A SYNOPSIS OF NEW WORLD LOPHOPIDAE
(HOMOPTERA, FULGOROIDEA)

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ABSTRACT

A new species, Carrionia panamensis, is described. The genus Ucayalia Fennah is synonymized with its senior synonym Carrionia Muir, and Carrionia nigrovittata (Fennah) becomes a new combination. Keys to the 3 genera and 7 species and illustrations of the frons, vertex, and forewing of each species are provided.

RESUMEN

Se describe una nueva especie, Carrionia panamensis. Se sinonimiza el género Ucayalia Fennah con Carrionia Muir, lo que produce una combinación nueva, Carrionia nigrovittata (Fennah). Se proveen claves para los 3 géneros y las 7 especies, y se incluyen ilustraciones de la frente, vertex, y ala anterior de cada especie.

The morphological characters of a new species of Lophopidae from Panama are intermediate between the characters used for the genera Carrionia Muir and Ucayalia Fennah, so that the latter name is synonymized. This produces a new combination, Carrionia nigrovittata (Fennah). The new species extends the range of the family into Panama from Brazil, Peru, Ecuador, and the Guianas.

This paper contains a checklist of the New World species, keys to the genera and species, brief generic descriptions, a description of the new species, and illustrations of the frons, vertex, and forewing shape of all of the species. A key to the families of Fulgoroidea may be found in Fennah (1950) or an illustrated key in O'Brien & Wilson (1985). Lophopidae fall into the group of Fulgoroidea with the 2nd posterior tarsomere devoid of spines. In the New World, Ricaniidae, Lophopidae, and Eurybrachidae share this character, but the one species of Eurybrachidae reported from the New World is thought to be geographically mislabelled.

It is interesting to note that Carrionia is the only new world genus with the female anal flap enlarged to produce and hold strands of wax, which Asche, Hoch, and I thought might be a unique synapomorphy which would define the family Lophopidae when we discovered it in 1985 (unpublished). The 10th segments of female Hesticus and Silvanana are normal fulgoroid anal segments; that is, small and entire, no larger than the 10th segment of the male of the same species. The specimens I have on hand do not have wax on this segment, nor on the 7th, 8th and 9th, the usual position for wax plates in Fulgoroidea.
Checklist of New World Lophopidae

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Distribution</th>
<th>Type Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carronia flavicollis Muir</td>
<td>Ecuador</td>
<td>BMNH</td>
</tr>
<tr>
<td>nigrovittata (Fennah)</td>
<td>Peru</td>
<td>NMNH</td>
</tr>
<tr>
<td>panamensis n. sp.</td>
<td>Panama</td>
<td>LOB</td>
</tr>
<tr>
<td>Histicus pictus Walker</td>
<td>Brazil, Br. Guiana</td>
<td>BMNH</td>
</tr>
<tr>
<td>ruftanus Walker</td>
<td>Brazil</td>
<td>BMNH</td>
</tr>
<tr>
<td>sanguinifrons Muir</td>
<td>Ecuador, Peru</td>
<td>BPBM</td>
</tr>
<tr>
<td>Silvanana omani Metcalf</td>
<td>Brazil</td>
<td>NCS</td>
</tr>
</tbody>
</table>

Key to the genera of New World Lophopidae

1. Forewings membranous and transparent ........................................ Hesticus Muir
1'. Forewings colored and opaque ............................................................ 2

2(1'). Pro and meso femora and tibiae foliately expanded; lateral ocelli absent; large species 12 mm long or longer; vertex narrow and concave. Carronia Muir
2'. Femora not expanded; lateral ocelli present, small species under 10 mm in length; vertex broad and flat .................................... Silvanana Metcalf

Silvanana omani Metcalf and Ucayalia nigrovittata Fennah were illustrated thoroughly when they were published. Illustrations of Hesticus species from the Amazon are being published (O'Brien, Penny & Arias, in press) and the other two species of Carronia are illustrated here.

Carronia Muir 1931 (fig. 1-3, 6-9, 15-17)
[Type species flavicollis, by monotypy]

=Ucayalia Fennah 1944, New Synonymy. [Carronia nigrovittata (Fennah), New Combination].

Large lophopids, 12-16 mm in length, with yellow pronotum, partially dark head, and dark wings with apical light bands. Vertex longer than wide, varying from 1.25:1 to 1.9:1, concave; frons longer than broad or as long as broad, lateral angles broadly produced (fig. 6-8); genae lacking ocelli, with a transverse ridge at level of frontal angles; clypeus laterally carinate at least at base; pro and meso femora and tibiae foliately flattened and expanded.

