

CONTRIBUTIONS TO THE KNOWLEDGE OF NORTH AMERICAN ICHNEUMONINAE

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Résumé

Deux nouveaux genres sont décrits ainsi que neuf espèces nouvelles.

Le premier genre présenté, *Provancherides* avec l'espèce type *P. saecularis* n. sp., comprend deux autres espèces nouvelles *P. michoacana* et *P. marginipennis*. Les trois espèces proviennent du nord et du centre du Mexique.

L'auteur désigne *Netanyacra nuevoleonis* nouvelle espèce, comme espèce type pour le second genre *Netanyacra*. A celui-ci trois autres espèces nouvelles sont rattachées: *N. leucopus*, *N. dakotae* et *N. arizonae*.

Deux espèces additionnelles sont décrites l'une provenant de l'état de New York *Homotherus smileyi*, n. sp., et *Ichneumon dillerorum* n. sp. du Maine U.S.A.,

L'espèce *Spilichneumon citrinus* (Prov.) est commentée.

Abstract

Two new genera are described with nine new species of Ichneumoninae from North America.

The first genus described, *Provancherides* with *P. saecularis* new species as type species, comprise also *P. michoacana* and *P. marginipennis* n. sp., all from northern and central Mexico. A second genus is described, *Netanyacra* new genus, with *nuevoleonis* as type species, and three others new species *N. leucopus*, *N. dakotae* and *N. arizonae* from central and southern states.

Two other species are described one new species from New York State *Homotherus smileyi* and *Ichneumon dillerorum* new species from Maine.

These descriptions are followed by a short note on the status of *Spilichneumon citrinus* (Prov.)

Genus *Provancherides*, new genusType species. — *Provancherides saecularis*, new species

DISTRIBUTION

Northern Mexico: Nuevo Leon.

PREAMBLE

This striking genus belongs quite obviously to the subtribe *Amblytelina* of the tribe Ichneumonini. It agrees in all essential characters with the diagnosis of that subtribe as given by Heinrich (Ichneumoninae Stenopneusticae of Africa, 1967, Vol. III.), except only for the shape of the rhomboidal areolet. The type species mimics by color, size, and banded wings *Trogomorpha arrogans* (Cresson); these two species were collected simultaneously in the same locality. Morphologically the genus seems to be related, though not too closely, to the Ethiopian genera *Macrophatnus* Cameron and *Setantops* Heinrich.

The most important characters of this genus are: (1) the structure of the propodeum, with most of the carination indistinct or lacking; (2) the trapezoidal shape of the areolet; (3) the elevated, laterally at base carinate scutellum; (4) the lack of thyridia and indistinctness of gastrocoeli; (5) the broad, oval, short spiracles of propodeum; (6) the amblypygous apex of the female abdomen with medio-apical depression on the hypopygium.

MORPHOLOGICAL CHARACTERS

Flagellum.—Of female bristle-shaped, slender, fairly long, ventrally flattened beyond middle but not widened, gradually very strongly attenuated toward apex; of male likewise strongly attenuated toward apex, distinctly nodose beyond middle, with a row of distinctly oval, short tyloides.

Head.—Wide, coarsely and densely punctured all over; temple profile, in dorsal view, broadly curved, not or slightly narrowed behind eyes; cheeks swollen, in lateral view broad; cheek profile, in front view, curved, only slightly narrowed toward mandible base; malar space somewhat shorter than width of mandible base; mandibles robust, the apical tooth long and strong, the subapical tooth rudimentary; clypeus wide, rather normal, a trifle convex, with almost straight apical border and somewhat converging sides; median field of face distinctly protruding, with lateral longitudinal depressions.

Thorax.—Mesoscutum slightly longer than medially wide, convex, coarsely and densely punctured, shiny; notauli lacking in type species, basally fairly distinct in another species; scutellum moderately to strongly raised above postscutellum, with gradual apical slope, laterally weakly carinate basally or to

about middle, coarsely punctured; propodeum with distinct and deep basal furrow, the horizontal part medially somewhat shorter than declivity and without distinct carination, coarsely rugose-punctate, in type species except weakly sculptured and somewhat shiny median part (which is coarsely transversely rugose in another species); spiracles oval, unusually wide and more or less abbreviated; areae dentiparae gradually and considerably sloping downward, their apical part limited by weak carinae, their apices in one species bluntly projecting (but not in type species); carina metapleurals fairly distinct, all other carinae obsolete in type species.

