

***Placidiopsis cavicola*, a new lichen species (*Verrucariaceae*) from the Pyrenees**

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Received 24. 2. 1994

Key words: Pyrenocarpous lichens, *Verrucariaceae*, *Placidiopsis cavicola*, spec. nova. - Systematics, taxonomy. - Flora of Spain.

Abstract: *Placidiopsis cavicola* is described as new from a cave in Navarra province, Spain. It differs from the otherwise similar *P. minor* mainly by its larger spores and finely incised squamules. Remarks on the taxonomy and ecology of the new species are given.

Zusammenfassung: *Placidiopsis cavicola* aus einer Höhle in den Pyrenäen wird neu beschrieben. Die neue Art unterscheidet sich von *P. minor* durch größere Sporen und feinkerbige Schüppchen. Ihre Ökologie wird kurz umrissen.

Placidiopsis is closely allied to the more widely known genus *Catapyrenium* from which it differs by having 2-celled instead of non-septate spores. The thallus consists of small squamules which are fastened to the substratum by either a hypothallus of intricate rhizohyphae or central hyphal tufts or rhizines. Most of the species are terricolous; only three are saxicolous: *P. sbarbaronis* (SERVÍT) CLAUZ. & ROUX, *P. minor* R. C. HARRIS, and the new species described below, which was found in the course of lichenological investigations of caves and underhangs in Navarra province, Spain (CALVO & ETAYO, unpubl.).

***Placidiopsis cavicola* ETAYO & BREUSS, spec. nova**

Placidiopsi minori similis, sed ab hac specie sporis multo maioribus differt.

Typus: Spain, Navarra, Larra, Isaba, Añelarra, 2145 m, Cave A-50, 5 m depth, on calcareous flagstone, 19. 8. 1992, J. ETAYO & J. I. CALVO no. 11668 (MA - holotype, isotypes in Herb. ETAYO, Herb. BREUSS, W).

Thallus of minute, greyish green squamules overgrowing a thin debris cover on rock. Squamules up to 0.5 mm broad, flat, with neatly incised margins, adnate, adjacent to slightly overlapping; in cross-section c. 100-150 µm thick (up to 250 µm when fertile), paraplectenchymatous throughout. Upper cortex 10-20 µm, of roundish-

angular cells 4-6 μm in diam., necral layer lacking. Algal cells 5-9 μm in diam., distributed over most of the thallus in section. Lowermost part of squamule formed by an indistinct cellular layer of varying thickness closely adpressed to the substratum. Underside of squamule brown, with hyaline to brownish rhizohyphae, c. 4 μm in diam., penetrating the substratum.

Perithecia c. 1-5 per squamule, 150-250 μm wide, perithecial wall colourless except near ostiole. Periphyses 20-25 x 3-3.5 μm . Asci clavate, c. 45-55 x 15-20 μm , 8-spored. Spores biseriata, 1-septate, ellipsoid, 13-17 x 6-7 μm .

The specimens are on rock, overgrowing a thin algal cover or debris crust. The squamules are very small and superficially resemble those of *P. minor* R. C. HARRIS. This latter species - known from a few localities in the United States and Greenland - grows partly on rock and partly on crustose lichen thalli thereon (HARRIS 1979, ALSTRUP 1991). Its squamules are rounded or slightly lobate and greyish pruinose, whereas the squamules of *P. cavicola* are finely incised and epruinose (Fig. 2). The most obvious difference between the two species is the spore size: 13-17 x 6-7 μm in *P. cavicola* versus 8-10 x 4-5 μm in *P. minor*. Both species are fastened to the substratum by rhizohyphae which form a more or less distinctly discernible hypothallus.

