RAMGEA, A NEW GENUS OF PEZIZALES FROM THE NETHERLANDS

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A new ascomycetous genus, Ramgea, related to genera of the Thelebolaceae, is proposed with Ramgea annulispora, spec. nov. as type species.

Ramgea Brumm., gen. nov.


Typus generis: Ramgea annulispora Brumm.

TYPUS


ETYMOLOGY

An abbreviation formed from the initials of Dr. R.A. Maas Geesteranus, and suffix -ea for euphony. Gender feminine. It is with great pleasure to dedicate this new genus to Dr. R.A. Maas Geesteranus, to whom I express my cordial thanks for his advice and co-operation over many years.

Ramgea annulispora Brumm., spec. nov. — Figs. 1-3


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on the outside, consisting of one or a very few layers of angular and subglobular cells 5–14 × 4–12 μm (texture globulosa), more or less arranged in longitudinal rows, with maturity restricted to the lower part of the fruit-body. Asci numerous, clavate with a short, broad stalk and a dome-shaped apex, irregularly opening at the top, where wall layers are separating to form a cavity, 27–35 × 6.7–9.0 μm, mostly with 4 well-developed spores and (0–)1–3(–4) more or less deficient spores; the wall not staining blue with iodine. Ascospores uniseriate or irregularly arranged, ellipsoid (length/width ratio 1.3–1.7, average 1.38–1.51), 5.7–8.1 × 4.0–5.1 μm (without ornamentation), without oil globules or granules, ornamented with coarse outstanding ridges or crests in the shape of oblique rings or spirals; with more than 4 spores in an ascus the 'extra' spores are always smaller and without ornamentation. Paraphyses present, septate, filiform, simple, hyaline, in the lower part c. 2 μm thick, strongly globularly enlarged up to 5–9 μm at the tip, not embedded in mucus, only the exposed part of the tips covered with a rather uniform, thin layer of amorphous pale yellowish brown pigment.

Habitat.—Known only from dung of pheasant.

Etymology.—From Latin, annulus, a ring and spora, a seed: with spores possessing rings.


The material of this fungus was kindly sent to the Rijksherbarium by Mr. L. Raaijmakers. With fruit-bodies only occasionally over 100 µm wide, it belongs to the smallest among the Pezizales. Just because the fruit-bodies were growing in groups they could be detected on the substratum. Efforts to isolate this fungus again from dung samples of the same locality remained without success.

Although no developmental studies on living material could be executed, it could be concluded from the youngest stages available, that the ascomata are paragymnohymenial, i.e., only hyphae of limited growth over-arch the ascogonium, without forming a closed sheath during further development (van Brummelen, 1967). As a result swelling and intercallation of asci during ripening the hymenium widens considerably and the surrounding excipulum is stretched and mainly restricted to the basal part of the mature fruit-body.

Strongly swollen tips of paraphyses occur regularly with small ascomata of Pezizales with the same type of development, e.g. in Saccobolus versicolor (P. Karst.) P. Karst. and 'Asco- phanus' coemansii Boud. Especially when those swollen tips are covered or glued together with pigment or another substance, they form together with the cortical cells of the excipulum a continuous protective sheath around the developing asci.

The number of spores in each ascus is rather variable in R. annulispora. Although most asci form four full-grown ornamented spores, in a number of asci also up to four deficient spores can be found (Fig. 3c, d). At one occasion an ascus with twelve very small and two somewhat larger spores was observed (Fig. 3c). This supports the view that the low spore number is reached by reduction from a higher number.

Essential for its taxonomic relationship are the shape and the opening mechanism of the ascus. The asci in Ramgea are broad with a short base. The outer ascal wall clearly stains with Congo red, except for the extreme apical part. In the inner layer of the wall a small central zone in the tip stains blue with Waterman's blue-black ink. Also a rather faint narrow ring can be observed at the inner side of the ascal wall with interference contrast optics (Fig. 3c, d). The ascus opens at the top with an irregular tear in the zone above the ring (Fig. 3d).

From the structure of the ascus it is clear that the relationship of Ramgea is with the Thele- bolaceae as defined by Eckblad (1968).

In Ascozonus (Renny) Boud. a very prominent ascal ring is present and a less conspicuous one in species of Thelebolus Tode: Fr. (van Brummelen, 1978). For the still rather poorly understood genus Caccobius Kimbrough in Kimbrough & Korf (Kimbrough & Korf, 1967;
Kimbrough, 1972; Korf, 1972) an apical ring is not reported, but in *Caccobius minusculus* Kimbrough in Kimbrough & Korf an ascal plug staining with Waterman’s blue-black ink is considered characteristic.

Of the genera of Thelebolaceae mentioned, especially *Caccobius* shows affinities. But the presence of a well-developed, lasting spore ornamentation will keep *Ramgea* in a rather isolated position in this family.

**REFERENCES**


