A note on *Pohlia ludwigii* (Spreng. ex Schwägr.) Broth., (Bryaceae, Musci) in Turkey

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**Abstract**

*Pohlia ludwigii* (Sprengl. ex Schwägr.) Broth. is recorded for the second time in Turkey after more than half a century from the first recording time. And also with this record, this species is reported for the first time from Western Black Sea region of Turkey. A description of the species is given along with its ecology and a discussion of its phytogeographical significance.

**Key words:** Bryophyte flora, Pohlia, Bryaceae, Phytogeography, Turkey

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The main vegetation types of this mountain chain are meadows near the lake and, beyond the meadows, there are forests. To the south, there is a mixed forest (Fagus L., Carpinus L., Quercus L., Acer L., Crataegus L., Pyracantha M.J.Roemer and Juniperus L.). In the other regions, Pinus L. and Abies Miller make up mixed and pure stands. On the tops of the hills, alpine zones are present (Uçar Türker & Güner, 2003).


Plants medium-sized, (1−) 2−10 (−15) cm high, green above and reddish brown below in lax or dense tufts. Stems erect, simple and seldom foliate, with a few rhizoids at base. Leaves shrunken when dry, patent when moist, lax and distant arranged, oblong ovate to narrowly ovate-lanceolate, broadly decurrent at base, margins plane, sinuose or faintly serrulate near apex; costae brownish ending below the apex; leaf cells elongate-rhomboidal, 60-100 µm x 16-24 µm; lower marginal and basal cells narrower and thin-walled, Sporophytes not seen (Figure 2).

1.1 Specimen examined

Turkey, Bolu province, Abant district, Ereli plateau (N 40° 38', E 031° 19'), in Abies nordmannia (Stev.) Spach subsp. bornmuelleriana (Mattf.) Coode & Cullen and Pinus sylvestris L. mixed forest, on wet soil, alt. 1410 m, 15. 06. 2011, (Herb. UYAR), ALATAŞ 789.

1.2 World Distribution

Scattered higher altitudes in northern Europe north to Svalbard, Faeroes, Iceland, Greenland, West, Central, East Europe and Pyrenees in southwest Europe, China, Japan, Northern Part of Ural Mountains in Russia, Caucasus, Turkey, Iran, Kenya and North America (Ignatov & Afonina, 1992; Nyholm, 1993; Smith, 2004; Frey et al., 2006; Xing-Jiang & Crosby, 2007; Kürschner, 2008).

1.3 Ecology

This circumpolar species prefers on wet or moist sandy or gravelly soils on streams-banks, flushes high in the mountain and late snow fields. It also grows on wet soil overlying outcrops rock, rock ledges and in scree (Dierßen, 2001; Atherton et al., 2010). The specimens collected in Turkey come from 2 different localities on brown forest soils where on the granite and granodiorite main rock. Accompanying moss species in new collecting locality of the species in Bolu province are such as; Marchantia polymorpha L., Mnium spinosum (Voit) Schwägr., Philonotis calcarea (Bruch & Schimp.) Schimp., Hygroamblystegium fluviatile (Hedw.) Loeske., Dicranella heteromalla (Hedw.) Schimp., Pohlia wahlenbergii (F.Weber & D.Mohr) A.L.Andrews., Weissia brachycarpa (Nees & Hornsch.) Jur, Rhizomnium punctatum (Hedw.) T.J.Kop., Oxycyrtynchium hians (Hedw.) Loeske and also Pleuridium acuminatum Lindb.
2. Discussion

*Pohlia ludwigii* dissimilar other Pohlia species with its leaf base that widely runs down onto the stem. In addition, at first sight this species resembles to *Bryum weigelii* Spreng, but *B. weigelii* differs from *P. ludwigii* in its upper leaves usually being pink rather than green and its leaves more widely spaced down the stem.

Although *P. ludwigii* almost occurs in the whole Europe, until now it has not been recorded in Bulgaria (Natcheva & Ganeva, 2005). The nearest localities of this species are situated in Greece and Romania at the Balkan countries (Sabovljević et al., 2008). Nevertheless, it was recorded only one locality where; Golestan Province is one of the 31 provinces of Iran, located in the north-east of the country, south of the Caspian Sea from South-west Asia (Akhani & Kürschner, 2004). The first report of this rare circumpolar-mountain species in Turkey corresponded to Rize province at high altitude (ca 3200 m a.s.l.) (Henderson, 1955), whereas in this study it was collected from a rather low locality (ca 1400 a.s.l.) than it had been in Turkey. Thus this new finding extends its distribution range to the Western Black Sea region in Turkey. In addition, this record filled distributional gap of this species between southwest Asia and Balkan countries. Consequently, the new record is not surprising because of its distribution line. In our opinion, with the increasing floristic studies on bryophyte flora of Turkey especially in less studied regions can be added significant new records to Turkish bryophyte flora.

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