

Exp. 7

Umanak, Greenland.

May 27, 1914.

M. C. Tanguay, ^{col.}

Sixteen lepidopterous larvae, collected from the dry rocky places within a few hundred rods of the house at Umanak. They were placed in a small breeding cage made by standing four sticks in the corners of a shallow (tin) chocolate box and covering with cheese cloth. Some earth and stones were placed inside the cage and grass and various plants, including arctic willow in a small bottle of water.

Three of these larvae were collected on May 22. The others on May 27. The first time I

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saw any of these larvae crawling was on May 22. The weather during the early part of May was unpleasant, being cloudy, windy or snowing much of the time (at Umanak). May 22 was a bright warm day and the sun brought out the larvae from their hibernating places.

The larvae vary in size from 8 mm. to 36 mm. in length. They are covered with a dense coat of hairs, each segment having a circlet of hairs, except that the ventral parts of the body does not have them. On the dorsal part of ~~each segment of the abdomen~~ is a 1st, 2nd, and 8th abdominal segment is a small tuft of black hairs, and on the dorsal

(3) (1)
The older larvae are very dark, some of them losing all their yellowish hairs and becoming entirely black after the last moult. The four in acc #58 are about the typical color. A few more have perished.

2/ III
its first cocoon only spun a few threads, inside of which it is now pupating. The fourth caterpillar is now spinning its cocoon.

I place a cocoon that was collected ^{by H.E. Ekblaw} June 2ⁿ from the hill slope near Umanak, in this box.

June 6. The larva that deserted its cocoon has shed its larval skin and is now a perfect chrysalis, lying beside the cast off skin inside the few silken threads forming its last partial cocoon.

June 9. Another cocoon collected outside, was added to the exp. to-day.

July 25. Our moth emerged.

July 30. The wings did not develop well - evidently too dry. Pinned as acc. #

21
2)

II

May 28. I add another parasitized caterpillar.

May 30. I add a 4th. parasitized caterpillar ^{day before}

Both this one and the one yesterday are dead, but were alive when captured. I can see the parasite inside the one added to-day moving its head regularly as the spinning silk. It does not have the cocoon of the parasite showing on the ventral side as do the others.

May 31. I add a 5th. parasitized caterpillar from Exp. #1.

II

Exp. #2

Umanak, Greenland.

May 27, 1914.

M.P.T., Exp.

Lepidopterous larva (two of them collected to-day (same as in exp. #1, which see) containing parasites. Both larvae ~~are~~ apparently dead, but the movement of the parasitic larvae inside causes a slight movement of the caterpillar's body. The ventral side of the caterpillar's body is partly covered with web, spun by the parasite. In one of them I can make out the moving head of the parasite as it is apparently spinning its silk.

I place in a ~~small~~ large vial. To rear parasites.

II

Exp. #3

Umanak, Greenland.

May 27, 1914

Some of the larger of the lepidopterous larvae collected to-day are slightly different in color from those in exp. #1 and may be a different species so are placed in a different ~~species~~ exp., exp. #3.

About the only difference is that the orange colored tufts of hair on the 3rd + 4th abd. segments are not so sharply distinguished from the rest of the hairy covering, ~~having~~ and the dark colored tufts have more orange colored hairs surrounding them making them less noticeable. The black tufts on the 8th. abd. segt is not so prominent. I think however that these variations are only due to the advanced stage

of development of the caterpillars.
There are 4 caterpillars in this
exp.

May. 30.

At 2:00 A.M. I notice that
two of the caterpillars have be-
gun to spin cocoons. They spin
with an oral spinneret.

8:00 P.M. Both larvae have been
spinning most of the day. One is
still spinning to-night; the other is
quiet.

May 31. One larva has crawled out
of its nearly finished cocoon.

June 1. This larva has begun another
cocoon. A third larva has begun
spinning a cocoon, & the 4th. seems
to have spun a few threads on top
of the cocoon of #1.

June 4. The larva that deserted.

part of the 3rd. & 4th. abd. segment
is a shorter tuft of orange col-
ored hairs. On the dorsal part of
the 5th. & 7th. abd. segts. is a chim-
ney-like projection or fold of the
epidermis. The color of the body of
the larva is a uniform black.

Exp. is for specimens of adult
and for parasites. The exp. will
be run part of the time in the
living room, and during the warm
part of the day, outside, in or-
der to hasten development.

May 29.

I transferred the larvae to an-
other cage made out of a tin box
and covered with glass, as the
larvae ate their way through the
cheese cloth. I placed other lar-
vae, collected May 26, in with these.

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June 4. Two of the caterpillars have spun cocoons. I have placed other caterpillars in with these from time to time as I have collected them, or as they have been collected by Mr. Ekblaw, Peter, or the Eskimos. I placed in fresh Willow today this morning and this afternoon most of the caterpillars are on it. I have not seen them eat anything but arctic willow.

