

**SYNOPSIS OF NEARCTIC ICHNEUMONINAE STENOPNEUSTICAE
WITH PARTICULAR REFERENCE TO THE NORTHEASTERN
REGION (HYMENOPTERA). SUPPLEMENT 4**

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Résumé

L'auteur présente un nouveau genre néarctique, *Carlsonia*, avec comme espèce-type *Linytus perturbator* Heinrich. Deux nouvelles espèces sont décrites, chacune dans les deux sexes: *Cratichneumon fleischkei* provenant du Colorado, et *Melanichneumon margaritae*, de l'Arkansas et du Tennessee.

Abstract

A new nearctic genus is introduced: *Carlsonia*, with *Linytus perturbator* Heinrich as the type species. Two new species are described, each in both sexes: *Cratichneumon fleischkei* from Colorado and *Melanichneumon margaritae* from Arkansas and Tennessee.

***Carlsonia*, new genus**

Type species: *Linytus perturbator* Heinrich.

DISTRIBUTION: Maine and Michigan

PREAMBLE

The original description of the species *Linytus perturbator* (*Naturaliste can.*, 98: 1022-1024) was based on two males only (from southern Maine). The type specimens are most closely related in structure to the genus *Linytus* Cameron, but morphologically not quite identical with the type of that genus, differing from it (as mentioned in the original description) by the "somewhat elongate, nearly parallel-sided shape of the abdomen" and by wider and more curved cheek profile and temple profile.

Recently Dr. R.W. Carlson forwarded to me for examination a female of the subfamily Ichneumoninae, collected in Michigan, which seemed unassociated with any known species and genus of the subfamily, although Dr. Carlson was convinced that it belonged to the tribe Platylabini.

The female was indeed so strikingly distinguished in appearance from all forms ever associated with the Platylabini that I have been reluctant at first to attribute it to that tribe, until a close examination revealed that it represented, without doubt, the, so far unknown, other sex of *Linytus perturbator*; this fact definitely established the tribal position of this new genus as Carlson had already correctly suggested.

1. The preceding supplements 1, 2, and 3 were also published in *Naturaliste Canadien: Supplement 1* in 1969 (Vol. 96, p. 935-963), Supplement 2 in 1971 (Vol. 98, p. 959-1026), Supplement 3 in 1972 (Vol. 99, p. 173-211). All these supplements refer to the authors "Synopsis of nearctic Ichneumoninae Stenopneusticae with particular reference to the northeastern region", published as Supplements to the *Canadian Entomologist* from February 1, 1961, to November 27, 1962 (Supplements Nos. 15, 18, 21, 23, 26, 27, and 29).

While the male of *Carlsonia* is rather closely related in structure to *Linytus*, differing from that genus mainly in the unobtrusively elongate abdomen and in the head structure, the female shows a very striking specialization of the shape of the abdomen, which is quite unique in the tribe Platylabini; the abdomen is elongate, parallel-sided and cylindrical, a structure which in all probability represents an evolutionary adaptation of the abdomen of the female, to serve as a tool in the act of parasitization of a special host. Analogous abdominal structures occur in almost all other tribes and subtribes of the Ichneumoninae, as for example in *Limerodops* Heinrich of the Amblytelina, in *Erythrojoppa* Cameron of the Ichneumonina, and in *Deuterotypus* Heinrich of the Listrodromini, but were unknown in the Platylabini until now.

DESCRIPTIVE NOTES

Carlsonia belongs to the group of the Platylabini which is distinguished by very small, short-oval or almost circular spiracles of the propodeum, and which is represented in the Nearctic Zone also by the genera *Cyclofabus* Heinrich, *Linytus* Cameron, *Neolinytus* Heinrich, and *Apaeliticus* Wesmæl. *Carlsonia* differs from all these four genera most strikingly by the elongate structure of the abdomen of the female, as mentioned above. Some characters agree with *Linytus*, such as the only slightly depressed and narrower than their interspace gastrocoeli, which are irregularly reticulate-rugose, as is their interspace, and the strongly developed anterior third of notauli.

