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Septobasidium marianii

Figures 1–16

Septobasidium marianii Bres. 1905 [2 : 164]

Basidiome pluriannual, effused, orbicular, up to 10 (20) cm in diam., sometimes confluent, sometimes entirely wrapping twigs, membranaceous, felted, pliable, up to 1 (2) mm thick; built up by two or three concentrical zones: a marginal band rather large corresponding to the annual growth, a smooth central or median one where the hymenium is formed, and eventually a central zone with necrotic tissues corresponding to the old or dead parts of the basidiome. In section, three layers are readily observed: the subiculum, a stratum of tall pillars and the top layer.
Hymenium poorly differentiated, 30–80 µm thick, with a smooth surface, continuous, finely tomentose (×10), when moist whitish, soon ochre then brown, red brown, blood red, purple, becoming more or less uniformly cinnamon on drying.
Subhymenium rather thin, up to 0.1 (0.2) mm, not much compact but difficultly squashed, brown to dark brown.
Context built up by a series of pillars 0.5 (0.8) mm high and 20–80 µm broad, relatively spaced, of compact and fibrous consistency, smooth or ridged, dark brown to blackish, branched especially at the base and at top. The context may become stratified by the replication of the pillar and top layers.
Subiculum complex, 0.1–0.3 mm thick, often multilayered, built up by a net of very compact blackish threads or ribs and short pillars that separate tunnels and the different insect chambers and support discontinuous thin pellicular patches that form the roofs of chambers.
Margin growing in spring, about 1 cm wide, formed by thin white patches, short (0.1 mm) pillars and 2–3 mm long spiklets that becomes soon blackish, and from which start other small pellicular patches, 20–50 µm thick, more or less orbicular, soon becoming yellowish brown, confluent or partly superposed so that empty spaces are formed at different levels. Over these plates and spiklets develops the pillars, initially separate, then developing

the confluent top layer with the new hymenium. At the end of summer, the margin is reduced to 1–3 mm. The margin of the top layer become determinate, smooth and thin.

Hyphal system monomitic. All hyphae simple-septate, 3–4 µm in diam., compactly arranged in the pillars and subicular patches, more loosely arranged otherwise, thick-walled, yellowish to yellowish brown; hymenial hyphae (mixed up with probasidia) 2–3 µm, thin-walled, hyaline or almost so.
Haustoria as spiralled hyphae, 2–2.5 µm wide, hyaline.
Probasidia becoming broadly clavate, 20–25×9–12 µm, persistent after the production of the basidium and then showing at top a short cylindrical prominence and with slightly thickening wall (about 0.5 µm); other probasidia growth inside.
Basidia cylindrical, 45–55×4–5.5 (6) µm, with 3 septa, easily detached from the probasidium; sterigmata 4–6 µm long.
Basidiospores elongated and curved, with a prominent apiculus at one extremity of the convex side so to show a slightly sigmoid shape, (10) 14–22 (25)×(2.2) 2.5–4.5 (5) µm, with 0–3 (4) septa on the basidiome, 0–7 on spore prints. Some spores produce numerous small narrowly ellipsoid budding cells, 3–6×1–1.5 µm.
Chemical reactions: CB–; IKI–
Incrustation: none.

