

***Polyporus nigrocristatus* sp. n., a new polypore from New Zealand**

E. HORAK

Geobotanical Institute, Herbarium, ETHZ, Universitätsstraße 2, CH-8092
Zürich, Switzerland

&

L. RYVARDEN

Botanical Institute, University of Oslo, P. O. B. 1045, Blindern, Oslo 3, Norway

Summary. — *Polyporus nigrocristatus* Hk. & Rrv. sp. n. from New Zealand is characterized by a greyish, finely appressed tomentose pileus with raised black radially arranged crests, by a lateral dark brown and minutely tomentose stipe (with a black cuticle) and grey pore surface and tubes respectively. The new species belongs into sect. *Melanopus* of *Polyporus* s. str.

***Polyporus nigrocristatus* E. HORAK & L. RYVARDEN, sp. n. — Fig. 1**

Carpophorus stipitatus; pileus griseus, velutino-squamulosus, crestitis nigris parvisque radialiter instructus; stipes griseus; pori grisei minuti (7–8 per mm); contextus albus, hyphae dimiticae fibulatae, hyphae ligantes parce ramosae; sporae 6–7 × 2.5–3 µm, cylindricae, inamyloideae, leves. — Holotypus: New Zealand: Southland, Te Anau (track to Mt. Luxmore), on dead logs and branches of *Nothofagus menziesii* (Hook. f.) OERST. (Fagaceae), 28 March 1983, leg. HORAK, 2155, ZT; isotypus in O.

Fruitbody stipitate, annual. — **Pileus** 30–45 mm diam., 1–1.5 mm thick, semicircular with lateral stipe, single, surface lobed and wavy with curled-up margin in dry condition, cartilaginous when fresh brittle to papery when dry, upper surface greyish, velutinous to finely squamulose or coarsely fibrillose with scattered black radially arranged crests giving the surface a streaked appearance, individual crests 2–3 mm long and up to 400 µm high with incised ridges. — **Stipe** 20–30 × 4–5 mm, cylindrical, pestle-like enlarged at base, covered by a very fine appressed pale brown tomentum covering a black cuticle, stipe core white, homogenous, spongy to dense. — **Pore surface** grey; pores round, very minute, 7–8 per mm, almost indistinguishable by naked eye, tubes and margin of tubes concolorous, up to 400 µm deep. — **Context** up to 1 mm thick, white, dense, with a thin black zone at the base of the pileal tomentum. — **Hyphal system** dimitic, generative hyphae with clamps, membranes hyaline to pale brown, tips of the tomental hyphae with slightly thickened walls (6–12 µm

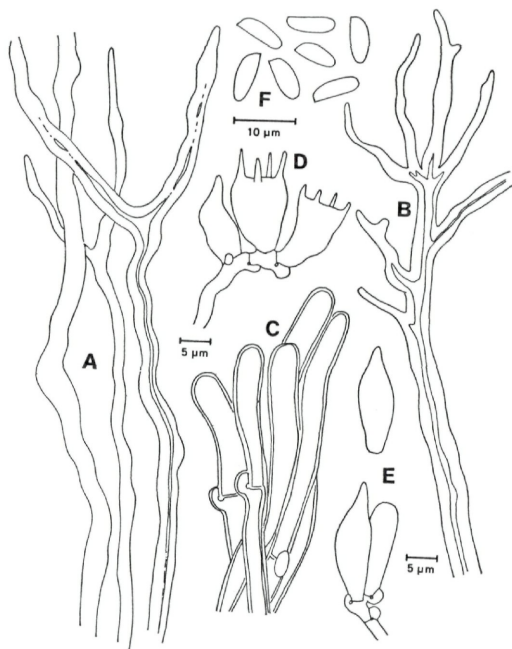


Fig. 1: *Polyporus nigrocristatus* Hk. & RYV. sp. n. (holotype): A. hyphae of context. — B. hypha of dissipiment trama. — C. generative hyphae from tomentum on stipe. — D. basidia. — E. cystidiol. — F. spores.

at the widest part), apical cell 25—60 µm long, hyphae of the hymenium narrower, usually 2—4 µm wide, membrane thin-walled; sparingly branched to arboriform vegetative hyphae present in the context and trama composed of long unbranched segments. However, all transitions from typical arboriform binding hyphae (of the *Bovista*-type) to dichotomously branched skeletal hyphae are observed. Hyaline membranes of context, stipe core or especially of the central trama are filled (in the lumen) with a pale brown, non-amyloid substance which gives sections of the trama a "streaked" appearance; these coloured hyphae are probably responsible for the greyish tint of the tubes. — Cystidia none. — Basidia 10—14 × 7—8 µm, 4-spored. — Cystidiols present in various numbers among the basidia, hyaline, non-projecting, apex acute to rounded. — Spores 6—7 × 2.5—3 µm, cylindrical, hyaline, thin-walled, non-amyloid.

Habitat. — **NEW ZEALAND:** on rotten logs and branches of *Nothofagus menziesii* (Hook. f.) OERST. ("silver beech"), Fagaceae, causing a white rot.

Remarks. — This new species clearly belongs to *Polyporus* s. str. due to the stipitate fruitbody, the dimittic hyphal system (with sparingly aboriform vegetative hyphae), and the cylindrical, smooth and non-amyloid spores. *P. nigrocristatus* obviously belongs to the group of species around *P. melanopus* FR., *P. badius* SCHW. and *P. dictyopus* MONT. (from southern South America). These taxa are characterized by (1) the same general type of hyphal system, (2) by a stipe whose very thin black cuticle is covered at first by a fine brown tomentum composed of vegetative hyphae, and (3) by cylindrical spores. *P. xerophyllus* BERK., originally described from New Zealand, also belongs to this group and without doubt is the closest relative of *P. nigrocristatus*. However, the former species is readily separated by the glabrous chestnut-brown to black pileus (covered by distinctly raised radial veins) and a pale cream hymenial surface which turns darker to almost straw yellow in dry condition. The glabrous stipe, however, is chestnut-brown to black, and its surface is not tomentose as in the species described here. Microscopically, the two species are distinctly separated by the size and shape of their spores. They are 3.5–4 µm wide in *P. xerophyllus* but only 2.5–3 µm wide in *P. nigrocristatus*. Both species have laterally attached stipes and the rim of the pileal margin is more lobed and crenulate as normally observed on carpophores of species in this section of *Polyporus*.

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