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Notes on some species of *Coccophagus* Westwood,
Coccophagoides Girault, *Encarsia* Foerster and *Encarsiella*
Hayat (Hymenoptera: Aphelinidae), mainly from the
nearctic and neotropical regions

In an attempt to clarify the generic placement and the diagnostic characters of poorly known species of *Encarsia* Foerster and allied genera, the type material of twenty-one species has been restudied. Revisional notes and illustration of the key-characters have been provided.

ABBREVIATIONS OF TYPE-DEPOSITORIES

- BPBM Bernice Pauahi Bishop Museum, Honolulu, Hawaii;
INHS Illinois Natural History Survey, Campaign - Urbana, Illinois, USA;
QM Queensland Museum, Fortitude Valley, Queensland, Australia;
UCR University of California, Riverside, California, USA;
USNM National Museum of Natural History, Washington, USA.

The curators of the entomological collections of the mentioned institutions are gratefully acknowledged for the loan of material.

Encarsiella aleurodici (Girault), n. comb.

Coccophagus aleurodici Girault, 1916. Entom. News 27: 401.

Prospaltella aleurodici, Compre, 1931. Proc. U.S. Nat. Mus. 78:11.

To the original description the following notes and illustrations are added (Fig. I,1-5):

Maxillary palpi 2-segmented; labial palpi 1-segmented; thorax with mesoscutum densely setose; axillae large, with 1 small seta on the basal part; scutellum with 2 pairs of setae; copulatory organ very well developed and of the same type as those of *Encarsia* species, phallobase length 0.285 mm.

Based on its characters this species is transferred to the genus *Encarsiella* Hayat¹. The type species *E. noyesi* Hayat appears closely allied to *aleurodici*, but the forewings have different features (HAYAT, 1983).

Material examined - 4 ♀ and 2 ♂ on one slide, type n. 20223 and 2 ♀ and 1 ♂ on points; 1 ♀ and 1 ♂ of the type-series, remounted on one slide by this author; all from *Aleurodiscus* sp. on *Theobroma bicolor*, Trinidad, British West Indies, December 1914, F.W. Urich (USNM).

Encarsia angelica Howard

Encarsia angelica Howard, 1895. U.S. Dept. Agr. Div. Ent., Tech Ser. 1:30.

The type specimen, mounted on a slide, shows the forewings overlapping the mesoscutum, on which no setae are visible.

This species can be best characterized on the basis of antenna, forewing and leg details. The antennal features are illustrated in the Fig. 1,6 and they closely correspond to those of the original description. The forewing has a row of 4 setae before the premarginal vein (= parastigma), a normal pilosity on the disc and a frige as long as one third the width of the disc. The middle and hind tibiae and tarsi are as in Fig. 1,7 and 8, with fore and hind tarsi 5-segmented and middle tarsi 4-segmented. The copulatory organ appears rather narrow and long.

Because of tarsal, antennal, and forewing characters, *E. angelica* is placed in the *formosa* species group (VIGGIANI & MAZZONE, 1979).

Material examined - 1 ♂, type n. 2705, reared from *Aleyrodes* on willow September 17, at Los Angeles, Cal., by Mr. D.W. Coquillett (USNM).

Encarsia aurantii (Howard)

Coccophagus aurantii Howard, 1894. U.S. Dept. Agr., Insect Life 6:231-232.

Prospaltella aurantii, Howard, 1894. Insect Life 7:6-7.

Prospaltella aurantii, Howard, 1908. Ann. Entom. Soc. Am. 1:283.

This species was misidentified by several authors, mainly because of lack of information concerning the ovipositor features. The illustrations reported in this paper (Fig. II,1-6) will clarify several aspects of *E. aurantii*.

Among the allied species (i.e. *E. herndoni* Girault, *E. perniciosi* Tower, etc.) *E. aurantii* can be distinguished by the very short ovipositor in combination with antennal and forewing features.

Material examined - 2 ♀ reared May 9, 1887, by D.W. Coquillett from *Aspidiotus aurantii*, var. *citrinus*, from San Gabriel, Cal., type n. 709 (USNM). The specimen encircled with black ink is hereby designated lectotype.

(¹) The synonymy of *Encarsiella* Hayat with *Encarsia* Foerster, proposed by SHAFEE & RIZVI (1984), is not accepted by the present author.

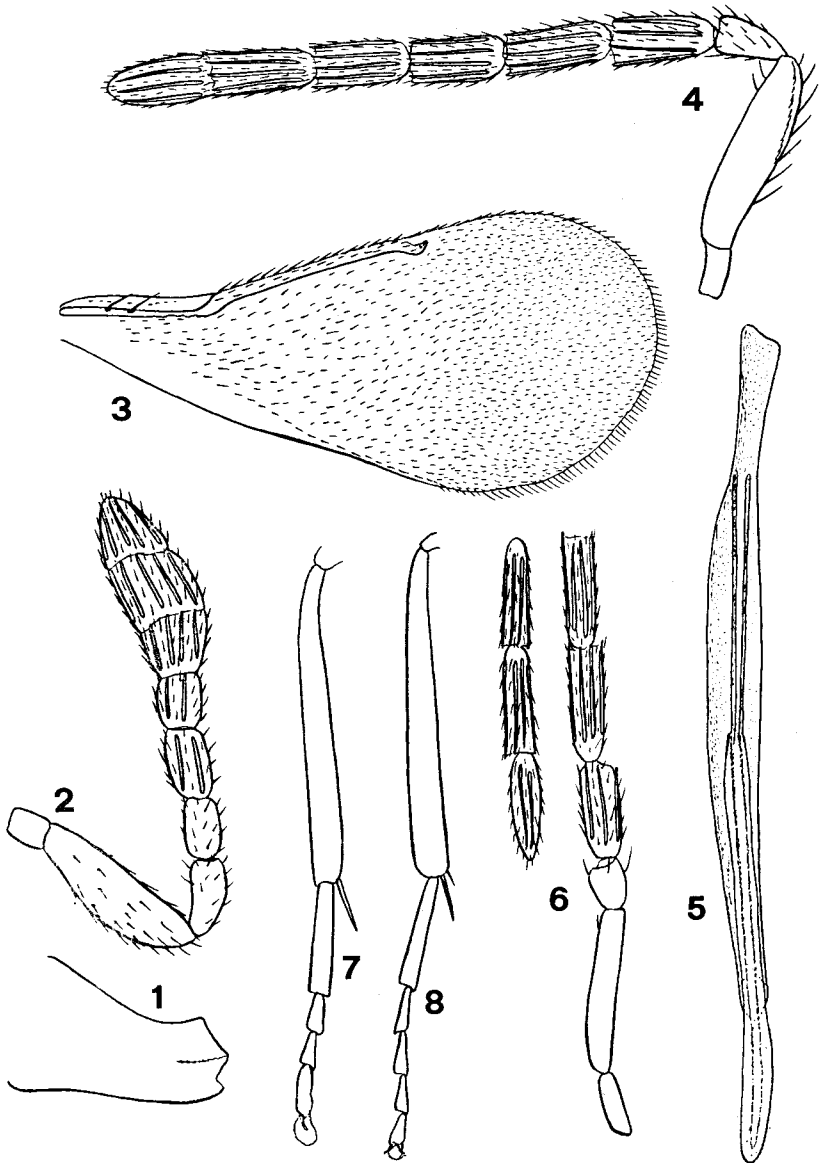


Fig. I - *Encarsiella aleurodici* (Girault). Female: 1. mandible; 2. antenna; 3. forewing. Male: 4. antenna; 5. copulatory organ. *Encarsia angelica* Howard. Male: 6. antenna; 7. middle tibia and tarsus; 8. hind tibia and tarsus.

