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NOTES ON DICRANUM (DICRANACEAE, MUSCI) IN RUSSIA.1. DICRANUM NIPPONENSE FOUNDIN FAR EAST

ЗАМЕТКИ ПО РОДУ DICRANUM (DICRANACEAE,MUSCI) В РОССИИ.1. DICRANUM NIPPONENSE НАЙДЕН НА ДАЛЬНЕМ ВОСТОКЕ

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Abstract

Dicranum nipponense is reported for the first time for Russia,in Primorsky Territory and Kunashir Island of Kuril Islands.This species was known before from Japan,Korea and Taiwan.Its differencies from *D. scoparium* and *D. bonjeanii* are disscussed.

Abstract

Dicranum nipponense приводится впервые для России,в Приморском крае и на Курильских островах (о.Кунашир).До этого данный вид был известен из Японии,Кореи и с Тайваня. Обсуждаются отличия *D. nipponense* от *D. scoparium* и *D. bonjeanii*.

As a result of a study of *Dicranum* species growing in Russia *Dicranum nipponense* Besch. has been found in collections, previously referred to *D. bonjeanii* DeNot.and *D. scoparium* Hedw., from Russian Far East in IRK.Firstly,L.Bardunov has re-idendified one specimen of *Dicranum bonjeanii* from Ussuriskii Reserve as *D. nipponense*, but has never published his result. I found *D. nipponense* in several more localities in Primorskij Territory: Ussuriiskij reserve (3 localities), Lazovskij Reserve, "Kedrovaya Pad" Reserve, and in Kunashir Island (Kuril Islands).

Dicranum nipponense Besch. Fig. 1

Plants in compact, green to yellowish-green tufts. Stems 2-5 cm long, unevenly foliate with leaves more crowded at shoot tip. Leaves falcate or appressed with upper leaves falcate when dry, lanceolate, lower leaves ca. 3 mm long, upper leaves up to 7 mm, broadest just above the base, narrowed to a broad, keeled subula, acute or narrowly acute at the apex; margins strongly dentate in the upper 1/3 part, subentire below; costa usually ending just below the apex or rarely shortly excurrent, comparatively weak, with 2-3 serrate ridges at back in the upper half. Laminal cells smooth throughout, with very porose walls; upper cells narrowly rectangular or linear-rhomboidal, (21)49-63(92) μm long and 12-14 μm wide; median laminal cells rectangular,(35)49-84(112) μm long and 13-15 μm wide; lower cells linear,(42)84-140 μm long and 15-17 μm wide, very often becaming shorter and wider towards the margins,50-71(84) μm long and 18-23 μm wide; alar cells brown,rectangular,28-42 μm wide and 49-56(71) μm long. Dioicous or phyllodioicous. Sporophyte solitary.Inner perichaetial leaves convolute-sheating,the innermost the largest,to 10 mm long, from the wide-oblong base abruptly narrowed to a rather short and entire subula, the outer perichaetial leaves short, with a comparatively long and serrate subula. Seta 2-4 cm long. Capsule cylindric, 3-4 mm long, about 1 mm in diam., brown, nearly symmetric, inclined, with a tapering neck, scarcely furrowed or not furrowed when dry.Spores 16-20 μm.Normal male plants somewhat more slender than the females. Dwarf male plants 0.5-1.5 mm long; antheridia few.

This species occurs mainly on rotten wood and rarely on trunk of tree.

According to Takaki (1964) *D. nipponense* is somewhat variable in leaf-shape and the serration of leaf-margins; Noguchi (1986) indicates that this species is variable in size.

Dicranum nipponense can be distinguished from the other allied species of *Dicranum* in stem unevenly foliate with crowded leaves, falcate, lanceolate, broadest just above the base and keeled above with a broad and dentate point,

