

AN INTERESTING *LYCOPERDON* AFFIN TO *L. ERICAEUM*

M. P. MARTÍN¹ & M. JEPSON²

1.- Real Jardín Botánico, C.S.I.C., Plaza de Murillo 2, 28014 Madrid, Spain.

2.- Lilla Håjumsgatan 4, S-461 35 Trollhättan, Sweden.

ABSTRACT. An interesting *Lycoperdon* affin to *L. ericaeum*. *Lycoperdon* collections recorded from acidic, dry, mossy habitats on rocks or on sand in Fennoscandia and the Northeastern of Spain are here described. These collections are close to *L. ericaeum* but differs in its protruding ostiole and its subelastastic capillitium.

Key Words: Basidiomycotina, Lycoperdales, Spain, Sweden

RESUMEN. Un interesante *Lycoperdon* afín a *L. ericaeum*. Se han recolectado basidiomas de *Lycoperdon* entre musgos en terrenos acidófilos or en zonas arenosas en Fennoscandia y en el noreste de España. Estas recolecciones presentan caracteres similares a los de *L. ericaeum*, pero difieren en su ostiolo prominente y el capilicio subelástico.

INTRODUCTION

In the early 1970-ies an unidentified species of *Lycoperdon* with small subglobose to pyriform fruitbodies growing in thin moss cover on granitic rocks was discovered in South Sweden. The same species was later found also in South Norway, Finland and Northeastern of the Iberian Peninsula. Recently, these specimens were reexamined to define the macroscopic and microscopic characters following the criteria of DEMOULIN (1972). The material studied is kept mainly in MA-Fungi, BCC and the private herbarium of M. Jeppson (MJ). Observations of the gleba were made using a Hitachi S-2300 SEM according to MARTÍN & ROCABRUNA (1988). It is an interesting *Lycoperdon* related to *L. ericaeum* and, according to V. Demoulin, could be a form of *L. niveum*, a rare species of which the variability is unfortunately not sufficiently known at the moment.

DESCRIPTION

Basidiomes subglobose-pyriform (0,7)-1,0-1,5-2 cm in diameter. Exoperidium whitish, pale brownish or yellowish brown, formed by flocculent and convergent small spines (less than 1 mm tall); some collections, with brown and isolated small spines. Endoperidium yellowish brown. Mouth rounded, lobed, distinctly protruding. Subgleba small but usually well developed, pale greyish brown. Pseudocolumella weakly developed. Spore print yellowish brown, "terre d'ombre brûlée" (PXII n° 176; SÉGUY, 1936).

Exoperidium formed by thinwalled and hyaline sphaerocysts, 10-20 µm in diameter; sometimes irregular, somewhat angular sphaerocysts have been observed. Endoperidium "banal" formed by hyphae running paralell to the surface; these hyphae are 6-7 µm in diameter; in mouth zone isolated, dextrinoid and spiny setate sphaerocysts are present (20-60 x 4-8 µm). Capillium subelastastic and fragile, hyphae (2-5 µm diameter) frequently ramified, thinwalled with some small pores; septa occur

sparingly, often at the ramifications. Spores sphaerical 4,0-4,5-(5,0) μm diameter, finely warted (B); no debris of broken pedicels have been observed.

HABITAT AND DISTRIBUTION. Found in general in more or less sun-exposed dry, acidic places among mosses on rocks, at margins of mixed forest (Fennoscandia and Spain) as well as among mosses and low herbs on dry sand in hemiboreal and boreal zones in Fennoscandia.

COLLECTIONS EXAMINED. NORWAY: Oppland, Nordre Land, Nordsinni, Møllersforsen, 31-8-1997, *leg.* J. & M. Jeppson 4304 (MJ, MA-Fungi); Søndre Land, Trevattna, N. Vassenden, 14-9-1984, *leg.* J. Nitare (MJ 1673). SPAIN: Barcelona, Vallès Oriental, Mosqueroles, 2-12-1992, *leg.* A. Rocabrana (BCC- MPM1606). SWEDEN: Västergötland, Rångedala, N of lake Marsjön, 1-11-1996, *leg.* R.-G. Carlsson (MJ); Västergötland, Trollhättan, Sylte, 2-9-1971, *leg.* M. Jeppson 57 (MJ); *Ibidem*, 30-4-1970, *leg.* M. Jeppson 170 (MJ); *Ibidem*, 19-8-1972, *leg.* M. Jeppson 248 (MJ, MA-Fungi); *Idem*, *leg.* M. Jeppson 250 (MJ); *Idem*, *leg.* M. Jeppson 251 (MJ,); *Ibidem*, 5-9-1972, *leg.* M. Jeppson 258 (MJ, BCC, MA-Fungi); Västergötland, V. Tunhem, S of "Hembygdsgården, 7-9-1974, *leg.* M. Jeppson 540 (MJ, BCC, MA-Fungi); *Ibidem*, 12-10-1974, *leg.* M. Jeppson 629 (MJ); Västerbotten, Stadsliden, Gammlia, 10-9-1979, *leg.* J. Nitare (S).