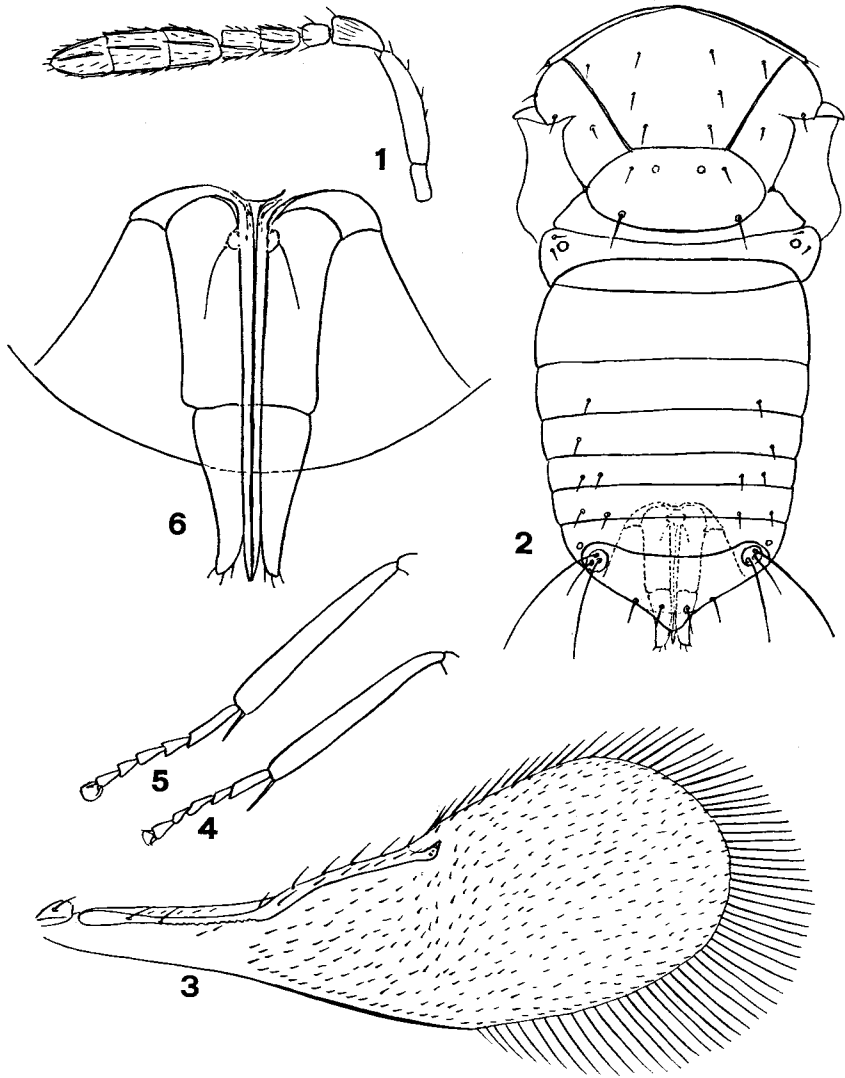


Fig. II - *Encarsia aurantii* (Howard). Female: 1. antenna; 2. thorax and gaster; 3. forewing; 4. middle tibia and tarsus; 5. hind tibia and tarsus; 6. ovipositor.

Encarsia bella (Gahan), n. comb.

Prospaltella bella Gahan, 1927. Proc. U.S. Nat. Mus. 71: 21.

The original description is rather detailed. The following notes are added: female antenna (Fig. III,1) apparently without linear sensilla on F1; forewing (Fig. III,2) with a row of 4 setae before the premarginal vein; tibial spur of middle leg as long as two-thirds of the corresponding basi-

tarsus (Fig. III,3); hind tibial spur about one half the length of the basitarsus (Fig. III,4); ovipositor rather short, with base at the level of the 7th tergite; valvula III somewhat short and wide, about one-fifth of the ovipositor length. Male antenna as in Fig. III,5.

Material examined - 1 ♀ holotype and 1 ♂ allotype, several paratypes, cat n. 29447 (USNM).

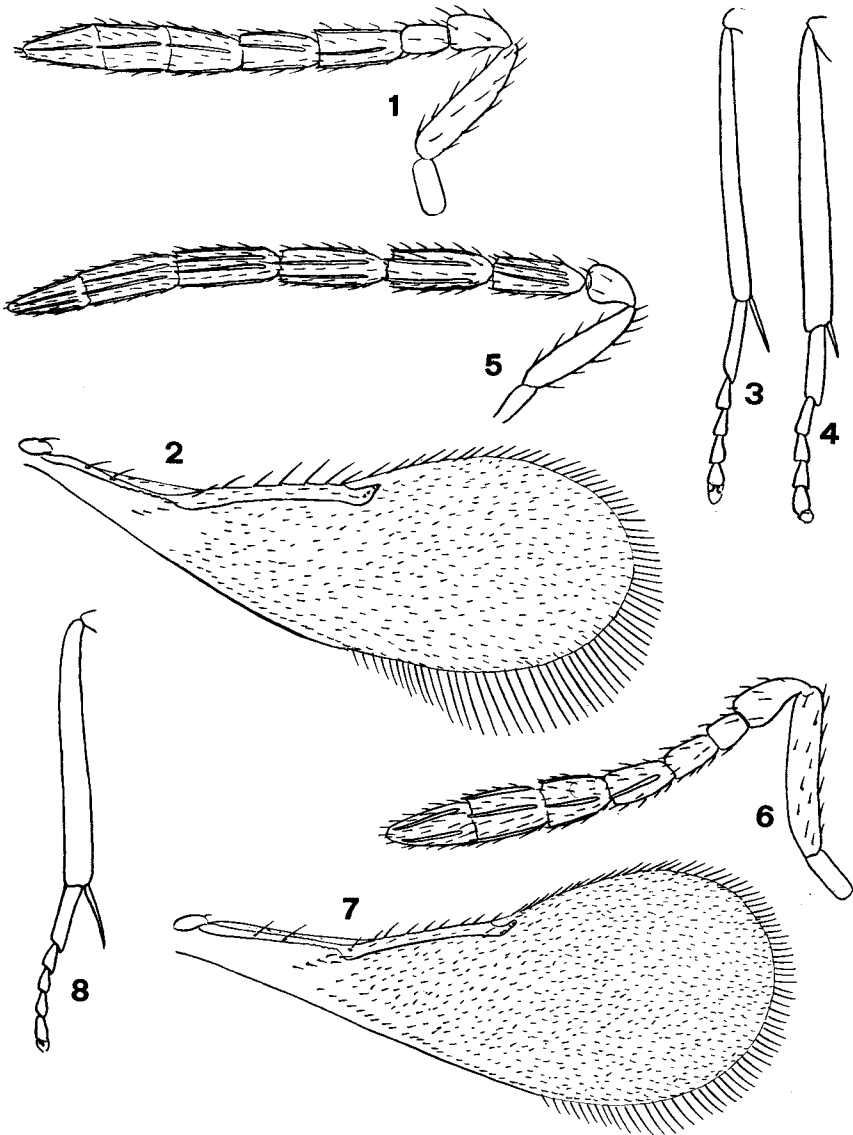


Fig. III - *Encarsia bella* (Gahan). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. Male: 5. antenna. *Encarsia bicolor* (Timberlake). Female: 6. antenna; 7. forewing; 8. middle tibia and tarsus.

