

**REVALIDATION OF *PHTHEIROPOIOS GRACILIPES* (AMBLYCERA,
GYROPIDAE), WITH REMARKS ON ITS SYNOXENISM AND
DISTRIBUTION IN *CTENOMYS* SPECIES FROM ARGENTINA (RODENTIA,
CTENOMYIDAE)**

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ABSTRACT

Phtheiropoios gracilipes (Ewing, 1924) is revalidated from the synonymy of *P. latipollicaris* (Ewing, 1924), based on the type series and seven samples collected on five different *Ctenomys* species. A characterization and illustrations are provided. Its synoxenic occurrence with *Gyropus parvus parvus* (Ewing, 1924) and two others *Phtheiropoios* species within the geographical ranges of those host species are commented.

KEYWORDS. *Phtheiropoios gracilipes*, Phthiraptera, synoxenism, *Ctenomys*, Argentina.

INTRODUCTION

Phtheiropoios gracilipes was described in the genus *Gyropus* Nitzsch, 1818 by EWING (1924) (type species *G. ovalis* Nitzsch, 1818) from four females and one male, collected on a female skin of *Ctenomys colburni* Allen, 1903 from Río Negro, Argentina. EICHLER (1939) erected the genus *Phtheiropoios* (type species *P. wetmorei* (Ewing, 1924)) including *P. gracilipes*. WERNECK (1948) examined the types and synonymized *P. gracilipes* with *P. latipollicaris* (Ewing, 1924). This statement has been transcribed by HOPKINS & CLAY (1952).

CICCHINO (1978), CASTRO & CICCHINO (1987) and CASTRO **et al.** (1987) based on Werneck's work, misidentified specimens collected on *Ctenomys australis* Rusconi, 1934 from Buenos Aires Province, Argentina. Recently, CICCHINO & CASTRO (1994) pointed out that four *Phtheiropoios* samples from four different *Ctenomys* species (including the type host of *P. gracilipes*) belong to the same morphological species, which has been previously identified erroneously as *P. latipollicaris* following somatic features provided by WERNECK (1948), but leaving this situation unresolved.

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After examination of the type series and samples of *P. gracilipes*, we propose to revalidate this species, giving a diagnosis and the variation observed in seven different samples of this louse found on six *Ctenomys* species, commenting its synoxenic occurrence with *Gyropus parvus parvus* (Ewing, 1924) and other *Phtheiropoios* species within the geographical ranges of these hosts.

MATERIALS AND METHODS

Most of the specimens examined were obtained alive from different *Ctenomys* species, also trapped alive. All the specimens were fixed in ethanol-acetic 1:1 vol/vol mixture; in due time, mounted in slides following the procedure described by CASTRO & CICCHINO (1978), using Eosin W as staining agent, and are deposited in the Museo de La Plata collections (MLP), Buenos Aires, Argentina.

Syntypes of *P. gracilipes* housed in the Smithsonian Institution, National Museum of Natural History (USNM), Washington DC, are also examined.

Phtheiropoios gracilipes (Ewing, 1924), revalidated

(Figs. 1-4, 6)

Gyropus gracilipes EWING, 1924: 18-19, fig 7, a male and four females syntypes mounted in a single slide, from Huanuluán, El Cuy departament, Río Negro Province, Argentina (USNM 23751), examined; WERNECK, 1936: 441.

Phtheiropoios gracilipes; EICHLER, 1939: 161.

Phtheiropoios latipollicaris; WERNECK, 1948, : 79- 81 (**partim**) (*P. gracilipes* synonymized); HOPKINS & CLAY, 1952: 289. CICCHINO, 1978: 154 (misidentification). EMERSON & PRICE, 1981:42 (synonymy). CASTRO & CICCHINO, 1987: 360 (misidentification). CASTRO **et al.**, 1987: 322 (misidentification).

Phtheiropoios sp.; CICCHINO & CASTRO, 1994: 7.