Voucher specimens

SWITZERLAND — **Graubünden** – Leggia, Pasqué, on bark of a standing, hard trunk of *Corylus avellana*, leg. E. Martini, 14.VI.2009 (em-10847) — **Ticino** – Aurigeno, passerella, on bark of a standing, hard twig of *Corylus avellana*, leg. E. Martini, 25.X.2008 (em-10591) – Bignasco, Comunella, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 12.IV.2008 (em-10452) – Gordevio, Saleggio, on wood and bark of a lying, hard branch of a deciduous tree, leg. E. Zenone, 2.V.2007 (em-9881) – *ibid.*, on bark of a standing, hard twig of *Corylus avellana*, leg. E. Zenone, 28.VI.2007 (em-9960) – Iragna, Monda, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 18.IV.2009 (em-10828) – Lodano, Pradel, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 19.IV.2008 (em-10461) – Losone, Gerre, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 8.III.2015 (em-12543) – Maggia, Saligin, on bark of a standing, hard trunk of *Corylus avellana*, leg. E. Martini, 12.IV.2008 (em-10456) – Riveo, Saleggi, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 7.VI.2007 (em-9885) – *ibid.*, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 7.VI.2007 (em-9886) – *ibid.*, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 18.VIII.2007 (em-10001) – *ibid.*, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 22.V.2008 (em-10473) – *ibid.*, on bark of a standing, hard branch of *Corylus avellana*, leg. E. Martini, 22.V.2008 (em-10475.2) – *ibid.*, on bark of a standing, hard twig of *Corylus avellana*, leg. E. Martini, 14.VI.2008 (em-10495) – *ibid.*, on bark of a standing, hard twig of *Corylus avellana*, leg. E. Martini, 14.VI.2008

Fig. 1: Basidiomes (end of August) showing a wide brown 'band' toward the margin: the new hymenium is still not formed [em-10001]

(em-10497) – Someo, on bark of a standing, hard twig of *Corylus avellana*, leg. E. Martini, 12.IV.2008 (em-10448)

References

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[5] Wojewoda, W. (1977). *Grzyby. Tom VIII. Basidiomycetes, Tremellales, Auriculariales, Septobasidiales*. Warszawa. 329 p.

Fig. 2: Some basidiomes on *Corylus avellana* [em-10001]

Fig. 3: Dried basidiome. Image width = 55 mm [em-10001]

Fig. 4: Basidiome showing old dead parts and an actively growing margin. Image width = 10 cm [em-9886]

Fig. 5: Basidiome [em-9885]

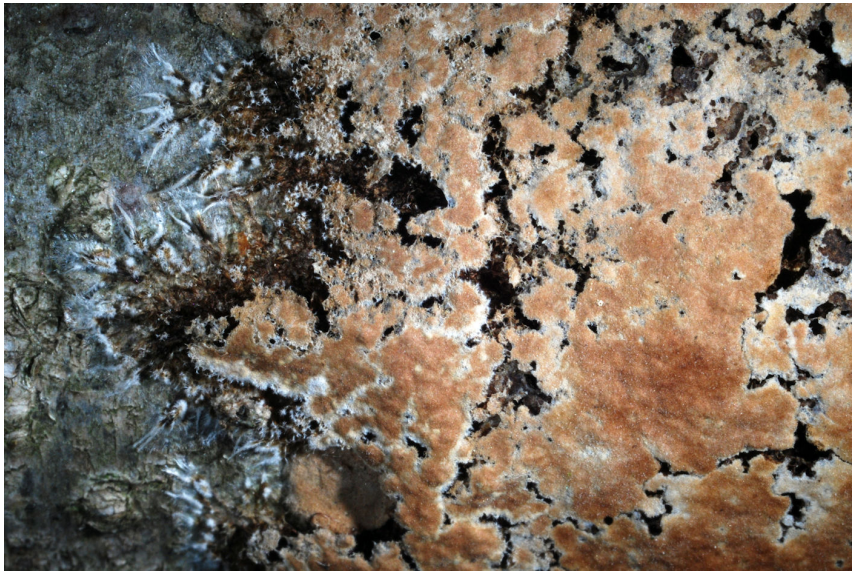

Fig. 6: Basidiome toward the margin. Image width = 23 mm [em-10475.2]

Fig. 7: Basidiome at the margin. Image width = 23 mm [em-10452]

Fig. 8: Developing margin with spiklets and small orbicular plates of the subicular layer. Image width = 11 mm [em-9885]

