

SCIENTIFIC NOTE

The Correct Identity of a Louse Sample (Phthiraptera: Menoponidae) from the Roadside Hawk, *Rupornis magnirostris* (Gmelin) (Falconiformes: Accipitridae)MICHEL P. VALIM¹ AND RICARDO L. PALMA²

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A Identidade Correta de uma Amostra de Piolho (Phthiraptera: Menoponidae) do Gavião-Carijó, *Rupornis magnirostris* (Gmelin) (Falconiformes: Accipitridae)

RESUMO - O relato de uma amostra do piolho identificada como *Colpocephalum cholibae* Price & Beer por Oliveira *et al.* (2004), de um gavião-carijó [*Rupornis magnirostris* (Gmelin)] no estado de São Paulo, é considerado uma identificação incorreta. Uma correção à identidade do piolho é dada como *Kurodaia* (*Kurodaia*) *fulvofasciata* (Piaget). As diferenças morfológicas entre os gêneros *Colpocephalum* e *Kurodaia* são discutidas, bem como as possíveis razões para o erro na identificação.

PALAVRAS-CHAVE: *Colpocephalum cholibae*, *Kurodaia fulvofasciata*, identificação incorreta

ABSTRACT - A report of a louse sample identified as *Colpocephalum cholibae* Price & Beer by Oliveira *et al.* (2004), from the roadside hawk [*Rupornis magnirostris* (Gmelin)] in the state of São Paulo, Brazil, is regarded as a misidentification. A correction to the identity of the lice is given as *Kurodaia* (*Kurodaia*) *fulvofasciata* (Piaget). Key morphological differences between the genera *Colpocephalum* and *Kurodaia* are discussed, as well as possible reasons for the misidentification.

KEY WORDS: *Colpocephalum cholibae*, *Kurodaia fulvofasciata*, misidentification

In the family Menoponidae (Amblycera), there are seven genera of lice with species parasitic on members of the bird order Falconiformes, while only two menoponid genera have been recorded from the bird order Strigiformes (Price *et al.* 2003). Species belonging to the genera *Colpocephalum* Nitzsch, 1818 and *Kurodaia* Uchida, 1926 are found on members of both bird orders. *Colpocephalum* comprises a large number of species distributed over a similarly large number of host taxa in 11 bird orders (Price *et al.* 2003). Price & Beer (1963a, c) revised the species of *Colpocephalum* from the Strigiformes and the Falconiformes. *Kurodaia* is restricted to the two bird orders mentioned above, and it has been divided into two subgenera: *Kurodaia sensu stricto* including the species from the Falconiformes and *Conciella* Eichler, 1949 containing the species from the Strigiformes (Price & Beer 1963b, d). Considering that *Colpocephalum* and *Kurodaia* are superficially similar, and that several species of the falconiform genera *Buteo* Lacepede and *Rupornis* Kaup are parasitised by species belonging to both louse genera, it is not surprising to find some confusion in distinguishing lice belonging to those genera (Price & Beer 1963b).

Recently, Oliveira *et al.* (2004) identified as *Colpocephalum cholibae* Price & Beer, 1963 a menoponid

species collected from a specimen of *Rupornis magnirostris* (Gmelin), the roadside hawk, held captive in a zoological garden in the city of Sorocaba, state of São Paulo. The text description given by Oliveira *et al.* (2004) is adequate and well complemented by several clear line drawings of the whole male and of key characters from both sexes. After a critical analysis of that description and, especially, of the illustrations, we conclude that the lice they represent are actually *Kurodaia* (*Kurodaia*) *fulvofasciata* (Piaget, 1880).

