

# A New Species of *Rallicola*, Subgenus *Parricola* (Mallophaga: Philopteridae), from the Lotus Bird (Charadriiformes: Jacanidae) in New Guinea

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J. Med. Entomol. 24: 279-281 (1987)

**ABSTRACT** The new species *Rallicola* (*Parricola*) *irediparrae* Price & Emerson is described and illustrated from specimens collected off the lotus bird, *Irediparra gallinacea* (Temminck), taken in New Guinea. Notes are included on the generic concepts within the *Rallicola* complex.

**KEY WORDS** *Rallicola*, Mallophaga, lotus bird, Charadriiformes

THE MAJORITY OF the species presently recognized in the philopterid *Rallicola* complex occurs on hosts within the avian order Gruiformes (Clay 1953, Emerson 1955). The remaining species are distributed on hosts within several other bird orders, including four species of *Rallicola* Johnston & Harrison, subgenus *Parricola* Harrison, on members of the family Jacanidae (Charadriiformes); these represent the only *Rallicola* known from this large bird order.

We have recently obtained a series of lice that represents a fifth, and as yet undescribed, species of *Rallicola* (*Parricola*) from a host taxon within the Jacanidae. We describe and illustrate this new species here.

## *Rallicola* (*Parricola*) *irediparrae* Price & Emerson, n. sp. (Fig. 1-5)

Type host: *Irediparra gallinacea*  
(Temminck), the lotus bird

♂. As in Fig. 1. Head with clearly defined dorsoanterior plate, flattened anteriorly and rounded posteriorly. Antenna with enlarged basal segment and distally expanded 3rd segment. Preantennal head margin slightly concave; preantennal head width 0.26-0.27 mm, temple width 0.35-0.36 mm, head length 0.46-0.47 mm. Pronotum with single short lateroposterior seta at each corner; width 0.22-0.23 mm. Pteronotum with total of 5 marginal setae on each side, lengths and distribution as in Fig. 1; pair of minute medioanterior setae; width 0.33-0.35 mm. Abdomen with tergal plate on II (first apparent tergite) with narrow median division, III-IV with only suggestion of partial median division; remainder undivided. Dorsally, abdomen with pair of median medium setae on segments II-VIII; each side of II-III with single medium seta, IV-V with 2 medium setae, VI with 1 very long and 2 medium setae, VII with 2 very long and 2 medium setae,

and VIII with 4 medium to long setae. Last tergite as in Fig. 1. Width of abdomen at level of segment V 0.42-0.45 mm. Sternal setae: II, 2 (rarely 3); III, 5-7; IV, 7-8; V, 6-8; VI, 6-7; VII, 2-4. Subgenital plate with sternite VIII partially fused to IX; chaetotaxy of ventral terminalia as in Fig. 3. Total length 1.66-1.71 mm. Genitalia (Fig. 4) with broadly expanded bilobed basal plate, long slender gently curved parameres with minute seta at tip, and mesosomal structures as shown; length to tip of parameres 0.31-0.33 mm, width at paramere insertion 0.07-0.08 mm.

♀. As in Fig. 5. Much as for ♂, except as follows. Antenna filiform, basal segment not greatly enlarged nor 3rd segment distally expanded. Preantennal head width 0.29-0.30 mm, temple width 0.37-0.39 mm, head length 0.48-0.49 mm. Pronotum width 0.23-0.25 mm. Abdomen with tergal plates medially separated on II-VIII. Last tergite as in Fig. 5. Width of abdomen at level of segment V 0.48-0.53 mm. Sternal setae: II, 2; IV, 6-8; V-VI, 7-8. Subgenital plate with sternite VII fused to VIII; ventral terminalia as in Fig. 2; posterior margin of subgenital plate concave on each side, with total of 16-19 short spiniform setae submarginally and 22-27 short fine setae marginally; each side of ventral terminalia with 3 (rarely 4) prominent heavy setae followed by patch of single long and 10 or so short setae. Circular doughnut-shaped spermatheca 0.04 mm in diameter. Total length 1.77-1.89 mm.

