

NEW GENERA AND SPECIES OF NEOTROPICAL
AMISEGINAE (HYMENOPTERA, CHRYSIDIDAE)*

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The Canadian National Collection (OTTAWA) has one of the largest, if not the largest collection of neotropical Amiseginae in the world. In a sample of about 700 unidentified specimens sent to me by Lubomir Masner from this collection there were many new taxa, including representatives of a new genus. In addition, material was borrowed from the Museum of Comparative Zoology, Harvard University (J. M. Carpenter), Cambridge, Massachusetts, the American Entomological Institute, Gainesville, Florida (H. Townes, GAINESVILLE), and the U.S. National Museum, Washington, D.C. (K. V. Krombein, WASHINGTON). The new species of *Adelphe* are described separately (Kimsey 1986). The remaining new taxa are included below.

The following abbreviations are used: F = flagellomere, MOD = midocellus diameter, PD = puncture diameter and T = gastral tergum.

Amisega Cameron

Amisega Cameron 1888: 457. Type: *Amisega cuprifrons* Cameron 1888: 457. Monotypic.

Mesitiopterus Ashmead 1902: 231. Type: *Mesitiopterus kahlii* Ashmead 1902: 231. Orig. desig. NEW SYNONYMY.

KEY TO SPECIES OF *AMISEGA*

1. Gaster with 4 visible terga, F-I parallel-sided and about 4× as long as broad, female2
Gaster with 4 visible terga, F-I bulging submedially and about 3.5× as long as broad, male19
2. Legs, including coxae primarily dark brown, fore and midtibiae and tarsi often paler3

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- Legs, including coxae primarily yellow, apex of femora and some tarsomeres may be dark brown 10
3. Propodeal dorsal enclosures smooth and polished; mesopleuron about one-half punctate or less 4
 Propodeal dorsal enclosures finely wrinkled or scratched; mesopleuron less than one-third impunctate 7
4. Vertex, pronotum and scutum densely transversely striate, T-II with small basomedial area of punctures, gena finely scratched or striate between punctures
 *townsendi* (Ashmead)
 Vertex pronotum and scutum without dense transverse striate, T-II mostly punctate, gena smooth between punctures 5
5. T-II bronzy purple, scapal basin smooth without striation
 *aeniceps* Ducke
 T-II black, without metallic tints; scapal basin with extensive transverse striation 6
6. Propodeum bluer than rest of thoracic dorsum, T-II reddish laterally *rufilateralis* Kimsey
 Propodeum and thoracic dorsum concolorous, black with faint bluish tints; T-II entirely black *tenebrae* Kimsey
7. Notauli complete, clearly indicated; mesopleuron finely striate or cross ridged above scrobe 8
 Notauli incomplete or absent; mesopleuron smooth above scrobe 9
8. Scutal posterolateral corners protruding dorsally, toothlike; vertex, pronotum, scutum, scutellum and metanotum reddish coppery *cooperi* Krombein
 Scutal posterolateral corners not protruding dorsally; vertex, pronotum, scutum, scutellum and metanotum bluish green
 *mocsaryi* Ducke
9. Malar space about 1 MOD, scape and legs dark, blackish
 *evansi* Krombein
 Malar space 1.7–2.0 MOD, scape and at least coxae yellowish brown *chiapana* Kimsey
10. Propodeal dorsal enclosures finely wrinkled, striate or scratched 11
 Propodeal dorsal enclosures smooth, shiny 12
11. Propodeal dorsal enclosure finely wrinkled or scratched, posterior enclosure smooth; legs pale red or yellow except posterior half of hindfemur dark brown ... *bicolor* Kimsey

- Propodeal dorsal and posterior enclosures densely striate, legs reddish brown with hindleg darker *striata* Kimsey
12. F-I yellow 13
 F-I dark brown 15
13. Pronotum lateral face punctate; mesopleuron rough with small punctures below scrobe along posterior margin; scape and pedicel yellow, flagellomeres becoming gradually darker toward apex of antenna *kahlii* Ashmead
 Pronotum lateral face polished and impunctate, mesopleuron polished and impunctate below scrobe along posterior margin; F-I pale only or scape, pedicel and F-I-III yellow and apical flagellomeres dark brown, without gradual transition 14
14. Antenna with only F-I pale, scutellum extensively transversely striate between sparse punctures, thoracic dorsum bluish *bennetti* Kimsey
 Antennal scape through F-III yellow; scutellum smooth between sparse punctures, without transverse striae; thoracic dorsum bronze *flavicus* Kimsey
15. Head and thorax bright coppery, propodeum green-tinted; forewing membrane with pale transverse medial band; hindfemoral apex dark brown *belizensis* Kimsey
 Head, thorax and propodeum concolorous bluish green to green or propodeum bluer, forewing without pale band, hindfemur entirely yellowish or apex dark brown 16
16. Scape yellow to red, malar space 1.8–2.0 MOD long *floridensis* (Krombein).
 Scape dark brown, malar space 1.0–1.5 MOD long 17
17. T-II blue; frons, vertex and postocellar area densely cross striate *perviridis* Kimsey
 T-II black or dark brown; frons and vertex without cross striae, postocellar area with or without striae 18
18. Legs entirely yellow *flavipes* Kimsey
 Legs yellow, except femoral apices, base of hindtibia and hindtarsomeres dark brown *semiflava* Kimsey
19. Legs including coxae primarily pale red or yellow 20
 Legs primarily dark brown, coxae always dark brown 23
20. Scape reddish, at least ventrally paler than flagellomeres 21
 Scape and flagellomere concolorous dark brown 22
21. Scape paler and reddish apically, contrasting with dark brown