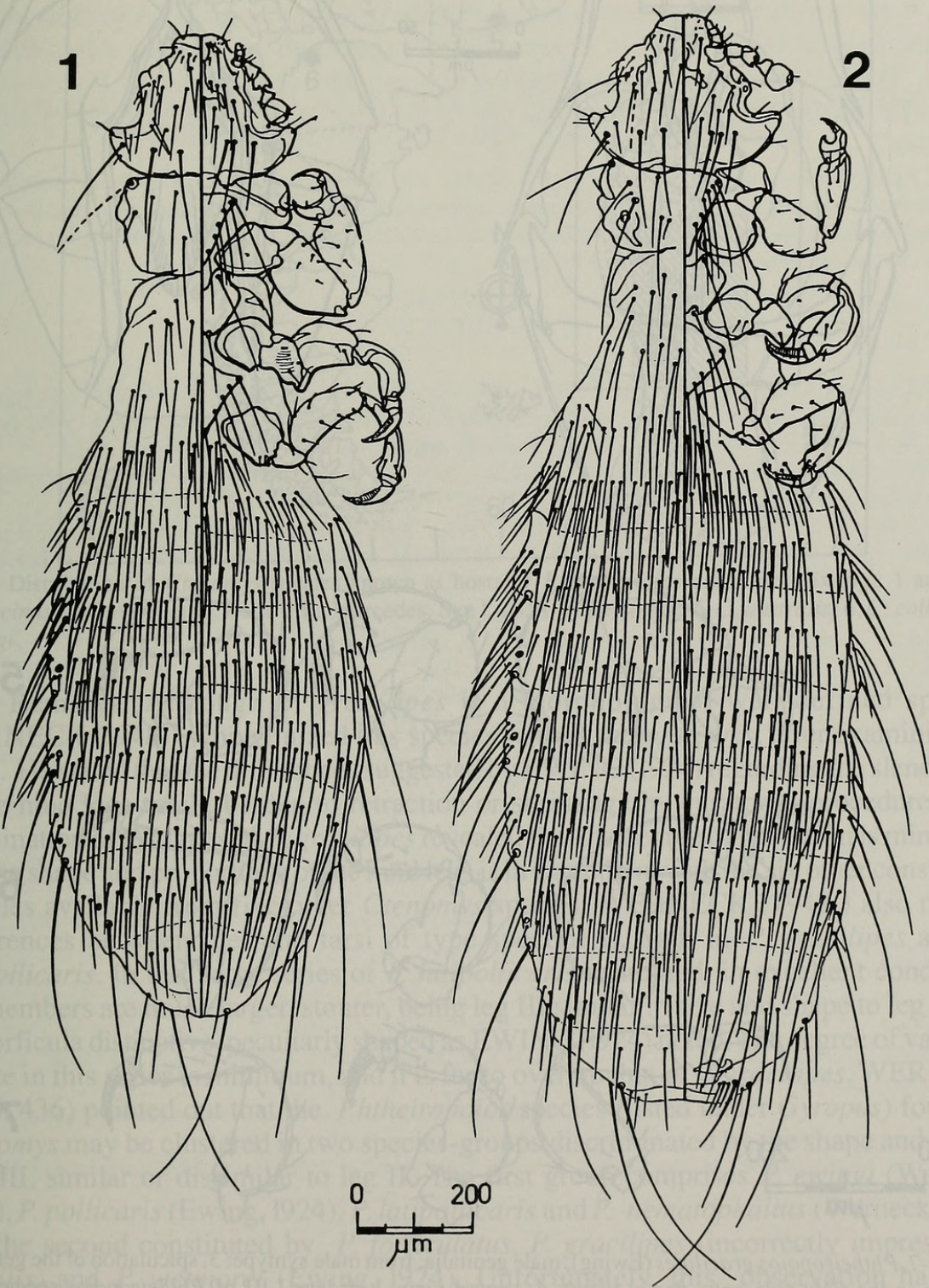
Male (syntype fig. 1). Differential diagnosis: Total length 1.68 mm. Tarsal thumb of foretarsus and general shape of the forficula (fig. 6) resemble that of *P. rionegrensis* Cicchino & Castro, 1994, and are very different of those of *P. latipollicaris* and *P. forficulatus* (Neumann, 1912) (figs. 5, 7). Femoral tenaculum of leg II similar to that of *P. forficulatus* and different of *P. latipollicaris* (figs. 5, 7). Hind femur long and slender, with tenaculum reduced, similar to *P. forficulatus*. Hind tibia also long and slender. Hind tarsus slender, and claw slender and longer than middle tarsus, similar to *P. forficulatus* (figs. 6, 7). Genitalia (figs. 3, 4) similar to *P. latipollicaris*, differing in shape of the pseudopenis and ventral sclerite; penial sclerite very similar.

