

A reappraisal of type and authentic material of the larger Basidiomycetes in the Pretoria Herbarium

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ABSTRACT

Accounts of the macroscopic appearance and microscopic structure of twenty type and authentic specimens of the larger Basidiomycetes preserved in the Pretoria Herbarium are given. The species concerned have been reassigned wherever possible to genera in accordance with modern taxonomic concepts, and the following new combinations made: *Antrodia conchata* (Lloyd) Reid, *Coriolus durbanensis* (Van der Byl) Reid, *Ganoderma nigrolucidum* (Lloyd) Reid, *Ramaria cladoniae* (Kalchbr.) Reid.

This paper is an account of type and authentic specimens of the larger Basidiomycetes in the Pretoria Herbarium, exclusive of those species described by, or reported on, by both Wakefield and Talbot, and for which full and accurate diagnoses already exist. It is a supplement to my paper (Reid, 1973) reporting the results of a study of type and authentic material in the Van der Byl Herbarium, Stellenbosch.

When that paper was written attention was drawn to the many discrepancies in the numbering of Van der Byl's specimens in STE as compared with the published data, and it was suggested that this may have been due to a partial renumbering by Van der Byl of his herbarium when he moved to Stellenbosch. However, specimens bearing the published numbers were subsequently found in PRE and, although these collections are probably part of the gatherings studied at STE, one cannot be sure without having them side by side for comparison. For this reason I have provided detailed accounts of these specimens in PRE since they are either holotypes or isotypes. In most instances there is virtually complete agreement with my published descriptions of the STE material—an exception involves *Trametes albotexta* in which the spores of the isotype in PRE are appreciably broader than those found in the STE material. This is probably only a question of maturity.

In addition to the descriptions of these undoubted holotypes or isotypes of species already studied at STE, this paper includes accounts of similar material of species described by both Van der Byl and Lloyd which are not represented in STE. Modern descriptions are also provided for three species published by Kalchbrenner, the isotypes of which are preserved in PRE, viz. *Daedalea macowanii*, *Polyporus vibecinus* var. *antelopum*, and *Clavaria cladoniae*.

In most instances attempts have been made to reassign the taxa to genera in accordance with current taxonomic concepts.

The format follows that adopted in my previous paper; the original description is reproduced followed by my own account of the material. For those species described by Lloyd, where the diagnosis is often brief, I have combined the original description with that of Van der Byl, who had often seen the specimens in the fresh condition. In such cases Van der Byl's comments have been interspersed between brackets, following on Lloyd's observations. For the species described by Kalchbrenner the Latin diagnosis is reproduced followed in turn by a rough translation and then by my own observations.

ACKNOWLEDGEMENTS

It is with pleasure and gratitude that the author wishes to thank the trustees for the award of the Smuts Memorial Fellowship which made this work possible. He also wishes to thank Prof. E. A. Schelpe, University of Cape Town, who was responsible for suggesting and helping to organize my visits to South Africa to study the Basidiomycete flora. Grateful thanks are also due to the Director of the Botanical Research Institute, Pretoria, for allowing me to work in his Institute and for the innumerable kindnesses shown to me by him and his staff. It is also a pleasure to acknowledge the help and friendship so generously given to me by Dr and Mrs B. de Winter, and Drs G. C. A. van der Westhuizen and W. F. O. Marasas.

APHYLLOPHORALES

Daedalea macowanii Kalchbr. ex Thuem. in Flora 59: 362 (1876).

"Sessilis, suberosus, extus intusque concolor albidus et demum alutaceus. Pileus difformis primum tuberis instar e matrice egrediens, in optima evolutione semiorbicularis, convexus, 3-4" longus latusve, ad basin $\frac{1}{2}$ -2" crassus, margine attenuato, obtusiusculus, azonus, laevis, tomentoso-glabratus, tectu mollis sed mox nudus. Pori majusculi, labyrinthici, acie obtusi, marginem versus valde elongati-paralleli. Caro intus zonata.—In cortice vivo Celtidis rhamnifoliae aliorumque arborum ad ripas fluvii "Klyn Vischriver". Promont: bonae spei. 1875. Leg. P. MacOwan (No. 1066).

"Sessile, suberose, concolorous outside and in, whitish becoming alutaceous. Pileus deformed, at first tuber-like as it emerges from the matrix, when better developed semi-orbicular, convex, 3-4 inches long and wide, at the base $\frac{1}{2}$ -2 inches thick, with attenuated margin, obtuse, azonate, smooth, tomentose-glabrous, surface soft but soon naked. Pores rather large, labyrinthoid, with obtuse edge, toward the margin strongly elongate-parallel. Flesh internally zonate.—On living bark of *Celtis rhamnifolia* and other trees on the banks of the Klein Visrivier, Cape of Good Hope, 1875. leg. P. MacOwan (No. 1066)."

This is typical of the very common tropical fungus usually known as *Lenzites palisotii* (Fr.) Fr. and determined as such by P. H. B. Talbot in a note on the type sheet. It is, however, best left in the genus *Daedalea* Pers. ex Fr. to which it was originally referred as *D. palisotii* Fr.

An interesting feature concerning members of the genus *Daedalea sensu stricto* is that they have the interior of the tubes lined by a palisadic layer of thick-walled hyphal endings which could be interpreted as very poorly differentiated cystidioles. The basidia, when formed, grow up through this palisade,

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Polyporus arenosobasus Lloyd in Mycological Writings 6: 919, Pl. 144, fig. 1643 (1920). (Fig. 1).

“(Plants annual, stipitate). Pileus about three inches in diameter globose with a thin cuticle (pileus circular, 8 cm diam.; surface with a thin pellicle). Color (dried) dark, fuliginous (fawn-coloured changing to sepia, rugulose). Flesh firm, pale isabelline (context 0,1 to 1 cm, fibrous, corky, firm, light yellowish). Stem short, prolonged underground into a sclerotium-like body of agglutinated sand (stalk arising from a false sclerotium of agglutinated sand; true stalk short, about 1,8 cm diam.; false sclerotium 5 cm long by 3 to 4 cm diam.). Pores small, round, trametoid (tubes 1 to 3 mm long, decurrent on stalk; mouths subrotund to irregular, 3 to 4 to the mm; edges thin, entire. Spores not found; hyphae 6μ to $7,5\mu$ diam.).

This must be rare as I judge that Mr Van der Byl found only one specimen as he sent me only half a specimen. It should be added to Section 38 of Ovinus. Another similar plant has been collected in Africa, *Polyporus goetzii* (Cfr. Synopsis, Ovinus, page 74, Fig. 496) but that has a true sclerotium and large pores. The false sclerotium of this is only sand-agglutinated and the only other known specimen with such a body is *Polyporus tuberaster*, Fig. 509 in our Ovinus pamphlet.

(Distribution.—A single collection at Durban, Natal, by J. B. Leslie. Type in Natal Herbarium, No. 710.

The plant differs from others recorded from South Africa in its false sclerotium. *Polyporus tuberaster* Pers., a native of Europe, has a similar false sclerotium. Here, as in *P. arenosobasus*, the false sclerotium is composed of sand particles cemented together into a hard body by the mycelial threads of the fungus.”

