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A NEW SPECIES OF ORTHOTRICHUM (ORTHOTRICHACEAE, MUSCI) FROM TUVA REPUBLIC, SOUTH SIBERIA

НОВЫЙ ВИД ORTHOTRICHUM (ORTHOTRICHACEAE, MUSCI) ИЗ РЕСПУБЛИКИ ТУВА, ЮЖНАЯ СИБИРЬ

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Abstract

A new speices of *Orthotrichum* is described from Tuva Republic, South Siberia. It is similar to *O. obtusifolium* and *O. gymnostomum* in obtuse leaf and abundant gemmae produced on leaf surface. However *O. furcatum* Otnyukova sp. nov. differs from them in high and (2-)3(-4)-forked papillae on both sides, one per cell, its leaf margin crenulate in the upper half of leaf due to large papillae on marginal cells.

Резюме

Из Тувы описан новый вид - *Ortotrichum furcatum* Otnyukova sp. nov. Этот новый вид близок к *O. obtusifolium* и *O. gymnostomum:* он также имеет закругленные на верхушке листья и обильные выводковые тела на поверхности листа, но отличается высокими одиночными папиллами, на верхушке (2-)3(-4)-раздельными, на обеих сторонах листа, а также выступающими по краю в верхней половине листа простыми папиллами, отчего край листа выраженно городчатый.

During the study of moss collections from the Todginskaya Valley (Tuva region, South Siberia) two new species for science were found.

Orthotrichum furcatum T. Otn. sp. nov. (Figs. 1-8).

Plantae caespitosae, parvae, ad 0.5 cm altus. Folia ovato-lanceolata, ad 1.2 mm longi, versus apicem sensim angustata, margine superne papillata, inferne levae. Cellulae laminorum papillosae. Papillae solitariae, ad apices trichotome ramificans. Sporogonia et organa generativa ignoti. Gemmae in folia evolvuntur.

Species affinis *Orthotrichum obtusifolium* cui folia margine levae, cellulae papillosae, papillae nonramificans et *Orthotrichum gymnostomum* cui folia margine involuta, papillae verrucosae.

TYPUS: Russia, Tuva Respublica, Todginskaja Vallis, Kadish Lacus, 52°36' lat. bor., 97°02' long, orient., 1100 m alt., in rupium fissuris in litore meridionali lacus. 4.IX.1999. Leg. T.N.Otnjukova (holotypus KRF; isotypus MHA).

Plants small, 0.3-0.5 cm tall, in tufts, green above, brownish below. Leaves erect when dry, ovate-lanceolate to lanceolate, 1.0-1.2 mm long and 0.4-0.6 mm wide, bluntly acuminate, in the upper 1/3-2/3 part crenulate due to one (rarely two) large papillae per cell, in the lower part entire; margins almost plane. Upper laminal cells irregularly hexagonal, 12-16 μm, thick-walled, with high (2)3-(4)-forked papillae on both sides. Basal cells rectangular and smooth towards costa, with straight thick walls, 23-29 μm long and 11-13 μm wide, shorter towards margins, 11-18 μm long and 16-20 μm wide. Gemmae produced in abundance on leaf surface, ovate to cylindric, usually 5-6 cells in one row. Sporophytes and gametangia unknown.

Type: Russia, Tuva Republic, Todginskaya Valley, the west extremity of the Kadysh Lake, its south bank. 52°36'N - 97°02'E, 1100 m alt. In fissures of rocks. 4.IX.1999. T.N.Otnyukova (holotype KRF, isotype MHA).

Orthotrichum furcatum is similar to *O. obtusifolium* Brid. (Figs. 9-13) and *O. gymnostomum* Bruch. ex Brid. in having obtuse leaves and abundant gemmae produced on leaf surface. However, *O. furcatum* differs from the former in 1) laminal