Legs.—Moderately long; coxae III without scopa; claws not pectinate.

Wings.—Nervulus very strongly postfurcal and oblique; areolet irregularly trapezoidal in type species (second abscissa of cubitus shortest, second intercubitus longest); in another species areolet irregularly pentagonal, with intercubiti strongly narrowed in front but not coalescent, the ratio of length of abscissae and intercubiti, however, as in type species; radius apically rather strongly curved toward anterior edge of wing.

Abdomen.—Of female amblypygous; petiole gradually widening into postpetiole, the latter without indication of median field, slightly convex, usually with a more or less distinct, small, rounded median impression at base, medially not or sparsely punctured and smooth or finely coriaceous, laterally coarsely and fairly densely punctured; gastrocoeli very small or indistinct, thyridia entirely lacking; second tergite apically about as wide as medially long, the third wider than long; in type species tergites 2–4 strongly sclerotized, distinctly separated from each other by sutures, coarsely and fairly densely punctured (in female the fourth tergite only to about middle), in *marginipennis*, new species, these tergites with only a few scattered weak punctures, finely coriaceous, not strongly sclerotized and not distinctly separated; hypopygium of males bluntly triangularly projecting, of females bearing a growth of stiff bristles, except apico-medially where an, apparently membranous, depression is visible.

CHROMATIC CHARACTERS

Basic color ferruginous-red in type species, without white markings, except white tarsi III in males and white flagellar annulus in both sexes; head, thorax, and legs in type species with restricted black markings, uniformly black in another species; wings intensely yellow-tinged, with more or less extensive infuscated bandings.

REMARK

The close relationship of the species *marginipennis*, new species, to the type species is indubitable; however, there are also quite important differences,

as in the carination and sculpture of the propodeum, in the sculpture of the abdomen, in the presence or absence of notauli, and in the shape of the areolet. Whether these differences should be considered as specific or rather as generic is difficult to decide mainly on account of our still very incomplete knowledge of the Central-American forms of this group.

1. *Provancherides saecularis*, new species

TYPES

Holotype.—♀, « Iturbide, 1700 m, (Nuevo Leon), Mexico, 10.VIII.53. » Collection G. Heinrich.

Allotype.—♂, same data. Collection G. Heinrich.

Paratypes.—2♂♂, San Pedro Iturbide (Nuevo Leon), Mexico. Collection H. Townes.

DISTRIBUTION

Northeastern Mexico: Nuevo Leon province.

FEMALE

Light-ferruginous with some black sutures on the thorax; apex of tibiae III and segments 1 and 2 of tarsi III predominantly black; flagellum tricolored, with white annulus; wings slightly yellow-tinged with a strongly infuscated transverse band beyond base and before apex of wings; length 11 mm.

Flagellum.—With 40 segments, the first about 2.5 times as long as wide, in lateral view about the 8th square, seen from the flat side the widest also approximately square, the about 11 apical segments distinctly longer than wide. Segments 1–4 pale ferruginous (close to orange), segments 5–12 almost entirely white, the following segments black; scape pale ferruginous.

Head.—Structure and sculpture as described for the genus. Uniformly light ferruginous, only apex of mandibles black.

Thorax.—Structure and sculpture as described for the genus; all pleura coarsely and densely punctured, the lower part of propleura and the metapleura rugose-punctate. Light ferruginous, the following black: narrow base and the extreme apex of prosternum, prepectus except broad exterior belt, basal furrow of scutellum, sutures of scutellum and postscutellum narrowly, basal furrow and narrow apical margin of propodeum.

Legs.—Light ferruginous, except blackish apical third of tibiae III only and most of segments 1 and 2 of tarsi III.

Wings.—As described above.

Abdomen.—Structure and sculpture as described for the genus; somewhat more than apical half of fourth tergite and the following tergites almost impunctate, extremely finely coriaceous and shiny. Light ferruginous; the sutures between tergites 1–4 very narrowly and slightly infuscated.

MALE

Light ferruginous, with more extensive black markings on head and thorax than in female; legs also more extensively black than in female: coxae and trochanters II and III, femora and tibiae III usually almost entirely black; tarsi III yellowish-white, tarsi I and II pale-yellowish; flagellum black on base and apex, extensively white in the middle; wings blackish-infuscated, with a clear band before areolet; length 10–14 mm.