The specimen in PRE bears the following data: Durban, 6 Aug. 1917 [Herb. PRE 14022]. There are also a few fragments in Herb K of a specimen bearing the Van der Byl No. 710 and this appears to be equated by Doidge (1950) with the Pretoria collection No. 14022 and also with the specimen No. 56364 in the Lloyd Catalogue which is the type number of *P. arenosobasus*. This would tie up with Van der Byl's statement in 1922 that only a single collection was known at that time. However, judged from Stevenson & Cash (1936) there appear to be two collections in the Lloyd herbarium and they cite the specimen with the Lloyd Cat. No. 56364 as type and equate the specimen bearing the Van der Byl number 710 with the other specimen in the Lloyd Herbarium with the Cat. No. 56386. This does not agree with the Van der Byl observation of a single collection prior to 1922. A further reason for regarding the PRE specimen as isotype is that Lloyd (1920) mentions that only part of the fruitbody was sent to him by Van der Byl and the specimen in PRE consists of only $\frac{1}{3}$ of a fruitbody in two slices. These match the half specimen illustrated by Lloyd so closely in dimensions that they must surely be part of the same sporophore.

The pileus is smooth, fawn to sepia in colour, with a poorly defined cuticle. The stipe, about 1 cm long, expands below ground into a long false sclerotium, 5 cm in length and 3,5 cm wide, formed of agglutinated sand grains. The pores, 3–4 per mm, are ochraceous, angular with thin dissepiments; the tubes, 5 mm long, are ochraceous fawn; and the flesh, similarly coloured, is soft and cottony, up to 6 mm thick at the centre of the pileus, thinning to 1,5 mm at the incurved margin. Anatomically the context is probably dimitic but generative hyphae were not actually seen; the skeletal hyphae, $4,5$ – $8,0\mu$ diam., are long, seldom branched, with distinctly thickened, strongly dextrinoid walls, but they retain a very wide lumen which may be secondarily septate on rare occasions. There are also a few narrow, branching hyphae but these may be the rare arboriform endings of skeletal hyphae. Spores were not seen.

In the Kew fragments the hyphal structure was still somewhat uncertain but there appeared to be occasional, very collapsed, short lengths of thin-walled septate non-dextrinoid hyphae in the tubes with clamp-connections, but this needs confirmation on better material. In addition very collapsed and fairly numerous thin-walled, hyaline, non-dextrinoid, very broadly elliptic to ovate spores were observed with a range of $6,2$ – $7,2 \times 4,75$ – $5,75\mu$.

This species is best left in *Polyporus* [(Mich.) Fr.] Fr. The fact that the hyphae are strongly dextrinoid is not seemingly of generic significance for currently species are admitted to *Perenniporia* Murr. with both dextrinoid and non-dextrinoid flesh. However, with accumulation of additional data concerning tropical polypores it may in the future be necessary to refer this species to some other genus.

Polyporus conchatus Lloyd in Mycological Writings 5; Mycological Notes 49, p. 700, fig. 1048 (1917). (Fig. 2).

“Largely resupinate, but with reflexed pileus, conchoid (Plants effused reflexed to entirely resupinate; pileus conchate, 1 cm to 6 cm by 0,5 cm to 1,5 cm by 0,1 cm to 0,5 cm). Color (also of context) pinkish-buff. Surface dull mat. (Surface pale buff, becoming darker, uneven; context firm, hard, buff with pinkish spots, or pinky tint throughout, 1 mm to 4 mm). Pores medium, round or elongated on portion growing vertical (tubes, 0,5 mm to 1,5 mm, concolorous; mouths subrotund to irregularly angular, unequal, 2 to 3 to mm elongated on effused portion). Cystidia none. Spores abundant, $4,5$ – 8 – 10 , hyaline, surface uneven. (Spores hyaline $3,7\mu$ to $5,5\mu$ by $7,4\mu$ to $9,3\mu$; hyphae 4μ to 5μ diam.; setae none).

This belongs in section 91 of the Apus *Polyporus*, and closely related to *Polyporus rugoso-porus*. The color is entirely different.

(Distribution.—Found by the writer at Klapmuts, Cape Province, on stump of *Populus* and known only from this collection. The pinkish buff colour of context is peculiar. The plant would also be looked for under *Trametes*. (Cotype in Natal Herbarium, P.v.d.B., No. 358.)

The specimen in PRE bears the number 385 but the information on the packet otherwise agrees with the published collection data; evidently there has been an error at some time in transcribing the figures. The specimen was collected in Dec. 1916.

Sporophores vary from completely resupinate patches to small effuso-reflexed brackets measuring only 0,6 cm from the point of attachment to the margin. There is little evidence of pink colour in any of the fruitbodies now—the colour is pale ochraceous buff with the surface of the brackets becoming almost blackish in the older parts. The pores, 2–3 per mm, are round, angular or irregular with thick dissepiments. Anatomically the context is seemingly dimitic, comprising thick-walled, almost solid, glassy skeletal hyphae, 3 – 5μ diam., and a few remnants of thin-walled generative hyphae with clamp-connections at the septa. Spores abundant, hyaline, elliptical, $7,5$ – $11,5$ ($-12,0$) \times $3,2$ – $4,0$ ($-4,2$) μ .

This species would seem to belong in *Antrodia* Karst. sensu Donk (1966), and shows remarkable similarity to *A. serialis* (Fr.) Donk in regard to spore size and the pink colouration of the flesh (see Donk, 1971). However, *A. serialis* is said to be restricted to coniferous substrates so that one cannot feel justification for assigning the South African fungus to synonymy under this species. Hence I propose the following new combination: ***Antrodia conchata* (Lloyd) Reid, comb. nov.**

Polyporus durbanensis Van der Byl in S. Afr. J. Sci. 18: 261–262 (1922). (Fig. 16 a–c).

Polyporus griseus Boes. in Annls mycol. 10, 494 (1912), non *P. griseus* Peck (1874).

Trametes varians Van der Byl in S. Afr. J. Sci. 18: 281–282 (1922).

Polyporus pectunculus Lloyd in Mycological Writings 7: 1315 (1924), non *P. pectunculus* Lév. (1846).

"Plants annual, sessile or effused reflexed; pileus dimidiate, imbricate, applanate to conchate, laterally connate, 1 cm to 3 cm by 0,5 cm to 2,5 cm by 0,1 cm to 0,3 cm, coriaceous, tough, becoming firm and rigid in drying; surface pearl to lead or ash grey, finely tomentose pruinose, undulating, smooth becoming scabrid and fuliginous in places; context 0,5 mm to 1,5 mm white to discoloured, firm, corky; tubes 0,5 mm to 1,5 mm long; mouths irregular, angular, 4 to 5 to the mm; edges thin, entire, grey changing to yellowish; spores hyaline, globose to oblong, 4μ diam.; hyphae 4μ to $5,5\mu$.

Distribution.—Known only from around Durban where it was collected on dead logs by the writer. (Type in Natal Herb. P.v.d.B., No. 896)."

In a previous paper I (Reid, 1973) ventured the opinion that *P. durbanensis* belonged in the genus *Coriolus* Quél. but this view was based on a study of a specimen in STE collected by Van der Byl at Durban and named by him. However, it was not type material and I indicated that before any transfer was made it would be necessary to study the type collection. This has now been completed and the results confirm that the species does in fact belong in *Coriolus*. A description of this collection follows:

Specimen No. 896, Durban (PRE 14021).