- pedicel and flagellum; midocellus 2.5–3.0 MOD from ocular margin *kahlui* (Ashmead)
- Scape reddish brown, pedicel and flagellum only slightly darker; midocellus 2.0–2.2 MOD from ocular margin
 *floridensis* (Krombein)
22. Propodeal dorsal enclosure smooth, T-II blue medially, scutal punctures 0.5–2.0 PD apart and not striatiform
 *perviridis* Kimsey
- Propodeal dorsal enclosure finely rugose, T-II black medially, scutal punctures contiguous and striatiform
 *bicolor* Kimsey
23. Propodeal dorsal enclosures finely rugose or striate; mesopleuron rugose, striate or punctate below scrobe 24
- Propodeal dorsal enclosures smooth; mesopleuron smooth, polished and impunctate below scrobe 27
24. Scutal posterolateral corners projecting dorsally, wings with transverse submedial unstained area *cooperi* Krombein
- Scutal posterolateral corners not projecting, wings evenly brown-stained 25
25. Propodeal posterior enclosures smooth, scapal basin distinct with few scattered punctures and without distinct transverse striation, pronotum and scutum with large circular punctures and without striae, notauli deeply impressed
 *mocsaryi* Ducke
- Propodeal posterior enclosures rugose or striate at least dorsally, scapal basin not clearly delimited and densely striate, pronotal and scutal punctures striatiform among transverse striate 26
26. Face and thoracic dorsum covered with dense, linear, transverse striae, punctures tiny and 2–5 PD apart; scape reddish, paler than flagellum *striata* Kimsey
- Face and thoracic dorsum with coarse, irregular, transverse striae, punctures medium-sized and nearly contiguous; scape dark brown or black concolorous with flagellum
 *chiapana* Kimsey
27. T-II medially bright blue, purple or bronze 28
- T-II medially black, without metallic tints 30
28. Terga dorsally bronzy, scapal basin smooth without transverse striation *aeniceps* Ducke

- Terga dorsally blue to purple, scapal basin with transverse striation29
29. Malar space shorter than 1.5 MOD; terga bright blue dorsally *similis* Kimsey
 Malar space longer than 1.5 MOD; terga purplish dorsally....
 *flavipes* Kimsey
30. Fore and midtibiae dark brown, concolorous with femora; pronotum densely striate31
 Fore and midtibiae reddish, considerably paler than femora; pronotum usually with few if any striae.....32
31. Gena smooth without striation, pronotum depressed sublaterally, South American *flavicrus* Kimsey
 Gena finely scratched or striate, pronotum evenly rounded, Mexican *townsendi* (Ashmead)
32. Thoracic dorsum green, pronotum with transverse striae medially, forewings with unstained medial band
 *belizensis* Kimsey
 Thoracic dorsum blue, pronotum without transverse striae medially, forewings evenly brown-stained33
33. Mesopleuron impunctate, or with few tiny punctures immediately below subalar fovea; F-I parallel-sided and 4× as long as broad *bennetti* Kimsey
 Mesopleuron punctate immediately below subalar fovea, punctures subequal in size to those on anterior half; F-I dilated and 3.5× as long as broad34
34. Hindtibia and tarsus reddish, paler than femur
 *tenebrae* Kimsey
 Hindtibia and tarsus dark brown, concolorous with femur....
 *rufilateralis* Kimsey

Amisega species are characterized by: narrow metanotum, less than half as long as scutellum; malar space less than one-eighth eye height; underside of head with long narrow fovea on either side of midline of genal bridge (= suboral fovea); propodeum without lateral angles; mesopleuron without oblique mesopleural carina, and pronotum without medial groove or anterior and lateral carina.

Species distinctions in this group are difficult, and color patterns tend to be more useful than structural measurements. Unfortunately, unlike most chrysidids, male *Amisega* tend to be structurally

conservative and have few color differences between species. Because of this difficulty with males, holotypes of most of the following new species are females.

***Amisega belizensis* Kimsey, new species**

Holotype female. Body length 3.5 mm. Face with fine striatiform punctures, scapal basin densely cross-ridged; malar space 1.3 MOD; eye in lateral view widest at midline; postocellar area covered with fine transverse striae and punctures; F-I 4× as long as broad; F-II length 2.5× breadth; pronotum and scutum covered with striatiform punctures, with transverse striae on pronotum; scutum without notauli; scutellar punctures irregularly spaced 0.2–2.0 PD apart, faintly striatiform anteriorly; mesopleuron with punctures densely clumped on anterior half, posterior area smooth and impunctate; propodeal enclosures smooth and impunctate; T-I and III-IV nearly impunctate, except for a few widely scattered tiny punctures; T-II with small anteromedial patch of tiny punctures, otherwise impunctate. Head, pronotum, scutum, scutellum and metanotum coppery; rest of thorax and propodeum with faint blue-green tint; terga black, except T-I-II with a lateral bluish spot; antenna dark brown; legs, including coxae, red, except posterior half of hind-femur dark brown; wings brown-stained with unstained medial stripe across wing at stigma.

