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The Lacewings (Insecta: Neuroptera) Collected from the Kamchatka Peninsula and the North Kuril Islands in 1996–1997

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Abstract Thirteen species of lacewings (Neuroptera) are recorded from the Kamchatka Peninsula and North Kuril Islands based on a collection made during the Biological Expedition to the Kamchatka Peninsula and North Kuril Islands in 1996 and 1997. They are listed and classified into two families as follows: seven species of Hemerobiidae and six species of Chrysopidae. Four species and one species are new records for the Kamchatka Peninsula and North Kuril Islands, respectively.

Key words: Lacewings, Hemerobiidae, Chrysopidae, Neuroptera, Kamchatka Peninsula, Kuril Islands.

Up to present, 17 species and one species of lacewings have been recorded from the Kamchatka Peninsula and North Kuril Islands, respectively (Kuwayama, 1967; Makarkin, 1995).

The Biological Expedition to the Kamchatka Peninsula and North Kuril Islands of the Natural History Museum and Institute, Chiba, was carried out in 1996 and 1997. It was a part of a project entitled "The Origin and Biogeography of the Northeast Asian Biota," in co-operation with the Institute of Biology and Pedology and the Institute of Marine Biology belonging to the Far Eastern Branch of the Russian Academy of Sciences, Vladivostok. In the present paper, a list of the lacewings is presented based on material collected during the expedition.

Materials and Methods

Specimens were collected from 12 sites on the Kamchatka Peninsula, during the periods 3rd to 17th July 1996, 7th to 10th July 1997 and 27th July to 5th August 1997. On the North Kuril Islands, lacewings were collected at three sites on Paramushir Island during the periods 11th to 24th July 1997. The sampling localities are shown in Figs. 1 and 2 and detailed information is given below.

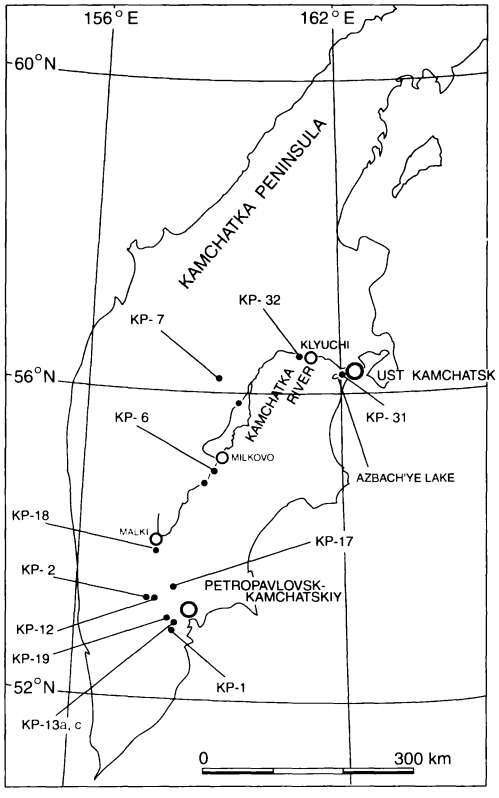

Fig. 1. Map of study sites in the Kamchatka Peninsula. For detailed explanations, see text.

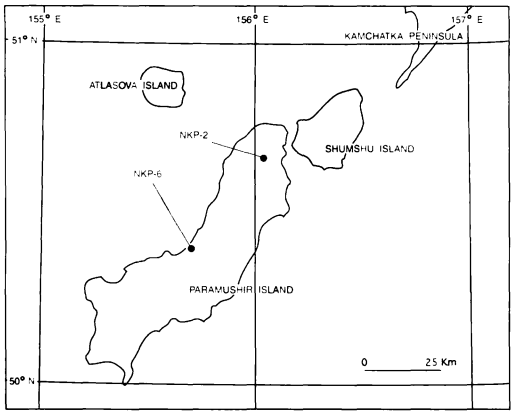

Fig. 2. Map of study sites in the North Kuril Islands. For detailed explanations, see text.

Kamchatka Peninsula

KP-1: 5 km west of Mt. Vilyuchinsky (52°42′ N, 158°10′ E), alt. ca. 154 m.
KP-2: Bystraya River (Riverside), 11 km north of Malki (53°26′ N, 157°32′ E), alt. ca. 220 m.
KP-6: Milkovo Village (54°42′ N, 158°36′ E), alt. ca. 112 m.
KP-7: basin of Bystraya river, 10 km southeast of Anavgay (56°02′ N, 159°04′ E), alt. ca. 310 m.
KP-12: Hot Spring (riverside), Malki (52°25′ N, 157°30′ E), alt. ca. 20 m.
KP-13a: 5 km south of Paratunka (52°57′ N, 158°14′ E), alt. ca. 120 m.
KP-13c: 15 km south of Paratunka (52°49′ N, 158°10′ E), alt. ca. 110 m.
KP-17: Poperechnaya River, Bystraya River basin, 17 km from main road (53°22–23′ N, 157°41′ E), alt. ca. 400 m.
KP-18: Bystraya River basin, 30 km north of Ganaly (53°58′ N, 157°45′ E), alt. ca. 390 m.
KP-19: Mt. Vachkazhets, upper part of Takhkoloch River, basin of Plotnikova (53°05′ N, 157°55′ E), alt. ca. 550 m.
KP-31: Lotnaya River, near Azhabach'ye Lake (56°06′ N, 161°52′ E), alt. ca. 20 m.
KP-32: 25 km west of Klyuchi (56°19′ N, 160°24′ E), alt. ca. 150 m.

