

TYPE STUDIES IN THE POLYPORACEAE—12

Species described by F. W. Junghuhn

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F. W. Junghuhn described 30 polypores out of which 4 types could not be located. Of the rest, 15 species are accepted, 11 are regarded as synonyms. *Ganoderma tropicum* (Jungh.) Bres. is described.

F. W. Junghun (1838, 1840) described a restricted number of polypores based on his own collections from Java. The lectotypes of these polypores are today in the Leiden herbarium, while a few isotypes are in the Stockholm herbarium. Almost all species were described in *Polyporus* and in the following they are treated alphabetically according to the specific epithet. After the name there is a reference to the paper in which they were published. As the label only indicated 'Java, Junghuhn', this text is not repeated for each species. However, later a number of species was given an accession number in the Leiden herbarium. If indicated, this number is cited.

When the type was found to be a taxonomic synonym, this is marked with =, followed by the proper name. When the species has been accepted, it is cited in its proper genus with a reference to a modern description. Some of Junghuhns types have been examined earlier by Lloyd (1912) and Bresaldola (1910) and the synonym indicated by the two mycologists are referred to in a few cases.

POLYPORUS ANNULATUS (Junghuhn, 1838: 53).

Type not found, already noted as missing by Lloyd (1910: 2).

POLYPORUS ASPER (Junghuhn, 1838: 60). L 910.232.1662.

This is an accepted species and should be cited *Corioloropsis asper* (Jungh.) Teng. For a description see Ryvarden & Johansen (1980: 283).

POLYPORUS BICOLOR (Junghuhn, 1838: 54). L 910.222.3718.

= *Corioloropsis sanguinaria* (Jungh.) Ryv.

POLYPORUS BYSSOGENUS (Junghuhn, 1838: 43). L 910.277.133.

The species is accepted in *Trichaptum* as *T. byssogenum* (Jungh.) Ryv. For a description, see Ryvarden & Johansen (1980: 594).

POLYPORUS CERVINO-GILVUS (Junghuhn, 1838: 45). L 910.252.1687.

This is an accepted species and should be cited as *Oxyporus cervino-gilvus* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 451).

POLYPORUS CERVINO-PLUMBEUS (Junghuhn, 1838: 61). L 910.111.3526.

= *Hexagonia tenuis* (Hook.) Fr.

LASCHIA CRUSTACEA (Junghuhn, 1838: 75). L 910.252.1753.

This is an accepted species and the type *Junghuhnia* Corda. For a description see Ryvarden & Johansen (1980: 387).

POLYPORUS DURUS (Junghuhn, 1838: 62). L 910.252.1699.

The species is accepted in *Nigroporus* as *N. durus* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 447).

POLYPORUS FLAVUS (Junghuhn, 1838: 46).

Irpex flavus Kl. 1833.

POLYPORUS FLOCCOSUS (Junghuhn, 1838: 49).

This is an accepted and widely distributed species and should be cited as *Corioloropsis floccosus* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 289).

POLYPORUS FURCATUS (Junghuhn, 1838: 69).

The type is missing and was also missing in 1912 (Lloyd, 1912).

POLYPORUS FUSCO-ALBUS (Junghun, 1838: 52).

The type has not been found. Fries (1851: 56) indicated that Junghuhn's name was a homonym and changed it to *P. junghuhnii* Fr. I have not been able to trace *Polyporus fusco-albus* Fr. and it is not mentioned in Donk's checklist (Donk 1973) nor in Saccardo's Syllogue Fungorum.

POLYPORUS INDECORUS (Junghuhn, 1838: 51). L 910.252.1692. (isotype in S).

= *Trametes scabrosa* (Pers.) G. Cunn. This has been noted already by Bresadola (1910: 585).

DAEDALEA INDICA (Junghuhn, 1838: 74). (isotype in S).

= *Lenzites elegans* (Fr.) Pat. The synonym has already been indicated by Lloyd (1912: 3).

POLYPORUS LACERUS (Junghuhn, 1838: 65). (isotype in S).

