

ADDITIONAL RECORDS AND NEW SPECIES OF THE LEAFHOPPER GENUS *SCARIS* (HOMOPTERA, CICADELLIDAE)¹

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ABSTRACT. New records in Latin America are documented for the first time for 12 leafhopper species of the genus *Scaris*. Included are the following: *S. sidera*, Colombia; *S. unguis* first females, French Guiana; *S. ingula*, Venezuela; *S. defecta*, Brazil; *S. bicolorata*, Surinam; *S. zipha* first female, French Guiana; *S. vulgata*, Costa Rica; *S. laticephala*, Venezuela; *S. exerata*, French Guiana; *S. caballa*, Colombia and first female, Venezuela; *S. lecta*, Brazil; and *S. cirra*, French Guiana. Also 19 new species are added to the genus. They include: *S. abrupta* n.sp., Venezuela; *S. rabida* n.sp., Venezuela and Guyana; *S. habena* n.sp., French Guiana; *S. talota* n.sp., Brazil; *S. metra* n.sp., Guyana; *S. saga* n.sp., French Guiana; *S. taenia* n.sp., Brazil and French Guiana; *S. ovata* n.sp., Brazil and Peru; *S. radiata* n.sp., Brazil; *S. lurida* n.sp., Panama; *S. vagans* n.sp., Panama; *S. tabulata* n.sp., Costa Rica; *S. genalis* n.sp., French Guiana and Brazil; *S. minima* n.sp., French Guiana; *S. vagata* n.sp., Brazil; *S. unita* n.sp., Colombia; *S. lupita* n.sp., French Guiana; *S. atrata* n.sp., Brazil; and *S. relicta* n.sp., Surinam.

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INTRODUCTION

Many additional specimens of the genus *Scaris* have been identified since our revision of this group (DeLong and Freytag 1969). Published additions and corrections made since 1969 include: Teson (1971), who added data on 3 species and described 2 new species and DeLong and Freytag (1972), who corrected and transferred the generic name of *Clinonaria* to *Scaris*.

We have given additional records for 12 species and described 19 new species in this paper, raising the total number of known species in this genus to 96.

SPECIES ACCOUNTS

Scaris sidera (DeLong and Freytag)

Clinonaria sidera DeLong and Freytag 1969, p. 176.

One additional large male specimen (11 mm) of this species has been examined. It is labeled "Curiche, Colombia, 1968" and is in the DeLong Collection, Ohio

State University. The distribution now extends from Panama to Colombia.

Scaris abrupta n.sp.
(Figs. 1-5)

Length of males, 11-11.5 mm, crown nearly 3 times as wide as long, anterior margin rounded, indistinct.

COLOR: Head yellow with few brown spots on crown, ocelli red. Pronotum yellow, spotted with brown, dark brown posteriorly near median, posterior margin with irregular, dark brown, transverse band. Scutellum brown. Fore wings yellowish brown, mottled with brown, also with dark brown spot at apex of each claval vein. **MALE GENITALIA:** Plates 4 times as long as wide, apices narrowed, rounded. Styles stout, curved dorsad on apical third, narrowed gradually to sharp pointed apices. Aedeagus stout, tabular, with one pair of subapical processes, which are short, stout, curving apically, apices slightly extended beyond length of shaft, apices narrowing, sharply pointed. Pygofer narrowly rounded

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near dorsal apices with short finger-like processes on anterior dorsal margin.

TYPES: Holotype male, labeled "Venezuela, Exp., Culebra, N. Duida, Territ. Amazonas, April 7-16, 1950, J. Maldonado Capriles Coll." Paratypes, one male, same data as holotype, one male, same data as holotype except July 1-4, 1950. Holotype and one paratype are in the U. S. National Museum, other paratype is in the DeLong Collection, Ohio State University.

NOTES: The male genitalia of this species is similar to *peruvella*, however, the pair of aedeagal processes are slightly longer and the ventral pair are absent.

Scaris rabida n.sp.
(Figs. 6-10)

Length of males, 11-12 mm, crown nearly 3 times as wide as long, anterior margin rounded, indistinct.

COLOR: Head yellow with a few brown spots on crown, ocelli red. Pronotum yellow, spotted with brown, dark brown posteriorly near median, posterior margin with irregular, dark brown, transverse band. Scutellum brown. Fore wings yellowish brown, mottled with darker brown. MALE GENITALIA: Plates more than 4 times longer than wide, apices rounded. Styles stout, curved dorsad on apical third, narrowed gradually to sharply pointed apices. Aedeagus stout, tubular, with 2 pairs of subapical processes; first pair short, stout, curving apically, apices expanded; second pair short, stout, curving ventrally, crossing under first pair, apices sharply pointed. Pygofer narrowing slightly near dorsal apices, rounded, with short finger-like processes on anterior dorsal margin.

TYPES: Holotype male, labeled "Venezuela Exp., Territ. Amazonas, Mt. Marahauaca, N. Slopes, Benitez Camp, May 1-25, 1950, J. Maldonado Capriles Coll." Paratypes: 2 males, labeled "Guyana: Esseq. 6 mi S. Wineperu, Picrewana Is., March 8-16, 1969, Duckworth and Dietz," and one male, labeled "Guyana: Esseq. Wineperu, March 18-24, 1969, Duckworth and

Dietz." Holotype and 2 paratypes are in the U. S. National Museum; the other paratype is in the DeLong Collection, Ohio State University.

