Ichneumon larvae Curtis

A Critical Study on this Arctic Species and its Closely Related Forms

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Ichneumon larvae Curt.

Syn. Cratichneumon aurivillii Roman (new Syn.)

Orig. Ichneumon larvae Curtis, 1835, in Ross, Appendix to the Narrative of a Second Voyage in Search of a North-West Passage, p. LXI, fig. Pl. A, 1.


[no description.]


[Description of one 9 specimen from Greenland possibly belonging to this species: black with red scut, legs, ventral, sides of abdomen and greater part of antennae.


[49 9 from Arctic, East Siberia, considered as representatives of a new subspecies, asiaticus Rom. of Ichneumon larvae Curt. The specimens recorded before from Greenland by Schiodte, 1857, and Aurivillius, 1890, loc. cit. are considered and named as a different new species aurivillii Roman which is contributed to the genus Cratichneumon Thoms. on account of the smooth sculpture of postpetiole.]


[Considers specimen described by Aurivillius loc. cit. 1890, as different from larvae Curt. and as new. Contributes this new species to Cratichneumon on account of the smooth postpetiole.]

I. (Cratichneumon) aurivillii Henriksen & Lundbeck, 1908, Meddel. om Grønland XXII, p. 520.

[References to reference.]

Distribution: West Greenland north to 70°20'; many localities. East Greenland: one record only: Helge Haven.


[19 on hearth, Kugung, Greenland. The least rare species of Ichneumon race in Greenland. Species never paleartic, therefore suggested as being derived from America.]

Ichneumon larvae ; man, 1933, Selsk. om Svalbard Nr. 53, p. 617.

[Transfers species to Ichneumon. Larvae describes a black male with vivid red legs as "nearly certain" belonging to it.]

Type Locality:--East shore of Boothia Peninsula between 70° and 73° N.

[Perhaps Fury Beach between 72° and 73° N because the expedition stayed here on the way back during summer 1832 when the catarpillars of Byrdia rossi were collected.]

Holotype:--According to information recently granted by J. F. Perkins, British Museum, no typical specimen of I. larvae Curt. was discovered in England. The holotype therefore is regarded as lost.

Distribution:--Boothia Peninsula, Greenland, Baffin Island (new record), Southampton Island (new record).

Preface

The description of this species was founded on two specimens, one captured, the other said to be reared from the host Byrdia rossi Curtis. As the types are lost, we depend for re-identification of the species on the description, the coloured picture and the host record.

The Canadian National Collection contains 2 specimens of an Ichneumon species reared from Byrdia rossi Curt. (1 from Spence Bay, N.W.T., & from

1This contribution to our knowledge of the Ichneumonidae of the boreal parts of Canada and of Alaska is based mainly on material obtained by the Canadian National Insect Survey, which is a co-operative project of the Canadian Department of Agriculture and the Canadian Defence Research Board, Canada Department of National Defence.

Repulse Bay, N.W.T.) and 2 captured specimens evidently belonging to the same species (1 from Yukon Territory, 1 from Frobisher Bay, Baffin Is). Unfortunately none of the mentioned specimens matches the picture of I. larvae Curt., either in colour pattern or in size.

There is a series of 4 specimens of a different Ichneumon species from Greenland (Sonderstrom Airbase) in the Canadian National Collection, which matches one specimen exactly--the picture of I. larvae Curt. This species, however, belongs morphologically to the bulk of the genus and therefore may not be expected to be a parasite of Lipariid larvae. As a matter of fact, one of the 4 specimens was reared from an unidentified pupa of Noctua.

Now the dilemma arises: The species matching the picture and description of I. larvae Curt. is not a parasite of Byrdia rossi Curt. while the species reared from Byrdia rossi Curt. does not match the picture.

One explanation seems to be possible: Curtis might have erroneously regarded his two specimens as belonging to the same species and then derived the host record from the one, the picture from the other. After thorough consideration of the facts I decided to accept this explanation. I regard the species matching the picture as representing I. larvae Curt. and shall describe the other species, which is the parasite of Byrdia rossi Curt., as Ichneumon byrdiae spec. nov.