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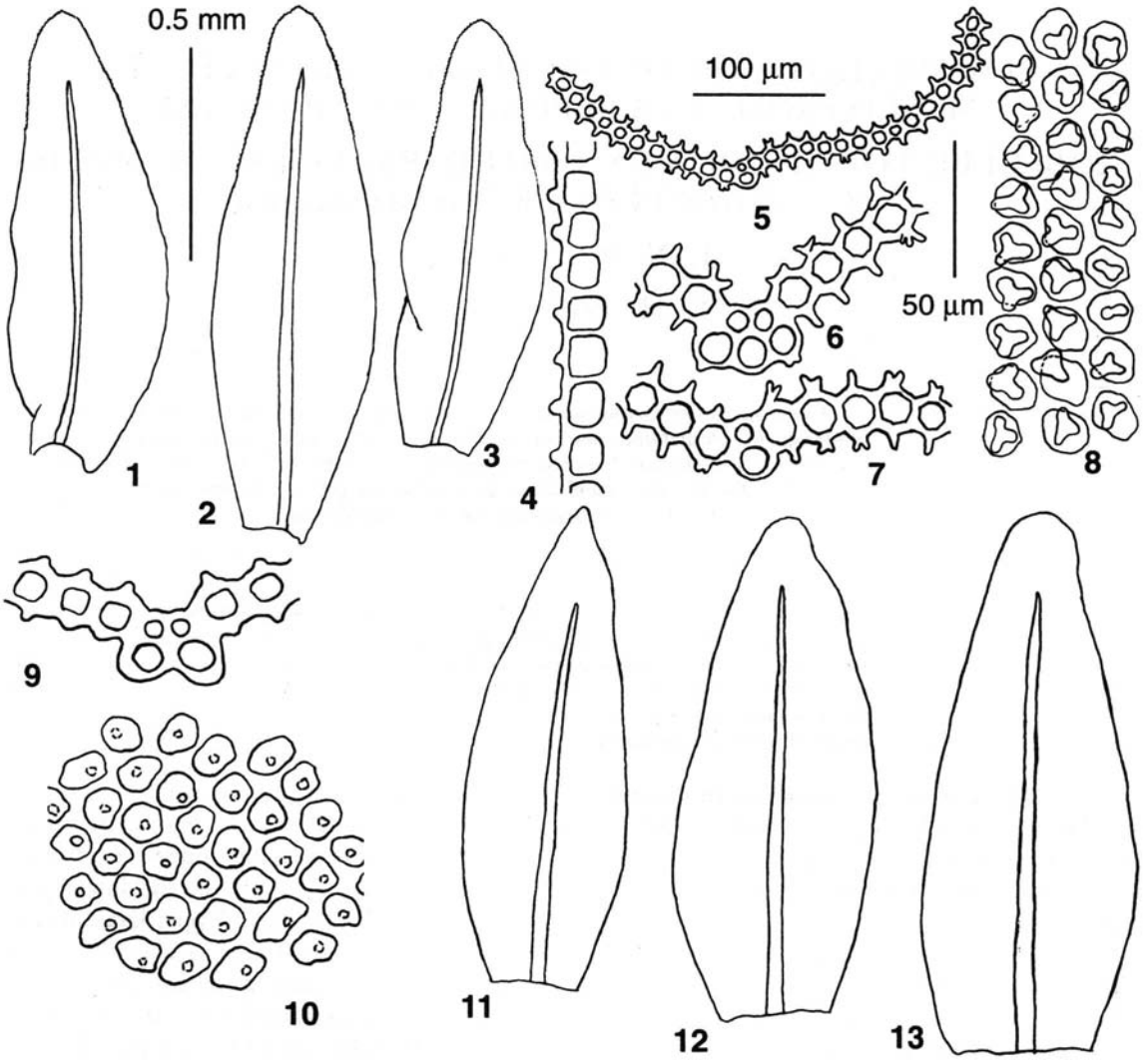

Figs. 1-8 *Orthtotrichum furcatum* T. Otn. sp. nov. (from holotype, *Otnyukova 4786*) and 9-13 *O. obtusifolium* Brid. (from Todginskaya Valley, *Otnyukova* 17 VII 1995). 1-3, 11-13 - leaves; 4 - margin in midlcaf; 5-7, 9 - transverse leaf sections; 8, 10 - lamina cells in midlcaf. Scale bar: 0.5 mm - for 1-3, 11-13; 100 µm - for 8; 50 µm - for 4-7.

cells with high and branched papillae, in the upper part of leaf 3(4)-forked, in the lower part of leaf 2-3-forked, vs. rather low, unbranched in *O. obtusifolium*; 2) leaf margin mainly plane and distincly crenulate in the 1/3-2/3 upper part due to large papillae, vs. margin entire or slighly crenulate at tip in *O. obtusifolium*. In *O. gymnostomum* leaf margins are strongly revolute from the middle part up to apex, upper leaf cells have very low verrucosus papillae, usually 2-3 per cell.

New species was found only on rocks; *O. obtusifolium* grows mainly on trunks of deciduous trees, rarely on rocks; in latter case, the characters of the species remain the same as in corticolous habitats.

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