

## TWO NEW SPECIES OF MALLOPHAGA (PHILOPTERIDAE) FROM THE MALLEE FOWL (GALLIFORMES: MEGAPODIIDAE) IN AUSTRALIA<sup>1</sup>

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**Abstract.** The new species *Goniodes australis* and *Lipeurus parkeri* are described and illustrated from specimens collected off the Mallee Fowl, *Leipoa ocellata*, taken in South Australia.

Recently, Emerson & Price (1984) and Price & Emerson (1984) described the new philopterid species *Goniodes leipoae* and *Megapodiella parkeri*, respectively, from *Leipoa ocellata* Gould, the Mallee Fowl. We are describing and illustrating herewith 2 additional new species from *L. ocellata*, thereby bringing the total of known Mallophaga species from this host taxon to 4.

### *Goniodes australis* Emerson & Price, new species

FIG. 1-3

Type-host: *Leipoa ocellata* Gould, the Mallee Fowl.

♂. As in Fig. 3. Antenna with enlarged basal segment and 4th segment attached at right angle to midportion of 3rd segment. Clavi large, well developed. Temples considerably wider than preantennal region of forehead; preantennal head width 0.60-0.70 mm, temple width 0.89-1.07 mm. Head length 0.63-0.71 mm. Shape and chaetotaxy of head as in Fig. 3. Pronotum with single long lateroposterior corner seta on each side; width 0.56-0.61 mm. Pteronotum shaped as shown in Fig. 3, each side with row of 9 long marginal setae and 2 long, 1 short, and 1 minute setae associated with medioposterior lobe. Large abdominal tergal plates on each side of segments II-VIII, smaller on IX; with 4, 2, 2, 2, 2, 2, and 3 long lateral marginal setae on tergal plates II-VIII, respectively; with single long median seta on III-VIII and short to minute setae between these and lateral long setae. Terminalia with chaetotaxy and shape as in Fig. 3. Large oblong sternal plate on each side of III-VII and much smaller lateral plate on III-VIII; sterna II-VIII with single long median seta on each side with associated short to minute setae. Abdominal width 1.21-1.52 mm. Total length 2.38-2.74 mm. Genitalia (Fig. 2) with broad stout parameres lightly serrated on lateral margin; length 0.95-1.12 mm, width 0.27-0.32 mm.

♀. As in Fig. 1. Antenna filiform, basal segment not greatly enlarged. Clavi small. Temples greatly expanded, attenuate; preantennal head width 0.82-0.94 mm, temple width 1.38-1.50 mm. Head length 0.80-0.87 mm. Shape and chaetotaxy of head as in Fig. 1. Chaetotaxy of thorax much as for ♂, but with fewer marginal setae on pteronotum; pronotal width 0.64-

0.67 mm. Large abdominal tergal plates on each side of II-VIII; large undivided terminal tergal plate; tergal plates II-VI each with 2 long lateral marginal setae, VII-VIII with 3-4 shorter setae; with 4, 3, 3, 1, 1, and 1 long median tergal setae on each side of II-VII, respectively, with minute associated setae on IV-VII and only short setae on VIII. Terminalia as in Fig. 1. Sternal plates and chaetotaxy of III-VII essentially as for ♂. Abdominal width 1.48-1.72 mm. Total length 3.21-3.51 mm.

**Holotype** ♂, ex *L. ocellata*, SOUTH AUSTRALIA: Renmark, 6.I.1984 (David Booth, B-37829); in South Australian Museum. **Paratypes**, ex *L. ocellata*, 6♂, 6♀, same data as holotype; 1♂, 6♀, same except 23.X.1983 and no host number; 3♂, 1♀, same except Murray Scrubs, early 1900s (B-8348); paratypes in South Australian Museum, Bishop Museum, United States National Museum of Natural History, University of Minnesota, and Oklahoma State University.

**Remarks.** Both sexes of *G. australis* are much larger than any other species in species-group M of Clay (1940), which includes all species of *Goniodes* found on hosts of the avian family Megapodiidae. Other unique features for the male involve the details of the genitalia, the shape of the head, and the enlarged basal antennal segment. The chaetotaxy of the pterothorax and abdomen of both sexes is also unlike any other known species.

### *Lipeurus parkeri* Emerson & Price, new species

FIG. 4-6

Type-host: *Leipoa ocellata* Gould, the Mallee Fowl.

♂. As in Fig. 6. Antenna with enlarged basal segment bearing process on posterior margin and with 4th segment attached at right angle to midportion of 3rd segment. Clavi small. Preantennal head width 0.58 mm, temple width 0.57 mm. Head length 0.86 mm. Shape and chaetotaxy of head as in Fig. 6. Pronotum with single medium seta laterally on each side; width 0.49 mm. Pteronotum with cluster of 3 very long setae marginally on each side, with 2 shorter setae laterad to these. Abdominal tergal and sternal plates and associated chaetotaxy as in Fig. 6. Abdominal width 0.81 mm. Total length 3.76 mm. Genitalia (Fig. 5) with short broad subtriangular parameres and complex of median structures as shown; length 0.82 mm, width 0.22 mm.

