

INSECTS ON THE SURFACE OF THE SNOWY RAVINE OF BANZAI VALLEY,
MT. HAKUSAN

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万才谷雪溪上の昆虫類

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Since 1950, I have frequently found some dead or blown insects on the surface of the snowy ravines of Mt. Hakusan. Those dead or blown insects were flies, sawflies, ichneumon flies, lady bird beetles or butterflies.

On the 15th of July, 1981, I found many blown insects on the surface of the snowy ravine of Banzai Valley in Mt. Hakusan.

In this paper I report on the blown insects found on the surface of the snowy ravine.

Before going further, I wish to express my hearty thanks to Dr. S. Asahina, Tokyo, Dr. D. Sorin, Kogakuken Univ., Ise City, Mr. K. Tanida, Hakusan Nature Conservation Center, Yoshinodani, Ishikawa, Mr. S. Tsukaguchi, University of Osaka Prefecture, Sakai, and Dr. S. I. Ueno, National Science Museum (Nat. Hist. Institute), Tokyo, for the identification of aphids and grand beetle.

Results and consideration

Table 1 is a list of the insects found on the surface of the snowy ravine of Banzai Valley, Mt. Hakusan.

Ischnura asiatica is widely distributed the subtropical and the temperate regions in Asia. In Japan, this species is common in the lowland.

Eucorysses grandis inhabits a foot of Mt. Hakusan. HIURA (1977) stated that the flying power of this species seems strong because the adults of this species were found in Hokkaido or the Japan Alps.

Cinara longipennis is known as a parasite of *Abies sachalinensis* Fr. Schm. and *A. firma* Sieb. et Zucc. (HIGUCHI and MIYAZAKI, 1969). But the host plant of this species in Mt. Hakusan is unknown.

Adults of neuropterous insects inhabit from the lowland to the montane region in Mt. Hakusan.

A caddisfly is found near the streams of the montane region.

Agonum (Europhilus) charillum BATES is found under the stones near the edge of the snowy ravine of the alpine region.

Table 1. A list of insects on the surface of the snowy ravine of Banzai Valley, Mt. Hakusan.

Odonata
<i>Ischnura asiatica</i> (Brauer)
Hemiptera
<i>Eucorysses grandis</i> Thunberg
<i>Cinara longipennis</i> (Matsumura)
<i>Lachnus</i> sp.
<i>Macrosiphum akebiae</i> Shinji
<i>Euceraphis punctipennis</i> (Zetterstedt)
Neuroptera
<i>Nineta</i> sp.
<i>Chrysopa septempunctata</i> Wesmael
<i>Anisochrysa</i> (s. str.) <i>cognatella</i> (Okamoto)
<i>Anisochrysa nipponensis</i> (Okamoto)
<i>Hemerobius japonicus</i> Nakahara
<i>Plethosmylus hyalinatus</i> (MacLachlan)
Trichoptera
<i>Hydropsyche</i> sp.
Coleoptera
<i>Agonum (Europhilus) charillum</i> Bates
Hymenoptera
<i>Tenthredo nagaii</i> (Togashi)
<i>Gilpinia</i> sp.
<i>Rhyssa jozana</i> Matsumura
<i>Netelia</i> sp.

Tenthredo nagaii inhabits the alpine region and *Gilpinia* sp. is usually found on the surface of the needles of *Pinus pumila* Regel.

In regard to the adults of *Rhyssa jozana*, MOMOI (1977) is stated that this is found around the forest of the coniferous trees.

I have frequently observed the aphids carried by the air current in Mt. Hakusan. Therefore, it was assumed that the blown aphids on the surface of the snow were carried by the upper air currents from distant areas and they were fallen off on the surface of snow for the sudden decline of the atmospheric temperature.

In regard to *Ischnura asiatica*, it is considered that this is a one of a long distance flight insect (ASAHINA and TURUOKA, 1970). In the case of *Eucorysses grandis*, it is considered that this is a one of the long distance flight insect. Therefore, based on the above-mentioned facts, *Ischnura asiatica* and *Eucorysses grandis* were considered that they were fallen off on the surface of the snowy ravine on the way of migration from distant areas for the sudden decline of atmospheric temperature.

