

# *Ichneumon lariae* Curtis

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

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### *Ichneumon lariae* Curt.

Syn. *Craticheumon aurivillii* Roman (new Syn.)

Orig.: *Ichneumon lariae* 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.

*Ichneumon lariae* Schiodte, 1857, Till. t. Rink. Grønland, 59.

[no description.]

*Ichneumon lariae* Auriv., 1890, Bih. Svensk. Vet. Akad. Handl. XV, p. 4, p. 31, n. 16, fig. Taf. 3, 11 and 11a.

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

*Ichneumon lariae* Roman, 1914, Mem. Ac. Sc. St. Petersburg.

[49 ♀ from arctic East Siberia are considered as representatives of a new subspecies, *asiaticus* Rom. of *Ichneumon lariae* 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 *Craticheumon* Thoms. on account of the smooth sculpture of postpetiole.]

*Craticheumon aurivillii* Roman, 1916, Arkiv for Zoologi X, 22 p. 5.

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

*I. (Craticheumon) aurivillii* Henriksen & Lundbeck, 1918, Meddel. om Grønland XXII, p. 520.

[Bibliographic 1895-1907. Distribution: West Greenland north to 70°20'; many localities. East Greenland: one record only: Hekle Haven.]

*Craticheumon aurivillii* Roman, 1930, Am. Mag. Nat. Hist. 10 p. 282.

[1 ♀ on heath, Kugssuk, Greenland. The least rare species of *Ichneumoninae* in Greenland. Species never found in palaearctic, therefore suggested as being derived from America.]

*Ichneumon aurivillii* : man, 1933, Skrifter om Svalbard Nr. 53, p. 617.

[Transfers species to *Ichneumon* L. Describes a black male with vivid red legs as "nearly certainly" 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 caterpillars of *Byrdia rossi* Curt. were collected.]

Holotype:—According to information recently granted by J. F. Perkins, British Museum, no type specimen of *I. lariae* 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 based on two specimens, one captured, the other said to be reared from the pupa of *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* Curtis (♀ from Spence Bay, N.W.T., ♂ from

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

Repulse Bay, N.W.T.) and 2 captured specimens evidently belonging to the same species (♀ from Yukon Territory, ♂ from Frobisher Bay, Baffin Isl.). Unfortunately none of the mentioned specimens matches the picture of *I. lariae* 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. lariae* Curtis. This species, however, belongs morphologically to the bulk of the genus and therefore may not be expected to be a parasite of Liparid larvae. As a matter of fact, one of the 4 specimens was reared from an unidentified pupa of Noctuae.

Now the dilemma arises: The species matching the picture and description of *I. lariae* Curtis 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. lariae* Curt. and shall describe the other species, which is the parasite of *Byrdia rossi* Curt., as *Ichneumon byrdiae* spec. nov.

*Ichneumon lariae* 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. lariae* 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. lariae* 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. lariae* Curtis for granted now, Roman derives from these specimens the character of the sculpture of postpetiole as a criterion of the species *lariae* 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 postpetioles, belong to a new species (and even another genus) named in the footnote as *Craticheumon 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. lariae* 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. lariae* Curtis in the conception of this paper. It was observed especially in *I. lariae subarcticus* ssp. nov.

(described below) and in less degree also in *I. larvae larvae* Curtis, though in both subspecies the polished sculpture of postpetiole prevails. Thus there seems to be no doubt that *I. aurivillii* Roman is a synonym of *I. larvae* Curtis as interpreted here. Besides, I believe it to be quite possible, though not yet finally proven, that ssp. *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 *Craticheumon* Thoms. since the rest of morphology indicates a genuine *Ichneumon* L. and the sculpture of postpetiole tends to mutate into feeble striation individually as well as perhaps geographically.

#### Redescription

based on 4 ♀♀ 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 2 to 4, or 5, 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 cheek 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, inconspicuously 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 striae 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.

Mesonotum and epinotal 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. (Cam-

bridge 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), pro-, mesopleura 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 *I. aurivillii* Roman, as entirely black with the legs vivid red except coxae 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.

#### *Ichneumon larvae* Curtis subarcticus ssp. nov.

Type Locality:—Salmita Mines (65°05'N, 111°15'W), Northwest Territories, Canada.

Holotype:—♀, J. G. Chillcott, 30.VI.1953, No. 6410 in Canadian National Collection, Ottawa.

Paratypes:—16 ♀♀ from type locality, J. G. Chillcott; 1 ♀, N.W.T., Repulse Bay, J. E. H. Martin, 21.VI.50; 1 ♀, Manitoba, Churchill, J. G. Chillcott, 29.VI.52; 1 ♀, Quebec, Ft. Chimo, R. H. MacLeod, 21.VI.48; in Canadian National Collection, Ottawa, and collection of G. H. Heinrich, Dryden, Maine.

