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New species of *Stictiella* (Hymenoptera, Sphecidae)

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ABSTRACT: Three new species of North American sand wasps of the genus *Stictiella* are described (Bembicini, Stictiellina). These are *fairchildi* from Florida, *gillaspyi* from Arizona and western Mexico and *villegasi* from southern California.

The Stictiellina presently includes 5 genera of Bembicini or sand wasps: *Stictiella* J. Parker, *Glenostictia* Gillaspy, *Microstictia* Gillaspy, *Xerostictia* Gillaspy, and *Steniolia* Say. All of these have the midocellar remnant depressed. Important characters of *Stictiella* are the evenly convex labrum, irregular or serrate lower margin of the male midfemur, 6-4 palpal formula, and the midocellar remnant as well as the surrounding raised area about as broad as long or slightly broader. All of the known forms are North American. The following new species are described so that they can be used in a forthcoming revision of the subtribe. Holotypes are in the University of California at Davis collection (UCD). For brevity terga are abbreviated as T-I, T-II, etc., sterna as S-I etc., and flagellomeres as F-I, etc.

Stictiella ***fairchildi*** Bohart, new species

MALE HOLOTYPE: Length 14 mm, forewing 11.5 mm. Black, marked with yellow as follows: face as in Fig. 9, broad pronotal band broken medially and sublaterally, scutum laterally, broadly V-shaped scutellar band, metanotum mostly, propodeal spot at lateral angle and laterally on enclosure; large spots on propleuron, mesopleuron (triangular), and metapleuron; legs mostly, femora dark basally, trochanters and coxae spotted; bands on T-I–VII, those on II–III somewhat recurved (Fig. 11); lateral spots on S-II–III (Fig. 10), bands on IV–VI, sterna somewhat more black than yellow overall; flagellum black, wing veins dark, membrane light brown. Pubescence pale, partly fulvous, a few scattered short hairs beneath hindfemur. Punctation inconspicuous, macropunctures scattered on clypeus and labrum. Facial proportions as in Fig. 9, galea about 1.5 times as long as labrum, F-XI three times as long as broad, clypeus almost evenly convex, midocellar flat area a little broader than long; foretarsus slender, I five times as long as broad and with five short rake bristles, claws slender and equal, arolium well developed; midleg (Fig. 12) with midbasitarsus curved, midfemur with a few weak serrations before apical notch; hindfemur nearly straight beneath in basal three fourths; abdomen stout, T-VII apex broadly rounded, laterally straight, lateral lobes of T-VII separated ventrally by a little less than length

of F-I–II together, S-II bidentate subapically, S-VIII with three prongs and a slender medioventral projection.

