

***Cystogloea oelandica*: an unusual new auricularioid species from Sweden**

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Cystogloea oelandica, a new species and genus of auricularioid fungi (Basidiomycota, *incertae sedis*), is described from the Swedish island of Öland.

Key words: Basidiomycota, heterobasidiomycetes, parasitic fungi

INTRODUCTION

Whilst examining collections brought back from a field trip to the Swedish island of Öland in 2001, an undescribed auricularioid fungus was found with gelatinous basidiomes and unusual, deciduous probasidia arising from disarticulating hyphal compartments. This new species is described in a new genus, as follows:

DESCRIPTION OF GENUS AND SPECIES

Cystogloea P. Roberts gen. nov.

Basidiomata gelatinosa. **Hyphae** in matrice gelatinosa, moniliformes, disarticulantes, in typo generis efibulatae. **Probasidia** ex hyphis disarticulatis constata, tenuitunicata. **Epibasidia** cylindracea, septata. **Basidiosporae** in typo generis oblongae.

Typus generis: *Cystogloea oelandica* P. Roberts

The new genus is distinguished by producing gelatinous basidiomes in which auricularioid basidia arise from conspicuous probasidia which develop from disarticulated segments of moniliform hyphae.

Cystogloea oelandica P. Roberts sp. nov.

Basidiomata gelatinosa, hyalina, pustulata, 1 - 2 mm lata. *Hyphae* in matrice gelatinosa, moniliformes, disarticulantes, efibulatae. *Probasidia* ex hyphis disarticulatis constata, plerumque subglobosa vel ellipsoidea, c. 15 - 20 x 12 - 17 μm , saepe oblonga vel cylindrica, fusiformes, c. 25 - 40 x 8 - 10 μm , tenuitunicata. *Epibasidia* cylindracea, 45 - 60 x 5 - 7 μm , terseptata. *Sterigmata* 4 - 10 (- 18) μm longa. *Basidiospores* oblongae, 8 - 10.5 x 5.5 - 6.5 μm .

HOLOTYPE: SWEDEN, Öland, on *Quercus* twig with *Pseudotrichia minor* on old stromata of *Amphiportha leiphaemia*, 4 June 2001, B.M. Spooner, K(M) 137630.

Basidiomes gelatinous, hyaline, erumpent, irregularly pustular, 1 - 2 mm across, often coalescing. *Hyphae* in a soft, gelatinous matrix; disarticulating and only visible as disconnected, swollen, hyphal compartments in most basidiomes examined; where vis-