Flagellum.—With 38 segments and with oval, short tyloides on segments 7 or 8 to 18 or 19. Segments 1–5 or to 6 or 7 dorsally black, the last of these segments usually ventrally at least in part white; segments 6 or 8 to 16 or 17 with complete white annulus, sometimes segments 18 and 19 again ventrally white, the following segments black; scape and pedicel pale ferruginous; first segment sometimes ventrally brownish.

Head.—As in female; middle of antennal cavity and of ocellar triangle black.

Thorax.—Generally as in female, but scutellum rather strongly raised above postscutellum. Sometimes scutellum yellow; in addition to black markings as described for female, black are: mark on pronotum above collar, prosternum and prepectus entirely, middle of mesosternum on both sides of mesolcus or entire mesosternum, lateral slopes of scutellum, and postscutellum more extensively.

Legs.—The following are black: coxae and trochanters II and III almost entirely, usually femora and tibiae III except at the extreme base; trochanters and coxae I sometimes infuscated; sometimes femora and tibiae III red except apex of tibiae; all tarsi yellow, tarsi III almost white.

Wings.—In contrast to female predominantly blackish-infuscated, with only one clear transverse band on forewings below stigma and a few clear marks on hind wings in continuation of that band.

Abdomen.—As in female, except petiole black.

2. *Provancherides michoacana*, new species

TYPES

Holotype.—♂, « Mexico, 9 mi W Morelia, Mich., 2.IX.62., 2400 ft. » Collection H. Townes.

Paratype.—1 ♂, Mexico, 4 mi W Jiquizpan, Mich., 24.VIII.62, 8000 ft. Collection G. Heinrich.

DISTRIBUTION

Central Mexico: Michoacan province.

PREAMBLE

This form is closely related to *saecularis* Heinrich, differing from it mainly by uniformly deeply infuscated wings lacking the yellowish transverse band; basic ferruginous color darker than in *saecularis*. Probably subspecifically linked with *saecularis*.

FEMALE

Dark ferruginous, thorax with some black sutures (*holotype*), or sterna and metapleura entirely black (*paratype*); all legs predominantly ferruginous, with yellowish-white tarsi (*holotype*), or legs III black except white tarsi (*paratype*); wings uniformly and deeply infuscated; flagellum black with white annulus; length 14 mm.

Flagellum.—With 38 or 39 segments and with short, oval tyloides on segments 8 - 16. Black, with complete white annulus on segments 8 to 16 or 17; scape and pedicel ferruginous.

Head.—Structure and sculpture as in *saecularis*. Ferruginous, without black markings; facial orbits narrowly yellow-tinged.

Thorax.—Structure and sculpture as in *saecularis*. Ferruginous, apex of scutellum yellowish; in *holotype*, the following black: narrow base and extreme apex of prosternum, prepectus, middle of mesosternum, patch in the middle of pronotum (behind collare), basal furrow of scutellum and of propodeum, narrow apical margin of propodeum, lateral sutures of scutellum and of postscutellum; in *paratype* in addition black are: entire prosternum and mesosternum, lower part of mesopleura, the metapleura, carinal triangle, and area posteromedial; in *paratype* apices of areæ spiraculiferae yellowish.

Legs.—As described above.

Wings.—Uniformly deeply infuscated, base of stigma pale ferruginous.

Abdomen.—Structure and sculpture as described for the genus. Dark ferruginous, petiole black.

3. *Provancherides marginipennis*, new species

TYPES

Holotype.—♀, « Rio Frio, Mexico, 55.5 km W of Mex. City, X.24.62., H. a. M. Townes. » (Flagella lacking.) Collection H. Townes.

DISTRIBUTION

Central Mexico: west of Mexico City.

PREAMBLE

This species differs from the type species morphologically by less bulging temple profile, fairly distinct anterior third of notauli, higher elevated scutellum with the lateral carinae more raised at base, bluntly projecting apices of areæ dentiparæ, transversely rugose horizontal part of propodeum, distinct carinae coxales, in front not coalescent intercubiti, and by fine, coriaceous sculpture of abdomen.

Advancing knowledge of Central-American forms may reveal that this species represents a distinct genus.

FEMALE

Head, thorax, and legs.—Black; *abdomen* uniformly red; wings intensely yellow-tinged with blackish-gray infuscated apical margins; length 13 mm.

Genus *Netanyacra*, new genus

Type species.—*Netanyacra nuevoleonis*, new species

DISTRIBUTION

Northern Mexico (type locality); Arizona, South Carolina, South Dakota.