Ichneumon larvae Curtis (in the conception above) seems to be one of the most common species of the Arctic region, accordingly most often mentioned in literature with the result of a complicated taxonomy, the latter due to the fact that this species evidently has an unusual high mutability in colour as well as in sculpture.

Roman's publication loc. cit. 1914 deserves a special discussion. As may be concluded from the wording of this article, Roman has never seen the type specimen of I. larvae Curtis. Nevertheless he considers the 4 discussed females from eastern Siberia (all from east of the mouth of the river Lena) as belonging to this species, evidently on account of Curtis' coloured picture, though the Siberian specimens are somewhat different in colour and therefore named as a new subspecies asiaticus Roman. As main support for the somewhat hypothetical identification of the Siberian specimens Roman mentions the fact that Byrdia rossi Curt., the host of I. larvae as recorded by Curtis, is replaced on the Siberian side of the Bering Strait by Byrdia groenlandica Wocke, a closely related species. This argument seems to be meaningless, since no one of the Siberian specimens was reared from this host. Taking, nevertheless, the correct identification of the Siberian specimens as I. larvae Curtis for granted now, Roman derives from these specimens the character of the sculpture of postpetiole as a criterion of the species larvae Curtis for proving that the specimens recorded under the same name by Schiodte and Aurivillius (loc. cit. 1897 and 1890) from Greenland, which have a different sculpture of postpetiole, belong to a new species (and even another genus) named in the footnote as Cratichneumon aurivillii Roman.

This whole deduction was reconstructed here in full detail to show that it lacks any concrete foundation. There is no proof whatsoever that the Siberian specimens really are I. larvae Curtis and therefore there is no proof either that the specimens recorded under this name from Greenland are not.

The main difference mentioned by Roman between both populations is that the postpetiole in the Siberian specimens is said to be "very delicately, sometimes indistinctly" striated, in the Greenland specimens to be "polished". A mutability of this degree seems to be peculiar to the species I. larvae Curtis in the conception of this paper. It was observed especially in I. larvae subarcticus sp. nov.
(described below) and in lesser degree also in *L. laruae* Curtis, though in both subspecies the polished sculpture of postpetiole prevails. Thus there seems to be no doubt that *L. auricillii* Roman is a synonym of *L. laruae* Curtis as interpreted here. Besides, I believe it to be quite possible, though not yet finally proven, that *L. asiaticus* Roman geographically represents the same species.

With regard to the generic position of the species the polished postpetiole seems not to be reason enough to place it into the genus *Cratichnemum* Thoms. since the rest of morphology indicates a genuine *Ichnneumon* L. and the sculpture of postpetiole tends to mutate into fuzzy striation individually as well as perhaps geographically.

**Redescription**

based on 4 ♀ 2 ♂ from Greenland (Sonderstrom Air Base)
2 ♀ from Baffin Island (Cape Dorset and Nettling Lake)
1 ♂ from Southampton Island (Coral Harbour)

**Female**

Head and sterna black, face usually with a red mark in the middle. Mesonotum with scutellum red. Pleura and propodeum red and black in different extent from nearly entirely red to nearly entirely black. Abdomen red with black marks of variable size and extent on the disk of tergite 1 to 6, or 6, or 7, sometimes tergite 4-7 totally black. Legs red, coxae and trochanters varying from partially red to entirely black. Antennae red, dark towards the apex. One of the four specimens from Greenland with a whitish spot on the seventh tergite. Length: 10-11.5 mm.

Head transverse with temples only slightly narrowed behind the eyes. Malar space about as long as the width of mandible base. In front view check profile straight and converging considerably towards base of mandibles. Middle field of face elevated. Mandibles normal, the upper tooth being somewhat longer than the lower. Punctuation, except lower part of cheeks, rather strong.