Encarsia bicolor (Timberlake)

Prospaltella bicolor Timberlake, 1926. Proc. Haw. Ent. Soc. 6:310.

The original description is rather detailed. Additional notes: antennal funicle without linear sensilla on F1 and F2 (Fig. III,6); mesoscutum with 4-5 pairs of setae; forewing with a row of 6 setae before the premarginal vein (Fig. III,7) mid tibial spur and tarsus as in Fig. III,8; ovipositor slightly longer than one half the length of the gaster, with valvula III as long as one third of the length of the ovipositor.

Material examined - 1 ♀, holotype, remounted on slide by this author, reared from *Aspidiotus cydoniae* Comstock, on sugar-cane, Honolulu, Oahu, Mar. 2d. 24 (BPBM).

Encarsia brunnea (Howard), n. comb.

Prospaltella brunnea Howard, 1908. Ann. Ent. Soc. Am. 1:283.

To the very short original description the following notes are added: antenna (Fig. IV,1) with each funicular segment bearing 2-3 linear sensilla; mesoscutum with 2+2 setae; forewing (Fig. IV,2) with 2 setae before the premarginal vein, scattered discal ciliation and very short marginal fringe; middle and hind legs with tibial spur shorter than basitarsus (Fig. IV,3 and 4); ovipositor as long as hind tibia, with base at level of 3rd urotergite and not extruded.

Material examined - 1 ♀, holotype, n. 12165, reared from *Aleyrodes* sp. on a climbing vine, collected at Bayamon, Puerto Rico, January, 1899, by A. Busck (USNM).

Encarsia ciliata (Gahan), n. comb.

Prospaltella ciliata Gahan, 1927. Proc. U.S. Nat. Mus. 71:22.

The original description is rather detailed, but without illustrations. The following notes are added: antenna with linear sensilla as in Fig. IV,5; mesoscutum unusually setose, with about 11 pairs of setae; forewing (Fig. IV,6) with a row of 7 setae before the premarginal vein, with dense and rather long ciliation below the marginal vein; middle leg with tibial spur about as long as basitarsus (Fig. IV,7); ovipositor extends into the distal two-thirds of gaster; valvula III slightly longer than one third of the entire ovipositor.

Material examined - 1 ♀, holotype, reared by H.L. Dozier from *Aleurodicus*, Jan. 10, 1925, San Juan, Puerto Rico, cat. n. 29448 (USNM).

Encarsia herndoni (Girault), n. comb.

Prospaltella aurantii, Silvestri, 1930, nec Howard, 1894. Boll. Lab. Zool. Gen. Agr. Portici 25:49-51.

Coccophagus herndoni Girault, 1935. *Microhymenoptera Australiensis Nova*. Mostly Chalcididae. Priv. Publ.: 2.

Prospaltella elongata Dozier, 1937. *J. Agric. Univ. Puerto Rico* 21: 128.

Prospaltella elongata, Compere, 1961. *Hilgardia* 31: 267.

Prospaltella herndoni, De Santis, 1979. *Rev. Soc. Ent. Argentina* 38: 133-136.

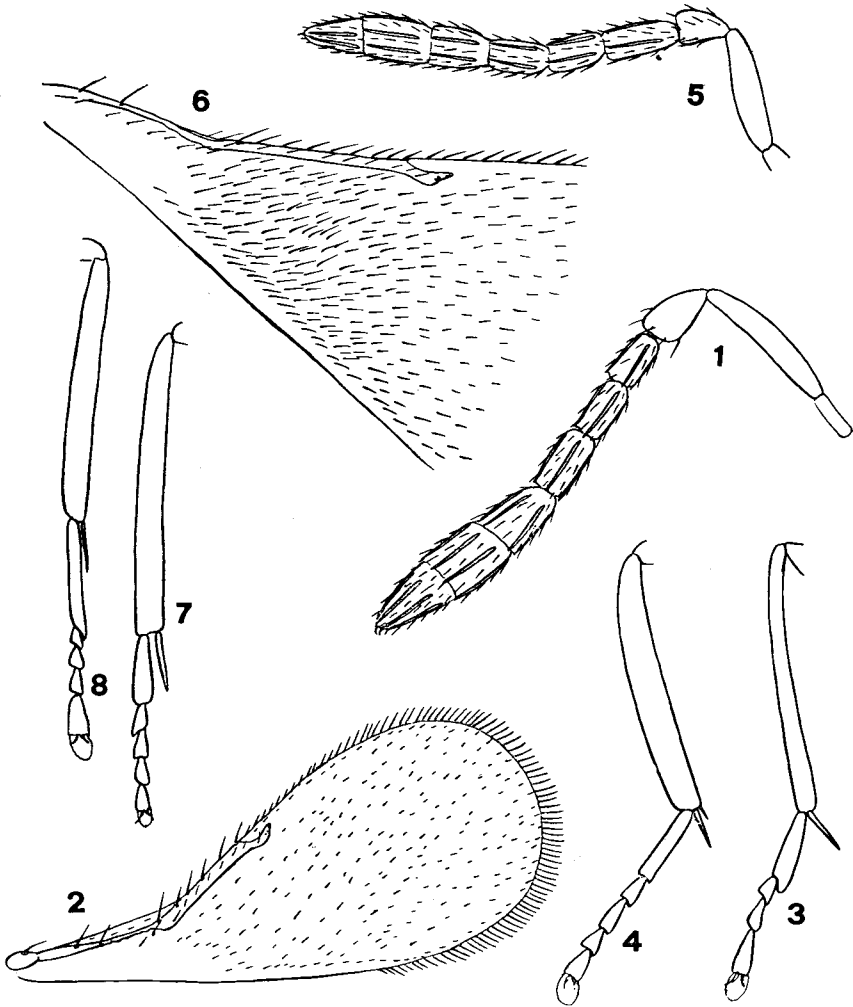


Fig. IV - *Encarsia brunnea* (Howard). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. *Encarsia ciliata* (Gahan). Female: 5. antenna; 6. basal part of forewing; 7. middle tibia and tarsus; 8. hind tibia and tarsus.

GIRAULT (1935) originally recognized that *Prospaltella aurantii* sensu SILVESTRI (1930) was different from *P. aurantii* Howard and named the Silvestri species *Coccophagus herndoni*. Subsequently COMPERE (1961)

pointed out that *P. aurantii* sensu Silvestri was the same as *Prospaltella elongata* Dozier.

After study of the type material of *P. aurantii* Howard, *P. aurantii* sensu Silvestri and *P. elongata* Dozier, the preceding combination is proposed by this author.

The original description of *elongata* was apparently based on a single female specimen mounted on a slide, with the wings stretched out to the side, on which the narrow and elongate shape of the body seems to be a slide artifact; the other paratype specimens on the same slide appear rather normal in this respect.

Some additional notes are given for the female, and the male is described.

Female. - Antenna (Fig. V,1) not particularly long and somewhat flattened, but just as in *aurantii*; mesoscutum with 4+2+2 setae; forewing (Fig. V,2) rather narrow, with fringe about as long as half discal width; tibial spur of middle leg slightly shorter than basitarsus (Fig. V,3); hind tibial spur about half of associated basitarsus (Fig. V,4); ovipositor inserted at the level of the 4rth urotergite as long as hind tibia; valvula III shortly exerted, not longer than hind basitarsus.

