

NEW NEOTROPICAL AMISEGINE WASPS (HYMENOPTERA: CHRYSIDIDAE)

LYNN S. KIMSEY

Department of Entomology, University of California,
Davis, California 95616

Abstract.—Eleven new Amiseginae are described from the Neotropical Region, including nine species of *Adelphe*: *A. argentea* NEW SPECIES, *A. dominicana* NEW SPECIES, *A. hansonii* NEW SPECIES, *A. limonae* NEW SPECIES, *A. meridae* NEW SPECIES, *A. minuta* NEW SPECIES, *A. nitida* NEW SPECIES, *A. paralaavis* NEW SPECIES and *A. ziva* NEW SPECIES, and two of *Amisega*: *A. geminata* NEW SPECIES and *A. gloriosa* NEW SPECIES. *Duckeia vagabunda* Kimsey is now recorded from Costa Rica in addition to the original collection site in Mexico.

Key Words.—Hymenoptera, Chrysididae, Amiseginae, *Adelphe*, *Amisega*, Neotropics

Amisegine chrysidids are found in very few insect collections around the world, and even those that have them generally have a small number of representatives. Despite this apparent rarity, these wasps may actually be common in some situations. The redoubtable efforts of Lubomir Masner, and the intensive sampling of the Costa Rican wasp fauna, organized by Ian Gauld, Dan Janzen and Paul Hanson, have shed some light on the actual size of this group.

There seem to be two basic factors involved in the discrepancy between the commonness in collections versus nature. The first has to do with search images. Most collectors simply never see these wasps. Female amisegines tend to spend most of their time, in or on, the leaf litter searching in cryptic situations for the walking stick host eggs; whereas males rest on or fly among, low vegetation. The second factor involves collecting techniques. Masner uses pan traps and modified malaise traps, and Gauld and Hanson also use malaise traps. Appropriately situated, both techniques are very effective at catching amisegine wasps.

In the Western Hemisphere, the extent of the amisegine fauna has been underestimated. Prior to the survey of the Costa Rican Hymenoptera, only two *Amisega* and three *Adelphe* species were recorded from that country. The survey has revealed two more undescribed species of *Amisega* and six of *Adelphe*, as well as a species of *Duckeia*, *D. vagabunda* Kimsey, recorded previously only from Mexico. As a result, the revisions of *Adelphe* (Kimsey 1986) and *Amisega* (Kimsey 1987), which included species keys, are clearly inadequate based on the material described here.

Masner's collecting has revealed a great deal of island endemism in *Adelphe*. Every Caribbean island that he has sampled has turned up one or more endemic species. If this is typical, then given the diversity of genera in southeast Asia, the species diversity there is probably even greater than in the Caribbean.

Once sufficient numbers of these taxa are described it should be possible to trace the evolutionary relationships among them with more accuracy than has been done by Kimsey & Bohart (1991). In particular it will be very interesting to examine the evolutionary relationships among the *Adelphe* species on Caribbean islands and the mainland, to see how these wasps, with poor dispersal capabilities, managed to colonize so many islands.

Although there are female specimens of *Adelphe* collected at some of the localities listed here, it has proven impossible, so far, to definitively associate them with any of the males. Therefore, at this point the females for the *Adelphe* species described here are unknown.

Depositories and Abbreviations.—The majority of specimens described below are from the Canadian National Insect Collection, Ottawa, Ontario (OTTAWA). The remainder are deposited in the Bernice P. Bishop Museum, Honolulu, Hawaii (HONOLULU), National Museum of Natural History, San José, Costa Rica (SAN JOSE), and the Bohart Museum of Entomology, University of California, Davis (DAVIS). Two abbreviations are used throughout the descriptions as units of distance: MOD = midocellus diameter and PD = puncture diameter.

ADELPHE ARGENTEA, NEW SPECIES

(Fig. 1)

Type.—Holotype male: DOMINICAN REPUBLIC. *PEDERNALES PROV.*: 9.5 km N of Cabo Rojo, Jul 1990, L. Masner. Deposited in the Canadian National Collection, Ottawa.