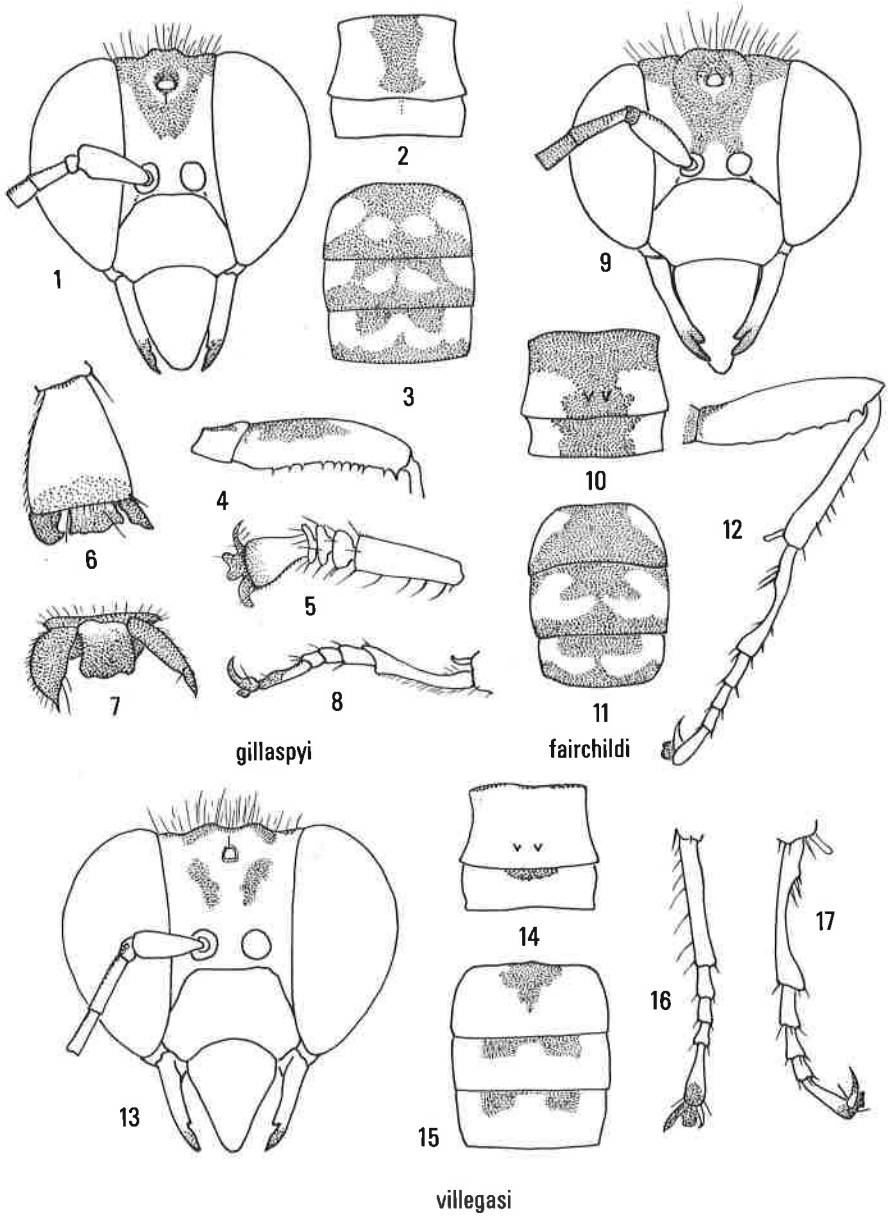
Holotype male, Austin Cary Forest, Gainesville, Florida, V-20-76 (G. B. Fairchild). Known only from the male, *fairchildi* is distinguished from other *Stictiella* by a combination of the distinct arolium, hindfemur practically non-hirsute beneath, simple foretarsus, frons broader than compound eye, and labrum longer than F-I–II together. The species is named for the well known dipterist, who collected the type specimen.

Stictiella ***gillaspyi*** Bohart, new species

MALE HOLOTYPE: Length 13 mm, forewing 8 mm. Black, marked with yellow as follows: face as in Fig. 1. Pronotum mostly, scutum laterally and with a quadripartite discal U, broadly V-shaped scutellar band, metanotum mostly, propodeal enclosure posteriorly but broken medially, pleuron mostly (black behind pronotal lobe), propodeal angle, legs except femoral spots within and tarsi toward apex, lateral tergal spots narrowly connected (or nearly so) with double submedian spots (Fig. 3), T-VII apically, S-I except at base, S-II except for elongate median black area (Fig. 2), S-III–V, S-VI apically; flagellum dark above, dull yellow beneath beyond F-I; wing veins brown to black, membrane a little stained and with obvious microsetae. Pubescence pale, off-white to fulvous on vertex and scutum; hindfemur with a few short scattered hairs beneath. Punctation inconspicuous. Face (Fig. 1) with frons unusually narrow, galea 1.6 times as long as labrum, F-XI 2.6 times as long as broad, clypeus evenly convex, midocellar flat area a little broader than long, foretarsus flattened with V nearly as broad as long (Figs. 5, 6), anterior claw slender, posterior one short and stout, arolium distinct, midtarsus (Fig. 8) with basitarsus curved, midtibia flattened and breadth at distal fourth greater than that of midfemur, latter with many sharp spinules beyond basal fifth (Fig. 4), hindfemur nearly straight beneath in basal two thirds, T-VII strongly incurved laterally and narrowly rounded apically, lateral lobes of T-VII separated ventrally by length of F-I–III together, S-II not dentate, three-pronged S-VIII without median projection.

FEMALE: Size and markings about as in male, yellow scutal U usually complete except for narrow posterior interruption; orbital stripe sometimes incomplete behind vertex; tarsomere V yellow except narrowly at apex. Frons as broad as eye width in front view; forebasitarsus three times as long as broad, bearing seven rake bristles, basal one weak; foretarsal V less than twice as long as broad.

