

## *Caloplaca cerina* in the Pyrenees mountains of Huesca Province

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### Abstract

A. R. BURGAZ, F. ARENAL, V. GONZÁLEZ AND F. ESTEVE-RAVENTÓS. 1999. *Caloplaca cerina* in the Pyrenees mountains of Huesca Province. *Bot. Complutensis* 23: 53-57.

A population of *Caloplaca cerina* (Ehrh. ex Hedwig) Th. Fr. from the subalpine belt in Huesca Province with an infrequent ascospore septum thickness is studied. Macro and microphotographs of the most striking features are added.

**Key words:** Flore, Huesca, *Caloplaca*.

### Resumen

A. R. BURGAZ, F. ARENAL, V. GONZÁLEZ AND F. ESTEVE-RAVENTÓS. 1999. *Caloplaca cerina* en los Pirineos de Huesca. *Bot. Complutensis* 23: 53-57.

Se estudia una población de *Caloplaca cerina* (Ehrh. ex Hedwig) Th. Fr. procedente del piso subalpino de los Pirineos oscenses que presenta ascósporas con un grosor del septo infrecuente. Se incluyen fotografías de los caracteres más destacables.

**Palabras clave:** Flora, Huesca, *Caloplaca*.

### INTRODUCTION

During several field works carried out in the summer of 1996 in the Pyrenees mountains, in order to collect fungi not lichenized (ESTEVE-RAVENTÓS *et al.*, 1997) the three last authors found a *Caloplaca* population overgrowing dead leaves of *Dryas octopetala* L. The apothecium of these samples lacks a persistent swollen and raised greyish flexuose thalline exciple. This character together with the smaller,

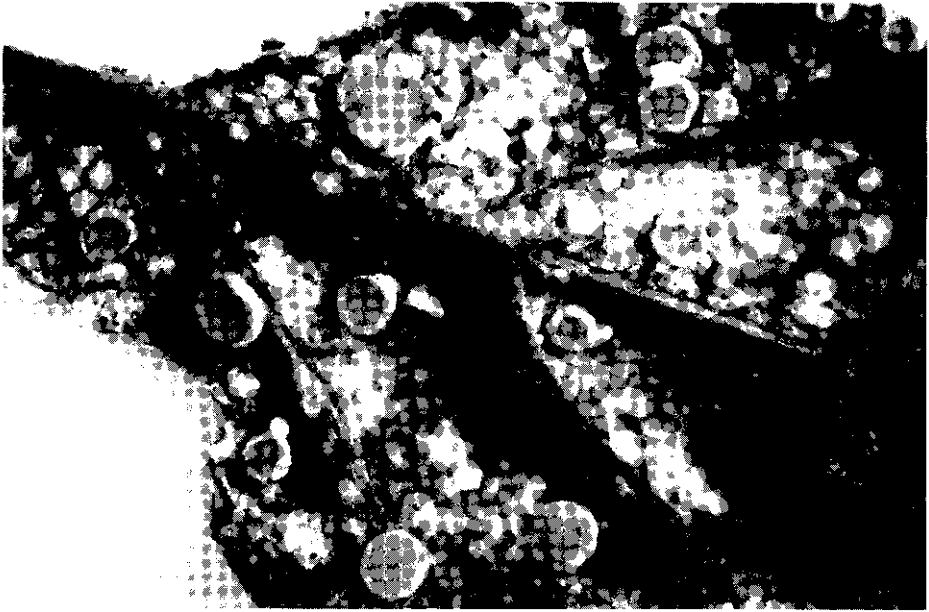


Figura 1.—Thallus of *Caloplaca cerina*. x40.

not sessile and plane apothecium (not concave when young) are common features in Arctic-alpine samples overgrowing mosses of *C. stillicidiorum* (Vahl) Lyngé, not always possible to separate from *C. cerina* (Ehrh. ex Hedwig) Th. Fr. and generally synonymized (Søchting in littere).

Our samples have faint white pruina on the disks and the ascospores have a swollen and thick septum that looks strange because the septum size published in Arctic material of *C. cerina* is smaller, 4–6  $\mu\text{m}$  (HANSEN *et al.* 1987) and generally less than  $\frac{1}{2}$  of ascospore length. Nevertheless, as the group is extremely difficult and variable, a modern revision of southern European species is urgently needed. Meanwhile, we include this material as a shaded form of *C. cerina* s. lat., and a detailed description could be interesting for further studies.

#### MATERIAL AND METHODS

The anatomical measures were obtained from freezing microtome sections, mounted in destillated water and lactophenol cotton-blue. Mature ascospores, without lipidic drops, were studied six months after recolection and any pretreatment was used to avoid variations in septum size (STEINER & PEVELING, 1984).