Male. - Similar to female except for more extensive brownish coloration and antennae. Antenna (Fig. V,5) with F1 and F2 more enlarged than F3, each with 5-6 linear sensilla; F2 ventrally with a special sensorial complex represented by a concavity in which 10-12 basiconic sensilla are located (Fig. V,6); copulatory organ typical of the genus.

Material examined - 1 ♀ holotype and 5 female paratypes, cat. 51681, reared from long scale *Lepidosaphes gloverii* on *Euonymus*, New Orleans, La., Jan., 1926, H.L. Dozier (USNM); 1 ♂ and 2 ♀, ex same host, Iran. 12.6.54 (UCR).

Coccophagoides fasciiventris (Girault), n. comb.

Prospaltella fasciiventris Girault, 1908. *Psyche* 15:117-120.

This species is allied to *murtfeldtii* Howard and it is placed in *Coccophagoides* Girault.

Material examined - 1 ♀, lectotype and 1 ♀ paratype from *Chionaspis furfura*, Urbana Ill., 4.III.1908, type access. 37481 (INHS).

Encarsiella magniclava (Girault), n. comb.

Coccophagus magniclavus Girault, 1916. *Ent. News* 27: 33-34.

The female of this species bears a large club with the third segment obliquely truncated (Fig. V,7); scutellum with 2 pairs of setae and the sub-

marginal vein of the forewing with 2 setae (Fig. V,8). Based on these characters this species is transferred to *Encarsiella* Hayat.

Material examined - 7 ♀, cat. n. 19343, reared from *Aleurochiton* species, Berlice, Demerara, British Guiana, March, 1913, G.E. Bodkin (USNM).

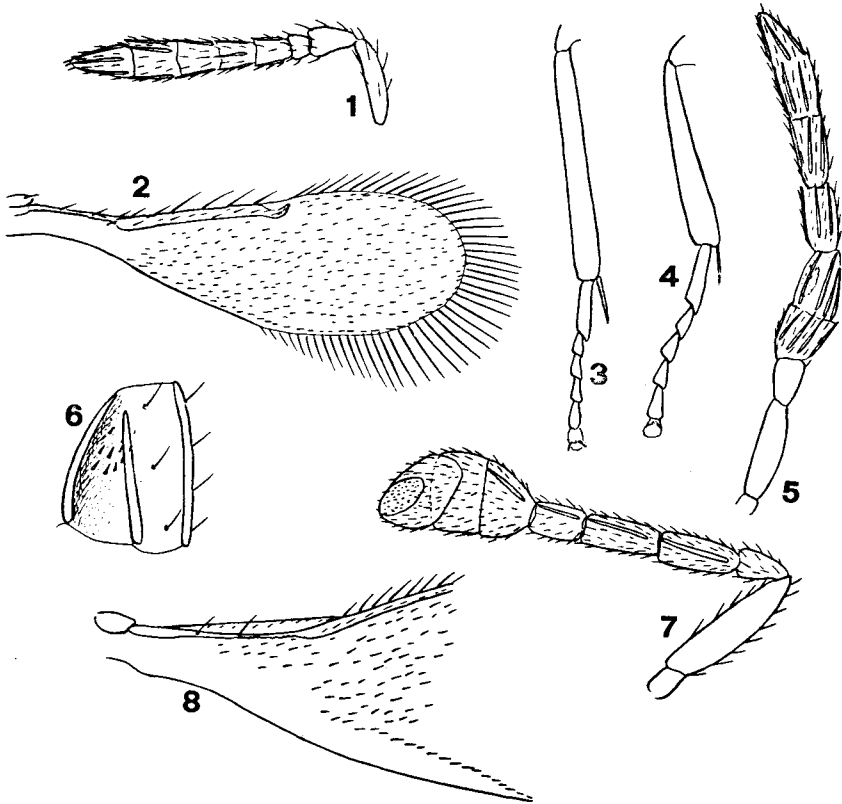


Fig. V - *Encarsia herndoni* (Girault). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. Male: 5. antenna; 6. second flagellar segment. *Encarsiella magniclava* (Girault). Female: 7. antenna; 8. basal part of forewing.

Encarsia nigrifemur (Girault), n. comb.

Prospaltella nigrifemur Girault, 1914. Proc. Ent. Soc. Wash. 16: 118.

The original description is basically correct. Additional notes: maxillary and labial palpi unisegmented; antenna (Fig. VI,1) with scape about 2.5 times as long as wide, pedicel shorter than F1, funicle not well distinct from the two-segmented club; flagellar segments, except the terminal one which is shorter, about twice as long as wide, each with 3-4 linear sensilla;

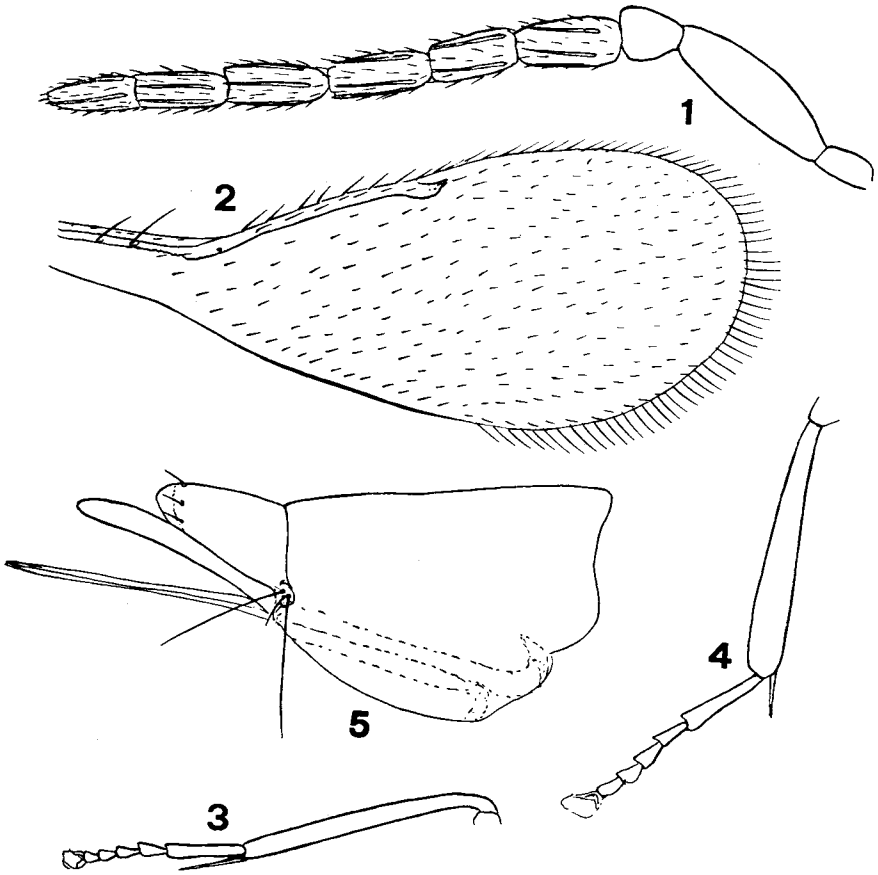


Fig. VI - *Encarsia nigrifemur* (Girault). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus; 5. gaster.

thorax about one-third shorter than gaster, mesoscutum and scutellum with 7 and 2 pairs of setae respectively, metanotum and propodeum very short in the middle; forewing (Fig. VI,2) with 2 setae on the submarginal vein, rather scant pilosity on the disc, marginal fringe short, about one sixth of the disc width; legs normal, middle and hind tibial spurs as in Fig. VI,3 and 4; gaster conic ovate, with syntergum well developed, subtriangular, about as long as wide; ovipositor robust, originating near the base of the gaster, third valvulae stylet-shaped, a little longer than one third the length of the entire ovipositor and slightly extruded below the syntergum (Fig. VI,5).

