NEW SPECIES OF OZOPHORA FROM THE LESSER ANTILLES WITH NOTES ON THE BIOLOGY AND IMMATURE STAGES (HEMIPTERA: LYGAEIDAE)\(^1\)\(^2\)

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ABSTRACT

Three new species \textit{josephina}, \textit{hirsuta}, and \textit{longirostris}, representing 3 distinct elements within the genus \textit{Ozophora} are described from the French West Indies. The species are figured, their habitats are discussed, and the immature stages are described.

We recently have been engaged in a revisional study of the genus \textit{Ozophora} (Hemiptera: Lygaeidae). This genus has undergone extensive speciation in the West Indies, contains many undescribed species, and will eventually prove to be of considerable importance in zoogeographic and dispersal studies. This paper is presented at this time to validate the names of 3 new species that occur in the French West Indies so that they may be available for use in a faunal study of the Lygaeidae of these islands. In 1971 we had the opportunity to spend several days collecting on Martinique, Guadeloupe, and Dominica and in 1973 on St. Lucia, St. Vincent, and Grenada so that we were able to obtain habitat and host plant information and associate nymphs and adults of several species.

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Originally it was our intent to treat in this paper all of the undescribed species of *Ozophora* that occur in the French West Indies. A very complex taxonomic problem was encountered involving *pallescens*, *divaricata*, and several undescribed species. This "complex" includes taxa that do not occur in the French West Indies and which must be treated together with those that do for an analysis to be meaningful. We have therefore excluded discussion of this complex from the present paper and will discuss it in a separate contribution.

The new species described below represent elements of 3 quite distinct complexes within *Ozophora*. Two of these, *josephina* and *longirostris*, are parts of, respectively, the *burmeisteri* and *quinquemaculata* complexes, both of which are widespread through the West Indies. *Ozophora hirsuta* is very closely related to *O. concava*, and were it not for the distinctive parameres and sperm reservoirs (Fig. 4, 5, 12, 13), it might be considered to be a small pale geographic subspecies of *concava*. We have not yet seen specimens similar to *concava* from any of the Greater Antilles and suspect that *hirsuta* may have developed from a "waif" propagule of a *concava*-like ancestor from South America.

*Ozophora josephina* Slater & Baranowski, NEW SPECIES

(Fig. 1)

General coloration dark chocolate brown to black. Head, anterior pronotal lobe, and 1st antennal segment completely dark chocolate brown; anterior pronotal collar, humeral angles, and an interrupted longitudinal vitta on either side of meson of posterior pronotal lobe contrastingly pale yellow; scutellum black with a divergent vitta on either side of middle in middle, and extreme apex contrastingly pale yellow; clavus dark brown with the raised cubital vein paler anteriorly; corium variegated, chiefly dark chocolate brown; explanate lateral flange broadly pale yellow with a moderately broad dark fascia posterior to middle and a broad apical fascia chocolate brown, area between radial and medial veins near margin with a longitudinal pale fascia; an irregular pale spot near middle of corium immediately posterior to level of apex of scutellum; radial vein near apical margin of corium also pale; membrane completely fumose lacking apical or basal pale areas; ventral and pleural surfaces almost uniformly dark chocolate brown, but extreme caudo-dorsal angles of metapleurum pale yellow; coxae and distal 1/2 of femora dark chocolate, remainder of legs contrastingly light yellow; labium pale except for distal 2/3 of segment 4; 2nd and proximal 1/2 of 3rd antennal segment pale yellow; proximal 1/3 of 4th antennal segment conspicuously white; distal 1/2 of antennal segment 3 and distal 2/3 of 4 dark chocolate brown; surface of body dull non-shining, appearing subpruinose; head, pronotum and hemelytra with numerous conspicuous elongate upstanding hairs present; elongate hairs also evident mesally on abdomen.

