

A Note on *Cheilothela chloropus* (Brid.) Lindb. (*Ditrichaceae, Musci*) in Turkey

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Abstract: Fruiting specimens of *Cheilothela chloropus* (Brid.) Lindb. were collected and illustrated for the first time from the southwest of Turkey. A description and the distribution of the species are given to provide a contribution for further studies on Turkish mosses.

Key Words: *Cheilothela*, Turkish mosses, *Ditrichaceae*, Phytogeography

Introduction

Cheilothela chloropus (Brid.) Lindb. is a monotypic Mediterranean species, which was described (depending on gametophytic characters) by Lindberg in 1878 as a segregate of the genus *Ceratodon* Brid. (Buck, 1981). Microscopically, the presence of mammillose protuberant to bulging lamina cells is the diagnostic character to distinguish the species from resembling genera such as *Barbula* Hedw. and *Ceratodon*. But as a contrast to the genus, the lamina cells are smooth to papillose (not bulging) in *Barbula* and smooth in *Ceratodon*.

In Turkey, *Cheilothela chloropus* occurs on basic soils and rocks covered by a thin layer of soil at road sides, and in open and relatively sheltered habitats in west Anatolia according to Henderson (1961), Henderson and Prentice (1969), Walther (1967, 1970) and Çetin (1989). As this is the first collection of a fruiting specimen of the species from Turkey, a description is given below.

Cheilothela chloropus (Brid.) Lindb., Eur. Bladmoss. (Bryinae acrocarpae), 1878

Basionym: *Ceratodon chloropus* Brid., Bryol. Univ. 1: 48, 1826

Plants small, gregarious or in loose, brown to yellow brown tufts with greenish upper parts up to 1 cm high; stem rounded with weakly developed central strand, outer cortex cells thick walled, inner cells thin walled and larger (Fig. 1); leaves erect and loosely imbricate with

few slightly twisted upper leaves when dry, erecto-patent when moist except upper leaves becoming almost squarrose, triangular to elongate ovate-lanceolate, 1.5-2 mm long, gradually tapering to a long acuminate apex; margin plane slightly concave, finely crenulate below and papillose crenulate above; basal leaf cells smooth, long rectangular to rhomboid hexagonal near costa, shorter and narrower toward margins; mid leaf cells very short rectangular to rhomboidal with some irregularly triangular cells, 6- 8 (10)µm, mammillose to bulging, bistratose except nearly smooth base; costa well developed and longly excurrent; perichaetial leaves longer and with sheathing basal lamina, inner leaves longer than outer leaves (Fig. 3); seta yellow to yellowish brown, straight from base to middle part, twisted clockwise in upper part; capsule brown, inclined to erect, cylindrical, slightly ovoid, furrowed when dry, not strumose (Fig. 1); exothecial cells very thick walled, longitudinal walls (Fig. 2) generally thicker than transverse walls; operculum rostrate; annulus present with large cells, easily deciduous; peristome teeth bifid, very spiculate, 16, teeth segments separated at apex (Fig. 2); spores small, 10µm, smooth (Fig. 1).

Specimen examined:

Cheilothela chloropus (Brid.) Lindb.

Turkey, C11 Aydın: Cine valley, Roman bridge, on soil covering gneiss rock, alt. ca 300 m, 18 May 1999, Erd. 1273. (Aydın, Turkey), KRAM 139001 (Krakow, Poland)

Syn.: *Ceratodon chloropus* Brid.