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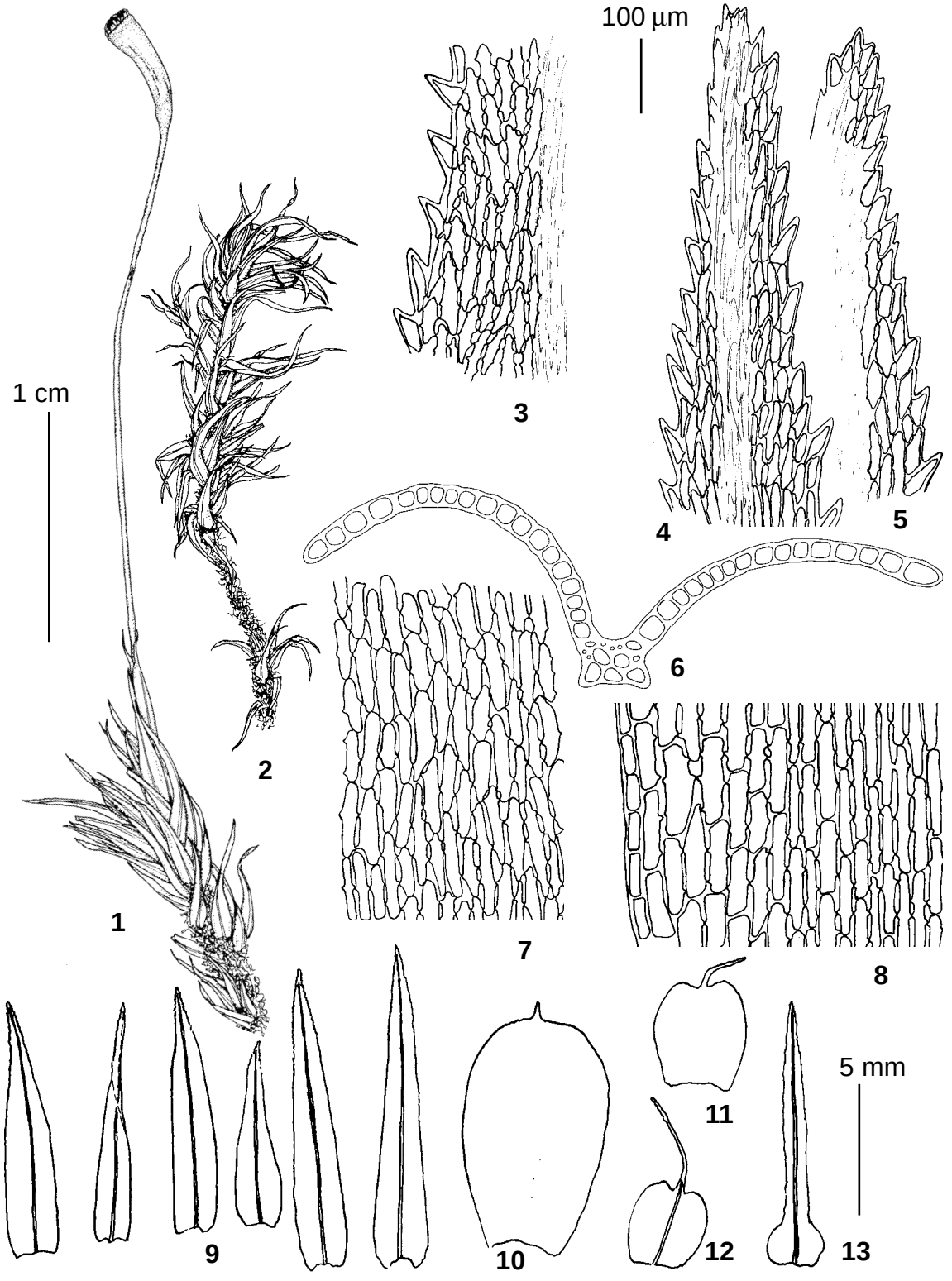

Fig. 1. *Dicranum nipponense* Besch. (from Lasovskij Reserve, 20.IX.1974, Bardunov & Czerdantseva, IRK) 1-2 – habit; 3-5 – upper laminal cells; 6 – leaf transverse section; 7 – lower leaf cells; 8 – basal leaf cells; 9 – stem leaves; 10 – inner perichaetial leaf; 11-13 – outer perichaetial leaves. Scale bars: 1 cm for 1-2; 5 mm for 9-13; 100 µm for 3-8.