Head non-declivent, acuminate (Fig. 10) moderately convex across vertex; eyes rounded, only moderately protrudent, set well away from anterior pronotal margins; tylius not attaining middle of 1st antennal segment; length head 1.10 (all measurements are in millimeters), width across eyes 1.04, interocular space 0.54; lateral pronotal margins strongly sinuate
Fig. 1. *Ozophora josephina* Slater and Baranowski, new species, dorsal view.

and markedly tapering anteriorly; pronotum with transverse impression obsolete mesally, posterior margin shallowly concave; length pronotum 1.10, width 1.65; scutellum with a low obtuse median elevation on distal 1/2, basal 1/2 very shallowly concave mesally; length scutellum 0.94, width 0.90; hemelytra with lateral corial margins conspicuously explanate and slightly sinuate, the lateral edge finely serrated; length claval commissure 0.82; distance apex clavus to apex corium 1.34; distance apex corium to apex membrane 0.34; distal extension of scent gland auricle short, slightly bent posteriorly but not extending caudad of posterior edge of orifice opening;
posterior margins of metapleura deeply concave; fore femora moderately incrassate, armed below with 5 well separated distinct dark spines, a small distal spine present beyond most distal of major spines; labium elongate extending caudad of metacoxae at least onto 2nd abdominal sternum; labial segments I 1.12, II 1.10, III 0.98, IV 0.48 long respectively; antennae elongate, slender, typical for genus; antennal segments I 0.80, II 1.82, III 1.50, IV 1.82 long respectively. Total length 6.0.


This species is most closely related to the widespread and ubiquitous O. burmeisteri Guerin but is a much larger darker species and readily distinguishable by the black 1st antennal segment which contrasts strikingly with the pale yellow of segments 2 and 3, and by lacking a pale apex to the membrane of the forewing. In O. burmeisteri the 1st antennal segment is pale and unicolorous with the 2nd, and the apex of the membrane possesses a distinctly pale apical patch. Ozophora josephina also has an appreciably longer labium than does burmeisteri. The genital capsule (Fig. 7) is strongly produced posteriorly. When viewed from caudal end sclerotized plates (Fig. 9) should not be mistaken for posterior projections. These internal plates often appear to differ in shape from species to species. The paramere has a very broad short inner projection (Fig. 6), and the wings of the sperm reservoir (Fig. 14) are extremely tapered at their proximal ends.

The Martinique series was taken in a sandy area adjacent to a beach where a breeding population of adults and nymphs was present in seed litter under an isolated clump of Lantana involucrata Linnaeus.

This species of Lantana may be introduced, although Lantana camara Linnaeus (Anderson pers. comm.) at least is native to tropical America.

The St. Lucia series was taken in a very different habitat. Nymphs and adults were taken in dense shade among thick leaf litter lying on a steep slope below a large strangler fig (Ficus sp.) adjacent to a roadside. Adults and numerous nymphs of both josephina and a member of the quinquemaculata complex were taken together at this site, the latter being the most numerous. Both species were very active, adults flying readily when the litter was disturbed.

Description of josephina nymphs

5th instar: (Sainte-Anne, Martinique). (Fig. 2). Head, pronotum, and mesothoracic wing pads chiefly dark chocolate brown; a small irregular spot on either side of midline of posterior margin of head and epicranial arms pale yellow; pronotum marked with yellow on anterior 2/3 of explanate margins, as a triangular spot on either side of midline at anterior margin (the apex of the triangle located posteriorly), and as a pair of elongate
Fig. 2. Osophora josephina Slater and Baranowski, new species, 5th instar dorsal view.

