

THE NORTH AMERICAN ANTS DESCRIBED BY ASA FITCH.

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Asa Fitch, in his well-known report on the insects infesting fruit and forest trees, first issued in 1855 in the Transactions of the New York State Agricultural Society and in 1856 as a separate volume, published descriptions and ethological notes on six species of common North American ants which he named the "cherry ant" (*Myrmica cerasi* Fitch), the "troublesome ant" (*Myrmica molesta* Say), the "silky ant" (*Formica subsericea* Say), the "wood-eating ant" (*F. herculeana* L.; *F. ligniperda* Latr.), the "New York ant" (*F. novæboracensis* Fitch) and the "walnut ant" (*F. caryæ* Fitch). Hymenopterists have bestowed little attention on Fitch's work and have even misinterpreted some of his descriptions. A recent visit to the United States National Museum, where I found the types of his *F. novæboracensis* and *caryæ*, has led me to study the descriptions of these and the other species with a view to determining the names by which they should now be known.

1. There is no difficulty in regard to *Myrmica cerasi*, which Emery was undoubtedly right in regarding as a distinct and easily recognizable color-variety of what had been previously described by Say (1836) as *Myrmica lineolata*, now known as *Crematogaster lineolata* var. *cerasi* Fitch.

2. Fitch described at length the habits of *Myrmica molesta* Say. Mayr, Forel, Dalla Torre and others believed Say's species to be merely the common house ant, *Monomorium pharaonis* L., because Say mentioned its occurrence in dwellings, but as Fitch describes it as nesting also "in our pastures and plowed fields and sometimes doing much injury in cornfields, gnawing the blades of corn when they are but a few inches high, for the purpose of drinking the sweet juice which flows from the wounds," it is evident that he refers to what Mayr later called *Solenopsis debilis*. The European myrmecologists were misled by their inability to believe that a small *Solenopsis*, closely allied to the European *S. fugax* Latr., could become a household pest. Many years ago I showed that this is really the case and supported Emery's contention that Say's

species should be known as *Solenopsis molesta* (= *debilis* Mayr). Fitch's observations, which were unknown to me at that time, are additional confirmation of our view.

3. The silky ant, *Formica subsericea* Say, is, of course, the common form now regarded as merely a more pubescent variety of *F. fusca* L.

4. Fitch's description of *F. herculeana* and *ligniperda*, which he evidently believed to be synonymous, shows that he referred to what we now call *Camponotus herculeanus* L. subsp. *pennsylvanicus* DeGeer. He was thoroughly familiar with this insect and its habits.

5. Fitch's description of *F. noveboracensis* is very clear and shows that he had before him specimens of what Forel later called *Camponotus ligniperdus* var. *pictus*. Some years ago Pergande proved this from examination of Fitch's types. As *ligniperda* is merely a subspecies of *herculeanus*, the ant is now called *C. herculeanus* L. subsp. *ligniperda* Latr. var. *noveboracensis* Fitch. It should be noted that the last name is spelled "*novæboracensis*" by Fitch. It is, perhaps, permissible to amend so obvious an orthographic error.

6. On examining the types of Fitch's *F. caryæ* (several workers and females) in the National Museum I was surprised to find that they are identical with the form described by Emery in 1893 as *Camponotus marginatus* Latr. var. *nearcticus*. Emery subsequently discovered that Latreille's *marginatus* was a variety of *C. maculatus* Fabr. subsp. *æthiops* Fabr. and that what Roger and later myrmecologists had been calling *marginatus* was really the form described by Nylander in 1856 as *fallax*. In my later papers I therefore referred *nearcticus* and a whole series of allied subspecies and varieties to Nylander's species. It is now evident that *nearcticus* becomes a synonym of *caryæ* and that the closely related *fallax* of Europe, described a year later, becomes *C. caryæ* var. *fallax* Nyl. Hence the synonymy of the typical *caryæ* would stand as follows:

Camponotus (*Camponotus*) *caryæ* Fitch.

Formica caryæ Fitch, Trans. N. Y. State Agric. Soc. 14 (1854), 1855, pp. 855-859, ♀, ♀, ♂; First and Second Report on the Nox. Benef. and Other Ins. State N. Y., 1856, pp. 151-155; Third Report, 1859, p. 123.

