

The Anamorphs of *Pleurotus sajor-caju* (FR.) SINGER and *Pleurotus gemmellarii* (INZENG.) SACC.

Lizzie N. NAIR & V. P. KAUL

Department of Botany, University of Pune, Pune 411-007, India

Abstract. The anamorph of *Pleurotus sajor-caju* (FR.) SINGER, observed on and with rudimentary fruit bodies of the teleomorphs, is being described as a new species of *Antromycopsis* (*A. sajor-caju*). The anamorph of *Pleurotus gemmellarii* (INZENG.) SACC. which came up in culture (isolated from gill tissue) and identified as *Antromycopsis broussantiae* PAT. & TRAB. var. *minor* PENZ. & SACC. is a new record for India. For the first time *A. broussantiae* PAT. & TRAB. var. *minor* PENZ. & SACC. is linked with its teleomorph.

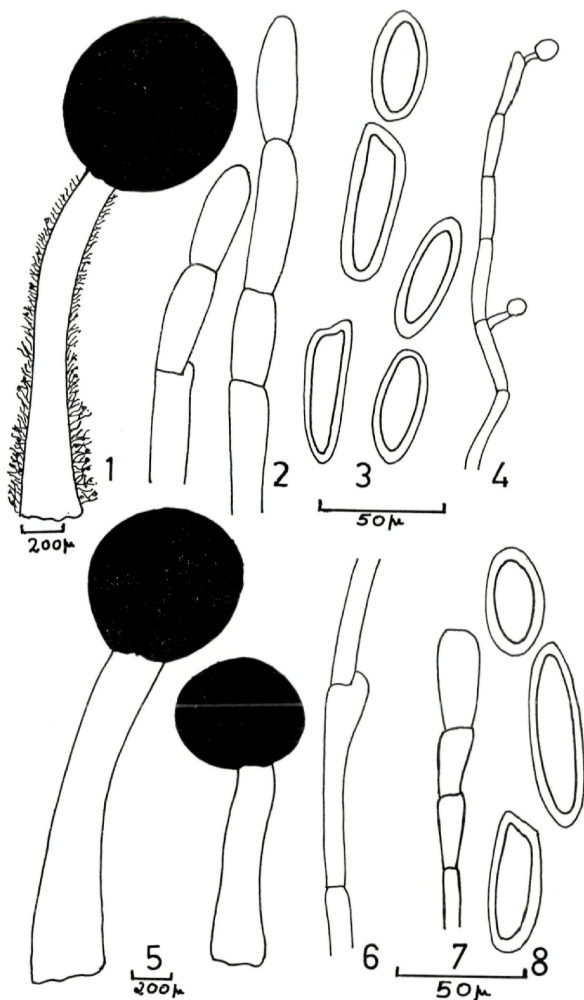
Description of species

1. *Pleurotus sajor-caju* (FR.) SINGER

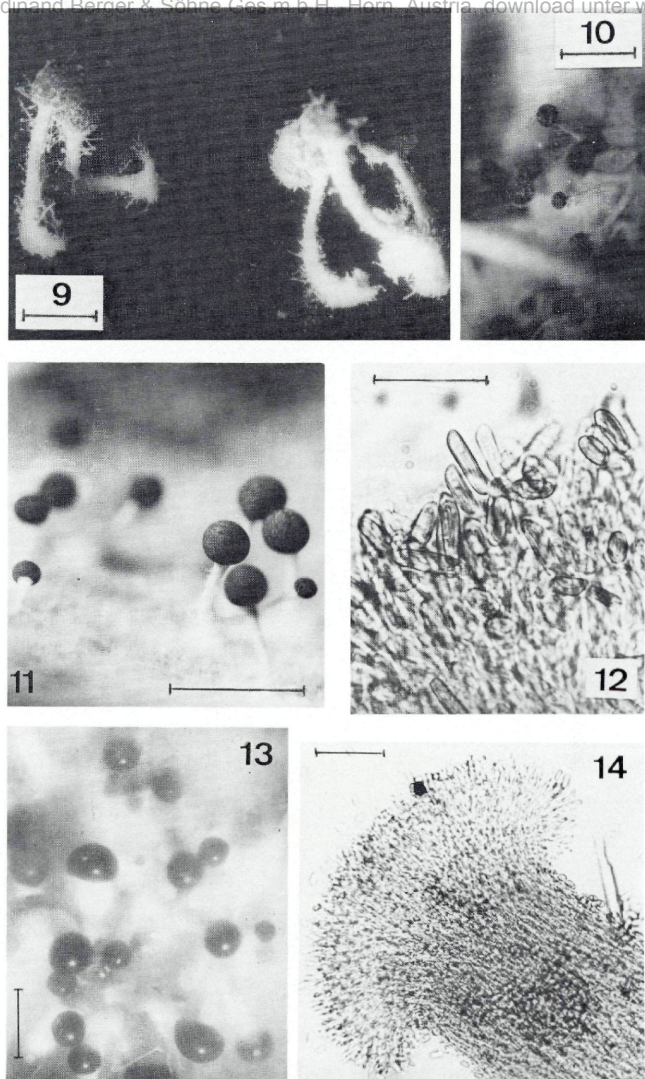
Cultures of *Pleurotus sajor-caju* were raised from the tissues of fruitbodies. When maintained on malt agar, rudimentary fruit bodies develop after about a month (Fig. 9). From the tenth to fifteenth day these cultures produce the synnematosus anamorph. The anamorphs grow up from the white mat of mycelium with white stalks capped by a black glistening drop of conidia. (Figs. 9—11).

