Amauronematus compactus Bogacheva and *A. harpicola* Bogacheva (Hymenoptera, Tenthredinidae) from the Polar Urals

Aleksej G. Zinovjev & Stefan Schmidt

Zinovjev, A. G. & Schmidt, S. 1994: *Amauronematus compactus* Bogacheva and *A. harpicola* Bogacheva (Hymenoptera, Tenthredinidae) from the Polar Urals. — Entomol. Fennica 5:135–138.

In a list of sawflies from the Polar Urals, I. A. Bogacheva briefly described and named the larvae of two *Amauronematus* species attributed to Zhelokhovtsev. Reared specimens with Zhelokhovtsev's identification labels can be considered syntypes. Lectotypes of *Amauronematus compactus* Bogacheva, 1977 and *A. harpicola* Bogacheva, 1977 are designated and described.

Aleksej G. Zinovjev, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg, 199034 Russia
Stefan Schmidt, Zoological Institute and Zoological Museum, University of Hamburg, Martin-Luther-King-Platz 3, D-20146 Hamburg, Germany

Received 16 November 1993, accepted 30 July 1994

From 1970 to 1974 several sawfly species were collected and reared by I. A. Bogacheva at a biological field station in the northern Ob river region, Polar Urals. The material was sent to Prof. A. N. Zhelokhovtsev for identification. He found two new species, labelled them *Amauronematus harpicola* Zhel., sp. n., and *Amauronematus compactus* Zhel., sp. n., but did not publish any descriptions. No manuscript referring to these species could be found by A. Zinovjev after Zhelokhovtsev's death.

In 1977 I. A. Bogacheva published a list of sawfly species collected from Polar Urals. She mentioned *A. harpicola* and *A. compactus* with very brief descriptions of their larvae. According to the International Code of Zoological Nomenclature these names are available with Bogacheva as author.

Some reared specimens identified by Zhelokhovtsev were found in the collections of the Zoological Museum of Moscow State University and in the Institute of Plant and Animal Ecology in Yekaterinburg (previously Sverdlovsk). These specimens are certainly syntypes. We now designate lectotypes of *Amauronematus harpicola* Bogacheva and *A. compactus* Bogacheva, and describe them in this paper. We do not discuss the taxonomical positions of these species, because it would need a revision of some *Amauronematus* species groups, and some types of species described by E. Lindqvist are not yet examined.

The number of syntypes listed below does not correspond to the number of specimens mentioned by Bogacheva. Evidently she listed only specimens kept in Yekaterinburg, and that collection is partly destroyed by dermestid beetles. We regard the reared specimens from both museums (Yekaterinburg and Moscow) as syntypes.

The following abbreviations are used: ZMMU = Zoological Museum of the Moscow State University, Moscow; ZISP = Zoological Institute, Russian Academy of Sciences, St. Petersburg; IPAE = Institute of Plant and Animal Ecology, Yekaterinburg (previously Sverdlovsk).

Measurements were made as described in Vikberg (1965) with one exception: the length of the hind femur includes the trochantellus.

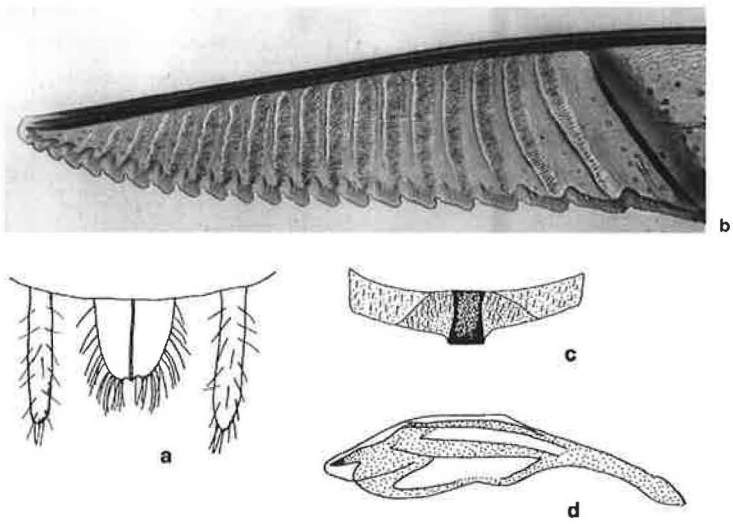

Fig. 1. *Amauronematus compactus*. a: Sawsheath in dorsal view, b: lamnium, c: eighth tergite of male, d: penis valve.