NOTES: The male genitalia of this species are close to *abrupta*, except there are 2 pairs of aedeagal processes instead of one.

Scaris habena n.sp.
(Figs. 11-15)

Length of male, 11.5 mm, crown nearly 3 times wider than long, anterior margin rounded.

COLOR: Overall yellow brown, lightly spotted with brown and dark brown. Median crossveins and caudal ends of claval veins covered with black spots.

MALE GENITALIA: Plates 3 times as long as wide, apices narrowed, rounded. Styles stout, curved dorsad on apical third, narrowed gradually to sharply pointed apices. Aedeagus stout, tubular, laterally expanded near apex, with a short dorsally recurved process on each side, medial part of apex bulbous. Pygofer robust, with a slight dorsal notch near apex, and short stubby finger-like processes on anterior dorsal margin.

TYPE: Holotype male, labeled "Ile de Touenké, Novembre 19-21, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris." Holotype is in the Paris Museum.

NOTE: This species is closest to *amputa* on the basis of the male genitalia. The apex of the aedeagus is quite different; in *amputa* there are no lateral, subapical processes, and the medial area is not bulbous, in *habena* the lateral, subapical processes are prominent, and the medial area is quite bulbous.

Scaris unguia (DeLong and Freytag)
Clinonaria unguia DeLong and Freytag
1969, p. 179.

Additional specimens of this species have been seen in the Paris Museum. Included are the following: Two males, one female, labeled, "Riviere-Camopi, Mont

FIGURES 1-5: *Scaris abrupta* n.sp. (1) Ventral view of aedeagus, (2) Lateral view of aedeagus, (3) Lateroventral view of style, (4) Ventral view of plate, (5) Lateral view of pygofer.

FIGURES 6-10: *Scaris rabida* n.sp. (6) Ventral view of aedeagus, (7) Lateral view of aedeagus, (8) Lateroventral view of style, (9) Ventral view of plate, (10) Lateral view of pygofer.

FIGURES 11-15: *Scaris habena* n.sp. (11) Ventral view of aedeagus, (12) Lateral view of aedeagus, (13) Lateroventral view of style, (14) Ventral view of plate, (15) Lateral view of pygofer.

FIGURES 16-20: *Scaris talota* n.sp. (16) Ventral view of aedeagus, (17) Lateral view of aedeagus, (18) Lateroventral view of style, (19) Ventral view of plate, (20) Lateral view of pygofer. All drawn to the same scale.

FIGURES 21-25: *Scaris metra* n.sp. (21) Ventral view of aedeagus, (22) Lateral view of aedeagus, (23) Lateroventral view of style, (24) Ventral view of plate, (25) Lateral view of pygofer.

FIGURES 26-30: *Scaris saga* n.sp. (26) Ventral view of aedeagus, (27) Lateral view of aedeagus, (28) Lateroventral view of style, (29) Ventral view of plate, (30) Lateral view of pygofer.

FIGURES 31-35: *Scaris taenia* n.sp. (31) Ventral view of aedeagus, (32) Lateral view of aedeagus, (33) Lateroventral view of style, (34) Ventral view of plate, (35) Lateral view of pygofer.

FIGURES 36-40: *Scaris ovata* n.sp. (36) Ventral view of aedeagus, (37) Lateral view of aedeagus, (38) Lateroventral view of style, (39) Ventral view of plate, (40) Lateral view of pygofer. All drawn to the same scale.

FIGURES 41-45: *Scaris radiata* n.sp. (41) Ventral view of aedeagus, (42) Lateral view of aedeagus, (43) Lateroventral view of style, (44) Ventral view of plate, (45) Lateral view of pygofer.

FIGURES 46-50: *Scaris lurida* n.sp. (46) Ventral view of aedeagus, (47) Lateral view of aedeagus, (48) Lateroventral view of style, (49) Ventral view of plate, (50) Lateral view of pygofer.

FIGURES 51-55: *Scaris vagans* n.sp. (51) Ventral view of aedeagus, (52) Lateral view of aedeagus, (53) Lateroventral view of style, (54) Ventral view of plate, (55) Lateral view of pygofer.

FIGURES 56-60: *Scaris tabulata* n.sp. (56) Ventral view of aedeagus, (57) Lateral view of aedeagus, (58) Lateroventral view of style, (59) Ventral view of

plate, (60) Lateral view of pygofer. All drawn to the same scale.

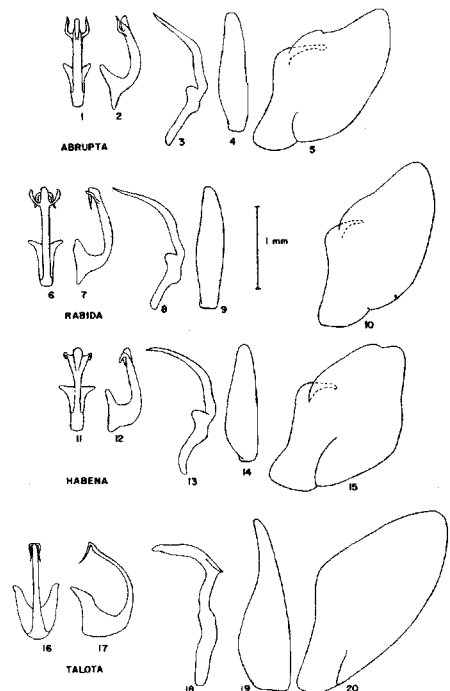
FIGURES 61-66: *Scaris genalis* n.sp. (61) Ventral view of aedeagus, (62) Lateral view of aedeagus, (63) Lateroventral view of style, (64) Ventral view of plate, (65) Lateral view of pygofer, (66) Ventral view of female seventh abdominal sternum.