Holotype ♂ (BPBM 13591), ex. *I. gallinacea*, NEW GUINEA: Northern Province, Soputa River, 29-IX-1963 (H. Clissold, BBM-NC 29731); in Bishop Museum, Honolulu. Paratypes, ex. *I. gallinacea*, 1 ♂, 3 ♀♀, same data as holotype; 1 ♀, same except BBM-NC 29736; 8 ♂♂, 1 ♀, same except 1-X-1963, BBM-NC 29765; 11 ♂♂, 2 ♀♀, same except 3-X-1963, BBM-NC 29812; 1 ♀, same except 5-X-1963, BBM-NC 29844; 2 ♂♂, 2 ♀♀, same except 7-X-1963, BBM-NC 29880; paratypes in collections of Bishop Museum, U.S. National Museum of Natural History, Oklahoma State University, University of Minnesota, and British Museum (Natural History).

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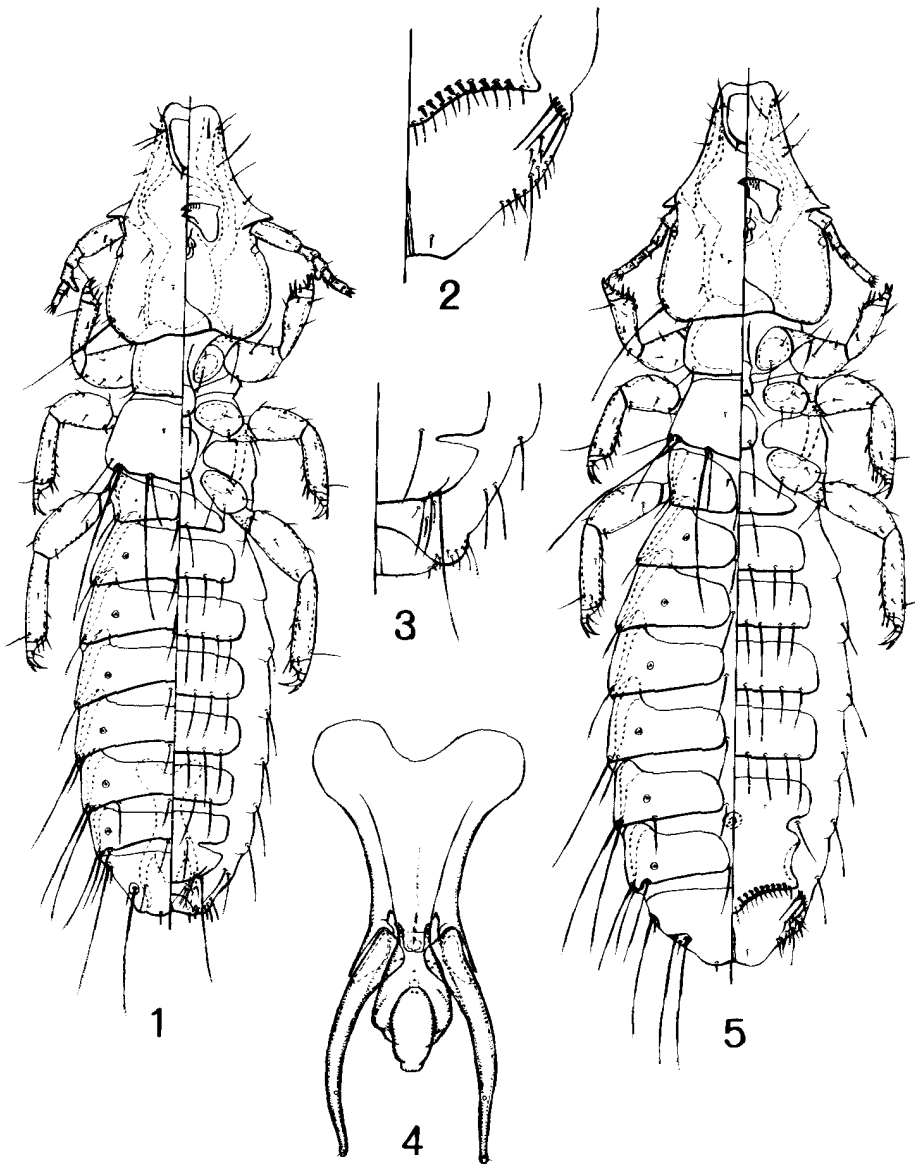