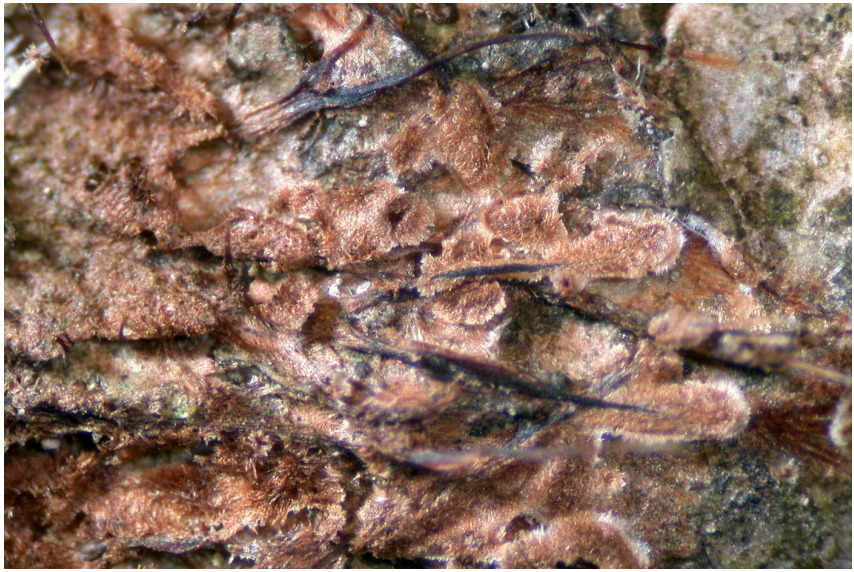

Fig. 9: Developing margin with spiklets and small orbicular plates of the subicular layer. Image width = 5 mm [em-9960]

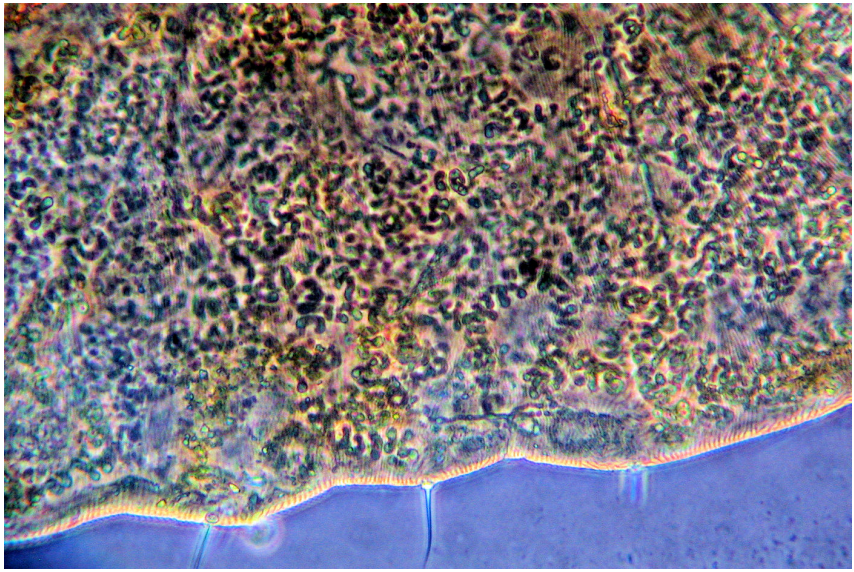

Fig. 10: Part of a scale insect filled by haustoria [em-9960]

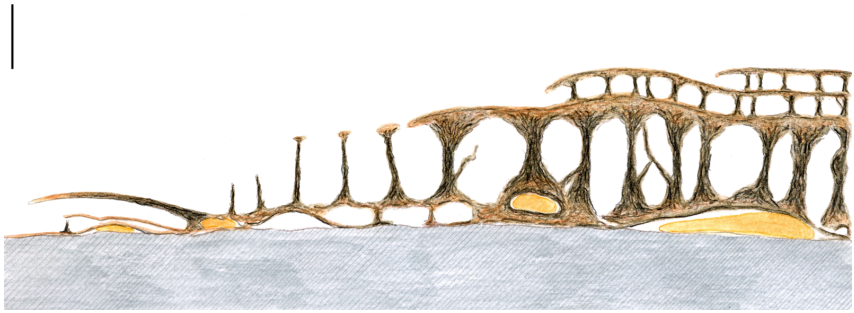

Fig. 11: Vertical section through the basidiome. Bar = 0.4 mm [em-9881]