FIGURES 67-72: *Scaris minima* n.sp. (67) Ventral view of aedeagus, (68) Lateral view of aedeagus, (69) Lateroventral view of style, (70) Ventral view of plate, (71) Lateral view of pygofer, (72) Ventral view of female seventh abdominal sternum.

FIGURES 73-77: *Scaris vagata* n.sp. (73) Ventral view of aedeagus, (74) Lateral view of aedeagus, (75) Lateroventral view of style, (76) Ventral view of plate, (77) Lateral view of pygofer.

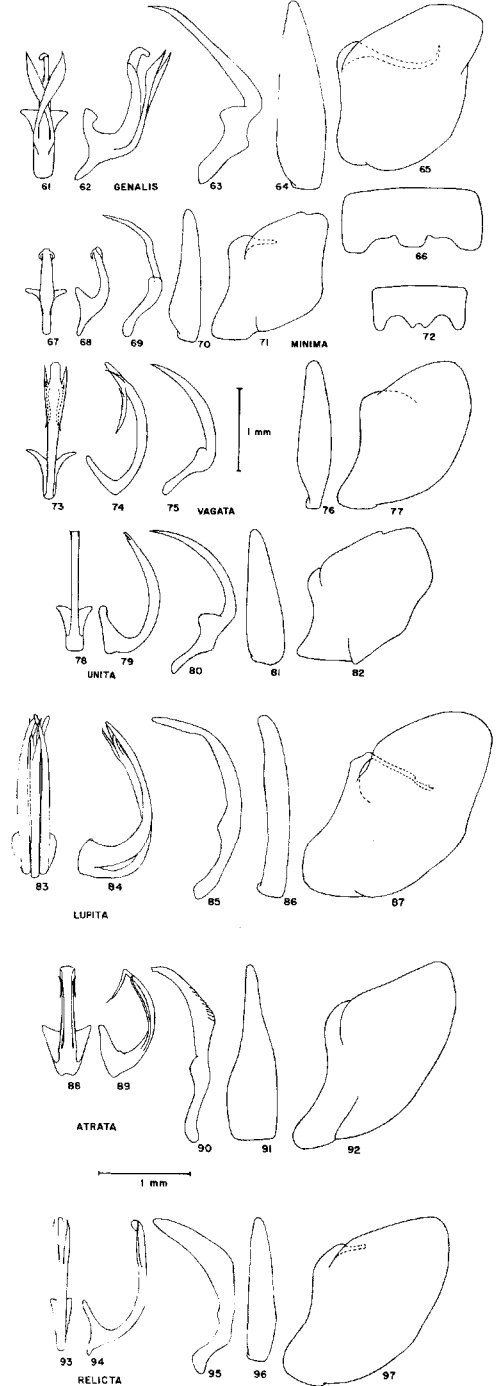
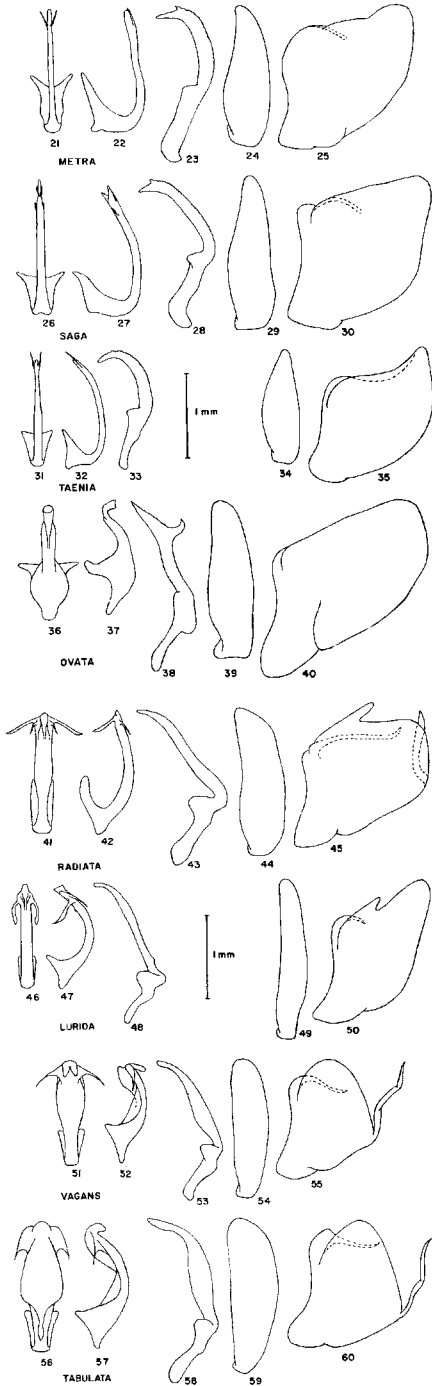
FIGURES 78-82: *Scaris unita* n.sp. (78) Ventral view of aedeagus, (79) Lateral view of aedeagus, (80) Lateroventral view of style, (81) Ventral view of plate, (82) Lateral view of pygofer. All male drawings to same scale. Female drawings to half scale of male drawings.

