

ADDITIONS AND CORRECTIONS TO "THE WASPS OF THE
GENUS SOLIERELLA IN CALIFORNIA"

(Hymenoptera: Sphecidae, Larrinae)

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Since the publication of my paper on the genus *Solierella* in California (1950. Proceedings of the California Academy of Sciences 26 [11] :335-417) more material has come to hand which necessitates a few changes and some additions. These notes are based on a collection made chiefly by the California Insect Survey, Department of Entomology and Parasitology, University of California, mostly in 1948 and 1949, and on specimens collected by me in the summer of 1950 while a guest at the California Insect Survey Camp in the San Gabriel Mountains, Southern California. Thanks are extended to the above Institution and to Drs. J. W. MacSwain and P. D. Hurd who made the collection available to me.

1. SOLIERELLA BOHARTI Williams

Solierella boharti Williams, 1950. Proc. Calif. Acad. Sci. 26(11):366.*Solierella lasseni* Williams, loc. cit.:366-367. New synonymy.

Three females from Echo Lake, El Dorado County, July 21, 1949 (P. D. Hurd): 2 ♀, Buck's Lake, Plumas County, July 14, 1949 (P. D. Hurd), and August 9, 1949 (J. W. MacSwain) 4 ♂ and 4 ♀, Tanbark Flat, San Gabriel Mts., Los Angeles Co., 2700 feet elevation, June, July, 1950; 4 ♂, Crystal Lake, San Gabriel Mts., 6000 ft. (F. X. Williams). One of the females from Echo Lake is entirely black, the remaining females have the abdomen red. My *Solierella lasseni* is only a color phase of *S. boharti*. All the males are black. This species varies in length from about 4 mm. in the male to 8.75 in the largest female.

2. SOLIERELLA SONORAE Williams

(Figures 1-3, 7)

Solierella sonoreae Williams, 1950. Proc. Calif. Acad. Sci., 26(11):368.

Four females, Palo Verde, Imperial County, collected as follows: 1 ♀ March 7, 1947 (E. G. Linsley); 3 ♀ April 8, 1949 (P. D. Hurd); 1 ♀, Borego, San Diego County, April 5, 1949 (P. D. Hurd); 1 ♀, Cottonwood Springs, Riverside County, April 26, 1949 (J. E. Gillaspay), and 1 ♂, Yaqui Well, San Diego County, April 25, 1949 (L. W. Quate).

The largest female is 9 mm. long, and all have the disc of the propodeum mainly finely granulate and with a delicate median carina. The single male is 6 mm. long, and also has the abdomen reddish; the tarsi are pale brown and there is a dorsal creamy yellow stripe on the posterior tibiae, while the apex of the fore trochanters is pale yellow. The clypeus has the lateral teeth incurved; the frontal V is long, rather sharply margined, and constricted above; the antennae are moderately stout—much as in the common *S. striatipes*—with segment 3 widening distally (fig. 7). The extension of the last visible ventral segment is long and slender; the lobe of the aedeagus with a curved point—as in *S. boharti*, and *S. fossor* (Rohwer). The vestiture is all silvery.

3. SOLIERELLA MAJOR (Rohwer)

(Figures 6, 8)

Silaon major Rohwer, 1917. Proc. U. S. Nat. Mus., 53:247–248.

One female and 4 males, Crystal Lake, San Gabriel Mts., Los Angeles County, elev. 6000 ft., June 29, 1950 (F. X. Williams) Taken beneath a honey-dewed shrub.

The female is 8.75 mm. long and differs from the type (described from North Yakima, Washington) in having the third pair of legs red. The frontal V is not constricted above. It differs from *S. striatipes* in lacking the low lateral clypeal tooth and in having a well developed tarsal comb. The males average 6.5 mm. long; they are black with the head and thorax subopaque and with strong close punctures. The abdomen is more finely punctate. The tarsi are chiefly pale reddish-brown; the hind tibiae with a creamy white stripe above; venation dark; abdomen red. Clypeus strongly carinate, the produced portion truncate, with a shining median lobe that widens as viewed from in front, the lateral angles are rounded; frontal carina running into the open apex of the frontal V which is shallow, heavily rimmed and subtending an angle of somewhat less than 90 degrees, converging above, the greatest width of the V being about twice the distance between one of its edges and the compound eye on that side; upper U slightly indicated; ocelli in nearly an equilateral triangle; a smooth area between each posterior ocellus and the compound eye. Antennae more slender than in *S. sonorae* and *S. striatipes*, the third segment rather slender, not expanding much distally, its length at least $2\frac{1}{2}$ times the apical diameter (Fig. 8). Disc of propodeum with a median carina and strong oblique carinae, the posterior face with a narrow V-like groove and transverse carinae. Second submarginal cell receiving both recurrent veins. Last visible ventral segment with the extension tapering from a broad base and a little shorter than in *S. sonorae*; aedeagus nearest to *S. striatipes*, terminating in profile as a rounded club, curved at nearly right angles. Vestiture, of silvery pile.