Fig. 1-5. *R. (P.) irediparar*: (1) male dorsal-ventral view; (2) female ventral terminalia; (3) male ventral terminalia; (4) male genitalia; (5) female dorsal-ventral view.

**Remarks.** In the key to the species of *Rallicola* in Clay (1953), *R. irediparar* runs to *Rallicola sulcatus* (Piaget) in couplet 17; the type host of *R. sulcatus* is *Hydrophasianus chirurgus* (Scopoli), also a member of the Jacanidae and listed by Peters

(1934) immediately following *Irediparar*. Both of these host genera are monotypic and geographically close in the South Pacific. *R. irediparar* is readily distinguished from *R. sulcatus* on the basis of the wide bilobed shape of the basal plate and

details of the mesosome of the male genitalia, the separation of male sternite VII from VIII, the concavity of the female subgenital plate posterior margin, and the much shorter setae in the ventral lateroposterior patch on the female terminalia. The only other jacanid *Rallicola* included in Clay's key, *Rallicola exiguifrons* described by Carriker (1944) off *Jacana spinosa gymnostoma* (Wagler) from Mexico, differs from *R. irediparar* by lacking pronounced sexually dimorphic antennae in addition to the previously mentioned differences associated with the male genitalic endomerter plate and mesosome and the female subgenital plate margin.

The two species of jacanid *Rallicola* described after the revision of the genus by Clay (1953) are *Rallicola africana* Timmermann, 1957, off *Actophilornis africana* (Gmelin) from Africa and *Rallicola indicus* Emerson & Elbel, 1961, off *Metopidius indicus* (Latham) from Southeast Asia; they are readily distinguishable from *R. irediparar* by the male genitalic features cited above. In addition, the *R. africana* male has a less produced third antennal segment, the genitalia with broader parameres, and a much differently shaped subgenital plate; both sexes of *R. indicus* are larger in all dimensions and the shape of the dorsoanterior head plate is different, the last male tergite has three long setae on each side, and the female has more short spiniform setae on the posterior portion of the subgenital plate.

Peters (1934), in a footnote to the family Jacanidae, mentions an ornithologist who "... would remove this family from the Charadriiformes and place it in the Gruiformes." The fact that Jacanidae represents the only Charadriiformes with chewing lice of the genera *Rallicola* and *Pseudomenopon* Mjöberg, both of which are widespread among the Gruiformes, tends to support this shift in placement.

Hopkins & Clay (1952) recognized *Aptericola* Harrison as a subgenus of *Rallicola* for the species

found on the avian order Apterygiformes (kiwis) and listed *Parricola*, *Furnaricola* Carriker, *Epipicus* Carriker, and *Corvicola* Carriker as inseparable from *Rallicola*. Our study of the *Rallicola* complex has led us to conclude that *Parricola* is best regarded as a subgenus of *Rallicola* and that *Aptericola*, *Furnaricola*, *Epipicus*, and *Corvicola* should assume generic status.

#### Acknowledgment

This paper is published as paper no. 14,957 of the Scientific Journal Series of the Minnesota Agricultural Experiment Station on research conducted under Minnesota Agricultural Experiment Station Projects No. Min-17-015 and Min-17-016.

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Received for publication 19 June 1986; accepted 15 September 1986.