Additional records on dermatitis caused by three oedemerid species (Coleoptera: Oedemeridae)

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Abstract: Oedemerid beetles generally produce acute vesicular dermatitis on human skin. I report here on the dermatitis caused by three oedemerid species, Chrysanthia viatica, Oedemera (Oncomera) venosa and O. (Oedemera) sexualis. The former two species have not been previously reported to cause dermatitis whereas the latter species has been previously reported to cause dermatitis in Japan. As a result of the survey, a total of 11 species of Oedemeridae are now known to cause dermatitis in Japan.

INTRODUCTION

False blister beetles or oedemerid beetles (Coleoptera, Oedemeridae) are notorious insects because they contain cantharidin, a defensive chemical, in their body fluid and can often cause acute vesicular dermatitis on human skin. Until now, more than fifty oedemerid species have been recorded in Japan (Mizota, 1998), of which 9 species belonging to three genera, i.e. Nacerdes, Eobia and Oedemera, have so far been reported as causing dermatitis in humans (Kurosa, 1956, 1958a, 1958b, 1958c; Mori et al., 1984).

In this article, I would like to report on the cases of dermatitis caused by three oedemerid species, Chrysanthia viatica, Oedemera (Oncomera) venosa and O. (Oedemera) sexualis. The former two species have not been previously reported to cause dermatitis whereas the latter species has been previously reported to cause dermatitis in Japan (Mori et al., 1984). As a result of the survey, a total of 11 species of Oedemeridae are now known to cause dermatitis in Japan (see Table 1).

CASE REPORT

Case 1. Chrysanthia viatica Lewis (Fig. 1) [Japanese name: Suji-kamikiri-modoki]

The patient was a 21-year-old male entomologist who was collecting insects on grasses using a sweeping method at Jōzankei, Sapporo, Hokkaido on June 1993. When a large number of C. viatica were netted in, he accidentally crushed one on his right upper arm. Although he made a dash to a nearby river and immediately washed the affected part with water, after returning home that night, he felt some pain on his upper arm where the toxic substance was bound to contact, and some bullae appeared rather suddenly.

It took a week for the lesions to completely heal, and a well-defined pigmentation mark remained for more than two
months after that.

This is the first report on the dermatitis caused by *C. viatica* in the world. The species is very common in Hokkaido and is generally attracted to wild flowers in the daytime. Until now, little attention has been paid to the dermatitis caused by diurnal species of oedemerid beetles such as *C. viatica* because they are not attracted to light and seldom come into contact with humans. This report indicates that we need to pay just as much attention to diurnal species as we do to nocturnal species as sanitary pests.

**Case 2. Oedemera (Oncomera) venosa (Lewis) (Fig. 2)**

[Japanese name: Madara-kamikiri-mo-doki]

The patients were two entomologists, a 30-year-old male and a 23-year-old male, who were collecting nocturnal insects with a light trap at the foot of Mt. Yôtei, Niseko, Hokkaido on 26 May 1992. Immediately after switching on the light, a large number of *O. venosa* were strongly attracted to the light trap and more than one hundred individuals were collected at that time (Ôhara et al., 1995). After finishing their collection, the entomologists noticed that some individuals of *O. venosa* had entered inside their clothing and were crawling upon their skin. Although they carefully brushed the beetles away with their fingers, approximately five small blistered areas appeared over their cervical regions within one hour after brushing the beetles away. This result indicates that the beetles are irritated by pressure, such as compression, involuntarily and leaked out the poisonous substances in the body fluid, since oedemerid beetles, in general, do not cause such blisters when only allowed to walk freely on human skin (Kurosa, 1958a). The men felt mild pain and itchiness in the affected areas for a
few days but those healed up quickly. Some vague pigmentation marks remained over their cervical regions at least for three months.

Although this is the first report on dermatitis caused by *O. venosa*, the incidence of the dermatitis from their species is thought to be fairly common. The reason is that *O. venosa* is one of the most common species in the northern part of Japan and is often attracted to light. This species deserves careful attention in the night-time.

**Case 3. Oedemera (Oedemera) sexualis**

Marseul (Fig. 3)

[Japanese name: Futairo-kamikiri-modoki]

The 24-year-old male patient was also an entomologist, who was collecting flower-visiting beetles on wild flowers in Kushikawa Village, Kume-jima Island, Okinawa, on 18 March 1998. He accidentally nipped the body of *O. sexualis* with the lid of the sampling vial. To remove the broken body of the beetle from the sampling vial, he wiped it with his right forefinger directly. As is to be expected after contact with the body fluid of this beetle, a somewhat large blister (7 to 8 mm in diameter) with burning and itching sensations appeared in his right forefinger. It took about a week or more for the lesions to completely heal, and a vague pigmentation mark remained for about one month.

Mori et al. (1984) first reported on the dermatitis caused by this species, and this is the second report in Japan. In the light of their result, I found one small difference. They mentioned that the dermatitis caused by *O. sexualis* did not cause any blistering to appear on the patient's skin. Contrary to their reports, a blister was observed to appear just like with the other dermatitis-causing Oedemeridae.

In all three of these cases, the symptoms of dermatitis were almost identical. A few hours after contact with the toxic substance from the body of oedemerid beetles, blisters with burning and itching sensations appeared. The blisters varied in shape and size, and also in number depending on the case. It took a week or more
for the lesions to heal completely, but they sometimes remained as well-defined pigmentation marks for more than three months afterwards.

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References


摘要

カミキリモドキ科甲虫3種による皮膚炎の
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カミキリモドキ科の甲虫は体液中にカタリジンを含み、人体皮膚に著しい水疱性皮膚炎を引き起こすことが知られている。日本には現在までのところ50種を越えるカミキリモドキが分布しているが、実際に被害が報告されているのはわずか9種に過ぎない。今回、筆者はマングスカミキリモドキOedemera(Oncomera)venosa(Lewis),スキエキモドキChrysanthia viaticaLewis,ファイロカミキリモドキOedemera(Oedemera)sexualisMarseulによって被害例に関する知見を得たので、その被害状況について報告した。マングスカミキリモドキ、スキエキモドキに関しては日本で初めて被害が確認されたもので、その結果、日本からは合計11種のカミキリモドキによる病害が報告されることになる。

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