Sporophores consisting of a series of imbricate variously confluent brackets forming a compound fructification about 5 cm in length and up to 3 cm from the point of attachment to the margin. These brackets are rigid and up to 2,5 mm in total thickness. The surface varies from pale ochraceous fawn or buff to grey-brown near the margin, and is not really tomentose. Toward the grey-brown marginal zone the pileus appears closely and densely radially streaky due to small raised fibrils (s.l.), but further back has a rough scrupose texture due seemingly to a pruinose pubescence. There is no real cuticle. The flesh is pale lignicolous with darker, more or less horny lines; it has a fibrous texture but is inclined to flake away rather than to pull apart in a fluffy manner. The pores are small, with thin papery dissepiments, angular, and rather dark ochraceous brown. Tubes about 1 mm deep. Anatomically the context at the base of the fruitbody has a peculiar hyphal construction since it is composed mainly of thick-walled hyphae (often with a lumen occupying about $\frac{1}{3}$ the width of the hypha) which, although consisting of a very long unbranched axis, develop numerous short side branches of limited growth in some instances; furthermore the main trunk bears clamp-connections. In other similar hyphae, although clamps are also present, side branches may be few or absent. The side branches vary from very short and peg-like to better-developed hyphae. Elsewhere the context seems to be typically trimitic comprising more or less solid skeletal hyphae, $4-6\mu$ wide; coralloid binding hyphae, $2,5\mu$ wide forming indistinct tangled complexes; and branched, hyaline, clamp-bearing generative hyphae, $2,5\mu$ wide. Although a hymenium was present, no spores were found.

This species is hereby transferred to the genus *Coriolus* Quél. as *Coriolus durbanensis* (Van der Byl) Reid, comb. nov.

In PRE there is another collection of *C. durbanensis*: Drummond, Natal, leg. W. G. Rump, June 1932 (PRE 26845). This consists of two portions. One example (Fig. 16 a) comprises a well-developed bracket together with several rudimentary imbricate pilei; the entire compound fruitbody is 10 cm long and 2 cm from the point of attachment to the margin.

The surface is buff or fawn becoming darker yellowish brown or brown toward the margin, which is quite conspicuously radially ridged; the surface is minutely pruinose-pubescent and under a lens appears to have a structure consisting of a matted but very short tomentum. The pores are small and grey-brown, but there is a broad, sterile, obtuse margin. In texture the lignicolous flesh is hard and fibrous, without horny lines. Anatomically the context is seemingly trimitic in the thick basal portion comprising solid, glassy skeletal hyphae, up to 6μ wide, which taper to the apex; generative hyphae up to $2,5\mu$ wide, with clamp-connections at the septa, and slightly thickened walls; and what appear to be narrow binding hyphae which are not coralloid but more elongated, solid, $2,5\mu$ wide. Clearly the trimitic structure is not so obvious as in the type material but nevertheless the specimen seems to be referable to *C. durbanensis*. A few hyaline, elliptical spores were found in this specimen, measuring $4,5-6,0 \times 2,0\mu$.

The second fruitbody (Fig. 16 b) consists of a series of imbricate brackets with a vertical disposition, one above the other. In this fruitbody the marginal area of the brackets is dark blackish brown and very conspicuously ridged, but elsewhere the surface is inclined to be rough and scrupose. In this fructification the structure is more like that of the type. There are many broad skeletal, 6μ wide, but also other skeletal-like hyphae with clamp-connections and, in addition, branched thick-walled hyphae some of which appear to be binding hyphae but others bear clamps and are presumably thick-walled generatives.

The anatomy of these two fruitbodies would seem to indicate that in this species there is a considerable degree of plasticity of hyphal structure with almost any of the hyphae able to develop clamp-connections, at least under certain conditions.

As regards *Polyporus pectunculus* Lloyd (non *P. pectunculus* Lév.), Doidge (1950) would seem to cite the collection under *P. durbanensis* in such a way as to indicate that the types of this species and of *P. pectunculus* were based on the same gathering, "Stella Bush, v.d. Byl 896, Type (Lloyd Myc. Coll. 23901) 14021". Stevenson & Cash (1936) cite specimen No. 23901 as the type of *P. pectunculus* Lloyd but they do not give any data to suggest that this is Van der Byl's specimen 896! Whether or not *P. pectunculus* Lloyd is an obligate synonym of *P. durbanensis*, it is interesting to note that Van der Byl (1928) regarded the two species as identical. This has been confirmed by a study of the type collection of *P. pectunculus* in BPI, which has a trimitic hyphal structure but also shows the presence of broad skeletal-type hyphae with clamp-connections in the basal portion of the fruitbody. The surface pruinose-pubescence is formed of erect, thin-walled, clamped generative hyphae. Spores are also present in this material although mostly collapsed; they are hyaline, elliptic, $5,2-5,75 \times 1,75-2,0\mu$. A more detailed account of *P. pectunculus* Lloyd will be given in a later paper in this series.

Polyporus flexilis Van der Byl in S. Afr. J. Sci. 18: 271 (1922).

A study of the type collection from "Maritzburg, on dead log, det. P. A. v. d. Byl, No. 810 (PRE 14031)" has shown that this species is probably the same as *Funalia protea* var. *imbricata* (Berk.) Reid, as were the specimens studied in STE, see Reid (1973) to which description I have nothing to add.

Polyporus mollicarnosus Lloyd in Mycological Writings 4; Letter 60, p. 11 (1915). (Fig. 3).

Ganoderma mollicarnosum (Lloyd) Sacc. & Trott. in Syll. Fung. 23: 401 (1925).

"Pileus sessile, a foot or more in diameter (Pileus annual or persisting a second season, circular, 38 cm in diam., concave above). Surface not laccate, pale buff color, smooth, soft to touch. (Surface smooth, pale buff to bluish-green, smooth, undulating). Context very soft and spongy, light color, varying from buff to isabelline. (Context soft, spongy, floccose, buff to yellowish-buff, 1 cm to 5 cm thick). Pores small, round, an inch or more long, with concolorous mouths. (Tubes long, 0,5 cm to 3 cm, buff coloured; mouths reseda green, irregular, angular to elongated). Spores $8 \times 12-14$, very pale color, smooth. Spores (teste Lloyd) smooth, very pale colour, truncate, 8μ by 12μ to 14μ ; hyphae 4μ to 11μ .

Distribution.—A single specimen collected at Durban, Natal.

This plant impresses me as exceptional among the *Ganoderma* section in its very soft flesh and pale spores. I know of no other with such flesh excepting *Polyporus colossus*, which has a differently colored context, and larger spores. I would class it in Section 102 of my recent *Apus Polyporus* pamphlet. It is an evident annual and probably of rapid growth. Type 58 from I. B. Pole Evans, South Africa.

(In its soft spongy context the fungus resembles *P. colossus*, but differs from it in its habit, surface, long pores, spore characters, and colour of context.

It is evidently normally an annual, though in part a second pore layer had formed over the first").

Sporophore circular, 38 cm diam., occasionally lobed at the obtusely rounded margin, with an unevenly undulating and radially folded surface and a very thin papery cuticle. The fruitbody is centrally stipitate; the stipe being 8 cm long and 12 cm diam. The pores, 2-3 per mm, are angular with thin dissepiments and the tubes up to 3,5 cm long; in part there is a hint of indistinct stratification (but this is probably an illusion). The flesh is about 3 cm thick in the pileus but much thicker in the centre where it continues into the stipe; it has a soft cottony texture and is ochraceous fawn becoming yellowish brown in the stipe. Anatomically the context is dimitic, consisting of strongly dextrinoid skeletal hyphae, 6-11 μ wide, with slightly to distinctly thickened pale straw-coloured walls. These hyphae are mostly unbranched and taper to an elongated thin-walled hyaline apex; however there may be very occasional branching. No generative hyphae were seen, as these had presumably collapsed. Spores were very scanty although eventually found at the mouths of the tubes near the base of the fruitbody. They are broadly elliptical, hyaline, $10,2-12,0 \times 6,0\mu$.

