

A new lichenicolous *Enterographa* species from Brittany (France)

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Abstract: *Enterographa brezhonega*, a fourth lichenicolous species in the genus is described. The species has been collected in an ancient woodland in western France growing on *Porina rosei* and probably other crustose lichens with a *Trentepohlia* photobiont. It shows affinities with the similar *Enterographa epiphylla*, but has an even number of septa and short-lirelliform ascomata.

Key words: *Arthoniales*, *Roccellaceae*

Introduction

Since the publication of an *Enterographa* monograph (Sparrius 2004) several additional species have been described (Aptroot *et al.* 2007; Ertz *et al.* 2005; Sparrius *et al.* 2006). The three previously known lichenicolous species of *Enterographa* are distributed mainly in the tropics. Two species, *E. epiphylla* (Sérus.) Ertz, Diederich & Sparrius (Aptroot *et al.* 1997; Ertz *et al.* 2005) and *E. mazosiae* Matzer live on epiphyllous lichens. The third species, *E. punctata* Ertz & Diederich, is a gall-inducing parasite on *Lobaria* (Ertz *et al.* 2005). During a field trip to Brittany the authors discovered a fourth lichenicolous species of *Enterographa* growing on *Porina rosei* in an old-growth forest.

Enterographa brezhonega Sparrius & Aptroot sp. nov.

Species lichenicola. Ascomata lirelliformia, brunnea vel nigra, 2–5 in pseudostromatibus sedent. Asci 4-sporei, 40–50 × 12–15 µm. Ascospores fusiformes, (4–)6 septatae, (12–)15–20 × 2.5–3.0(–4.0) µm.

Typus: France, Bretagne, Finistère, Scaër, Forêt de Coatloc'h, on trunk of mature *Quercus robur* in ancient woodland, lichenicolous on *Porina rosei*, 30 T VU

435160 (WGS84), 150 m, 29 vii 2006, Aptroot 65991 & Sparrius (B—holotypus; hb Sparrius 8976—*isotypus*).

(Figs 1 & 2)

Thallus absent, species lichenicolous on various lichens, not inducing galls. *Pseudostromata* superficial on the host, flat to strongly convex, cerebriform, with 2–5 ascomata, white with a thin white pruina, 0.2–0.7 mm diam. and up to 150 µm thick, densely filled with oxalate crystals *c.* 15 µm diam.

Ascomata apically converged, entirely immersed in the pseudostromata, lirelliform, often branched, 0.03–0.1 × 0.1–0.6 mm, disc shiny dark brown to black, not pruinose. *True excipulum* very thin, *c.* 15 µm wide, hyaline to dark orange-brown (crystals) in section, K–. *Hypothecium* hyaline, 10–15 µm tall, K–, filled with small oxalate crystals up to 5 µm diam. *Hymenium* hyaline, 60–100 µm tall. *Paraphysoids c.* 0.8 µm wide, branched and anastomosed, apices not swollen, hyaline. *Epithecium c.* 10 µm tall, with orange-brown pigment, unchanged in K, without crystals. *Asci* 40–50 × 12–15 µm, clavate, bitunicate, apically thickened with a poorly developed ocular chamber (*Opegrapha*-type), 4-spored. *Ascospores* fusiform, (12–)15–20 × 2.5–3.0 (–4.0) µm (excluding perispore), (4–)6-septate with one of the middle cells sometimes enlarged,