North Kuril Islands: Paramushir Island

NKP-2: Matrosskaya River, near Severo-Kurilsk (50°40′ N, 156°05′ E), alt. 30–128 m.
NKP-6: Shelekhovo to Medvezhiy Waterfall (50°22′ N, 155°37′ E ⇔ 50°22′ N, 155°39′ E), alt. 0–10 m.
NKP-8: Mt. Ebeko, (50°41′ N, 156°03′ E) alt. 200–960 m.

Specimens were collected by using sweep nets and light trap, and were preserved in paper triangles. They are deposited in the Natural History Museum and Institute, Chiba (CBM, with a code of ZI).

List of collected species

Information about the specimens is given in the following sequence: scientific name, site of collection (abbreviation), number of specimens, date, collector, registration number of the Museum (CBM-ZI), and known distribution. Collector's names are abbreviated as follows. AS: Akiko Saito; RBK: Ryoichi B. Kuranishi of the Natural History Museum and institute, Chiba. In the following list, 13 species are recorded and these are classified into two families as follows: seven species of Hemerobiidae, and six species of Chrysopidae. Species name of three female specimens have been undecided, because an examination of male genitalia is necessary for their species identifications.

Family Hemerobiidae

1 *Hemerobius perelegans* Stephens, 1836

Material examined. **KP-1**, 1 female, 3. VII. 1996, RBK leg., CBM-ZI 83537; **KP-2**, 1 male, 5. VII. 1996, RBK leg., CBM-ZI 83538; **KP-6**, 1 female, 8. VII. 1996, RBK leg., CBM-ZI 83539; **KP-13c**, 1 female, 3. VII. 1996, RBK leg., CBM-ZI 83540; **KP-31**, 1 male, 1 female, 12. VII. 1996, RBK leg., CBM-ZI 83541–83542; **NKP-2**, 1 male, 12. VII. 1997, RBK leg., CBM-ZI 83543; **NKP-6**, 1 female, 18. VII. 1997, AS leg., CBM-ZI 83544; **NKP-8**, 1 male, 14. VII. 1997, AS leg., CBM-ZI 83545.

Distribution. Russian Far East: Kamchatka Peninsula (new record), North Kuril Islands (new record); Europe.

2 *Hemerobius* sp. 1

Material examined. **KP-6**, 1 female, 8. VII. 1996, RBK leg., CBM-ZI 83546.

Remarks. This species is similar to *Hemerobius simulans* Walker, 1853 and its allied

species.

3 *Hemerobius* sp. 2

Material examined. **KP-19**, 1 female, 3. VIII. 1997, AS leg., CBM-ZI 83547.

Remarks. This species is similar to *Hemerobius handschini* Tjeder, 1957 and *H. schedli* Holzel, 1970 known from Europe.

4 *Micromus angulatus* (Stephens, 1836)

Material examined. **KP-13a**, 1 female, 7. VII. 1997, AS leg., CBM-ZI 83548.

Distribution. Holarctic region; also recorded from Taiwan.

5 *Micromus numerosus* Navás, 1910

Material examined. **KP-2**, 1 male, 5. VII. 1996, RBK leg., CBM-ZI 83549.

Distribution. Russian Far East: Kamchatka Peninsula (new record); Korea, Japan.

6 *Micromus paganus* (Linnaeus, 1767)

Material examined. **KP-18**, 1 female, 29. VII. 1997, AS leg., CBM-ZI 83550; **KP-31**, 1 female, 12. VII. 1996, RBK leg., CBM-ZI 83551; **KP-32**, 1 female, 10. VII. 1996, RBK leg., CBM-ZI 83552.

Distribution. Russian Far East: Kamchatka Peninsula, Khabarovsk, Amur, Primorye, Sakhaline, Kuril Islands; Europe, Korea, Japan.

7 *Wesmalius nervosus* (Fabricius, 1793)

Material examined. **KP-6**, 1 male, 8. VII. 1996, RBK leg., CBM-ZI 83553.

Distribution. Russian Far East: Chukotka, Kamchatka Peninsula, Khabarovsk, Primorye, Sakhaline, South Kuril Islands; Europe, Iran, Siberia, Korea, Japan.

