *Phalacrocorax auritus floridanus* (Audubon), Salinas, Ciénaga de Zapata, Prov. of Las Villas, 26. 7. 1965.

Until now, *Phalacrocorax aristotelis* (Linné) and *P. atriceps* King are known as hosts of this species (FAIN 1967).

PHALACRODECTES FAIN, 1966 (PELEDECTES) SG. N.

The hypopi of the following species are very similar to the known species of the genus *Phalacrodectes* Fain, 1966 differing at the same time in some features which allow to establish a new subgenus.

Diagnosis: With the characters of the typical subgenus. Sejugal furrow present dorsally. Cuticle of the body sclerotized and finely punctuated. More strongly sclerotized areas on the propodosoma dorsally, near the coxae and in the posterior part of the hysterosoma. Epimeres I forming a sternum. Tarsus IV distinctly shorter than tarsus III. It differs in the distant, strongly diverging, genital suckers. Genital sclerite lacking.

Type-species: *Phalacrodectes (Peledectes) punctatissimus* sp. n.

4. *Phalacrodectes (Peledectes) punctatissimus* sp. n.

Fig. 2

Material examined: 116 specimens from *Pelecanus occidentalis occidentalis* Linné, Cayo Jutía, Prov. of Las Villas, 10. 3. 1965.

Hypopus (holotype — Nr CU 697/8): Length 806 μ , width 330 μ . Coxal field II 122 μ long by 69 μ wide. Sternum 41 μ long, little sclerotized. Epimeres II and epimerites II incompletely joined. Tarsi I—IV 22 μ , 28 μ , 42 μ and 10 μ long, respectively. Tarsal spines I—III 8 μ m, 6 μ and 5 μ , respectively. Tarsus IV with a long indented seta. Genital suckers strongly diverging, both together

22 μ . The anterior sucker a little smaller than the posterior one. Genital sclerite absent. A short transversal furrow behind the genital suckers. Dorsally, two narrow whitish less sclerotized strips in the hysterosomal region. Only setae sce, d_1 , d_2 , d_5 , l_1 , h and sh long.