The subelastium capillitium and the protruding mouth with thickwalled, dextrinoid, setose sphaerocysts, are not present in *L. ericaeum* Bonorden. *L. niveum* is an artic-alpine species so far known from the Himalayas and Iceland. The spore ornamentation is the best character that separate this species (typus C, DEMOULIN 1972) from the material described in this paper (typus B, DEMOULIN 1972).

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REFERENCES

- DEMOULIN, V. (1972). Le genre *Lycoperdon* en Europe et en Amérique du Nord. Étude taxonomique et Phytogéographique. Doctoral Thesis. Univ. Liège.
- MARTÍN, M.P. & ROCABRUNA, A. (1988). *Phellorinia herculeana* (Pallas: Pers.) Kreisel en los Monegros.
- SÉGUY, E. (1936). XXX Code Universel des couleurs. Edt. P. Lechevalier, 51 pl. Paris.

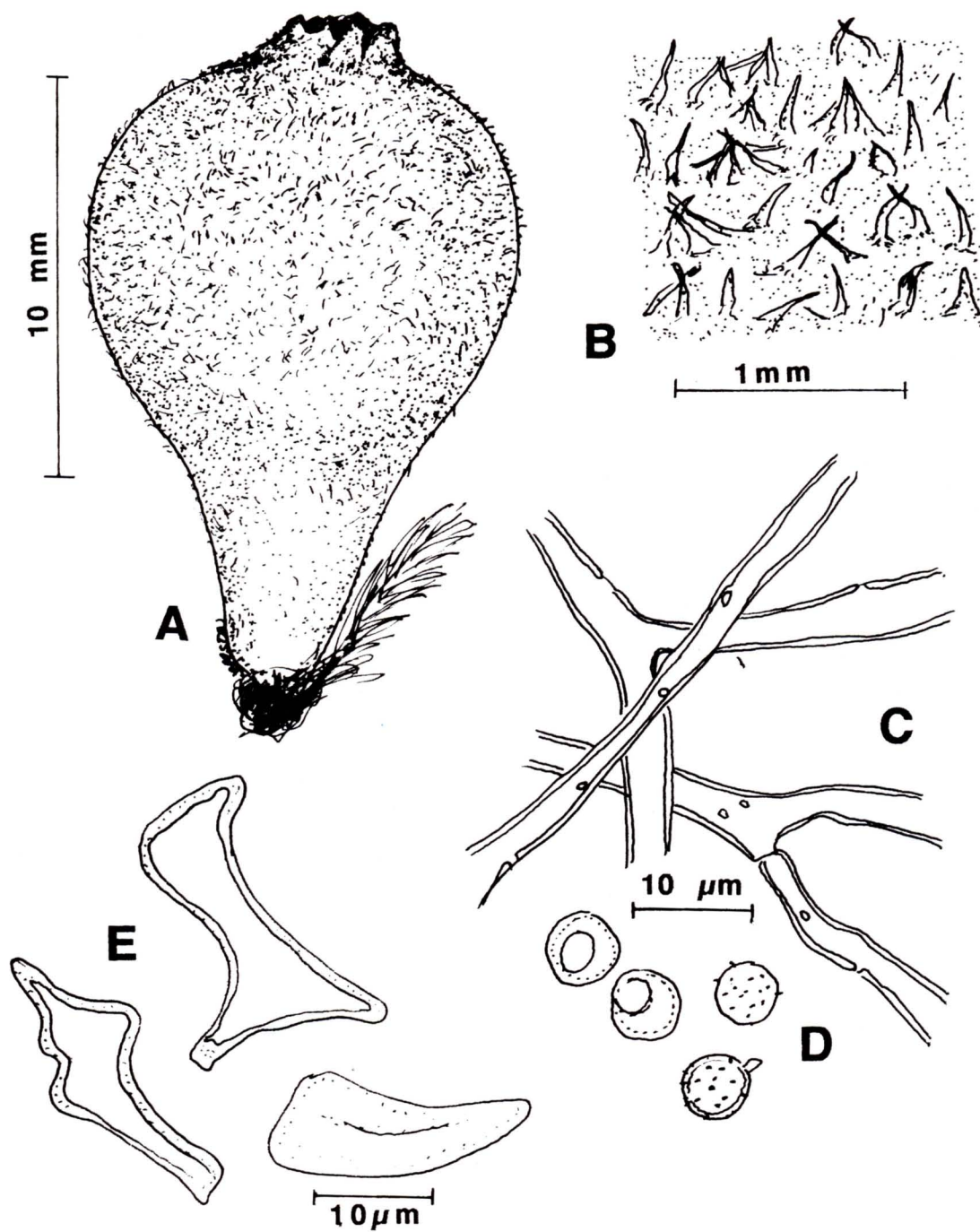


Fig. 1 *Lycoperdon* sp. aff. *L. ericaeum* Bonorden.- A. Habitus. B. Detail of peridium. C. Capillitium. D. Spores. E. Setose sphaerocysts from mouth zone.