Holotype male, 48.5 mi s. Hermosillo, Sonora, Mexico, VIII-17-64 (M. E. Irwin). Paratypes, 2 males, 15 females, all collected in August in Mexico: SONORA: Guaymas, Navajoa, Estacion Llano, and Hermosillo; SINALOA: Choix and Mazatlan; 1 male paratype, ARIZONA: Tumacacori, VIII-25-81,



Figs. 1–17. *Stictiella*. Figs. 1–8. *gillaspyi* male holotype. Figs. 9–12. *fairchildi* male holotype. Figs. 13–17. *villegasi* male holotype. Figs. 1, 9, 13. Face. Figs. 2, 10, 15. Sterna II–III. Figs. 3, 11, 15. Terga I–III. Fig. 4. Midtrochanter and midfemur. Figs. 5, 16. Foretarsus. Fig. 6. Foretarsal V, enlarged, dorsal. Fig. 7. Foretarsal V, end view. Figs. 8, 17. Midtarsus, lateral. Fig. 12. Midleg, lateral.

at flowers of *Kallstroemia grandiflora* (E. and J. Linsley); other paratype collectors: G. Bohart, J. Chemsak, M. Irwin, J. Sears et al., R. Thorp, M. and J. Wasbauer. Paratypes in collections of Utah State U., U.C. Berkeley and Davis, Calif. State Dept. Agric., and J. Gillaspy.

The greatly flattened male foretarsus with asymmetrical claws and a small but distinct arolium is a condition found also in *formosa* Cresson. Also, both species have relatively short wings. Differences in both sexes of *gillaspyi* are as follows: average size about one half (body length 14 mm vs. 19 mm), galea dark brown except a narrow strip of yellow vs. half yellow and half light reddish brown, flagellum broadly pale to apex vs. dull or brown toward apex. Male *gillaspyi* have additional differences: foretarsal I broadened toward apex vs. narrowed toward apex, foretarsal IV twice as broad as long vs. nearly as long as broad, foretarsal V dark only toward apex vs. all dark, midtibia broadest at distal third and then rather abruptly narrowed vs. gradually broadened to distal fifth, gonostyle only a little narrowed toward apex and broadly rounded there vs. with a distal pedicel and narrowly rounded at apex. The species is named for J. Gillaspy who has contributed more than any other modern taxonomist to our knowledge of the Stictiellina.

Stictiella ***villegasi*** Bohart, new species

MALE HOLOTYPE: Length 16 mm, forewing 12 mm. Yellow with a few black areas: frontal spots and vertex (Fig. 13), central and sublateral scutal areas bordering a large yellow U which is narrowly broken posteriorly, narrow stripes bordering propodeal enclosure anteriorly and along sides, small mesopleural spot in front of midcoxa, distal two fifths of each tarsal V, base and subtended median triangle on T-I, spots on T-I–VI (Fig. 15), basal band on VII, basomedian spots on S-III–VI (Fig. 14); antenna dark above, flagellum brownish below beyond F-I; wing veins mostly brown, membrane clear, microsetae nearly invisible. Pubescence pale, abundant on vertex and thorax, a few short hairs beneath hindfemur. Punctation inconspicuous. Face (Fig. 13) with galea 1.3 times longer than labrum, F-XI three times as long as broad, clypeus evenly convex, midocellar flat area about as long as broad, foretarsus slender, I six times as long as broad and with six rake bristles a little longer than tarsomere breadth (Fig. 16), claws slender and equal, arolium small but distinct, midtarsus (Fig. 17) with midbasitarsus curved, midfemur distinctly serrate on distal half, hindfemur nearly straight beneath on basal two fifths, abdomen stout, T-VII apex broad and medially indented, lateral edge of T-VII beveled and a little incurved, lateral lobes of VII separated ventrally by length of F-I–II together, S-II bidentate subapically, S-VIII with three prongs and a short thornlike medioventral projection.

FEMALE: Size and markings about as in male, tarsi not maculate. Labrum nearly as broad as long. Forebasitarsus 3.5 times as long as broad, bearing eight rake bristles, basal one weak.

Holotype male, Glamis, Imperial Co., California, X-11-72 (B. Villegas). Paratypes, 4 males, 4 females, same data as holotype but 3 males, 1 female collected by C. Goodpasture. Also, 1 male, 3 mi nw. Glamis, California, X-16-72 (M. Wasbauer, E. Hardy). Paratypes in collections of U.C. Davis, U.S. Natl. Mus., Calif. Acad. Sci., Calif. State Dept. Agric., and J. Gillaspy.

Stictiella villegasi can be recognized by its almost entirely yellow appearance and a combination of other characters: arolium distinct, hindfemur essentially non-hirsute beneath, wing membrane clear, and female F-I as long as scape. Markings are similar to those of *Xerostictia longilabris* Gillaspy, but that species has the labrum much longer, as well as fewer palpal segments. The species is named for Baldomero Villegas, one of the most prodigious collectors I have known.