The head is wider than in *Linytus* in both sexes, with the temple profile not narrowed behind eyes, strongly curved and with the cheeks in lateral view broad and strongly convex; the clypeus is rather strongly convex.

Scutellum moderately raised above postscutellum and laterally weakly carinate to about middle in female, more

strongly carinate to the apex in male; area supermedia short, in female about three times as wide as medially long.

Named in honor of Dr. Robert W. Carlson who collected the female of the type species and who recognized its taxonomic importance.

Carlsonia perturbator (Heinrich), new combination

Linytus perturbator Heinrich, 1971, *Naturaliste can.*, 96: 1022-1024.

TYPES

Holotype: ♂, Southern Maine. C.G.H. II.

Neallotype: ♀, "Iron Co., Michigan, 6—18-VIII-1967, R. W. Carlson". U.S. N.M.

DISTRIBUTION: Maine and Michigan.

DESCRIPTION OF FEMALE

Orange-red; the following white: orbits around eyes (narrowly interrupted on malar space and on vertex, broadly interrupted on temples), subalarum, collare, pronotal ridge, apex of pronotal base, scutellum (except orange base); tarsi III dorsally whitish; the following black: basic color of entire head and pronotum, sutures around mesoscutum, stripe below subalarum, basal furrow of scutellum, axillary troughs, trochanters I, apex of femora III; femora III dorsally blackish-infuscated; length 9 mm.

Flagellum: Bristle-shaped, moderately long, ventrally flattened beyond middle but not widened, fairly strongly attenuated toward apex, with 31 segments, the first fully 3 times as long as apically wide, the widest on the flat side approximately square. Black, with dorsal white annulus on segments 6-10.

Head: Carinal junction at mandible base; malar space not quite as long as width of mandible base; mandibles normal, with small subapical tooth; face,

clypeus, and frons fairly finely, but distinctly and very densely punctured all over.

Thorax: Mesoscutum slightly longer than wide, rather strongly convex, densely and fairly finely punctured, extremely finely coriaceous and glossy between punctures; carination of propodeum complete, except for the absent carinae coxales; area basalis deepened; pleura densely punctured all over, including speculum; no apophyses.

Wings: Nervulus interstitial.

Legs: Long and fairly slender.

Abdomen: Petiole barely wider than high; postpetiole with very sharply defined median field; the median field shows some irregular rugosity and some irregular punctures, but no striation; second tergite parallel-sided, distinctly longer than wide; gastrocoeli with fairly distinct thyridia; third tergite also parallel-sided, somewhat longer than wide; the following tergites parallel-sided; second tergite (except reticulate-rugose gastrocoeli and their interspace) finely punctured, with extremely fine, coriaceous undersculpture; third tergite with sparse, very fine puncturation, glossy; the following tergites glossy, almost impunctate.

Cratichneumon flaschkai, new species

TYPES

Holotype: ♀, "Drake, Colorado, VII-1963", leg. H. Flaschka. C.G.H. II.

Allotype: ♂, same data. C.G.H. II.

DISTRIBUTION: Colorado.

PREAMBLE

A rather large species, well distinguished chromatically and in structure as follows: basic color black, abdomen in male with distinct, steel-blue tinge; tibiae in both sexes with broad, ivory annulus shortly beyond base, the tibiae I and II in male uniformly ivory; areae dentiparae in both sexes, in contrast to all similarly colored eastern nearctic species of the *subiatus* group, with dis-

tinct, triangular apophyses (more prominent in female than in male); postpetiole finely, irregularly rugose in both sexes; gastrocoeli superficial, the thyridia somewhat removed from the base of second tergite in male.

This is not a typical species of the genus *Cratichneumon*. It approaches rather the oriental genus *Lareiga* Cameron and is also related to the blue European species *patruelis* Holmgren, sharing with these forms the short projections of the propodeum and the long, bristle-shaped flagellum of the females.