♀. As in Fig. 4. Antenna filiform, basal segment not greatly enlarged nor with posterior marginal process. Clavi small. Preantennal head width 0.68-0.70 mm, temple width 0.68-0.73 mm. Head length 0.87-0.92 mm. Shape and chaetotaxy of head as

1. This paper is published as paper no. 14,437 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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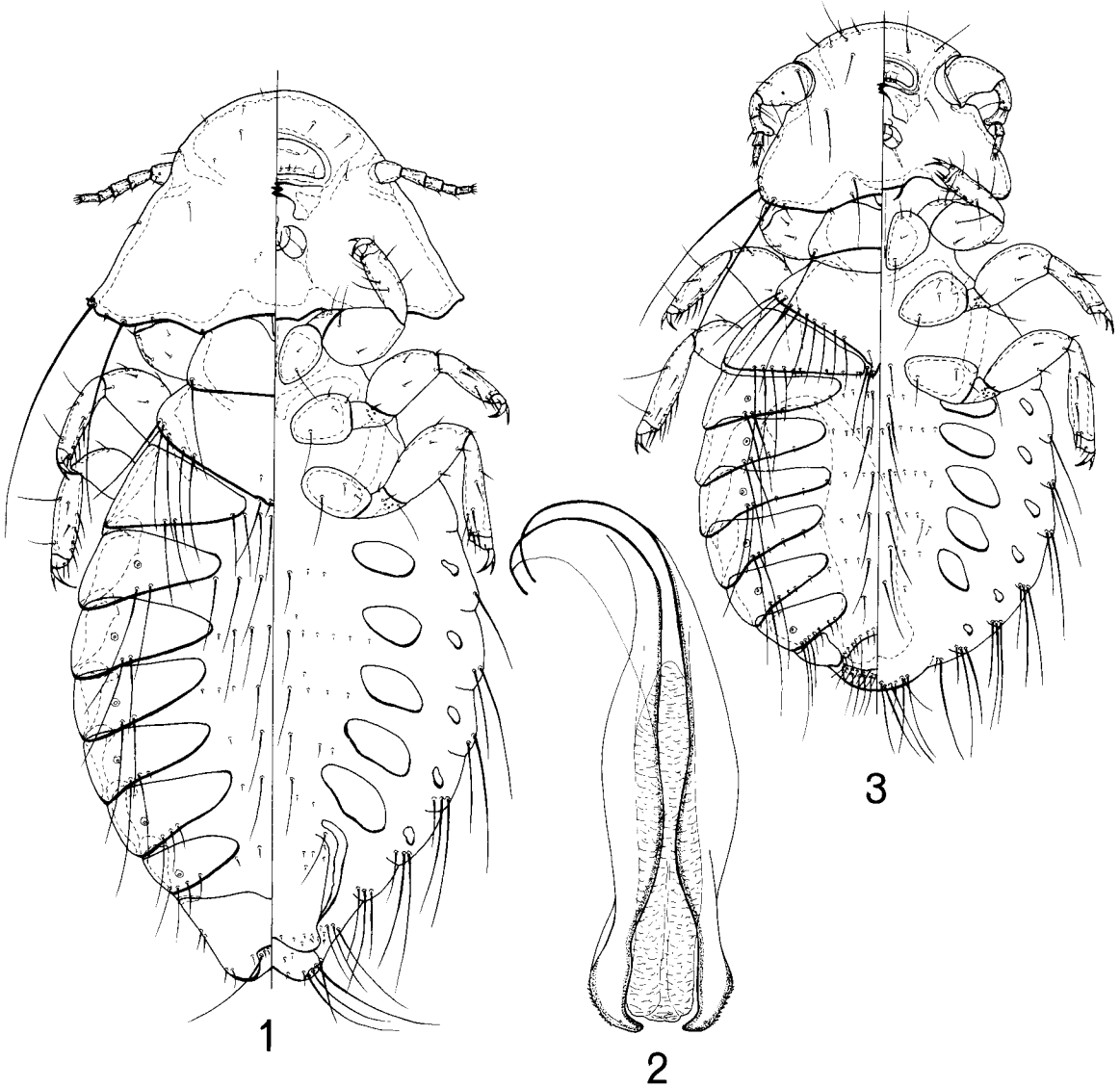


FIG. 1-3. *Goniodes australis*: 1, ♀ dorsal-ventral view; 2, ♂ genitalia; 3, ♂ dorsal-ventral view.

in Fig. 4. Chaetotaxy of thorax and abdomen, except for terminalia, much as for ♂. Pronotal width 0.49–0.53 mm. Tergites II–IX with median pigmented area as shown; sternal plates on III–VI reduced compared to ♂, and with lateral elongate plate on each side of IV–VII. Terminalia as in Fig. 4. Abdominal width 0.96–0.99 mm. Total length 3.75–4.03 mm.