Material examined - 7 ♀ syntypes on one slide, type 7309, from *Aleurodes* sp. on *Ficus*, June 13, 1913, Passeroean, Java. One specimen encircled with black ink is hereby designated lectotype (QM).

Encarsia peltata (Cockerell)

Mimatomus peltatus Cockerell, 1911. Ent. News 22: 464.

The author described only the female, but a male was also found in the original material. To the short original description of the female the following notes are added.

Female. - Maxillary palpi 2-segmented (Fig. VII,1), labial palpi reduced. Antenna (Fig. VII,2) with pedicel slightly longer than F1; 3-segmented funicle as long as the club, but with narrower segments, F1 cylindrical, smaller than F2 and with 2 linear sensilla, F3 subequal to F2, both with three linear sensilla.

Mesoscutum with 6 pairs of setae; axilla with 1 seta; propodeum very short in the middle. Forewing (Fig. VII,3) subtriangular, with 2 setae on the submarginal vein, a group of 8-10 setae before the premarginal vein, normal pilosity on the disc and very short marginal fringe. Hindwing with sparse setae and fringe length about twice that of forewing. Middle tibia with spur about as long as associated basitarsus; hind tibial spur about one third the length of the corresponding basitarsus (Fig. VII,4 and 5).

Ovipositor very short, about as long as one-third of hind tibia, with base inserted at level of urotergum VIII; valvula III as long as one-third the entire ovipositor length (Fig. VII,6).

Male. - Similar to the female, but antenna (Fig. VII,7) with first four segments rather similar, about twice as long as wide, each with 4-5 linear sensilla; last two segments forming a club as long as the preceding two; other characters as in Fig. VII,7. Genitalia typical of *Encarsia* (Fig. VII,8).

Material examined - 4 ♀ and 1 ♂, on pins, ex *Aleyrodes* on *Euphorbia*, Glenwood Springs, co., cat. n. 15695 (USNM). This author mounted all these specimens on slides and designated a lectotype (♀).

Encarsia perseae (Girault), n. status and comb.

Coccophagus ashmeadi Girault, *perseus* new var. Girault, 1917. Insec. Inscit. Men. 5: 29.

The original diagnosis is the following: « In the analysis of the Australian species runs to *ashmeadi* from which it differs in that the club joints are subequal to funicle 3 and not longer as in *nigriventris*. The pronotum is very slightly dusky, if at all ».

The main characters of *E. perseae* are illustrated in Fig. VIII,1-5. This species appears very similar to *E. ashmeadi*, but it can be distinguished by the ovipositor length which is about three fourths the length of the gaster, whereas in *E. ashmeadi* the ovipositor is about half the length of the gaster. The forewing (Fig. VIII,2) bears one seta on the submarginal vein; compa-

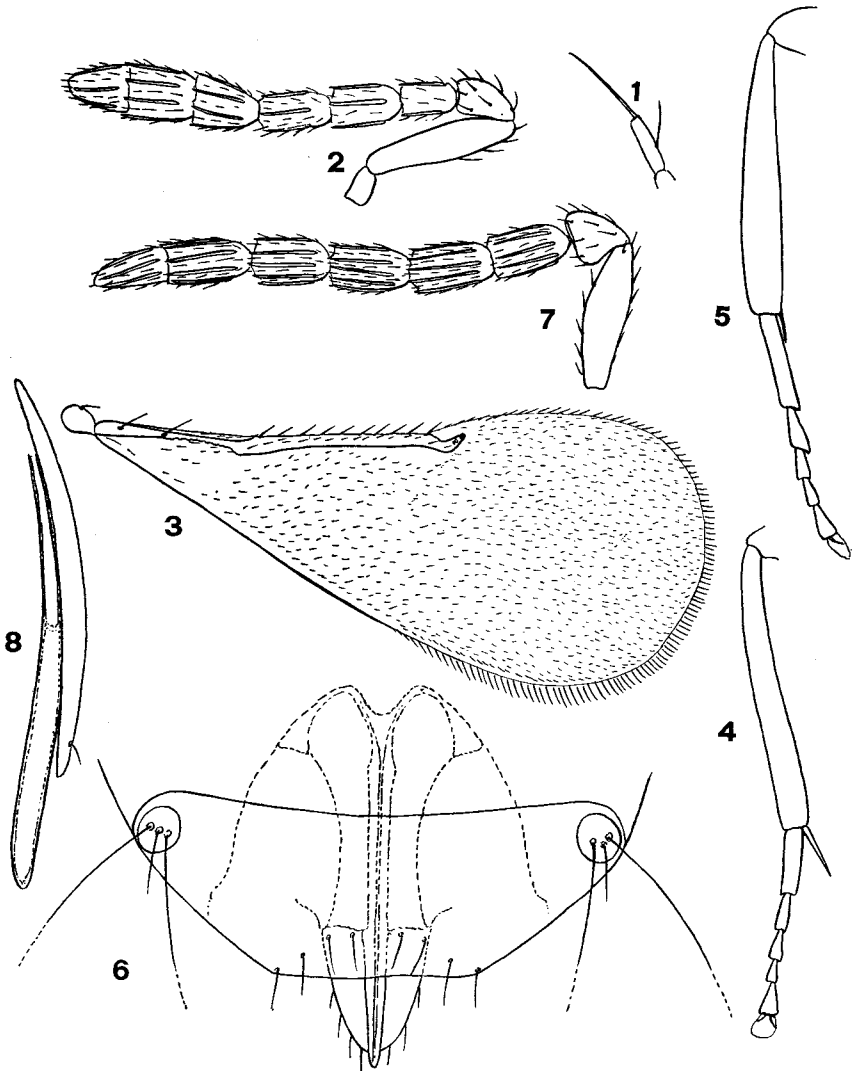


Fig. VII - *Encarsia peltata* (Cockerell). Female: 1. maxillary palpus; 2. antenna; 3. forewing; 4. middle tibia and tarsus; 5. hind tibia and tarsus; 6. distal part of gaster. Male: 7. antenna; 8. copulatory organ.

rison with *E. ashmeadi* is not possible because of the bad condition of the type material of the latter (VICCIANI, 1985).

Material examined - 2 ♀, type n. 20683 (USNM), Swan River, W. Australia, coll. G. Compere. The specimen in dorsal view is designated lectotype by this author.

Encarsia perspicuipennis (Girault), n. comb.

Prospaltella perspicuipennis Girault, 1910. N.Y. Entom. Soc. J. 18: 234-236.

This species clearly belongs to *Encarsia* Foerster. The original description is rather detailed. The following notes are added: antenna with F1 and F2 without linear sensilla, F3 and club segments with 3-4 linear sensilla (Fig. VIII,6); mesoscutum with 3 pairs of setae; forewing as in Fig. VIII,7; middle tarsi 4-segmented, fore-and hind tarsi 5-segmented (Fig. VIII,8 and 9).