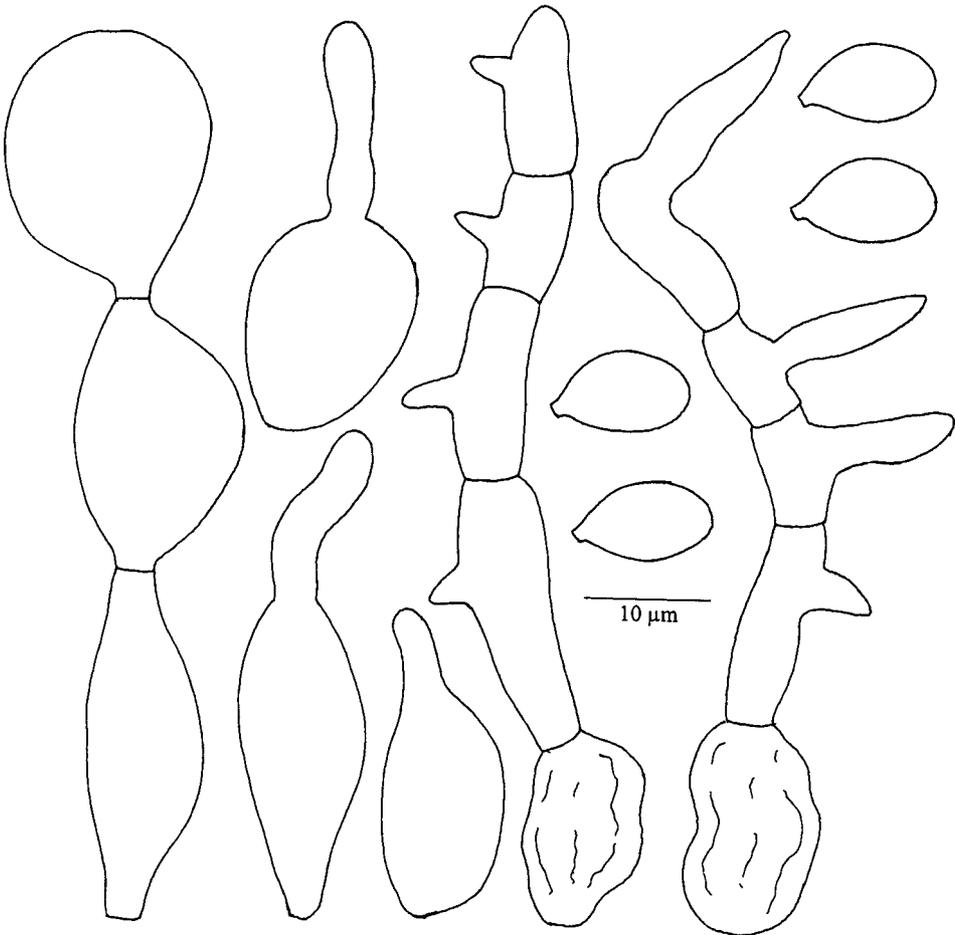


Fig. 1. *Cystogloea oelandica*. (left to right) moniliform hyphae; disarticulated hyphal compartments (probasidia) starting to produce epibasidia; mature, septate epibasidia arising from collapsed hyphal compartments (probasidia); basidiospores (type specimen).

ible, composed of branching chains of short, swollen, hyaline compartments, 10 - 35 x 6 - 17 μm , 2.5 - 3.5 μm wide at septa, lacking clamp-connexions. *Hyphidia* none seen. *Cystidia* none seen. *Conidiophores* none seen. *Basidia* arising from disarticulated hyphal segments which act as probasidia; these probasidia thin-walled, variously shaped; mostly subglobose to ellipsoid, c. 15 - 20 x 12 - 17 μm , but often fusiform, oblong to cylindrical, c. 25 - 40 x 8 - 10 μm , and sometimes irregular; the probasidia give rise to tubular, auricularioid epibasidia, 45 - 60 x 5 - 7 μm , which become triseptate at maturity. *Sterigmata* 4 - 10 (- 18) μm long. *Basidiospores* oblong (Q = 1.4 - 1.6), 8 - 10.5 x 5.5 - 6.5 μm , germination not seen. Fig. 1.

The collection consists of several dozen, small, erumpent, gelatinous basidiomes which in the field were thought to be a species of *Tremella* Pers. The basidiomes were growing on an oak twig, most if not all arising from perithecia of *Pseudotrachia minor* Munk on old stromata of *Amphiportha leiphaemia* (Fr.) Butin. Microscopically, all that can be seen in most mounts are loose probasidia in a gelatinous matrix, some of which are giving rise to tubular, auricularioid epibasidia bearing oblong basidiospores. Examination of apparently immature basidiomes eventually revealed branched, rhizoctonia-like chains of swollen hyphal compartments. It appears that these swollen hyphal compartments readily disarticulate and subsequently act as probasidia.

No known auricularioid species appears similar. Deciduous basidia are a feature of the genus *Mycogloea* L.S. Olive, but in *Mycogloea* species it is the tubular, epibasidial part of the basidium that is deciduous, the probasidia (produced on normal, narrow hyphae) remaining attached (Bandoni 1998).

Large globose to oblong probasidia are found in some species currently assigned to the genus *Cystobasidium* (Lagerh.) Neuhoff, e.g. *C. proliferans* L.S. Olive and the lichen associates *C. hypogymniicola* Diederich & Ahti and *C. usneicola* Diederich & Alstrup, but in these species the probasidia are produced on normal hyphae and are not deciduous (Olive 1952; Diederich 1996).

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Cystogloea oelandica: niezwykle, nowy, auricularioidalny gatunek ze Szwecji

Streszczenie

Praca zawiera opis rodzaju i gatunku *Cystogloea oelandica* zebranego w 2001 roku na Wyspach Alandzkich w Szwecji.