Male.—(Holotype). Body length 3.5 mm. Face (Fig. 1) with dense shallow punctures, 0.1–0.3 PD apart; scapal basin with broad ovoid zone of cross-ridging; mandibles with 2 apical teeth; clypeal apex thickened, forming nearly a right angle in profile; subantennal distance 1.2 MOD; malar space 3.5 MOD; postocular distance 1 MOD; occipital carina well-developed but not flared; flagellomere I length $3.5 \times$ breadth; flagellomere II $2.6 \times$ as long as broad; mesopleuron evenly and densely punctate, punctures 0.2 PDs apart; scrobal sulcus entirely lacking; metanotal disk $5 \times$ as broad as long; propodeal dorsomedial enclosure coarsely cross-ridged; posteromedial enclosure polished, irregularly and sparsely punctate, punctures occurring mostly dorsally, lateral tooth small and obtuse. Ocular setae 0.4 MOD long. Head, thorax and abdomen black; scape brown with red accent; flagellum and pedicel dark brown; legs red, except hindtibia, hindtarsi and hindfemoral apex dark brown. Body with extensive erect silvery setae. Flagellar setae very short and dense, 0.2 MOD long.

Diagnosis.—The lack of a scrobal sulcus and silvery vestiture will immediately distinguish *A. argentea* NEW SPECIES from other *Adelphe* species. *Adelphe argentea* does not appear to be closely related to any other *Adelphe*.

Material Examined.—See type.

ADELPHE DOMINICANA, NEW SPECIES

(Fig. 2)

Type.—Holotype male: DOMINICAN REPUBLIC. *PEDERNALES PROV.*: 14.5 km N of Cabo Rojo, Jul 1990, 165 m, arid scrub, L. Masner. Deposited in the Canadian National Collection, Ottawa.

Male.—(Holotype). Body length 4.5 mm. Face (Fig. 2) densely punctate, with punctures 0.1–0.5 PD apart; scapal basin smooth without cross-ridging, with few scattered punctures; mandibles with 2 apical teeth; clypeal apex thickened, forming nearly a right angle in profile; subantennal distance 1 MOD; malar space 3.8 MOD; postocular distance 1.5 MOD; occipital carina complete but not flared; flagellomere I length $4.7 \times$ breadth; flagellomere II $2.3 \times$ as long as broad; mesopleuron polished with few scattered punctures, 1–4 PD apart; scrobal sulcus $8 \times$ as long as broad; metanotal disk $3 \times$ as broad as long; propodeal dorsomedial enclosure densely cross-ridged; posteromedial enclosure smooth with punctures clumped along dorsal margin, lateral tooth tiny, low obtuse angle. Ocular setae 0.5 MOD long. Head, thorax and abdomen black with faint coppery tints on face; entire antennae black; legs brown, trochanters and tibiae paler and somewhat red. Body with extensive erect pale setae. Flagellar setae 0.1 MOD long.

Diagnosis.—The long flagellomere, I, short malar space, long narrow scrobal sulcus of *A. dominicana* suggest a close relationship with *A. mexicana* Mocsary, and to a lesser extent with *A. puertoricana* Kimsey and *A. cubana* Kimsey. Diagnostic features for *A. dominicana* NEW SPECIES, which will separate it from related species, include: metanotal disk $3\times$ as wide as long, subantennal distance 1 MOD and flagellar setae very short and dense.

Material Examined.—See type.

ADELPHE HANSONI, NEW SPECIES

(Fig. 3)

Type.—Holotype male: COSTA RICA. SAN JOSE PROV.: Parque Nacional Braulio Carrillo, 8 km NE of Tunel, 1100 m, 15 May 1988, P. Hanson. Deposited in the Bohart Museum of Entomology, University of California, Davis.

