

***Ptilidium pulcherrimum* (Ptilidiaceae, Hepaticae)
new to South-West Asia**

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Résumé – *Ptilidium pulcherrimum* (Ptilidiaceae, Hepaticae) a été récolté pour la première fois en Asie du sud-ouest parmi des spécimens collectés en Turquie. *Ptilidium pulcherrimum* est décrit et illustré à partir des spécimens Turcs.

***Ptilidium pulcherrimum* / Ptilidiaceae / Hepaticae / Turquie**

Abstract – *Ptilidium pulcherrimum* (Ptilidiaceae, Hepaticae) is recorded for the first time in South-West Asia, from specimens collected in Turkey. The Turkish specimens of *Ptilidium pulcherrimum* are described and illustrated.

***Ptilidium pulcherrimum* / Ptilidiaceae / Hepaticae / Turkey**

INTRODUCTION

The Ptilidiaceae contain one genus, *Ptilidium* Nees which includes three species. To date, *Ptilidiaceae* were unknown from SW Asia (Bischler & Jovet-Ast, 1986; Frey, 1986; Long, 1987; Çetin, 1988; Kürschner, 2001). Recently, we collected *P. pulcherrimum* (G.Web.) Vain. in the vicinities of Ballıdağ Mountain and Yaralgöz Mountain in northern Turkey. The identification was kindly confirmed by Tomas Hallingbäck. The Turkish specimens are described and illustrated (Figs 1-7). The distribution in SW Asia is shown (Fig. 8).

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***Ptilidium pulcherrimum* (G. Web.) Vain.**
(Figs 1-7)

Plants forming low, dense and prostrate patches. Shoots green, to *ca* 3 cm, irregularly 1-2 pinnate. Stem 200-350 µm in diameter, cortex 1-2 cells wide, medulla 4-7 cells wide in cross section. Leaves imbricate, 0.7-1.4 mm long (including cilia), usually 3-4 lobed. Leaf lobes deeply divided (3/4-4/5), dorsal lobe 6-12 cells broad (200-225 µm) at base. Margins densely ciliate, cilia to 450 µm long, usually crowded and incurved, maximum length much greater than basal width of the dorsal lobe. Cilia 6-13 on the largest lobe of leaves. Cells of cilia up to 25 × 50 µm, of leaf middle 30 × 45 µm, up to 30 × 55 µm near base of lobe. Walls thickened, trigones large and strongly bulging, walls rarely thin and trigones small. Oil bodies 15-40 per cell, (1-)2 × 3(-4) µm, spherical to rod-like, glistening. Underleaves up to 0.7 µm long (including cilia), shallowly bilobed, 8-13 cells wide at base. Gemmae lacking. Specimens sterile.

Ptilidium pulcherrimum is only likely to be confused with smaller forms of *Ptilidium ciliare* which is normally much more robust and more loosely attached to the substrate (Schuster, 1966; Arnell, 1981; Frey et al., 1995; Smith, 1996; Paton, 1999).

ECOLOGY AND DISTRIBUTION

Ptilidium pulcherrimum is a pioneer species which is more often found on trees and shrubs than on rock. The species occurs from lowlands to 1700 m. The Turkish specimens were collected between 1360 m and 1470 m.