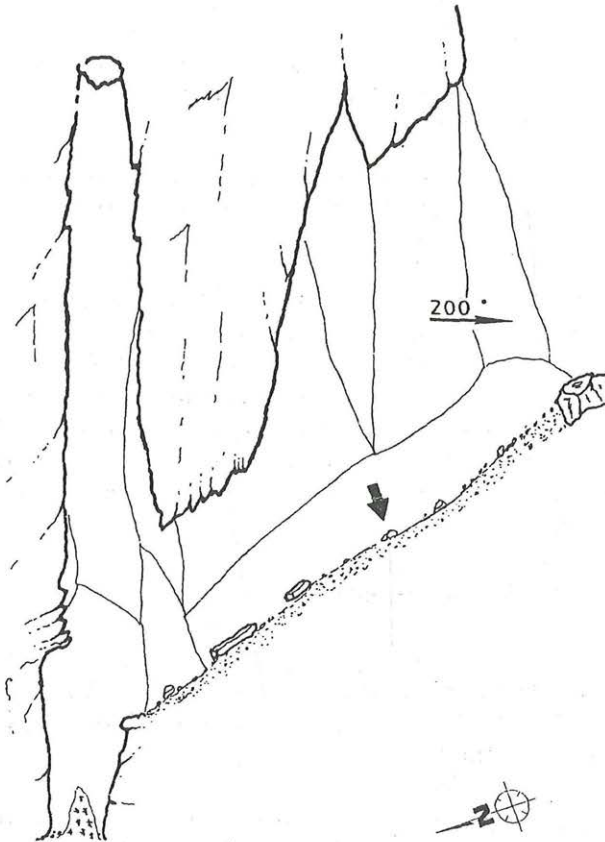


Fig. 1. Vertical section of Cave A-50. The thick arrow marks the collecting site of *P. cavicola*. - Drawing J. I. CALVO.