DESCRIPTION OF FEMALE

Black, the following ivory: frontal and vertical orbits broadly, mark on collare, entire pronotal ridge, subalarum, scutellum, postscutellum, and all tibiae except narrowly black bases and broadly black apices; flagellum with white annulus; length 15 mm.

Flagellum: Bristle-shaped, but only moderately attenuated toward apex, ventrally flattened but not widened beyond middle, with 39 segments, the first nearly three times as long as apically wide, in lateral view the 7th square, none tangibly wider than long. Black, with complete white annulus on segments 8-18.

Head: Temple profile not narrowed behind eyes, curved; cheek profile in frontal view slightly narrowed toward mandible base; malar space about as long as width of mandible base; median field of face and lower parts of lateral fields slightly protruding; clypeus slightly convex; face and clypeus coarsely and densely punctured, frons slightly concave, densely and finely punctured and coriaceous.

Thorax: Anterior third of notauli distinct; mesoscutum coarsely and densely punctured all over; scutellum smooth and almost flat; horizontal part of propodeum medially distinctly shorter than the declivity, the latter coarsely, irregularly rugose, without distinct carination;

horizontal part of propodeum also coarsely and irregularly rugose, the area superomedial about as long as wide, not clearly separated in front from area basalis; costulae indicated, oblique; areae dentiparae with short, triangular, distinct apophyses; pleura coarsely, irregularly reticulate-rugose.

Wings: Nervulus strongly postfurcal; areolet clearly pentagonal.

Legs: Coxae III densely punctured, smooth and shiny between punctures, without scopa.

Abdomen: Postpetiole with weakly indicated median field, finely and irregularly rugose, with scattered punctures; second tergite finely and very densely punctured all over, coriaceous between punctures; the third tergite extremely finely punctured and coriaceous.

DESCRIPTION OF MALE

Black, tergites 2-7 distinctly steel-blue-tinged; the following ivory: face, clypeus, band around orbits (interrupted narrowly at temples and at malar space), mandible base, collare, pronotal ridge entirely, lower third of pronotal base, subalarum, tegulae almost entirely, scutellum, postscutellum, coxae I and II except black bases, first trochanters I and II, tibiae III (except narrowly black base and about the apical half black), tibiae I and II dorsally entirely, ventrally except black wedge-shaped, fairly long apical line, segment I of tarsi I and II dorsally extensively, and a small apico-dorsal mark on coxae III; flagellum with white annulus; length 18 mm.

Flagellum: With 42 segments, nodose, with subapical bristle-ridges on interior side of segments, and with tyloids on segments 6-19; the tyloids are bacilliform on segments 6 and 7, increase gradually in width on segments 8-10, and are broadly-oval, reaching close to bases and apices of segments on segments 10-

26. Black, with complete white annulus on segments 17 (apex) to 24; scape ventrally white.

Malar space rather short, barely one third as long as width of mandible base; mesoscutum and scutellum markedly more convex than in female; scutellum steeply curved down apically toward postscutellum; sculpture of mesoscutum as in female; propodeum markedly more abbreviated than in female, the area superomedial about three times as wide as medially long; apophyses of areae dentiparae slightly less strongly developed than in female; area post-eromedia, as in female, not delimited; gastrocoeli narrowed and somewhat elongate, the thyridia distinctly removed from base of second tergite; tergites 2-4 densely and strongly punctured, finely coriaceous between punctures, the fifth tergite more finely and more sparsely punctured.

Named in honor of the collector, Dr. Helmut Fiaschka, Georgia Technological College, Atlanta, Georgia.

Melanichneumon margaritae, new species

TYPES Holotype: ♀, "Natchez Trail State Park, Henderson Co., Tennessee, 22-26-VI-1972." C.G.H. II.

Allotype: ♂, same data. C.G.H. II.