PREAMBLE

The decisive character of this genus is the structure of the hypopygium and of the claspers of the male. Except for this character the species included could pass for *Eutanyacra* Cameron or (*Pseudamblyteles* =) *Dyphyus* Kriechbaumer. The hypopygium of the male is short, unusually wide, stronger sclerotized than usually, and medially in a very wide angle somewhat projecting, it is (as the preceding 1 - 2 tergites) on the apical part over the entire width rather densely covered by stiff bristles; the claspers are fairly short, rather wide, and strongly convex. This gives the apex of the abdomen of the male an unusually blunt appearance. A number of species are at hand, but no female is known so far. It remains thus unknown whether females are distinguishable from *Eutanyacra*.

This genus clearly belongs to the subtribe Amblytelina of the tribe Ichneumonini. It seems to be ecologically confined to open and dry habitats.

MORPHOLOGICAL CHARACTERS

Flagellum.—Of male not nodose, without transverse bristleridges, with a row of narrow, elongate-oval tyloides, which, in contrast to *Eutanyacra*, do not start before the 4th segment; even the longest tyloides not quite reaching the bases and apices of segments.

Head.—Normal, coarsely and densely punctured all over; mandibles normal, the apical tooth somewhat longer than the subapical.

Thorax.—Mesoscutum somewhat longer than medially wide, convex, coarsely and very densely punctured, notauli lacking; scutellum convex, somewhat raised above postcutellum, laterally not carinate, coarsely, slightly less densely punctured than the mesoscutum; propodeum of the clearly broken type, the horizontal part medially distinctly shorter than the area posteromedial; basal furrow of propodeum distinct; carination distinct and usually complete, except carinae coxales lacking; area superomedia about square or slightly longer than wide, sometimes hexagonal, with costulae in the middle, costulae sometimes indistinct; spiracles moderately long, elongate-oval.

Legs.—Normal.

Wings.—Nervulus usually distinctly postfurcal and oblique; areolet clearly pentagonal; radius nearly straight, only slightly bent toward anterior margin of wing apically.

Abdomen.—Postpetiole with distinct, longitudinally striate median field, the lateral fields coarsely punctured; gastrocoeli narrower than their interspace.

slightly to moderately impressed, irregularly, longitudinally rugose, thyridia narrow or indistinct; interspace of gastrocoeli strongly longitudinally striate; all tergites very densely punctured, opaque (the anterior tergites coarsely, the two apical tergites more finely); sternites 1 - 4 with plica, not strongly sclerotized; hypopygium and claspers as described in preamble.

CHROMATIC CHARACTERS

Abdomen of males black, with yellow apical bands on most or all tergites, sometimes most tergites yellow, some with narrow basal black bands; head and propodeum extensively yellow-marked, sometimes also pro and mesothorax and legs extensively yellow or white.

1. *Netanyacra nuevoleonis*, new species

TYPE

Holotype.—♂, 4 Iturbide, 1700 m, (Nuevo Leon), Mexico, 10.VIII.53. » Collection G. Heinrich.

DISTRIBUTION

Northern Mexico. Nuevo Leon, 1700 m.

MALE

Head black, with only facial and frontal orbits white; mesoscutum and mesopleura black, except a small white dot on the latter; all coxae and the femora II and III uniformly black, all tibiae ventrally white, tibiae III except apical third; propodeum black with a large white mark on each side; abdomen black, all tergites with apical, continuous white bands; scutella and prescutellar carinae white; flagellum without annulus; length 11 mm.

Flagellum.—With 40 segments and with elongate-oval, rather narrow tyloides on segments 5 - 18, the longest (on about segments 10 - 14) not quite reaching bases and apices of segments. Black, ventrally orange, scape black.

Head.—Temple profile slightly narrowed behind eyes, moderately curved; malar space somewhat shorter than width of mandible base; coarsely and very densely punctured all over, subopaque, the clypeus less densely and more coarsely punctured than the rest, somewhat shiny. Black, facial orbits broadly, frontal orbits up to level with lower ocellus narrowly yellowish-white.

Abdomen.—Structure and sculpture as described for the genus. Black, all tergites with apical white bands, which are widest (in longitudinal diameter) on tergites 1 – 3 and decrease gradually in width on tergites 4 – 7; rarely band on seventh tergite medially interrupted.