FIGURES 83-87: *Scaris lupita* n.sp. (83) Ventral view of aedeagus, (84) Lateral view of aedeagus, (85) Lateroventral view of style, (86) Ventral view of plate, (87) Lateral view of pygofer.



FIGURES 88-92: *Scaris atrata* n.sp. (88) Ventral view of aedeagus, (89) Lateral view of aedeagus, (90) Lateroventral view of style, (91) Ventral view of plate, (92) Lateral view of pygofer.

FIGURES 93-97: *Scaris relicta* n.sp. (93) Ventral view of aedeagus, (94) Lateral view of aedeagus, (95) Lateroventral view of style, (96) Ventral view of plate, (97) Lateral view of pygofer. All drawn to the same scale.



Alikene, Guyane, Novembre 11, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969"; one male, labeled "Carbet République, Août 20, 1975, Guyane Française-Mission, M. Boulard et P. Pompanon, Muséum Paris"; one male, labeled "Saut-Maripa, Oyapock, Guyane, Novembre 26, 1969 Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct. - Nov. 1969"; one male, labeled "Camopi-Oyapock, Guyane, Novembre 20, 1969, Guyane-Mission, Balachowsky-Gruner, Oct. - Nov. 1969"; one female, labeled "Antécumepata (Saut Kialo), Septembre 22, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris"; one female, labeled "Forêt de Balaté, St. Jean du Maroni, Octobre 16, 1969, Guyane-Mission, Balachowsky-Gruner, Oct. - Nov. 1969"; and one female, labeled "Saint-Elie, Août 30 - Septembre 2, 1975, Guyane Française-Mission, M. Boulard. et P. Pompanon, Muséum Paris."

Scaris talota n.sp.
(Figs. 16-20)

Length of male, 14 mm, crown 3 times wider than long, anterior margin distinct, evenly roundly produced.

COLOR: Overall brown, ocelli red. Fore wings brown mottled with yellow between veins, median cross veins covered with a black spot, a smaller black spot posterior to larger one by its own width. Hind wings reddish brown.

MALE GENITALIA: Plates 3 times as long as wide, apical third narrowed, apices rounded. Styles robust, apical third bent dorsally at right angle to base, keeled at bend, nearly same width throughout. Aedeagus stout at base, apical $\frac{2}{3}$ narrow, tubular, apex with a pair of short, pointed, dorsally produced processes. Pygofer ovate, with a basal clear area on ventral margin. TYPE: Holotype male, labeled "Igarapé, Belém, Rio Solimões, Am., April 7-30, 1966, Malkin Coll." Holotype is in the Museu de Zoologia, São Paulo, Brazil.

NOTES: This species is closest to *ungua* in

overall appearance, but the male genitalia are quite different. In *ungua*, the aedeagus has 4 terminal processes extending beyond apex, whereas *talota* has one pair of dorsally projecting processes. Also, the style is more distinctly developed in *talota* with its foot-like appearance.

Scaris metra n.sp.
(Figs. 21-25)

Length of male, 11.5 mm, crown nearly 3 times as wide as long. Anterior margin indistinct, rounded to front.

COLOR: Head yellow, heavily spotted with brown between ocelli. Pronotum yellow, heavily spotted overall with brown. Scutellum yellow with triangles brown. Fore wings brown, spotted with yellow, a large blackish-brown, rectangular spot near middle of each wing.

MALE GENITALIA: Plates 3 times as long as wide, narrowing slightly at apical third, bending laterad. Styles stout, serrated at apical half of ventral margin, apices projecting dorsad, bluntly pointed, with a prominent subapical spur at end of serrated area. Aedeagus tubular, narrow, with a pair of short, spine-like, subapical processes extending distally beyond apex of shaft. Pygofer robust, broadly rounded, with short finger-like processes on anterior dorsal margin.

TYPE: Holotype male, labeled "Bartica District, British Guiana, May 1, 1924, Gift of New York Zoo. Soc., Dept. of Tropical Research, William Beebe Dir." Holotype is in the American Museum of Natural History, New York City.

NOTES: This species has male genitalia similar to *serosa*, except the processes of the aedeagus do not extend beyond the shaft, the style has a subapical spur instead of the larger process as in *serosa*, and the pygofer is broadly rounded. Also, the general color is yellow not brown as in *serosa*.

Scaris saga n.sp.
(Figs. 26-30)

Length of males, 12-12.5 mm, crown 3 times as wide as long, anterior margin

nearly indistinct, rounded to face, striae obscure but transverse.

COLOR: Head, pronotum and scutellum yellow, heavily spotted with dark brown, face mostly yellow. Fore wings brown, heavily spotted with yellow on basal third, remainder of wing lightly spotted with yellow.

MALE GENITALIA: Plate 3 times as long as wide, narrowing slightly at apical third. Styles stout, lightly serrated at apical half of ventral margin, apices projecting dorsad, bluntly pointed, with a prominent sharply pointed subapical spur at end of serrated area. Aedeagus tubular, narrow, with 2 pairs of short subapical processes (one pair basal to other pair), apex appearing bifid in lateral view. Pygofer robust, truncate, with short finger-like processes on anterior dorsal margin.

