

Auchenorrhyncha (Insecta: Rhynchota) collected from the Kamchatka Peninsula and the North Kuril Islands in 1996–1997

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Abstract Nineteen species of Auchenorrhyncha from the families Aphrophoridae, Cicadellidae and Delphacidae are recorded from the Kamchatka Peninsula and the North Kuril Islands of the Russian Far East. *Aphrophora major* Uhler (Aphrophoridae), *Oncopsis planiscuta* (Thomson), *Stroggylocephalus agrestis* (Fallén) and *Edwardsiana menzbieri* Zachvatkin (Cicadellidae) have not been recorded in these regions previously. Some taxonomic and distributional notes are also given.

Key words: Auchenorrhyncha, Kamchatka, North Kuril Islands, list, new records.

The Auchenorrhyncha from the Kamchatka Peninsula and the Kuril Islands are known principally from the taxonomic and faunistic studies by Ishihara (1966), Anufriev (1967, 1970a, 1970b, 1977), Nast (1972, 1982), Vilbaste (1980) and Anufriev and Emeljanov (1988). Approximately 80 species of Auchenorrhyncha have been recorded from the Kamchatka Peninsula, including 55 species of Cicadellidae, especially Deltocephalinae (38 spp.) and Typhlocybinae (9 spp.), and 20 species of Delphacidae. The genera are for the most part Palearctic or Holarctic. The deltocephaline genus *Macrosteles* is rich in its number of species, showing an aspect of the boreal fauna. The species of *Sonronius* Dorst, *Doliotettix* Oman (Cicadellidae) and *Javesella* Fennah (Delphacidae) also characterize the Kamchatkan fauna (Vilbaste 1980).

The auchenorrhynchan fauna of the Kuril Islands is less well known. Several species have been recorded from the North and Middle Kurils: Paramushir, Simushir, Urup, but studies have been concentrated on the South Kurils: Kunashir, Shikotan, Iturup, etc. (Anufriev 1970a, 1977).

The Natural History Museum and Institute, Chiba, made the Biological Expedition to the Kamchatka Peninsula and the North Kuril Islands in 1996 and 1997, as a part of a

project entitled “The Origin and Biogeography of the Northeast Asian Biota”, in cooperation with the Institute of Biology and Pedology and the Institute of Marine Biology of the Far Eastern Branch of the Russian Academy of Sciences, Vladivostok.

This paper presents an annotated list of the Auchenorrhyncha collected during the expedition; it comprised 19 species in the families Aphrophoridae (3 spp.), Cicadellidae (12 spp.) and Delphacidae (4 spp.). Seventeen species were collected from the Kamchatka Peninsula and five from the North Kuril Islands.

Specimens were collected by using sweep nets or a light trap, and was each mounted individually on paper-card points (triangles). These are deposited in the Natural History Museum and Institute, Chiba (CBM with a code of ZI).

List of collected species

Family Aphrophoridae

1. *Aphrophora major* Uhler, 1896

Material examined. Kamchatka Peninsula: 1 male, hot spring (riverside), Malka, 17. VII. 1996, light trap, R. B. Kuranishi leg.

Distribution. Russian Far East: Kamchatka (new record), Khabarovsk, Amur, Primorsky,

Sakhalin, South Kurils; Korea; China; Japan (Hokkaido, Honshu, Shikoku, Kyushu).

Remarks. This species has hitherto been known only in the southern part of the Far East (northeastward to South Sakhalin and Iturup, Kuril Islands) in Russia, and this is the first report of its occurrence in the Kamchatka Peninsula.

2. *Philaenus spumarius* (Linnaeus, 1758)

Material examined. **Kamchatka Peninsula:** 2 males 3 females, Bystraya River Basin (53°58' N 157°45' E; alt. 390 m), 30 km N of Ganaly, 30. VII. 1997, R. B. Kuranishi and A. Saito leg.; 1 male 1 female, Lagemaya Bay (52°55' N 158°41' E; alt. 10 m), 6 km SE of Petropavlovsk Kamchatskiy, 5. VIII. 1997, R. B. Kuranishi leg.