In one male specimen the carinulae of the disc of the propodeum are arranged in more or less concentric fashion (as some-

times occurs in *S. striatipes*). Since the female specimen is not typical, having the posterior legs red, the male herein described may differ from that which may eventually be taken in the type locality. The males from the San Gabriel Mountains differ from both *S. striatipes* and *S. sonorae* slightly in the clypeal outline, in the more slender antennal segments, the somewhat blunter frontal V, and slightly in the last visible ventral segment and aedeagus.

I am indebted to Dr. Karl V. Krombein, of the United States National Museum for comparing the female *Solierella major* from the San Gabriel Mountains, with the type.

4. SOLIERELLA STRIATIPES (Ashmead)

Niteliopsis striatipes Ashmead, 1899. Ent. News, 10(1):9.

One male, Tracy, San Joaquin County, July, 1946 (E. G. Linsley).

Males of this species seem rarely to have the facial pile silvery instead of pale brassy.

5. SOLIERELLA VIERECKI (Rohwer)

Niteliopsis vierecki Rohwer, 1909. Trans. Amer. Ent. Soc., 35(1):112.

One male, White Water Canyon, Riverside County, April 2, 1948 (J. W. MacSwain); 1 ♀, Mt. Palomar, San Diego County, 4000 ft. elevation, June 19, 1950 (F. X. Williams).

Both specimens of this wide-fronted species are in fine condition. The clypeus of the male has a rather narrow median wedge and the fore trochanters are feebly excavate basally.

This wasp appears to be rare in California.

6. SOLIERELLA SIMILIS (Bridwell)

Silaon similis Bridwell, 1920. Proc. Hawaiian Ent. Soc., 4(2):402-403.

One female, Carriville, Trinity County, 2400-2500 feet, June 18, 1934 (T. Aitken); 1 ♀, Quincy, 4 mi. W., Plumas County, July 2, 1949 (J. W. MacSwain); 2 ♀, Buck's Lake, Plumas County, July 14, 1949; 1 ♂, Tanbark Flat, San Gabriel Mts., June 25, 1950 (F. X. Williams).

7. SOLIERELLA VANDYKEI Williams

Solierella vandykei Williams, 1950. Proc. Calif. Acad. Sci., 26(11):371.

One female, China Flat, El Dorado County, June 28, 1948 (J. W. MacSwain).

The dorsulum is more shining and more delicately punctate than in *S. similis*, its relative. Clypeus with a steep preapical break.

Thus far an uncommon species. Male unknown.

8. SOLIERELLA CORIZI Williams

Solierella corizi Williams, 1950. Proc. Calif. Acad. Sci., 26(11):372-373.

Four females, Tracy, San Joaquin County, summer of 1949 (J. W. MacSwain, Ray F. Smith); 1 ♂, Quincy, 4 m. W. Plumas County, July 16, 1949; 1 ♀, Bridge Creek Camp, Lassen County, August 9, 1949 (J. W. MacSwain). These are typical large specimens that show no postocellar convexities. A female from Blythe, Riverside County, has a pair of postocellar tubercles. Specimens from Llano County, Texas, may or may not have these tubercles, and they show other variations among themselves.

9. SOLIERELLA INERMIS (Cresson)

Nysson inermis Cresson, 1872. Trans. Amer. Ent. Soc., 4(3):224.

What I take to be this species is represented by one male and one female from Llana County, Texas, June 12, 1941 (J. E. Gilaspay). They much resemble those that I have studied from western Kansas, and except slight differences in clypeal outline and in aedeagus suggest small *Solierella corizi*. The *Solierella* of the *inermis*, *mirifica* Pate, and *corizi* group need study in larger series.

10. SOLIERELLA BLAISDELLI (Bridwell)

Silaon blaisdelli Bridwell, 1920. Proc. Hawaiian Ent. Soc., 4(2):401.