Material examined - 1 ♀, lectotype, designated by this author, August 27, 1909, Centralia, Illinois, access. n. 41679, Illinois State Laboratory of Natural History, Urbana.

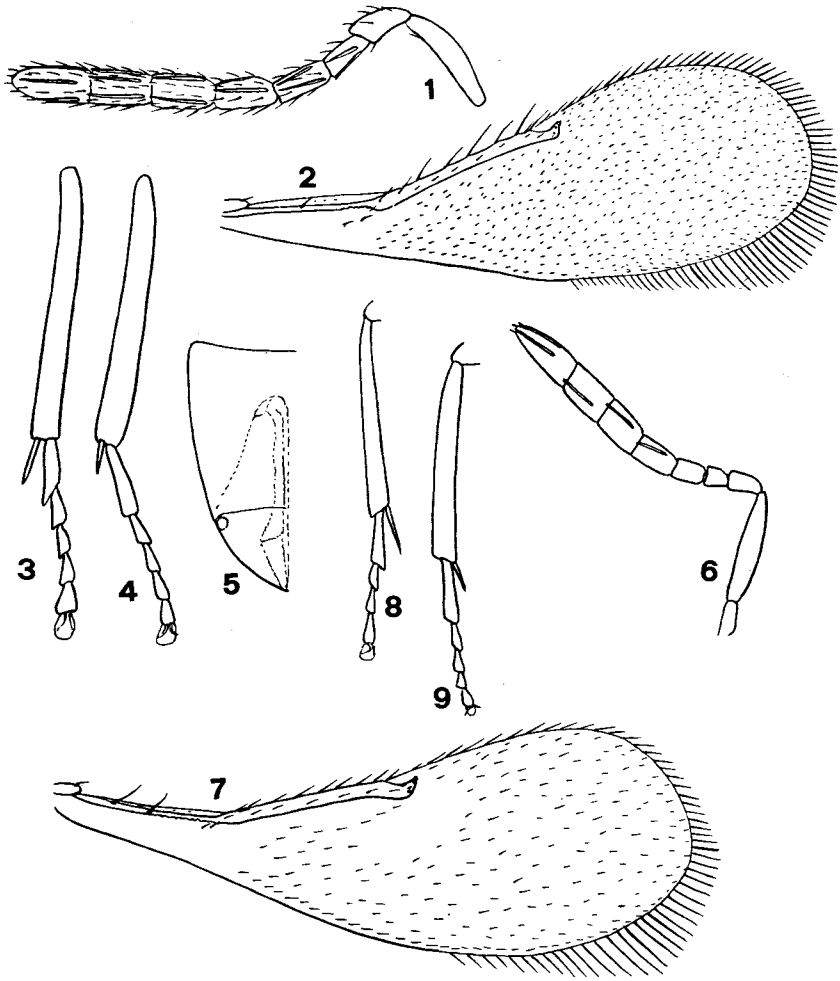


Fig. VIII - *Encarsia perseae* (Girault). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus; 5. sketch of half gaster. *Encarsia perspicuipennis* (Girault). Female: 6. antenna; 7. forewing; 8. middle tibia and tarsus; 9. hind tibia and tarsus.

Encarsia peruviana (Rust), n. comb.

Prospaltella peruviana Rust, 1913. Entom. News 24: 161-162.

The thorax and gaster of the type specimen are mounted laterally on the microslide. The following notes are added to the short original description: antenna (Fig. IX,1) without linear sensilla on F1, 2 linear sensilla on F2 and 3-4 linear sensilla on each club segment; middle and hind tibial

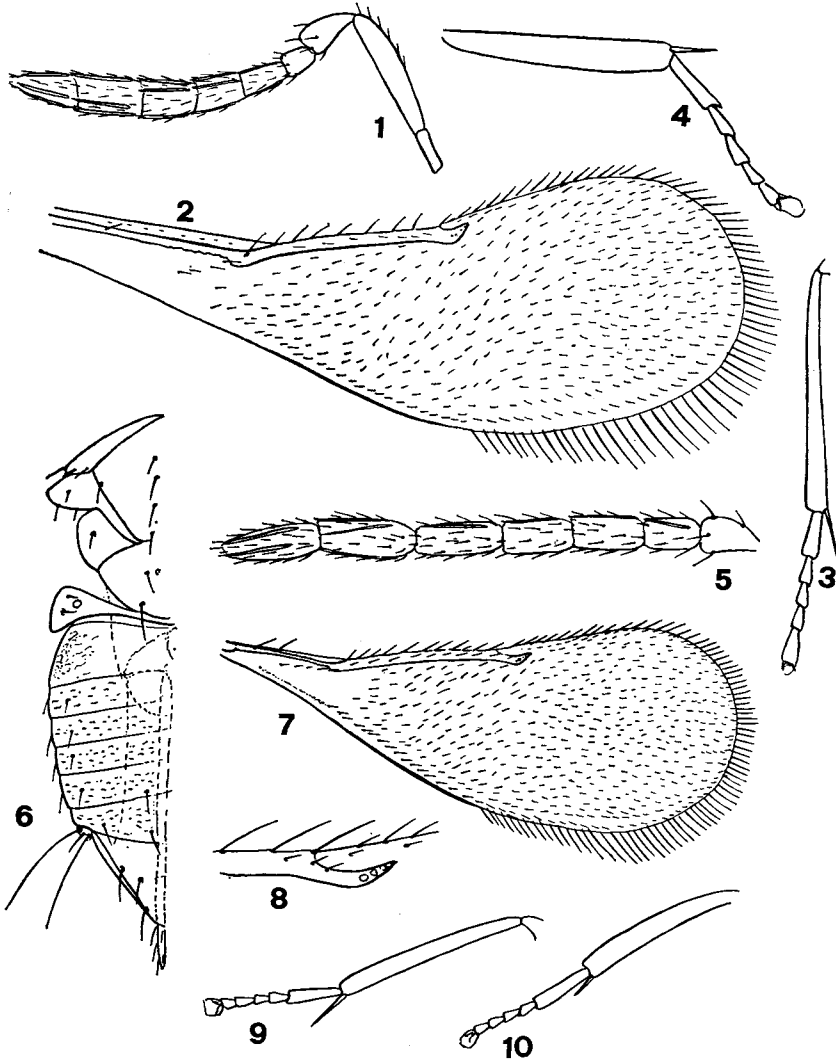


Fig. IX - *Encarsia peruviana* (Rust). Female: 1. antenna, 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. *Encarsia portoricensis* Howard. Female: 5. antenna; 6. thorax and gaster; 7. forewing; 8. particular of the stigmal vein; 9. middle tibia and tarsus; 10. hind tibia and tarsus.

spurs and tarsi as in Fig. IX,3 and 4; forewing as in Fig. IX,2; gaster rather short, with the ovipositor taking up the distal half of the gaster and as long as hind tibia; 3rd valvula half as long as the entire ovipositor.

Material examined - 1 ♀, type, ex *Hemichionaspis minor*, Macacara, Perù, August 5, '10, n. 41386 (USNM).

Encarsia portoricensis Howard

Encarsia portoricensis Howard, 1907. U.S.D.A. Bur. Ent. Tech. Serv. 12: 77-78.