June 6. One more cocoon.

" 12. More caterpillars have been added from time to time as they have been collected by Mr. Ekblaw or myself.

June 21. Four larvae were killed today in hot water & preserved as acc #58 in 70% alc.

Exp. #4

4

Umanak.

June 1, '14

Four puparia collected to-day by Eskimo boy, Eustis, ^{under rocks} I place in a small glass vial stoppered with cotton.

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Exf. #5.

(5)

Umanak, Greenland.

June 1, 1914

Twenty small puparia collected
^{under rocks.}
to-day by Eustis. I place in
small vial with cotton.

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(6)

Umanak, Greenland.

Exp. #6

June 1, 1914

Six dipterous larvae collected to-day, under rocks.

Place in small vial with moist earth & some cotton.

Exp. #7.

Umanak, Gr.

June 1, 1914.

Two lepidopterous larvae, collected to-day. I found one lying on the ground beside a rock; the other underneath a small flat rock, enclosed in a cavity ~~made~~ formed by the rock on one side, and a fine, white silken web and small stones on the other. They are slender, pinkish larvae about 25 mm. in length, covered with brown spots about 10 or 12 spots to each segment, (description given later).

I place in a glass vial with some moist earth.

11

(8)

Expt #8

Umanak, ^{Green}land.

June 1, 1914 4.

W.C. Pangnani.

Chrysalid found to-day under flat rock not far from house at Umanak.

I place in a vial with some moist earth.

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Exp. # 9.

Wmanak, Gr.

June 1, 1914.

McTungwah.

Two lepidopterous larvae (probably Noctuid) collected today under rocks. Of uniform, dirty white color, with a brown head, and a light-brown shield on dorsum of prothorax, and on dorsum of last segt. of abdomen. Minute brown spots on body where the bristles appear. Fleshy, grub-like and about $1\frac{1}{4}$ in. in length.

Place in condensed milk tin with earth + grass.

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Exp. #10

Umanak, Gr.

June 1, 1914.

Forty dipterous larvae collected to day under flat stones in moist, rather sandy spot where the snow had first thawed. On south slope at Umanak. In grass roots, or simply in the earth under stones. I place in earth in a round tin box.

Ten of same larvae ~~for~~ killed by boiling and preserved in vial of ^{75%} alc. as acc # 23.

June 12. A number of the larvae have pupated.

June 17. More larvae have pupated.

July 26. Several flies emerged.

Pinned as acc. # 150 + 151. Over

Puffaria fimbria as sec. #152.

Exp. #11

Umanak, Gr

June 1, 1914

One lepidopterous larva,
found lying on ground near
rock. + near

About $\frac{3}{4}$ inch long, grayish
brown, with light gray band
running down middle of dorsum,
and a darker ^{brown} stripe on either
side.

Place in vial with some
earth.

June 17. I place in a large screw-
capped bottle with 12 others which
have been taken during the past
week. I place in some earth, and
some *Saxifrage* on which they feed.
They also feed on the *Saxifrage arctica*.

I place others in small tin covered
with cheese-cloth

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12

Umanak, Greenland

June 6, 1914

Exp. # 12.

Five dipterous larvae
collected to day under rocks
near Umanak, June 4.

I place in glass vial
containing moist earth + stop-
pered with cotton.

Exf. 13

Umanak

June 14, 1914.

Several dipterous larvae found working in an old seal skin (*Phoca foetida*). I place in a tin can with a piece of seal meat. To rear for specimens.

I kill a few of the larvae by boiling in water & preserve in vial of 70% alc. as acc. #42.

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be tough and thrown into deep
creases and folds.

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(14)

Exp. #14

Umanak, Greenland.

June 10, 1914

Two lepidoptera larvae found by Mr. Ekblaw working on *Saxifraga oppositifolia*. I place in syracuse watch glass with some *Saxifraga*.

The larva is short, thick, fleshy, semi-cylindrical, and somewhat grub-like. It is about $\frac{1}{2}$ in. long. The ground color is green, but this is more or less broken up by red and black markings, so that it is very hard to distinguish in a clump of *Saxifraga*. Probably a case of protective coloration. It has a very small black head. It is covered with short, thick, spine-like, black hairs and the epidermis seems to

#15

(15)

Umanak, Greenland

June 17, 1914

Several small dipterous larvae found in damp moss at Saunders Island June 15, by H. E. Ekblaw. Place in dial with damp moss.

In same dial, also a very small yellowish larva about $\frac{1}{8}$ in. long, found in same moss.

June 21. One larva has pupated. The others have died.

July 23. Fly emerged. Pinned as acc. # 131.