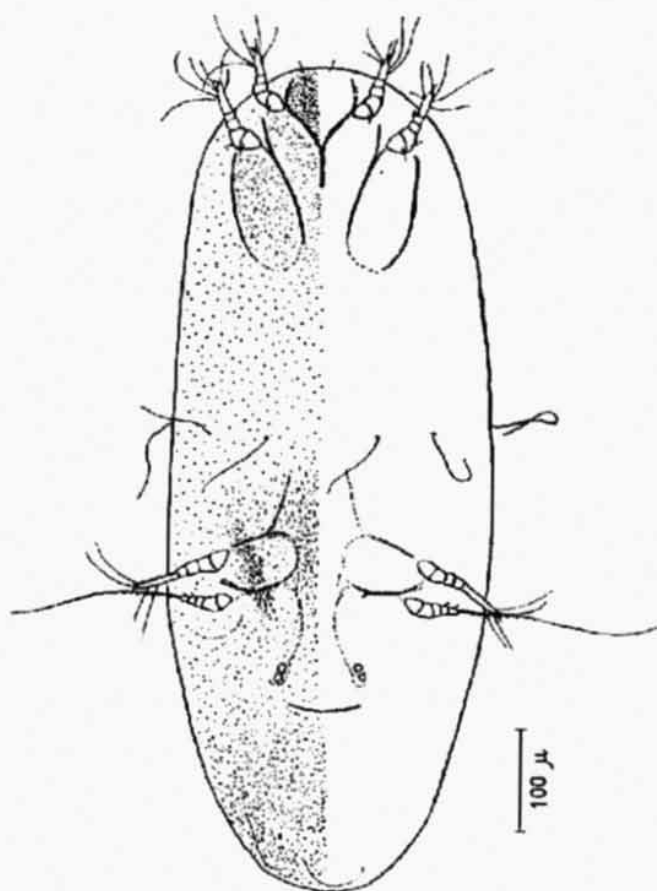


Fig. 2. *Phalacrodes punctatissimus*
sp. n., ventral view

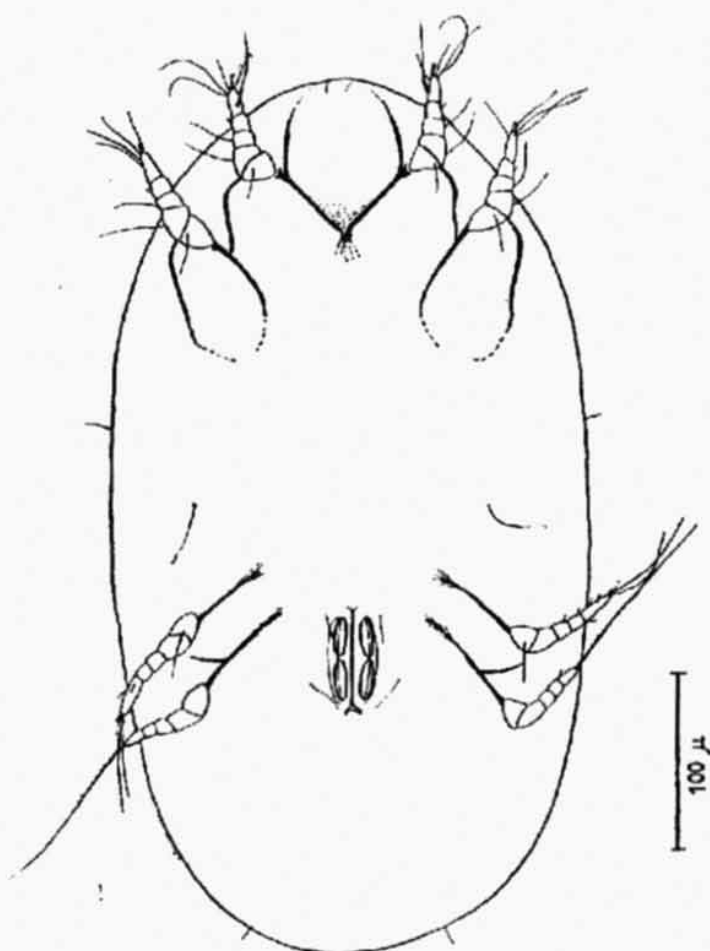


Fig. 3. *Tytodectes glaucidii*
sp. n., ventral view

5. *Tytodectes glaucidii* sp. n.

Fig. 3

Material examined: 59 specimens from *Glaucidium siju siju* (D'Orbigny), Cabo Cruz, Vereón, Prov. of Oriente, 30. 3. 1965, on the hind legs and breast.

Hypopus (holotype — Nr CU 868/4): Length 476 μ , width 268 μ . Dorsally, se-jugal furrow present. Punctuations on the body surface very fine, more pronounced in the region between epimeres I which are V-shaped. Epimerites III joined to epimeres IV. Length of tarsus I—IV 17 μ , 18 μ , 23 μ and 15 μ , respectively. The terminal spine of tarsus I and II short, 4—5 μ , bifurcated. The terminal spine of tarsus III simple, 3 μ long. The genital suckers narrow, both together 46 μ long, separated by a sclerite 61 μ long. The body setae very fine, not exceeding 25 μ with the exception of sh.

The new species differs from *Tytodectes tyto* Fain, 1966 in its larger size, absence of sternum, absence of spine on tibia IV, connection of epimerite III and epimere

IV and length of setae. The presence of a spine on tibia IV is one of the characters of the subgenus *Tytodectes* Fain, 1966 (FAIN 1967). The morphology of the new species shows that this character must be eliminated from the subgeneric diagnosis.

The holotypes and paratypes of the new taxa are deposited in the collection of the Biological Institute of the Cuban Academy of Sciences, the paratypes also in the collection of the Institute of Parasitology, Czechoslovak Academy of Sciences.

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REFERENCES

- BEEBE C. B., Preliminary observations on a subdermal mite occurring among the birds of New York Zoological Park. *Science* 15: 754—755, 1902.
- FAIN A., Note sur les Acariens nidicoles à deutonymphe parasite tissulaire des oiseaux (Hypodectidae: Sarcoptiformes) (Note préliminaire). *Rev. Zool. Bot. Afr.* 74: 324—330, 1966.
- , Les hypopes parasites des tissus cellulaires des oiseaux (Hypodectidae: Sarcoptiformes). *Bull. Inst. R. Sci. Nat. Belg.* 43: 1—139, 1967.
- , A new heteromorphic deutonymph (Hypopus) of a sarcoptiform mite parasitic under the skin of a toucan. *J. nat. Hist.* 2: 459—461, 1968.
- , BAFORT J., Les hypopes parasitant les tissus cellulaires des pigeons sont les deutonymphes d'un Acarien libre et pas celles d'un Acarien plumicole. (Note préliminaire). *Rev. Zool. Bot. Afr.* 74: 313—316, 1966.
- , —, Cycle évolutif et morphologie de Hypodectes (Hypodectoides) propus (Nitzsch). Acarien nidicole à deutonymphe parasite tissulaire des pigeons. *Bull. Acad. R. Belg. (Classe des Sciences)* 5: 501—533, 1967.
- LEIDY J., *Hypoderas* in the little blue heron (*Florida coerulea*). *Proc. Acad. Nat. Sc. Philad.* 1890: 63, 1890.

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