The synnemata are solitary or rarely in pairs, measuring 2—6 mm in height; the stipe is solid with the group of conidiophores being compactly packed. The microconidiophores — which look as hair-like outgrowths (Fig. 10) — are composed of thin hyphae and bear globular microconidia at the tips of the short branches (Fig. 4). These microconidia measure 5—6.2 μm in diam. and their presence is a unique feature of this particular species. The conidiophores become more loose in the apical region where they spread out and cut off macroconidia in acropetal succession. The globose heads are 0.2—0.6 mm in diam., waxy, brown then black and not easily detachable. Macroconidia are brown, single-celled and binucleate. There is a variation in the size of the macroconidia. The ones nearer to the conidiophores are often elongate (measuring 35.5—44.4 \times 6 μm). Most of these conidia have a papilla-like protuberance at one end (Fig. 3, 12), supposed to be the rest of the clamp connection. The ovoid macroconidia are more abundant and measure 17.7—26.6 \times 5.15—6.9 μm .

This anamorph does not agree with any of the known species of *Antromycopsis* and hence it is described as a new species. It is the first time that the holomorph is being established.



Figs. 1-4: *Antromycopsis sajor-caju* anam. nov.: 1. Synnematum. — 2. Conidiophores (note clamp connection). — 3. Macroconidia. — 4. Microconidia. Figs. 5-8: *Antromycopsis broussantiae* PAT. & TRAB. var. *minor* PENZ. & SACC.: 5. Synnemata. — 6. Conidiophore (note clamp connection). — 7. Conidiophore. — 8. Conidia



Figs. 9–12: *Antromycopsis sajor-caju* anam. nov.: 9. Rudimentary fruitbody of teleomorph with anamorph (scale: 2 mm). — 10. Synnemata (note microconidia on stipe; scale: 2 mm). — 11. Synnemata in culture (scale: 1 mm). — 12. Apical region of conidiophores and conidia (scale: 50 μ m). Figs. 13–14: *Antromycopsis broussantiae* PAT. & TRAB. var. *minor* PENZ. & SACC.: 13. Synnemata in culture (scale: 1 mm). — 14. Apical region of synnemata (scale: 200 μ m)

Antromycopsis sajor-caju NAIR & KAUL, anam. nov.

Stat. anam. *Pleurotus sajor-caju* (Fr.) SINGER (Basidiomycetes, Agaricales).
 Synnemata solitaria, raro binata, 2–6 mm; stipes solidus, albus vel luteus, sporis parvis globulosis 5–6.2 μ diam., capitulo globoso 0.2–0.6 mm diam., ceraceo, brunneo tandem nigro; conidiophora producentia conidia catenata et basipetalia; macroconidia brunnea, unicellularia, praecipue ovoidea (12.7–14.9 \times 6.7–9 μ m) vel cylindrica (35.5–44.4 \times 6 μ m), saepe ad basim papillata.

Ad carpophora *Pleuroti sajor-caju* in agaro cultivati.

2. *Pleurotus gemmellarii* (INZENG.) SACC.

Pleurotus gemmellarii was collected from a dead branch of *Ficus tsiela* L. in the University Campus, Pune, India. A pure culture of the dikaryotic mycelium was obtained from the gills of the teleomorph which produced its anamorph along with the growing mycelium in about 8–10 days. (Fig. 13).

Antromycopsis broussantiae PAT. & TRAB. var. *minor* PENZ. & SACC. Figs. 5–8, 13–14.

The synnemata are either solitary (Figs. 5, 6) or in groups being 1.3–2 mm high, solid, white, firm and smooth. The basal cylindrical region is broad (300–320 μ m), whereas the apical region measures only 170–200 μ m. The black glistening heads are easily detachable, unlike those of *A. sajor-caju* anam. nov. They are brown, then black, globose and have a diameter of 480–500 μ m. The conidiophores which are compact at the basal region spread out in the apical region (Fig. 14). These conidiophores have clamp connections (Fig. 6) and produce chains of conidia in basipetal succession (Fig. 7). The conidia are brown, single-celled (Fig. 8), ovoid, and measure 15–15.5 \times 7.5–8.5 μ m.

Morphologically conidia of 2 different shapes can be observed. One type has a small lateral papilla which is considered to be the remnants of the clamp connection whereas the conidia of the other type lack that projection (Fig. 8).

In its characters this *Antromycopsis* allies closely with *A. broussantiae* PAT. & TRAB. var. *minor* PENZ. and SACC., described by SUBRAMANIAN (1954) from India, and therefore it is assigned to that species and variety.

Pleurotus gemmellarii (INZENG.) SACC. has already been reported by PEGLER (1977) from Pakistan. This is the first report of this species from India. It is also for the first time that this species of *Antromycopsis* is linked with its teleomorph, *Pleurotus gemmellarii*.

KAUFERT (1935) for the first time described the production of asexual spores in *Pleurotus corticatus*. To our opinion KAUFERT identified correctly the beak-like projections on the conidia as the remnants of the clamp connection.

MILLER (1969) described a new species of *Pleurotus*, *P. cystidiosus*, with a coremioid imperfect stage. He reported that black headed coremia develop on the edges and faces of the lamellae in cultured fruitbodies and on wood in natural habitat.

About six years later, JONG & PENG (1975) assigned this anamorph of *Pleurotus cystidiosus* to *Antromycopsis*, however, without making a specific determination. It was in 1979 that finally *Antromycopsis broussantiae* PAT. & TRAB. was designated by KENDRICK & WATLING (1979) as the anamorph of *Pleurotus cystidiosus*.

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Autor(en)/Author(s): Nair Lizzie N., Kaul V. P.

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