REMARK

One specimen from Tennessee in Collection H. Townes has the characteristic white pattern, including the white exterior side of femora III (as in *leucopus*), but the mesoscutum is ferruginous with black median band on median lobe as in *dacotae*, new species, and the interior side of femora III ferruginous instead of black. I suspect that this is an erythristic mutant of *leucopus* rather than a representative of a subspecies of *dacotae*. If this is correct it would suggest that *dacotae* is the western vicariant of *leucopus*.

3. *Netanyacra dacotae*, new species

TYPE

Holotype.—♂, « No 1 Yellow, Brookings, S. D., Aug. 21.1928., M. Fredricksen Coll. » Collection H. Townes.

DISTRIBUTION

South Dakota (type locality); Alberta (see remark below).

PREAMBLE

This species too is similar in its light (pale-yellow) color pattern to the two preceding species. It differs by extensively ferruginous color of thorax, legs, and tergites 1 and 2, and in structure by medially somewhat more projecting hypopygium.

MALE

Head yellow, with dorsal black parts and ferruginous-tinged upper orbits; thorax ferruginous, with black and yellow markings; median lobe of mesoscutum with longitudinal black band; yellow are: a large mark on each side of propodeum, scutellum, postscutellum, prescutellar carinae, and other parts but no marks on mesoscutum; legs ferruginous and yellow, apices of femora III and of tibiae III blackish; abdomen black, except ferruginous seventh tergite, basic color of first tergite, and middle of second; tergites 1 – 6 with apical yellow bands; flagellum without annulus; length 12 mm.

Flagellum.—With 40 segments and with narrow, almost bacilliform tyloides on segments 5 – 18. Black, ventrally pale ferruginous; scape predominantly yellow.

Head.—Structure and sculpture as in *nuevoleonis* Heinrich. Yellow, the following black: antennal cavities, middle of frons broadly, ocellar, occipital, and temple regions, black on temples not reaching margins of eyes; vertical and temple orbits, posterior part of cheeks, and malar space ferruginous-tinged.

Thorax.—Structure and sculpture as described for the genus and for *leucopus* Heinrich; costulae not quite distinct; area superomedia approximately square. Ferruginous; the following black: longitudinal band on median lobe of mesoscutum, less distinct bands on posterior parts of lateral lobes, basal furrow of scutellum and of propodeum, area posteromedia, metapleura predominantly, prosternum, middle of prepectus, middle of pronotum with lower part of propleura, upper part and lower posterior part of mesopleura, middle and end of mesosternum; the following yellow: collar, pronotal base and pronotal ridge, subalarum, tegulae, prescutellar carinae, scutellum, postscutellum, a mark on each side of propodeum (covers areae dentiparae, posteroexternae, and apical part of areae spiraculiferae), and a spot on lower apical part of mesopleura.

Legs.—Ferruginous; yellow are: trochanters I and II ventrally, apical marks on coxae I and II, anterior side of femora I and II, and the tibiae I, II, and III (tibiae III except brownish-infuscated apex); tarsi yellow-tinged; apices of femora III extensively blackish.

Wings.—As described for the genus.

Abdomen.—Structure and sculpture as described for the genus; thyridia obsolete; hypopygium medially somewhat more projecting than in the two preceding species. Black, seventh tergite entirely, the first except apical yellow band, the second medially ferruginous; tergites 1 – 2 with apical yellow bands, which gradually decrease in width from third to the sixth tergite.

REMARK

One male from Lethbridge, Alberta, in Collection H. Townes differs from the holotype by almost entirely black mesoscutum and by reduction of ferruginous color also on pleura, propodeum, sterna, and anterior tergites. It apparently is conspecific with the holotype but could represent a different subspecies, if not just a melanistic variation.

4. *Netanyacra arizonae*, new species

TYPE

Holotype.—♂, * Rustler's Park, Ariz., 6.17.56., R. + K. Dreisbach, Collection H. Townes.

DISTRIBUTION

Arizona.

PREAMBLE

This form agrees in structure and sculpture with *dacotae* Heinrich. It also approaches the latter species in the chromatic characters of head, thorax, legs, and tergites 1 and 2; quite different is only the color of tergites 3 - 7, which are almost uniformly lemon-yellow, with (on tergites 3 - 5 only) narrow basal black bands, decreasing in width and length from tergite to tergite; this is in strong contrast to *dacotae* where the extent of the black basic color of tergites increases gradually from tergite to tergite. Nevertheless it seems possible that this is a vicariant and subspecies of *dacotae*.