Flagellum with 37-39 joints, filiform, slender, fairly long, of even width throughout, neither broadened beyond the middle nor attenuated at the apex, inopercaciously flattened on one side towards the end, the first joint being somewhat less than twice as long as wide at the apex, about the 12th joint square, about the last 15 joints transverse.

Mesonotum and scutellum shining with shallow and not dense punctuation. Scutellum slightly convex.

Propodeum fairly short with the area supermedia square or slightly broader than long.

Postpetiole without clearly separated middle area, smooth and shining, polished or with some indistinct, hardly visible stria and a few scattered punctures.

Gastrocoeli of triangular shape, shallow, the interval usually distinctly broader than one of them.

Coxae III with a little, not very distinct brush, densely and rather strongly punctured.

Mesosternum and epipodenchial area strongly and densely punctured as the coxae.

The species seems to be widespread over the Arctic islands extending southward into the subarctic regions of the American continent in Labrador and the Northwest Territories, where it is replaced by the following subspecies mainly signified by reduction of melanistic characters peculiar to the island populations.

The occasional occurrence of unmelanistic mutants also among the island populations has to be expected and is recorded as follows: 1 ♀, N.W.T. (Campbridge Bay): Besides middle of the face, a mark on each side of it and the inner orbits partially red. Red furthermore: Propodeum (except areae coxae), pronotopleura and coxae. Black marks of abdomen reduced.

1 ♀, N.W.T. (Spencer Bay): As before, but black colour of head reduced to cheeks, ocellar region and occiput.

**Male**

Roman described loc. cit. 1933 a single male specimen from Greenland, which he supposed to belong to *L. auricillii* Roman, as entirely black with the legs and trochanters. According to description head and thorax are black haired, the area supermedia is transverse, the postpetiole distinctly striated. This association might be correct, but it might just as well be wrong. It still lacks confirmation by biological facts.

*Ichnneumon laruae* Curtis

*subarcticus* sp. nov.

**Type Locality:** Salinia Mines (65°05'S, 111°15'W), Northwest Territories, Canada.

**Holotype:** 1 ♀, J. G. Chilcott, 30 VI 1953, No. 6410 in Canadian National Collection, Ottawa.

**Paratypes:** 16 ♀ from type locality, J. G. Chilcott, 1 ♀, N.W.T., Repulse Bay, J. E. H. Maclean, 21 VI 30; 1 ♀, Manitoba, Churchill, J. G. Chilcott, 29 VI 32; 1 ♀, Quebeq, F. Chico, R. H. MacLeod, 21 VI 48; in Canadian National Collection, Ottawa, and collection of G. H. Heinrich, Dryden, Maine.

Differs from *larae laruae* Curt. by decrease of melanistic colour pattern. Abdomen entirely red. Head and pleurae entirely or mostly red. Mesosternum and often prosternum black, the former at least to the line where sternauli would be situated if present. Legs red, rarely coxae II and III partially black.

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16 specimens from type locality.

Besides the above mentioned variability of colour an essential mutability also in sculpture and even to a certain degree in the proportions of joints of antennae has to be noted. To me, however, it seems impossible to separate several species on account of such differences. I presume that a somewhat unusually high mutability has to be regarded as a peculiar character of this arctic and subarctic species. The final proof may only be procured by rearing it.
Type Locality:—Chara-Ullach Mountains, East of the river Lena, East Siberia.

Holotype:—Not selected.

The black colour pattern, however, as recorded by the author, still falls into the frame of mutability of American specimens as given in the redescription of L. laricæ Curt. above. There remains only one character of diagnostical value for the subspecies: the black antennae.

2 specimens with partially black, pronotum but red tergites 6-7, length: 11-12 mm.

3 specimens with red pronotum but black tergites 6-7, length: 9-10 mm.

Whether the original description refers to one or two species and whether or not specimens included really represent a subspecies of L. laricæ sensu meo remains to be proven.

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