



Lecania sessilisoralinata, a new sorediate lichen species from limestone in Turkey

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The new species *Lecania sessilisoralinata* is described from limestone in Burdur in Turkey. This species, close to *L. baeomma* with has indigo-speckled soralia and is coastal, has very clear discrete soralia with granular soredia.

Key words: Burdur, *Lecania*, *Ramalinaceae*, lichen, new species, taxonomy

The Burdur region (comprising of the Central Burdur, Kemer and Altinyayla districts) is mountainous and heavily forested with intermittent streams and lakes (Baytop & Denizci 1963). Forest tree genera include *Abies*, *Cedrus*, *Ficus*, *Fraxinus*, *Juniperus*, *Olea*, *Pinus*, *Pistacia*, *Prunus*, *Quercus* (especially in Altinyayla district), and *Rhus*. The flora is very species rich and abundant, although the mountains are mostly covered with marble rock. The region has a continental Mediterranean climate characterized by cold snowy winters and very hot long dry summers. Temperatures range from –16 to 39°C, with a mean annual temperature of 15°C, and the mean annual rainfall is about 468 mm with an average humidity of 51.2% (Akman 1999).

The rock outcrops in the Burdur region are mainly limestone. Among the lichens present on this substratum (Yazici *et al.* 2015), there is a conspicuous sorediate lichen that was found a few times fertile and turns out to be an undescribed *Lecania* A. Massal. (*Ramalinaceae*) species. The purpose of this paper is to formally describe it.

The genus *Lecania* contains *ca.* 50 species worldwide. From Turkey, so far 14 species of *Lecania* have been reported (Çobanoğlu & Akdemir 2000, Çobanoğlu *et al.* 2013, John 1996, 2003, Kinalioglu 2010, Yavuz & Çobanoğlu 2007, Yazici & Aptroot 2007, Yazici & Aslan 2009, Yazici *et al.* 2007).

Material and Methods

Collecting sites

Kenan Yazici collected lichen samples on 10–27.06. 2013 during a lichenological survey of the Burdur region.

Collecting, storage and processing of samples

Identification and descriptive study were carried out using a Nikon Zeiss Stemi 2000-c stereomicroscope and a Zeiss Axio Imager.A2 light microscope. Macrophotographs and microphotographs were taken with the digital camera Zeiss AxioCam ERc5s The specimens are preserved in the Herbarium of the Biology Department, Karadeniz Technical University, Trabzon, Turkey (KTUB) and in ABL.

Results and discussion

Lecania sessilisoralinata Yazici & Aptroot, sp. nov. Figs. 1A,B,C,D,E,F

MycoBank No: MB 823452

Diagnosis:—*Lecania* with pale olivaceous areolate thallus with sessile discrete soralia with granular whitish soredia and small apothecia with ascospores $8.5\text{--}9.8 \times 2.4\text{--}3.1 \mu\text{m}$.

Description:—Thallus crustose, covering an area up to 2.5–3 cm diam, cracked-areolate, pale olivaceous brown to pale olivaceous green, closely appressed the substratum, 1–2 mm thick in center, thinner towards the margin; areoles mostly

crowded, 0.2–0.6 mm in diam. Medulla white. Soralia sessile and raised above the thallus, initially punctiform, remaining clearly discrete, whitish and clearly contrasting in colour with the thallus, to 0.8–1 mm in diam., mostly crowded in the center of the the thallus, concave or convex-globose. Soredia granular, c. 30–50 μm diam. Algae chlorococcoid. 6–12 μm diam. Apothecia very rare, to 0.3–0.4 mm diam, sessile, thallin margin beige, pale brown; disc dark red-brown, young apothecium pale brown to beige colour, to 0.15–0.20 mm diam. Hymenium almost hyaline, 46–55 μm high; hypothecium pale brown, to 54–61 μm high; epithecium brown; proper margin (exciple) yellow-brown. Ascus 8-spored, Bacidia-type, 8.5–12 \times 25.5–30 μm . Ascospores 8.5–9.8 \times 2.4–3.1 μm , 1-septate, hyaline, ellipsoid to elongate-ellipsoid, straight or somewhat curved, sometimes constricted at the septum, ends rounded or slightly pointed, wall thin, without perispore.

