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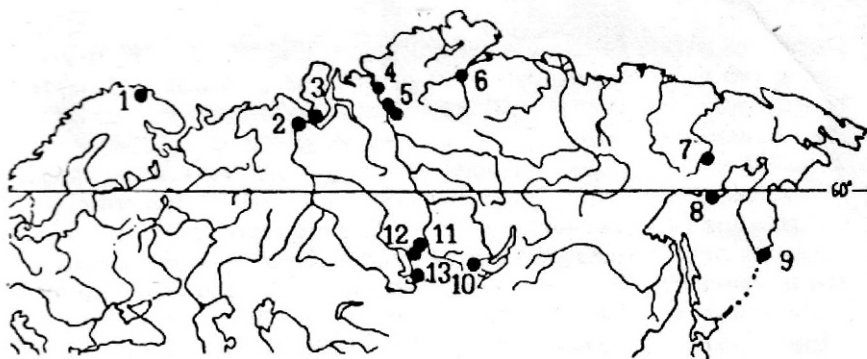
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**NEW DISTRIBUTION RECORDS OF *SOMATOCHLORA*
SAHLBERGI TRYBOM (ODONATA, CORDULIIDAE)**

Abstract. Kosterin O., 1992. New distribution records of *Somatochlora sahlbergi* Trybom (Odonata, Corduliidae). — Acta hydroentomol. latvica, 2: 22—26.

The rare circumboreal dragonfly *Somatochlora sahlbergi* hitherto has been found mostly north from the 60th parallel, and in the mountains of Southern Siberia. Three new localities are now recorded: the Kuraiskiy mountain range of the SE Altai, the East Manyi mountain massif of the NE Altai, and the Koni Peninsula, South Magadan region. Notes on ecology are added.

The rare circumboreal dragonfly *Somatochlora sahlbergi* Trybom was described from the lower reaches of the Yenisey [Енисей] river (Plakhino [Плахино] and Dudinka [Дудинка] villages) [Белышев, Оводов, 1961; Белышев, 1973]. Later it was found in a number of distant localities situated mostly north from the 60th parallel, in northern taiga and forest-tundra zones. They are, namely, former North Finland (Petsamfjord — recently Petchenga [Печенга], Murmansk region [Valle, 1931]; Polar Ural (surroundings of the settlement Labytnangi [Лабытнанги]) [Харитонов, 1975]; peninsulas Yamal [Ямал] (the Tanlovaya [Танловая] river) [Белышев, Коршунов, 1976]; Gydan [Гыдан], and Taymyr [Таймыр] [Белышев, Харитонов, 1981]; the middle flow of the Kolyma [Колыма] river (Verkhniy Seymchan [Верхний Сеймчан] town) [Белышев и др.,



The map of the sites where *Somatochlora sahlbergi* Trybom has been collected in Euroasia:

1 — Petsamfjord (Petchenga); 2 — Polar Ural, Labytnangi; 3 — Yamal, the Tanlovaya river; 4, 5 — the low Yenisey, Plakhino and Dudinka; 6 — Taymyr, Khatanga; 7 — the Kolyma river, Verkhniy Seymchan; 8 — Magadan region, the Koni Peninsula; 9 — Kamchatka, the Pauzhetka river; 10 — South Pribaykalye, Tunkin Valley; 11 — West Saian, Abaza; 12 — East Manyi; 13 — Altai, Kuraiskiy mountain range

1978]; Kamchatka (the Pauzhetka [Паужетка] river) [Белышев, Харитонов, 1981]; Alaska (the Kuskokwim river); North-West Canada (the mouth of the MacKensie river) [Белышев, Оводов, 1961; Белышев, 1973; Белышев, Харитонов, 1981]. In the North-West Siberia (Polar Ural, Yamal, Gydan) this species appeared to be abundant [Белышев, Харитонов, 1975].

In 1960 *S. sahlbergi* was unexpectedly collected in South Pribaykalye [Южное Прибайкалье], namely, in the Tunkin Valley [Тункинская долина] near Turan [Туран] village (200 km WSW from Irkutsk city, 18 km from the frontier of Mongolia) at a latitude of 52° [Белышев, Оводов, 1961]. Considering this finding B. Belyshev supposed the species to inhabit a vast territory of Siberian taiga expanding as far as the mountains of South Siberia. However, in his later work [Белышев, 1971] he regarded the Tunkin population as a glacial relict, and even described the only male specimen obtained as a new subspecies *S. sahlbergi relictus* Belyshev, differing from the typical one by the shortage of the yellow basal coloration of the wings and by the lighter colour of the hairs covering the anal appendages. Nevertheless, this subspecies was not mentioned in his monograph "Dragonflies of Siberia", where the supposition of a broad Siberian areal of the species was repeated.