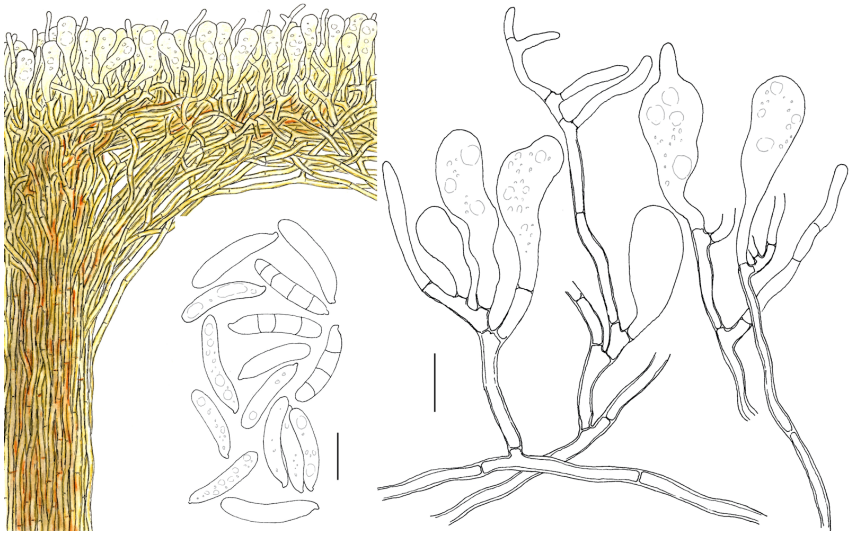

Fig. 12: Young hymenium with probasidia, hyphae of top layer and pillar, basidiospores from basidiome. Bar = 10 µm [em-9881]

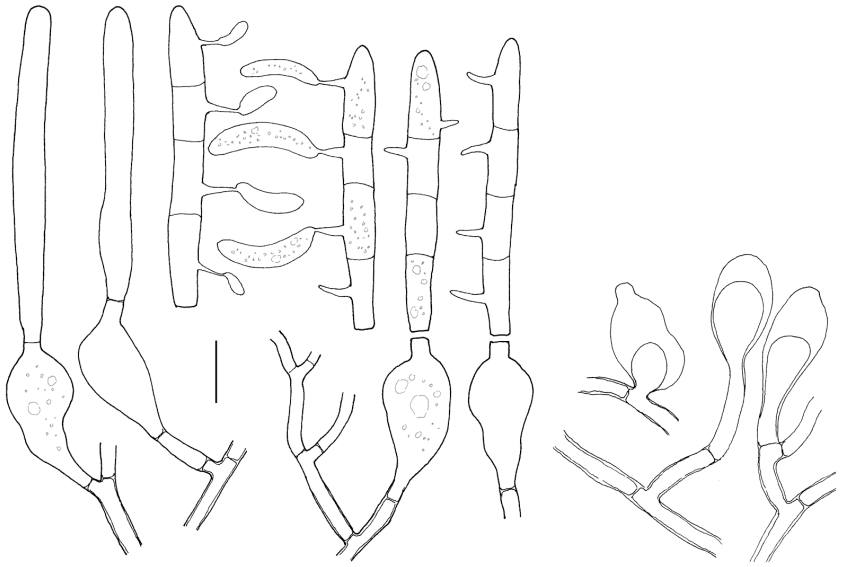

Fig. 13: Basidia, probasidia and basidiospores (left), old probasidia forming new ones inside (right). Bar = 10 µm [em-9885]

