

Dyar, List N. A. Lep., 353, 1902 (*Eurycyttarus carbonaria* Pack.).

Smith, Check List Lep. Bor. Am., 82, 1903 (*Eurycyttarus carbonaria* Pack.).

Dyar, Insec. Ins. Mens., I, 104, 1913 (*carbonaria*).

Barnes & McDun., Can. Ent., XLVI, 30, 1914 (*carbonaria*).

Dyar, Can. Ent., XLVI, 179, 1914 (*carbonaria*).

Barnes & McDun., Check List Lep. Bor. Am., 125, 1917 (= *gloveri* Pack.).

Barnes & McDun., Check List Lep. Bor. Am., 125, 1917 (*Eurycyttarus carbonaria* Pack.).

Dyar, Insec. Ins. Mens., XI, 2, 1923 (*Pachytelia carbonaria*).

Dyar, Insec. Ins. Mens., XI, 4, 1923 (*Manatha*).

Oberthur, Etudes Lep. Comp., XXI (II), 170, 1923 (*Platoceticus*).

Barnes & Benj., Cont. N. H. Lep. N. A., V (3), 187, 1924 (? *carbonaria*).

EXPLANATION OF PLATE III

Eurukuttarus edwardsii Heyl.

1. Venation, wings of ♂.
2. Genitalia, with adjacent abdominal plates.
3. Abdominal plates, dorsal and ventral.
4. Legs.
5. Caudal segments, pupa of ♀.
6. Pupa of ♂.
7. Caudal segments, pupa of ♂.
8. Head of larva, last instar.
9. Larva, last instar.
10. Wing-scales, 100 ×.

Eurukuttarus polingi Barnes and Benj.

11. Wing-scales, 100 ×.

A Preliminary List of the Ants of Kansas (Hymenoptera, Formicidae).

(Continued from page 12.)

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MYRMICINAE.

MYRMICINA GRAMINICOLA subsp. AMERICANA Emery. This species is recorded by Tucker (1909, p. 289) from Lawrence, who further comments that males were found in September and October. This insect, according to Wheeler (1910), occurs in the Northeastern states.

MONOMORIUM PHARAONIS Linn. None of the lists of Kansas Hymenoptera contain this common species. It is a cosmopolitan species. In this state it is often confused with *Solenopsis molesta* Say, both of which infest houses and are spoken of as "red ants." It occurs widespread over the state.

M. MINIMUM Buckley. This small black species constructs crater nests in sandy or gravelly situations. The writer has found workers hibernating in a nest in December at a depth of 18 to 24 inches, and at Winfield found them under stones, April 29. In the State Agricultural College collection are three wingless queens and four workers collected by Marlatt. The Winfield specimens were determined by Wheeler, and the Riley County specimens by M. R. Smith.

M. MINUTUM var. MINIMUM Buckley. This variety, as cited, is given in the Tucker list as occurring at Lawrence, Kansas, in June and July.

SOLENOPSIS MOLESTA Say. This pernicious pest is known over the state as the kafir ant or tiny thief ant. It attacks the planted seeds of sorghums and other crops and causes an immense amount of damage in southern Kansas. It is also a pest of houses and on the other hand is a useful insect on account of its scavenger habits. The results of two years' study of the biology of this ant by the writer (1920) are reported elsewhere. The species is widespread throughout the United States and Mexico. The writer has found it in many of the counties in the eastern half of the state. It has not been found and reported west of Smith and Barber Counties.

Unfortunately, considerable confusion exists in the American literature with regard to this species. Originally described as *Myrmica molesta*, it, 30 years later, was redescribed by Buckley (1866, p. 342), from specimens collected in the vicinity of Washington, D. C., as *Myrmica exigua*. This name has not, so far as the writer is able to learn, crept into the economic literature. After another period of 20 years, the same ant was again described by Mayr (1886, p. 461) as *Solenopsis debilis*. It will be noticed that Mayr was the first to place the species in the genus *Solenopsis* Westwood. Under this name the species has, much too frequently, been reported as noxious and of considerable economic importance. Previous to the time of Mayr's paper, many references to this ant were made under the name *Solenopsis fugax* Latr. This mistake is accounted for by the close resemblance of *S. molesta* to the well-known Euro-

pean *S. fugax*. Several workers (Forbes, Webster, et al.) referring, in earlier papers, to *S. molesta* used the name *S. fugax*; and, following the advent of Mayr's description, made similar references under the name *S. debilis*.

According to Wheeler, "Emery (1894, p. 277) was the first to insist that this (*debilis*) was merely a synonym of Say's *molesta*." Commenting further on the synonymy of the species, Wheeler in a letter says, "*Solenopsis fugax* is a European species and does not occur in this country. It is extremely close to *Solenopsis molesta*, however. Undoubtedly, all references to *fugax* in American literature refer to *molesta*."

Additional confusion has arisen between *S. molesta* and the little red house ant, *Monomorium pharaonis* Linn. This is due, in part, to the similarity of habits, but more to their likeness in coloration. Both species are spoken of as tiny, but only a superficial observation is needed to note the much smaller size of *S. molesta*.

Myrmica minuta Say, a meagerly described form, is thought by such an authority as Emery (1894, p. 277) to be a synonym of *molesta*.

Crevecoeur's list contains this species cited as *Solenopsis debilis*.

S. TEXANA Emery. Tucker records this species from Lawrence. A female was found by him in June at twilight. Wheeler's list records this species only from Texas, and in view of the writer's work with *S. molesta*, the determination of this species from Kansas appears doubtful.