TYPES: Holotype male, labeled "Kourou, Cr. des Peres, Novembre 4-5, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret, et P. Pompanon, Muséum Paris." Paratype male, same data as holotype. Holotype is in the Paris Museum, paratype in the DeLong Collection, Ohio State University.

NOTES: This species is similar to *metra* in general appearance, but larger, and the aedeagus has 2 pairs of shorter subapical processes, with a divided shaft in lateral view.

Scaris taenia n.sp.
(Figs. 31-35)

Length of males 11 mm, crown more than 3 times as wide as long, anterior margin varying from indistinct to distinct, striae transverse between ocelli.

COLOR: Head, pronotum and scutellum yellowish brown, heavily spotted with brown and dark brown. Fore wings brown, spotted in most cells with yellowish brown, largest spot rectangular on middle of each wing.

MALE GENITALIA: Plates 3 times as long as wide, apical half narrowing to bluntly pointed apices. Styles evenly arched dorsad on apical half, ventral margin lightly serrate, apex bluntly pointed with a slight

subapical spur at apical end of serrated area. Aedeagus narrow, tubular, with a pair of subapical lateral processes, extending half their length beyond apex of shaft. Pygofer evenly rounded on ventral margin, dorsal margin indented.

TYPES: Holotype male, labeled "Belém, Mocambo, 03-05-1977, Brasil, Parà, N. Guimoroës." Paratype male, labeled "Garetigre, Août 28, 1975, Guyane Française Mission, M. Boulard et P. Pompanon, Muséum Paris." Holotype is in the Museu de Zoologia, São Paulo, Brazil. Paratype is in the Paris Museum.

NOTES: This species is very similar to *lira* but much smaller. In *taenia* the style is evenly arched and the apex is larger and less sharply pointed. The pygofer is not dorsally indented in *taenia* and the ventral margin is evenly rounded.

Scaris ingula (DeLong and Freytag)
Clinonaria ingula DeLong and Freytag
1969, p. 166.

One additional male has been seen. It is labeled "Venezuela Exp., Territ. Amazonas, Upper Cunucunuma, Tapara, May 28, 1950, J. Maldonado Capriles Coll.," and is in the U. S. National Museum.

Scaris defecta (DeLong and Freytag)
Clinonaria defecta DeLong and Freytag
1969, p. 138.

One additional male specimen of this species has been seen. It is labeled "Amazonas, Brazil, Benjamin Constant, Rio Jarary, Jan. 25-Feb. 15, 1942, August Rabaut Coll.," and is in the American Museum of Natural History. This specimen extends the distribution of this species from Peru to Brazil.

Scaris ovata n.sp.
(Figs. 36-40)

Length of males, 14.5-15 mm, crown 3 times as wide as long, with indistinct margin, rounded to face, striae transverse between ocelli.

COLOR: Head yellow, ocelli red. Pronotum

yellow, with a few brown spots and a wide band across posterior margin. Scutellum and fore wings brown.

MALE GENITALIA: Plates 3 times as long as wide, slightly narrowed to broadly rounded apices. Styles stout, sharply pointed apices with a large curved spur on ventral margin. Aedeagus robust, bulbous at base, tubular on apical half, with apex recurved ventrad. Pygofer large, truncate. TYPES: Holotype male, labeled "Igarapé, Belém, Rio Solimões, Am., April 7-30, 1966, Malkin Col." Paratypes: one male, same data as holotype, one male, labeled "Estiron, Dept. Loreta, Rio Ampiacu, Peru, May 15-22, 1966, Malkin Col." Holotype and one paratype are in the Museu de Zoologia, São Paulo, Brazil; other paratype is in the DeLong Collection, Ohio State University.

NOTES: This species is closest to *defecta* but larger and with quite different male genitalia. This species can be easily separated from all others of this genus by the large spur on the ventral margin of the style.

Scaris bicolorata (Osborn)

Ponana bicolorata Osborn 1938, p. 43.

Clinonaria bicolor (Osborn); Metcalf 1949, p. 277.

Clinonaria bicolorata (Osborn); DeLong and Freytag 1969, p. 136.

One additional male specimen, labeled "Antécumepata (Saut Kialo), Novembre 22, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris," has been seen, and is in the Paris Museum.

Scaris radiata n.sp.

(Figs. 41-45)

Length of male, 12 mm, crown 3 times as wide as long, anterior margin thickened, indistinct, nearly rounded. Striae transverse between ocelli.

COLOR: Head with crown yellow, with a longitudinal brown band just inside each ocellus. Pronotum brown with a median longitudinal band and lateral margins,

yellow. Scutellum brown, with a median longitudinal yellow band expanding posteriorly into a spot. Fore wings brown, with a yellow streak on anterior costal margin as well as along claval suture.

MALE GENITALIA: Plates 3 times as long as wide, apical half slightly narrowed, apices bent toward outer margin. Style stout, angled dorsad, with bluntly pointed apices. Aedeagus with shaft expanded beyond middle, somewhat flattened dorso-ventrally, with 2 pairs of subapical processes; ventral pair short, extending ventrad and based; dorsal lateral pair more than twice as large as ventral pair, expanded subapically, and extending dorsad. Pygofer truncate with a finger-like, dorso-caudal process on each side; also 2 pairs of spines, one pair long, thin, arising from anterior dorsal margin, other pair arising on ventral caudal margin, blade-like, both extending to apical margin.

