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## IS ECITON MEXICANUM F. SMITH REALLY ECITON PILOSUS F. SMITH?\*

BY M. R. SMITH

A. & M. COLLEGE, MISSISSIPPI

In 1858 F. Smith described a species of ant, *Eciton* (*A.*) *pilosus*, from the worker phase. From that date until the present time neither the queen nor the male have been discovered. A year later Smith described another *Eciton* from the male phase. This ant, *Eciton* (*A.*) *mexicanum*, is still known from only the male phase although it has been over seventy years since Smith first described the species. Since I have some data bearing on the identity of the two species, I believe it worth while to record it here. From the information at hand I am led to believe that the ant which F. Smith described as *E. mexicanum* is not a valid species, but is very probably the male of *Eciton pilosus*. If my assumption should prove correct, then the name *E. mexicanum* must be relegated to synonymy. The reasons which have led me to this hypothesis are given below.

During the summer of 1930 I received for determination a number of ants from Mr. J. P. Kislanko, of Wiggins, Mississippi. Among the lot was a number of specimens of male ants belonging to a species of *Eciton*. Mr. Kislanko stated that the specimens were collected at a light trap at Wiggins on the night of June 27. After carefully examining the ants I found that they agreed splendidly with Wheeler's remarks and figure of *Eciton mexicanum* F. Smith as given in his "Ants of Texas, New Mexico and Arizona." (Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 414, f. 11, pl. 26 (1908).)

Previous to the date on which the males of *E. mexicanum* were collected at Wiggins, the genus *Eciton* (*Acamatus*) was represented in Mississippi by only four species, namely: *carolinensis*, *opacithorax*, *pilosus*, and *schmitti*, although rather general collecting for ants had been done over a period of ten years or more. Of these four species, males are known only for *opacithorax* and

\* A contribution from the Mississippi Agricultural Experiment Station.

*schmitti*. There are thus two species of *Eciton* in Mississippi for which the male phase is not yet known.

It at once occurred to me that possibly the males (which are now known as *E. mexicanum*) might be the much-looked-for male of either *carolinensis* or *pilosus*. Since the type locality of *Eciton mexicanum* is Mexico, as the specific name suggests, and since *carolinensis* is not known to occur in Mexico, I at once inferred that the males at hand might very probably be the males of *Eciton pilosus*, an ant which is not only common to Mexico but ranges throughout the southern part of the United States, certainly as far east as Mathiston (Webster County) Mississippi.

Any one who has studied our North American species of *Eciton* (*Acamatus*) will quite readily agree that *opacithorax* and *carolinensis* are very closely allied taxonomically if one is to judge them by a study of the worker phase of the two species. Reasoning from this basis one would expect the male of *E. carolinensis* to be very similar in a general way to that of *E. opacithorax* and rather remote from the male of *E. pilosus*. Hence, since the specimens of *E. mexicanum* do not in any way agree with the male of *opacithorax*, and since *carolinensis* is not known to occur in Mexico, it is an easy inference that the males of *E. mexicanum* might be the long-sought males of *E. pilosus*.

One might, of course, argue that the males collected at Wiggins were blown into Mississippi by strong southern or western winds but this hypothesis is hardly tenable. The only conclusive proof that the species are the same would be the finding of the males of *E. pilosus* associated with workers in a nest. During the past summer I sought diligently for nests of this species, but without success. I believe my efforts will eventually be rewarded and what I have suggested here will prove to be a fact.

The present synonymy of the two species is as follows:

*E. pilosum* Fred Smith, Cat. Hym. Brit. Mus. Vol. 6, 151 (1858) worker.

*E. pilosum* Mayr, Novara Reise, Formic. p. 77 (1865), Wien Ent. Zeit. Vol. 5, p. 120 (1886); Dalla Torre, Cat. Hymen. Vol. 7, p. 5 (1893) worker; Emery Bull. Soc. Ent. Ital. Vol. 26, p. 183 (1894) worker; Forel, Biol. Centr. Am. Hym. Vol. 3, p. 27 (1899-1900) worker. Emery, Mem.

Real. Acad. Ist. Bologna, p. 16, (1900) worker; Wheeler, Amer. Nat. Vol. 35, p. 165 (1901) worker, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 412 (1908) worker.

*E. clavicornis* Norton, Trans. Amer. Ent. Soc. Vol. 2, p. 46 (1868) worker.

**E. mexicanum** (Fred Smith), Cat. Hym. Brit. Mus. Vol. 7, p. 7 (1859).

*Labidus mexicanus* Cresson, Trans. Amer. Ent. Soc. p. 194 (1872) male.

*Eciton (Labidus) subsulcatum* Mayr. Verh. Zool. bot. Ges. Wien, Vol. 36, p. 440 (1886) male.

*Labidus subsulcatum* Cresson, Trans. Amer. Ent. Soc. Suppl. Vol. p. 259 (1887) male.

*Eciton mexicanum* Dalla Torre, Cat. Hym. Vol. 7, p. 4 (1893) male; Emery, Zool. Jahrb. Syst. Vol. 8, p. 260 (1894) male, Mem. Acad. Sc. Bologna Vol. 8, p. 515, f. 19, (1900) male; Wheeler, Amer. Nat. Vol. 35, p. 165 (1901) male, Bull. Amer. Museum Nat. Hist. Vol. 24, p. 414, pl. 26, f. 11, (1908) male.

*Eciton (Acamatus) mexicanum* Emery, Mem. Real. Acad. Ist. Bologna p. 17, f. 19, (1900) male.

Author's note: Before submitting this article for publication I mailed it to Dr. W. M. Wheeler for suggestions and criticisms. In replying Dr. Wheeler referred me to his paper entitled, "Observations on Army Ants in British Guiana," Proc. Amer. Acad. Arts and Sci. Vol. 56, No. 8, pp. 291-328 (1921). Wheeler in studying some specimens collected by Mr. Wm. Beebe at Kartabo, in which males were taken along with workers, quickly realized that the workers were a new variety of *Eciton (Acamatus) pilosum*, which he named var. *beebei*. The males except for some minor differences showed very clearly that they were a variety of *Eciton (A.) mexicanus*. From such data Wheeler came to the conclusion that the name *E. (A.) mexicanum* should be relegated to synonymy since the male phase (the only phase that has ever been recognized) is nothing more than the male of *pilosus*, an ant which was described from the worker phase a year earlier than *mexicanum*.

As I reached a similar conclusion under somewhat different circumstances and absolutely ignorant of Dr. Wheeler's inferences, I have deemed it advisable to publish this article in that it tends to confirm Dr. Wheeler's conclusions.

In the same article Wheeler also describes for the first time both the female and male of *Eciton (A.) carolinensis*.