

NOTES ON THE BEHAVIOR OF A FEW
SOLITARY WASPS.

BY PHIL RAU, Kirkwood, Missouri.

Ancistrocerus spinolae de Sauss. [Jos. Bequaert]. A wasp of this species was taken on the windowpane of my study on May 9, 1939. It evidently escaped from one of the bags containing nests of *Sceliphron caementarium* collected in St. Louis County, Missouri.

Ancistrocerus unifasciatus de Sauss. [G. A. Sandhouse]. Several individuals emerged, May 13 to 20, 1933, from mud-nests of *Sceliphron caementarium* collected at Grubville, Missouri. Many adults of this species were seen feeding on the small flowers of the buck brush, *Symphoricarpos orbiculatus* Moench [E. S. Anderson] at Ranken, Missouri. On July 27, 1930 several dipterous parasites, *Pachyophthalmus floridensis* Tns [J. M. Aldrich] emerged from their cells.

Pemphredon (Cemonus) tenax Fox [G. A. Sandhouse]. A colony of these wasps lived in tunnels of a dried stump under a clubhouse porch at Dieke, Missouri. The stump was brought into the laboratory on August 14, 1938, and during the following week nine wasps emerged. The tunnels were evidently those which were made by beetles. Each mother used burrows independently, and not in a social or semisocial way.

Tachysphex terminatus F. Sm. [G. A. Sandhouse]. Many females were seen digging burrows in the loose soil under a clubhouse at Dieke, St. Louis County, Missouri, August 14, 1938. They fill the nests with small nymphs of an Acridid, some of which are *Melanoplus* sp. [A. B. Gurney]. Prey taken from incoming wasps at Kirkwood, June 26, 1932, were nymphs of *Arphia sulphurea* Fab. [A. N. Caudell], and *Dichromopha viridis* Scud [A. N. Caudell].

Tachytes elongatus Cress [G. A. Sandhouse]. A locust was taken from a wasp as she was carrying it into a burrow at Reelsfoot Lake, Tennessee, July 13, 1937. It proved to be *Melanoplus differentialis* Thos. [A. B. Gurney].

Sceliphron caementarium Drury. From a cocoon of this wasp taken at Ranken, Missouri, I bred, on June 28, 1932, the dipterous parasite *Spogostylum obsoletum* Loew [C. T. Greene] and on July 29-30, 1926, I bred from cocoons of this wasp eleven dipterous insects, *Pachyophthalmus floridensis* Tns. [C. T. Greene].

There is to my knowledge no record of the mating behavior of this wasp. I have, however, observed courtship behavior that probably culminated in mating. I watched a female wasp on June

26, 1932, as she came to the mud puddle; as she was preparing for flight, a male resting upon a stone nearby, flew swiftly into the air and pursued her. They were both soon beyond my range of vision, but after a little while he returned and resumed his position on the rock. In the same way he pursued the next female that came to the water, and the next one and also the next one, always returning to his place on the rock. Finally when he returned no more, I assumed he had been successful in his quest and mating had taken place in the air. He must have watched the female very closely as she came to the water's edge, for while he would not molest her while at work, he would always fly into the air at the same time she did, and trailing close behind her would sometimes hit her body with his own.

Cryptocheilus unifasciatus Say [G. A. Sandhouse]. Several individuals were observed feeding on flowers of *Eupatorium* sp. at Pacific, Missouri, Sept. 4, 1938.

Microbembix monodonta Say. A wasp of this species was seen to enter a burrow in the sand at Silica, Missouri, July 18, 1922. She was carrying a beetle, *Discoderus parallelus* [E. A. Schwarz] which appeared to be dead.

Scolia bicincta. Many were seen feeding on the flowers of the buck brush, *Symphoricarpos orbiculatus* Moench [E. S. Anderson].

Scolia nobilitata Fab. [G. A. Sandhouse]. One specimen was observed feeding on flowers of *Erigeron canadensis* August 7, 1932.

Stizoides unicinctus Say [G. A. Sandhouse]. Several specimens were feeding on flowers of *Pycnanthemum flexuosum* (Walt) B.S.P. [E. S. Anderson] at Kirkwood, Missouri, July 18, 1937.

Myzine quinquecincta Fab. [G. A. Sandhouse]. Several individuals were in company with *Stizoides unicinctus* feeding on same flowers.

Chrysis (*Trichrysis*) *parvula* Fab. [G. A. Sandhouse]. A male and female of this species were taken at clay bank at Kirkwood, Missouri, on July 4, 1930. This bank contained many nests of several species of mining-bees and mining-wasps. Another specimen was taken on the windowpane of an old house at Lesterville, Missouri, July 25, 1938.

Chrysis (*Tetrachrysis*) *coerulans* Fabr. [G. A. Sandhouse]. Two specimens were taken on July 26, 1932, at the above-mentioned clay bank.

Chrysis (*Hexachrysis*) *fabricii* Mocsary [G. A. Sandhouse]. Four specimens were taken at the clay bank mentioned above on June 23, 1932.



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