

## *Oviascoma*, a new genus of Otideaceae

Y.-J. YAO<sup>1,2</sup> AND B. M. SPOONER<sup>1</sup>

<sup>1</sup> Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE, U.K.

<sup>2</sup> School of Biomolecular Sciences, Liverpool John Moores University, Byrom Street, Liverpool L3 3AF, U.K.

A new genus *Oviascoma* is proposed to accommodate the fungus previously described as *Lamprospora crec'hqueraultii* var. *paludosa*. The genus is characterized by ovoid apothecia which are attached to the substratum at a narrow base, have a strongly convex hymenium, excipulum consisting of globose to subglobose cells and lacking a distinct margin. The operculate ascus with iodine negative reaction justifies its position in the *Otideaceae*.

In their account of *Ramsbottomia* W. D. Buckley, Benkert & Schumacher (1985) listed *Lamprospora crec'hqueraultii* var. *paludosa* Dennis as a doubtful species because the type collection no longer bears apothecia. They stated that the type material was fragmentary and considered that the species involved could be *Boudiera walkerae* Seaver. However, investigation of the type packet in K reveals more than 20 apothecia in good condition. Examination of this material shows that it represents a species distinct from *Lamprospora crec'hqueraultii* (P. Crouan & H. Crouan) Boud. and that there is no appropriate genus in which it can be placed. Therefore, a new genus is proposed here to accommodate this species. A full description of the species is also given.

The methods employed in this investigation are those given in Yao & Spooner (1995).

***Oviascoma*** Y. J. Yao & Spooner, gen. nov. (Figs 1–5)

Etym.: *ovi-* Latin, egg-; *ascoma* Latin, ascus-containing structure; referring to the egg-shaped apothecium of the type species.

*Apothecia* solitaria vel gregaria, albida, in sicco brunneola, primum cylindrica demum ovoidea vel obovoidea vel globosa. *Discus* valde convexus, laevis. *Receptaculum* emarginatum, glabrum, ad basin angustatum. *Excipulum* e textura globulosa compositum; muri cellularum tenues; cellulae marginem versus elongatiusculae vel clavatae. *Asci* operculati, cylindrici, 1-. *Ascospores* unicellulares, hyalinae, globosae vel subglobosae, spinis ornatae. *Paraphyses* filiformes, septatae.

*Species typica*: *Lamprospora crec'hqueraultii* var. *paludosa* Dennis (syn. *Oviascoma paludosum* (Dennis) Y. J. Yao & Spooner).

*Apothecia* solitaria or gregarious; whitish when fresh, brownish-orange to brown after drying; cylindrical at first, becoming ovoid or obovoid to almost globose. *Disc* strongly convex,

smooth. *Receptacle* emarginate, deeply cupulate, outer surface glabrous, attached to the substratum at a narrow base. *Excipulum* a *textura globulosa*, cells thin-walled, broadly ellipsoid to subglobose, marginal cells slightly elongate or clavate. *Asci* operculate, cylindric, 1-. *Ascospores* unicellular, colourless, globose to subglobose, ornamented with spines. *Paraphyses* filiform, septate, flexuous.

*Type species*: *Lamprospora crec'hqueraultii* var. *paludosa* Dennis (syn. *Oviascoma paludosum* (Dennis) Y. J. Yao & Spooner).