TYPE: Holotype male, labeled "Brazil, Amazonas, Manaus, Uypiranga, Rio Negro, 14 Km from Manaus, 81 m, October 1941, August Rabaut Coll." Holotype is in the American Museum of Natural History, N. Y.

NOTES: This species is closely related to *semota*, and can be separated on the basis of the aedeagal processes and the pygofer processes. The dorsal-lateral aedeagal process of *radiata* is longer and expanded subapically; in *semota* it is shorter and thinner throughout its length. The dorsal pygofer processes in *radiata* are longer than in *semota* and the ventral processes are wider and stout whereas in *semota* they are thin and sharply pointed.

Scaris zipha (DeLong and Freytag)

Clinonaria zipha (DeLong and Freytag) 1969, p. 149.

Three additional specimens of this species have been seen and are in the Paris Museum. Included are the following: one male, labeled "Saul, Octobre 28, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969";

one male, labeled "Ile de Touenké, Novembre 19-21, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris"; and one female, labeled Carbet-Alice, Oyapock, Guyane, Novembre 8, 1969, Piége lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.-Nov. 1969."

Scaris lurida n.sp.
(Figs. 46-50)

Length of male, 10 mm, crown more than twice as wide as long, broadly rounded to face.

COLOR: Crown brown, ocelli red. Pronotum yellow, with darker mottling. Scutellum brown, with a median yellow spot. Fore wings creamy white, mottled and spotted with dark brown.

MALE GENITALIA: Plates long, narrow, more than 5 times as long as wide. Styles long, stout, bluntly rounded at apices. Aedeagus short, stout, with 2 pairs of subapical processes, lateral pair stout, slightly expanded subapically, extending dorso-laterally, ventral pair shorter, thin, sharply pointed, extending along shaft basad. Pygofer narrow, bluntly pointed at apex, with a finger-like process on dorso-caudal margin, also a short spine-like process arising on the dorsal anterior margin, extending into capsule.

TYPE: Holotype male, labeled "Barro Colorado, C. Z., lights, SM-1, August 12, 1974, H. Wolda Coll." Holotype is in the DeLong Collection, Ohio State University.

NOTES: This species is closest to *decorata* and can be easily separated by the lateral subapical processes of the aedeagus; in *decorata* these bifurcate and in *lurida* they are single.

Scaris vulgata (DeLong and Freytag)

Clinonaria vulgata DeLong and Freytag 1969, p. 174.

Two specimens (1 male, 1 female) from Costa Rica have been seen. They are labeled "Costa Rica, Turrialba, March-

(1-5 for female, 13-17 for male) 1965, S. S. & W. D. Duckworth." They are in the U. S. National Museum. This is a common species in Panama and many more specimens have been seen from there.

Scaris laticephala (DeLong and Freytag)

Clinonaria laticephala DeLong and Freytag 1969, p. 176.

An additional male has been seen from Venezuela. Labeled "Venezuela: Arag., Rancho Grande, February 10-21, 1969, Duckworth & Dietz," it is in the U. S. National Museum. This species was previously known only from Peru.

Scaris vagans n.sp.
(Figs. 51-55)

Length of male, 11 mm, crown nearly 3 times as wide as long, with striae transverse between ocelli. Anterior margin is distinct and slightly turned up.

COLOR: Generally brown, mottled with darker brown and yellow.

MALE GENITALIA: Plates nearly 4 times as long as wide, broadly rounded at apex. Styles stout, slightly enlarged near middle, apices narrow, slightly turned dorsad. Aedeagus broad, expanded on dorsal side, apex projecting ventrally and bifurcate, with a pair of large, lateral, apical processes, which are broad at base narrowing to sharply pointed apices. Pygofer short, truncate, with a large, long, twisted, ventral apical process on each side, and a long, pointed, anterior dorsal process on each side extending into capsule.

TYPE: Holotype male, labeled "Panama: Cerro Campana, Nr. Chica, April 2-5, 1965, S. S. & W. D. Duckworth." Holotype is in the U. S. National Museum.

NOTES: This species is closest to *vulgata* in overall characteristics. It differs from *vulgata* by having a style which is expanded near the middle, not more apically, and the lateral apical processes of the aedeagus are much larger and longer.

Scaris tabulata n.sp.
(Figs. 56-60)

Length of male, 12 mm, crown nearly 3 times as wide as long, anterior margin thick, slightly turned up.

COLOR: Crown yellow, with a median, longitudinal brown band expanding on anterior margin into a spot. Pronotum yellow, with irregular brown spotting along anterior margin, also a brown scalloped band along posterior margin. Scutellum brown. Fore wings yellowish brown, heavily mottled in all cells with brownish black.

MALE GENITALIA: Plates 3 times as long as wide, broadly rounded at apices. Styles broadest near middle, narrowing to somewhat knobbed apices which are curved dorsad. Aedeagus very broad in ventral view, with wing-like lateral apical processes which are sharply pointed at apices, apex of shaft bent slightly ventrad. Pygofer truncate with a large, long, twisted, ventral apical process on each side, and a long, pointed, anterior dorsal process on each side extending into capsule.

TYPE: Holotype male, labeled "Costa Rica, Turrialba, March 1-6, 1965, S. S. & W. D. Duckworth." Holotype is in the U. S. National Museum.

NOTES: This species is closest to *hebes* in all characteristics. It differs by being a smaller species and has much sharper, pointed, lateral processes on the aedeagus.