Male. Same as female, except wing color fainter, body with green tints, coxae and femora dark brown, and tibiae and tarsomeres red.

Holotype female—BELIZE: Middlesex, 125m, 15 April 1965, E. C. Welling (OTTAWA). Paratypes: 1 female and 2 males, same data as type except 27 April 1965, 3 April 1965 and 15 March 1965.

Discussion. The female of *belizensis* can be readily distinguished by the pale legs, coppery head and thorax and banded wings. Males are more difficult to distinguish but their legs tend to be pale apically, the notauli are essentially absent and the mesopleural punctation is distinctive.

***Amisega bennetti* Kimsey, new species**

Holotype female. Body length 3 mm. Face with fine contiguous punctures; scapal basin cross-ridged with scattered punctures; malar space 1.2 MOD; eye in lateral view widest at midline; F-I length 4×

breadth; F-II length $2\times$ breadth; postocellar area finely transversely striate, with scattered punctures 1–3 PD apart; pronotum, scutum and scutellum covered with fine transverse striae and small shallow punctures 1–3 PD apart; scutum with notauli present posteriorly and absent anteriorly; mesopleuron smooth with moderate punctures along anterior half, 0.2–1.0 PD apart; propodeal enclosures smooth and impunctate; T-I with transverse band of small punctures along posterior margin; T-II with small punctures clumped anteromedially; T-III-IV with tiny punctures along posterior margin. Face with green highlights; vertex coppery; thorax with bluish green highlights; abdomen dark brown without metallic highlights; antenna dark brown, except F-I yellow; legs including coxae yellow.

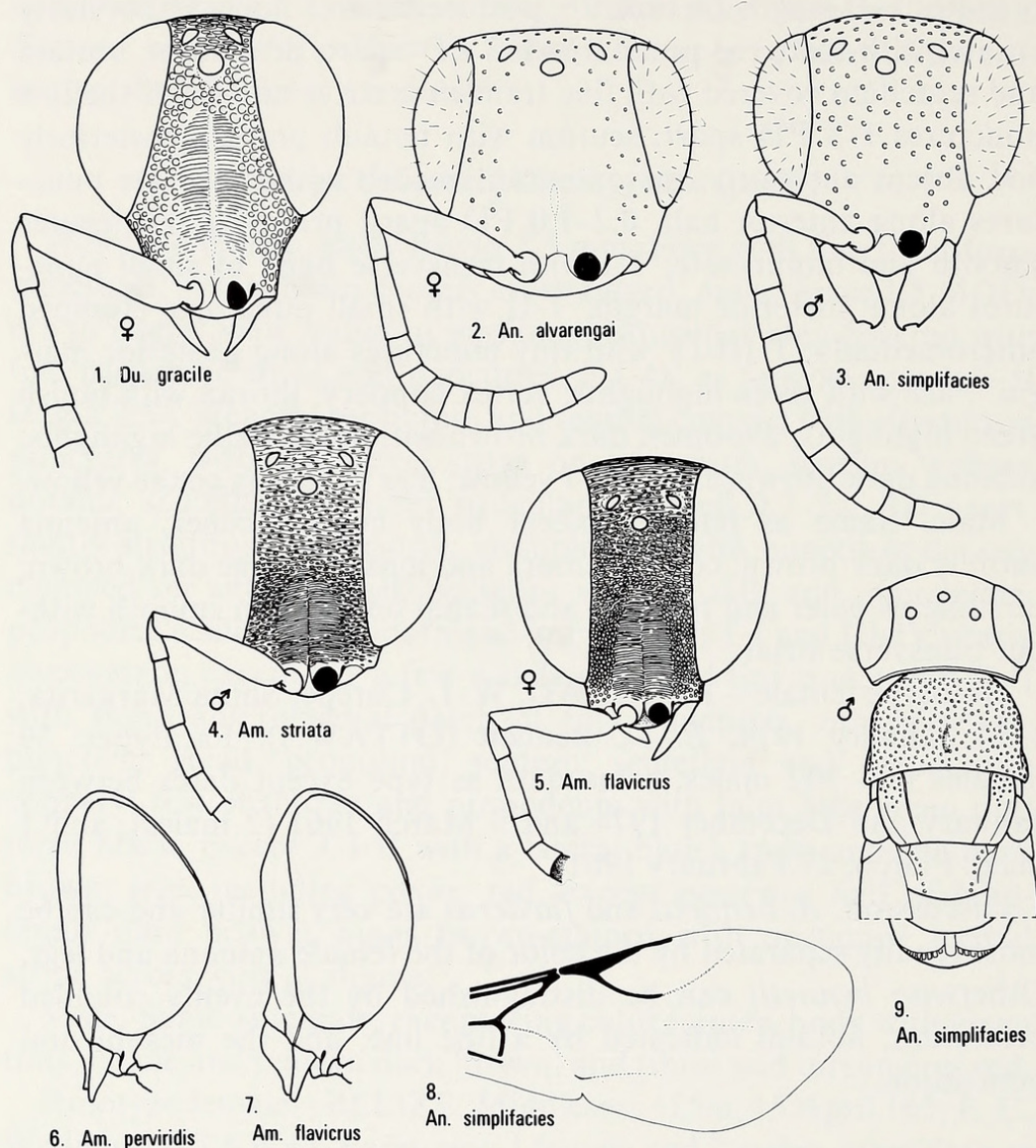
Male. Same as female, except body color greener; antenna entirely dark brown; coxae, femora and most of tibiae dark brown; tarsomeres paler and reddish, and scapal basin often smooth without transverse striae.