MALE

Head yellow, dorsal parts ferruginous with restricted black markings; thorax ferruginous with black and yellow markings; median lobe of mesoscutum with a black mark on anterior part; yellow are: a large mark on each side of propodeum, scutellum, postscutellum, prescutellar carinae, and other parts; legs ferruginous and yellow, apices of femora III and of tibiae III not blackish-infuscated; abdomen lemon-yellow, about basal third of tergites 1 and 2 black, median third ferruginous; tergites 3 - 5 with narrow, basal black bands; flagellum without annulus; length 12 mm.

Flagellum.—(Apices missing); with narrow, almost bacilliform tyloides on segments 5 - 18. Black-brown, ventrally pale ferruginous; scape predominantly yellow.

Thorax.—Ferruginous, with black and yellow markings; the following are black: base of prosternum, middle of prepectus, middle of propleura, mark on anterior part of median lobe of mesoscutum, basal furrow of scutellum and of propodeum, region of area coxalis, area posteromedial; the following yellow: collare, pronotal ridge and base, subalarum, tegulae, scutellum, postscutellum, prescutellar carinae, a mark on lower posterior part of mesopleura, large marks on sides of propodeum covering the areae dentiparae, posterior half of areae spiraculiferae, and upper part of areae posteroexternae.

Legs.—Ferruginous; the following yellow; marks on coxae I and II, trochanters I and II ventrally, trochanters III partially, anterior side of femora I and II, all tibiae (except ferruginous-tinged apices); tarsi and apices of tibiae II and III orange-tinged yellow.

Abdomen.—As described above.

Homotherus smileyi, new species

TYPES

Holotype.—♀, * Lake Mohonk, New Paltz, New York, 1.VIII.1966. » Collection G. Heinrich.

Allotype.—♂, same locality, 30.VIII.66. Collection G. Heinrich.

Paratypes.—2♀♀, same locality, 17 and 23 Aug. 1966 Collection G. Heinrich.

DISTRIBUTION

New York: Mohonk Lake (Ulster county).

PREAMBLE

A very small species, most closely related to *semiaoplus* Heinrich. Females differ from that species by considerably smaller size, in color by orange-ferruginous (instead of white) trochanters I and II and basic color of scutellum, in structure by slightly shorter segments of flagellum, much denser puncturation of frons and mesoscutum, and by slightly more convex frons and vertex. Structure of flagella of female subbristle-shaped, as in *semiaoplus*. The carination of propodeum and the type of sexual dichroism suggest a close relationship to *Barichneumon* and *Stenobarichneumon*, but the sculpture of first tergite agrees better with *Homotherus*.

FEMALE

Ferruginous-orange, sides and apex of scutellum and pronotal ridge narrowly yellowish-white, as are also orbits almost around eyes, collare, subalarum; legs without infuscated parts; flagellum subbristle-shaped, little widened beyond middle; thyridia transverse, but sometimes rather indistinct and barely impressed; coxae III without scopa; length 6 mm.

Flagellum.—Subbristle-shaped, little widened beyond middle, slightly attenuated toward apex, with 29 – 30 segments, the first slightly more than 1.5 times as long as wide, the 6th or 7th (in lateral view) square, the widest about 1.5 times as wide as long. Black, with nearly complete white annulus on segments 8 (apex) to 13 or 14, basal segments apically narrowly brownish; scape ventrally ferruginous.

Head.—Temple profile and cheek profile distinctly narrowed with slightly curved outlines; malar space somewhat shorter than width of mandible base; frons and vertex slightly convex and, in contrast to *semiaoplus*, very densely punctured and subopaque. Ferruginous-orange; orbits narrowly yellowish-white around eyes, except on lower part of face; base of mandibles yellowish; posterior part of occipital and temple regions sometimes moderately infuscated.

Thorax.—Anterior third of notauli distinct; mesoscutum more densely punctured all over than in *semiaoplus*, less shiny; scutellum barely raised above postscutellum, dorsally flat and shiny, with a few scattered punctures; declivity of propodeum nearly 1.5 times as long as horizontal part medially; carination distinct and usually complete, except sometimes costulae and anterior carina of area supermedia; the latter hexagonal, slightly wider than long, with costulae approximately in the middle; costulae oblique; sculpture of horizontal part of propodeum much coarser and denser than in *semiaoplus*, very densely irregularly rugose-punctate all over. Ferruginous-orange; the following yellowish-white: collare, pronotal ridge narrowly (for the entire length or almost so), subalarum, sides and apex of scutellum (the white not clearly limited toward ferruginous-orange basic color), and usually tegulae; the following blackish: middle of pronotum, exterior sutures of mesoscutum, basal furrow of scutellum, basal furrow of propodeum, and sutures around scutellum and postscutellum.

