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ADVERTISEMENT.

This work is the fifteenth of a series of papers intended to illustrate the collections of Natural History and Ethnology belonging to the United States, and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846.

It has been prepared at the request of the Institution, and printed by authority of the honorable Secretary of the Interior.

SPENCER F. BAIRD,

Secretary of the Smithsonian Institution.

SMITHSONIAN INSTITUTION,

Washington, April 15, 1879.

CONTRIBUTIONS

TO THE

NATURAL HISTORY

OF

ARCTIC AMERICA,

MADE IN CONNECTION WITH

THE HOWGATE POLAR EXPEDITION, 1877-78,

BY

LUDWIG KUMLIEN,

NATURALIST OF THE EXPEDITION.



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INSECTS.

HYMENOPTERA, NOCTURNAL LEPIDOPTERA, DIPTERA, COLEOPTERA, NEUROPTERA,
AND ARACHNIDA.

BY S. H. SCUDDER AND OTHERS.

The insects collected by Mr. Kumlien were very few in number, amounting to only sixteen species; and they appear to add little to our previous knowledge of the fauna. Nevertheless, as all lists from high northern localities possess a certain importance, the following is given. The Hymenoptera were determined by Mr. E. T. Cresson; the report on the Lepidoptera is by Mr. A. R. Grote; Mr. E. Burgess has named the Diptera, Dr. J. L. LeConte the Coleoptera, Dr. H. Hagen the Neuroptera, and Mr. J. H. Emerton the Arachnid.—SAMUEL H. SCUDDER.

The Diurnal Lepidoptera were placed in the hands of Mr. W. H. Edwards for examination, and appear on pp. 155-157.

HYMENOPTERA.

1. No. 944. *Bombus lacustris* Cress. One specimen; American Harbor, Gulf of Cumberland, July 6, 1878.
2. No. 1287. *Bombus* sp. near *B. scutellaris* Cress., and probably *B. grandicus* Smith. One specimen; Godhavn, Greenland, August 3, 1878.
3. No. 1431. *Limneria* sp. (not described). One specimen; Disko Fjord, Disko Island, Greenland, August 9, 1878.

NOCTURNAL LEPIDOPTERA.

4. *Larva Rossii* Curtis, Appendix to the Second Voyage of Sir J. Ross, lxi, Pl. A, fig. 10.

The specimens belonging to this species are (1) a dried larva, black, with yellowish brown hairs, and on each side a row of yellow tufts, arctiform; (2) a slight cocoon formed of the larval hair like those of the genus *Orgyia*; (3) a single worn male specimen of the moth. The specimens were collected at Annanactook, Cumberland Island, the latter part

of June. The cocoon has attached to it a fragment of a lichen and several coniferous needles, and was evidently formed on the ground; these objects are merely slightly attached and form no part of the structure itself. The cocoon, which is close in texture, yet very frail and light, contains the black and shining pupa, which is unusually thickly clothed with brownish hair.

Curtis says of this species: "It is a very abundant insect, especially in the caterpillar state, for about a hundred were collected on the 16th of June 1832, near Fury Beach." His description of the larva does not well accord with the present specimen. He says: "The caterpillar is large and hairy, and of a beautiful shining velvety black, the hairs being somewhat ochreous; there are two tufts of black hair on the back, followed by two of orange." His description of the pupa and web, as well as of the perfect insect, agrees with the specimens now received. He gives the food-plant of the larva as *Saxifraga tricuspidata* and *S. oppositifolia*.

I have recorded (Psyche, 1, 131) the occurrence of this species above the tree-line on Mount Washington, N. H. It is another instance of the distribution of our existing species of moths, through the agency of the change in climate attending the Glacial Epoch.

5. No. 1431. *Anarta melanopa* (Thunb.).

A single specimen collected at Disko Fjord, Disko Island, August 9, 1878. This species has been taken above timber-line, 13,000 feet elevation, by Lieut. W. L. Carpenter, on Taos Peak, Rocky Mountains. It is found also in Labrador, and has been collected by Mr. George Dimmock near the summit of Mount Washington.

6. No. 1127.

A single specimen of a small dusky gray moth too much rubbed for positive identification and otherwise mutilated. The eyes are naked, the ocelli apparent. It was taken at Kikkerton Island, Gulf of Cumberland, July 25, 1878.

DIPTERA.

7. No. 1061. *Culex* sp. One specimen; American Harbor, Gulf of Cumberland, July 10, 1878.

8. Nos. 1061, 1127. *Tipula arctica* Curt. Two specimens; American Harbor, Gulf of Cumberland, July 10, 1878; and Kikkerton Island, Gulf of Cumberland, July 25, 1878.

9. No. 1431. *Rhamphomyia* sp., perhaps *R. nigrita* Zett. Two specimens; Disko Fjord, Disko Island, Greenland, August 9, 1878.

10. A Tachinid of unrecognizable genus; two pupa cases and a fly which has escaped from one in confinement, with crumpled wings; found parasitic on the larva of *Larva Rossii*, Annanactook, Cumberland Sound.
11. No. 12-3. *Calliphora crythrocephala* Meig. One specimen; Godthaab, Greenland.
12. No. 1098. *Scatophaga apicalis* Curt. (= ? *S. squalida* Meig.). One specimen; off shore, American Harbor, Cumberland Sound, July 13, 1878.

COLEOPTERA.

13. No. 1061. *Amara hamatopus* Dej. (Feronia); *Stereocorus similis* Kirby. One specimen; American Harbor, Cumberland Sound, July 10, 1878. The species is found generally throughout sub arctic America.
14. No. 1641. *Agabus (Gastrodytes) tristis* Aubé. Five specimens in poor preservation; Lake Caroline Mann, Cumberland Island, September 1, 1878. The species is abundant in Alaska and extends down to California in the Sierra region.

NEUROPTERA.

15. No. 1641. A Limnophilid, perhaps an *Halesus*. Several larval cases with dried larvæ in some of them; the cases are composed of minute scales of mica. Lake Caroline Mann, Cumberland Island, September 1, 1878.

ARACHNIDA.

16. No. 1051. *Lycosa* sp., probably *L. grænlandica* Thor. One dried specimen; American Harbor, Cumberland Sound, July 10, 1878.