Scaris genalis n.sp.
(Figs. 61-66)

Length of male, 13 mm; females, 14-14.5 mm, crown 3 times as wide as long, rounded to face.

COLOR: Head yellow, with 2 brown transverse bands on each side between eye and ocellus, ocelli connected by a brown band. Pronotum yellow, with 3, indistinct, transverse brown bands and posterior third entirely brown. Scutellum brown. Fore wings brown, mottled with darker brown, median cross-veins with large brown spots.

MALE GENITALIA: Plates $3\frac{1}{2}$ times as long

as wide, gradually narrowing to bluntly rounded apices. Styles stout, elongate, apices curved dorsad and pointed. Aedeagus with a stout base narrowing to a rounded shaft which is apically extended and bent ventrad, a pair of ventral blade-like processes extending along shaft, crossing over each other, and extending slightly beyond apex of shaft. Pygofer large, truncate at apices, with a dorsal anterior process on each side extending into capsule, long, pointed, with apex turned dorsad.

FEMALE GENITALIA: Posterior margin of seventh sternum with a truncate median projection, extending $\frac{2}{3}$ length of lateral margins.

TYPES: Holotype male, labeled "Saut-Maripa, Oyapock, Guyane, November 26, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct. - Nov. 1969." Allotype female, same data as holotype except date "Novembre 27, 1969." Paratype females, one labeled "Env. de Sao Felice, Estrada da Colonia, Septembre 29-30, 1975, Moyen Xingu (Brésil) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris," and one labeled "Env. de Sao Felice, Camp 11, Octobre 1-2, 1975, Moyen Xingu (Brésil) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris." All types are in the Paris Museum.

NOTES: This species is closely related to *trifaciata*, but smaller and with slightly different male genitalia. The major difference in the males is in the processes of the pygofer; in *trifaciata* they are very long and greatly hook-shaped; in *genalis* they are shorter and only slightly curved.

Scaris minima n.sp.
(Figs. 67-72)

Length of male, 10.5 mm; female, 12 mm, crown 3 times as wide as long, rounded to face, with striae transverse between ocelli.

COLOR: Head and pronotum yellowish green, mottled with brown, posterior margin of pronotum with a dark brown scalloped border. Scutellum and fore wings

brown, heavily spotted with yellow.

MALE GENITALIA: Plates more than 3 times as long as wide, narrowing to rounded apices. Styles long, slender, bent dorsad, narrowing to pointed apices. Aedeagus short, stout, with a pair of lateral apical processes which are short, pointed and curved dorsad. Pygofer truncate, emarginate on dorsal subapical margin, with a short, stout finger-like process on dorso-anterior margin.

FEMALE GENITALIA: Posterior margin of seventh sternum with median area produced to length of lateral margins and widely emarginate in middle.

TYPES: Holotype male, labeled "Massikiri-Oyapock, Guyane, Novembre 17, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969." Allotype female, labeled "Carbet-Alice, Oyapock, Guyane, Novembre 8, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969." Holotype and allotype are in the Paris Museum.

NOTES: This species is closely related to *affinula*, but the male genitalia and the color of the fore wings are different. In *affinula* the aedeagal processes are longer and extend laterally whereas in *minima* they are shorter and curve dorsally. The fore wings of *affinula* are light colored with dark brown spots, and in *minima* they are brown with yellow spots.

Scaris exerata (DeLong and Freytag)

Clinonaria exerata DeLong and Freytag 1969, p. 142.

One additional male, labeled "Ile de Touenké, Novembre 19-21, 1975, Itani (Guyanes) Mission, M. Boulard, P. Jauffret et P. Pompanon, Muséum Paris," has been seen in the Paris Museum.

Scaris vagata n.sp.
(Figs. 72-77)

Length of males, 11.5-12.5 mm, crown 3 times as wide as long, anterior margin indistinct, rounded to face with striae transverse between ocelli.

COLOR: Head yellow, with a few black spots on crown, ocelli red. Pronotum yellow, mottled with brown, darker near middle, posterior margin brown. Scutellum brown, with posterior third yellow. Fore wings yellow, heavily mottled with brown and brownish black.

MALE GENITALIA: Plates 4 times as long as wide, slightly narrowing to rounded apices. Styles stout, evenly curved dorsad and narrowing to pointed apices. Aedeagus stout, tubular, with a pair of lateral subapical processes extending nearly length of shaft and a pair of dorsal subapical processes which extend ventrad along shaft $\frac{1}{3}$ length of shaft with a short basal apically projecting spur. Pygofer robust, roundedly produced.

TYPES: Holotype male, labeled "Igarapé, Belém, Rio Solimões, Am., April 7-30, 1966, Malkin Col." Paratype males, 3 specimens labeled same as holotype. Holotype and 2 paratypes are in the Museu de Zoologia, São Paulo, Brazil; other paratype in the DeLong Collection, Ohio State University.

NOTES: This species is closely related to *conspicua*, but can easily be separated by the addition of the dorsal subapical processes on the aedeagus, and the much lighter color pattern.

Scaris unita n.sp.
(Figs. 78-81)

Length of male, 12 mm, crown 3 times as wide as long, rounded to face with striae transverse between ocelli.

COLOR: Head yellow, ocelli red. Pronotum yellow, a few brown spots across middle, posterior margin with a wide band of brown. Scutellum and fore wings brown.