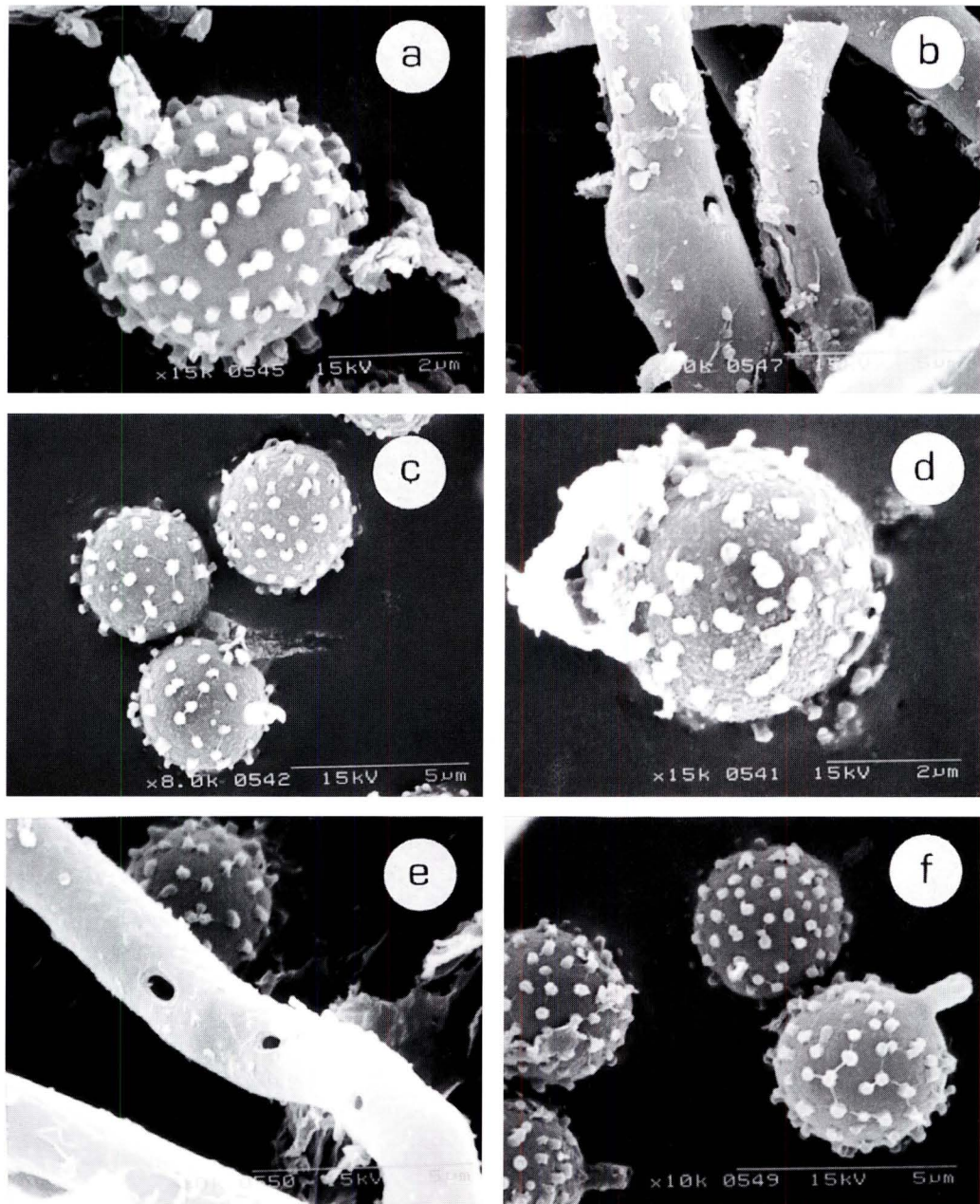


Fig. 2. *Lycoperdon* sp. aff. *L. ericaeum* Bonorden. Spores (A, C, D, F) and capillitium (B, E). Collections BCC-MPM 1606 (A, B), M. Jeppson 258 (C, D) and M. Jeppson 540 (E, F).