Male.—(Holotype). Body length 2.5 mm. Face (Fig. 3) highly polished, punctures shallow and scattered, 2–4 PD apart; scapal basin smooth and polished without striae, rugae or punctures; mandibles with 2 apical teeth; subantennal distance 2 MOD; clypeal apex thickened, forming nearly a right angle in profile; malar space 4 MOD; postocular distance 1.7 MOD; occipital carina complete and not flared; flagellomere I length $3.7\times$ breadth; flagellomere II $2.5\times$ as long as broad; mesopleuron polished and impunctate; scrobal sulcus $5\times$ as long as broad; metanotal disk $1.8\times$ as broad as long; propodeal dorsomedial enclosure with narrow zone of cross-ridging on either side of smooth medial welt, flanked laterally by another equally wide impunctate welt; posteromedial enclosure irregularly rugose, lateral tooth prominent and acute. Ocular setae 0.8 MOD long. Head and thorax black, dorsum with bronzy tints; abdomen brown with red accent, paler basally; scape and pedicel yellow; flagellum black; legs including coxae yellow. Body with extensive erect black setae. Flagellar setae 0.8 MOD long.

Diagnosis.—This species can be immediately distinguished by the long malar space and subantennal distance. Additional diagnostic features include the bronzy dorsum and yellow legs, scape and pedicel. *Adelphie ziva* from Jamaica has similar facial and antennal dimensions but differs substantially in color and the length of the ocular and flagellar setae.

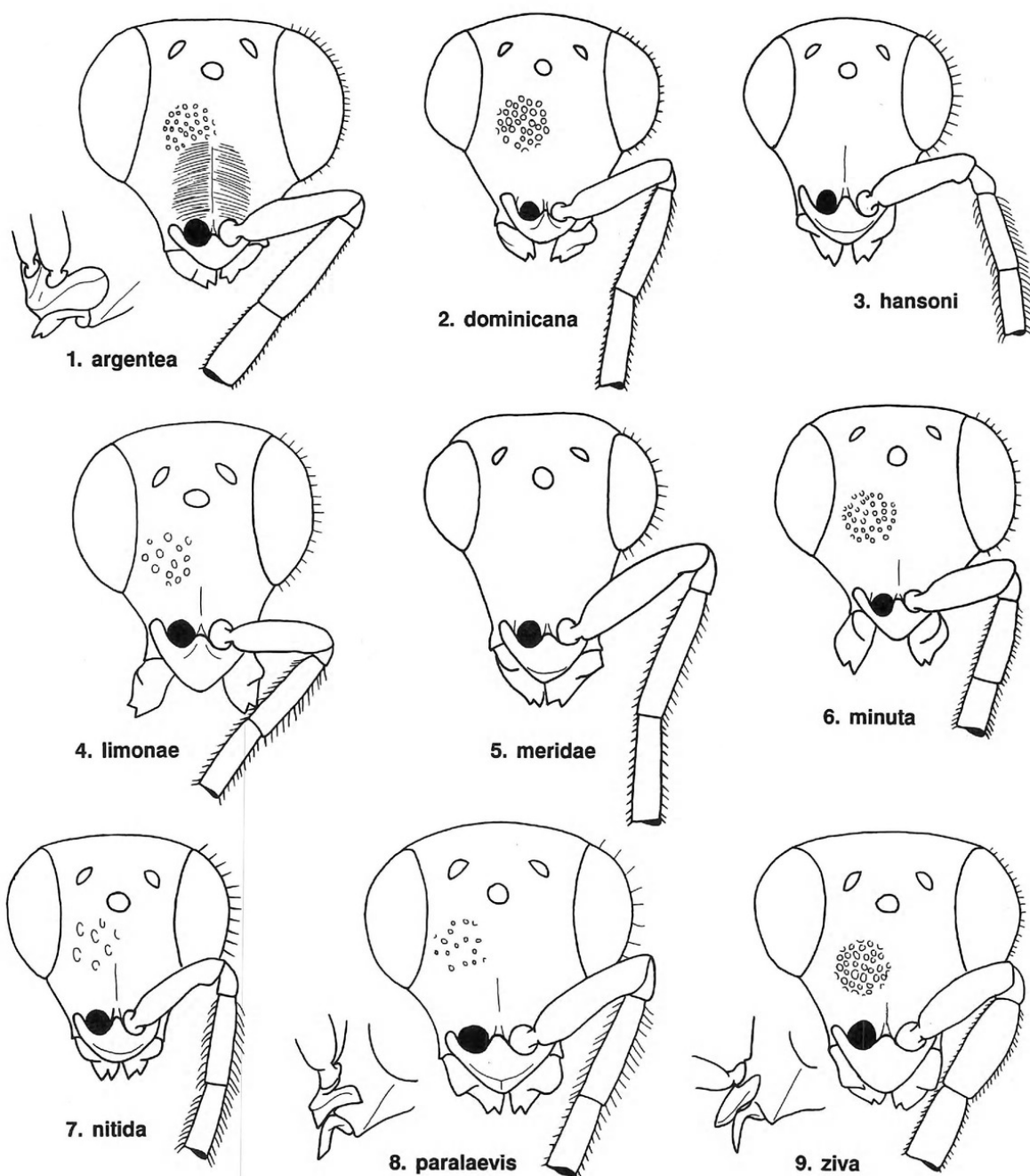
Material Examined.—See type.