Female (fig. 2). Diagnosis: total length 1.94 mm. Similar to *P. latipollicaris*, differing as follows: a) noticeably smaller (1,80-1,90 vs. 2,10-2,20 mm); b) like the male, leg III differently shaped than II, being the femur and tibia longer and slender, the tarsus slender and the claw longer and slender; c) larger number of setae in the abdomen.

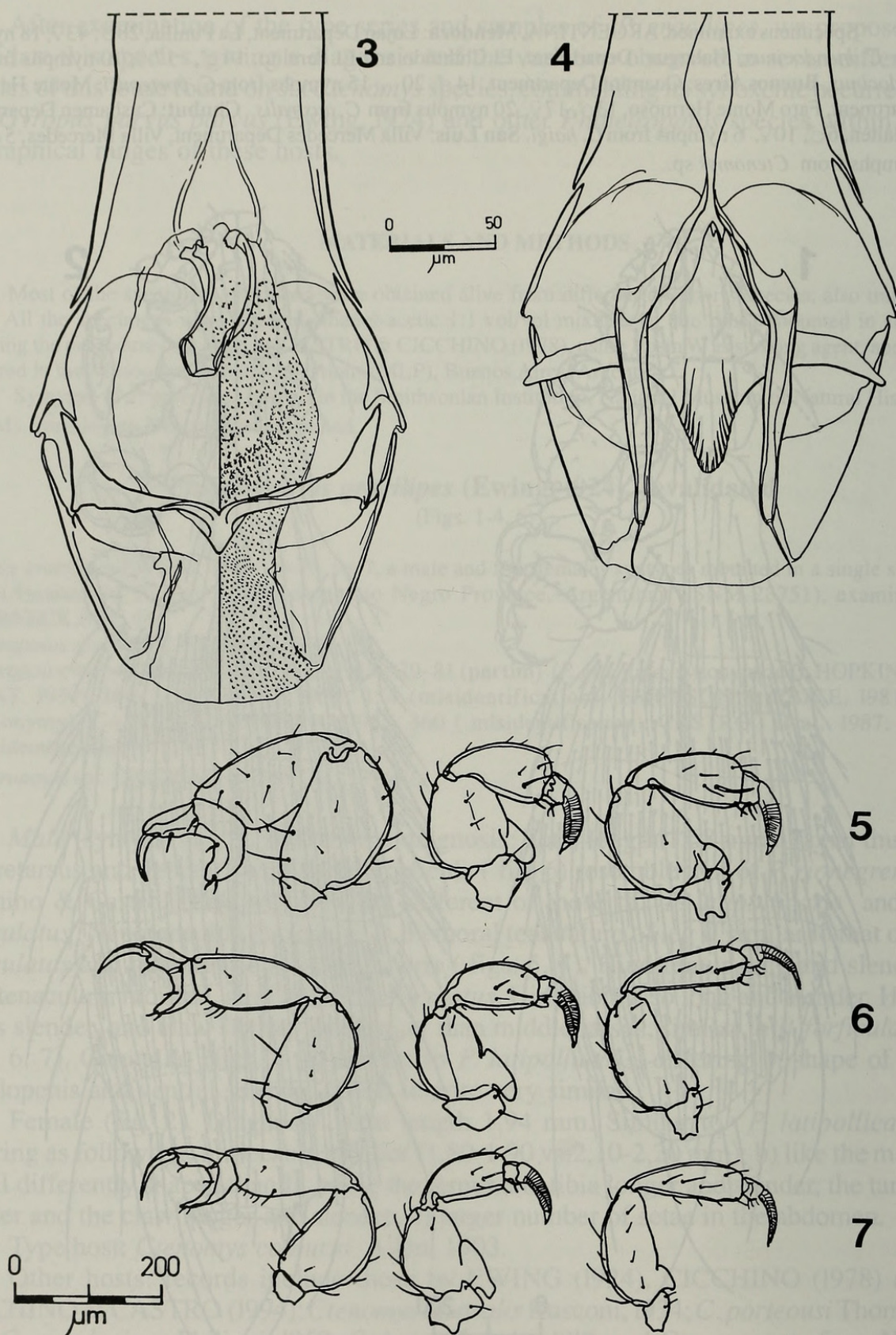
Type host: *Ctenomys colburni* Allen, 1903.