dashes midway between meson and margin on posterior 1/2 of pronotum; mesothoracic wing pads marked with a sinuate pale yellow stripe which extends caudo-mesad from near antero-lateral angles to posterior 1/3 of wing pads; explanate margins of mesothoracic wing pads pale yellow on proximal 2/3; scutellum with a diagonal pale yellow stripe laterally which forms a comma-shaped mark basally midway between meson and antero-lateral angles; this diagonal scutellar stripe continued over metathoracic wing pads on either side of midline; ground color of abdomen dark gray
becoming suffused with dull red anterior to each abdominal scent gland orifice and as a vague interrupted stripe on either side of midline between meson and lateral margins of terga 3-6; tergum 1 with a median longitudinal white stripe; a large irregularly ovoid white patch present laterad of abdominal scent gland orifices beginning on posterior 1/3 of abdominal tergum 3, extending through tergum 4, and narrowing posteriorly to terminate at lateral edge of sclerites surrounding scent gland orifices between terga 4 and 5; a suffused white macula also present in similar position to above on tergum 5, tergum 6, and anterior 1/2 of tergum 7 which has a broad median white macula; abdominal tergum with irregular pale gray to white flecking 1/3 distance from lateral margins; terga 8 and 9 pale mesally; abdominal sternum chiefly pale gray with a suffused reddish coloration present midway between meson and lateral margins; lateral areas of abdominal sterna 4, 5, 6, and 7 laterad of trichobothria pale yellow and with a longitudinal gray streak at level of spiracles; thoracic pleura chiefly dark chocolate brown; metapleuron with dorsal 1/3 pale yellow with exception of a suffused longitudinal brown stripe near dorsal margin; legs chiefly pale yellow but with a small, dark brown spot present on anterior face of pro- and mesocoxae; distal 1/2 to 1/3 of femora dark brown; 2nd tarsal segment somewhat infuscated with brown; labium pale yellow with exception of distal 2/3 of 4th segment; all of 1st antennal segment, extreme distal end of 2nd, distal 2/3 of 3rd, and distal 2/3 of 4th antennal segments as well as extreme proximal end of latter dark chocolate brown, remainder of 2nd and 3rd antennal segments pale yellow; proximal 1/3 of antennal segment 4 with exception of extreme proximal end white; dorsal surface bearing numerous conspicuous upright hairs.

Head non-declivent, tyulus extending anteriorly to middle of 1st antennal segment; eyes set well away from anterior margin of pronotum; epicranial stem very short; length head 0.92, width head 0.96, interocular space 0.52; pronotum with a distinct anterior collar present; lateral margins of pronotum strongly explanate and slightly dentate along posterior 2/3, these lateral margins moderately arcuate and slightly sinuate; posterior pronotal margin straight; length pronotum 0.72, width 1.28; mesothoracic wing pads strongly explanate laterally, extending posteriorly over anterior 1/3 of 3rd abdominal tergum; length mesothoracic wing pads 1.40; abdomen evenly elliptical; sclerotization around abdominal scent gland orifices between terga 3-4, 4-5, and 5-6 very narrow, forming essentially only a marginal rim; length abdomen 2.56; fore femora slender, armed below with 5 prominent sharp spines of equal length, a minute spine present in addition near distal end of each femur; posterior femora with 4 or 5 short but distinct spines present; labium extending posteriorly slightly beyond metacoxae, labial segments I 0.84, II 0.84, III 0.72, IV 0.40 long respectively; antennae slender, chiefly terete, but segments 2 and 3 slightly enlarged near distal ends; antennal segments I 0.60, II 1.20, III 1.12, IV 1.40 long respectively; total length 4.80.

4th instar: (collecting site as above). Similar in form and color to 5th instar; pronotum with explanate margins nearly uniformly dark brown; suffused red areas on abdomen more evident than in 5th instar; 3rd antennal segment with almost entire distal 1/2 dark brown; length head 0.80, width 0.80, interocular space 0.44; pronotum with lateral margins nearly evenly
convex, length pronotum 0.52, width 0.92; length mesothoracic wing pads 0.69; dorsal median length of abdomen 2.0; labial segments I 0.72, II 0.64, III 0.48, IV 0.36 long, respectively; antennal segments I 0.40, II 0.88, III 0.80, IV 0.96 long, respectively; total length 3.60.