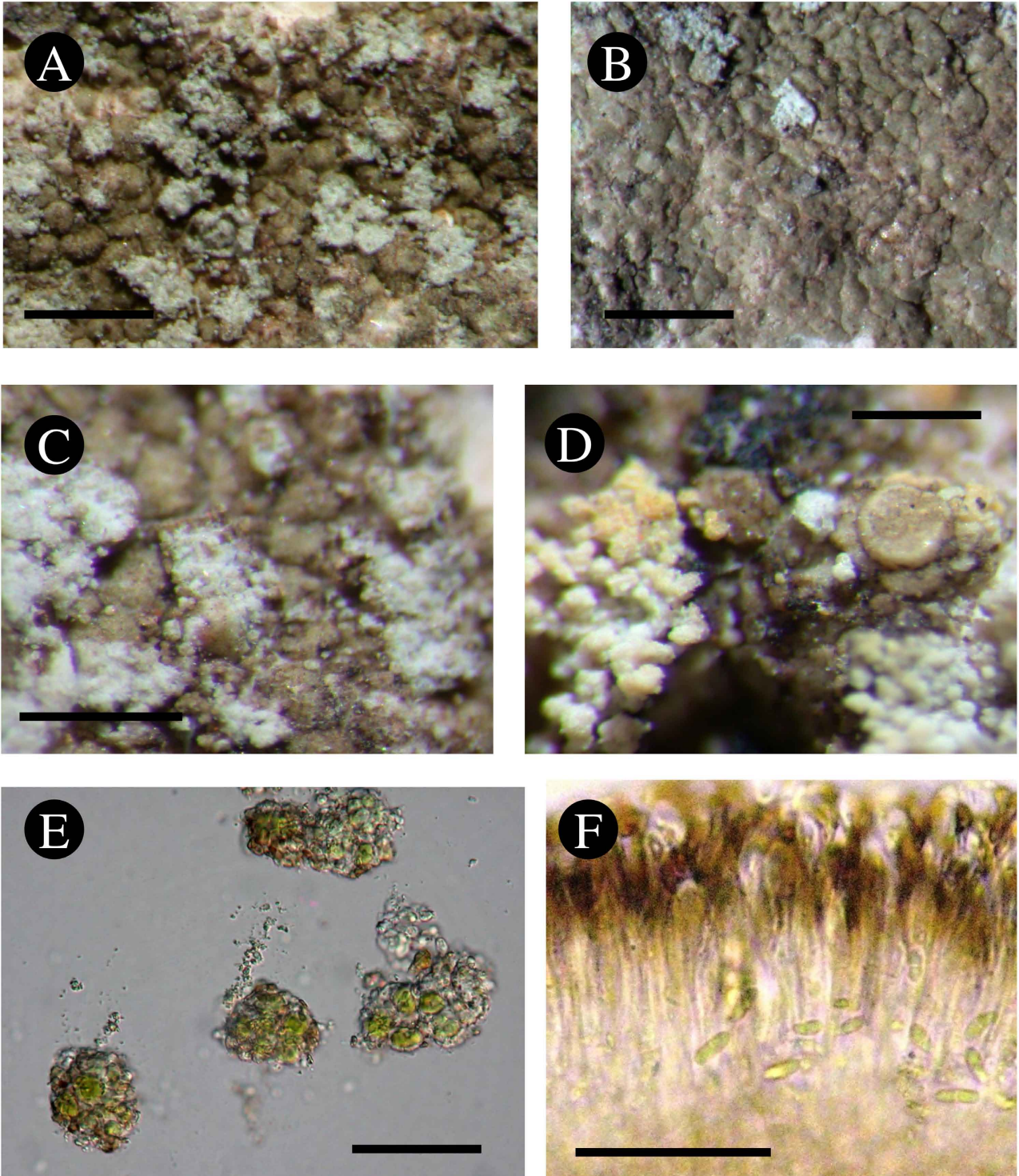


FIGURE 1A–D. *Lecania sessilisoraliata* (holotype): **A**, habitus. Scale = 2 mm, **B**, marginal zone of thallus. Scale = 2 mm, **C**, soralia. Scale = 1 mm, **D**, apothecium and soredia. Scale = 0.5 mm. **E**, Soredia. Scale = 50 μm . **F**, hymenium. Scale = 50 μm .

Secondary chemistry:—Thallus, medulla and soralia K–, C–, KC–, P–; no substances detected.

Etymology:—The epithet refers to sessile soralia.

Holotype:—TURKEY. Burdur, Bucak, Esirlik village, 37°16'50"N 30°43'30"E, 859 m, on calcareous rock, 27 June 2013, *leg. et det.* K. Yazici 2461 (KTUB; isotype; ABL).

Distribution and ecology:—On somewhat exposed limestone, together with *e.g.* several *Verrucaria* species. Only known from Turkey.

Remarks:—This is a *Lecania* with very clear discrete soralia with granular soredia. It is somewhat close to *Lecania baemma* (Nyl.) P. James & J.R. Laundon (Smith *et al.* 2009), but that species has indigo-speckled soralia and is coastal.

Additional fertile specimen examined:—TURKEY. Burdur, Kocaaliler, 37°18'33"N 30°44'36"E, 625 m, on calcareous rock, 10 June 2013, *leg. et det.* K. Yazici 2462 (KTUB).

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