This species is liable to confusion with *P. baudonii* Pat. (syn. *Phaeolus manihotis* Heim) but the latter has appreciably smaller spores and the skeletal hyphae of the context are both narrower and non-dextrinoid. *P. mollicarnosus* is left in *Polyporus* [(Mich.) Fr.] Fr. for the time being; it was erroneously referred to *Ganoderma* Karst. by Saccardo & Trotter.

Polyporus nigrolucidus Lloyd in Mycological Writings 6: 925, Pl. 146, Fig. 1664. (1920). (Fig. 4a-b).

In this instance Lloyd's description is so vague it is reproduced separately as follows:

"The European form of *Polyporus lucidus* was not even suggested to us when we first saw this specimen but when we came to 'analyze' it we concluded that it is only a 'species form'. Plant is mesopodial with the surface shiny and jet black. Trama, pores and pore mouths isabelline. The interior of the stem is so soft that it could be called pithy. Spores 6×8 of the usual type. There is a black form of *Polyporus lucidus* in Japan that corresponds to the European plant except as to color. This does not exactly agree in any feature."

Van der Byl's (1922) description is more lucid:

"Plants terrestrial, annual, stalked; pileus depressed at the centre, rarely reniform, 4 cm to 9 cm diam. by 5 cm, surface black, laccate, rugulose; context white to brown, 1 mm to 3 mm thick, soft; tubes 1 mm to 3 mm long, white within; mouths subrotund to angular, 5 to 6 to the mm; edges thin, entire, white, becoming discoloured; spores coloured, apiculate, truncate, 4μ to $5,5\mu$ by 6μ to $7,5\mu$; hyphae $5,5\mu$ to $7,5\mu$; stalk central, rarely somewhat excentric or lateral, and deeply rooted. 12 cm to 20 cm long by 5 mm to 7 mm diam., interior soft.

Distribution.—Found at Durban, Natal, by J. M. Wood, and collected here also by the writer.

Distinguished by black laccate surface of pileus and stalk. (Type in Natal Herbarium, No. 412). In young specimens surface of the pileus is frequently dark chestnut brown in part and in a few specimens the main stalk branched below the soil."

There is some uncertainty concerning the status of the collection in PRE (No. 13941, ex Van der Byl), but the latter expressly stated that the type was in the Natal Herbarium, and since the mycological collections from that herbarium are now in PRE it seems reasonable to conclude that it is indeed the specimen referred to as type by Van der Byl. Reference to Doidge's (1950) list of South African Fungi and Lichens is confusing since it is not clear whether she is indicating that Van der Byl No. 900 is to be equated with the specimen in the Lloyd collections, with the Lloyd Catalogue No. 22888, and hence to be regarded as type rather than specimen No. 13941 in PRE. Certainly Stevenson & Cash (1936) merely quote Lloyd's collection No. 22888 from Van der Byl as type without quoting any collector's number.

The following notes are taken from collection No. 13941 in PRE: This consists of two fruitbodies with circular, umbilicate, concentrically sulcate and radially plicate pilei, the surface of which is laccate and of a dark chestnut to almost black. The stipe likewise has a black shining crust and, although broken, is up to 6 cm long and up to 1,2 cm wide with pale ligni-colorous flesh. The pores, 5 per mm, are minute, angular, with thin dissepiments, and creamy fawn. The flesh of the pileus is similarly coloured but more ochraceous. Anatomically the surface of the pileus consists of a cuticle formed of a palisade of very short, clavate or capitate elements, but with very slightly thickened walls. These elements measure $13-20 \times 8-11\mu$. In structure the flesh appears to be dimitic, comprising skeletal hyphae, up to 5μ wide, with thin, pale straw-coloured dextrinoid walls but retaining a wide, often abundantly secondarily septate lumen. Some of these hyphae branch toward their apex. Spores are frequent, $8,0-9,75 \times 6,2-6,5\mu$, and typical of those found in the genus *Ganoderma* Karst. to which genus this species is now transferred as *Ganoderma nigrolucidum* (Lloyd) Reid, comb. nov.

The distinguishing features appear to be the centrally-stalked fruitbody with dark laccate crust, the pale flesh, the small size and thin-walled nature of the cuticular elements, and the small pores.

Polyporus ochroporus Van der Byl in S. Afr. J. Sci. 18: 269 (1922).

The type material from the Eastern Cape Forest Conservancy, coll. Van der Byl (No. 115) in PRE has almost been destroyed by insects. Both surface and pores have been eaten and only two portions of context remain. Examination of these shows the hyphal anatomy to be as described for this species in my previous paper (Reid, 1973).

It should be noted that Doidge's (1950) citation is again confusing, for Van der Byl clearly stated that the type No. 115 was in the Natal Herbarium and came from the Eastern Cape Forest Conservancy, collected by himself. There is nothing on this specimen in PRE to suggest it came from Branders High Forest and was collected by Keet. Neither is there any suggestion of this data on the Kew specimen which merely bears the following information "South Africa, Van der Bijl; Don. C. J. Humphrey, July 1932. Lloyd Myc. Coll. Cat. No. 18843". Just how many collections are included in the one citation by Doidge, and all apparently equated with the type No. 115, is far from clear.

This fungus is now widely known as *Inonotus ochroporus* (Van der Byl) Pegler.

Polyporus rusticus Lloyd in Mycological Writings 5, Mycological Notes 53, p. 751, Fig. 1124, (1918). (Figs. 5 a-b).

The isotype collection in PRE: On dead pine, Klappmuts, Cape, December 1916, No. 387 (PRE 13940), differs in no significant detail from the specimen 285 in STE as described in my previous paper (Reid, 1973). It is similar in macroscopic appearance, hyphal structure, and in having hyaline, elliptic spores, measuring $7.5-9.0 \times 3.5-4.0 \mu$. This species is the same as *Funalia protea* var. *imbricata* (Berk.) Reid.

Polyporus trichiliae Van der Byl in S. Afr. J. Sci. 18: 262 (1922). (Fig. 7 a-b).

Examination of the holotype in PRE: On *Trichilia emetica*, Durban, No. 897 (PRE 14032), confirms that this species is a synonym of *Xylodon subiculoides* (Lloyd) Reid as suggested in my previous paper (Reid, 1973). However, as the generic name *Xylodon* P. Karst. has been superseded by *Schizopora* Velen., the fungus should be cited as: ***Schizopora subiculoides* (Lloyd) Ryvarden.**

Polyporus vibecinus var. **antelopum** Kalchbr. in Grevillea 10: 53 (1881).

"Pileo vix virgato, margine exciso-lobato, lobis passim dichotomis; poris nudicoribus, reticulatis.

P. Natal (1. Wood, No. 99)."

"Pileus scarcely virgate, margin excised-lobate, lobes here and there dichotomous; pores rough*, reticulate.