ADELPHE LIMONAE, NEW SPECIES

(Fig. 4)

Type.—Holotype male: COSTA RICA. LIMON: 7 km SW of Bribri, 50 m, Sep 1989, P. Hanson. Holotype deposited in the Bohart Museum of Entomology, University of California, Davis. Paratypes: 9 males (SAN JOSE, DAVIS): 4 males: same data as holotype except Jan–Feb 1990; 3 males: 4 km SW of Bribri, Sep–Nov 1989, P. Hanson; 2 males: Limón, Parque Nacional Tortuguero, Est. 4–esquinas, 0 m, Jun–Aug 1989, Solano.

Male.—(Holotype). Body length 4 mm. Face (Fig. 4) polished with shallow punctures about 1 PD apart; scapal basin polished with narrow strip of cross-ridging on either side of midline; clypeal apex nearly flat in profile, not thickened or forming right angle; mandibles with 2 apical teeth; subantennal distance 1.7 MOD long; malar space 2.4 MOD; postocular distance 1.2 MOD; occipital carina well developed but not flared; flagellomere I length $3\times$ breadth; flagellomere II $2.5\times$ as long as broad; mesopleuron polished with scattered small punctures between 2 and 4 PDs apart; scrobal sulcus $4.3\times$ as long as broad; metanotal disk $3.5\times$ as broad as long; propodeal dorsomedial enclosure cross-ridged; posteromedial enclosure polished and only punctate marginally, lateral tooth small and subacute. Ocular setulae 0.5 MOD long. Head, thorax and abdomen black with red accent on basal abdominal



Figures 1-9. Front view of male face, *Adelphe* species. Punctuation and setation only shown on right side. Oblique (1a), or lateral (8a, 9a) views of clypeus, mandible and malar space.

tergum; face, vertex, pronotum, scutum, scutellum and metanotum with strong brassy highlights; pedicel red; flagellum dark brown; legs including coxae yellow. Body with extensive erect black setae. Flagellar setae 0.9 MOD long.

Diagnosis.—Although *A. limonae* NEW SPECIES is one of the *Adelphe* species with cross-ridging in the scapal basin, including *A. argentea*, *A. confusa* Kimsey, *A. masneri* Kimsey, *A. paradoxa* (Ducke), *A. robusta* Kimsey and *A. jamaicensis* Kimsey, it differs from the rest by having a shorter malar space, longer subantennal distance, and longer first flagellomere.

Material Examined.—See types.