Other hosts: records include those by EWING (1924), CICCHINO (1978) and CICCHINO & CASTRO (1994): *Ctenomys australis* Rusconi, 1934; *C. porteousi* Thomas, 1916; *C. mendocinus* Philippi, 1869; *C. haigi* Thomas, 1919, and *Ctenomys* sp. from Villa Mercedes, San Juan Province, Argentina.

Specimens examined. ARGENTINA. **Mendoza**: Lujan Department, La Punilla, 28♂, 43♀, 18 nymphs from *C. mendocinus*; Malargue Department, El Chihuido and El Peralito, 14♂, 17♀, 10 nymphs from *C. mendocinus*. **Buenos Aires**: Guaminí Department, 14♂, 20♀, 15 nymphs from *C. porteousi*; Monte Hermoso Department, Faro Monte Hermoso, 13♂, 17♀, 20 nymphs from *C. australis*. **Chubut**: Cushamen Department, El Maiten, 6♂, 10♀, 6 nymphs from *C. haigi*. **San Luis**: Villa Mercedes Department, Villa Mercedes, 5♂, 7♀, 3 nymphs from *Ctenomys* sp..



Figs. 1-2. *Phtheiropoios gracilipes* (Ewing), syntypes: 1, male dorsal and ventral views; 2, female dorsal and ventral views.



Figs. 3-7. *Phtheiropoios gracilipes* (Ewing), male genitalia, from male syntype: 3, spiculation of the genital sac (shown in the right side only, dorsal view); 4, ventral view. Left legs I-III of *Phtheiropoios* species: 5, *P. latipollicaris* (Ewing) (from *Ctenomys magellanicus*); 6, *P. gracilipes* (from *C. haigi*); 7, *P. forficulatus* (Neumann) (from *C. mendocinus*).