P. Natal (coll. Wood, No. 99)."

The isotype in PRE: Inanda, Natal, coll. J. M. Wood, 1877/1888 No. 99, consists of six fruitbodies. These are all dimidiate or spatulate and narrowed behind into a short dorsiventrally flattened stipe-like base. The upper surface is purplish brown, densely radiately striate or virgate, and covered toward the base with a sparse, discontinuous tomentum which is visible only under a lens, and extends in progressively more sparse form to about the centre of the pileus. The margin is slightly lacerate but not lobed. The pores are ashy-buff, angular and elongated radially (favoloid) and $2.5-3.0$ per mm; the dissepiments are either entire or lacerated and toothed. Anatomically the structure agrees with that of the var. *vibecinus* and is dimitic, comprising non-dextrinoid, very elongated, thick-walled to almost solid, glassy, unbranched skeletal hyphae, which at their widest portion are $5-8 \mu$ diam., but taper at either end to about 2μ ; the generative hyphae have collapsed and disappeared.

* There appears to have been an error in the printing and it seems likely that "rudioribus" was intended instead of "nudicoribus". The former would presumably refer to the almost toothed or lacerated dissepiments.

This taxon is in no way different from *P. vibecinus* Fr., which is itself a synonym of *Favolus spathulatus* (Jungh.) Bres., and was listed as such by Doidge (1950).

Trametes albotexta Lloyd in Mycological Writings 5; Mycological Notes 44: p. 614, fig. 868 (1916). (Fig. 6).

"Pileus sessile, $2-3 \times 4-5$ inches, an inch thick, surface reddish brown, dull, matt, soft. (Pileus sessile, dimidiate, 8 cm to 10 cm by 5 cm by 1.4 cm to 4 cm; surface reddish brown, soft to hard, rugulose, tomentose to subglabrous, smooth or scabrid to touch). Context reddish brown, thin, soft. (context 0.4 cm to 0.7 cm, firm, tough, corky, reddish brown). Pores rigid, small, round, an inch long. Pore tissue white, contrasting with the brown hymenium so that a section is variegated. (tubes 0.5 mm to 1.5 mm long, tissue white with reddish-brown hymenium; mouths subrotund to angular, 2 to 3 to mm, edges entire or produced into teeth, white changing to yellowish and dark brown). Cystidia none. Spores pale brown, small, elliptical-subglobose, $3-4 \times 4-5$. (Spores pale brown in mass, subglobose 3.7μ by 5μ ; hyphae 4μ to 5μ).

The coloration of the surface, pore surface and context is reddish brown, the tissue of the pores white. I know of no other *Trametes* or polyporoid with this peculiar color pore contrast. The pale-colored spores might be the basis for a "new genus", but I think that would be "inutile".

(Distribution).—On dead *Podocarpus* sp. in Hlatikulu Forest. Type in Natal Herbarium, No. 181. Collected also by Miss A. V. Duthie.

The surface and context colour are peculiar and would aid in the recognition.)"

The isotype in PRE: On dead *Podocarpus*, Hlatikulu Forest, Swaziland, 11 May 1915, No. 181 (PRE 15568), is very similar indeed to the specimen in STE which I have already described (Reid, 1973), but there is an appreciable difference in spore size and shape. I can only conclude that the spores in the STE collection are immature. Because of this discrepancy I have reproduced my notes on the PRE material in full:

Sporophores with a very dark red-brown to blackish surface, consisting of alternating bands of tomentum and glabrous zones. The tomentum appears rather scrupose, especially under a lens. The pores, $2-3$ per mm, are rounded to irregular, pale brownish (due to the colour of the hymenium), with thick buff-coloured dissepiments. The tubes, up to 10 mm long, are lined with the pale brown hymenium. Toward the base of the fruitbody the flesh is up to 1.5 cm thick but is only 3 mm thick elsewhere. The lignicolous context is rather fibrous and has a monomitic structure, comprising thick-walled, glassy generative hyphae, $5-8 \mu$ diam., with clamp-connections at the septa. These hyphae, which are non-dextrinoid, have a very broad lumen. Toward the cuticle there are coloured conducting elements with brown contents. There are similar conducting elements in the tubes and some of these appear to terminate in the hymenium as gloecystidia-like organs. The hyphae forming the surface tomentum of the pileus are also brown. The spores, $5.0-5.75 \times 3.75-4.2 \mu$, vary in shape from very broadly elliptic to ovate and have slightly thickened hyaline walls, but some spores either become brownish or become stained brownish. They are non-dextrinoid.

If this account is compared with that of the STE specimen it is difficult to believe that one is dealing with two different species. I think it more probable that the spores of the STE fruitbody are immature, but obviously this is a point in need of clarification. Further collecting will be necessary to resolve the problem.

Trametes capensis Lloyd apud Doidge in Bothalia 5: 544 (1950), non rite publicatum.

The description, without Latin diagnosis, is as follows: "This fungus was named by Lloyd (l.c.) and described in a letter dated 7 August 1920, but the description was omitted from his published notes. The following is Lloyd's description: "Sessile, hard, ligneous. Context and pores isabelline. Surface reddish-brown, minutely velutinate. Pores small, rigid, irregular. Spores not found. This belongs in section 128 but is close to *Trametes devexa* (in 131). The yellowish context and minutely velutinate surface alone distinguish it. The spores have the same appearance. Based on collection 8820, L. C. Turner."

The specimen in PRE: "On *Acacia horrida*, Fountains Valley, L. C. Turner, No. 8820" comprises fruitbodies forming an imbricate series of woody brackets, each with a somewhat uneven, pale tawny, velutinate surface. The pores, 2–3 per mm, are rounded to angular, with thick dissepiments and, over most of the lower surface of the brackets, have become open and plate-like or trametoid. The flesh, up to 6 mm thick is tawny-brown, zoned, and there is a distinct black, thin, horny cuticle. The context is trimitic, comprising solid, glassy, slightly tinted, skeletal hyphae, 5–6 μ diam.; solid binding hyphae, 2–3 μ diam., which are sometimes condensed into coralloid complexes, but on occasion may be more elongated and lax; generative hyphae were not seen and had presumably collapsed. Spores not seen.

This is typical *Trametes meyenii* (Klotzsch) Lloyd.

Trametes griseo-lilacina Van der Byl in S. Afr. J. Sci. 18: 283 (1922). (Fig. 8).

"Plants annual, sessile; pileus coriaceous to corky, applanate imbricate, dimidiate to laterally extended, 3 cm to 10 cm by 2,5 cm to 4 cm by 4 cm to 0,8 cm; surface concentrically sulcate, tomentose to glabrous, fasciculate setose, rugulose, grey to greyish-fawn; margin acute, tomentose on upper surface; context corky, firm, fibrous, lilac-mauve to mouse-coloured, 3 mm to 4 mm; tubes 0,5 mm to 2,5 mm long, lighter than context; mouths unequal, irregular, round to elongated and angular, 2 to 3 to the mm; edges thick, entire, concolorous; lilac-mauve; spores hyaline, smooth, oblong, 3,7 μ by 7,5 μ ; hyphae simple, 3,5 μ to 6 μ .

Distribution.—Single collection by Geo. Hobbs on railway sleeper at Illovo River, Natal. (Type in Natal Herbarium, No. 921).

The context colour and colour of pore mouths is peculiar and should aid in the identification of the fungus. The fungus is evidently related to the Australian *Trametes lilacino-gilva* (Berk.) Lloyd, but with rougher surface and irregular pore mouths."