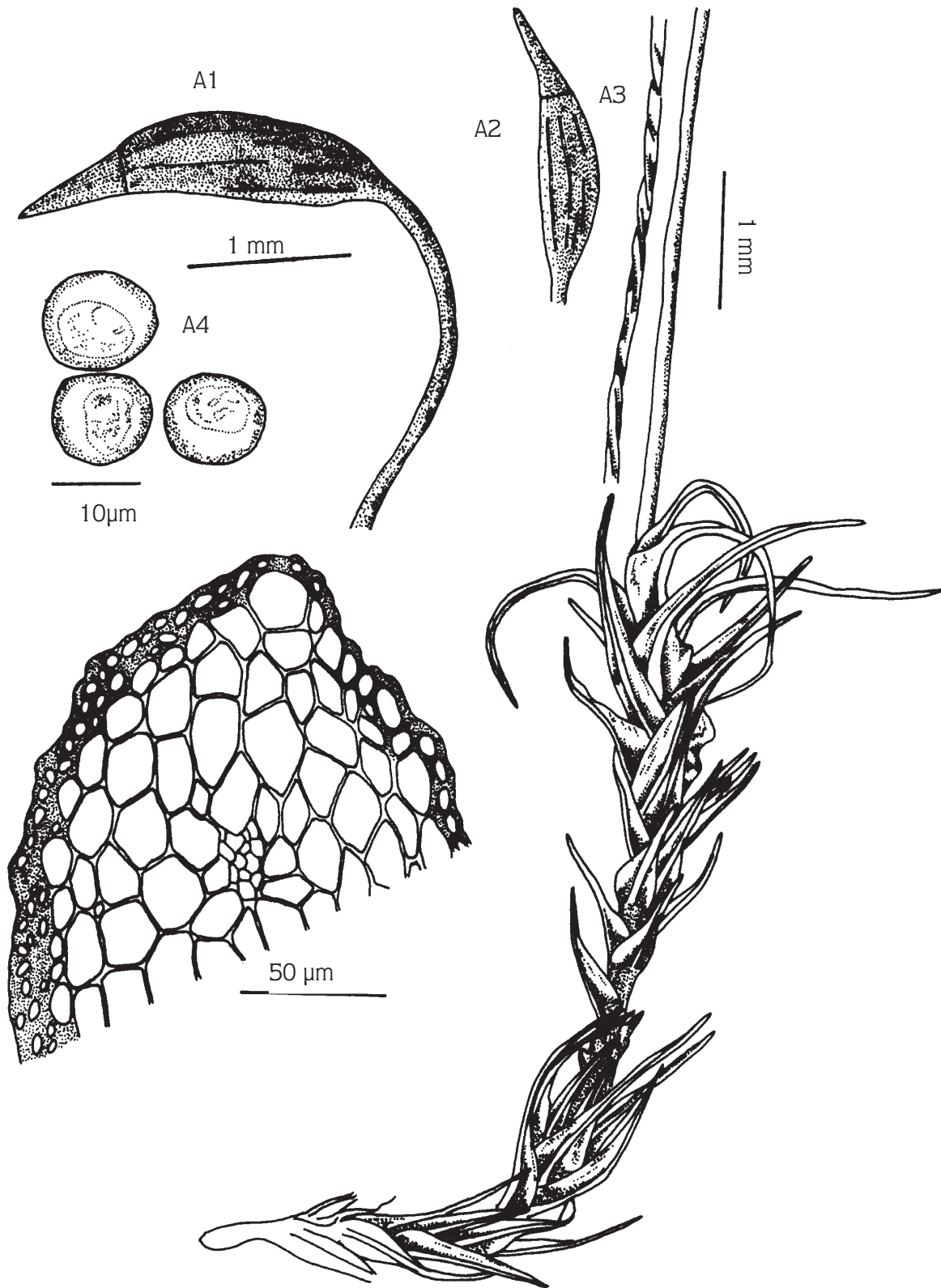


Figure 1. *Cheilothela chloropus*. A1, A2, Capsules; A3, Habit; A4, Spores; B, Cross section of stem.