Paratypes: 1♀, 6♂, same locality, June 1972. C.G.H. II.; 5♂, Mountainburg, Arkansas, 10-13-VI-1971. Collection of Henry Townes.

DISTRIBUTION: Tennessee, Arkansas.

PREAMBLE

This species belongs to the genus *Melanichneumon* Thomson, sensu stricto (see Heinrich, Synopsis of nearctic Ichneumoninae Stenopneusticae, *Can. Ent.*, Vol. 93, Suppl. 26, p. 583-604). In contrast to all other nearctic species of this genus, it is distinguished by strongly developed sexual dichroism, the basic color of the female being red, of

the male black. The white (ivory) pattern is, in both sexes, similar to that of the majority of the species of the genus.

In the key to the females of the genus *Melanichneumon* (Heinrich, 1962) this female runs to couplet 7, but disagrees with both alternatives of that couplet, as the mesoscutum and the prescutellar carinae are ivory-marked and simultaneously the 6th and 7th tergites display very distinct apical ivory marks; it shows some general, chromatic similarity with the three species: *honestus* Cresson, *flavocarina* Heinrich, and *disparilis* Cresson, but differs decisively from them all in structure by a markedly longer, less widened beyond middle, and apically more strongly attenuated flagellum.

The male shares the black basic color of the entire body with two nearctic species only: *dreisbachi* Heinrich and *foxlei* Heinrich. It differs from these two species by: (1) the percurrent, medially not interrupted, apical, white bands on tergites 1-5; (2) the presence of two longitudinal, median, white stripes on the mesoscutum; and (3) by the extensively white-marked mesopleuron and metapleuron. It is in size almost equal to *foxlei*, but considerably smaller than *dreisbachi*.

DESCRIPTION OF FEMALE

Bright ferruginous-red, with a few black markings and with rich ivory pattern; mesoscutum ferruginous-red, with two narrow, not very distinct, longitudinal, median ivory lines and two similar lateral lines, the basic color of lateral lobes of mesoscutum sometimes blackish-infuscated; particularly indicative among the other various ivory marks are the two ivory patches on pleura, one on the lower apical part of the mesopleuron, the other on the lower apical part of the area metapleuralis; there are two conspicuous, apical ivory marks, one on the 6th tergite, the other on the 7th; tergites 1-3 with percurrent,

or medially interrupted, narrow, apical ivory bands; scutellum, postscutellum, marks on prescutellar carinae, and the areae posteroexternae ivory; all coxae partially ivory; flagellum with white annulus; length 11 mm.

Flagellum: Comparatively long and more slender than in all similar species: with 41-43 segments, the first about twice as long as apically wide, the 8th in lateral view square, the widest nearly 2.5 times as wide as long on the flat side, long and strongly attenuated toward apex. Black, with complete white annulus on segments 6 or 7 to 16; scape extensively ferruginous.

DESCRIPTION OF MALE

Black, with very rich white pattern and without ferruginous parts; the following white: head (except black antennal cavities, broad middle of frons, ocellar and occipital regions), collare, pronotal ridge and base, subalarum, mark on tegulae, two longitudinal, median stripes on mesoscutum, two lateral stripes on mesoscutum, marks on prescutellar carinae, scutellum, postscutellum, upper exterior belt of prepectus more or less extensively, a broad, continuous, longitudinal band, or instead, two separated, irregular marks on mesopleuron, areae posteroexternae, mark on carinal triangle, regular, apical bands on tergites 1-5, apical marks on tergites 6 and 7, and various markings on coxae, trochanters, and ventral side of tibiae I and II and femora I and II; flagellum with white annulus; length 11 mm.

Flagellum: With 38-41 segments and with very short, small, ivory-colored, narrowly-oval tyloids on segments 9 or 10 to 17 or 18. Black, with almost complete white annulus on segments 11-18 or 19; scape ventrally white.

Named in honor of Mrs. Marjorie Townes in admiration of her dedicated and indefatigable work for the cause of Ichneumonology.