One female, Amedee, Lassen County, July 4, 1947 (J. W. MacSwain).

11. SOLIERELLA PECKHAMI (Ashmead)

Dr. Karl V. Krombein 1951, in "Hymenoptera of North America North of Mexico—Synoptic Catalog," U. S. Dept. Agr., Monogr. 2:943, gives the synonym of this widely distributed species as follows:

Plenoculus peckhami Ashmead, 1897. Psyche, 8:130. ♂.

Plenoculus niger Ashmead, 1899. Psyche, 8:339 ♀. N. syn.

Silaon rohweri Bridwell, 1920. Hawaiian Ent. Soc. Proc., 4:398. N. syn.

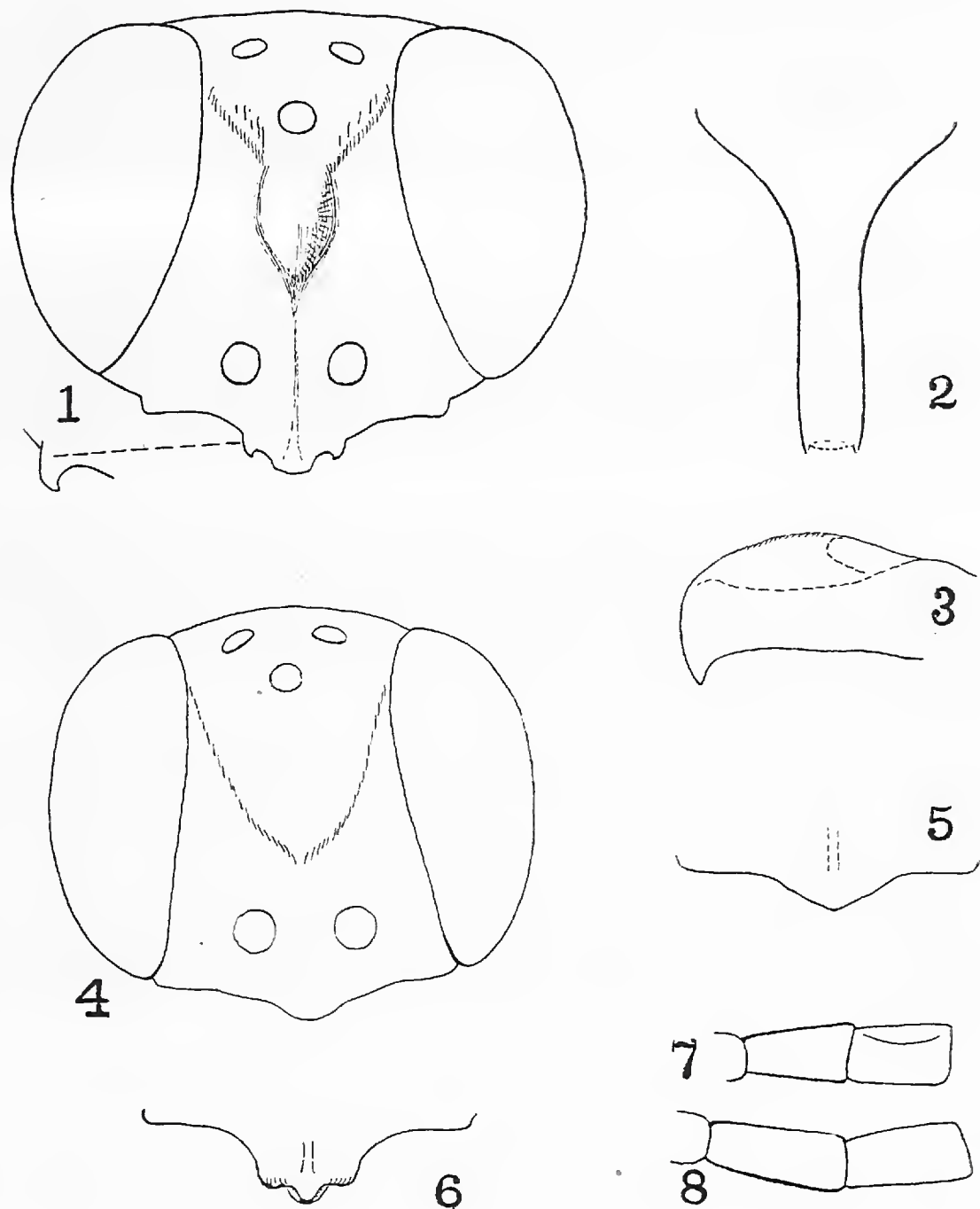
Solierella (Silaon) arenaria Krombein, 1939. Brooklyn Ent. Soc. Bul. 34: 139 ♀. N. syn.

