

# *Enterographa serusiauxii*, a new foliicolous lichen species from Guadeloupe

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## Article info

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**Abstract.** The new species *Enterographa serusiauxii* (crustose *Roccellaceae*, lichenized *Ascomycetes*) is described from Guadeloupe. It grows abundantly on leaves of *Garcinia humilis* and *Calophyllum calaba* in coastal vegetation. It was already collected in the previous century by Le Gallo, but these specimens were only identified recently by us. In 2019 it was recollected in the type locality by the first author.

**Key words:** Guadeloupe, Lesser Antilles, foliicolous, *Roccellaceae*, *Enterographa*

## Introduction

Before 1950, foliicolous lichens in Guadeloupe were almost unknown. Santesson (1952) cited eight additional species from Guadeloupe, based on samples collected by P. and V. Allorge in 1936. Vivant collected many lichens in Guadeloupe, bringing the number of foliicolous lichens to 66 species (Vězda & Vivant 1992), including two newly described species (Vězda 1994). Sérusiaux (1998) described four new species of *Gyalideopsis* species from Guadeloupe and added 22 taxa not previously reported from Guadeloupe. Lücking (2008) mentions numerous records from Guadeloupe. Surveys carried out in 2007 and 2009 by Bricaud (2009) increased the number of foliicolous taxa in Guadeloupe to 165.

From 1951 to 1970, the priest C. Le Gallo collected many foliicolous lichens and gave them to the National Museum of Natural History (MNHN, Paris). In 1953, a part of the collection was given to Santesson, who identified 29 species in it without publishing them (Le Gallo 1972). The collection was not further studied until now, and the first outcome of our identification is the report of one new species. The final results of the examination of this collection will be the subject of a future paper, but here we describe the new species found in it.

Le Gallo collected a sample of *Enterographa* that remained unnamed. While the species appears abundant on leaves of *Garcinia humilis* and *Calophyllum calaba* in

coastal vegetation (< 10 m alt.), it was not recollected to our knowledge until 2019, when the first author visited the original locality. The species is described below.

## Material and methods

Identification and descriptive work employed an Olympus SZX7 stereomicroscope and an Olympus BX50 compound microscope with interference contrast, connected to a Nikon Coolpix digital camera. Sections were mounted in tap water, in which also all measurements were taken. IKI reactions were seen by adding commercial undiluted Lugol (Merck 9261). The chemistry of most specimens was investigated by thin-layer chromatography (TLC) using solvent A (Orange et al. 2001).

## Results

*Enterographa serusiauxii* Lebreton & Aptroot, sp. nov. (Fig. 1)

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Diagnosis: foliicolous *Enterographa* with verrucose thallus and 7–9-septate ascospores, (25–)27–29 × 2.5–3.5 μm.

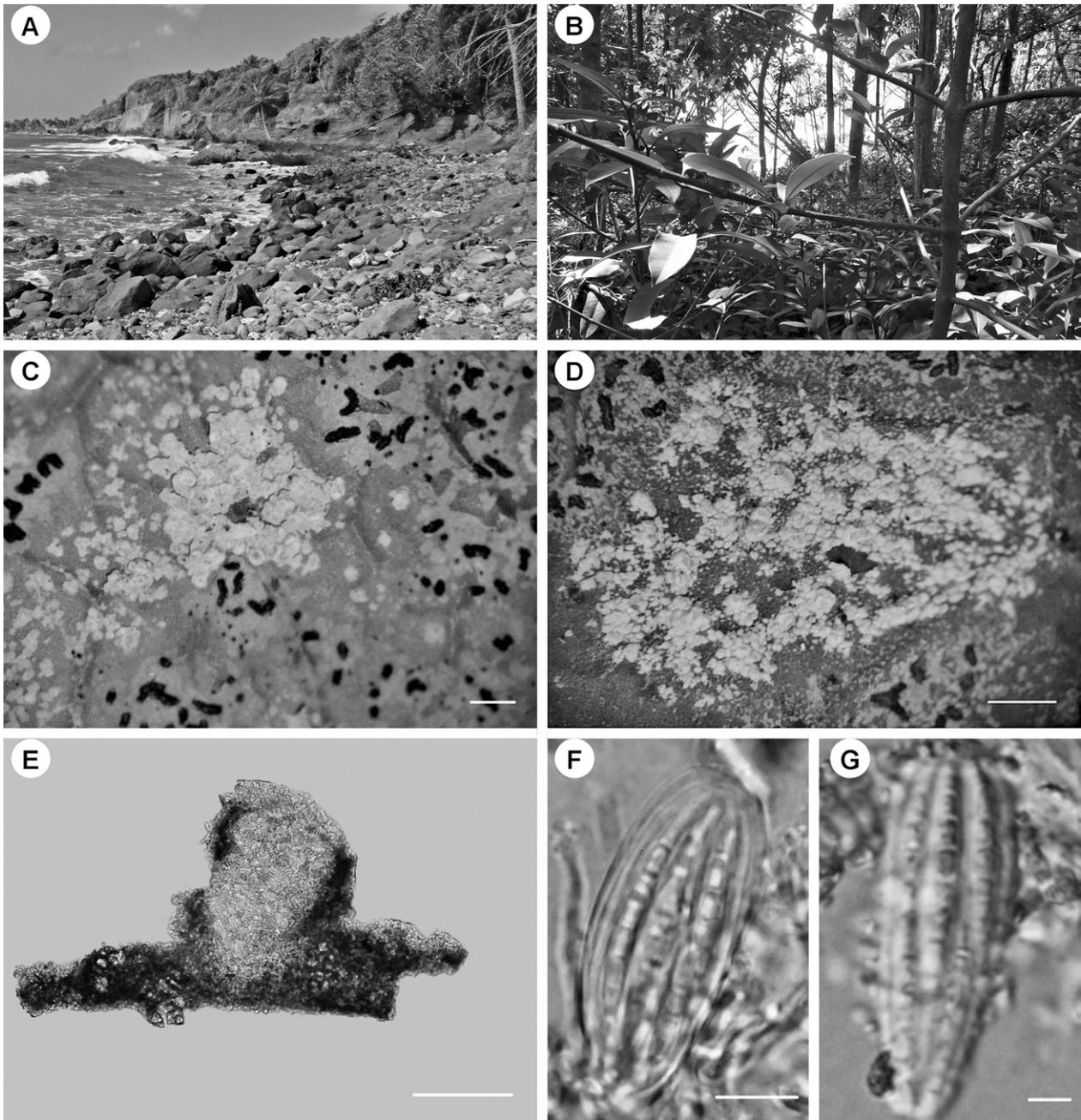
Type: Guadeloupe, Littoral de Robin municipality of Trois Rivières, 15°58'1.596"N, 61°39'10.943"W, alt. 7 m, leg. E. Lebreton & R. Poncet, 7 March 2019, on living leaves (*Garcinia humilis*) in coastal forest, (PC0712097 – holotype!, ABL – isotype!).