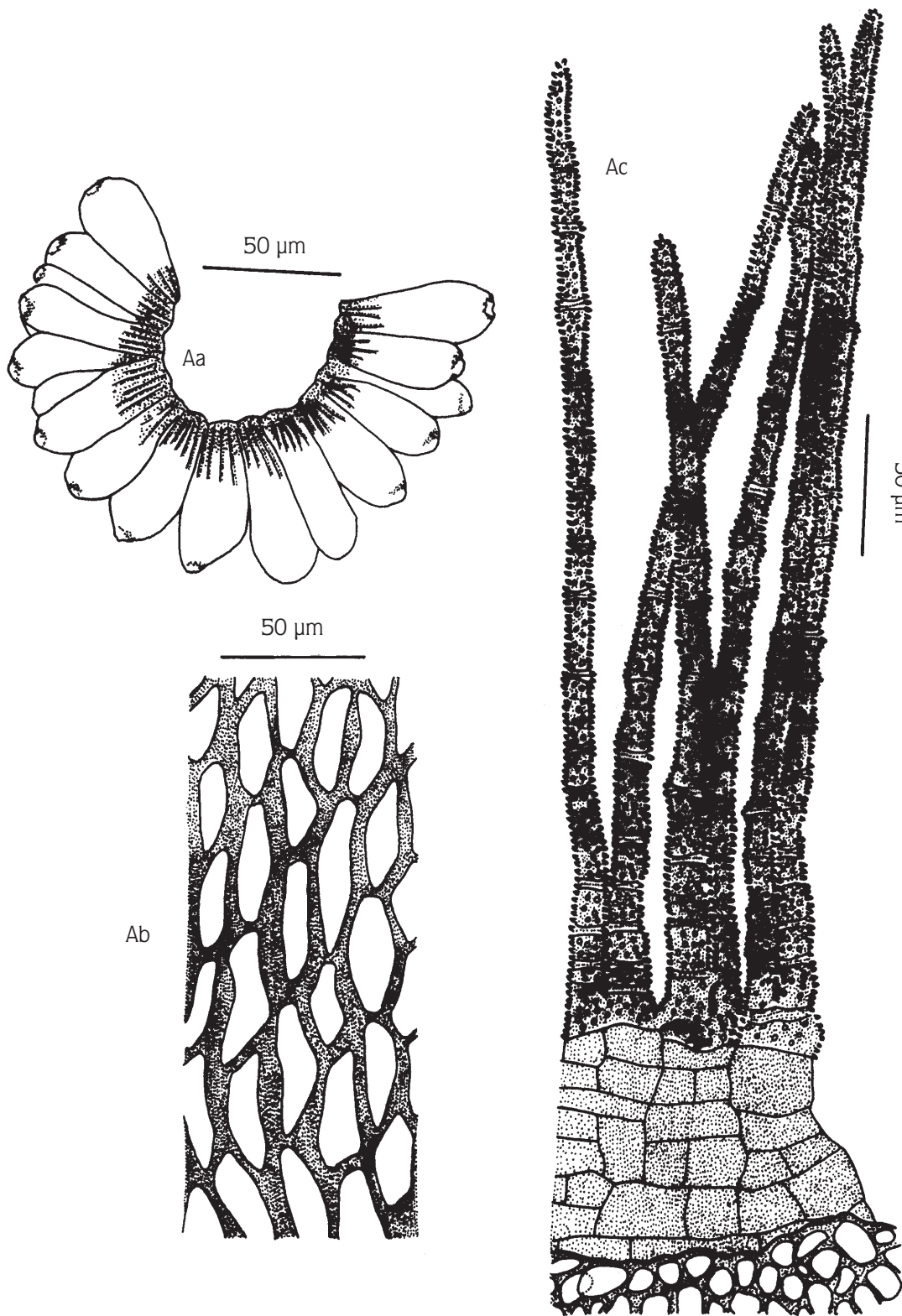


Figure 2. Sporophyte features. Aa, Annulus; Ab, Exothecial cells; Ac, Peristome teeth.