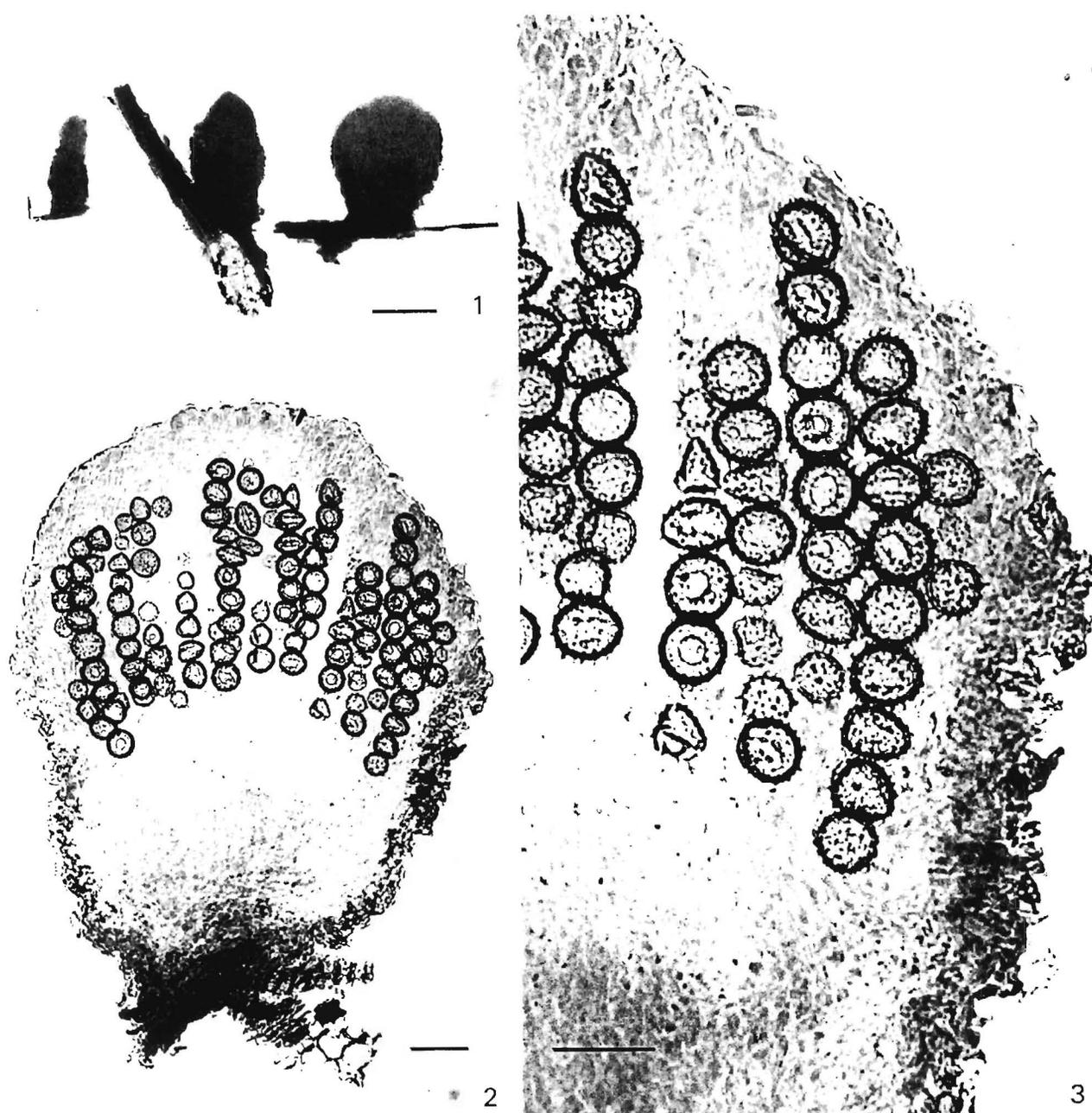
***Oviascoma paludosum*** (Dennis) Y. J. Yao & Spooner, comb. nov. (Figs 1–5)

*Lamprospora crec'hqueraultii* var. *paludosa* Dennis in *Kew Bull.* 1955: 572 (1956).

*Apothecia* solitaria or gregarious; whitish when fresh, brownish-orange to brown after drying; cylindrical at first, becoming ovoid or obovoid to almost globose; taller than broad, 0.5–1.0 mm high, 0.3–0.8 mm diam. *Disc* strongly convex, smooth. *Receptacle* emarginate, deeply cupulate, outer surface glabrous, attached to the substratum at a narrow base. *Excipulum* a *textura globulosa*, cells thin-walled, almost uniform, broadly ellipsoid to subglobose, slightly smaller towards the surface, 18.0–31.0 × 14.0–25.0 µm, marginal cells slightly elongate or clavate, 28.0–35.0 × 15.0–20.0 µm. *Asci* operculate, 1-, cylindric, 310–350 × 30.0–35.0 (–40.0) µm; 8-spored, spores uniseriate. *Ascospores* unicellular, colourless, globose to subglobose, 24.0–32.0 (–35.0) µm diam.; spore ornament of slender, often curved spines, 4.0–6.0 µm long, 1.0–2.0 µm broad at the base. *Paraphyses* filiform, septate, flexuous, thin-walled, 5.0–8.0 µm diam., gradually enlarged towards the clavate apex to 12.0–19.0 µm diam.