ADELPHE MERIDAE, NEW SPECIES

(Fig. 5)

Type.—Holotype male: VENEZUELA. *MERIDA*: El Valle, 15 km NE of Mérida, 2400 m, 24 Jun–2 Jul 1989, S. and J. Peck. Deposited in the Canadian National Collection, Ottawa.

Male.—(Holotype). Body length 3 mm. Face (Fig. 5) polished and nearly impunctate; scapal basin polished without punctures, striation or rugae; mandibles with 2 apical teeth; clypeal apex thickened, forming nearly a right angle in profile; subantennal distance 2 MOD; malar space 4.4 MOD; postocular distance 3 MOD; occipital carina not unusually enlarged or flared; flagellomere I length $4.5 \times$ breadth; flagellomere II $3.5 \times$ as long as broad; mesopleuron polished and essentially impunctate; scrobal sulcus $5 \times$ as long as broad; metanotal disk slightly longer than broad; propodeal dorsomedial and posteromedial enclosures smoothly polished and impunctate, lateral tooth a low obtuse angle. Ocular setae sparse about 0.4 MOD long. Head and thorax black; antenna dark brown; legs brown with yellow accent. Body with sparse erect yellow setae. Flagellar setae 0.6 MOD long.

Diagnosis.—Unusual features of *A. meridae* NEW SPECIES include the unusually long malar space, smoothly polished face, essentially impunctate mesopleuron and long flagellomeres. This species most closely resembles *A. laevis* Kimsey, *A. cubana* and *A. puertoricana*, but can be distinguished by the features listed above as well as the darker scape and pedicel, smooth propodeal posterior enclosure and narrower scrobal sulcus.

Material Examined.—See type.

ADELPHE MINUTA, NEW SPECIES

(Fig. 6)

Type.—Holotype male: DOMINICAN REPUBLIC. *PEDERNALES PROV.*: 9.5 km N of Cabo Rojo, Jul 1990, desert, L. Masner. Deposited in the Canadian National Collection, Ottawa. Paratypes: 9 males, same data as holotype (OTTAWA, DAVIS).

Male.—(Holotype). Body length 2.5 mm. Face (Fig. 6) strongly narrowed across antennal sockets, with large shallow punctures 0.3–1 PD apart; scapal basin smooth without cross-ridging or striation; mandibles with one primary apical tooth on inner angle, outer margin ending in right angle, not actually tooth-like; clypeal apex thickened, forming nearly right angle in profile; subantennal distance 1.2 MOD; malar space 4.6 MOD; postocular distance 1 MOD; occipital carina narrow only slightly flared; flagellomere I length $2.6 \times$ breadth; flagellomere II $1.8 \times$ as long as broad; mesopleuron polished with few scattered small punctures; scrobal sulcus parallel sided, $10 \times$ as long as broad; metanotal disk $3 \times$ as broad as long; propodeal dorsomedial enclosure polished with fine rugae laterally; posteromedial enclosure polished with scattered shallow large punctures, lateral tooth a short obtuse angle. Ocular setae short and relatively dense, 0.6 MOD long. Head, thorax and abdomen black; scape and legs, rest of antenna black. Body with extensive erect pale setae. Flagellar setae, short and dense, 0.2 MOD long.

Diagnosis.—This is the smallest species of *Adelophe* described to date. It is similar to *A. calvata* Kimsey, a Brazilian species, but can be distinguished by the eyes having setulae, a longer postocular distance, flagellomere I shorter and II longer, the mandible not obviously bidentate, and the metanotal disk considerably wider than long. The closest relative of *A. minuta* NEW SPECIES appears to be *A. insula* Kimsey. However, it can be distinguished from *A. insula* by the longer

malar space, shorter flagellomere I, the oddly dentate mandible, and the propodeal enclosure not cross-ridged.

Material Examined.—See types.