Holotype female—TRINIDAD, W. I., Curepe, Santa Margarita, 1–14 January 1974, E. D. Bennett (OTTAWA). Paratypes: 59 females and 302 males, same data as type except dates between January and December 1974 and 3 March 1961 (2 males), and 1 male: Piarco, 27 February 1961.

Discussion. *A. bennetti* and *flavicus* are very similar and can be most readily separated by the color of the female antenna and legs. Otherwise *bennetti* can be distinguished by the evenly rounded pronotum, notauli indicated by a fine line; and the mesopleural punctation.

***Amisega bicolor* Kimsey, new species**

Holotype female. Body length 3.5 mm. Scapal basin with smooth impunctate areas, without cross-ridging; frons to postocellar area appearing granular with contiguous small punctures and without striae; pronotum, scutum and scutellum same as vertex, without striae; malar space 1.5 MOD; eye in lateral view widest medially; F-I $4\times$ as long as broad; F-II length twice breadth; mesopleuron with dense nearly contiguous punctures on anterior two-thirds, posterior part smooth and largely impunctate; dorsal propodeal enclosures finely rugose; T-I with few very scattered punctures; T-II with small anteromedial clump of punctures. Head, scape and thoracic dorsum



Figs. 1-5. Front view of face. Figs. 6, 7. Lateral view of head. Fig. 8. Forewing, apical two-thirds. Fig. 9. Dorsal view of head and thorax, with wings removed. Am = *Amisega*, An = *Anadelphe*, Du = *Duckeia*.

brassy green; rest of thorax greener; pedicel and flagellum dark brown; legs, including coxae, yellow, except apex of hindfemur brown; terga black except I with anterior face reddish brown and posterolateral corners bluish.

Paratype females with cross-ridging in scapal basin and transverse striae on vertex.

Male. Same as female, except somewhat darker on T-I and II with more punctures.

Holotype female—MEXICO: Sinaloa, 20 mi. e. Concordia, 3000 ft., 12 August 1964, W. R. M. Mason (OTTAWA). Paratypes: 3 males and 3 females; Sinaloa: 5 mi w. El Palmito, 5000 ft., July 1964, W. R. M. Mason and L. Kelton (2 males, 3 females); Veracruz: Catemaco, 1100 ft., 16–18 June 1969 (1 male).

Discussion. Of the species with pale legs *bicolor* most closely resembles *striata*, based on the sculpture of the mesopleuron and propodeal enclosures. *A. bicolor* can be distinguished by the bicolored hindfemur, the entirely dark scape and bluer thoracic color.

***Amisega chiapana* Kimsey, new species**

Holotype female. Body length 3 mm. Face finely cross-ridged in scapal basin, with transversely striatiform punctures on frons and vertex; malar space 2 MOD; eye in lateral view widest at midline; postocellar area with fine transverse striae and punctures; F-I length $3.5\times$ breadth; F-II length twice breadth; pronotum, scutum and scutellum with punctures striatiform; scutum with notauli only indicated faintly anteriorly; mesopleuron with dense punctures on anterior two-thirds, posterior third polished and impunctate above scrobe, rugose below; propodeal enclosures finely striate; T-I-II with very scattered punctures. Head and thorax with light green tints laterally; antenna dark brown, except scape yellow; coxae, trochanters and base of femora yellow, rest of foreleg yellowish brown, rest of mid and hindleg brown; wings brown stained.

Male. Same as female, except head and thorax blue-green, legs and antenna entirely dark brown, and T-II usually with small antemedial patch of punctures.

Holotype female: MEXICO: Chiapas, 20 mi. n. Bochil, 5700 ft., Yerba Buena, 24 June 1969 (OTTAWA). Paratypes: 2 males and 7 females; same data as type (2 males, 5 females); Yerba Buena, 5800 ft., 18 June 1969, Mason (2 females); Chiapas: se. side of Cerro Tres Picos, 28 May 1972, D. E. Breedlove (1 female).

Discussion. This species belongs to the group that has dark legs even in the females. *A. chiapana* most closely resembles *evansi* based on the finely sculptured propodeal enclosures, densely punctate mesopleuron and obsolescent notauli. It can be distinguished

from *evansi* by the long malar space and pale female scape and legs basally.