Distribution. Holarctic region.

3. *Neophilaenus sachalinensis* (Matsu mura, 1915), (Fig. 1)

Material examined. **Kamchatka Peninsula:** 1 female, 30 km SW of Milkovo (54°31' N

158°24' E; alt. ca 230 m), 8. VII. 1996, R. B. Kuranishi leg.; 1 female, Bystraya River Basin, 30 km N of Ganaly, 30. VII. 1997, A. Saito leg.; 2 males 2 females, Lagemaya Bay, 6 km SE from Petropavlovsk-Kamchatskiy, 5. VIII. 1997, R. B. Kuranishi leg.

Distribution. Russia (Kamchatka, Khabarovsk, Primorskj, Sakhalin, Kurils, Yakutsk); Korea; Mongolia.

Family Cicadellidae Subfamily Macropsinae

4. *Oncopsis flavicollis* (Linnaeus, 1761)

Material examined. **Kamchatka Peninsula:** 2 males, Tikhayia River (53°05' N 158°22' E; alt. 40 m), ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, A. Saito leg.

Distribution. Palearctic region. In the Russian Far East, this species is recorded from Kamchatka, Sakhalin and Primorskj, but not from the Kuril Islands.

5. *Oncopsis planiscuta* (Thomson, 1870)

Material examined. **Kamchatka Peninsula:**



Figs. 1–4. Some auchenorrhynchans from the Kamchatka Peninsula. 1, *Neophilaenus sachalinensis*, female (body length: 6.1 mm), in dorsal view; 2, *Sonronius dahlbomi*, male (body length: 4.7 mm), in obliquely dorsal view; 3, *Diplocolenus (Verdanus) evansi*, male (body length: 3.9 mm), in obliquely dorsal view; 4, *Hyledelphax elegantula*, male (body length: 2.5 mm), in obliquely dorsal view.

1 male, Tikhayia River, ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, T. Komai leg.; 1 female, Bystraya River Basin, 30 km N of Ganaly, 30. VII. 1997, A. Saito leg.; 1 female, Mt. Vachkazhets (53°04' N 157°55-56' E; alt. 550-730 m), upper part of Takhkoloch River Basin of Plotnikova, 3. VIII. 1997, A. Saito leg.

Distribution. Palearctic region. It has been known from Magadan, Khabarovsk, Primorskj, and the Kurils, and is hereby recorded from the Kamchatka Peninsula for the first time.

Remarks. *Oncopsis sardescens* Anufriev, 1967, described from the Kurils (Shikotan and Simushir) and Magadan is a junior synonym of this species (Anufriev 1970a). Anufriev (1967) suggested that its host is *Alnus maximowiczii* Call. of Betulaceae.

Subfamily Cicadellinae

6. *Evacanthus interruptus* (Linnaeus, 1758)

Material examined. **Kamchatka Peninsula:** 1 nymph, Bystraya River Basin, 30 km N of Ganaly, 30. VII. 1997, A. Saito leg. **North Kuril Islands:** 8 nymphs, Lake Bol'shoye (50°46' N 156°15' E, alt. 15 m), Shumshu I., 21. VII. 1997, A. Saito leg.; 6 nymphs, Shelekhovo (50°22' N 155°37' E, alt. 10 m), Paramushir I., 19. VII. 1997, A. Saito leg.; 6 nymphs, Shelekhovo Shimoyur River (50°22' N 155°37' E, alt. 0-100 m), Paramushir I., 17. VII. 1997, A. Saito leg.

Distribution. Palearctic region.

Subfamily Aphrodinae

7. *Stroggylocephalus agrestis* (Fallén, 1806)

Material examined. **Kamchatka Peninsula:** 1 female, Mt. Vachkazhets, upper part of Takhkoloch River, Basin of Plotnikova, 2. VIII. 1997, R. B. Kuranishi leg.