Legs.—Moderately slender; coxae III ventrally very densely punctured, shiny, without scopa. Almost uniformly ferruginous-orange, including trochanters I and II, without infuscations; coxae I and II indistinctly whitish toward apex, trochanters I and II apically narrowly whitish.

Wings.—Areolet pentagonal; nervulus interstitial or slightly postfurcal; radius straight.

Abdomen.—Median field of postpetiole weakly indicated; gastroceli and thyridia transverse, sometimes barely impressed and indistinct, their interspace much narrower than one of them; postpetiole very densely, irregularly rugose-punctate, subopaque; tergites 2 and 3 very densely and fairly coarsely punctate, the fourth tergite somewhat finer but also distinctly and rather densely punctured; ovipositor somewhat projecting. Uniformly ferruginous-orange.

MALE

Differs from female by black basic color of thorax (except propodeum) and dorsal part of head, and by white coxae and trochanters I and II, scutella, short lateral lines on mesoscutum, pronotal ridge and base, collare, tegulae, subalarum, marks on posterior median part of mesosternum, apex of prosternum, entire face, clypeus, and orbits; flagellum without annulus; length 6 mm.

Flagellum.—With 29 segments and with elongate-oval (nearly bacilliform) tyloides on segments 7 – 14. Black, ventrally black-brown, scape ventrally white.

Head.—Structure and sculpture corresponding with female; frons and vertex very densely punctured, coriaceous between punctures, subopaque, convex; malar space less than half as long as width of mandible base. The following white: mandibles (except teeth), orbits broadly around eyes, entire face and clypeus, cheeks (except posterior stripe); rest black.

Thorax.—Structure and sculpture as in female: scutellum slightly more convex. Propodeum ferruginous-orange; basic color of prothorax and mesothorax black, with white markings, the mesopleura extensively, the mesosternum from mesopleura to sternauli dark red-brown-tinged; the following white: collare, pronotal ridge and base, tegulae, subalarum, two short, lateral lines on mesoscutum (at tegulae), dots on prescutellar carinae, scutellum (except brownish longitudinal median mark from base to almost middle), postscutellum, indistinct small markings along sternauli and the exterior edge of prepectus, apex of prosternum, and a mark on each side of mesolcus on apex of mesosternum.

Legs.—Ferruginous-orange; coxae and trochanters I and II white, apices of femora I and II and anterior side of tibiae I and II whitish.

Wings.—As in female.

Abdomen.—The coarse, irregularly rugose-punctate sculpture of postpetiole as in female; gastroceli somewhat more distinctly impressed, about as wide as the space between them. Uniformly ferruginous-orange.

REMARK

Named in honor of Mr. Daniel Smiley, Mohonk Lake, who collected this species and who's deep interest in nature has decisively contributed to the preservation and exploration of the fauna of that area.

Ichneumon dillerorum new species

TYPES

Holotype.—♀, « Mt. Blue, Maine, U.S.A., 12.VI.1965. » Collection G. Heinrich.

Paratypes.—♀, same data; 1♀, Dryden, Maine, hibernating. Collection G. Heinrich.

DISTRIBUTION

Maine: Mt. Blue, Weld and Dryden.

PREAMBLE

Very similar to *maius* Cresson, *valdopacus* Heinrich, and *pseudomaius* Heinrich. Differs from *maius* in color by predominantly ferruginous head (black in *maius*) and by black pronotum (usually red in *maius*); in structure by the clearly transverse gastrocoeli, with their interspace slightly to distinctly narrower than one of them. Differs from *pseudomaius* clearly by much less narrowed (behind eyes) temple profile and by (compared with the length) wider mesoscutum and wider tergites 1 – 3. Differs from *valdopacus* barely in color but distinctly in sculpture, by less densely punctured, shiny mesoscutum, scutellum, and tergites 2 and 3, and also by much stouter femora.

FEMALE

Head predominantly ferruginous, with more or less extensive black markings; thorax black with mesoscutum, collar, apical part of pronotal ridge, tegulae, subalarum, postscutellum, and sometimes scutellum ferruginous; in holotype and the other specimen from Mt. Blue scutellum white, collar white-marked; all coxae and trochanters, femora III, parts of femora II, and apex of tibiae III black, rest of legs ferruginous; abdomen uniformly ferruginous, seventh tergite with distinct medio-apical white mark, the sixth with less distinct, smaller medio-apical white mark; flagellum black, with complete white annulus; length 9 mm.

