

**REDISCOVERY OF EMESAYA BREVICOA AND ITS
OCCURRENCE IN THE WEBS OF SPIDERS
(HEMIPTERA, REDUVIIDAE).**

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The thread-legged bug, *Emesaya brevicoxa* (Banks), was more precisely defined by McAtee and Malloch (1925), who examined the unique female holotype from Los Angeles, California, now stored in the Museum of Comparative Zoology. The small size and distinctive carinae of the seventh tergite in the female will readily distinguish it from allied species. Thanks to the interest of Mr. George Mansfield I am now able to report additional specimens of this species. *Emesaya brevicoxa* was found commonly at Atascadero, California, in October, 1940. Mr. Mansfield writes that they "were found in cobwebs under house eaves of a cabin." Several last instar nymphs were received from Mr. Mansfield and were kept alive in a breeding cage for five months. They were supplied with miscellaneous arthropods obtained by sweeping in an alfalfa field each week. Although small Hymenoptera, Diptera, and Coleoptera were thus available at all times, *Emesaya* was never observed to feed upon them. Soon after each collection of sweepings was introduced, each thread-legged bug was seen to have captured a spider. The bugs lived thus for months, suspended upside down from spider webs and subsisted, so far as observed, entirely on a diet of various species of spiders. That they never became entangled in the webbing is remarkable considering their large size and apparently awkward locomotion. Uhler (1884) has noted in *Emesaya brevipennis* (Say) the "curious habit of swinging back and forth . . . when lodged on the twig of a tree or bush." In the present case a remarkable up and down movement of the body was frequently observed while the bugs were suspended from the spider webs.

Other Reduviidae which have been recorded as inhabitants of spider webs include the closely related *Emesaya brevipennis* (Say) (Wickham, 1910; Smith, 1910; Howes, 1919); three species of the genus *Eugubinus* Distant in India (Distant, 1904, 1915; Gravely, 1915); *Empicoris vagabundus* (Linn.) (Downes in Parshley, 1921), and *Empicoris rubromaculatus* (Blackburn) (Downes, 1927) in Canada; *Tagalis inornata cubensis* McAtee and Mall. and *Oncerothelus acuminatus* Say in Cuba (Fracker and Bruner, 1924); and *Acholla multispinosa* De Geer (Auten, 1925) in Ohio. China and Myers (1929) summarized our knowledge concerning

the Heteropterous inhabitants of spider webs and stated that "in no case is it certain whether the eggs, young, or captured prey are the prime attraction." Readio (1927) was likewise uncertain on this point as regards *Emesaya* whereas Howes (1919) considered that captured prey constituted the main food supply.

Wickham (1910) has described the curious contortions assumed by these bugs during mating. Equally sharp bending of the body was observed during ecdysis. The moult from last nymphal instar to adult was observed on January 30, 1941. The nymph was hanging head downward from strands of spider webbing. The body was bent abruptly between the pro- and mesothorax, the under surface of head and the prosternum being pressed against the other thoracic sterna and thus directed backward.

The nymphal skin broke in the usual manner, splitting along the epicranial stem and epicranial arms (Spooner, 1939) and continuing along the middorsal line of the thorax. The head bends forward in front of the epicranial arms. As the moulting bug emerges, first the head and later the pronotum bend downward and backward parallel to the main axis of the body. The adult gradually emerges in this fashion, the front legs and antennae coming out of the front portion while the abdomen and meso- and meta-thoracic legs emerge from the back portion. While pulling out the middle and hind legs, the femora are bent at right angles near the middle and the tibiae are strongly bowed. When the antennae are free they are grasped, one at a time, by the front legs and pulled so hard that the third antennal segment is strongly bowed. This operation is repeated several times.

The bug is completely free after approximately 30 minutes but remains clinging to the suspended exuviae and to the webbing for nearly three hours before appearing completely pigmented.

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NOTICE—Date of Mailing of *Entomologica Americana*, vol. XXI, no. 2, for April, 1941.

The actual date of mailing this number to subscribers was **July 28, 1941**. Owing to unforeseen difficulties with presses and folding machines, this number was much delayed beyond July 16, the date of issue as printed on the front cover.



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