

NOTES ON AUSTRALIAN FUNGI, No. IV.

POLYPORUS, FOMES AND HEXAGONA.

By J. BURTON OLELAND, M.D., and EDWIN CHEEL, Botanical
Assistant, Botanic Gardens, Sydney.

[Read before the Royal Society of N.S. Wales, December 5, 1917.]

THROUGH the kind assistance of C. G. Lloyd of Cincinnati, Ohio, most of the Australian polypores in our possession have been accurately identified. In the present paper we record our various collections. In doing so, we make use of the excellent keys employed by Lloyd in the following works:—'Synopsis of the Genus Hexagona' (Ohio, 1910), 'Synopsis of the Stipitate Polyporoids' (Ohio, 1912), 'Synopsis of the Section Apus of the Genus Polyporus' (Ohio, 1915) and 'Synopsis of the Genus Fomes' (Ohio, 1915). In addition to recording the plants we have handled, we have included as well all the Australian species embraced in these works. Australian mycologists should thus have available a workable scheme for the identification of most of our firmer polypores. Those who have attempted to work out the species from Cooke's 'Handbook of Australian Fungi,' will appreciate the value of Lloyd's work.

We deal first with the Stipitate Polypores, then with *Fomes*, *Polyporus* (*Apus*) and *Hexagona*.

**I. STIPITATE SPECIES OF THE GENERA FOMES,
POLYPORUS AND POLYSTICTUS.**

Sub-woody.—With woody fibrils but not perennial and not having the pores in strata (except as to the first).

Pores in areas of growth indistinctly stratified. *Fomes*.

Pores not stratified.

Spores coloured, mostly elliptical, with a strong apiculus. Context coloured. Surface of most species laccate.—*Ganodermus*.

Spores coloured, mostly globose, with none or a small apiculus. Context coloured. Surface of most species dull.—*Amaurodermus*.

Spores white. Context (except Section 11) pale or white.—*Lignosus*.

Fleshy or coriaceous.

Stipe lateral. Spores white.—*Petaloides*.

Stipe branching and bearing several pileoli.—*Merismus*.

Stipe central or excentric (rarely lateral). Flesh spongy, light. Spores white or coloured.—*Spongiosus*.

Spores coloured. Fleshy or coriaceous.—*Pelloporus*.

Spores white. Fleshy, soft, usually terrestrial, with thick pilei.—*Ovinus*.

Spores white. Fleshy-pliant, coriaceous, usually with thin pilei and epixylous.—*Lentus*.

Lentus with black stems.—*Melanopus*.

First Division—FOMES (Stipitate).

Section 1. Lloyd records only one species, which is not Australian.

Second Division—GANODERMUS.

Section 2. Spores smooth or but slightly rough.

1. POLYPORUS (GANODERMUS) LUCIDUS, var. JAPONICUS Fries.

Syn. *Fomes lucidus* Fr., (Cooke, No. 673).

Cooke records *Fomes lucidus* for Queensland and Tasmania. As all our Australian specimens appear to be the variety *japonicus*, we record this form only for Australia.

In September, 1911, specimens of a fungus were exhibited at a meeting of the Linnean Society of New South Wales from Catherine Hill coal-mine near Newcastle, N.S.W., under the name *Fomes lucidus*. One consists of a long

black laccate stem 11 ins. in height and about $\frac{3}{8}$ in. long, whose summit has become twisted and bent. The larger specimen has about fifty concentric rings on the stem, giving it a snake-like appearance. As the context resembles in colour that of the specimens we are considering, we think that this is probably an anomalous form which has been unable to fruit. Probably each ring represents a separate growth effort, dependent on access of moisture and so not necessarily annual.