The holotype in PRE: Illovo River, Natal, leg. G. Hobbs, No. 921 (PRE 13942), consists of sporophores varying in size from 2–6 cm in length and 1,5–4,0 cm from the point of attachment to the margin. Some of the fruitbodies are imbricate, and become laterally confluent. They have a conspicuously radiately strigose surface consisting of adpressed but raised strands of hyphae, although in some fructifications the surface of the basal portion has an almost spiculate appearance (especially in young brackets). The pores, mostly 3 per mm, are rather irregular with somewhat thickened dissepiments and pinkish-grey-brown in colour. The flesh, up to 5 mm thick, is pinkish-fawn or pinkish-brown and has a felty texture. Anatomically the context appears to be rudimentarily trimitic and conforms closely to the structure described for the specimen in STE (see Reid, 1973). Spores are present, hyaline, elliptic, tapering to a snout, and measuring 5,0–7,2 \times 2,75–3,2 μ .

Trametes keetii Van der Byl in S. Afr. J. Sci. 18: 283 (1922). (Fig. 12).

"Plants sessile; pileus dimidiate, applanate, woody, firm and rigid, slightly decurrent, 3 cm to 6 cm by 2 cm to 3,5 cm by 0,4 cm to 1,5 cm; surface grey to purplish black, finely tomentose, smooth to scrupose; margin acute to rounded, grey; context 0,2 cm to 1 cm, hard, rusty-brown; tubes firm, 0,2 mm

to 4 mm concolorous with context; mouths minute, subrotund, 6 to 9 to the mm; edges entire, thick, firm, concolorous; spores not found, taken to be hyaline, setae present, slender, subulate, 21 μ to 28 μ long; hyphae 4 μ to 6 μ diam.

Distribution.—A single collection by J. D. Keet in Eastern Cape Forest Conservancy on *Rhus laevigata*. (Type in Natal Herbarium, No. 87)."

The holotype in PRE: On *Rhus laevigata*, Eastern Cape Forest Conservancy, Katberg Forest, 14 Aug. 1915, coll. J. D. Keet, No. 87 PRE (15636), consists of sporophores up to 3,2 cm from point of attachment to the margin, with a grey-black, blackish-brown or purplish-black scrupose surface and a pinkish-fawn marginal zone. In very young brackets the colour is paler pinkish-beige. The pores, mostly 6 per mm and scarcely visible to the naked eye, are very small, rounded, with thick dissepiments, and either rusty or rusty with a greyish bloom; the tubes are up to 4 mm deep. The flesh is rather thick behind, reaching 1,2 cm, and is rusty-brown. Anatomically the context is dimitic, comprising skeletal hyphae, 3,5–4,0 μ wide, with thick, brown walls although retaining a wide lumen; and generative hyphae are paler, narrower, branched, with thinner walls but lacking clamp-connections at the septa. Setae 15–30 μ long and 7–10 μ wide, thick-walled, brown and subulate. Spores not seen.

This is a thickish form of *Phellinus gilvus* (Schw.) Pat.

Trametes ochrolignea Lloyd in Mycological Writings 5; Letter 63, p. 10 (1916). (Fig. 9).

"(Plant forms a hard flat, woody and unseparable mass, 2 mm thick, on the wood of which it grows, the periphery of this mass is continued into the pilei or the pilei develop separately from it). Pileus woody, sessile, 4–6 inches in diameter, an inch thick (pilei subcircular 6–10 cm diam., by 0,7 cm to 2,0 cm thick). Surface uneven, not zoned, reddish-brown (Rood's Brown, Ridgway) minutely pubescent. (Surface uneven, tuberculate, reddish brown, more yellow towards margin, tomentose, with a few concentric furrows). Context hard, woody, yellow. (Context 3 mm to 9 mm thick, corky to hard and woody, yellow, shining). Pores round, or elongated, medium, somewhat irregular. (Tubes about 1 mm long; mouths round to elongated, irregular, 2 to 3 to the mm; edges thick or thin, somewhat lacerate, yellow). Spores 3 \times 6, cylindrical, hyaline, smooth. (Spores hyaline, smooth, 3,7 μ by 7 μ ; hyphae 3 μ to 7 μ diam.).

Trametes Zimmermanni, a species named in MSS at Berlin, and *Trametes ochro-flava* of Brazil, which is really a *Fomes*, are the only other species known to me with yellow context. Although the hymenial configuration is so different, with same texture, context color and spores, *Daedalea Dregeana*, *Daedalea Eatonii* and *Trametes ochrolignea* are for me variations of the same species. Zones of annual growth and indistinct pore strata are seen in *Trametes ochrolignea* so that it is really a *Fomes*.

(Distribution).—Found at Durban, Natal, on rotten log. Distinguished from *P. occidentalis* by its habit of growth, more tuberculate surface and context in older part and part above substratum being extremely hard and woody. Cotype in Natal Herbarium, No. 266)."

The isotype in PRE: Durban, Stella Bush, No. 226, 21 Feb. 1916. (PRE 11258), consists of imbricate woody brackets, covered by an even, smooth, ochraceous brown, felted tomentum, which is darker brown behind. The brackets are about 5 cm long and 3 cm from point of attachment to the margin. The pores, which are irregular and angular to almost sinuous behind, measure 2 per mm. The flesh, up to 1,2 cm at the base, is yellowish-brown to brown, with a silky sheen where cut. Anatomically the context is trimitic, comprising unbranched skeletal hyphae, 4–6(–8) μ diam., with only slightly thickened, pale brown walls and a very wide lumen (a very few almost solid skeletal are also present); scanty, more or less solid, hyaline, branched, binding hyphae, 2,5–3,0 μ diam., but not forming dense coralloid complexes; and a few mostly collapsed, hyaline,

generative hyphae, which appear to have very small clamp-connections at the septa. Spores, often in groups of 4, hyaline, elliptic, $6.0-7.2 \times 2.0-2.2 \mu$.

This is merely a thick form of *Coriolopsis occidentalis* (Klotzsch) Murr. as suggested by Reid (1973).

***Trametes subflava* Lloyd** in *Mycological Writings* 5; Letter 66, p. 8 (1917). (Fig. 10 a-b).

Examination of the isotype in PRE: On live *Celtis kraussiana*, coll. J. D. Keet, in Eastern Cape Forest Conservancy, No. 388 (PRE 31722), shows this to accord in all details with the description which was published (Reid, 1973) for the specimen in STE, and which, despite the differing numbers, is probably part of the same fruitbody. It certainly belongs in the genus *Oxyporus* (Bourd. & Galz.) Donk to which I referred it as *O. subflavus* (Lloyd) Reid.

***Trametes tomentosa* Van der Byl** in *S. Afr. J. Sci.* 18: 285 (1922).

After examination of a specimen in STE (No. 707) I (Reid, 1973) concluded that this agreed with the original diagnosis and was merely a large, thin, flaccid form of *Coriolopsis occidentalis* (Klotzsch) Murr. A study of the holotype in PRE: Durban, No. 836 (PRE 14036), has confirmed that this species is identical with *C. occidentalis*. The only unusual feature of specimen 836 is that the surface tomentum has become slightly more matted or felted and hence smoother than that of material in pristine condition.