?*Formica atra* Buckley, Proc. Ent. Soc. Phila., 6, 1866, p. 160, ♂.
Camponotus marginatus Mayr (*nec* Latreille), Verh. Zoöl. bot. Ges.
 Wien. 36, 1886, p. 423 (in part).

C. marginatus var. *nearcticus* Emery, Zoöl. Jahrb. Abth. f. Syst. 7,
 1893, p. 675, ♂, ♀; Wheeler, Bull. Amer. Mus. Nat. Hist.,
 21, 1905, p. 402; Occas. Papers Boston Soc. Nat. Hist., 7,
 1906, p. 24.

C. fallax Nyl. var. *nearcticus* Wheeler, Ann. Rep. N. J. State Mus.
 (1909), 1910, p. 663; Journ. N. Y. Ent. Soc., 18, 1910, p.
 222; Ann. N. Y. Acad. Sci., 20, 1910, p. 342.

Both Cresson (Synops. Fam. Gen. Hymen., 1887, p. 255) and Dalla Torre (Catalog. Hymen., 7, 1893, p. 247) assumed that Fitch's *F. caryæ* was merely a synonym of *Camponotus pennsylvanicus*, but, as we have seen, Fitch was well acquainted with this ant under the old name *F. herculeana* and we could hardly suppose that so competent an entomologist would redescribe it under a new name. And although some of the distinctive characters are omitted in the description of *caryæ*, it is, nevertheless, sufficiently explicit, even if the ethological notes and the types did not make the identification certain.

In conclusion the twenty described subspecies and varieties that must now be referred to the American *caryæ*, as the specific type, instead of to the European *fallax*, together with their known distribution, may be listed as follows:

North American Forms.

C. caryæ Fitch.—United States and British America.

var. *minutus* Emery.—United States and British America.

var. *pardus* Wheeler.—New York and New Jersey.

var. *tanquaryi* Wheeler.—Illinois.

var. *decipiens* Emery.—Indiana to Utah.

subsp. *rasilis* Wheeler.—Gulf States to Arizona.

var. *pavidus* Wheeler.—Gulf States.

subsp. *subbarbatus* Emery.—New Jersey to California.

var. *paucipilis* Emery.—Maryland.

subsp. *discolor* Buckley.—Texas to Illinois.

var. *clarithorax* Emery.—Pennsylvania to California.

var. *cnemidatus* Emery.—Maryland.

Eurasian Forms.

C. caryæ var. *fallax* Nyl.—Southern Europe.

var. *ruzskyi* Emery.—Russia.

var. *lameerei* Emery.—Tashkund.

var. *kamensis* Ruzsky.—Kasan.

var. *himalayanus* Forel.—Himalayas.

var. *quadrinotatus* Forel.—Japan.

var. *nawai* Ito. Japan.

subsp. *vitiosus* F. Smith.—Japan.

subsp. *brunni* Forel.—Japan.

A NEW MALAYAN ANT OF THE GENUS
PRODISCOTHYREA.

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Prodiscothyrea bryanti sp. nov.

Worker: Length, 2 mm. Very similar to the genotype *P. velutina*, which I recently described from Queensland, Australia (Trans. Royal Soc. South Australia, 40, 1916, pp. 33–37, Pl. 4), but differing in the following characters: The head is proportionally smaller and much less convex above, especially behind the frontal carinæ, the eyes are much smaller and the cheeks have a more prominent blunt tooth in front of the eyes. The antennal scapes are less abruptly narrowed at the base and the funicular joints, with the exception of the last are even more transverse, so that the whole funiculus is shorter, being scarcely longer than the scape. Thorax shorter, not $1\frac{1}{2}$ times as long as broad, less convex in front, with less angular humeri and with more distinct epinotal teeth and more nearly vertical epinotal declivity. Petiole much smaller and broader, nearly four times as broad as long and with a more pronounced, compressed, translucent tooth on its ventral surface. Postpetiole also shorter, less decidedly narrowed in front and less depressed above in front than in *velutina*. Sculpture, pubescence and color very similar to those of *velutina* but the dark median dorsal line on the postpetiole and first gastric segment is lacking.

Described from a single specimen taken on Penang Island in the Straits Settlements by Mr. G. E. Bryant and sent me by Mr.



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