ADELPHE NITIDA, NEW SPECIES

(Fig. 7)

Types.—Holotype male: COSTA RICA. LIMON: 4 km NE of Bribri, 50 m, Sep–Nov 1989, P. Hanson. Deposited in the National Museum of Natural History, San José, Costa Rica. Paratypes 10 males (COSTA RICA, DAVIS, OTTAWA): 2 males, same data as type; 1 male: ALAJUELA PROV.: San Pedro del la Tigra, Cacao, 200 m, Jan–Feb 1990; 2 males: HEREDIA PROV.: Chilamate, 75 m, May 1989; 1 male: LIMÓN PROV.: 16 km W of Guápiles, 400 m, Apr 1989; 1 male: PUNTARENAS PROV.: Golfo Dulce, 3 km S of Rincón, 10 m; 2 males: San Vito, Jardín Botánico Las Cruces, May 1988, 1200 m; 1 male: Parque Nac. Corcovado, Est. Sirena, 50 m, Apr–Aug 1989.

Male.—(Holotype). Body length 2.5 mm. Face (Fig. 7) smooth with shallow punctures, 0.5–2.0 PD apart; scapal basin smooth, without cross-ridging or striation; mandibles with two apical teeth; clypeal apex thickened, forming nearly a right angle in profile; subantennal distance 1 MOD long; malar space 3.5 MOD; postocular distance 1.5 MOD; occipital carina narrow and only slightly flared; flagellomere I length $3.5 \times$ breadth; flagellomere II length $2.5 \times$ breadth; mesopleuron polished, with very few tiny punctures; scrobal sulcus $5 \times$ as long as broad; metanotal disk $3 \times$ as broad as long; propodeal dorsomedial and posteromedial enclosures smooth, lateral tooth small and acute. Ocular setae 0.6 MOD long. Head and thorax black with faint green to coppery tints; antenna dark, except scape with yellow accent; legs including coxae pale yellow. Body with erect dark setae. Flagellar setae 0.8 MOD long. Paratypes body length 2.5–3.0 mm, otherwise closely resemble holotype.

Diagnosis.—This small sized species appears most closely related to *A. paralaevis*, based on the smooth scapal basin, long first flagellomere, long malar space, nearly impunctate mesopleuron and smooth propodeal enclosures. It can be distinguished from this and other species by the additional characteristics: metanotal disk more than twice as broad as long, pale scape, subantennal distance 1 MOD long, and green-coppery tinted dorsum.

Material Examined.—See types.

ADELPHE PARALAEVIS, NEW SPECIES

(Fig. 8)

Type.—Holotype male: COSTA RICA. PUNTARENAS PROV.: Monteverde Reserve, 16 Aug 1986, 1500 m, L. Masner. Deposited in the Canadian National Collection, Ottawa.

Male.—(Holotype). Body length 4.5 mm. Face (Fig. 8) highly polished, punctures shallow and 0.5–1 PD apart; scapal basin smoothly polished and impunctate; mandibles with 2 apical teeth; clypeal apex thickened, forming nearly a right angle in profile; subantennal distance 1.7 MOD; malar space 3 MOD; postocular distance 2 MOD; occipital carina well developed, angulate dorsolaterally; flagellomere I length $4 \times$ breadth; flagellomere II $2.5 \times$ as long as broad; mesopleuron polished with scattered punctures anteriorly, 1–3 PD apart; scrobal sulcus $4 \times$ as long as broad; metanotal disk $1.3 \times$ as broad as long; propodeal dorsomedial enclosure polished and faintly wrinkled; posteromedial enclosure with dense nearly contiguous punctures, lateral tooth large and apically rounded. Ocular setae 0.7 MOD long. Head and thorax black with green tints; abdomen brown-yellow; entire antenna black; legs including coxae yellow-brown. Body with extensive erect black setae. Flagellar setae 0.5 MOD long.