**Description.** Thallus crustose, foliicolous, very pale cream to off-white, to ~9 mm in diam. and ~0.1 mm thick, very uneven, verruculose, with verruculae ~0.1 mm diam., up to 0.2 mm thick in places with apothecia, in section with numerous hyaline crystals; without prothallus

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**Figure 1.** *Enterograptha serusiauxii*: A–B – Littoral de Robin, location of the holotype; C – holotype, PC, thalli with apothecia collected in 2019; D – isotype, PC, thalli with apothecia collected in 1958 by Le Gallo; E – section showing apothecium; F – holotype, asci with ascospores; G – isotype asci and ascospores (from Le Gallo collection). Scales: C–D = 1 mm; E = 0.1 mm; F–G = 5  $\mu$ m. [The color version will be available online](#)

but often with small areas without thallus between verruculae. Photobiont *Trentepohlia*, cells elongate in outline, yellowish green to orange. Ascomata apothecia, immersed in thallus, oval to irregularly slit-like,  $\sim 0.15 \times 0.2$ – $0.4$  mm; disc pale brown, flat to concave; margins of thallus structure and colour,  $\sim 0.1$  mm wide. Hymenium hyaline,  $\sim 50$   $\mu$ m high; epihymenium, excipulum and hypothecium hyaline. Paraphyses anastomosing. Asci ellipsoidal,  $\sim 45 \times 15$   $\mu$ m. Ascospores hyaline, 8 per ascus, slender clavate, slightly curved, 7–9-septate, (25–)27–29  $\times$  2.5–3.5  $\mu$ m, walls thickened, with 1  $\mu$ m thick gelatinous sheath. Pycnidia not observed.

**Chemistry.** Medulla K–, P–, C+ red, UV–. TLC: gyrophoric acid.

**Etymology.** This new species is named in honour of Emmanuël Sérusiaux, who introduced both of us to the study of foliicolous lichens, and who has a profound interest in foliicolous lichens and in the lichen flora of Guadeloupe.

**Notes.** The internal structures, especially the curved ascospores with thick walls, are in accordance with the genus *Enterograptha* sensu Sparrius (2004). The new species differs from all species treated by Sparrius (2004) by its verrucose thallus, the long ascospores and the chemistry. The recently described foliicolous species *E. oregonensis* (Sparrius & Björk 2008) differs by the C-negative thallus. In the recent world key to species of *Enterograptha* (Seavey & Seavey 2014) the new species would key out close to *E. oregonensis*.

**Distribution and ecology.** Known only from Guadeloupe. On living leaves of *Garcinia humilis* and *Calophyllum calaba* in coastal vegetation. The species is locally abundant (as can be seen from the many specimens cited) and often accompanied by numerous individuals of *Opegrapha* sp.

**Additional specimens examined.** Same details as type; PC0712066, PC0712067, PC0712068, PC0712069, PC0712070, PC0712071, PC0712072, PC0712073, PC0712074, PC0712075, PC0712076, PC0712077, PC0712078, PC0712079, PC0712080, PC0712081, PC0712098 & PC0712099 (all PC – paratypes!); same locality as type, 17 April 1958, C. Le Gallo PC0712077, PC0712078 (all PC – topotypes!); Grande Anse (Trois Rivières), 15°58'1.596"N, 61°39'10.943"W, 20 November 1961, C. Le Gallo; PC0712072, PC0712073, PC0712074, PC0712075, PC0712076 (all PC!); Embouchure de la rivière Sarcelle (Petit Bourg/Goyave), 16°9'40.464"N, 61°34'59.195"W, 13 November 1961, C. Le Gallo; PC0712079, PC0712080, PC0712081 PC0712066, PC0712067, PC0712068, PC0712069, PC0712070, PC0712071 (all PC!); Anse à Sable, 16°8'55.032"N, 61°46'27.155"W, 9 March 2019, E. Lebreton & R. Poncet; PC0712096 (PC!).

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