***Amisega flavicrus* Kimsey, new species**
(Figs. 5, 7)

Holotype female. Body length 3.5 mm. Face long and narrow (fig. 5), appearing granular, with fine contiguous punctures; scapal basin finely cross-ridged; malar space 1.3 MOD; eye in lateral view widest slightly above midline (fig. 7); F-I 4× as long as broad; F-II length 2× breadth; postocellar region transversely striate with small punctures 2–4 PD apart; pronotum more coarsely transversely striate, becoming smooth along posterior margin, punctures small and scattered 1–4 PD apart; scutum with some cross-striate between notauli and parapsides, notauli strong posteriorly and faint anteriorly, punctures 1–2 PD apart; scutellum smooth, punctures 2–5 PD apart; propodeal enclosures smooth and impunctate; mesopleuron smooth with punctures clumped along anterior half, nearly contiguous; T-I with transverse band of small punctures before posterior margin; T-II with large anteromedial zone of small punctures; T-III-IV with transverse band of small punctures before posterior margin; T-II with large anteromedial zone of small punctures; T-III-IV with transverse band of dense small punctures along posterior margin. Face green with brassy tints medially, thorax with greenish tints; terga blackish, except lateral triangular spot on T-I bluish; scape dorsobasally dark brown; remainder of scape, pedicel and F-I-III yellow, apical flagellomeres dark brown; legs, including coxae yellow; wings brown-tinted.

Male. Same as female except body color darker, and antenna and legs dark brown.

Holotype female—TRINIDAD: W. I. Curepe, CIBC lab. grounds, 14–28 May 1974, E. D. Bennett (OTTAWA). Paratypes: 75 males, 46 females; same data as type, except dates between January 1974 and January 1977 (57 males, 42 females); St. Augustine (2 males); Simla, 5 mi. n. Arima (3 males, 3 females); Morne Bleu (3 males); Curepe (2 males); Piarco (2 males), Arima Ward, Aripo Valley (1 male), Trinidad (6 males, 2 females).

Discussion. *A. flavicrus* females are distinctly colored and can be immediately recognized by the brassy green head and thoracic color, and yellow legs and scape to F-III. Both sexes have a long narrow

face and the pronotum appears slightly depressed sublaterally. Males of *flavicus* closely resemble those of *bennetti* but can be distinguished by the shape of the pronotum and the densely cross-striate face.

***Amisega flavipes* Kimsey, new species**

Holotype female. Body length 3 mm. Scapal basin with dense transverse striae; vertex punctures touching to 2 PD apart; postocellar area without transverse striae except at posterior margin; malar space 1.5 MOD; F-I length 4× breadth; F-II length 2.3× breadth; pronotum coarsely transversely striate; scutum without notauli or transverse striae, scutellum without transverse striae; mesopleuron less than half punctate, posterior part smooth and impunctate; propodeal enclosures smooth; T-I with narrow transverse band of small punctures; T-II with anteromedial punctate area; T-III-IV with few minute punctures. Head and thorax, including propodeum blue; antenna dark brown, except scape paler beneath; legs including coxae yellow; terga blackish; wing membrane faintly brown-stained.

Male. Same as female except darker; scape entirely dark; legs dark brown, except fore and midtibiae and basal tarsomeres yellowish; T-II with purple tints.

Holotype female—BRAZIL: Bahia, Encruzilhada, November 1975, M. Alvarenga (GAINESVILLE). Paratypes—4 males and 8 females, same data as type, except some also collected by Seabra and Oliveira.

Discussion. *A. flavipes* is one of the 3 South American species with yellow legs and dark antenna in the female. It can be distinguished from *perviridis* and *semiflava* by the entirely yellow legs, black T-II, and the dorsum of the head without striation. Males can be recognized by the long malar space, purple T-II, dark legs and striate scapal basin.

***Amisega perviridis* Kimsey, new species**
(Fig. 6)

Holotype female. Body length 4 mm. Face appearing granular, with fine contiguous punctures; scapal basin with small triangular zone of fine cross-ridging; malar space 1.2 MOD; eye in lateral view

widest below midline, strongly tapering dorsally (fig. 6); F-I length $4\times$ breadth; F-II length twice breadth; postocellar region covered with fine transverse striae, with scattered punctures 0.2–4 PD apart; pronotum covered with transverse striae; scutum and scutellum with sparser transverse striae, punctures 1–2 PD apart; notauli present posteriorly, obsolescent anteriorly; mesopleuron smooth with larger contiguous punctures along anterior half; propodeal enclosures smooth with scattered tiny punctures; T-I with narrow band of small punctures along posterior margin; T-II with dense small punctures anteromedially; T-III-IV with dense small punctures along posterior margin. Face brassy green with some coppery highlights around ocelli; thorax with green highlights becoming brassy dorsomedially; abdomen dark brown with blue highlights posterolaterally on T-I and medially on T-II; antenna dark brown; wings brown-tinted; legs including coxae yellow, except apical tarsomeres brown.

Male. Same as female except terga tend to be bluer.

Holotype female—TRINIDAD: W. I. Curepe, 1–14 January 1974, E. D. Bennett (OTTAWA). Paratypes: 2 females and 11 males, same data as type except dates between January 1974 and January 1975; 1 male: S. Grande, Turrence Rd., April 1969, H. and A. Howden.

Discussion. This is another species from Trinidad. It can be distinguished from *bennetti* and *flavicrus* by the larger size, broader head and entirely dark female antenna. Other diagnostic features of *perviridis* are the short malar space, pale legs in both sexes, scutum without transverse striae and mesopleuron with punctures on anterior half or less.