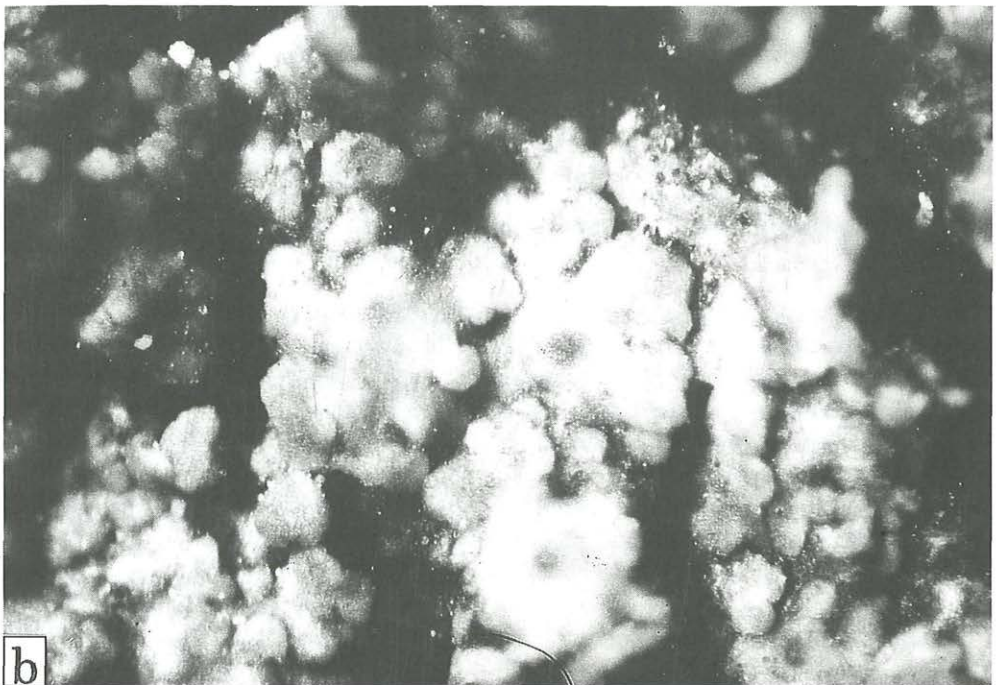
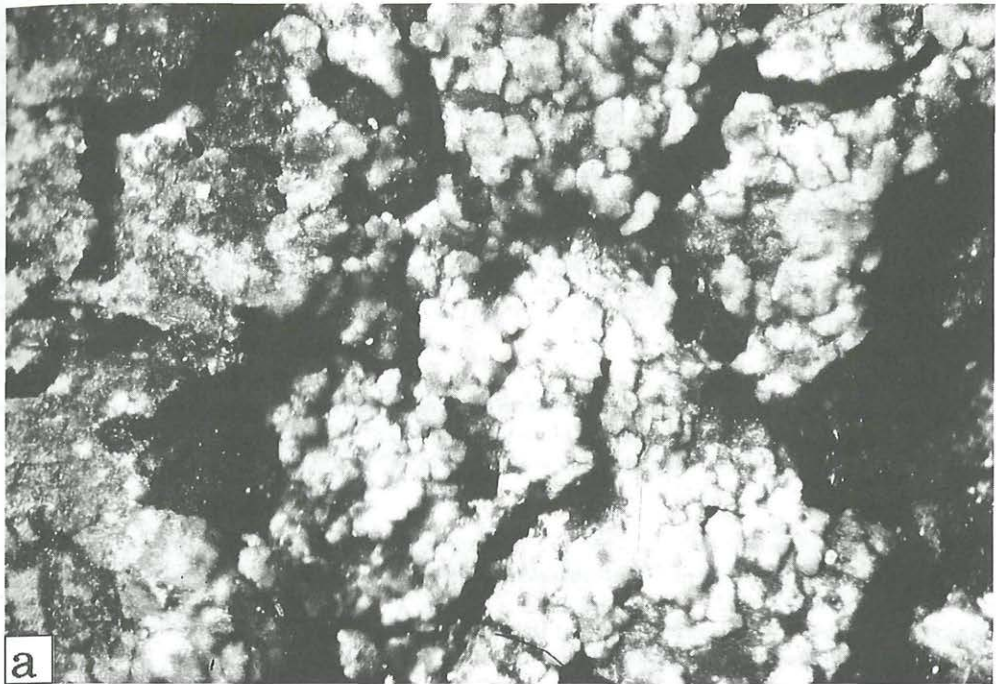


Fig. 2. *Placidiopsis cavicola*, holotype. a Habitus; b same specimen, detail. - Phot. J. ETAYO.

The cave in which *P. cavicola* was found, is situated in the Larra Karst of the Occidental Pyrenees in the subalpine belt with *Pinus uncinata* vegetation. The climate is atlantic with a mean annual precipitation of 2000 mm in the region, and probably more than 3000 mm/a at these heights. Snow stays from November to June, and it is possible to find snow in some parts of the cave until August. *P. cavicola* was found on a flagstone on the ground in the cave, c. 5 m in from the entrance (Fig. 1). The ecological conditions here are as follows: humidity 85%, air temperature 5° (August), low (umbral) illumination, inclination 40°. The only accompanying lichen species is *Catillaria minuta* (MASSAL.) LETTAU. On the walls in this part of the cave *Verrucaria caerulea* DC., *Caloplaca* aff. *lactea* (MASSAL.) ZAHLBR., bryophytes, and *Asplenium* spec. were found.

We are much indebted to Dr B. J. COPPINS (Edinburgh) for linguistic corrections on the manuscript. The first author is grateful to J. I. CALVO and I. SANTESTEBAN for their valuable collaboration, and to the Gobierno de Navarra for a subsidy to study caves in Navarra.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Österreichische Zeitschrift für Pilzkunde](#)

Jahr/Year: 1994

Band/Volume: [3](#)

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Artikel/Article: [Placidiopsis cavicola, a new lichen species \(Verrucariaceae\) from the Pyrenees. 21-24](#)