2nd instar: (Saint Lucia 2 mi. S. Micoud, Micoud Parish). Similar in form and color to 4th instar; mesothoracic wing pads uniformly red-brown lacking longitudinal striping through middle and anterior portion of expanse area; lateral 1/3 of metanotum white; large white macula on 3rd and 4th abdominal terga extending laterad to reach lateral margins; grayish color of abdomen of preceding instars in large part replaced by dull reddish; all of 3rd and distal 1/3 of 2nd antennal segments dark brown; length head 0.54, width 0.66, interocular space 0.42; length pronotum 0.36, width 0.74; length mesothoracic wing pads 0.24; length abdomen 1.28; labium extending posteriorly midway onto 3rd abdominal sternum, labial segments I 0.48, II 0.50, III 0.36, IV 0.39 long, respectively; antennal segments I 0.30, II 0.54, III 0.54, IV 0.72 long, respectively; total length 2.52.

2nd instar: (collecting site as above). Similar in form and color to 3rd instar but with femora chiefly pale gray and pale areas on antennae of later instars suffused with grayish; yellow markings midway between meson and lateral margins on anterior and posterior portions of pronotum reduced to small patches; length head 0.50, width 0.52, interocular space 0.34; length pronotum 0.26, width 0.54; 2 distal spines on each fore femur much more prominently developed than remaining spines: labial segments I 0.42, II 0.36, III 0.30, IV 0.14 long, respectively; antennal segments I 0.20, II 0.40, III 0.40, IV 0.58 long, respectively; total length 2.04.

1st instar: (as above). Head, pronotum and mesonotum completely brown; metanotum with a large dark quadrate transverse patch covering most of surface, but meson and lateral 1/4 pale yellow; abdomen with alternating transverse pale yellow and red stripes, the latter present across segment 2 and anterior portion of 3 and across posterior portion of 4th and all of 5th terga; femora chiefly gray with pale yellowish distal ends; tibiae and tarsi yellowish white; 2nd tarsal segment somewhat infuscated; 1st, 2nd, 3rd, and extreme proximal ends of 4th antennal segments brown, remainder of 4th segments pale yellow slightly suffused at extreme apices; fore femora with only 2 short spines below, on distal 1/3; labium elongate reaching well onto 3rd abdominal sternum; labial segments I 0.30, II 0.28, III 0.22, IV 0.20 long, respectively; antennal segments I 0.14, II 0.26, III 0.24, IV 0.42 long, respectively; total length 1.38.

Ozophora kirsuta Slater & Baranowski, NEW SPECIES

(Fig. 3)

General coloration bright reddish-brown; distal end of tylus, anterior pronotal collar, ground color of posterior pronotal lobe, a pair of moderately elongate markings on either side of midline of scutellum, extreme apex of scutellum, ground color of hemelytra, legs, labium, 1st and all but distal ends of 2nd and 3rd antennal segments yellow to straw colored; hemelytra marked with an obscure elongate brown streak near base that surrounds a pale elliptical spot near inner corial angle and extends along "radial ridge" to level of middle of claval commissure; a large dark brown subapical spot
and an irregular prominent patch present along lateral margins just posterior to level of distal end of claval commissure; extreme distal ends of antennal segments 2 and 3 and distal 3/4 of segment 4 dark chocolate brown to black; proximal 4th of antennal segment 4 white; thorax laterally and ventrally a rich brown; posterior margin of posterior lobe of metathoracic pleuron yellowish; abdomen pale yellow brown; pro- and metacoxal and anterior lobe of mesoacetabula white to dull straw colored; dorsal surface conspicuously clothed with elongate upstanding hairs; abdominal venter also with elongate hairs present, these most numerous and conspicuous mesally.

Fig. 3. Ozophora hirsuta Slater and Baranowski, new species, dorsal view.
Head prominent, non-declivent, moderately convex (Fig. 11) tylius extending not more than midway to distal end of 1st antennal segment; eyes large, elliptical, sessile set well away from antero-lateral pronotal angles, length head 0.76, width 0.86, interocular space 0.36; pronotum conventional in shape, calli smooth, continuous across meson; pronotal collar conspicuous with a fine demarked line of punctures along posterior margin; lateral margins of pronotum sinuate, posterior margin shallowly concave, length pronotum 0.80, width 1.32; length scutellum 0.80, width 0.76, length claval commissure 0.64, distance apex clavus—apex corium 0.88; apex corium—apex membrane 0.82; fore femora moderately incrassate, armed below on distal 3rd with 3 large prominent spines and 1 small subapical spine, area proximad of spines with a series of 4 to 6 elongate slender “hair spines”; posterior femora with 3 short acute ventral spines and 3 dorsally located elongate spines on distal 1/2 (variable, 3-5 in paratypes); antennae slender, antennal segments I 0.54, II 0.40, III 0.28, IV 0.24 long, respectively; labium extending well between metacoxae but not onto abdomen, 1st labial segment reaching or slightly exceeding base of head, labial segments I 0.80, II 0.82, III 0.66, IV 0.46 long, respectively; total length 4.80.