Diagnosis. — The smooth scapal basin and long flagellomere I place *A. paralaevis* NEW SPECIES in the group of species characterized by these features, including: *A. antennialis* Kimsey, *A. cubana*, *A. dominica*, *A. mexicana*, *A. nitida*, *A. metallica* (Kieffer), *A. meridae*, *A. laevis*, *A. brasiliensis* Kimsey and *A. puertoricana*. However, *A. paralaevis* has a longer malar space and subantennal distance than any of these other species. In addition, the posteromedial propodeal enclosure is densely punctate and antenna is dark brown to black.

Material Examined. — See type.

ADELPHE ZIVA, NEW SPECIES

(Fig. 9)

Type. — Holotype male: JAMAICA. St. Andrew Park, Fairy Glade Trail to Catherines Peak, 8 Dec 1975, G. F. Hevel. Deposited in the U.S. National Museum, Washington, D.C.

Male. — (Holotype). Body length 4 mm. Face (Fig. 9) with dense, nearly contiguous, shallow punctures; scapal basin barely indicated, punctures only slightly farther apart than on frons, no cross-ridging; mandibles with 2 apical teeth; clypeal apex nearly flat in profile, not thickened or nearly forming a right angle; subantennal distance 2.5 MOD; malar space 3 MOD; postocular distance 2 MOD; occipital carina complete but not flared; flagellomere I length $3.5 \times$ breadth and dilated medially; flagellomere II $2.5 \times$ as long as broad; mesopleuron with shallow punctures anteriorly, 0.2–0.5 PD apart; scrobal sulcus $8 \times$ as long as broad; metanotal disk $2 \times$ as broad as long; propodeal dorsomedial enclosure faintly wrinkled medially, without cross-ridging; posteromedial enclosure smooth and polished without medial ridge or welt, lateral tooth low and obtuse. Ocular setae 0.3 MOD long. Head and thorax black with silvery blue tints; abdomen black except with red accent basally; scape yellow, pedicel and flagellomeres black; legs including coxae pale yellow, except darker on hindfemoral-tibial joint and hindtarsi. Body with extensive erect silvery setae. Flagellar setae 0.2 MOD long.

Diagnosis. — *Adelphe hansonii* and *A. ziva* appear to be most closely related based on the combination of the length of flagellomere I, long subantennal distance and malar space and metanotal disk about twice as long as wide. *Adelphe ziva* NEW SPECIES can be distinguished from *A. hansonii* by the punctate mesopleuron, long narrow scrobal sulcus, thoracic dorsum with silvery blue tints and pedicel dark.

Material Examined. — See type.

AMISEGA GEMINATA, NEW SPECIES

Types. — Holotype female: COSTA RICA. GUANACASTE PROV.: Pitilla, 9 km S of Santa Cecilia, 700 m, Jun 1989, I. Gauld. Deposited in the National Museum of Natural History, San José, Costa Rica. Paratypes: 3 males and 3 females (SAN JOSE, DAVIS), same data as holotype.

Female. — (Holotype). Body length 3.5 mm. Scapal basin with smooth impunctate medial area without cross-ridging or striatiform punctures; frons and vertex with small contiguous punctures; malar space 1.2 MOD long; eye widest medially; flagellomere I $3.2 \times$ as long as broad; flagellomere II $2 \times$ as long as broad; pronotum, scutum, scutellum and metanotum covered with deep contiguous punctures; mesopleuron covered with large nearly contiguous deep punctures, with striatiform punctures above scrobe; propodeal enclosures polished and impunctate, dorsal enclosure faintly wrinkled; terga I–II polished with few widely scattered tiny punctures; terga III–IV with posterior band of tiny punctures associated with sparse fringe of setae. Vertex, pronotum, scutum, scutellum and metanotum bright coppery red; face, propleuron, gena and mesopleuron black with bronze tints; rest of thorax and propodeum black, propodeum dorsally with green tints; abdomen brown with red accent and

with black dorsally; coxae, trochanters, midfemur, basal one-half of hindfemur and base of hindtibia orange, rest of legs dark brown; antenna black, except flagellomeres I–V with green tints; wings with two faint brown bands, one basal and the other subapical.