We examined one male and one female of *C. cholibae* from *Otus choliba* (Vieillot) – the tropical screech owl – collected in the Zoological Gardens of the Foundation ZooNit, Niterói, Rio de Janeiro, Brazil, VII/04/2002 (M.P. Valim Collection). Also, 17 males and 13 females of *K. (K.) fulvofasciata* from *Accipiter fasciatus* (Vigors & Horsfield) – the Australian goshawk – collected in New Caledonia, August 1983, P. Millener (Museum of New Zealand Te Papa Tongarewa). The description published by Oliveira *et al.* (2004) was compared with the material listed above, as well as with the descriptions of *C. cholibae* in Price & Beer (1963a) and of *K. (K.) fulvofasciata* in Price & Beer (1963b).

The features that characterize the genera *Kurodaia* and *Colpocephalum* have been well documented by Clay (1947) and Price & Beer (1963a, b, c, d). In order to facilitate future

identification of lice belonging to these two genera, we think it would be useful to draw attention to the features that distinguish these genera from each other. *Colpocephalum* has heavily pigmented preocular and occipital nodi, usually interconnected by conspicuous occipital and temporal carinae, while *Kurodaia* has very poorly developed occipital nodi and lacks the carinae connecting the occipital nodi either to each other or to the corresponding preocular nodi. *Colpocephalum* has at most two widely spaced medium length setae anterior to the comb row along the lateroventral head margin, while *Kurodaia* has four to six setae in that position. *Colpocephalum* females lack ventral sclerites bearing setae between vulva and anus, while *Kurodaia* females have, on each side, a lateroventral sclerite between the vulva and anus bearing marginal and surface setae. The male genitalia in *Colpocephalum* have a distinctively shaped sclerotised plate associated with the genital sac, while *Kurodaia* lacks such a plate.

Among the features illustrated by Oliveira *et al.* (2004), the absence of a genital sclerite in the male genitalia clearly shows that their material cannot belong to *Colpocephalum*. On the other hand, those same genitalia figures largely agree with the genitalia depicted by Price & Beer (1963b) for *K. (K.) fulvofasciata*. To assist in the identification of *C. cholibae* males, we include here a figure of the male genitalia and of the male metasternal plate (Fig. 1).

The figure of the female ventral terminalia in Oliveira *et al.* (2004) clearly shows, on each side, a row of four setae between the vulva and the anus; although the lateroventral sclerite was not drawn, those setae are characteristic of the genus *Kurodaia*. In addition, the number of setae depicted by Oliveira *et al.* (2004) on the gular and the metasternal plates agree well with those present in *K. (K.) fulvofasciata*, and not with those of *C. cholibae* as shown by Price & Beer

(1963a) for the female. Finally, a comparison of the male dimensions (Table 1) given by Oliveira *et al.* (2004) and the equivalent for *K. (K.) fulvofasciata* taken from Price & Beer (1963b), shows that the former fit well within the ranges of *K. (K.) fulvofasciata*, with the exception of the total length, which may be the result of different methods during the preparation and slide-mounting of the specimens, a common problem in lice (e.g. Palma *et al.* 1998). We also include measurements from the only male of *C. cholibae* available to us (Table 2).

The species *K. (K.) fulvofasciata* has been recorded from at least 19 falconiform species of 11 host genera in two families, Accipitridae and Falconidae, including *R. magnirostris* (Price *et al.* 2003, as *Buteo magnirostris*). On the other hand, *C. cholibae* is known from two species of Strigiformes only, i.e. the owls *O. choliba crucigerus* (Spix) and *O. guatemalae* (Sharpe) (Price *et al.* 2003). Besides being host to *K. (K.) fulvofasciata*, *R. magnirostris* is also host to a species of *Colpocephalum*, the cosmopolitan *C. turbinatum* Denny, 1842, known from over 50 species from three bird orders (Price *et al.* 2003).