Amauronematus compactus Bogacheva, 1977

Figs. 1a–d

Amauronematus compactus Bogacheva, 1977:87–88: "*Amauronematus compactus* sp. n. Kharp [name of the station], 4 ♀♀. This species was reared from larvae collected on willows in late July of 1971. In early July of 1972 some adults were collected. Ground colour pale green with pale stripes above and laterally. Head nut-brown with a pale Y-like pattern. Last instar larvae with head and body concolorous, dirty green. During the first half of August the larvae prepare hard brown cocoons in litter between leaves." (translation).

Types: Lectotype: ♀, here designated, Russia, Polar Urals, Kharp biological station: "Из садка Г [= from the rearing box G]. 1971. Харп", "*Nematus (Amauronematus) compactus* n. sp. ♀ A. Zhelochovtsev det. 1973 Paratyp.", "pr. AZ. 353" (deposited in ZMMU). — Paralectotypes (2 females, 1 male): Polar Urals: ♂, "Харп 6.XII.71", "6.XII.1971 г.[=year] вывелся пилильщик из садка О" [=sawfly reared from the rearing box O], "*Nematus (Amauronematus) compactus* sp. n. ♂ A. Zhelochovtsev det. 1973 Allotyp." (deposited in ZMMU); ♀, "Харп 13.XII.71", "Садок Г, вывелся 13.XII." [=rearing box G, reared 13.xii.] (saw examined), "*Nematus (Amauronematus) compactus sp.* n. ♀ A. Zhelochovtsev det. 1973 Holotyp." (deposited in IPAE); ♀ "Харп" 13.XII.71", "Садок Г, вывелся 13.XII." [=rearing box G, reared 13.xii.] (saw examined, without determination label of Zhelokhovtsev, but the label with the collecting data is very similar to that of the previous specimen, therefore we consider it as a syntype, deposited in ZISP).

Description

Female (lectotype): Head black except following infuscate parts: temples, outer, lower and part of inner orbits, lower part of clypeus, labrum except base, mandibles except dark spot at base and middle parts, mostly rest of mouthparts. Clypeus clearly excised in the middle. Frons with rugous surface sculpture. Frontal area defined with depression below front ocellus. Frontal wall of frontal area notched in the middle. Postocellar area clearly defined and margined behind. Head almost parallel-sided behind eyes. Mouthparts elongated. Thorax predominantly black. Edge of pronotum reddish-brown. Tegulae black, partly pale in front. Mesonotum with fine surface sculpture. Hind and outer margin of front lobes, more or less inner margins of sides lobes, and the margin near the depressed part of the mesonotum infuscate. Medial furrow clearly defined. Mesepisternum reddish-brown, dull with coriaceous sculpture. Mesosternum black. Mesepimeron and scutellum black with fine surface sculpture. Postscutellum rugously sculptured. Metascutellum with fine transverse sculpture. Wings yellowish-hyaline. Stigma and costa yellow, rest of venation more or less brown. Coxae at apex and laterally pale. Femora infuscate, black-marked on lower side. Abdomen black above. Eighth tergite behind and ninth tergite entirely infuscate. Underside black except following infuscate parts: apical margins of sternites, hypopygium and part of sawsheath. Sawsheath in dorsal view slightly tapering behind, where it is bluntly rounded with a small medial projection at apex (Fig. 1a). Setae slightly curved. Cerci infuscate. Saw Fig. 1b. Length 7.6 mm. Ratio third/fourth antennal segment 1.04, head height/width 0.79, minimal/maxi-

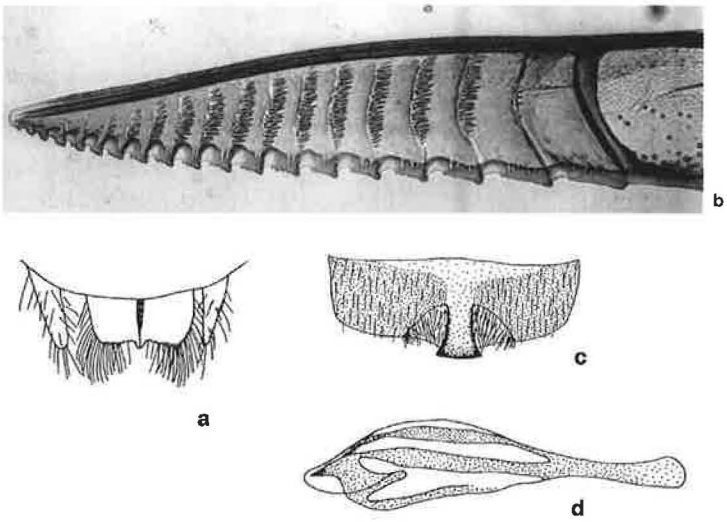

Fig. 2. *Amauronematus harpicola*. a: Sawsheath in dorsal view, b: lamnium, c: eighth tergite of male, d: penis valve.