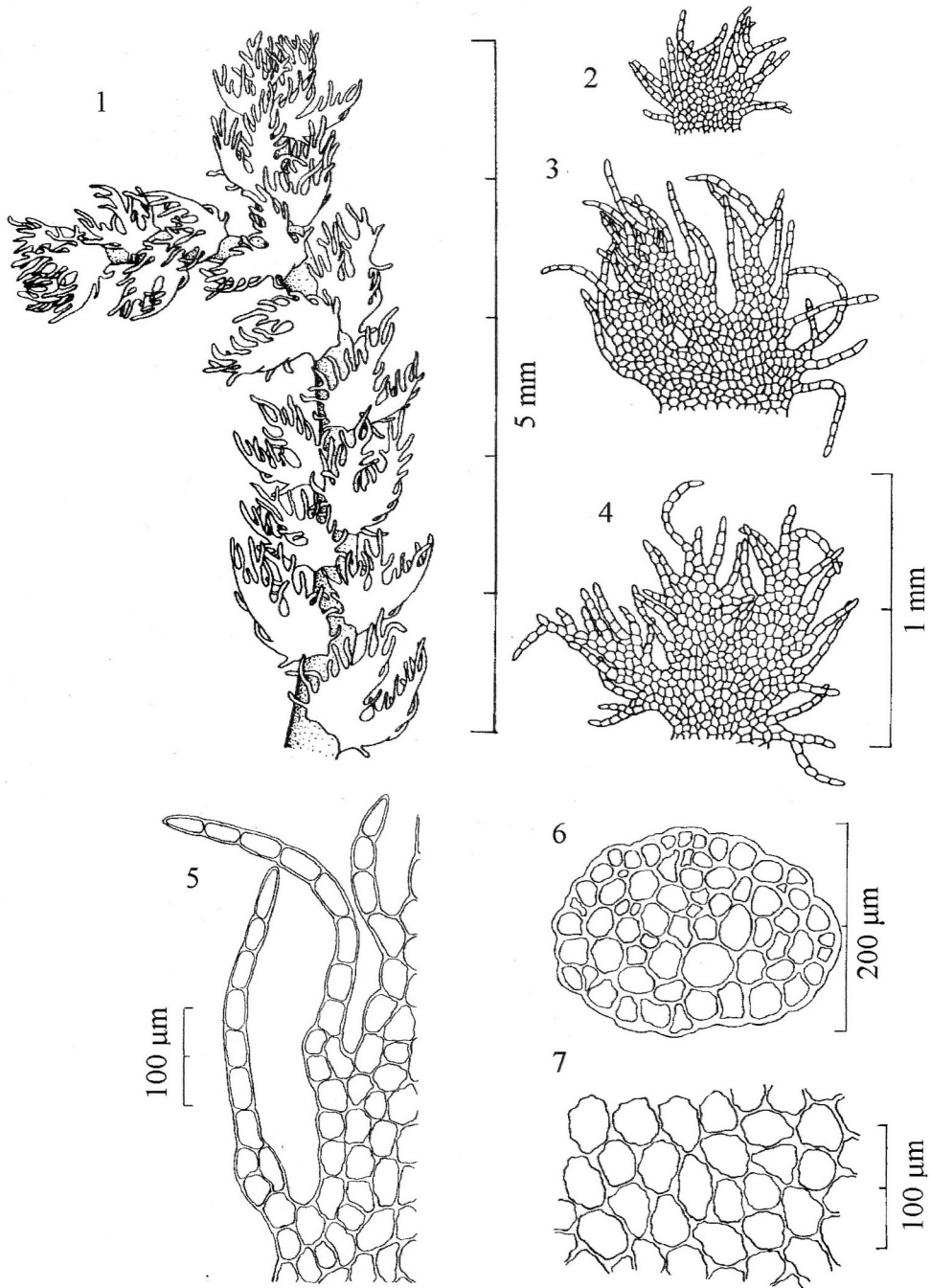
The area with the new records of *P. pulcherrimum* is located within the boundaries of the Euxinian district of the Euro-Siberian floristic region. It is characterized by semi-continental (Kastamonu, Devrekani) and trans-Mediterranean (Daday, Azdavay) climate with an average temperature of 11 °C, and precipitation amount of 653 mm per year (Akman, 1999). Rock types of the study area are lime, schist and andesite.

The first locality is in Western North Turkey: Northwest of Kastamonu, between Daday-Azdavay, near Ballıdağ Mountain (Fig. 8), 41°29'N, 33°23'E, 1470 m, 29 August 2000, Keçeli 1297 (ANK). *Ptilidium pulcherrimum* was found as an epiphyte, growing together with *Lophocolea heterophylla* (Schrad.) Dumort. The local vegetation was mainly made up of *Abies bornmuelleriana* Mattf., *Pinus nigra* Arn., *Pinus sylvestris* L., *Fagus orientalis* Lipsky and *Quercus* sp.

The second locality is: Northeast Kastamonu, between Devrekani-Bozkurt, slope of Yaralıgöz Mountain (Fig. 8), 41°46'N, 34°05'E, 1360 m, 20 September 2002 Keçeli 2096 (ANK).

The related specimen was found on a decaying tree trunk. The main tree and shrub species of the aerea are *Abies bornmuelleriana*, *Pinus nigra* Arn, *Pinus sylvestris*, *Fagus orientalis*, *Carpinus* sp., *Quercus* sp., *Acer* sp., *Corylus* sp.

World distribution of *Ptilidium pulcherrimum* (The nearest localities to Turkey bold) — *P. pulcherrimum*: Europe and Macaronesia (Iceland, Norway, Denmark, Sweden, Finland, Ireland, Britain, France, Netherlands, Belgium, Germany, Poland, Switzerland, Austria, Czech Republic, Slovakia, Hungary, Spain, Italy, Slovenia,



Figs 1-7. *Ptilidium pulcherrimum* (G. Web.) Vainio 1. Habit; 2. Underleaf; 3, 4. Leaves; 5. Cilia near base of leaf lobe; 6. Stem cross section; 7. Cells from middle of leaf (*Keçeli 1297*) (All drawings by Tamer KEÇELİ).