The locomotive activity of lace wings or caddisfly seems rather weak because their flight is weak. Based on this idea, it was assumed that they were brought by upper air currents from distant areas and fallen off on the surface of snow.

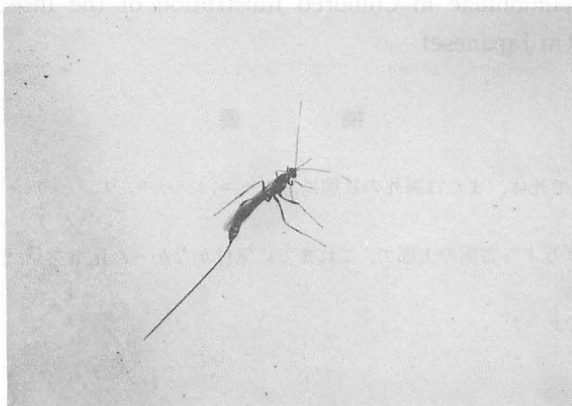


Fig. 1. *Rhyssa jozana* on the surface of the snowy ravine.

In the case of the sawflies inhabited the alpine region, it was considered that they were brought by air currents from distant areas of the alpine region. And also, in the case of *Rhyssa jozana* and *Netelia* sp., it was assumed that they were brought by upper air currents from distant subalpine or montane regions.

In regard to *Agonum (Europhilus) charillum*, it was assumed that this species visited the snowy ravine for feeding on blown insects brought by upper air currents from distant areas.

Summary

1. In this paper, I reported on the dead or blown insects on the surface of the snowy ravine.

2. Among them, it was assumed that many species were brought by the upper air currents from distant areas.

3. In the case of *Agonum (Europhilus) charillum*, it was considered that this species visited the snowy ravine for feeding on the blown or dead insects brought by the upper air currents.

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摘 要

1950年以來、白山の雪溪上で死体、または瀕死の状態にあるハエ、ハバチ、ヒメバチ、テントウムシ、ハムシやチョウをしばしば見出している。

1981年の7月15日に、私は万才谷雪溪の上部で、これまでに気付かなかった昆虫を見出したので記録した。

確認した昆虫は次の18種であった。

- 1 アジアイトトンボ
- 2 オオキンカメムシ
- 3 ハネナガオオアブラムシ
- 4 オオアブラムシの1種
- 5 ムギヒゲナガアブラムシ
- 6 カバワタフキマダラアブラムシ
- 7 ホシクサカゲロウの1種
- 8 ヨツボシクサカゲロウ
- 9 ヒメヨツボシクサカゲロウ
- 10 ヤマトクサカゲロウ
- 11 ヤマトヒメカゲロウ
- 12 スカンパヒロバカゲロウ
- 13 シマトビケラの1種
- 14 オンタケヒメヒラタゴミムシ
- 15 ナガイハバチ
- 16 マツハバチの1種
- 17 ジョウザンオナガバチ
- 18 アメバチの1種

この18種のうち、アジアイトトンボとオオキンカメムシの2種は長距離飛翔のできる昆虫といわれているため、移動の途中で雪溪上に落下したものと考えられる。

アブラムシ類は飛翔力は強くないため、これらは上昇気流により運ばれたものと考えられる。

同様にカゲロウ類やトビケラ類も上昇気流により離れた地域から運ばれたものと考えたい。

これに対し、オンタケヒメヒラタゴミムシは、雪溪周辺の石下に見出されるが、本種の場合は雪溪上に落下した昆虫を食べるために来ていたものではなかろうかと考えている。

ナガイハバチやマツハバチの1種のように、ハイマツ帯に生息している種は、室平を吹く風、気流により雪溪上にもたらされたものと考えている。

ジョウザンオナガバチやアメバチの1種は、その生息地から上昇気流により運ばれたものであろうと推察している。

なお、甲虫類、アブラムシ類、ハチ類の一部は死体を採集して(環境庁長官許可、環自中許第305号)、同定した。