Distribution. Holarctic and Oriental regions; Russia, Korea, Japan, China, Mongolia, Southeast Asia, Europe, North Africa, North America. In the Russian Far East, this species has been recorded from Amur and Primorskj, and it is herein newly recorded from the Kamchatka Peninsula.

Subfamily Deltocephalinae

8. *Macrosteles alpinus* (Zetterstedt, 1828)

Material examined. **Kamchatka Peninsula:** 1 male, Poperechnaya River (53°23' N, 157°41' E, alt. 320 m), Bystraya River Basin, 17 km from main road, 27. VII. 1997 (light trap), R. B. Kuranishi leg.

Distribution. Holarctic region.

Remarks. Vilbaste (1980) stated that a variant of *M. fascifrons* (Stål) listed by Beirne (1956) is possibly equivalent to *M. alpinus* with a suggestion of synonymy of the two species. The specimen here examined, however, is very similar to *M. fascifrons* in the shape of the male genitalia illustrated by Anufriev and Emeljanov (1988).

9. *Sonronius binotatus* (J. Sahlberg, 1871)

Material examined. **Kamchatka Peninsula:** 1 male, Bystraya River Basin, 30 km north of Ganaly, 30. VII. 1997, A. Saito leg.

Distribution. Russian Far East: Kamchatka; Mongolia; Altai; Kazakhstan; Europe.

10. *Sonronius dahlbomi* (Zetterstedt, 1840) (Fig. 2)

Material examined. **Kamchatka Peninsula:** 2 males, Nagomyi (53°07' N, 158°31' E), near Petropavlovsk-Kamchatskiy, 10. VII. 1997, A. Saito leg.

Distribution. Holarctic region. This leafhopper has hitherto been known only in the Kamchatka Peninsula and Sakhalin in the Russian Far East.

11. *Doliotettix lunulatus* (Zetterstedt, 1840)

Material examined. **Kamchatka Peninsula:** 2 males, Ebet Mountains (south part) (upper part of Radg River, 56°30' N, 162°00' E, alt. 150 m, sweeping), 42 km NW of Ust Kamchatsk, 11. VII. 1996, R. B. Kuranishi leg.

Distribution. Palearctic region: Russian Far East (Kamchatka and Primorskj), Siberia, Altai, China, central and northern Europe.

12. *Speudotettix subfuscus* (Fallén, 1806)

Material examined. **Kamchatka Peninsula:** 1 female, Tikhayia River, ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, A. Saito leg.

Distribution. Palearctic region. In eastern Eurasia, the range of this species is spread over the Russian Far East (Kamchatka, Primorskj, Kurils), Japan, Korea, China and Mongolia.

13. *Diplocolenus (Verdanus) evansi*
(Ashmead, 1904)
(Fig. 3)

Material examined. **Kamchatka Peninsula:** 1 male, Bystraya River Basin, 30 km N of Ganaly, 30. VII. 1997, A. Saito leg. **North Kuril Islands:** 1 male, 1 female, Lake Bol'shoye, Shumshu I., 21. VII. 1997, A. Saito and R. B. Kuranishi leg.

Distribution. Canada, Alaska, Russia (Kamchatka, Koryak, Magadan, Kuril Islands, Yakutia) and Japan (Hokkaido).

Remarks. This leafhopper had been known only from the Nearctic region (Alaska and Canada) (Beirne, 1956) until its occurrence in the Kamchatka Peninsula was recognized by Vilbaste (1965). This species is presumably a Nearctic species which has spread westward to northeastern Eurasia via the Beringia.

Subfamily Typhlocybinae

14. *Kybos betulicola* (Wagner, 1955)

Material examined. **Kamchatka Peninsula:** 1 male, Bystraya River Basin, 30 km north of Ganaly, 30. VII. 1997, A. Saito leg.

Distribution. Palearctic region; Russian Far East (Kamchatka, Magadan), Mongolia westward to Europe.

15. *Edwardsiana menzbieri* Zachvatkin,
1948

Material examined. **North Kuril Islands:** 4 males, Matrosskaya River, near Severo-Kuril'sk, Paramushir I., 11. VII. 1997, R. B. Kuranishi leg.