***Trametes varians* Van der Byl** in *S. Afr. J. Sci.* 18: 281-282 (1922). (Fig. 11).

"Plants effused-reflexed to largely resupinate; pileus corky rigid, dimidiate, imbricate, at times conchate, 2 cm to 4 cm by 0.7 cm to 2 cm by 0.5 cm to 1 cm; surface azonate, minutely pubescent, frequently somewhat tuberculate, at times rugulose and scabrid, creamy white becoming ochraceous to somewhat fuliginous; margin acute, cream coloured or fuliginous; context 1 mm to 2 mm thick, corky, creamy white; tubes 1.5 mm long, discoloured within; mouths angular to elongated, irregular, approximating 4 to the mm; edges entire, creamy white to greyish and greenish drab; hyphae 7.2μ diam.

Distribution.—Recorded from Eastern Cape Forest Conservancy. (Type in Natal Herbarium, No. 151).

Differs from *Trametes glabrescens* in habit, surface and pore-characters."

The holotype in PRE: Without field data on the packet (but fide Van der Byl from the Eastern Cape Forest Conservancy), det. Van der Byl and bearing the number 151 (PRE 14027), consists of effuso-reflexed, narrow brackets up to 2 cm from the point of attachment to the margin of a grey-buff to ochraceous-buff colour with a minutely roughened scrupose surface, and an acute margin. These brackets are rather thick behind, reaching 2 cm at the base. The pores, 3-4 per mm, are angular with thin dissepiments and the tubes up to 2 mm long. The flesh is concolorous and rudimentarily trimitic, comprising thick-walled, glassy, skeletal hyphae, up to 6μ diam. and also a few similar broad, thick-walled skeletal-type hyphae, but with clamp-connections. The generative hyphae are thin-walled, branched, with clamps at the septa. There are no coralloid binding hyphae, but there are long, narrow, glassy hyphae, 2.5μ diam., which are often kinked and bear abortive side-branches at the angles. These hyphae wander through the flesh and appear to be primitive binding hyphae. Spores, $4.75-6.0 \times 2.0-2.2 \mu$, thin-walled, hyaline and elliptic.

The above material seems to be conspecific with the collection 527 in STE, but is apparently more mature, which no doubt accounts for the very slightly

larger spores in the PRE fruitbodies. In my previous paper (Reid, 1973) I suggested the STE material represented young fructifications of a *Coriolus*. A study of the more mature sporophores of the holotype leads me to conclude that *T. varians* is a synonym of *Coriolus durbanensis* (Van der Byl) Reid (see page 000).

***Merulius gelatinosus* Lloyd** in *Mycological Writings* 7: 1158, Pl. 223, fig. 2293 (1922). (nec *M. gelatinosus* Petch, 1925). (Fig. 13).

"Resupinate, growing over leaves and debris with abundant development of white subiculum. The hymenium is even, when dry Dresden brown, and the quick change to bright russet when moistened is remarkable. On soaking it swells with a gelatinous appearance and the hymenium in folds turns dark, reminding one of *Exidia glandulosa*. The basidia are hyaline but seated in colored tissue. The abundant spores are elongated, 7×10 , deep colored, smooth. A section of soaked plant about 2-3 mm thick shows 3 layers, the intermediate being white of compact hyphae, the lower indefinite of coarse brown loosely woven hyphae. The entire plant when soaked has a gelatinous appearance, not seen in others of this section. Its affinities otherwise are very close to the notorious "dry rot" *Merulius lacrymans*."

After a study of what is probably isotype material in PRE: "On logs, debris, etc., Belvidere, Knysna, C.P., coll. A. V. Duthie, July 1921 (PRE 31481), there is little that can be added to the original diagnosis. As Lloyd stated, the hymenium of the dried material is smooth, but on soaking in water it becomes wrinkled in broad, obtuse undulations. The flesh is up to 1 mm thick, and the white subiculum is formed of hyaline, glassy hyphae with slightly thickened walls and clamp-connections at the septa. Nearest the substrate the hyphae have distinctly brown walls, but are otherwise similar to those of the subiculum, although less glassy. All the hyphae have a more or less erect, entwined orientation. Below the hymenium there is a dense subhymenial layer. The spores, $9.0-10.2 \times 5.75-6.2 \mu$, are elliptic, brown, with a distinct wall.

Ginns (1969) noted that Talbot (1951) had concluded that *M. gelatinosus* Lloyd differed from *Serpula himantoides* (Fr.) Bond. ex Parmasto primarily in having more frequent clamp-connections, but Ginns argued that the specimen which Talbot (and myself) studied, ie. Duthie 31481, may not have been authentic, for he indicated that there was no evidence from the specimen in the Lloyd herbarium to help establish its authenticity. (On the other hand there seems to me absolutely no reason to doubt it! There is an unusual feature shared by both the type as figured by Lloyd and the PRE specimen, in that both have numerous bird feathers in the substrate). Ginns along with W. B. Cooke (1957) considered *M. gelatinosus* Lloyd to be a synonym of *Serpula lacrimans* var *himantoides* (Fr.) W. B. Cooke. However, many authorities would prefer to recognize *Serpula himantoides* (Fr.) Karst. at specific level.

Despite the conclusions of Ginns and W. B. Cooke I am not entirely convinced that *M. gelatinosus* Lloyd should be reduced to synonymy under *S. himantoides*. The latter normally retains a distinctly reticulate-poroid hymenial configuration in the dried state; it does not swell conspicuously on soaking in water; and I have never seen a specimen 1 mm in thickness exclusive of pore tissue. I am uncertain whether this species should be assigned to *Serpula* Pers. ex S. F. Gray or to *Coniophora* DC. ex Mérat. Further collecting is needed to resolve this problem.



FIGS. 1-12.—Fig. 1, *Polyporus areno-sobasus*, spores from fragments in K of Van der Byl 710. Fig. 2, *Polyporus conchatus*, spores from PRE 385. Fig. 3, *Polyporus mollicarnosus*, spores from presumed isotype in PRE. Figs. 4 a-b, *Polyporus nigrolucidus*, a, cuticular elements; b, spores; from PRE 13941. Figs. 5 a-b, *Polyporus rusticus*, a, basidia; b, spores; from isotype in PRE. Fig. 6, *Trametes albotexta*, spores from isotype in PRE. Figs. 7 a-b, *Polyporus trichiliae*, a, cystidioles; b, spores; from holotype in PRE. Fig. 8, *Trametes griseo-lilacina*, spores from holotype in PRE. Fig. 9, *Trametes ochrolignea*, spores from isotype in PRE. Figs. 10 a-b, *Trametes subflava*, spores, from isotype in PRE. Fig. 11, *Trametes varians*, spores, from holotype in PRE. Fig. 12, *Trametes keetii*, setae, from holotype in PRE. (All $\times 866$).

CLAVARIACEAE

Clavaria cladoniae Kalchbr. in Grevillea 10: 105 (1882). (Fig. 14 a-d).

"Terrigena, simplex, ochraceo-ferruginea clavulis vix pollicem altis, sursum dilatatis et in ramulos breves, compressos, subfoliaceos divisus.

Somerset East, 1. McOw., No. 1431.

Basi mycelio radiculoso albo, supra folia serpente aucta. Clavulae nonnunquam scyphum *Cladonia pyxidata* referunt. Quam, *Clavaria pyxidata*, Pers. multo tenerior."

"Growing on the ground, simple, ochraceous-ferrugineous, clubs scarcely an inch high, dilated above and divided into short, compressed, subfoliaceous branches.

Somerset East, coll. MacOwan, No. 1431.

With basal mycelium forming white root-like strands, spreading and creeping over the leaves. Clubs sometimes resembling the scyphus of *Cladonia pyxidata*; much thinner than *Clavaria pyxidata*, Pers."