*Specimen examined*: England, Norfolk, Wheatfen, on rotting culms of *Carex riparia*, 3 Nov. 1946, E. A. Ellis (holotype, K).

This species resembles members of *Lamprospora* De Not. and *Ramsbottomia* in having globose to subglobose, ornamented



Figs 1–3. Photomicrograph of *Oviascoma paludosum* from the holotype. Fig. 1. Apothecia. Bar = 0.3 mm. Fig. 2. Vertical section of apothecium. Bar = 65  $\mu$ m. Fig. 3. Enlargement of the structure in the excipulum near the margin. Bar = 50  $\mu$ m.

spores. However, it is distinct in several respects. The apothecia in *O. paludosum* are emarginate, egg-shaped, taller than broad, and attached by a narrow base; the hymenium is strongly convex, even in dried material; and the excipulum consists of globose to subglobose cells. The apothecia of species of *Ramsbottomia* and those of *Lamprospora* are disc-shaped or cupulate with distinct margin, hymenium flat or concave when dried, and excipulum near the margin consisting of elongate cells. Moreover, the substratum of these fungi is also different. *Oviascoma paludosum* occurs on rotting vegetation, whilst *Lamprospora* and *Ramsbottomia* species are directly on bare soil or are associated with mosses.

From our examination of the type material, this species

differs from *Boudiera walkerae* (Seaver, 1939) in apothecial shape and spore size. *Oviascoma* may be confused with *Boudiera* Cooke as both include species with globose ascospores having echinulate ornament. However, the ascus wall of *Boudiera* stains blue in iodine, a crucial character which distinguishes Otideaceae from Pezizaceae. Ecology may, also, serve to distinguish these two genera, as species of *Boudiera* grow directly on soil (Dissing & Schumacher, 1979).

We wish to thank Dr R.W.G. Dennis for valuable discussion and permission to reproduce here his original drawings of apothecium and spores, and for reading the manuscript.