***Amisega rufilateralis* Kimsey, new species**

Holotype female. Body length 4 mm. Face with small dense punctures, smooth between, scapal basin densely cross-ridged; malar space 1.3 MOD long; eye in lateral view widest below midline; postocellar area punctate without transverse striae; F-I length $4\times$ breadth; F-II length $2.5\times$; pronotum, scutum, and scutellum punctate without striation; mesopleuron with anterior half punctate, posterior part smooth and impunctate; propodeal enclosures smooth and impunctate; terga with dense tiny punctures. Vertex, pronotum, scutum, scutellum and metanotum greyish blue; face and

propodeum bright blue; T-I reddish basally, T-II reddish laterally, rest of abdomen black; antenna dark brown; fore and midfemora and hindleg dark brown, fore and midtibiae and tarsi red; wing membrane brown-stained.

Male. Same as female, except F-I length $3.5\times$ breadth; head and thorax concolorous.

Holotype female—BRAZIL: Guanabara, Repressa de Rio Grande, April 1966, M. Alvarenga (GAINESVILLE). Paratypes: 1 male and 12 females—Santa Catarina, Nova Teutonia, various dates from January 1961 to March 1965, F. Plaumann; 6 females—same data as type, except various dates from May 1966–June 1967.

Discussion. *A. rufilateralis* most closely resembles *aeniceps* based on the dark legs, smooth propodeal enclosures and dorsum without transverse striae. Diagnostic characteristics include T-I black medially and reddish laterally, the suboral fossae nearly reach the occiput, and particularly in females the propodeum is much bluer than the rest of the thoracic dorsum.

***Amisega semiflava* Kimsey, new species**

Holotype female. Body length 3.5 mm. Scapal basin with fine dense transverse striae; frons and ocellar area without striation; postocellar area sparsely striate, becoming dense along posterior margin; malar space 1.2 MOD; eye in lateral view widest slightly below midline; F-I length $3.8\times$ breadth; F-II length twice breadth; pronotal punctures striatiform; scutum and scutellum without transverse striae; scutal notauli well-developed; mesopleuron with anterior half punctate, posterior part polished and impunctate; propodeal enclosures smooth; terga with sparse fine punctures. Head and thoracic dorsum dark greyish green; antenna blackish; legs including coxae yellow, except apex of femora and tarsomeres dark brown; wings evenly brown-stained; terga black without metallic highlights.

Male. Unknown.

Holotype female—BRAZIL: Goias, Jatai, November 1972, F. M. Oliveira (GAINESVILLE). Paratypes—4 females, same data as type; 5 females—Mato Grosso, Itaum Douarados, March 1974, M. Alvarenga; 1 female—Mato Grasso, Sinop, February 1967, O. Roppa.

Discussion. This is the only South American *Amisega* species with dark antennae, strongly bicolored legs, non-metallic abdomen and sparse transverse striation on the thorax.

***Amisega similis* Kimsey, new species**

Holotype male. Body length 3 mm. Scapal basin with dense fine transverse striae; rest of head densely punctate without striation; malar space 1.3 MOD long; eye in lateral view widest below midline; F-I length $3.5\times$ breadth; F-II length $2.2\times$ breadth; pronotum, scutum and scutellum without striation; notauli complete; mesopleural anterior half punctate, posterior part smooth and impunctate; propodeal enclosures smooth; terga with dense small punctures; head and thoracic dorsum blue; terga dorsally bright blue; antenna dark brown; fore and midfemora and hindlegs dark brown, fore and mid tibiae and tarsi pale yellowish brown; wing membrane brown-stained.

Female. Unknown.

Holotype male—BRAZIL. Guanabara, Represa Rio Grande, March 1972, F. M. Oliveira (GAINESVILLE). Paratypes—26 males, same data as type except various dates between 1968 and 1972; 1 male—Rio de Janeiro, Mangaratiba; 6 males—Rio de Janeiro, Guanabara; 1 male—Minas Gerais, Pedra Azul; 7 males—Pernambuco, Carvary; 5 males—Bahia, Encruzilhada.

Discussion. The most distinctive features of this species are the bright blue terga, and bicolored fore and midleg. Otherwise, *similis* closely resembles *aeniceps*.

***Amisega striata* Kimsey, new species**
(Fig. 4)

Holotype female. Body length 4 mm. Face (fig. 4) short and broad, $1.1\times$ as broad as long, with fine striatiform punctures; face and vertex finely cross-striate; scapal basin finely cross-ridged with striatiform punctures laterally; malar space 1 MOD long; eye in lateral view broadest at midline; F-I length $3\times$ breadth; F-II length twice breadth; thoracic dorsum completely transversely striate with sparse striatiform punctures; mesopleuron sparsely striate below wing base, otherwise smooth with dense punctures along anterior half; propodeal enclosures striate; scutum with notauli obsolescent;

T-I with punctures along posterior margin; T-II with dense punctures on anterior two-thirds; T-III-IV with transverse band of dense punctures. Head and thorax with bluish green highlights, except ocellar triangle brassy; abdomen dark brown, except blue tints laterally on T-I-II; antenna dark brown, except ventral half of scape red; legs reddish brown becoming darker on mid and hindcoxa, and hindleg brown; wings brown-tinted.

Male. Same as female, except slightly darker.

Holotype male—COSTA RICA: Guanacaste, Junquillal Beach, 3 March 1976, R. M. Bohart (DAVIS). Paratypes: 1 male, same data as type; 1 male and 1 female—Santa Rosa Park, 5 November 1977 and 23 July 1977, D. H. Janzen.