In May, 1915, and again in June, 1916, specimens of a polypore were collected near the base of a decaying *Casuarina* stump near Lisarow. Lloyd has kindly identified these for us as *Polyporus japonicus*. He says:—"Certainly a form of *P. lucidus* with dark context colour and dark surface. The Japanese plant which passes as *Polyporus japonicus* in Japanese works differs from *P. lucidus* in this way. Your specimen also departs in having a lateral stipe in the same plane and in being tubercular deformed." Our specimens are fan-shaped, usually about 3 ins. in diameter and with the upper surface dark brownish-black and rugose and very dull laccate. The stipe is very short but shews a dorso-lateral attachment. The context is a dark cinnamon and the pore orifices a dull brown. The spores were brown, smooth and 11×5.5 to 6.5μ in size.

The National Collection has the following specimens:—A very large fan-shaped one, 7 ins. long by 8 ins. wide, with a stem $2\frac{1}{2}$ ins. long, and another smaller plant, Atherton Scrub, North Queensland (R. Mitchell, August, 1911); a fan-shaped specimen from Eumundi, Queensland (J. Staer, 1911); a finger-like form, Ingham, Herbert River, North Queensland (Sid. W. Jackson, 1908).

2. POLYPORUS (GANODERMUS) AMBOINENSIS Fries.

Syn. *Fomes amboinensis* Fr. (Cooke, No. 672). Queensland. Var. *gibbosus* (Cooke, No. 672), Queensland.

3. POLYPORUS (GANODERMUS) FORNICATUS Fries.

Lloyd states that plants similar to this species but with rougher spores occur in Australia.

Section 3. Spores distinctly rough.

4. POLYPORUS (GANODERMUS) OCHROLACCATUS Mont.

"Pileus small but deep, attached by a short rudimentary, dorsal stem. Crust *pale, ochraceous*, faintly laccate, rugulose, zoned. Pores medium with white mouths, long, not stratified but reaching the crust, very regular, arranged in lines. Spores large, $16 \times 32(?)\mu$, with small apiculus, distinctly rough."—Lloyd.

Lloyd has identified specimens for us collected at Port Moresby, New Guinea, by A. E. Pratt.

Section 4. Anomalous section with a false stem. No Australian species recorded.

Third Division—AMAURODERMUS.

Section 5. Polyporus. Spores smooth or but slightly rough. Stem slender, usually mesopodal.

5. POLYPORUS (AMAURODERMUS) RUDIS Berk.

Syn. *Fomes rudis* Berk. (Cooke, No. 669).

This is a quaint species not uncommon in the Sydney district but of no importance in forestry. It grows on the ground and has an irregular cinnamon-brown stem, sometimes three inches long or more, and a dark brown irregularly wrinkled cap up to three inches across.

Cooke records also *A. rugosus* (No. 671) for Victoria, Queensland and New South Wales. Lloyd, in speaking of *A. rudis* of Australia says:—"It is close (too close perhaps) to *rugosus* of the East, but seems to be more rugulose, has larger pores and spores (9–12 as against 6–8 or 8–10 μ), and when mature retains its colour." Such being Lloyd's opinion we refrain from including *A. rugosus* amongst

Australian species until the identification of Australian specimens is more certain. As regards *Fomes pullatus* (Cooke No. 670), recorded from Victoria and Queensland, Lloyd says:—"This is a manuscript name that Berkely gave to an old specimen from Hong Kong, but afterwards concluded that it was *rudis* of Australia and did not publish it. Cooke afterwards dug it up and published it. I do not think the old specimen is *rudis*, but it was too poor to publish." In view of this, the Australian records are best referred to *A. rudis*.

We have specimens of *A. rudis* from several sources, which may be briefly described as follows:—

Lane Cove, Sydney (A. A. Hamilton), August 1901, at base of a dead tree. Pileus convex, up to 3 ins. in diameter, dark brown, in old specimens blackish, radiately plicaturogose and slightly so concentrically, tendency to umbilication with central umbo. Stems central to excentric, comparatively slender, irregular, up to 3 ins. long, finely velutinate, dirty cinnamon becoming black. Pores dark brown, becoming blackish. Context pale cinnamon. Spores 11 to 12 × 8.5 to 10.3 μ , thick walled, brown, nearly smooth.