mal eye diameter 0.65, sawsheath + basal plate / hind femur 0.72, inner hind tibial spur / hind basitarsus 0.68. Saw: Lamnium length 1.20 mm, ratio lamnium width / length 0.29, radix/lamnium 0.37.

Male: Head black except brown temporal spot and brown outer orbits, slightly shining with fine surface sculpture. Thorax black except outermost edge of pronotum and postspiracular sclerite, which are brown. Mesonotum with fine surface sculpture, almost dull. Legs yellow. Coxae and trochanters mainly, femora partly, black. Abdomen black, with part of eighth tergite, hypopygium, part of sternites, and lateral part of apical margins of tergites brown. Projection of eighth tergite Fig. 1c. Penis valve Fig. 1d.

Variation (in females): Head behind eyes parallel or contracted. The depression in front of the front ocellus can be very shallow. Pronotum largely brown with black flecks or almost completely black with only the hind edges brown. Tegulae black or brown. Length 7.6–8.8 mm. Ratio third/fourth antennal segment 1.00–1.03, head height/width 0.75–0.79, minimal/maximal eye diameter 0.65–0.66, scutellum (without postertergite) length/width 0.73–0.76, sawsheath + basal plate / hind femur 0.72–0.79, inner hind tibial spur / hind basitarsus 0.41–0.68. Lamnium length 1.20–1.27 mm, ratio lamnium width / length 0.25–0.29, radix/lamnium 0.34–0.37.

We located altogether 4 ♀♀ and 1 ♂ in the collections in Moscow and Yekaterinburg. One female was labelled by Zhelokhovtsev as a paratype, but it was captured in 1972, and was not reared from larvae. Hence we do not regard this specimen as a syntype. Moreover it may turn out to be a different species because of the darker colouration of its hind femora. The other specimens (3 ♀♀, 1 ♂) are syntypes and we designated the specimen in best condition as lectotype (it was originally labelled by Zhelokhovtsev as paratype). It will be deposited in the collection of the Zoological Museum of Moscow State University in Moscow.

Amauronematus harpicola Bogacheva, 1977

Fig. 2a–d

Amauronematus harpicola Bogacheva, 1977:87: "*Amauronematus harpicola* sp. n. "Kharp" [name of the station], 3 ♂ 7 ♀. Very common species in the surroundings of the station. It was reared from larvae collected on willows. After the second moulting the colouration of the larva is typical for this species: ground colour pale green with longitudinal pale dorsal and lateral stripes. There is another type of larvae with pink ground colour and similar stripes. It is about 50 times less common than the main type (11 of 530 specimens). The larvae prefer *Salix lanata,* less often they were found on S. *pulchra* and *S. glauca* and very seldomly on S. *phylicifolia.* The species was named by A. N. Zhelokhovtsev after the name of the station." (translation).

Types: Lectotype: ♀, here designated, Russia, Polar Urals, Kharp biological station: "Из 100 личинок на зараженность" [=from 100 larvae to study parasitation], Харп", "*Nematus (Amauronematus) harpicola* sp. n. A. Zhelochovtsev det. 1973 Paratyp.", "pr. AZ 354" (deposited in ZMMU).

Paralectotypes (1 female, 2 males): ♂, "Из 100 личинок на зараженность" [=from 100 larvae to study parasitation], Харп", *"Nematus (Amauronematus) harpicola* sp. n. A. Zhelochovtsev det. 1973 Paratyp." (deposited in ZISP); ♂, "Из 100 личинок на зараженность" [=from 100 larvae to study parasitation] (penis valve examined)", *"Nematus (Amauronematus) harpicola* sp. n. ♂ A. Zhelochovtsev det. 1973 Allotyp." (deposited in ZMMU); ♀, "6.III.72 на зараженность" [=to study parasitation] (saw examined), *"Nematus (Amauronematus) harpicola* sp. n. ♀ A. Zhelochovtsev det. 1973 Holotyp." (deposited in IPAE).