Discussion. The most distinctive characteristic of *striata* is the extensive transverse striation of the head, thoracic dorsum and entire propodeum. In addition this species can be distinguished by the reddish brown legs, scape ventrally pale and thoracic dorsum brassy or with some brassy tints (in males).

***Amisega tenebrae* Kimsey, new species**

Holotype female. Body length 3.5 mm. Scapal basin with dense transverse striae; rest of head punctate without striation; malar space 1.2 MOD long; F-I length 4× breadth; F-II length twice breadth; pronotum, scutum and scutellum punctures 1–3 PD apart and shallow, without striation; mesopleuron anterior half punctate, posterior part smooth and impunctate; scutal notauli complete; propodeal enclosures smooth; terga with sparse fine punctures, T-II punctures clumped anteromedially. Head and thoracic dorsum dark with faint bluish tints; antenna dark brown; legs dark brown, except fore and midtibiae and tarsi paler; wings evenly brown-stained; terga black, without highlights.

Male. Same as female, except head and thorax bluer, and malar space 1.5 MOD long.

Holotype female—BRAZIL: Teresopolis, 11 March 1966, H. Townes (GAINESVILLE). Paratypes—5 males and 3 females, same data as type; 6 males—Sao Paulo, S. J. Barreiros, Serra da Bocaina, January 1–13, 1969, Porter and Garcia; 1 male—Santa Catarina, Nova Teutonia, November 1971, F. Plaumann.

Discussion. This species closely resembles *rufilateralis* and the males of these 2 are nearly indistinguishable. Diagnostic features of

tenebrae are: the dark legs, antennae and weakly metallic thoracic dorsum, black T-II, striate scapal basin and smooth propodeal enclosures.

Anadelphe Kimsey, new genus

Diagnosis. Malar space without vertical sulcus; occipital carina complete and well-developed; scapal basin flattened and smooth; flagellum short and fusiform in both sexes (figs. 2, 3); male mandibles broad and flattened with 2 small apical teeth (fig. 3); pronotum about as long as scutum, without medial groove or pit and without pit before lateral lobe; scutum with well-developed parapsides and deep notauli; mesopleuron with omaulus and without scrobal sulcus; metanotum $0.7\times$ as long as scutellum, with elevated medial area without differential sculpturing or punctation (fig. 9); propodeum with long dorsal surface evenly rounded to steep posterior declivity, laterally rounded; tarsal claws with slender medial tooth; hindcoxa without dorsobasal carina; both sexes fully winged; forewing (fig. 8) RS extended by evenly curved dark streak, R1 $0.5\times$ as long as stigma or longer, medial vein arising before cu-a; terga rounded laterally.

Type: *Anadelphe simplifacies* Kimsey

Etymology: *An* = not, *Adelpha* = sister (Greek, feminine).

Discussion. *Anadelphe* appears to be most similar to *Adelphe* based on the unusual male mandibles, complete occipital carina, long ocular setulae, thickened clypeal apex, dentate tarsal claws, and propodeum with long dorsal surface. However, the absence of a pronotal carina and scrobal sulcus and no lateral propodeal angles immediately distinguish *Anadelphe* from *Adelphe*. In addition, *Anadelphe* differs from all the other American amisegines due to the long metanotum and the malar space with an obsolescent vertical sulcus.

Anadelphe alvarengai Kimsey, new species

(Fig. 2)

Holotype female. Body length 3 mm. Face (fig. 2) broad and highly polished; scapal basin flat, impunctate; brow with punctures shallow and small, 1–3 PD apart; malar space 2.5 MOD; subantennal distance 0.5 MOD; clypeus broad and projecting slightly

medially; midocellus 2.7 MOD from ocular margin, hindocellus 0.8 diameters from ocular margin; F-I length $3.5\times$ breadth; F-II $0.6\times$ as long as broad; pronotum $1.2\times$ as long as scutum, punctures large, shallow and faint; mesopleuron polished, with minute scattered punctures and smooth, broad and shallow depression along posterior margin; scutum, scutellum, metanotum, propodeum and abdominal segments highly polished and essentially impunctate. Head, metathorax and propodeum black; prothorax, scutum and scutellum orange; mesopleuron brownish orange anteriorly, posterior margin and ventral surface black; mandibles yellow medially, brown marginally; scape, pedicel and F-I-II yellow, apical flagellomeres dark brown; coxae and legs yellow; abdomen brown; wings lightly brown-tinted.

Male. Unknown.

Holotype female—BRAZIL: Mato Grosso, Itaum Dourados, March 1974, M. Alvarenga (OTTAWA).

Discussion. The orange coloration and smooth sparsely punctate integument will distinguish *alvarengai* from *simplifacies*. Other diagnostic features of *alvarengai* are the short, broad face and broadly rounded clypeus.