Flagellum.—Bristle-shaped, slender, moderately short, ventrally flattened beyond middle but not widened, distinctly attenuated toward apex, with 32 or 33 segments (thus longer than in *pseudomaius*), the first a little more than twice as long as wide at apex, seen from the side the seventh square, none distinctly wider than long. Black, with complete white annulus on segments 7 – 12, segments before annulus brownish apically on dorsal side, more extensively to

predominantly on ventral side; scape uniformly light ferruginous or dorsally blackish-infuscated.

Head.—Temple profile, in dorsal view, only slightly narrowed behind eyes, slightly curved; cheek profile, in front view, moderately narrowed toward mandible base, straight; malar space distinctly longer than width of mandible base; median field of face and lower parts of lateral fields slightly protruding; clypeus normal, a trifle convex, sparsely and coarsely punctured, shiny; cheeks finely and very sparsely punctured, face, frons, and vertex densely and moderately coarsely punctured. Ferruginous; the following black: antennal cavities, posterior temple region, lower part of occiput along occipital carinae, and cheeks, in specimen from Dryden also lateral fields of face predominantly; ocellar region moderately infuscated, to black.

Thorax.—Mesoscutum slightly longer than medially wide, moderately convex, fairly densely punctured, shiny; scutellum finely and sparsely punctured, shiny; declivity of propodeum medially by about a third longer than the horizontal part; area superomedia nearly square or a trifle longer than wide, usually very slightly narrowed toward area basalis, with weak costulae about in the middle; lateral carinae of area posteromedia indistinct or lacking, carinae coxae distinct. Black; collar, mesoscutum, scutella, apical part of pronotal ridge, tegulae, and subalarum ferruginous (Dryden), or scutellum and markings on collar pale yellow (Mt. Blue).

Legs.—Coxae III without scopae, densely punctured; femora short and thick. Ferruginous, the following black; all coxae and trochanters, femora III, femora II dorsally in varying extent, apex of tibiae III, last segment of tarsi III; upper apical margin of all trochanters whitish.

Wings.—Nervulus postfurcal; areolet regularly pentagonal; radius straight.

Abdomen.—Petiole gradually widening into postpetiole, the latter considerably wider than long, with sharply defined, longitudinally striate median field, the lateral fields also with irregular longitudinal striae and a few punctures; second tergite distinctly wider than medially long; second and third tergites moderately densely punctured, shiny; gastrocoeli transverse, considerably wider than long, their interspace narrower than one of them. Uniformly ferruginous, including petiole, the seventh tergite with fairly large, the sixth with smaller, sometimes less distinct yellowish-white mark.

REMARK

Named in honor of Mr. and Mrs. E. Diller who during the summer 1965 successfully assisted in collecting Ichneumoninae on Mt. Blue.

Spilichneumon citrinus (Provancher)

- Ichneumon citrinus* Provancher, 1886, Addit. Corr. Faune Ent. Canada Hym., p. 31.
Pseudamblyteles citrinus, Townes, 1951, Hymen. of Am. n.o. Mexico, p. 292.
Spilichneumon citrinus, Heinrich, 1960, Nearct. Ichn. Sten., II, p. 189.

TYPES

Holotype.—♂, Ontario, Ottawa, Can. Nat. Coll. No. 79.

DISTRIBUTION

Canada: Ontario (type locality); U.S.A.: Maine, Mt. Blue (new record).

The above-mentioned new record of this striking form is the first one since its description, about 80 years ago. The specimen recorded agrees almost perfectly with the type. The flagellum has 41 segments, with tyloids, as in *bronteus* Cresson (but a trifle shorter), on segments 5 – 15; segments 1 – 12 are apically white on exterior side, 13 – 25 entirely white on exterior side.

As mentioned by Heinrich (loc. cit. 1960) the form is morphologically identical with *bronteus* and *nubivagus* Cresson, from which it differs by a very unusual, predominantly whitish-yellow coloration (description see Heinrich, loc. cit.).

The taxonomic status, of *citrinus* remains *problematic*. It may represent a full species, or else an odd variation of *bronteus* or *nubivagus*.

The specimen discussed here was caught on an overgrown mountain meadow, close to the Mt. Blue State Park in Weld, Maine. Several typical males of *Spilichneumon nubivagus* Cresson were collected at the same time in the same locality.