= *Microporellus obovatus* (Jungh.) Ryv. as already noted by Bresadola (1910: 585).

POLYPORUS MICROSCOPICUS (Junghuhn, 1838: 52).

The type has not been found. It was missing in 1910 as already noted by Lloyd (1910: 4).

POLYPORUS MINIATUS (Junghuhn, 1838: 68). L 910.252.1316.

= *Laetiporus sulphureus* (Fr.) Murr. The synonym was also noted by Lloyd (1912: 4).

POLYPORUS MINIMUS (Junghuhn, 1838: 64).

I have not seen the type, but from the description it seems to be a poroid agaric and should be cited *Favolaschia minima* (Jungh.) Sing. For a description see Singer (1945: 200).

POLYPORUS MONS-VENERIS (Junghuhn, 1838: 61). L 910.222.3757.

= *Funalia leonina* (Kl.) Pat. Synonym already noted by Bresadola (1910: 585).

POLYPORUS NIVEUS (Junghuhn, 1838: 48). L 910.252.1674.

This is an accepted species and should be cited *Incrustoporia nivea* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 381).

POLYPORUS OBOVATUS (Junghuhn, 1838: 65). L 912.252.1664.

The species is accepted in *Microporellus* and should be cited *M. obovatus* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 427).

POLYPORUS PELLICULA (Junghuhn, 1838: 44). L 910.277.128.

The species is accepted in *Oxyporus* as *O. pellicula* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 455).

POLYPORUS PUNCTATUS (Junghuhn, 1838: 64). L 910.270.917.

= *Rigidoporus lineatus* (Pers.) Ryv. The specimen cited above may not be the type, but was collected and named by Junghuhn. Until a more authentic specimen is found, the specimen cited above is selected as a neotype.

FAVOLUS PUSTULOSUS (Junghuhn, 1838: 73).

The type was already noted as missing by Lloyd (1910: 4), but he pointed out that the description clearly pointed towards a poroid agaric. His interpretation has been accepted by Singer, and the species is today cited as *Favolaschia pustulosa* (Jungh.) Sing. For a description see Singer (1945: 198).

POLYPORUS ROSEO-ALBUS (Junghuhn, 1838: 43). L 910.277.135. (isotype in S).

The species is accepted in *Loweporus* as *L. roseo-albus* (Jungh.) Ryv. For a description see Ryvarden & Johansen (1980: 415).

POLYPORUS SPADICEUS (Junghuhn, 1838: 54). L 910.270.888.

= *Cyclomyces tabacinus* (Mont.) Pat.

LASCHIA SPATULATA (Junghuhn, 1838: 75). L 910.222.3512.

The species is accepted in *Favolus* as *F. spatulatus* (Jungh.) Lév. The species has repeatedly been described as new, because of its variable pores. For a description see Ryvarden & Johansen (1980: 331).

POLYPORUS TROPICUS (Junghuhn, 1838: 63). Lectotype in BPI noted 'Orig!' by Bresadola.

As already noted by Lloyd (1910: 5) and Bresadola (1912: 586) this is a *Ganoderma* species. The genus is badly in need of a revision and in the Species-Index in the National Fungus Collection (BPI) there are approximately 240 names under *Ganoderma*. Whether Junghuhn's name ultimately will be accepted or reduced to synonymy has to be decided when the genus is revised. Junghuhn's species belongs in the *Ganoderma lucidum* complex (as do most of the 240 names mentioned above). There is seemingly no modern description of the species and the following is based on the lectotype.

GANODERMA TROPICUM (Jungh.) Bres. in *Annls Mycol.* 8: 586.1910

Fruitbody annual (?) pileate, applanate, sessile, semicircular, 6 × 8 cm, approximately 1 cm thick at the base, woody hard. Pileus smooth, to slightly rugulose, glabrous and with a thin laccate crust, reddish brown at the margin, deep bay to almost black at the base. Pore surface umber brown, pores 6–8 per mm, tubes dark umber brown, up to 4 mm deep at the base. Context dark brown, homogenous, fibrous in radial direction, rather dense.