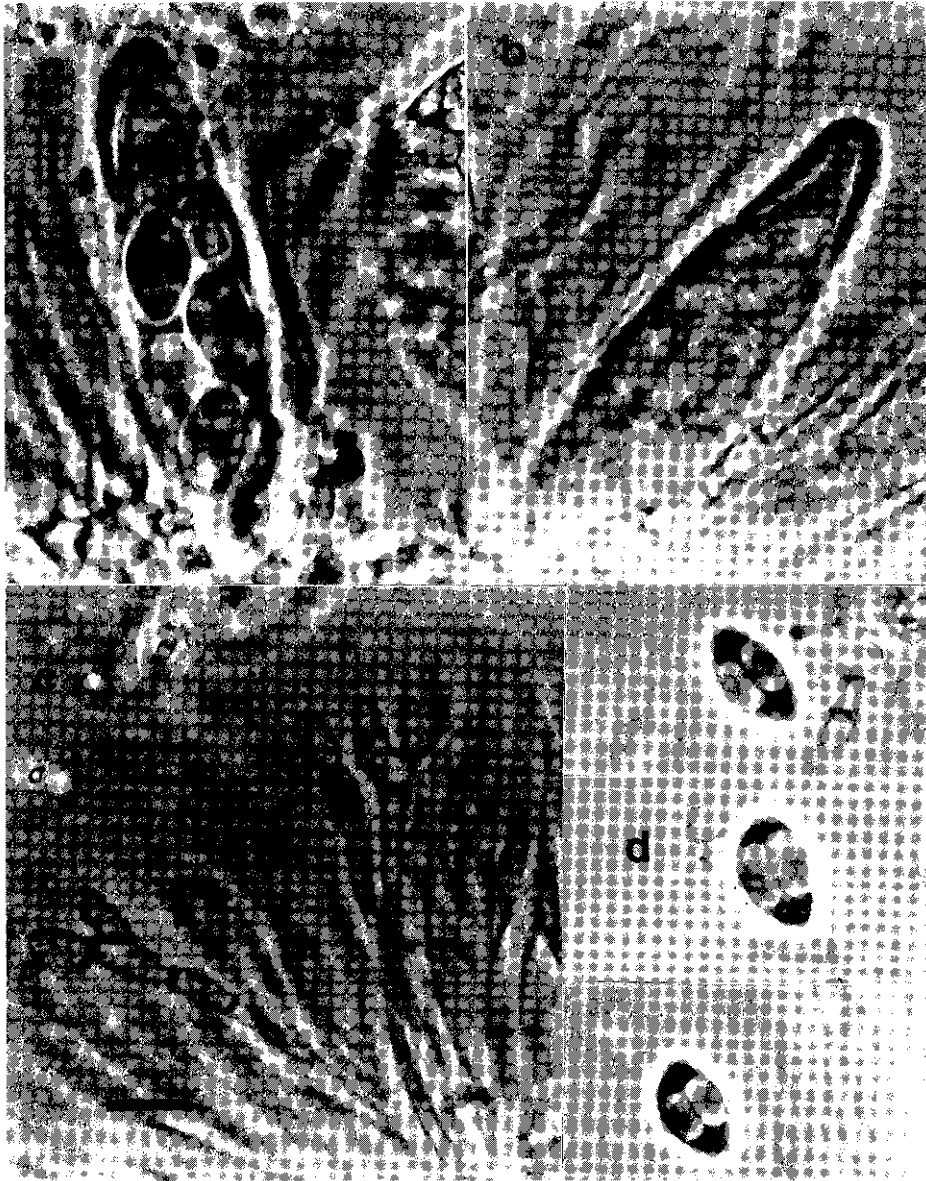


Figura 2.—*Caloplaca cerina* in phase contrast illumination. a, b, Asci; c, Paraphyses; d, Spores. Scale=10  $\mu$ m.

## DESCRIPTION

Material studied: Spain: Huesca Province, Bielsa, Valle de Pineta, Sierra de Revilla, La Pala de Montinier, near Mayo Gran and Mayo Pequeño, 30TBH6922, 1600-2000 m, 28-VIII-1996, in subalpine meadow of *Dryado-Salicetum pyrenai-cae*, F. Arenal; V. González & F. Esteve-Raventós, MACB 64965.

*Thallus* crustose, inconspicuous, greyish (Fig. 1.) K-, C-. Prothallus inconspicuous. Photobiont green, trebouxoid.

*Apothecia* numerous, with faint white pruine, constricted at base, 0.1-0.5 mm in diameter, persistently flat and dispersed, disc yellow to greenish yellow, K+ violet-red. With a persistent pale and unprominent thalline exciple, thin and smooth, K-. *Epithecium* with numerous yellowish brown crystals. *Hymenium* colourless, 60-70  $\mu\text{m}$  high. *Hypothecium* colourless. *Paraphyses* simple to sparsely branched, septate, apical cells slightly enlarged up to 2.5-4  $\mu\text{m}$  thick (Fig. 2).

*Asci* 8-spored, *Teloschistes*-type, 49-60  $\times$  13-15  $\mu\text{m}$ . *Ascospores* 11.5-15  $\times$  5-9  $\mu\text{m}$ , broadly ellipsoid, polarilocular, colourless, septum 7-9 m wide, more than  $\frac{1}{2}$  of the length of the ascospore. *Conidiomata* not observed.

**Distribution:** *C. cerina* is frequently reported in several habitats especially in polluted areas of the Mediterranean Region. In the Pyrenees mountains this species was collected on several phorophytes at lower altitudes and only rarely in the montane belt (GÓMEZ-BOLEA, 1985; ETAYO, 1990). The first reference of this taxon in Spanish subalpine habitats was by AZUAGA & GÓMEZ-BOLEA (1996) from Port de la Bonaigua in Lérida Province growing on deciduous trees and *Dryas octopetala*, later on was collected in Andorra growing on *Saxifraga oppositifolia* and bryophytes (AZUAGA & GÓMEZ-BOLEA, 1998) and in Palencia Province on bryophytes (LÓPEZ DE SILANES *et al.*, 1998), but these authors do not mention ascospore morphological variations in their samples. Our collection is first record to Huesca Province.

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