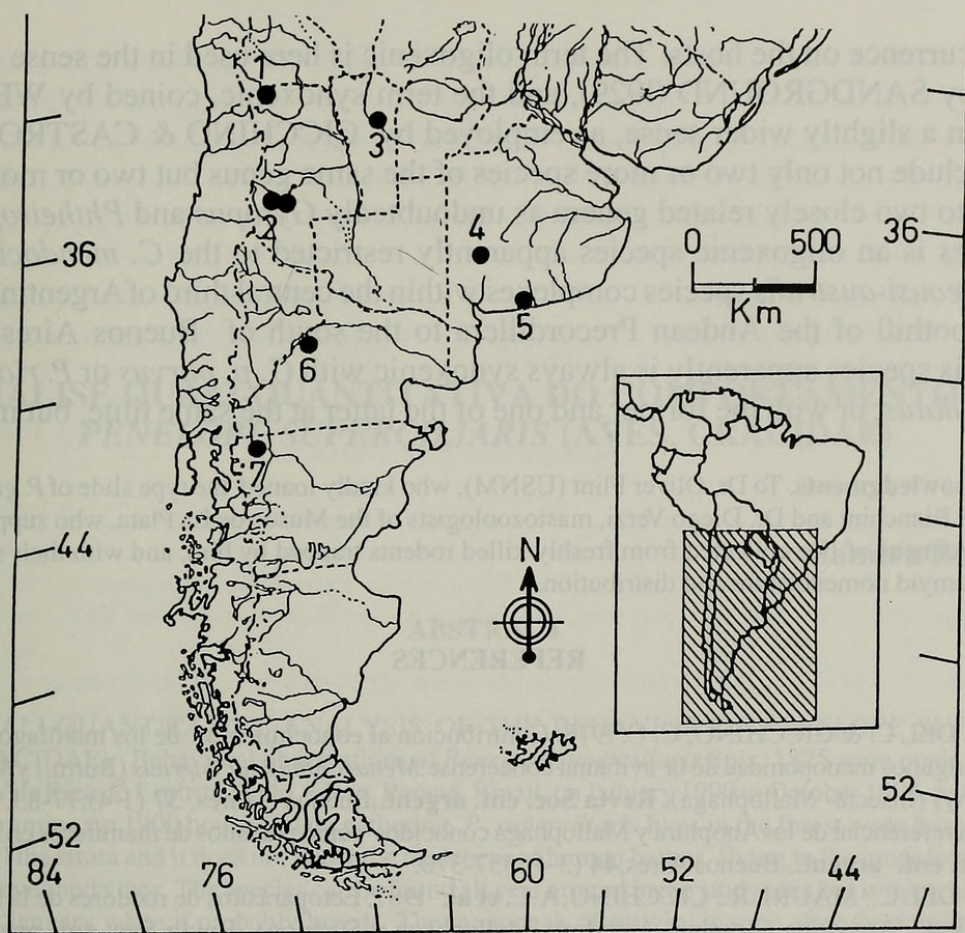


Fig. 8. Distribution of *Ctenomys* species known as hosts of *Phtheiropoios gracilipes* (Ewing): 1 and 2, *C. mendocinus*; 3, *Ctenomys* sp. from Villa Mercedes, San Luis; 4, *C. porteousi*; 5, *C. australis*; 6, *C. colburni*; 7, *C. haigi*.

Remarks. Although *P. gracilipes* is a morphological well defined species, WERNECK (1948) synonymized this species with *P. latipollicaris*, after examining the types. He stated that the differences suggested by EWING (1924) regarding the slenderness of the hind legs might be due to retraction or shrinkage by curatorial procedures. The examination of syntypes of *P. gracilipes* revealed that the degree of retraction is minimum, and the shape and proportions of the hind legs is in agreement with the six other conspecific samples available from five other *Ctenomys* species. WERNECK (1948) also noticed differences between the hind tarsi of type specimens, both in *P. gracilipes* and *P. latipollicaris*. In the large series of *P. latipollicaris* examined, in excellent conditions, the members are much larger, stouter, being leg III similar in size and shape to leg II, and the forficula distinctive, peculiarly shaped as EWING (1924) noted. The degree of variation in size in this series is minimum, and it is far to overlap that of *P. gracilipes*. WERNECK (1936: 436) pointed out that the *Phtheiropoios* species (listed under *Gyropus*) found on *Ctenomys* may be clustered in two species-groups discriminated by the shape and size of legs III, similar or dissimilar to leg II. The first group comprises *P. ewingi* (Werneck, 1936), *P. pollicaris* (Ewing, 1924), *P. latipollicaris* and *P. nematophallus* (Werneck, 1935), and the second constituted by *P. forficulatus*, *P. gracilipes* (incorrectly impressed as *gracilis*) and *P. wetmorei* (Ewing, 1924). Unfortunately, this observation has been apparently disregarded by him in 1948.