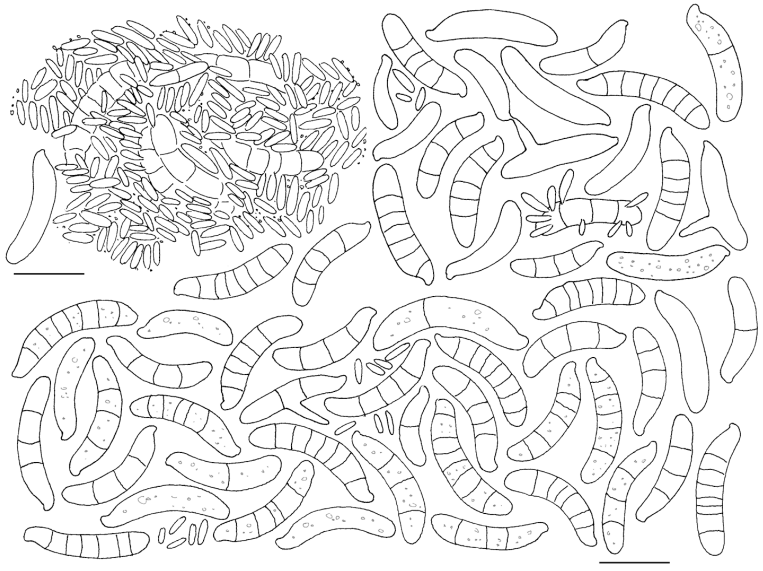

Fig. 14: Basidiospores from spore print (36 hours). Bar = 10 µm [em-10495]

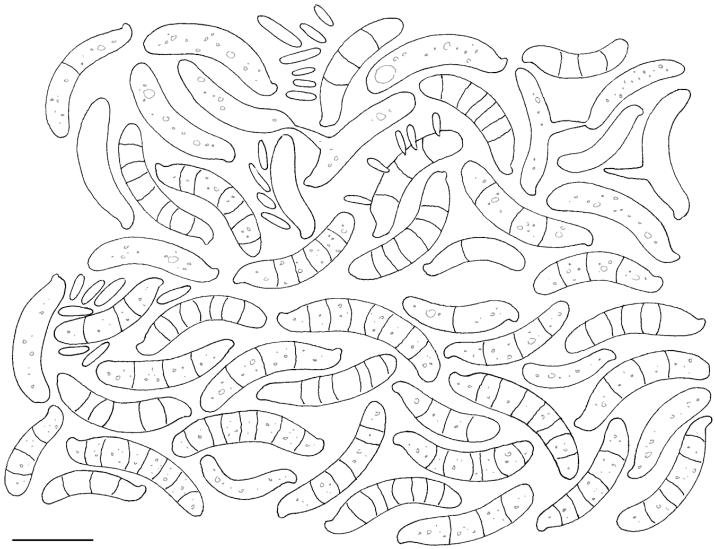

Fig. 15: Basidiospores from spore print (36 hours). Bar = 10 µm [em-10497]

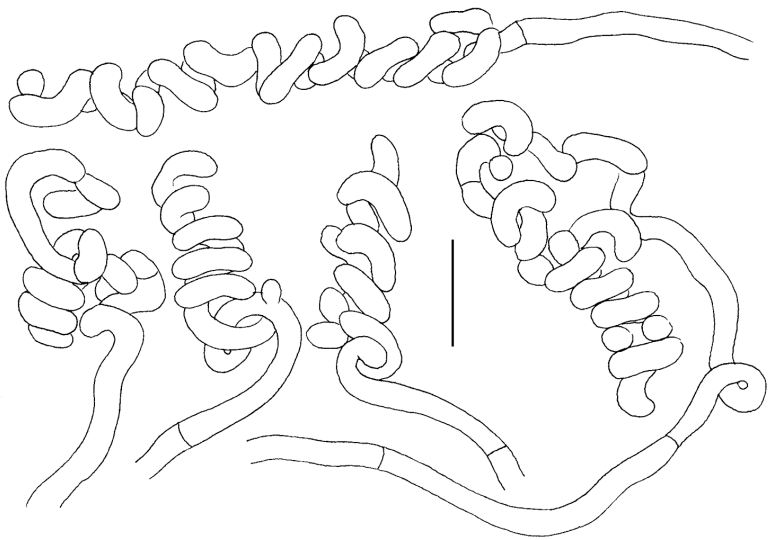

Fig. 16: Haustoria. Bar = 10 µm [em-9886]

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