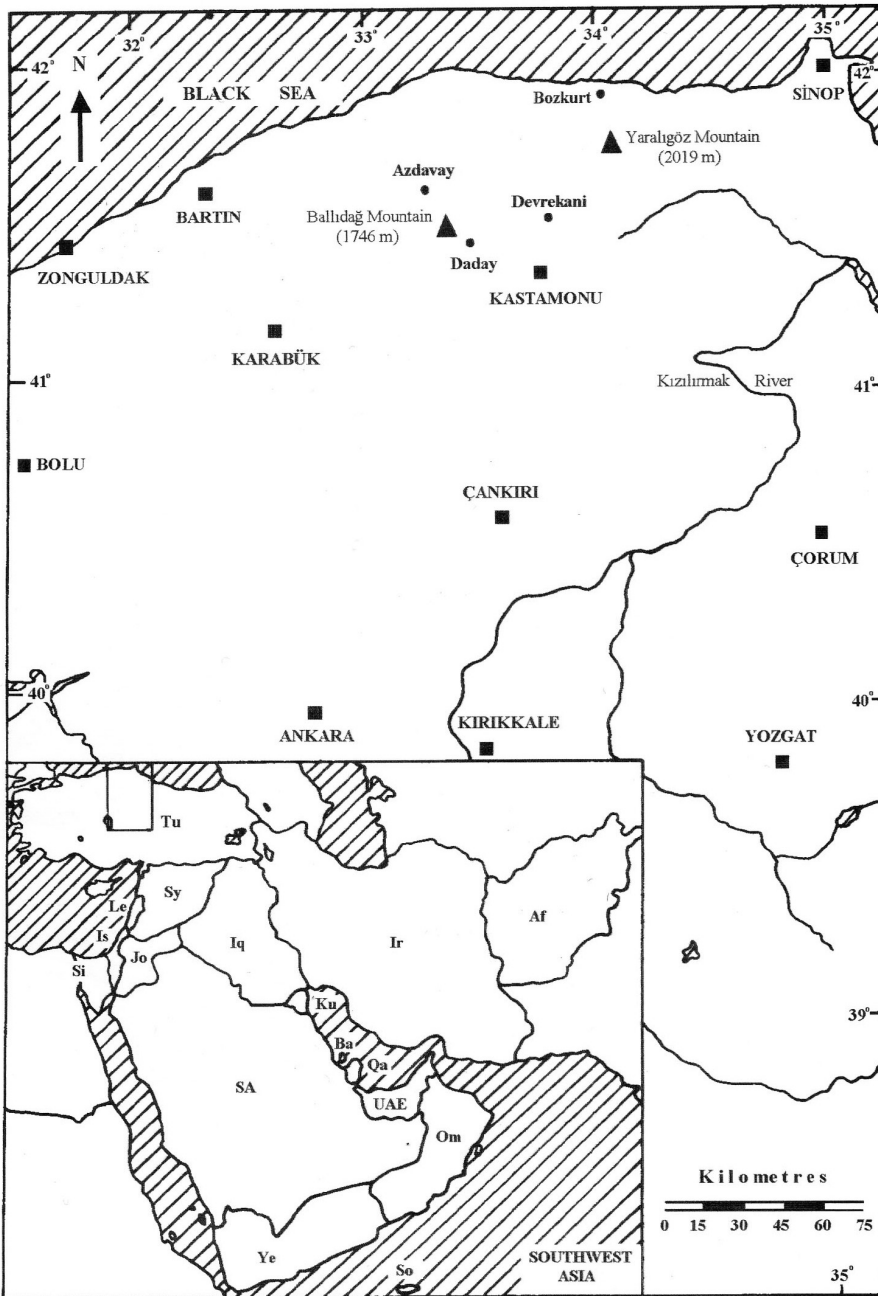


Fig. 8. The position of Turkey in SW Asia and the distribution of *Ptilidium pulcherrimum* (G. Web.) Vainio. The triangles represent the new localities in Turkey. Abbreviations: Af: Afghanistan; Ba: Bahrain; Ir: Iran; Iq: Iraq; Is: Israel; Jo: Jordan; Ku: Kuwait; Le: Lebanon; Om: Oman; Qa: Qatar; SA: Saudi Arabia; Si: Sinai Peninsula/Egypt; So: Socotra/Yemen; Sy: Syria; Tu: Turkey, UAE: United Arab Emirates; Ye: Yemen (drawing by Tamer KEÇELİ).

Croatia, Yugoslavia, Bosnia-Herzegovine, **Romania, Bulgaria**, Estonia, Latvia, Lithuania, Belarus, **Moldovo, Ukraine, Crimea**, Russia North, Russia Northwest, Russia Central, Russia East, North Caucasus), Temperate Asia (Siberia, Russian Far East, **Middle Asia, Transcaucasus**, China, Mongolia, Eastern Asia), Tropical Asia (Indian Subcontinent), Northern America (Subarctic America, Western Canada, Eastern Canada, North-western USA, North-Central USA, North-eastern USA, South-eastern USA).

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