Two males, Tanbark Flat, San Gabriel Mts., summer of 1950 (F. X. Williams).

12. SOLIERELLA CLYPEATA Williams

Solierella clypeata Williams, 1950. Proc. Calif. Acad. Sci., 26(11):376-378.

One female, Tanbark Flat, San Gabriel Mts., summer of 1950 (F. X. Williams).



EXPLANATION OF FIGURES

Fig. 1. *Solierella sonora* Williams. Male. From Yaqui Well, San Diego County. Fig. 2. Same. Last visible ventral segment. Same data. Fig. 3. Same. Male aedeagal lobe. Same data. Fig. 4. *Solierella affinis* (Rohwer). Female. Bridge Creek Canyon Camp, Lassen County. Fig. 5. Same. Clypeal outline of another specimen. Same data. Fig. 6. *Solierella major* (Rohwer). Male. Clypeus. San Gabriel Mts. Fig. 7. *Solierella sonora* Williams. Antennal segments 3 and 4 from within. Yaqui Well, San Diego County. Fig. 8. *Solierella major* (Rohwer). Male. Antennal segments 3 and 4 from within. San Gabriel Mts.

13. SOLIERELLA AUSTRALIS Williams

Solierella australis Williams, 1950. Proc. Calif. Acad. Sci., 26(11):379-380.

Five females and 1 male, Tanbark Flat, San Gabriel Mts., June-July, 1950; 1 ♀, Mt. Palomar, San Diego County, June 19, 1950 (F. X. Williams).

14. SOLIERELLA AFFINIS (Rohwer)

(Figures 4, 5)

Niteliopsis affinis Rohwer, 1909. Trans. Am. Ent. Soc., 35(1):113-114.

What I regard as this species is represented by 6 females, as follows: 1 ♀, Quincy, 4 mi. W., Plumas County, July 3, 1949 (J. E. Gillasp); 2 ♀, Buck's Lake, Plumas County, July 14, 1949 (P. D. Hurd); 2 ♀, Bridge Creek Camp, Lassen County, July 9, 1949 (J. W. MacSwain); 1 ♀, Lassen Peak, 7500 ft., July 18, 1949 (J. W. MacSwain).

These are large specimens; the type described from Colorado is 4.25 mm. long. The 6 specimens measure 5.5, 5.4, 5.1, 5.1, 5.0 and 4.30 mm. respectively. The mandibles are creamy white basally. The clypeal outline varies somewhat, as figured, being intermediate between *S. peckhami* and *S. arcuata*; in *S. arcuata* the clypeus is more broadly and evenly arched and is reddish apically. The slightly troughed disc of the propodeum has a median carina but no enclosing one, the latter being present in *S. blaisdelli* and *S. peckhami*; sides of the propodeum with rather numerous oblique carinulae. Pygidial area with fine deep punctures. There is a tendency for the second submarginal cell to receive both recurrent veins.

I have been unable to discover the male of *Solierella affinis*.

15. SOLIERELLA ALBIPES (Ashmead)

Plenoculus albipes Ashmead, 1899. Psyche, 8(275):338-339.

One ♀, Amedee, Lassen County, July 4, 1947 (T. F. Leigh); 1 ♀, Tracy, San Joaquin County, May 31, 1949 (J. W. MacSwain).

CORRIGENDA: My reference, "*Solierella albipes* (Ashmead) Krombein, 1938, An. Ent. Soc. Amer., 31:469" in Proc. Calif. Acad. Sci., 26(11):385 (1950), should be deleted.

16. SOLIERELLA SAYI (Rohwer)

Niteliopsis sayi Rohwer, 1909. Trans. Am. Ent. Soc., 35(1):114-115.

Two ♀, Quincy, 4 m. W., Plumas County, June 30 and July 3, 1949 (P. D. Hurd); 1 ♀, Hills backs of Oakland, July 20, 1949 (J. E. Gillasp); 2 ♀ and 7 ♂, Tanbark Flat, San Gabriel Mts., summer of 1950 (F. X. Williams).