The original description gives information about body coloration and antennal characters only. Additional notes: antenna (Fig. IX,5) with 2-3 linear sensilla on each segment; thorax shorter than gaster (Fig. IX,6); mesoscutum provided with 5+5 setae; forewing (Fig. IX,7) with a row of 6 setae before the premarginal vein, stigmal vein rather long and narrow (Fig. IX,8), fringe about one-fifth of wing width; middle tibial spur as long as corresponding basitarsus (Fig. IX,9), hind spur shorter than corresponding basitarsus (Fig. IX,10); gaster obconic, tergites II-VI with 2-3 rows of very small spine-like structures; syntergum triangular, twice as wide than long; ovipositor robust, originating at base of the gaster and slightly exerted; 3rd valvula about one-fourth the length of the entire ovipositor.

Material examined - 3 ♀, from *Aleyrodes* sp. on a climbing vine, Bayamon, Puerto Rico, type n. 10301 (USNM). The ♀ encircled with red is hereby selected lectotype.

Encarsia quercicola (Howard)

Prospaltella quercicola Howard, 1908. Ann. Entom. Soc. Amer. 1: 282-284.

The short original description needs some additions and corrections, except for coloration. Antenna (Fig. X,1) without well distinct club, which is apparently 2-segmented, pedicel as long as F1, latter cylindrical, slightly shorter than F2 and with one linear sensillum, F3 subequal to F4 each about twice as long as wide and each with 3 linear sensilla, club as long as F3 and F4 combined. Thorax shorter than gaster; mesoscutum with 4+2 setae; metanotum and propodeum very short in the middle. Forewing (Fig. X,2) with a row of 4 setae before the premarginal vein and without postmarginal vein; discal pilosity very robust below the marginal vein; fringe one-fourth of wing width. Middle tibial and hind tibial spur and tarsi as in Fig. X,3 and 4. Gaster conical, about one-third longer than thorax; ovipositor robust, with base at level of tergite I, slightly extruded; valvulae III about one-fourth of the total ovipositor length.

Material examined - 5 ♀ from the original material reared from *Aleyrodes gelatinosus* Cock. on oak, Los Angeles, Cal. April, 1908.

Encarsia socratis (Girault), n. comb.

Coccophagus socratis Girault, 1931. A new habit in an old insect, homo pudicus and new Eurytomidae. Priv. publ.: 3.

The type specimen is in very poor condition. The following characters can be seen: maxillary palpi two-segmented (Fig. X,5), antenna (Fig. X,6) rather long and spindle-shaped, each flagellar segment about twice as long as wide, with 2-3 linear sensilla; forewing (Fig. X,7) with 2 setae on the submarginal vein, 6 setae in two rows before the premarginal vein, normal ciliation on the disc and fringe about one-third of the wing width; thorax about one-third shorter than gaster; legs normal, middle and hind tibiae and tarsi as in Fig. X,8 and 9; ovipositor as long as gaster, not exerted.

Material examined - ♀ type, 4950, window, Indooroopilly, October, 13-20, 1930 (QM).

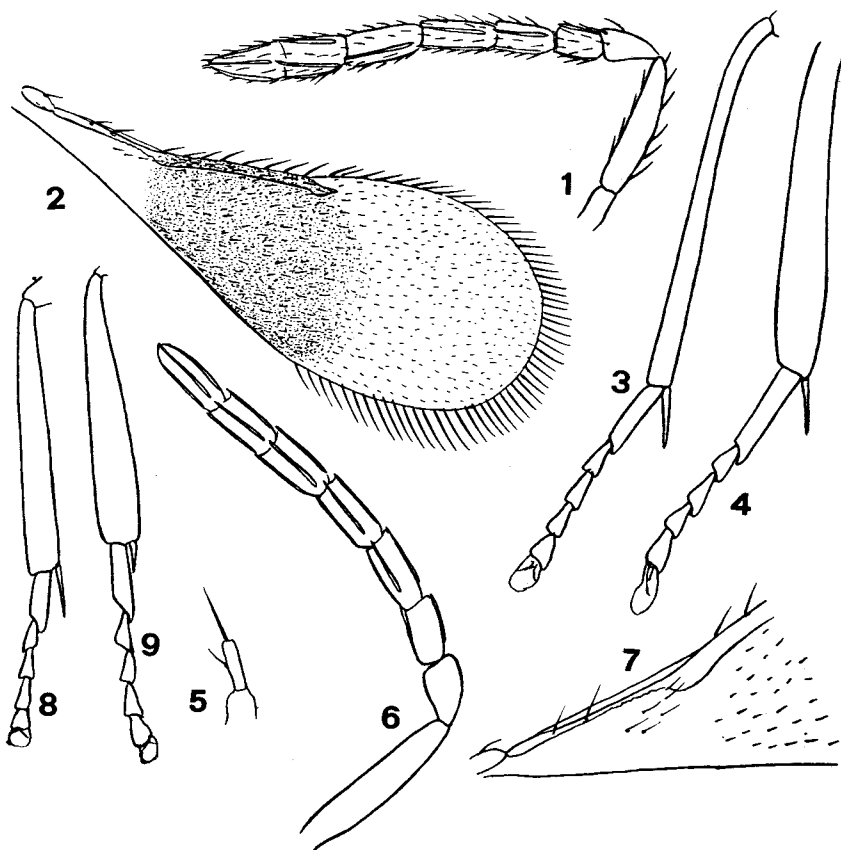


Fig. X - *Encarsia quercicola* (Howard). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. *Encarsia socratis* (Girault). Female: 5. maxillary palpus; 6. antenna; 7. basal part of forewing; 8. middle tibia and tarsus; 9. hind tibia and tarsus.

Encarsia taciti (Girault)

Coccophagus taciti Girault, 1930. New pests from Australia, VII, Brisbane Priv. publ.: 3.

The type specimen is crushed; thus thorax and gaster are in bad condition. The following notes and illustrations can be added to the original description: antenna (Fig. XI,1) rather short with spindle-like club, F1 without linear sensilla; forewing almond-shaped (Fig. XI,2); middle and hind tibiae and tarsi as in Fig. XI,3 and 4; ovipositor extends for the distal two-thirds of the gaster.

E. taciti appears allied to *E. inquirenda* Silvestri.

Material examined - 1 ♀ type, bracts *Passiflora foetida*, Mt. Cootha, March 13, 1929, coll. A.R. Brimblecombe (QM).

Encarsia townsendi Howard

Encarsia townsendi Howard, 1907. U.S.D.A. Bur. Ent., Tech. Serv., 12: 78-79.

The following notes and illustrations are added to the original description: antenna with slightly differentiated club, apparently 3-segmented (all type specimens have damaged antennae, the lectotype, designated here, has only the last club segment partially missing; F1 without linear sensilla; subsequent segments as in Fig. XI,5. Thorax about one-third shorter than gaster; mesoscutum with 4 + 2 + 2 setae. Forewing (Fig. XI,6) with 2 setae on the submarginal vein, 2 setae before the premarginal vein; fringe short, not longer than stigmal vein. Middle leg with tibial spur as long as basitarsus; hind tibial spur shorter (Fig. XI,7 and 8). Gaster conical; tergite VII + VIII triangular, about as long as wide; ovipositor robust, as long as gaster; III valvula about one-third the length of the ovipositor.

Material examined - 5 ♀, from *Aleyrodes* on a cross grass, Tabasco, Mexico, June 19, 1897, by C.H.T. Townsend. The ♀, encircled with red ink is designated lectotype by this author.

Encarsia variegata Howard

Encarsia variegata Howard, 1908. Proc. Ent. Soc. Washington 10: 64.