This supposition appeared to be true as *S. sahlbergi* was found in the mountains of South Siberia in two other places: in the Kuraiskiy mountain range [Курайский хребет] of the Altai (25 km NNW from Aktash [Акташ] village [Костерин, 1989], and in the West Saian [Западный Саян] (surroundings of Abaza [Абазы] town, 150 km SW from Abakan [Абакан] city, 270 km NNE from the previous site) [Харитонов, 1990, and a personal communication by I. Haritonova].

In July 1989 the fourth southern locality was added: a male of the species was caught by Gleb Kamalutdinov (to whom I express my gratitude for his collection) in the mountain massif of the East Manyi [Восточный Маный] situated by the middle flow of the Bolshoy Abakan [Большой Абакан] river (Tashtyb district, Krasnoyarsk region [Таштыбский район, Красноярский край]) that is at the joint of the Altai and the West Saian.

Another acquisition can be also added to the northern findings: a male of *S. sahlbergi* was collected by me on July 12, 1989 in the Koni Peninsula [Кони] Magadan region, Ola district [Магаданская область, Ольский район] (Ola section of the reserve "Magadanskiy" [Ольский участок заповедника "Магаданский"]).

The biology of the species was described by K.J. Valle [1931] for North Finland and by A. Haritonov [Харитонов, 1975] for Polar Ural. In Finland the species has been seen in the vicinity of a sphagnum moor surrounded by fjell slopes covered with subarctic birch elfin wood, at the upper boundary of the subarctic belt. Imagines were observed flying along the edges of woods and brooks, whereas larvae were found in a big hollow in the moor, and also in tiny spring-fed pools situated at the edge of the moor.

In the surroundings of Labytnangi (the lower reaches of the Ob river and adjacent regions of Polar Ural) larvae were found in small (8—20 m in diameter) but rather deep (not less than 0.5 m) semi-current reservoirs in flood-land forests, forest-tundra, and, if situated in relief depressions, in open tundra. The presence of moss or sedge was necessary for larvae to occur in a reservoir. Usually they prefer to keep to densely growing *Comarum palustre* L. In 1973 imagines were observed from June 14 to August 27. They were active only by windless weather and flew far away from reservoirs in which they developed.

In Kamchatka these scarce dragonflies appear to live in little (2—3 m) but deep and cold pools situated at the terraces of the Pauzhetka river, which are covered with alternating meadows, heath, Siberian dwarf-pine (*Pinus pumila* (Pall.) Regel) elfin wood and stone birch (*Betula ermani* Cham.) groves [A. Haritonov, personal communication].

In the Koni Peninsula *S. sahlbergi* was found in the environment much resembling the above-mentioned. Although this mountainous peninsula is

situated at 59° n. l., the influence of the Sea of Okhotsk makes the climate severe so that tundra goes down to the coast, and river valleys at low altitudes exhibit forest-tundra landscapes. The forests are narrow belts of *Chosenia arbutifolia* (Pall.) A. Skvortz. and *Populus suaveolens* Fisch. alongside rivers, and small massives of *Betula ermani* on southern hillsides. The majority of hillsides are covered with dwarf-pine (*Pinus pumila*) elfin wood, while thinned out bushes of dwarf-pine (4—5 m high) and shrubby alder (*Alnus fruticosa* Rupr.), meadows (with a big share of tundra-specific species in the plant species compound) alternate in valley bottoms. It was such a bottom of the valley of the Burgauli [Бупраули] river, at altitude of 200 m above sea level and 10 km north from the coast of the Sea of Okhotsk, where a male of *S. sahlbergi* was found flying above a clearing, that was crossed by a slowly flowing brook about 1—2 m wide (this male had been frightened off this site, and then it appeared again after several minutes, so there was apparently its individual territory). Another individual, probably female, was observed (but not caught) flying just above the surface of the brook beneath bushes. As there were no stagnant reservoirs detected, these dragonflies developed probably in such brooks or in the branches of the Burgauli. It should be noted that these were the only dragonflies in the peninsula which we met in a month.

It would be very interesting to know what kinds of environment this northern species inhabits in lower latitudes, but this, however, is a matter of further investigations, since the data obtained are too fragmentary. In Tunkin valley *S. sahlbergi* was found in the altitude of about 800 m above sea-level, at semi-current reservoir in a river-side spruce forest in an island of the Irkut [Иркут] river. In the Saians it was observed in the subalpine plainy top surfaces of mountains at an average altitude of about 1500 m in the surroundings of Abaza [I. Haritonova, personal communication], and in subalpine stone-pine (*Pinus sibirica* (Rupr.) Mayr) parkland at a height of 1700 m in the East Manyi. In the East Altai the species was found in boggy mountain tundra at a height of 2000 m. Thus, *S. sahlbergi* in the southern part of its areal tends to inhabit alpine regions environmentally resembling those of high latitudes, although it is not so in the case of Tunkin locality.

It is quite possible that previously named species with such a vast areal could be diversified into some subspecies; the data, however, are insufficient in this respect. On the other hand, *S. sahlbergi relict*a could hardly appear to be a real subspecies.

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