Family Chrysopidae

8 *Brinckochrysa kintoki* (Okamoto, 1919)

Material examined. **KP-2**, 1 female, 5. VII. 1996, RBK leg., CBM-ZI 83554.

Distribution. Russian Far East: Kamchatka Peninsula (new record); Japan.

9 *Chrysopa intima* McLachlan, 1893

Material examined. **KP-17**, 1 female, 27. VII. 1997, RBK leg., CBM-ZI 83555; **KP-18**, 1 female, 30. VII. 1997, AS leg., CBM-ZI 83556.

Distribution. Russian Far East: Kamchatka Peninsula, Khabarovsk, Amur, Primorye, Sakhaline, South Kuril Islands; Siberia, China, Mongolia, Korea, Japan.

10 *Chrysopa pallens* (Rambur, 1838)

Material examined. **KP-2**, 1 female, 5. VII. 1996, RBK leg., CBM-ZI 83557.

Distribution. Palaearctic region; also recorded from Taiwan and Cambodia.

11 *Chrysopa* sp.

Material examined. **KP-17**, 1 female, 27. VII. 1997, RBK leg., CBM-ZI 83558.

Remarks. This species is similar to *Chrysopa septemmaculata* Tsukaguchi, 1995 known from Japan.

12 *Dichochrysa cognatella* (Okamoto, 1914)

Material examined. **KP-2**, 4 female, 5. VII. 1996, RBK leg., CBM-ZI 83559–83562.

Distribution. Russian Far East: southern Primorye, southern Sakhalin, Kamchatka Peninsula (new record); China, Korea, Japan.

13 *Nineta vittata* (Wesmael, 1841)

Material examined. **KP-7**, 1 male, 9. VII. 1996, RBK leg., CBM-ZI 83563; **KP-12**, 1 female, 17. VII. 1996, RBK leg., CBM-ZI 83564; **KP-17**, 3 male, 3 female, 27. VII. 1997, RBK leg., CBM-ZI 83565–83570.

Distribution. Palaearctic region.

References

Aspöck, H., U. Aspöck and H. Hölzel. 1980a. Die Neuropteren Europas, 1. 495 pp. Goecke and Evers, Krefeld.

Aspöck, H., U. Aspöck and H. Hölzel. 1980b. Die Neuropteren Europas, 2. 355 pp. Goecke and Evers, Krefeld.

Killington, F. J. 1936. A monograph of the Britisch Neuroptera, 1. 269 pp. Ray Society, London.

Killington, F. J. 1937. A monograph of the Britisch Neuroptera, 2. 306 pp. Ray Society, London.
Kuwayama, S. 1967. Insect fauna of the Southern Kurile Islands. 225 pp. Hokunoukai, Hokkaido. (In Japanese)
Makarkin, V. N. 1995. Neuroptera. *In* Lehr, P. A. (ed.), Key to the insects of Russian Far East, Vol. 4. Part 1, pp. 37–67. Dal'nauka, Vladivostok. (In Russian).
Monserrat, V. J. 1990. A systematic checklist of the Hemerobidae of the world (Insecta: Neuroptera). *In* Mansell, M. W. and H. Aspöck (eds.), Advances in Neuropterology, pp. 215–262. Proceedings of the Third International Symposium on Neuropterology, Verg en Dal, Kruger National Park, Republic of South Africa, 1988, Pretoria, South Africa.
Tsukaguchi, S. 1995. Chrysopidae of Japan. (Insecta, Neuroptera). 223 pp. Author's publication Hyogo.

カムチャツカ半島と北千島のクサカゲロウ類

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1996 年と 1997 年に行われた千葉中央博物館のカムチャツカ半島と北千島生物学調査において採集されたクサカゲロウ類についてリストを作成した．本調査を通じて，2 科 7 属の少なくとも 13 種が記録された．*Hemerobius perelegans* Stephens, *Micromus numerosus* (Navas), *Brinckochrysa kintoki* (Okamoto), *Dichochrysa cognatella* (Okamoto) の 4 種はカムチャツカ半島からの初記録で，*Hemerobius perelegans* は，北千島からも初記録であった．*Hemerobius* sp. 1 は，*Hemerobius simulans* Walker およびその近縁種に，*Hemerobius* sp. 2 はヨーロッパに産する *Hemerobius handschini* Tjeder および *H. schedli* Holzel によく似ていた．今回は，*Hemerobius* sp. 1 と *H.* sp. 2 とも雌個体しか採集されなかったため，種までの同定はできなかった．今回，カムチャツカから初めて記録された *Brinckochrysa kintoki* (Okamoto) は，これまでは日本の温帯域から知られ，分布の北限が青森県であった．*Micromus numerosus* (Navás) も，暖温帯に分布する種で，これまでの分布の北限は北海道であった．