Key to the species of Carronia

1. Frons mostly black, subequal in length at midline and width at widest part .......................................................... flavicollis Muir
1'. Frons yellow or green with black midline, frons at least 1.3 x longer than wide .......................................................... 2

2(1'). Apex of each forewing with 3 small translucent areas (fig. 16) ............
.......................................................... panamensis n. sp.
2'. Apex of each forewing with transverse translucent bands (fig. 15) ........
.......................................................... nigrovittata (Fennah)
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Fig. 1-4: Vertex and pronotum of 1. Carrionia nigrovittata Fennah, 2. C. panamensis, n. sp., 3. C. flavicollis Muir, 4. Silvanana umani Metcalf. Fig. 5-8: Frons and clypeus (stippling indicates black coloration) of 5. S. umani, 6. C. nigrovittata, 7. C. panamensis, 8. C. flavicollis. Fig. 9-11: Vertex and pronotum (stippling indicates black coloration, crosshatching indicates red coloration) of 9. Hesticus rufimanus Walker, 10. H. pictus Walker, 11. H. sanguineifrons Muir. Fig. 12-14: Frons and clypeus of 12. H. rufimanus 13. H. pictus, 14. H. sanguineifrons.

Carrionia panamensis, new species (fig. 2, 7, 16)

Salient Features: Females 14-15.5 mm in length. Dorsal surface of pronotum yellow. Head pale green with a broad band overlying median carina of frone and clypeus, posterior 3/4 of vertex, sides of head above eyes, a triangular area on gena below eyes, apex of clypeus, lateral fields of pronotum, and ventral half of tegulae piceous. Legs piceous except for diagonal pale band across middle third of fore and meso tibiae. Tegmina dull rusty brown, appearing black where adpressed to darker hind wings, with three membranous areas at apex of wing outlined by shiny darker bands. Abdomen red.


**Notes:** The specimen from Corro Jefe is the largest of the three and slightly different from the other two in the shape and coloring of the fore and mid tibiae. The tibiae are less expanded than in the other two species, being approximately 3.6 x as long as
broad, compared with 3.4 for flavicollis, 3.2 for the other specimens of panamensis, and 2.3 for nigrovittata. The white band is reduced to a small spot, but the tibiae are also slightly indented at this point. In every other respect the specimen seems to be panamensis, and I am treating it as a paratype until males are collected for genital comparison.

This species is very similar to nigrovittata in color pattern except for the tegmina, the pale bands on the femora mentioned above, and the increased area of dark markings on the frons, clypeus, vertex, and gena of panamensis. The tegmental pattern is similar in the number of dark bands, but in panamensis they are compressed into one corner while in nigrovittata they are spread across the wing. The apices of the forewings are missing in flavicollis, but part of the first band is visible (fig. 17).

Hesticus Walker 1862 (fig. 9-14, 19-21)
[Type species pictus, by nonotypy]

Moderate sized lophopids, 9-12 mm in length, with yellowish orange bodies, sometimes marked with red, green, brown or black; wings translucent, sometimes marked with brown or red. Vertex 1.5 times as long as wide to subequal, chevron shaped, sometimes lateral carinae raised, vertex concave or flat; frons longer than broad or as long as broad, sides parallel; ocelli present on genae; frontoclypeal suture continued on genae but no transverse ridge as in Carrionia, clypeus laterally carinate at base; front femora and tibiae foliately flattened and expanded, mid and hind femora and tibiae normal, subequal in size.

Key to the species of Hesticus

1. Frons and clypeus with vertical red stripe; tegmina with veins of stigma red .................................................. sanguinifrons Muir

1'. Frons or clypeus lacking vertical red stripe, but with 1 or more horizontal black bands; tegmina without red veins ........................................ 2

2(1'). Face with only the clypeus having a horizontal black band; tegmina with brown marking limited to spots at stigma and apex ........ rufinuarius Walker

2'. Face with both frons and clypeus having horizontal black bands; tegmina with stigmatic spot, clavus, and commisural margin to apex brown . pictus Walker

Silvanana Metcalf 1947 (fig. 4, 5, 18)
[Type species omani Metcalf]

Small lophopids, about 8 mm in length, with light brown body and wings marked with darker brown. Vertex longer than wide, parallel sided, flat; frons longer than broad, slightly concave, lateral angles produced; genae with ocelli on transverse ridge at level of frontal angles; clypeus with lateral carinae at base, flattened and sunken between legs; none of legs foliately expanded.

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REFERENCES CITED


THE SCOLOPENDROMORPH CENTIPEDES OF NORTH CAROLINA, WITH A TAXONOMIC ASSESSMENT OF SCOLOPOCRYPTOPS GRACILIS PEREGRINATOR (CRABILL) (CHILOPODA: SCOLOPENDROMORPHA)

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Abstract

The scolopendromorph centipede fauna of North Carolina consists of eight species. Scolopecryptops sexspinosus (Say), S. nigridius McNeill, Theatops posticus (Say), and Cryptops hyalinus Say occur in all three physiographic provinces. Theatops