Penshurst, Sydney (E. Cheel), May 1910, at base of an old stump. Pileus irregular, convex, less rugose than the preceding, dark brown, matt. Stems irregular, up to 4 $\frac{1}{2}$ ins. Pores pallid. Context same tint as the preceding. Spores 11 × 8.5 μ , smooth, brown.

Linnean Society's Garden, Sydney (J. J. Fletcher), Nov. 1907. Pileus dark brown, 6 ins. in diameter, knobily rugulose, slightly umbilicate. Hymenium flat, pores dark brown (old). Stem 4 $\frac{1}{2}$ ins., irregular, moderately stout. Spores 10.5 to 11 × 9 μ .

Terrigal, N.S.W. (J. B. Cleland), June 1914. Description when fresh:—Pileus dark brown, rugose, plane (convex

when dry). Orifices of pores pallid, turning reddish when bruised. Tubes dark brown, at once turning black as do the orifices when deeply pressed. Substance pallid, turning a deep brown. Stem dark brown, smooth, violet-tinted pith. On the ground.

Near Lisarow in May 1915 a group of individuals of all sizes were met with amongst grass and leaves near a stump. When gathered, every part of the cap became blood-red on the slightest bruising, the injured part later turning black. The youngest plants showed a stalk with, for pileus, a small 'bleeding' knob. The cap was brown, knobby, velutinate and zoned, some of the zones being reddish-purple, others a dark blue grey, and others yellow-brown. The stem was central to lateral, brown, velutinate and irregular. The pores were soft, white, with rounded dissepiments. Spores brown, apparently smooth, $9 \times 8\mu$, $10.4 \times 8.5\mu$ or sometimes subspherical 8.5μ .

A specimen, collected at Hill Top in February 1911 had an irregular stem about 7 ins. long, and a very thin cap. We have another specimen from Mosman and one, gathered by Mr. A. A. Hamilton, from Lilyvale (April, 1912). Also one from Mount Wilson (June 1915), and one from Tuggerah (October, 1914. Spores smooth, 10.4 to 12×8.5 to 10.4μ).

In addition to these adult forms, we have two young specimens from Lilyvale, N.S.W. (April, 1912), with knobby flattened pilei under $\frac{1}{2}$ in. across, and thick-walled pallid pores. Spores 8.5 to $9 \times 7.5\mu$, smooth. A still younger form (stem 1 in., pileus $\frac{1}{4}$ in.), resembling a thick-headed nail in shape, was taken by one of us (J.B.C.) under trees at Bulli in April 1914. It was woody with a brown convex cap and very shallow white pores. Stem brown, slightly hollow with a spongy centre. It was 'adherent to a small brown pea-sized body, containing cavities and enclosing a white area like a bulb.

Section 6. Polyporus. Spores distinctly rough. Stem slender, usually mesopodal.

a. Stipe smooth, non-laccate surface. No Australian species recorded.

b. Stipe with a smooth, laccate crust.

6. POLYPORUS (AMAURODERMUS) LEPTOPUS, Persoon(?).

Cooke records *Fomes nigripes* (No. 668) for New South Wales. Lloyd has been unable to find the type of *Amaurodermus nigripes* described by Fries from Brazil, and states that the description of it reads much like *A. leptopus*, under which heading we place it, though possibly the Australian record belongs to neither.

LACCOCEPHALUM BASILAPILOIDES McAlpine and Tepper.

Lloyd suggests that the "stone-making fungus" described by McAlpine and Tepper as *Laccocephalum basilapiloides* is referable to this division. On examination of the type, we find that it is closely allied to *Polyporus tumulosus* of the Division *Ovinus* (which see).

Section 7. Polystictus. Plants with thin pilei and pore layers. No Australian species recorded.