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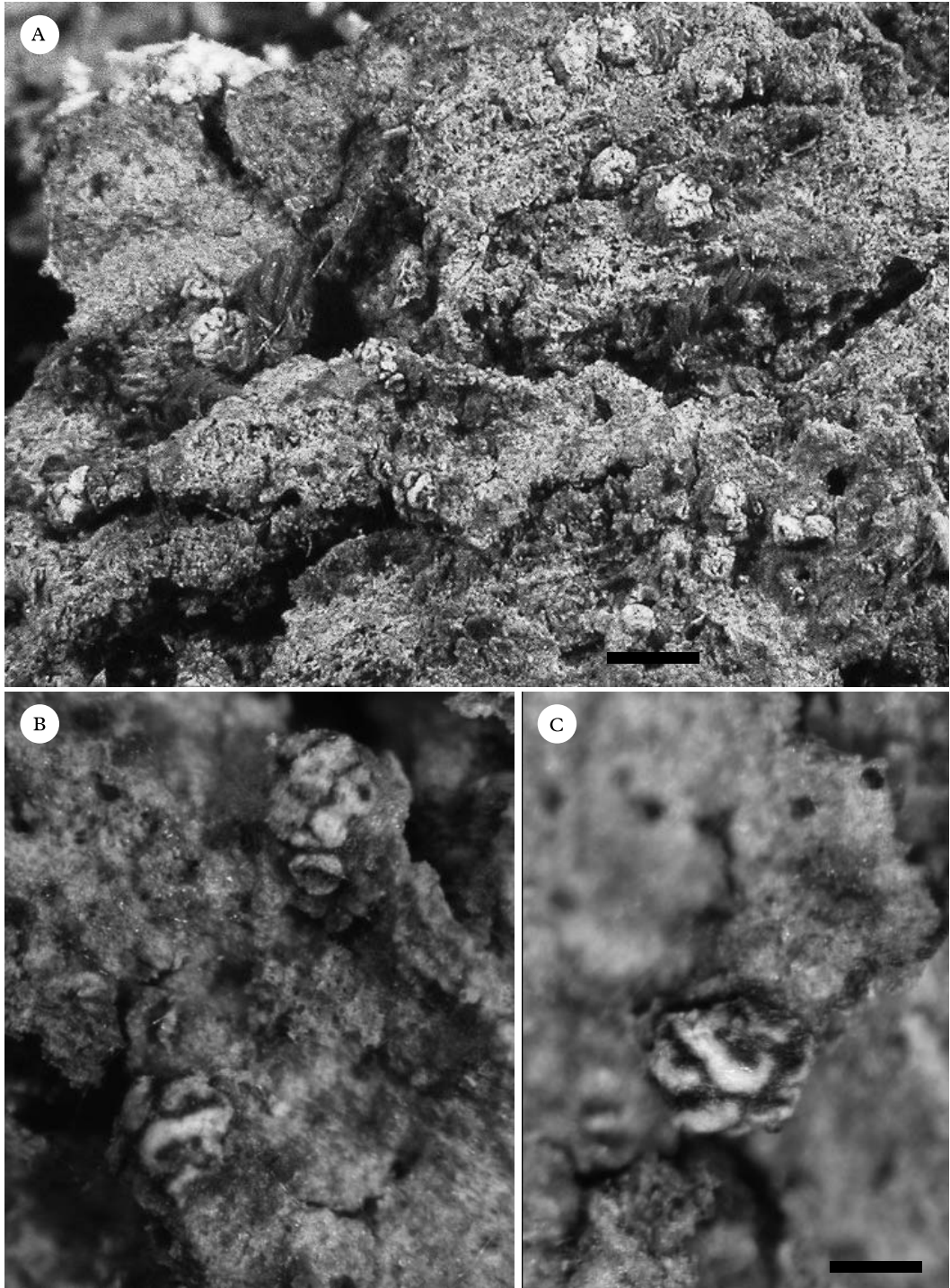


FIG. 1. *Enterographa brezhnoga* (holotype). A, infected thallus of *Porina rosei* with several pseudostromata; B & C, mature convex pseudostromata with lirelline ascomata. Scales: A=0.1 mm; B & C=0.5 mm.

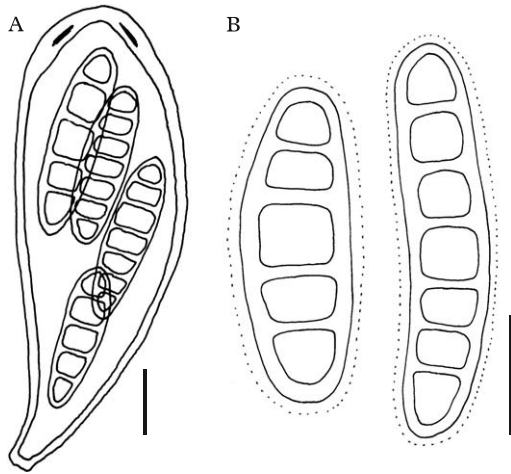


FIG. 2. *Enterographa brezhonega*. A, ascus with spores in 10% KI; B, typical ascospores with an even number of septa. Scales: A & B=5 μ m.

perispore to c. 1 μ m wide. Septation starts with two median septa.

Conidiomata not observed. *Conidia* sometimes produced by ill-defined conidiogenous tissue in outer parts of the excipulum (similar to those in *Enterographa bartletii* Sérus, as described by Sparrius, 2004), bacilliform, c. 3 \times 1 μ m, hyaline, simple.

Chemistry. Pseudostromata C⁻, K⁻, KC⁻, PD⁻, UV⁻ (no substances detected by TLC); amyloidity: excipulum, epithecium, hymenium, hypothecium I⁺ red, KI⁺ blue; asci I⁺ blue, turning red, KI⁻; asci with a KI⁺ blue apical ring.

Etymology. The name is derived from the word *brezhoneg*, Celtic for Breton.

Distribution and ecology. Known from a single locality on at least two mature *Quercus* trees in an old-growth woodland in coastal western France. The species grows lichenicolous on *Porina rosei* and possibly

also on *Pachyphiale fagicola* and other crustose lichens with a *Trentepohlia* photobiont. The distribution of the currently known hosts suggests that this new species should be looked for along the Atlantic seaboard and in Mediterranean Europe.

Notes. *Enterographa brezhonega* is easily overlooked as the white pseudostromata resemble myxomycete fruiting bodies. It is very similar in appearance to the pantropical *Enterographa epiphylla*, which has pseudostromata with a non-pruinose margin, punctiform ascomata, a K⁺ olivaceous exciple, and is confined to the epiphyllous lichen *Coenogonium flavicans*. Both taxa share the 4-spored asci and pale, rounded pseudostromata (i.e. a stroma of confluent thalline exciples of the ascomata) with dark coloured ascomata.

The even number of septa is a rare feature that also occurs in related genera, such as *Opegrapha* (Matzer 1996; Ertz *et al.* 2005).

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