Fig. 4-14. Structures of 4 species of Oizophora. 4) *O. hirsuta* n. sp., paramere; 5) *O. concava* Dist., paramere; 6) *O. josephina* n. sp., paramere, and 7) male genital capsule, lateral view; 8) *O. hirsuta* male genital capsule, lateral view; 9) *O. josephina* n. sp., male genital capsule, posterior view, and 10) head, dorsal view; 11) *O. hirsuta* n. sp. head, dorsal view, and 12) sperm reservoir; 13) *O. concava* Dist. sperm reservoir; and 14) *O. josephina* n. sp. sperm reservoir.

5-6-IV-1965 (R. J. Gagné); 1 ♀ Layou Valley 23-25-VII-1963 (O. S. Flint)
1 ♂ Macouchari 26-II-1965 (J. F. G. & T. M. Clarke); 1 ♀ So. Chittern Est.
3-III-1965 (J. F. G. & T. M. Clarke); 1 ♀ La Plaine 17-II-1964 (Dale F.
Bray); 1 ♂ Syndicate Est. 5-III-1964 (Dale F. Bray); 3 ♀ Springfield 1-VI-
1965 (D. R. Davis); 5 ♀ Salibia 28-30-I-1968 (Borys Malkin).


This species is closely related to concava resembling it in most details of form and structure. It is a paler species and averages much smaller in size.

The parameters of this species is quite different in shape from that of concava (Fig. 4, 5). In hirsuta the shaft is tapered to a fine hook and is quite irregular along the inner margin, and the inner projection is strongly bent toward the base. The sperm reservoir has the wings less strongly produced laterad beyond the bulb than are those of concava (Fig. 12, 13). The genital capsule (Fig. 8) is much less strongly produced than is that of josephina (Fig. 7).

Description of hirsuta nymphs

Fifth instar nymph: (Pointe Michel, Dominica). General coloration pale yellow conspicuously interspersed with dark brown as follows: posterior end of tylus, a broad stripe through vertex on either side of pale midline (the stripe produced laterad just anterior to epicranial arm and at base of head), dark markings on pronotum present broadly on either side of midline but interrupted on anterior lobe before collar area and on lateral 1/3 of pronotum but this latter dark area with a large pale spot on both anterior and posterior lobe; lateral margins of pronotum within explanate edge narrowly black; pale lateral pronotal spots tinged with orange; scutellum with a dark brown anteriorly widened stripe on either side of midline but interrupted on anterior 1/3 by a pair of large ellipsoidal yellow-orange macules; mesothoracic wing pads in large part dark chocolate brown but pale yellow to white along anterior 3/4 of explanate lateral margins and as an elongate stripe through middle and a short lobate area adjacent to anterior 1/2 of scutellum; 1st abdominal segment largely pale yellow with a red patch on either side of midline and dark along posterior margin; marked with grayish brown over all of abdominal segment 2, portion of segment 3 between mesothoracic wing pads which extends posteriorly to opening of scent gland orifices; segments 4 and 5 between orifices also gray; remainder of abdomen chiefly yellow interspersed with red markings laterally and adjacent to abdominal sutures; heavily infuscated with dark brown laterally on segments 4, 5, 6, and 7. Legs chiefly light yellow with an obscure darkened area distally on metasomata; apical 1/2 of 2nd tarsal segment and of 4th labial segment brown; clothed above with conspicuous upstanding
hairs; antennal segments 1, 2, and proximal 3/4 of 3 light yellow, distal end of segment 3 and extreme proximal end and distal 2/3 of segment 4 dark brown; proximal portion of antennal segment 4 with a conspicuous white annulus.