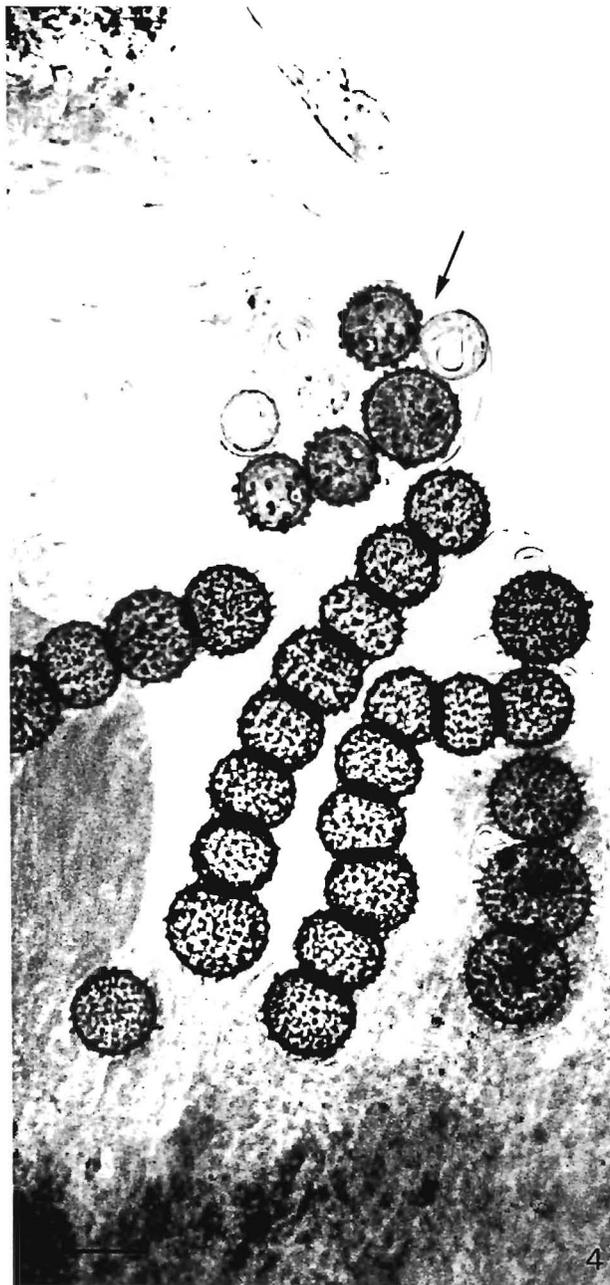
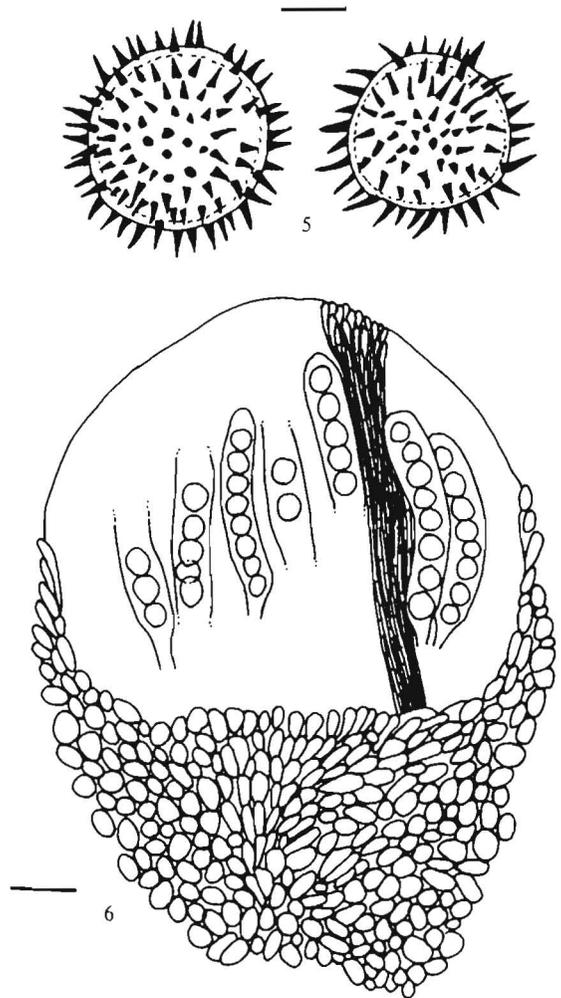


Fig. 4. Photomicrograph of *Oviascoma paludosum* from the holotype. Enlargement of asci and ascospores. An abnormal ascus with four degenerating spores is indicated by an arrow. Bar = 40  $\mu$ m.

Thanks are also due to Melanie Wilmott-Dear (Royal Botanic Gardens, Kew) for assistance with the Latin diagnosis, and to Prof. D.L. Hawksworth for general comments on the manuscript. This work has been carried out as part of the

(Accepted 24 June 1995)



Figs 5–6. *Oviascoma paludosum* (holotype). Fig. 5. Ascospores. Bar = 10  $\mu$ m. Fig. 6. Vertical section of apothecium. Bar = 0.1 mm.

project 'The Ascomycetes of Great Britain and Ireland', funded by a grant (GR3/8284) from the Natural Environment Research Council.

## REFERENCES

- Benkert, D. & Schumacher, T. (1985). Emendierung der gattung *Ramsbottomia* (Pezizales). *Agarica* **6** (12), 28–46.
- Dissing, H. & Schumacher, T. (1979). Preliminary studies in the genus *Boudiera*, taxonomy and ecology. *Norwegian Journal of Botany* **26**, 99–109.
- Seaver, F.J. (1939). Photographs and descriptions of cup-fungi. XXXII. A new *Boudiera*. *Mycologia* **31**, 499–501.
- Yao, Y.-J. & Spooner, B.M. (1995). New combinations in *Melastiza* and *Scutellinia* (Pezizales). *Mycotaxon* **53**, 467–477.