The type material is represented by 2 female specimens mounted laterally on a slide. The original description needs some additions and corrections.

Antenna (Fig. XI,9) with F1 without linear sensilla, following segments with 2-3 linear sensilla. Thorax a little shorter than gaster; mesoscutum with 5 pairs of setae. Forewing with 2 setae on the submarginal vein, a row of 4 setae before the premarginal vein, disc with normal ciliation and fringe about one-fifth of the wing width. Middle and hind spurs and tarsi as in Fig. XI,10 and 11. Ovipositor slightly exerted.

Material examined - 2 ♀ from *Aleurodiscus perseae* on lemon leaves, Orlando, Fla., June 25, 1907, type n. 11707 (USNM). The ♀ encircled with red ink is designated lectotype by this author.

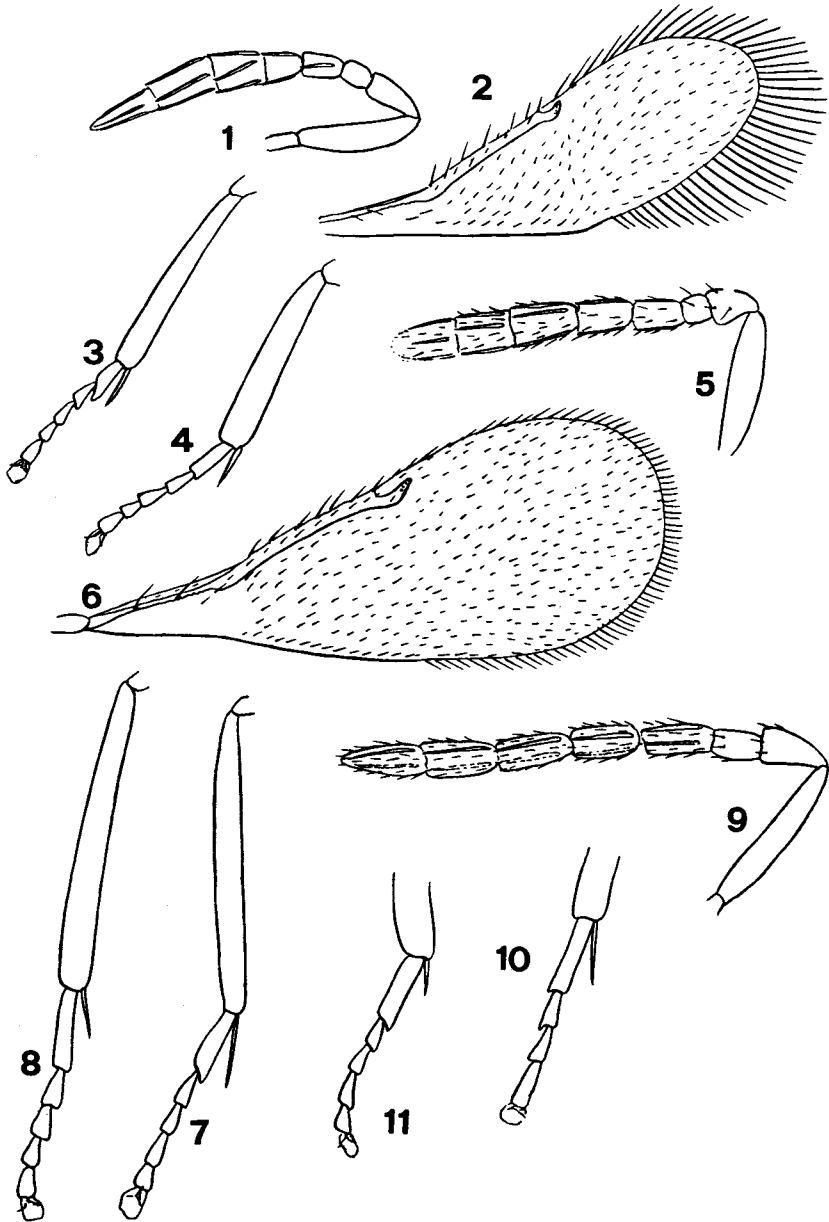


Fig. XI - *Encarsia taciti* (Girault). Female: 1. antenna; 2. forewing; 3. middle tibia and tarsus; 4. hind tibia and tarsus. *Encarsia townsendi* Howard. Female: 5. antenna; 6. forewing; 7. middle tibia and tarsus; 8. hind tibia and tarsus. *Encarsia variegata* Howard. Female: 9. antenna; 10. part of middle tibia and tarsus; 11. part of hind tibia and tarsus.

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SUMMARY

The type material of the following 21 species of Aphelinidae was examined: *Coccophagus aleurodici* Girault, *Encarsia angelica* Howard, *Coccophagus aurantii* Howard, *Prospaltella bella* Gahan, *Prospaltella bicolor* Timberlake, *Prospaltella brunnea* Howard, *Prospaltella ciliata* Gahan, *Prospaltella elongata* Dozier, *Prospaltella fasciiventris* Girault, *Coccophagus magniclavus* Girault, *Prospaltella nigrifemur* Girault, *Mimatomus peltatus* Cockerell, *Coccophagus ashmeadi* Girault, *perseus* n.v. Girault, *Prospaltella perspicuipennis* Girault, *Prospaltella peruviana* Rust, *Encarsia portoricensis* Howard, *Prospaltella quercicola* Howard, *Coccophagus socratis* Girault, *Coccophagus taciti* Girault, *Encarsia townsendi* Howard and *Encarsia variegata* Howard.

Coccophagus aleurodici and *C. magniclavus* were transferred to the genus *Encarsiella* Hayat; *Prospaltella fasciiventris* Girault to *Coccophagoides* Girault and all the other species were placed in the genus *Encarsia* Foerster.

Encarsia herndoni (Girault), n. comb. (= *Prospaltella aurantii* sensu Silvestri, nec Howard) is here confirmed as the senior name of *Prospaltella elongata* Dozier.

Additional descriptive notes and original illustrations are given for the species studied.

RIASSUNTO

E' stato studiato il materiale tipico delle seguenti 21 specie di Aphelinidae: *Coccophagus aleurodici* Girault, *Encarsia angelica* Howard, *Coccophagus aurantii* Howard, *Prospaltella bella* Gahan, *Prospaltella bicolor* Timberlake, *Prospaltella brunnea* Howard, *Prospaltella ciliata* Gahan, *Prospaltella elongata* Dozier, *Prospaltella fasciiventris* Girault, *Coccophagus magniclavus* Girault, *Prospaltella nigrifemur* Girault, *Mimatomus peltatus* Cockerell, *Coccophagus ashmeadi* Girault, *perseus* n.v. Girault, *Prospaltella perspicuipennis* Girault, *Prospaltella peruviana* Rust, *Encarsia portoricensis* Howard, *Prospaltella quercicola* Howard, *Coccophagus socratis* Girault, *Coccophagus taciti* Girault, *Encarsia townsendi* Howard and *Encarsia variegata* Howard.

Coccophagus aleurodici e *C. magniclavus* sono stati trasferiti nel genere *Encarsiella* Hayat; *Prospaltella fasciiventris* Girault in *Coccophagoides* Girault e tutte le altre specie sono state ascritte al genere *Encarsia* Foerster.

Encarsia herndoni (Girault), n. comb. (= *Prospaltella aurantii* sensu Silvestri, nec Howard) è confermato primo nome di *Prospaltella elongata* Dozier.

Per le specie studiate sono fornite note e illustrazioni originali.

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