Head slightly declivent; tylius extending only over proximal 1/3 of 1st antennal segment; eyes set well away from antero-lateral pronotal angles; epicranial sien short; length head 0.69, width 0.78, antennal socket to tylius 0.23, interocular space 0.40; pronotum conventionally shaped, posterior margin sinuate, lateral margins nearly evenly narrowing, pronotal collar conspicuous laterally, length pronotum 0.58, width 1.00; length wing pads 1.2; fore femora moderately incrassate armed below with 6 to 7 conspicuous sharp spines; hind femora with 3 short but distinct spines present on distal portion of dorsal surface and with a series of sharp spines present on ventral surface; labium reaching metacoxae; labial segments I 0.63, II 0.69, III 0.45, IV 0.33 long, respectively; antennae conventional in shape, antennal segments I 0.55, II 1.0, III 0.75, IV 1.0 long, respectively; total length 4.0.

Fourth instar nymph: (as above). General form and color as in 5th instar; head with area posterior to epicranial arms completely dark brown; a dark stripe on either side of midline of pronotum complete with its posterior portion expanded laterad; mesothoracic wing pads with pale areas not forming a lateral elongate stripe and an inner blotch but rather forming an irregular pale basal 2/3 to wing pads; 3rd antennal segment with distal 3/4 dark chocolate brown; length head 0.55, width 0.63, antennal socket to tylius 0.23, interocular space 0.35; length pronotum 0.35, width 0.73; length wing pads 0.40; labial segments I 0.50, II 0.45, III 0.35, IV 0.25 long, respectively; antennal segments I 0.43, II 0.65, III 0.60, IV 0.50 long, respectively; total length 2.60.

Third instar nymph: (as above). General form as in 4th instar; head completely dark chocolate brown; pronotum chiefly dark brown but with an irregular pale spot along both anterior and posterior margins midway between meson and lateral margin; mesonotum with a pale longitudinal stripe on either side of midline about 1/3 way to lateral margins; mesothoracic wing pads with a small crescent shaped or irregular macula near middle of posterior margin extending at most 1/2 way to anterior end; lateral explanate margin pale in middle, dark near anterior end and on posterior 1/2; metanotum with a large triangular brown patch tapering to meson and extending to about lateral 1/3 of metanotum; large dark gray areas of 4th and 5th instars heavily suffused with reddish, all femora light brown; 1st and distal 1/2 of 2nd antennal segments lightly suffused with brownish, 3rd segment almost completely brown, length head 0.53, width 0.60, antennal socket to tylius 0.20, interocular space 0.38; length pronotum 0.30, width 0.48; length wing pads 0.25; labial segments I 0.50, II 0.45, III 0.35, IV 0.25 long, respectively; antennal segments I 0.33, II 0.50, III 0.50, IV 0.68 long, respectively; total length 2.60.

Second instar nymph: (as above). Similar in form and color to instar 3; mesonotum with a pair of small dark spots on either side of midline, remainder of mesal area yellow, lateral 1/3 dark brown with a small pale mark along posterior margin; gray and reddish areas of abdomen essentially forming 2 broad irregular reddish gray transverse bands, 1 encompassing 2nd and anterior portion of 3rd tergum, other posterior portion of 4th and all of
5th segments; 2nd antennal segment with mesal area dark brown, pale on either end; pale white macula of 4th segment occupying almost 2/3 of segment, dark at base and apical 1/3; length head 0.28, width 0.43, antennal socket to tylius 0.13, interocular space 0.28; length pronotum 0.20, width 0.50; labial segments I 0.28, II 0.23, III 0.23, IV 0.20 long, respectively; antennal segments I 0.23, II 0.30, III 0.30, IV 0.48 long, respectively; total length 1.60. (There seems to be unusual variation in our specimens of this instar. Some specimens have the mesonotum almost completely dark brown, the 2nd antennal segment pale, and the pale stripe on the 4th segment confined to the basal 1/3).