Distribution. Palearctic region. In eastern Eurasia, this typhlocybinae has been recorded

from the Russian Far East (Khabarovsk, Amur, Primorskj, Sakhalin and S. Kurils), Japan (Hokkaido), Mongolia and Altai, and is herein recorded from the North Kurils (Paramushir).

Remarks. The branching apical processes of the aedeagal shaft in the male genitalia show infraspecific variation in length and direction.

Family Delphacidae

16. *Criomorphus wilhelmi* Anufriev and
Averkin, 1982

Material examined. **Kamchatka Peninsula:** 3 males, Tikhayia River, ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, A. Saito leg.

Distribution. Russia: Kamchatka, Magadan, Khabarovsk, Amur, Primorskj, South Kurils, Yakutia, etc.; Japan (Hokkaido); Mongolia.

Remarks. The genus *Criomorphus* Curtis is characterized by a pair of central carinae on the frons that are not fused up to the apex. Anufriev and Averkin (1982) reviewed the genus and described three new species. The occurrence of this species in eastern Hokkaido, Japan, was recently recorded by Hayashi (1999).

17. *Hyledelphax elegantula* (Boheman, 1847)
(Fig. 4)

Material examined. **Kamchatka Peninsula:** 2 males 1 female, Tikhayia River, ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, A. Saito leg.

Distribution. Palearctic region; northern Eurasia and North Africa. In the Russian Far East, the range of this species is the Kamchatka, Magadan and Khabarovsk Territories.

Remarks. The monotypic genus *Hyledelphax* Vilbaste is peculiar in the shape of the male genitalia: the style bears a distinct protrusion on the ventral side near the base.

18. *Javesella pellucida* (Fabricius, 1794)

Material examined. **Kamchatka Peninsula:** 1 male 1 female, Tikhayia River, ca 30 km from Petropavlovsk-Kamchatskiy, 9. VII. 1997, A. Saito leg. **North Kuril Islands:** 1

male, Lake Bol'shoye, Shumshu I., 22. VII. 1997, R. B. Kuranishi leg.

Distribution. Palearctic region. The distributional range in the Russian Far East extends to Kamchatka, Magadan, Khabarovsk, Primorsk, southern Sakhalin and the Kuril Islands.

19. *Javesella* sp.

Material examined. North Kuril Islands: 4 females, Lake Bol'shoye, Shumshu I., 22. VII. 1997, R. B. Kuranishi leg.

Remarks. Since no male specimens are available, this planthopper could not be identified to the species level; in addition to *J. pellucida*, five species of *Javesella* have been recorded from the Kamchatka Peninsula.

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カムチャッカ半島および北千島で採集された頸吻類 (同翅目)

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1996 年と 1997 年に、カムチャッカ半島と北千島で千葉県立中央博物館とロシア科学アカデミーの生物学共同調査が行われ、スーピング法とライトトラップ法により 3 科 19 種の頸吻類 (同翅目) が採集された。これらの内訳は、アワフキムシ科 3 種、ヨコバイ科 12 種、ウンカ科 4 種である。また、カムチャッカ半島から得られたものは 17 種、北千島からは 5 種で、従って、両地域から共通して確認されたものは 3 種であった。ここにそれら 19 種のリストを挙げ、一部については分布地理上あるいは分類学上のコメントを付した。なお、確認されたもののうち、モンキアワフキ *Aphrophora major* Uhler (アワフキムシ科 Aphrophoridae), *Oncopsis planiscuta* (Thomson) (ヨコバイ科ヒロズヨコバイ亜科 Cicadellidae-Macropsinae), イネヒラタヨコバイ *Stroggylocephalus agrestis* (Fallén) (ヨコバイ科ヒラタヨコバイ亜科 Cicadellidae-Aphrodinae), *Edwardsiana menzbieri* Zachvatkin (ヨコバイ科ヒメヨコバイ亜科 Cicadellidae-Typhlocybinae) の 3 種はこれらの地域からは新記録である。