PHEIDOLE PILIFERA Roger. Soldiers of this species were found by the writer attacking workers of *Solenopsis molesta* Say under stones at Winfield, Kansas, April 19, 1914. These were identified by Wheeler. This record is apparently new for the state. In Wheeler's list its range is given as "Eastern and Northern States."

PH. SITARCHES Wheeler. In the State Agricultural College collection are workers and soldiers of this species determined by M. R. Smith from Riley County, collected March 21 and April 30, under stones. This species in Wheeler's list is from Texas and has apparently not been noted previously in this state.

PH. SITARCHES Wheeler. New var. Workers of this species were collected in Cowley County by the writer in 1916. They were submitted to Wheeler who pronounced them a new variety

which is, as far as the writer can ascertain, still undescribed.

PH. VINELANDICA Forel var. Workers of this species were collected at Winfield, April 19, under stones. This species occurs in the "Eastern States" and no record was found of its occurrence in Kansas.

PH. HAYESI M. R. Smith. Specimens of this species found attacking planted corn and kafir seed at Manhattan were sent to M. R. Smith, who pronounced it a new species and who stated that Wheeler had concurred in the belief that it was a new and undescribed species. A description of this ant appeared in ENTOMOLOGICAL NEWS for July, 1924, page 251. Because of its damage to planted seed in the state, this insect bids fair to become of considerable importance and studies are now being carried on to learn of its life history. So far this species has been found at Manhattan only.

CREMASTOGASTER LINEOLATA Say. This species without reference to any of its varieties or subspecies is listed from Lawrence by Tucker (1908), who found females and workers in April, workers in June, and males and females in September. It is also found listed by Crevecoeur as new. Wheeler gives the range of this species as northern states and Canada.

C. LINEOLATA subsp. LEVIUSCULA Mayr. Tucker reports taking this subspecies from a dead standing elm tree at Lawrence, and at Wichita he found workers during April.

C. LINEOLATA var. CLARA Mayr. Workers of this variety (determined by W. M. W.) have been collected at Winfield a number of times by the writer. They were found under stones in several instances with colonies of *Solenopsis molesta* Say. This is apparently a new state record.

C. VICTIMA subsp. MISSOURIENSIS Pergande. This species (determined by M. R. S.) was collected by the writer at Manhattan under stones April 13, 1917. It is a new state record.

STENAMMA sp. Undetermined males of this genus are in the State Agricultural College collection from Manhattan collected in September both by Faville and Marlatt.

APHAENOGASTER MARIAE Forel. In a recent letter, M. R. Smith writes that he has seen this species among ants from the Colorado Agricultural College collection sent him by C. R. Jones which bore Kansas labels. This is apparently a new state record.³

A. TREATAE Forel. A new record for Kansas. Workers of

³Other species noted from this collection from Kansas are *Formica pallide-fulva* Latr., *Eciton schmitti* Emery, *Prenolepis imparis* Sav. and *Leptothorax curvispinosus* Mayr. Smith also has a record of *Monomorium minimum* Buckley from Lawrence. All of these are discussed elsewhere in this paper.

this species (determined by M. R. S.) were collected abundantly in March and April by Norton.

A. FULVA Roger. Although not reported from this state, this species may occur since Wheeler (1916, p. 586) says that *A. tennesseensis*, the next listed species, occurs only in regions where *A. fulva* occurs.

A. TENNESSEENSIS Mayr. This species was first reported from Lawrence by Tucker, at which time he called it *Stenamma* (*Aphaenogaster*) *tennesseensis*. It is listed, misspelled, as an addition to the Kansas list by Crevecoeur. In the State Agricultural College collection are workers (determined by M. R. S.) from Riley County collected in March.

POGONOMYRMEX BARBATUS subsp. *RUGOSUS* Emery. Three workers from Grant County, collected August 16 by Popenoe, two workers from Hamilton County, collected August 27 by Popenoe, and one worker from Meade County, collected July, are in the State Agricultural College collection, (determined by M. R. S.). According to Wheeler, the range of this subspecies is from Arizona to California. This is evidently a new state record and a somewhat eastern extension of its range.

P. OCCIDENTALIS Cresson. This insect, known commonly as the Mound-building Prairie Ant, is widely distributed over the western part of the state. Because of its economic importance it is one of the best-known Kansas ants. The work of Dean (1908) on its life history has revealed many facts concerning its biology. This species was first noted in Kansas lists by Bridwell (1899). Specimens are at hand from Russell, Wallace, Hamilton and Trego Counties, and the writer has collected specimens in Cowley County. Dean (loc. cit.) has shown that it occurs throughout the state "west of a line running through Belleville in Republic County and Oxford in Sumner County."

MYRMICA RUBRA Linn. This species without varietal distinction is reported from Lawrence by Tucker where he found it in September.

M. RUBRA Linn. var. *SULCINODOIDES* Emery. This variety is listed from the state by Crevecoeur. Its range according to Wheeler is Utah, Colorado and New Mexico.

LEPTOTHORAX SCHAUMI Roger. This species is in the Crevecoeur list as a Kansas species.

L. CURVISPINOSUS Mayr. Also listed by Crevecoeur. This and the previous species are probably from the vicinity of Ottawa.

L. sp. This undetermined species is also found in the Crevecoeur list. It may be one of the foregoing species or a different one.

(To be continued)