Additional material examined: 1 ♀, "Харп 9.XII.71", "из садка P, вывелся 9.XII." [=reared from the rearing box R, reared 9.XII.] (deposited in ZISP).

Description

Female: Head black, except yellow temporal spot, outer orbits, mandibles and clypeus. Basal part of clypeus and mandibles at base and apex brown. Antenna black. Upper head with grey setae about as long as an ocellus, with coriaceous sculpture. Frontal area scarcely defined, with medial longitudinal furrow clearly developed. Head clearly contracted behind eyes. Mouthparts elongated. Thorax almost entirely black, except for yellowish-white edge of pronotum, tegulae, postspiracular sclerite, and small spot near upper margin of mesepisternum. Front lobes of mesonotum with fine coriaceous sculpture. Medial furrow distinct but obsolescent behind. Side lobes more shining. Mesopleura with coriaceous sculpture, mesosternum more shining. Whole mesepimeron with fine coriaceous sculpture. Scutellum convex with fine transverse sculpture and with longitudinal depression posteriorly. Post-tergite with coriaceous sculpture between coarse punctures. Metascutellum shining, in the middle with coriaceous surface sculpture. Wings yellowish-hyaline, venation infuscate. Costa of fore wing and stigma yellow, except hind infuscate margin. Coxae black, except apex and inner parts. Front and middle femora largely, hind femora almost entirely black. Trochanter, trochantellus, knee and tibia yellow. Hind tarsi more or less infuscate. Abdomen mostly black, with apical margins of second to seventh tergite more or less pale. Eighth tergite laterally, ninth and tenth tergite, and sawsheath almost entirely pale. Underside of abdomen dark brown, apart from infuscate neighborhood of sawsheath. Sawsheath in dorsal view almost parallel-sided, truncate at apex with medial projection (Fig. 2a) and curved setae. Cerci pale, reaching about as far back as apex of sawsheath in dorsal view. Saw Fig. 2b. Length 7.6 mm. Ratio antenna/costa 0.87, third/fourth antennal segment 1.04, head height/width 0.75, minimal/maximal eye diameter 0.68, scutellum (without post-tergite) length/width 0.82, sawsheath / hind femur 0.88, inner hind tibial spur / hind basitarsus 0.46. Lamnium length 1.03 mm, lamnium width / length 0.26, radix/lamnium 0.38.

Male: As female, but with the following differences: Head including antenna piceous, rugously sculptured, shining. Thorax entirely piceous. Scutellum convex with fine longitudinal sculpture. Post-tergite with rugous sculpture. Metascutellum with fine transverse surface sculpture. Wings yellowish-hyaline. Venation infuscate except base of costa. Stigma yellow with infuscate margin. Coxae black except apex and inner parts. Coxa, trochanter and femora, except at apex, dark. Tibia pale. Hind tibia at apex, and tarsi more or less infuscate. Abdomen almost entirely black, with projection of eighth tergite, genitalia and hypopygium brownish. Projection of eighth tergite Fig. 2c. Penis valve Fig. 2d.

Variation (in females): Coarse punctures of postscutellum sometimes obsolete. Dark colouration of femora varying, front femora sometimes mostly yellow. Length 6.2–7.8 mm. Ratio antenna/costa 0.87–0.95, head height/width 0.75–0.78, minimal/maximal eye diameter 0.63–0.75, scutellum (without post-tergite) length/width 0.69–0.82, sawsheath / hind femur 0.79–0.88, inner hind tibial spur / hind basitarsus 0.40–0.46. Lamnium length 0.93–1.03 mm, ratio lamnium width / length 0.25–0.26, radix/lamnium 0.38–0.39.

Acknowledgements. We sincerely thank Dr A. Antropov (Zoological Museum of Moscow State University, Moscow) and Dr V. N. Olshwang, (Institute of Plant and Animal Ecology Yekaterinburg) for loan of the material. Dr D. Vinyard kindly checked the English.

References

Bogacheva, I. A. (Богачева, И. А.) 1977: [Sawflies (Hymenoptera: Tenthredinidae) and their role in the biogeocoenoses in the northern Ob river region.] (In Russian). — In: Danilov, N. N. (ed.), [The biocoenotical significance of animals in the forest tundra of Yamal]. Trudy Inst. Ecol. Plants Animals Sverdlovsk 106:85–103.

Vikberg, V. 1965: Pontania nudipectus sp. n. (Hymenoptera: Tenthredinidae), a new leafroller from Eastern Fennoscandia. — Ann. Entomol. Fennici 31:53–60.