Hyphal system probably trimitic, generative hyphae only seen in a few fragments, 2–4(–5)

μm wide and with clamps, fruitbody dominated by arboriform skeletal hyphae, solid to very thickwalled, pale brown, up to $8 \mu\text{m}$ wide in the stem, slightly to moderately branched, sidebranches up to $80 \mu\text{m}$ long. The crust on the pileus consists of a palisade of clublike swollen hyphal endings with a few (apparently) simple septa at the base, probably arising from generative hyphae as in other *Ganoderma* species, hyphal endings very thickwalled in the apex and dark brown, some clubshaped and evenly widened towards the apex, others with short protuberances and partly lobed, especially in the top, up to $60 \mu\text{m}$ long, $8\text{--}22 \mu\text{m}$ wide. Spores truncate, verruculose, pale brown, $11\text{--}14 \times 7.5\text{--}10 \mu\text{m}$.

The species is characterized rather by its laccate surface, large spores (distinctly larger than for most species in the *G. lucidum*-complex) and the slightly lobed hyphal endings in the crust. It is difficult to decide how taxonomically significant these hyphal endings are. We do not know how they vary (eventually) with age, climate, etc., or if their form really is genetically fixed.

POLYPORUS UDUS (Junghuhn, 1840: 189). L 910.222.3756.

This is an accepted species in *Polyporus* s.str. For a description see Ryvarden & Johansen (1980: 507).

POLYPORUS UMBILICATUS (Junghuhn, 1838: 72). L. 910.270.899. (isotype in S).
= *P. arcularius* Fr. as already stated by Lloyd (1912: 5).

POLYPORUS VENULOSUS (Junghuhn, 1838: 57). L 910.270.884.

The type is badly destroyed today and Lloyd has in the herbarium noted specimen L 910.270.901 as type. They are both of the same taxon and their identity is unknown to me, but my best guess is that the type is a small immature specimen of *Trametes scabrosa* (Pers.) G. Cunn. Its hyphal system is in accordance with that of this species.

Lloyd (1912: 4) indicated *P. macrotrema* as validly published by Junghuhn. However, Léveillé (1884: 200) changed the name proposed by Junghuhn, which he probably found on the envelope in Leiden, to *Hexagona molkenboeri*. Later Fries (1851: 101) published Junghuhn's name, which then according to the Botanical Code is a superfluous name since it is based on the type of the prior name of Léveillé.

REFERENCES

- BRESADOLA, J. (1910). Adnotanda in fungos aliquot exoticos regii Musei Lugdunensis. *In* *Annls Mycol.* 8: 585-589.
- DONK, M. A. (1974). Check list of European polypores. *In* *Verh. K. Ned. Akad. Wet. (Natuurk.)* 62: 1-469.
- FRIES, E. (1851). *Novae Symbolae Mycologicae in peregrinis terris a botanicis Danicis collectae. In* *Nova Acta R. Soc. Scient. Upsal (Ser. 3)* 1: 17-136.
- JUNGHUHN, F. W. (1838). Praemissae in floram cryptogamicam Java insulae (Batavia). *In* *Verh. Batav. Genootsch.* 17: 1-86 (preprint).
- (1840). *Nova genera et species plantarum florum Javae. I. In* *Tijdschr. nat. Gesch. Physiol.* 7: 285-317.
- LÉVEILLÉ, J. H. (1844). Champignons exotiques. *In* *Annls Sci. nat. (Bot.)* III 2: 167-221.
- LLOYD, C. G. (1912). The polyporoid types of Junghuhn preserved at Leiden. *In* *Meded. Rijksherb. Leiden* 10: 1-5.
- RYVARDEN, L. & JOHANSEN, I. (1980). A preliminary polypore flora of East Africa. Oslo.
- SINGER, R. (1945). The *Laschia*-complex (Basidiomycetes). *In* *Lloydia* 8: 170-230.