Anadelphe simplifacies Kimsey, new species
(Figs. 3, 8, 9)

Holotype male. Body length 2.5 mm. Face (fig. 3); scapal basin flat, impunctate; brow with punctures 0.5–1.0 PD apart; malar space 2.4 MOD; subantennal distance 1 MOD; clypeus projecting medially; midocellus 3 MOD from ocular margin; hindocellus 0.8–0.9 diameters from ocular margin; F-I length $1.9\times$ breadth; F-II $1.6\times$ as long as broad; pronotum (fig. 5) about as long as scutum medially, punctures 0.2–0.8 PD apart; scutum, scutellum and metanotum shiny, with sparse minute punctures; mesopleuron with large irregularly spaced punctures and shallow, broad, roughened depression along posterior margin, extending from scrobe to mid-coxa; propodeum posteromedially rugose, laterally smooth and impunctate; abdominal segments shiny, flattened and impunctate. Head and most of thorax black, except scutum dark brown and scutellum lighter brown; mandibles yellowish brown; scape and

pedicel yellow; flagellum dark brown; coxae dark brown; trochanters yellowish brown; femora brown, becoming yellow apically; tibiae and tarsi yellow; wings lightly brown-tinted; abdominal segments brown.

Female. Unknown.

Holotype male—ECUADOR: Pastaza, 22 km sw Puyo, 900 m, 14–16 July 1976, S. and J. Peck (OTTAWA).

Discussion. In *simplifacies* the face is longer and narrower than *alvarengai* and the clypeus is angulate medially.

***Duckeia gracile* Kimsey, new species**
(Fig. 1)

Holotype female. Body length 3.5 mm. Face (fig. 1), long and narrow, $0.9\times$ as long as broad; scapal basin long and densely cross-ridged; midocellus 1 MOD from ocular margin; malar space 3.3 MOD; subantennal distance 0.4 MOD; genal flange small and short; occipital carina absent dorsally; facial punctures coarse and contiguous; eyes strongly converging dorsally; F-I length $2.9\times$ breadth; F-II $1.3\times$ as long as broad; pronotum $0.9\times$ as long as scutum, narrower than head; scutum with parapsides and notauli complete and well-developed, notauli strongly converging posteriorly; mesopleuron with small, simple scrobal pit and impunctate stripe along posterior margin; metanotum $0.4\times$ as long as scutellum; thoracic dorsum with contiguous shallow punctures becoming smaller on scutum and scutellum, metanotal punctures contrastingly deeper and larger; forewing with brown spot across stigma and RS; propodeum with posterior surface coarsely rugose between carinae; abdominal punctures small, shallow and 0.5–1.0 PD apart. Body dark brown, except head with blue tints, antenna dark brown; legs, including coxae dark brown becoming red on tarsi, mesopleuron with ventral and posterior reddish stripe and T-II with faint bluish tint on lateral margin.

Male. Same as female.

Holotype female—BRAZIL: Represa Rio Grande, Guanabara, July 1972, M. Alvarenga (OTTAWA).

Discussion. The most distinctive features of this species are the slender compressed body, narrow face, the faint metallic color and

the weak abdominal punctation. These characteristics will immediately distinguish *gracile* from *cyanea* Costa Lima.

***Duckeia vagabunda* Kimsey, new species**

Holotype female. Body length 3.3 mm. Scapal basin long and densely cross-ridged; midocellus 2.5 MOD from ocular margin; malar space 4.3 MOD; subantennal distance 0.7 MOD; genal flange slightly shorter than eye height; occipital carina complete dorsally; facial punctures coarse and contiguous; F-I length $2.6\times$ breadth, F-II $1.2\times$ as long as broad; F-V length $0.9\times$ breadth, pronotum $0.9\times$ as long as scutum, about as broad as head posteriorly; scutum with parapsides clearly indicated and notauli faint; mesopleuron with small, simple scrobal pit and impunctate stripe along posterior margin; metanotum $0.4\times$ as long as scutellum; thoracic dorsum with coarse contiguous punctures, becoming only slightly smaller on scutellum and metanotum, metanotal punctures deeper; forewing with brown spot across stigma and RS; propodeal dorsal enclosures smooth and polished medially and evenly rugose along margins, posterior surface smooth with scattered punctures; abdominal punctures coarse, contiguous and subequal to thoracic punctures. Body bright metallic blue, except antenna, legs and tegular dark brown, becoming paler on tarsi.

Male. Unknown.

Holotype female—MEXICO (WASHINGTON) reared from phasmatid egg on leaf of *Chamaeodora oblongata* from quarantined material arriving on airplane in Memphis, Tennessee, 27 March, 1962. Phasmatid egg probably that of *Prisopus berousus* Westwood according to label. Paratype female reared from phasmatid egg on palm leaf in quarantine material arriving in San Antonio, Texas, by airplane from Mexico.

Discussion. *Duckeia vagabunda* most closely resembles *cyanea*, having a more robust body than *gracile*. It can be distinguished from *gracile* by the greater distance between the midocellus and eye, longer malar space and bright blue coloration. *D. vagabunda* differs from *cyanea* in having the eye encircled by a faint carina versus a pronounced one in *cyanea*, the female flagellomeres not lobulate and F-V not less than $0.9\times$ breadth. The paratype female closely resembles the holotype except that the legs and scape are reddish.

SUMMARY

One new genus, and new species, *Anadelphe* (*simplifacies* and *alvarengai*) are described. In addition, *Mesitiopterus* is synonymized under *Amisega*, and 10 new species of *Amisega* are described. Two new species of *Duckeia* are also described.

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