Table 1. Comparison of *Dicranum nipponense*, *D. scoparium* and *D. bonjeanii*

Character	*Dicranum nipponense*	*Dicranum scoparium*	*Dicranum bonjeanii*
Plants	rigid, densely tomentose, leaves ±crowded above	soft or rigid, densely or scarcely tomentose, leaves ±crowded above or not	soft, scarcely tomentose, not crowded above
Leaves	3-7 mm long, 0.7-0.9 mm wide, falcate-secund, rarely appressed, lanceolate, widest just above the base, plane below, strongly keeled above	6-10 mm long, 0.7-1.1 mm wide, falcate-secund or straight and erect-spreading, oblong- or ovate-lanceolate, widest at ca. 1/3 of leaf length, concave below keeled or subtubulose above	4-6 mm long and 1.0-1.4 mm wide, erect, sometimes undulate, ovate-lanceolate, widest at ca. 1/3 of leaf length, concave below, keeled above
Number of cell rows from margin to costa	15-25	25-45	45-55
Upper leaf	short, broadely acute, margins usually strongly dentate	short to long acute or obtuse, margins dentate to slightly serrulate	short, broadely acute, margins serrate to bluntly serrulate or entire
Upper leaf cells	long- or short-rectangular to hexagonal-rectangular, (21)49-63(92) µm long, 12-14 µm wide, with straight cell walls, porose or unclearly porose	long- to short-hexagonal or long-to short-rectangular, 21-71 µm long and 8-10 µm wide, somewhat flexuosus, not or somewhat porose	short- to long-elliptical, 35-49(63) µm long, (8)10-12(14) µm wide, flexuosus, not porose to porose
Median leaf cells	regular, elongate-rectangular, large, (35)49-84(112) µm long and 13-15 µm wide, with straight cell walls, strongly porose	irregular, elongate-hexagonal to short- rectangular, 21-56(74) µm long and 7-10 µm wide, flexuosus, porose to non porose	elongate-elliptical, (35)42-56(71)µm long and 9-12(14) µm wide, flexuosus, porose
Lower leaf cells	elongate-rectangular, (42)84-140 µm long, 15-17 µm wide, usually becoming shoter and wider towards margins, 50-71(84) µm long, 18-23 µm wide, with straight cell walls, strongly porose	long- to short-rectangular, narrow, 28-112 µm long and (7)9-14 µm wide, usually not changing towards margins or becoming narrower, with straight cell walls, porose or not	elongate-rectangular, (42) 56-84(105) µm long, (8)10-14 µm wide, usually not changing towards margins, porose
Inner perichaetial leaves	abruptly narrowed to rather short and entire subula	abruptly narrowed to long excurrent subula with a few serrations at the tip	not seen

leaf cells linear-rectangular and strongly porose, inner perichaetial leaves long in proportion to the length of stem leaves, and innermost perichaetial leaf ubruptly narrowed to a short and entiresubula (Fig.1). *D. nipponense* differs from *D. bonjeanii* in narrow leaf base, in 15-25 rows of cells and larger leaf cells,whereas in *D. bonjeanii* leaf base is wide, in 45-55 rows of cells and leaf cells are much smaller.Other differences from *D. scoparium* and *D. bonjeanii* aresummarized in Tabl.1.

Specimens examined.RUSSIAN FAR EAST: **Primorskij Territory,** Ussuriiskij Reserve, brushwood, on rotten wood accompanied with sporulating *Orthodicranum flagellare*. 16.VII.1974, S. Nesterova S., V. Czerdantseva (IRK, without sporophytes, as *D. bonjeanii* and *Dicranum congestum*). Ussuriiskij Reserve,Peishula hollow,south openning slope to Koryavaya river. *Abies-Picea* forest with deciduous trees, on rotten wood. 7.VII.1974, V.Czerdantseva (IRK,two samples with mature sporophytes,as *D. scoparium*); Reserve "Kedrovaya Pad'". Deciduous forest, on rotten wood.[???],V.Ardeeva (IRK,with mature sporophytes,as *D. scoparium*).Lasovskij Reserve,Petrov's Isl.*Taxus* forest,on rotten wood. 20.IX.1974, L. Bardunov, V. Czerdantseva (IRK,as *D. scoparium*).**Kuril Islands:** Kunashir,Goryachee lake.Mixed forest, on trunk of living deciduous tree.4.VIII.1978,V.Czerdantseva (IRK, with green sporophytes, as *D. scoparium*).

CHINA: N-E Tibet, Samokhe River basin, ca. 3300 m. Fir forest, on rotten wood. 21.VI.1958, N. Dilis *584* (LE).

JAPAN: H. Inoue: Bryophyta Selecta Exsiccata *33* (LE); Noguchi: Muci Japonici, *683, 858, 1115, 1261* (LE). Ando 7.V.1961, 23.VI.1963 (LE). Inoue: Bryophyta selecta exiccata, *33* (H 3045879). Noguchi & Iwatsuki: Musci Japonici Exiccati, *1261, 1564* (H 3045881, H 3045 885). Tagawa 26.VIII.1951, *995* (H 3045871), 26-28.XII.1952, *2090* (H 3045870). Takaki 30.VI.1950 (H 3045877), 30.VIII.1965, *32278* (H 3045876).

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