A contamination or straggling of a strigiform louse species onto a falconiform host is a plausible scenario, especially when birds are kept in cages within the confines of zoological gardens or rehabilitation centres for raptors (see Price *et al.* 1997). Considering that the lice misidentified by Oliveira *et al.* (2004) were collected from a roadside hawk held in captivity in a zoological garden, where other bird species would have been present, finding a species they identified as an owl louse on a hawk should have alerted the authors to the fact that they were dealing with a very unusual new host record. Most new host-lice records are not in themselves unusual, but a species record where the new host is from an entirely different order to previously

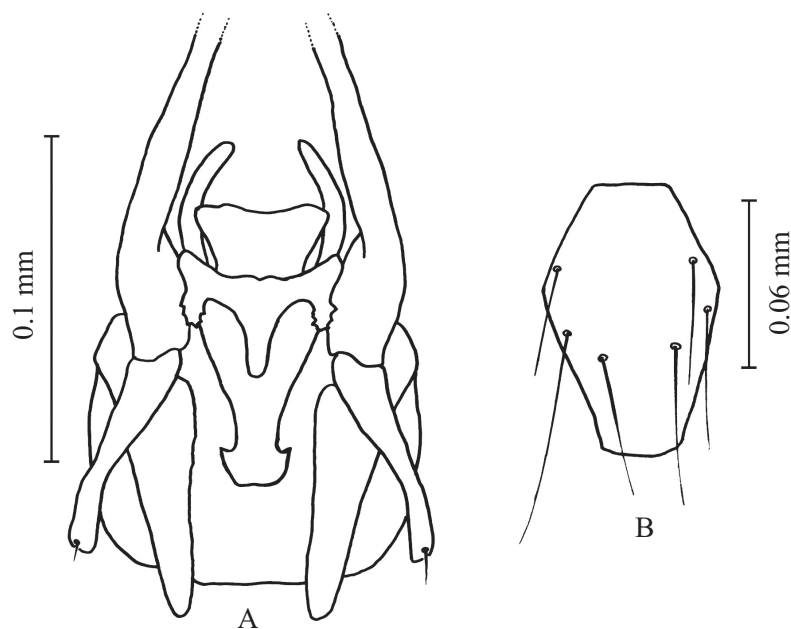


Fig. 1. *C. cholibae*. A: male genitalia; B: male metasternal plate.

Table 1. Comparison of male dimensions of “*C. cholibae*” taken from Oliveira *et al.* (2004), with those of *K. (K.) fulvofasciata* taken from Price & Beer (1963b).

Dimensions (mm)	“ <i>C. cholibae</i> ” in Oliveira <i>et al.</i> (2004)	<i>K. (K.) fulvofasciata</i> (Piaget, 1880)
Total length	1.46	1.52 – 1.64
Head width at temples	0.55	0.52 – 0.55
Pre-ocular head width	0.45	0.43 – 0.46
Male genitalia length	0.59	0.54 – 0.59

Table 2. Dimensions of one male *C. cholibae*.

Measurements	Values (mm)
Total length	1.485
Head width at temples	0.448
Prothorax width	0.311
Metathorax width	0.412
Abdomen width	0.533
Male genitalia length	0.559
Male genitalia width	0.102

known hosts is especially noteworthy. However, Oliveira *et al.* (2004) merely regarded *R. magnirostris* as a new host for *C. cholibae*, only making a comment about the adaptive potential of the louse species.

Judging from the literature citations listed in the references section, Oliveira *et al.* (2004) appear to have had access to the two papers by Price & Beer (1963a, c) where they revised the genus *Colpocephalum* from the Strigiformes and the Falconiformes, but not to the revisions of the genus *Kurodaia* from the same hosts by the same authors (Price & Beer 1963b, d). We believe that having access to the *Colpocephalum* papers only, may have led Oliveira *et al.* (2004) to place the lice in the wrong genus and, consequently, to misidentify the species as well. Furthermore, the fact that the male of *C. cholibae* was unknown, may have also contributed to their misidentification.

Oliveira *et al.* (2004) qualified their record of *C. cholibae* as the first for South America. Considering that their sample was misidentified, this paper constitutes the first record of *C. cholibae* from South America, as well as the first record of the male of this louse species.

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