_Ozophora longirostris_ Slater & Baranowski, NEW SPECIES

Body relatively stout, subshining; head, anterior pronotal lobe, distal ends of antennal segments 2 and 3 and apical 3/4 of antennal segment 4 dark chocolate brown to almost black, general body color testaceous including anterior pronotal collar; posterior pronotal lobe with 4 irregular longitudinal brown stripes, only lateral ones attaining posterior margin; scutellum with basal portion dark brown, distally becoming testaceous yellow with darker brown punctures; clavus and corium nearly testaceous, latter with an elongate brown vitta extending dorso-laterad from inner angle; a quadrate dark brown spot along explanate corial margin slightly posterior to level of end of claval commissura and a 2nd dark brown patch near apex of corium, this latter dark marking not covering extreme end of corium which is tinged with red; membrane smoky brown, veins paler; ventral and lateral surfaces nearly uniformly dark chocolate brown, becoming more reddish brown on abdomen; labium and legs pale yellow with distal 1/2 of labial segment 4 dark chocolate brown; meso- and metafemora with a dark brown subdistal annulus; antennae with 1st segment reddish brown, all but distal ends of segments 2 and 3 pale yellow, proximal 1/4 of 4th segment white; dorsal surface appearing glabrous, at most with a few extremely short inconspicuous hairs present; punctures on dorsal surface prominent, discrete, well defined.

Head completely straight, acuminata, tylius reaching at least to middle of 1st antennal segment, interocular space relatively flat, length head 0.86, width 1.04, interocular space 0.48; pronotum with lateral margins deeply sinuate, transverse impression extending across pronotum, length pronotum 1.06, width 1.62; scutellum with a mesal depression on basal 1/3rd, length scutellum 0.88, width 0.84; hemelytra with lateral corial margins sinuate, narrowest at level of apex of scutellum, distance apex clavus—apex corium 1.24, distance apex corium—apex membrane 0.84, length claval commissura 0.76; foroserrulae moderately incrassate and armed below with 4 to 5 prominent sharp spines, inner surface of all femora speckled; hind femora with 2 to 3 small sharp spines ventrally near distal ends; labium elongate extending well onto 3rd and sometimes 4th abdominal sterna, 1st segment slightly exceeding base of head, labial segments I 1.06, II 1.06, III 1.14, IV 0.44 long, respectively; antennal segments I 0.89, II 1.66, III 1.26, IV 1.56 long, respectively; total length 5.44.


This species is somewhat variable in color. In many specimens, especially females, the dark rays on the posterior pronotal lobe may be very conspicuous and almost as dark as the anterior lobe. Frequently the diagonal pale dashes on the scutellum extend to the base of the scutellum, there is a dark spot on the clavus near the middle of the claval commissure, a dark patch is present immediately mesad of the radial vein at the level of the distal end of the scutellum, the dark stripe at the inner angle of the corium is more extensive and completely encloses a pale macula, and the wing membrane is often more strongly variegated so that often the apical portion of the membrane is white.

Ozophora longirostris is a typical member of the quinquemaculata complex. It may readily be distinguished from the longer labium of the quinquemaculata by the posterior edge of the labium reaching only to the posterior margin of the metaoxoae and by the black distal ends of the 2nd and 3rd antennal segments. There is no appreciable difference between the Martinique and Dominica populations. However, there is slight sexual dimorphism, the males having
somewhat longer antennae. The following measurements are taken from a sample of 20 individuals from each island.