Occurrence on the hosts. The term oligoxenic is here used in the sense originally proposed by SANDGROUND (1929), and the term synoxenic, coined by WENZEL *et al.* (1966), in a slightly wider sense, as employed by CICCHINO & CASTRO (1994) in order to include not only two or more species of the same genus but two or more species belonging to two closely related genera as undoubtedly *Gyropus* and *Phtheiropoios* are. *P. gracilipes* is an oligoxenic species apparently restricted to the *C. mendocinus-haigi* and *C. porteousi-australis* species complexes within the central third of Argentina, ranging from the foothill of the Andean Precordillera to the south of Buenos Aires Province (fig.8). This species apparently is always synoxenic with *G. p. parvus* or *P. rionegrensis* or *P. forficulatus*, or with the former and one of the latter at the same time, but in different localities.

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REFERENCES

- CASTRO, D. DEL C. & CICCHINO, C. C. 1978. Contribución al conocimiento de los malófagos argentinos III. Sobre algunos menoponidae de la avifauna bonaerense: *Menacanthus eurysternus* (Burm.) y *Menacanthus pici* (Denny) (Insecta- Mallophaga). **Revta Soc. ent. argent.**, Buenos Aires, **37** (1-4):77-83.
- . 1987. Lista referencial de los Anoplura y Mallophaga conocidos como parásitos de mamíferos en la Argentina. **Revta Soc. ent. argent.**, Buenos Aires, **44** (3-4):357-370.
- CASTRO, D. DEL C.; MAURI, R.; CICCHINO, A.C. *et al.* 1987. Ectoparásitos de roedores de la Provincia de Buenos Aires, Argentina (Acarina, Anoplura, Mallophaga y Suctoria). **Revta Soc. ent. argent.**, Buenos Aires, **44** (3-4): 317-327.
- CICCHINO, A. C. 1978. Nuevos hospedadores para Gyropidae (Mallophaga-Amblycera) parásitos de *Ctenomys* (Rodentia- Ctenomyidae) en Argentina. **Neotropica**, La Plata, **24** (72):154.
- CICCHINO, A. C. & CASTRO, D. del C. 1994. On *Gyropus parvus parvus* (Ewing, 1924) and *Phtheiropoios rionegrensis* sp. n. (Phthiraptera, Amblycera, Gyropidae) parasitic on *Ctenomys haigi* Thomas, 1919 (Mammalia, Rodentia, Ctenomyidae). **Iheringia**, Sér. Zool., Porto Alegre, **(77)**:3-14.
- EICHLER, W., 1939. Notulae Mallophagologicae I. Neue Gattungen und Subfamilien von Haarlingen. **Zool. Anz.**, Leipzig, **129**: 158-162.
- EMERSON, K. C. & PRICE, R. D. 1981. A host parasite list of the Mallophaga of mammals. **Misc. Publs. ent. Soc. Am.**, Maryland, **12** (1):1-72.
- EWING, H. E. 1924. On the taxonomy, biology and distribution of the biting lice of the family Gyropidae. **Proc. U. S. natn. Mus.**, Washington D.C., **36** (20): 1-42.
- HOPKINS, G. H. E. & CLAY, T. 1952. **A checklist of the genera & species of Mallophaga**. London, British Museum (Natural History). 362 p.
- SANDGROUND, J. H. 1929. A consideration on relation of host specificity of helminths and metazoan parasites to the phenomena of age resistance and acquired immunity. **Parasitology**, Cambridge, **21**: 227-259.
- WENZEL, R. L.; TIPTON, V. J. & KIEWLICZ, A. 1966. The Streblid batflies of Panama (Diptera, Calyptridae, Streblidae). In: WENZEL, R. L. & TIPTON, V. J. ed. **Ectoparasites of Panama**. Chicago, Field Museum of Natural History, p. 405-475.
- WERNECK, F. L. 1936. Contribuição ao conhecimento dos mallofagos encontrados nos mamíferos sulamericanos. **Mems Inst. Oswaldo Cruz**, Rio de Janeiro, **31** (3):391-589.
- . 1948. **Os Mallophagos de mamíferos. Parte I: Amblycera e Ischnocera (Phloptoridae e parte de Trichodectidae)**. Rio de Janeiro, Revista Brasileira de Biologia, 243 p.



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