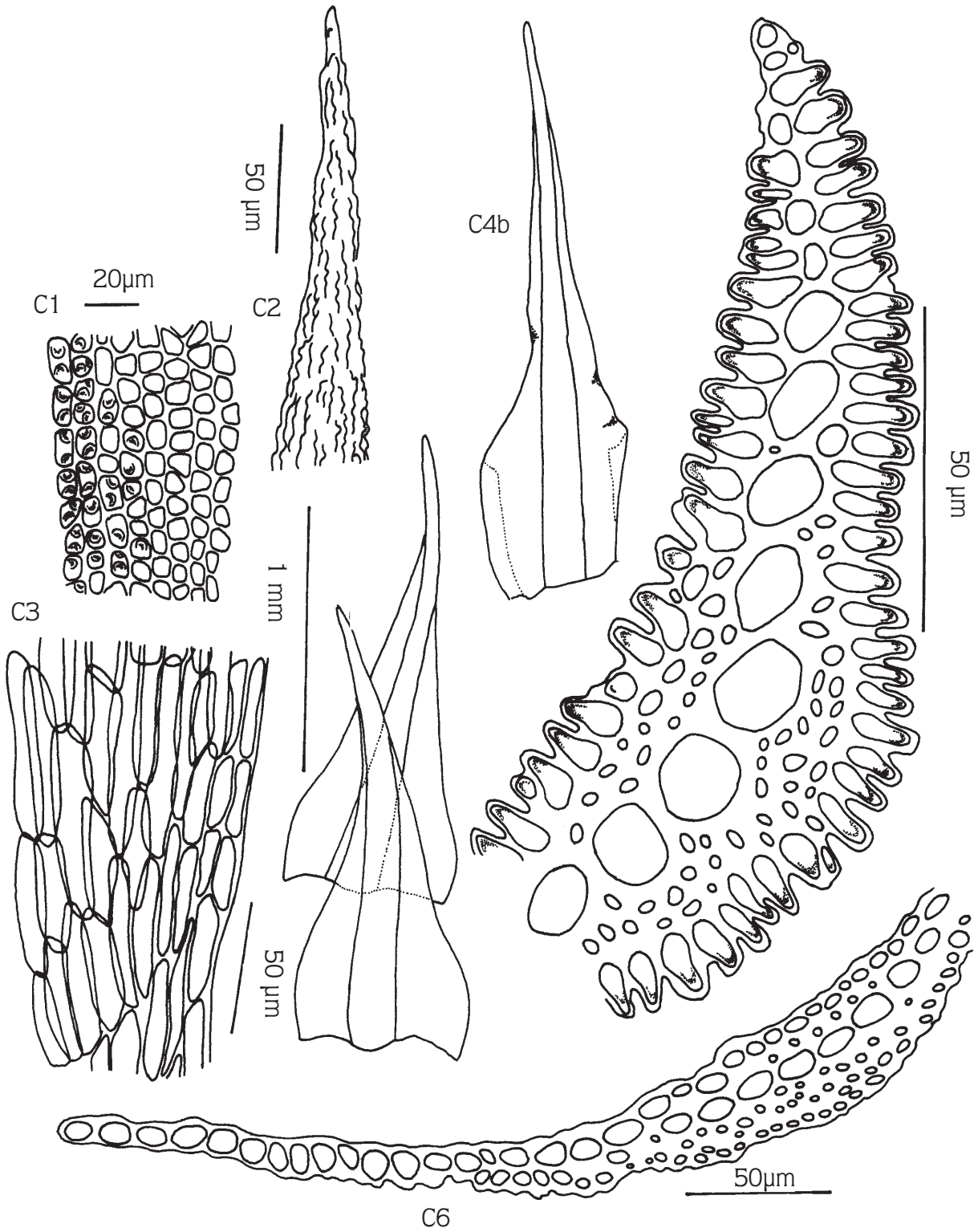


Figure 3. Leaves and leaf cells. C1, Mid leaf cells; C2, Apex; C3, Basal leaf cells; C4a, Stem leaves; C4b, Perichaetial leaf; C5, Cross section of upper lamina; C6, Cross section of basal lamina.

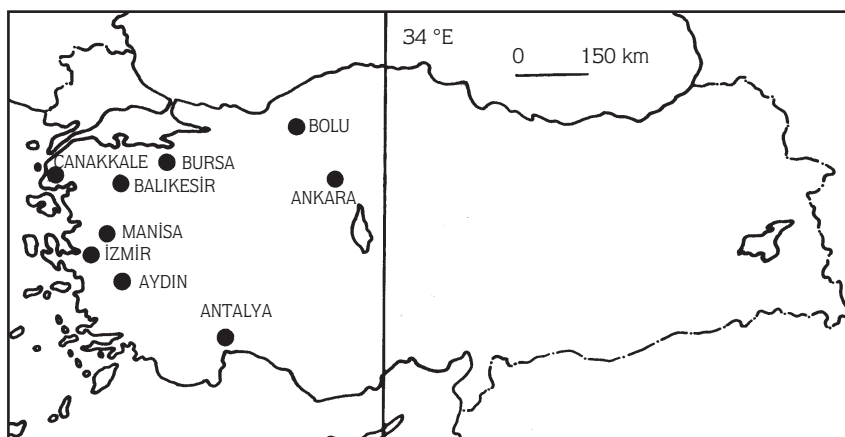


Figure 4. Distribution of the species in Turkey (based on Henderson, 1961; Henderson and Prentice, 1969; Walther, 1967, 1970; Çetin, 1989, and own collections)

Distribution

West of long. 34°E in Turkey including the provinces Ankara, Antalya, Balıkesir, Bolu, Bursa, Çanakkale, İzmir, and Manisa (*cf.* Henderson, 1961; Henderson and Prentice, 1969; Walther 1967, 1970; and Çetin, 1989), from alt. *ca* 50 m to 2400 m, on basic soils and rocks covered by thin soil (Fig. 4).

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