The isotype in PRE comprises fruitbodies up to 1 cm high, with a main trunk which is more or less flattened and dilated above where there is the irregular production of short prongs. The fructifications

resemble miniature antlers, and are rusty-ochraceous with a greyish tinge, but are attached to vegetable debris by the copious development of cream, cottony mycelial strands. The structure of these strands is monomitic, comprising narrow, hyaline hyphae, 1,7-2,0 μ wide, with slightly thickened, distinct walls but retaining a wide lumen. These hyphae, which have clamp-connections at the septa, are sometimes encrusted with large amorphous granules. Anatomically the flesh of the sporophore is formed of similar clamp-bearing hyphae, 2-3 μ wide, although some appear to be inflated up to 5 μ . Basidia elongate-clavate, with a basal clamp, and up to 40 μ in length. Spores brown, echinulate, elliptic, 6,5-8,75 \times 3,0-3,75 μ .

This fungus belongs in the genus *Ramaria* Holmsk. ex S. F. Gray and is accordingly so transferred as *Ramaria cladoniae* (Kalchbr.) Reid, comb. nov. It should be noted that Corner (1950) suggested that this species belonged in the genus *Lachnocladium* Lév.

TREMELLALES

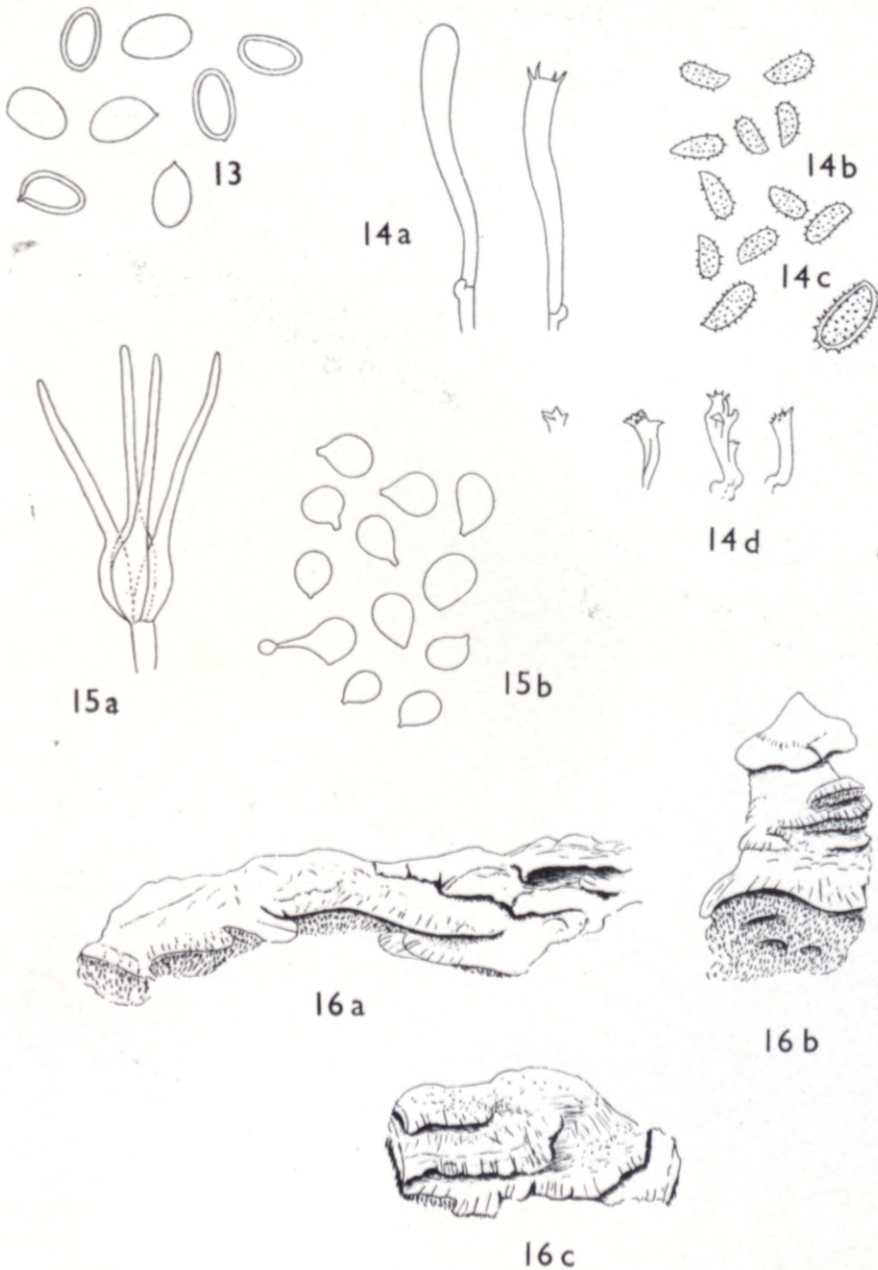
Tremella hemifoliacea Lloyd in Mycological Writings 7: 1338, Pl. 324, Figs. 3104, 3105 (1925)- (Fig. 15 a-b).

"When we first saw this it was something out of the usual, for we never saw a *Tremella* that dried down to a thin brown layer (Fig. 3104). When soaked it developed in perfect cerebriform fruitbodies over portions of the surface but not all (Fig. 3105). As to color, consistency and 'structure' it is the same as the European species *Tremella foliacea*, but a comparison with our Fig. 1195, page 793, well demonstrates that it cannot be the European plant. We will not further describe it, for, excepting its different method of development, it is same as *Tremella foliacea*. The brown color is exactly same, but collector's notes were a mass of dirty-white jelly."

The isotype in PRE: On *Gymnosporia peduncularis*, The Glebe, Knysna, C.P., coll. E. M. Doidge, 13 May 1923 (PRE 17798), consists of sporophores which, when dry, form a distinct greasy-looking (not varnish-like) brown film with a metallic sheen, for the most

part smooth, but here and there with an occasional wrinkle or fold. When soaked the fungus forms a dark brown, firmly gelatinous, encrusting layer, rather like a *Sebacina*, with a very closely-tuberculate or wrinkled surface, which does not become gyrose, foliose or cerebriform. The context is formed of very narrow, gelatinized hyphae, difficult to distinguish individually, but with brownish, granular contents and minute clamp-connections at the septa. The basidia are brown, more or less globose and 4-spored. Spores, $6,2-8,2 \times 4,75-6,0\mu$, vary from ovate or subglobose to elliptic, and germinate by repetition.

It should be noted that when Bandoni (1958) examined the holotype in the Lloyd Herbarium, he found it to be in poor condition and, beyond being able to confirm that it was a tremellaceous fungus, he could not even be sure of its generic disposition. It seems best left in *Tremella* Dill. ex Fr.



FIGS. 13-16.—Fig. 13, *Merulius tremellosus*, spores, from probable isotype in PRE. Figs. 14 a-d, *Clavaria cladoniae*, a, basidia; b, spores; c, spore $\times 1450$; d, habit sketch $\times \frac{1}{3}$, from holotype in PRE. Figs. 15 a-b, *Tremella hemifoliacea*, a, basidium; b, spores; from isotype in PRE. Figs. 16 a-c, *Polyporus durbanensis*, habit sketches of sporophores, from collection 26845 in PRE, $\times \frac{1}{3}$; c, habit sketch, from holotype in PRE, $\times \frac{1}{3}$ (All $\times 866$ except where otherwise indicated).

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