*Holotype* ♂, ex *L. ocellata*, SOUTH AUSTRALIA: Renmark, 6.I.1984 (David Booth, B-37829); in South Australian Museum. *Paratypes*, ex *L. ocellata*, 5♀, same data as holotype; 1♀, same except 23.X.1983 and no host number; paratypes in South Australian Museum, Bishop Museum, United States National Museum of Natural History, University of Minnesota, and Oklahoma State University.

*Remarks.* Six species of *Lipeurus* have been described previously off avian hosts of the family Megapodiidae. The following features of *L. parkeri*, in addition to the larger size of both sexes, are unique: the prominent median pigmented areas on female abdominal tergites; the small median abdominal sternal plates on segments II–VI and lateral sternal plates on segments IV–IX of the female; the details of the male genitalia; and the shape and chaetotaxy of the male terminal abdominal segments, including the subgenital plate.

*Acknowledgment.* We thank Dr Shane Parker, Curator of Birds, South Australian Museum, Adelaide, South Australia,

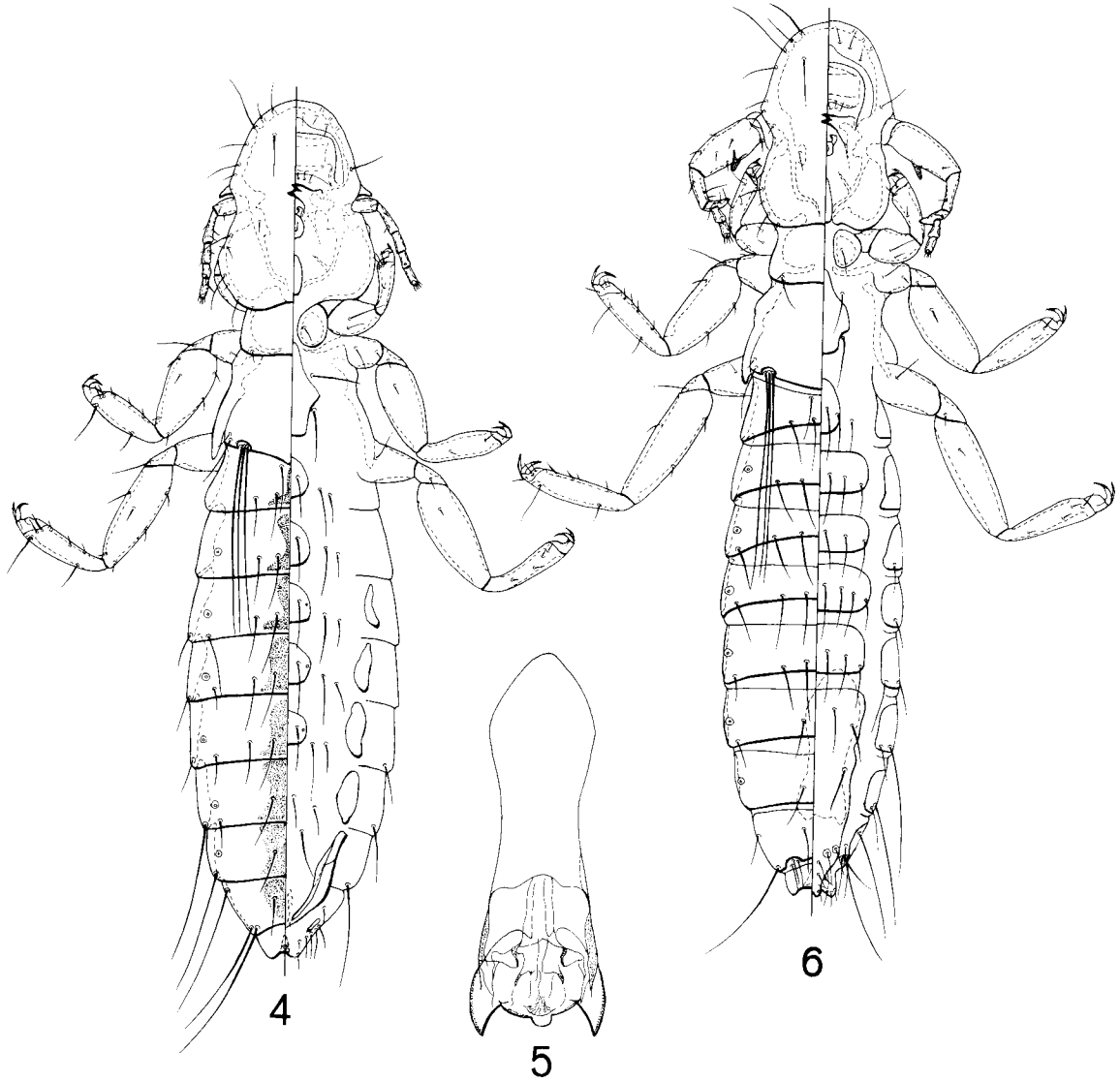


FIG. 4-6. *Lipeurus parkeri*: 4, ♀ dorsal-ventral view; 5, ♂ genitalia; 6, ♂ dorsal-ventral view.

for furnishing us with the specimens used for the descriptions of these 2 species.

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