Differs from *larvae larvae* 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 sternali would be situated if present. Legs red, rarely coxae II and III partially black.

	Head				Thorax		Propodeum		Abdomen		Legs															
	red	cheeks + black		cheeks & frons + black	black (except face & clypeus)		red	only mesosternum black		pro- and meso-sternum black		red	only areae coxalis black		metapleura black up to carina		metapleuralis		red	yellow mark tergite 7		yellow mark tergite 6 & 7		red	coxae II & III partially black	
16 specimens from type locality.....	10	1	4	1	1	8	7	9	1	6	15	1	-	13	3											

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.

*Ichneumon lariae* Curtis  
*labradoris* sp. nov.

**Type Locality:**—Hopedale, Labrador, Newfoundland.

**Holotype:**—♀, W. W. Perrett, 5.VII.1928, C.N.C. No. 6411, in Canadian National Collection, Ottawa.

**Paratypes:**—43 ♀♀, from type locality, W. W. Perrett, 1924-28, in Canadian National Collection, Ottawa and in collection of G. H. Heinrich, Dryden, Maine.

**Female**

Agrees with *lariae subarcticus* Heinr. in morphology, sculpture and colour, differs, however, considerably and constantly in size, a fact becoming strikingly evident by comparing the broad series of paratypes from both type localities. Average total length of 10 specimens of *labradoris* sp. n.: 12.5 mm. Average width of head measured:

in 5 specimens of sp. *subarcticus* Heinr.: 1.9 mm.

in 5 specimens of sp. n. *labradoris*: 2.05 mm.

Mutability of sculpture of postpetiole peculiar to the whole conspecies is evident also in this subspecies changing from smooth to distinctly though finely striated.

Colour evidently less mutable than in sp. *subarcticus* Heinr.: Red. Black only: mesosternum usual, to the place of sternaui, sometimes totally, epicnemial field and prosternum partially or entirely, sometimes base of coxae III and area coxalis.

*Ichneumon lariae* Curtis  
*ssp. asiaticus* Roman

**Type Locality:**—Chara-Ullach Mountains, East of the river Lena, East Siberia.

**Holotype:**—Not selected.

Differs from *lariae lariae* Curt. according to description by darker colour. 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. lariae* Curt. above. There remains only one character of diagnostic 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. lariae* sensu meo remains to be proven.

*Ichneumon alpestriformis* Viereck ♀

*Amblyteles* (*Pterocormus*) *alpestriformis* Viereck, 1923, N. American Fauna, 46, p. 234.

**Type Locality:**—St. Paul Island, Bering Sea, Alaska.

**Holotype:**—♀, A. G. Whitney, 22.VI.1913, U.S.N.M. No. 26475 in the U.S. National Museum, Washington, D.C.

**Paratypes:**—2 ♀♀, from type locality, in U.S. National Museum.

**Distribution:**—Alaska: St. Paul Island, St. George Island, St. Matthew Island (new record).

**Female**

Condensed from original description: Head reddish except cheeks, malar space and antennal basin which are black. Basal fourth of antennae reddish, rest blackish. Thorax including scutellum and postscutellum reddish. Abdomen red, the middle of its surface from the end of 2nd tergite to the base of 5th tergite

broadly black, 6th and 7th tergite with yellow spot. Legs mostly reddish, coxae and trochanters mostly black, coxae III reddish above. Area supermedia nearly quadrate. Postpetiole dullish, almost impunctate. Length: 9 mm.

1 ♀, in the Canadian National Collection, from St. Matthew Isl., R. Ranssch, 19.VIII.54, was compared by W. R. M. Mason with the type and found to be specifically identical. This specimen lacks the melanistic pattern on 2nd to 5th tergite present in the type. Colour of head agrees with the latter. All coxae are partially red. Black are: Pro- and mesosternum, epicnemial field and area coxalis. Rest of thorax and propodeum red. The two anal spots present. No distinct brush. Postpetiole smooth.

This species is closely related to *l. lariae* Curt. (= *aurivillii* Rom.) and agrees with the latter especially in the smooth sculpture of postpetiole and in the morphology of antennae. I presume that it geographically replaces *l. lariae* Curt. On account of the following differences it might be considered, however, as a good species rather than as a subspecies:

- 1) In front view cheek profile considerably more narrowed towards mandibles than in *l. lariae* Curt.
- 2) Tarsi I and II slightly shorter and relatively broader, besides more densely hairy than in *lariae* Curt. First joint of tarsi I about 2.4 times longer than wide at the apex in *alpestriformis* Vier., 2.65 times longer, in *lariae* Curt.
- 3) Yellowish spots on 6th and 7th tergite evident, constant. (In *lariae* Curt. including *subarcticus* sp. nov. present only in rare mutants.)

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