Male. — Body length 3–3.5 mm. Similar to female except: malar space 1.5 MOD long, wing banding even fainter; face and pronotum green; vertex, scutum medially, scutellum, metanotum and dorsal propodeal enclosure blue; rest of body including legs and antennae dark brown to black.

Diagnosis. — This species superficially resembles both *A. cooperi* Krombein and *A. gloriosa* because of the striking coloration. However, it is smaller than both of these species. It can be distinguished from *A. cooperi* by the polished dorsal propodeal enclosure, relatively impunctate posterior enclosure, and lack of a posterolateral scutal tooth. Unlike *A. gloriosa*, *A. geminata* NEW SPECIES has the wings faintly banded, the thorax primarily black not red, and the scapal basin has a polished and impunctate medial area.

Material Examined. — See types.

AMISEGA GLORIOSA, NEW SPECIES

Types. — Holotype female: GUATEMALA. ZACAPA DEPARTAMENTO: San Lorenzo, 1800 m, 9–11 Jul 1986, L. LeSage. Deposited in the Canadian National Collection, Ottawa. Paratypes: 1 female and 8 males, same data as holotype (OTTAWA, DAVIS).

Female. — (Holotype). Body length 5 mm. Face with fine contiguous punctures; scapal basin faintly cross-striated medially; frons, vertex and gena appearing granular; malar space 0.7 MOD; eye in lateral view widest medially; flagellomere I $4\times$ as long as broad; flagellomere II $2\times$ as long as broad; pronotum, scutum, scutellum and metanotum covered by fine contiguous punctures; notauli obsolescent; mesopleuron completely covered with coarse contiguous punctures, even above scrobe; dorsal propodeal enclosures smooth and impunctate; posterior propodeal enclosures smooth with scattered punctures; tergum I with transverse band of tiny punctures along posterior margin; tergum II with tiny punctures clumped anteriorly with impunctate medial stripe; terga III–IV with tiny nearly contiguous punctures and dense setae in transverse band across posterior one-half of tergum. Frons, vertex, pronotum, scutum, scutellum and metanotum bright coppery-red; gena and ventral surface of head with green cast; rest of thorax and coxae non-metallic red; femora inner surface red, outer surface dark brown to black with green tints; tibiae and tarsi brown; antennae dark brown with some green tints; wings with two dark brown bands, one subbasal and one subapical; tergum I brown with red accent basally, rest of abdomen black with green tints.

Male. — Similar to female except: body length 4.5–5 mm, body color entirely black with green tints, including legs and antennae, and wings faintly banded.

Diagnosis. — As discussed under *A. geminata* this species shares its striking dorsal coloration with *A. geminata* and *A. cooperi*. It can be distinguished by the darkly banded wings, non-metallic red thoracic sides and venter, scutal posterolateral corners not projecting, scapal basin not polished, notauli obsolescent, and the propodeal enclosures not finely striate.

Material Examined. — See types.

LITERATURE CITED

- Kimsey, L. S. 1986. New species of the American genus *Adelphe* Mocsáry. *Insecta Mundi*, 1: 197–205.
Kimsey, L. S. 1987. New genera and species of neotropical Amiseginae. *Psyche*, 94: 57–76.
Kimsey, L. S. & R. M. Bohart. 1991 (1990). *Chrysidid wasps of the world*. Oxford Univ. Press, Oxford.

Received 17 April 1992; accepted 13 January 1993.



Kimsey, Lynn Siri. 1993. "New Neotropical amisegine wasps (Hymenoptera: Chrysididae)." *The Pan-Pacific entomologist* 69(3), 205–212.

View This Item Online: <https://www.biodiversitylibrary.org/item/252172>

Permalink: <https://www.biodiversitylibrary.org/partpdf/268623>

Holding Institution

Pacific Coast Entomological Society

Sponsored by

IMLS LG-70-15-0138-15

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Pacific Coast Entomological Society

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <http://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.