

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

GENERAL NOTES.

THE DRUMMING SPIDER (*LYCOSA GULOSA* WALCKENAER).

In late April, 1935, I made a collecting trip into the Bull Run Mountains, Virginia, visiting one of the highest points on the ridge known as High Point, located nearly northeast of Broad Run Postoffice, in Fauquier County.

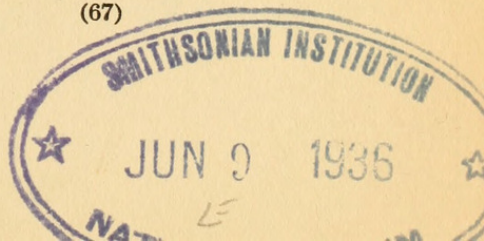
While reclining upon the leaves in the warm afternoon sun, I heard around me a distinct purring sound from time to time, which at once stimulated similar responses in the leaves around. Close watching revealed an active spider making the sounds. Mr. Irving Fox, who is engaged in identifying spiders in the collections of the U. S. National Museum found mine to be males of *Lycosa gulosa* Walckenaer.

The sounds are not stridulations due to the rubbing together of two external chitinous surfaces, but were actual tattoos rapidly executed upon the dry leaf surfaces.

The creatures were very wary, but with care I was able to examine their movements critically from a distance of only a few inches. When the spider moved and made its sounds, the fore part of the body quivered perceptibly and the palpi, too, executed gentle up and down movements. The quivering movements brought the chelicerae directly in contact with the dry leaf surface, and the latter alone appeared to be responsible for the rather loud sounds I had heard.

These sounds have no musical pitch or tonality such as is characteristic of cricket music, but are dry, toneless, rustling sounds bearing more resemblance to the sounds of the katydids known as the shield bearers of the genus *Atlantacus*. They can not well be expressed in written symbols, but the expression *pr - r - r - r - t* is perhaps as near as any, this phrase being delivered once or sometimes twice in quick succession at the time the spider comes to rest. The spiders not only produced a fast tattoo with their chelicerae, but at the end of these notes *pr - r - r - r - t*, also tapped out several distinct notes on the dry leaves with the tip of the abdomen raised and lowered briskly during the act. When after a period of silence one spider began its thrumming, others joined, until there were sounds all around. When travelling over rocks and sticks sounds were not heard, and did not appear to be attempted. These tapping sounds were surprisingly loud and could be heard readily a distance of ten feet or more.

The alertness and quick responsiveness of the spiders made it appear



that they heard each other readily. Oftentimes, they clearly oriented themselves and followed one another by the sounds made. John Burroughs appears to have been the first observer to refer to the *purring* of these spiders in the chapter "Notes by the Way" of his book *Pepacton* published in 1881. He did not determine how the sounds were made.

In 1904 Fred H. Lahee published a short paper "The Calls of Spiders" (*Psyche*, XI, No. 4, p. 74) describing the sounds of *Lycosa kochii* in Massachusetts. He concluded they were made by the tips of the palpi (pedipalps) striking upon the dry leaves. He observed the up and down movements of the abdomen but heard no sounds.

William T. Davis next refers to these spiders in a brief note "Spider Calls," (*Psyche*, XI, No. 6, 1904, p. 120), mentioning their purring. His material and those of Lahee were all males, and were identified by Emerton as *Lycosa kochii*. These spiders of Lahee and Davis, known at that time as *Lycosa kochii*, are without doubt identical with the species I observed in the Bull Run Mountains as *Lycosa gulosa* in keeping with more recent revisions.

To say the least, this is a most remarkable method of sound making, and is quite comparable to the drumming of woodpeckers with the bill upon resonant limbs, the spiders having learned to use the hard chelicerae.

—H. A. Allard, Washington, D. C.

FRANKLINIELLA GOSSYPIANA, NEW NAME.

The common *Frankliniella gossypii* (Morgan) of the Southwestern United States, originally described in *Euthrips* (Proc. U. S. Nat. Mus., Vol. 46, p. 9, figs. 19–22; August 23, 1913), must be re-named because the combination *Euthrips gossypii* has been previously used by Shiraki (Spl. Rept. No. 5, Agr. Exp. Sta., Govt. Gen. Formosa, *Insect Pests of Cotton*, pp. 65–67, Pl. IV, fig. 4; 1912; in Japanese). Although the American species is not by any means restricted to cotton as a food plant, it seems best to make as little change in the old name as possible; and hence *gossypiana* is proposed as a substitute. *Frankliniella gossypii* (Shiraki), comb. nov., is a quite different insect.

I am indebted to Mr. Sato, of the Yokohama office of the U. S. Bureau of Entomology and Plant Quarantine, for a translation of Dr. Shiraki's description and the verification of the reference and date of publication; to Messrs. R. W. Burrell and C. P. Clausen, also of the Bureau; and to Dr. R. Takahashi, Entomologist of the Formosan Agricultural Experiment Station, for aid extended to Mr. Sato.

—J. Douglas Hood.



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