MALE GENITALIA: Plates 3 times as long as wide, narrowing to rounded apices. Aedeagus tubular, with a pair of lateral, subapical, small apically projecting processes. Pygofer truncate, with a dorsal subapical emargination and dorsal finger-like process on each side.

TYPE: Holotype male, labeled "Curiche, Colombia, 1968." Holotype is in the DeLong Collection, Ohio State University.

NOTES: This species is closely related to *sarana*, but has smaller processes on the aedeagus and a truncate pygofer, whereas *sarana* has larger aedeagal processes and a more rounded pygofer.

Scaris lupita n.sp.
(Figs. 83-87)

Length of male, 14 mm, crown 2 times as wide as long, anterior margin indistinct, rounded to face.

COLOR: Head and $\frac{3}{4}$ of pronotum yellow, lightly spotted with yellowish brown. Posterior part of pronotum, scutellum and fore wings brown lightly spotted with yellowish brown, with a larger rectangular spot near middle of fore wing.

MALE GENITALIA: Plates 7 times as long as wide, same width throughout, truncate apices. Styles stout, curved dorsad, with bluntly rounded apices. Aedeagus long, tubular, with a pair of short dorsal sub-apical processes which extend to apex of shaft, and a pair of long basal processes which extend to apex of aedeagal shaft. Pygofer large, broadly rounded at apex, with a large anterior dorsal process on each side, extending into capsule, narrowing near apex and bifurcate at apex.

TYPE: Holotype male, labeled "Massikiri-Oyapock, Guyane, Novembre 15, 1969, Piège lumineux, Guyane Mission, Balachowsky-Gruner, Oct.- Nov. 1969." Holotype is in the Paris Museum.

NOTES: This species is similar to *trifaciata* in size, but quite different in color and male genitalia. This is another unique species with no known closely related species.

Scaris caballa (DeLong and Freytag)

Clinonaria caballa DeLong and Freytag 1969, p. 166.

Three additional specimens have been seen. They are labeled as follows: 1 male, "Venezuela Exp., Anaben, Colombia, June 6, 1950, J. Maldonado Capriles Coll."; 1 male, 1 female, "Venezuela Exp., Territ. Anazonas, Samariapo, June 12, 1950, J. Maldonado Capriles." All 3 specimens are in the U. S. National Museum. These

specimens add Colombia to the distribution as well as the first female which can be associated with this species.

Scaris lecta (DeLong and Freytag)

Clinonaria lecta DeLong and Freytag 1969, p. 162.

One additional male specimen appears to be in this species. It is 12 mm in length and is labeled "Belém, Mocambo, V-26-1977, Pará, Brasil, T. Pimentel Col." It is in the Museu de Zoologia, São Paulo, Brazil.

Scaris cirra (DeLong and Freytag)

Clinonaria cirra DeLong and Freytag 1969, p. 158.

Two additional males have been seen of this species, one labeled "Camopi-Oyapock, Guyane, Novembre 20, 1969, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969," and the other labeled "Saul, Octobre 27, 1969, Piège lumineux, Guyane-Mission, Balachowsky-Gruner, Oct.- Nov. 1969." Both specimens are in the Paris Museum.

Scaris atrata n.sp.
(Figs. 88-92)

Length of male, 13 mm, crown nearly 3 times as wide as long, with an indistinct anterior margin.

COLOR: Entire body mostly brown, with fore wings slightly mottled with yellowish brown.

MALE GENITALIA: Plates 3 times as long at widest point, greatly narrowing near middle to bluntly rounded apices. Styles stout, expanded and serrate on ventral margin near middle, apices truncate. Aedeagus tubular, somewhat compressed dorso-ventrally, with a pair of dorsally projecting apical processes, another pair of basal processes, slender, extending nearly length of shaft on each side, tips turned ventrad. Pygofer large, rounded at apex.

TYPE: Holotype male, labeled "Salto Huá, Rio Negro, 20-12 1962, Brasil, Am., J. & B. Bechyné." Holotype is in the Museu de Zoologia, São Paulo, Brazil.

NOTES: This species is closest to *jaculum* in

overall appearance, but the aedeagal shaft has apical processes and the pygofer is rounded, whereas *jaculum* lacks apical processes on the aedeagal shaft and the apex of the pygofer is nearly pointed.

Scaris relictata n.sp.
(Figs. 93-97)

Length of male, 12 mm, crown nearly 3 times as wide as long, with a distinct anterior margin, with striae transverse between ocelli.

COLOR: Overall brown, with crown, pronotum, and fore wings mottled with yellow, also a larger yellow spot near middle of costal cell of fore wing as well as a black spot near middle of vein between anteapical cells.

MALE GENITALIA: Plates long, 5 times as long as wide. Styles robust, blade-like, rounded at apices. Aedeagus tubular, with a pair of lateral processes arising a third distance from apex, extending along length of shaft and pointed. Pygofer large, broadly rounded with a short dorso-anterior process on each side extending into capsule.

TYPE: Holotype male, labeled "Pakira-
iméné (Rive Surinamienne), Decembre 2,
1975, Itani (Guyanes) Mission, M. Bou-
lard, P. Jauffret et P. Pompanon, Muséum

Paris." Holotype is in the Paris Museum.

NOTES: This species is closely related to *jaculum*, but smaller, with shorter aedeagal processes, and the pygofer is rounded.

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