

SOME SYNONYMY IN *ORYZAEPHILUS*

(COLEOPTERA: CUCULIIDAE)

Catalogues of beetles list four species of *Oryzaephilus* in America, north of Mexico. One of these was originally described as *Silvanus gossypii* by Chittenden in 1897 (U.S.D.A. Div. Ent. Bull. No. 8 (n.s.): 12, fig. 5). The holotype is in the U. S. National Museum; it was received at "Washington, D. C., in November, 1893, in cotton seed from India." A comparison of that holotype with a large number of specimens of *O. mercator* (Fauvel), 1889, has convinced me that it will easily fall within the range of variation of *mercator*. All the characteristics which Chittenden says are distinctive in *gossypii* occur also in *mercator*. The two names are synonymous (NEW SYNONYMY).

Another name to consider is *O. bicornis*, originally described as *Silvanus bicornis* by Erichson in 1846 (Naturg. Ins. Deutschlands 3, Abt. 1:337). In Europe this form is usually considered a synonym of *surinamensis* (L.) or a variety of it. Its genitalia are identical to those of *surinamensis*. It seems better at present to consider *bicornis* (Erichson) a synonym of *surinamensis* (L.).

The only two species of *Oryzaephilus* in America, north of Mexico, are well-known throughout the world, being common stored grain pests, distributed far and wide by commerce. The Saw-Toothed Grain Beetle is *O. surinamensis* (L.), and the Merchant Grain Beetle is *O. mercator* (Fauvel). They are easily separated morphologically by the temples, that area posterior to the eyes and anterior to the constriction of the neck. In the former species the temples are about two-thirds of the length of the eyes, whereas in the latter they are very short and tubercular in form.

A full morphological comparison of *O. surinamensis* and *O. mercator* was given by Slow in 1958 (Bull. Ent. Res. 49:27-34, 8 figs.), and their biologies were described by Howe in 1956 (Ann. Appl. Biol. 44:341-355, 6 figs.).

To Dr. R. W. Howe, of Slough, Bucks., England, I offer thanks for advice given.

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NOTES ON THE SYNONYMY OF A NORTH AMERICAN ANT

(HYMENOPTERA: FORMICIDAE)

In 1914 Santschi described an ant, *Formica cinerea* var. *canadensis*, from a series of 6 workers and 5 females from Saskatchewan, Canada. In his brief and rather inadequate description Santschi emphasized the black color of the ant, stating that it somewhat resembled *Formica*

fusca var. *subaenescens* Emery, which was synonymized in 1950 by Creighton with *Formica fusca* L. North American workers have never been able to recognize *canadensis* due to the very poor description and lack of types for study. Wheeler (1917, Proc. American Acad. Arts and Sci., 52: 550-551) thought Santschi might have confused the species with *hewitti*; Creighton (1950, p. 531) could not place *canadensis* with certainty but thought it most likely to be *altipetens* Wheeler or *cinerea lepida* Wheeler. Gregg (1953, p. 328) was more inclined to believe it a northern sample of the *lepida* population.

Hoping to establish the identity of *canadensis* with certainty, I borrowed 2 female and 2 worker cotypes of *canadensis* from the Musée d'Histoire Naturelle, Basel, Switzerland, through the kindness of Dr. Fréd Keiser. In addition to the material in the *cinerea* complex available to me in the U.S. National Museum, I also borrowed approximately 500 specimens from the collections of Drs. W. S. Creighton and Robert E. Gregg. Since the cotype workers of *canadensis* were in an unusually poor condition it was necessary to compare the cotype females with that of a female of *lepida* in a series of workers and female from Cedar Breaks, Utah, collected by W. S. Creighton on August 12, 1934. No important differences could be detected; therefore, I conclude that *canadensis* is the same as *lepida*.

Creighton gives the range of *lepida* as from the western Dakotas to the Pacific Coast and as far south as Utah. Gregg also records the sub-species from Colorado, but it is quite likely that *lepida* may range even farther south than this. It would be wise not to accept any published records outside of this definite range, unless such records can be confirmed. Creighton has pointed out that the species has a broad tolerance for altitudes and also individuals may vary greatly in color. He states that the ants from the higher altitudes are usually darker than those from lower altitudes. Latitude may also influence color as is evidenced by the dark Saskatchewan types.

Below are recorded original citations, type localities, and type repositories, as well as other important bibliographical references:

Formica cinerea cinerea var. *lepida* Wheeler, 1913, Bul. Mus. Compar. Zool., Harvard Univ., 53 (10): 526, worker. Type locality: Blue Lake, Humboldt County, California; types in Museum of Comparative Zoology.

Formica cinerea var. *canadensis* Santschi, 1914-(1913), Ann. Soc. Ent. de Belg., 57: 435-436, worker, female. Type locality: Saskatchewan Province (no specific locality cited), Canada; types in Musée d'Histoire Naturelle, Basel, Switzerland. **New synonymy.**

Formica cinerea lepida, Creighton, 1950, Bul. Mus. Compar. Zool., Harvard Univ., 104: 517-519, 529, 531, worker.—Gregg, 1953, Proc. Ent. Soc. Washington, 55 (6): 325-328, worker, figs. 1, 2.

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