**Description of longirostris nymphs**

*Fifth instar nymph:* (Dominica 1 mi. S. Layou River). General coloration variegated, pale straw yellow and brown. Head with a distinctive broad median longitudinal pale yellow stripe and yellow areas near base of head behind eyes, midway between meson and margin and on juga; pronotum with an alternating series of dark brown and light yellow longitudinal stripes, broadly dark brown mesally and with explanate lateral margins pale, the intermediate striping irregular and interrupted; mesothoracic wing pads with pale lateral explanate margins and 2 yellow curving longitudinal stripes, the inner “comma-shaped,” not extending posterior to apex of scutellum, the outer stripe curving caudo-mesal to terminate at about level of posterior margin of 1st abdominal tergum; abdomen strongly irrorate, ground color gray, speckled with numerous small yellow spots over almost entire surface; an irregular dull reddish stripe running along preconnexival abdominal area and extending mesally along intersegmental suture lines to near meson; sclerotization around scent gland orifices elliptical anterior to openings but developed only as an extremely narrow line posteriorly; legs pale yellow, metafemora each with a conspicuous subdistal dark brown annulation and extreme distal ends of hind tibiae and proximal end of 1st tarsal segment dark brown; antennae with segments 1 and 2 pale yellow, segment 3 and extreme proximal end and distal 2/3 of segment 4 dark brown, proximal portion of segment 4 with a conspicuous white annulus.

Structurally similar to other members of Ocophora with non-declivitous somewhat protrict head, very short epicranial stem, explanate and finely serrate margins to pronotum and mesothoracic wing pads; all abdominal scent gland orifices subequal in width; forefemora moderately incrasate, armed below with 5 to 6 small sharp spines; labium elongate extending nearly to middle of abdominal sternum, 1st segment almost attaining base of head; length head 0.72, width 0.85; interocular space 0.48; length pronotum 0.62, width 1.18; length wing pads 1.28; antenial segments I 0.55, II 0.98, III 0.72, IV 1.00 long, respectively; labial segments I 0.82, II 0.80, III 0.75, IV 0.40 long, respectively; total length 3.10.

*Fourth instar:* (as above). Form and color as in 5th instar, pale areas laterally more prominent on juga and before eyes; markings on mesothoracic wing pads differing from instar 5 in that the lateral pale area is bifid posteriorly and covers a considerable portion of surface of wing pad; 2nd

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<td>Mean</td>
<td>Min.-Max.</td>
</tr>
<tr>
<td>Dominica ♀</td>
<td>3.28</td>
<td>3.08-3.52</td>
</tr>
<tr>
<td>Martinique ♀</td>
<td>3.22</td>
<td>3.04-3.36</td>
</tr>
<tr>
<td>Dominica ♂</td>
<td>2.87</td>
<td>2.70-3.07</td>
</tr>
<tr>
<td>Martinique ♂</td>
<td>2.89</td>
<td>2.76-3.21</td>
</tr>
</tbody>
</table>
antennal segment broadly infuscated with dark brown mesally; all femora suffused with dark brown (probably individual variation); length head 0.60, width 0.65; interocular space 0.40; length pronotum 0.40, width 0.80; length wing pads 0.40; antennal segments I 0.42, II 0.65, III 0.58, IV 0.82 long, respectively; labial segments I 0.65, II 0.62, III 0.52, IV 0.30 long, respectively; total length 2.70.

Third instar: (as above). Form and color as in 4th instar but with head almost uniformly brown, a very faint median pale longitudinal stripe present; pronotum with a single broad pale stripe midway between meson and lateral margin which is continued over mesonotum which has in addition a very narrow longitudinal stripe midway between broadened stripe and lateral margin; red markings on abdomen more conspicuous than in 4th and 5th instars; length head 0.48, width 0.60; interocular space 0.32; length pronotum 0.20, width 0.68; length wing pads 0.12; antennal segments I 0.36, II 0.55, III 0.42, IV 0.68 long, respectively, labial segments I 0.48, II 0.50, III 0.45, IV 0.32 long, respectively; total length 2.10.

Second instar: (as above). Form and color as in 3rd instar; pale markings on pro- meso-, and metanotum broken into a series of discrete irregular spots, 1st antennal segment as well as mesal area of 2nd somewhat infuscated with brown; femora almost entirely pale brown; length head 0.45, width 0.48; interocular space 0.28; length pronotum 0.28, width 0.58; antennal segments I 0.28, II 0.50, III 0.42, IV 0.60 long, respectively; labial segments I 0.32, II 0.32, III 0.25, IV 0.22 long, respectively; total length 1.70.

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