Fourth Division—LIGNOSUS.

Section 8. Plants which form a sclerotium. Context pale or isabelline. Spores probably white.

No Australian species recorded.

Section 9. Pilei unilateral and superimposed. Context pale.

7. POLYPORUS (LIGNOSUS) SUPERPOSITUS Berk.

Under *Fomes superpositus* (No. 674) Cooke records this species for New South Wales. We have not met with it and it is evidently rare.

Section 10. Stipe mesopodal or pleuropodal. Context white or pale. Spores white.

No Australian species recorded.

Section 11. Context brown or gilvous. Spores white (probably).

8. POLYPORUS (LIGNOSUS) SCOPULOSUS Berk.
Cooke (No. 714) gives this species for Queensland.

Fifth Division—PETALOIDES.

Section 12. Carnosus. Fleshy, soft, thick species.

9. POLYPORUS (PETALOIDES) FUSCO-MACULATUS Bresadola.

Under *P. glutinifer*, Lloyd says that a single, sliced specimen exists at Kew which is probably the same as *P. fusco-maculatus*. It was described by Cooke and was said to have come from Mauritius, but Lloyd thinks it probably came from Australia.

Section 13. Polyporus. Fleshy, thin species, colour white or pale. Pores small.

10. POLYPORUS (PETALOIDES) ANNULATUS Junghuhn.

We have a small pure white somewhat fan-shaped species, $\frac{3}{4}$ in. in diameter, with a very short stem expanded into a disc. It resembles Lloyd's figure of *P. annulatus*. In drying, it became a pale fawn with a darker edge. The pores are small and dissepiments thin. The spores are elongated, 7 to 8.5 \times 3 μ . Bulli Pass, April, 1914.

11. POLYPORUS (PETALOIDES) RHIPIDIUM Berk.

This is a small white species, about $\frac{1}{4}$ in. in diameter, often found in numbers on the bark of living trees. Under *Favolus rhipidium*, this species is given by Cooke for Victoria, Queensland and New South Wales. Lloyd considers that *P. diminutus*, Masee, recorded for Australia, of which the type is not preserved, is from the figure and description founded on this species. *P. nanus* Masee, from Australia, is also *P. rhipidium*.

This species is common near Sydney on the trunks of Eucalypts (we have frequently taken it from that of *E.*

piperita). The size is rarely larger than $\frac{1}{4}$ in. and the colour almost pure white when gathered. Spores 4.4 to 5.2 \times 2 to 2.5 μ , white. Sydney; Terrigal (June, 1914); The Oaks (June, 1914); National Park (July, 1916). The following specimens are in the National Herbarium, Sydney:—Peakhurst (E. C., Dec., 1898); Bulli Pass (E. C., March, 1907); Narrabeen (E. C., Nov., 1908); Bowral (E. C., Aug., 1908); Cook's River (A. A. Hamilton, July, 1909); Nepean River (W. Craigie, Oct., 1909); Lane Cove (A. A. H., Aug., 1909); Helensburgh (W. C., Aug., 1909); Leura (A. A. H., Aug., 1908); Gladesville (Miss M. Flockton, May, 1900); Cheltenham (A. A. H., May, 1910); Thornleigh (E. C., Aug., 1910); Leura (T. Steel, Feb., 1911); Gosford (A. A. H., Aug., 1912); Lilyvale (A. A. H., April, 1912); Botanic Gardens (E. Bennett, June, 1913).

Section 14. Polyporus. Fleshy, thin species. Colour white or pale. Pores large, favoloid.

No Australian species recorded.

Section 15. Polyporus. Thin, rigid. Colour pale rose or reddish-brown. Not zonate or only faintly zonate.

12. POLYPORUS (PETALOIDES) RUBIDUS Berk.

Cooke (No. 640) records this species for Queensland and New South Wales.

13. POLYPORUS (PETALOIDES) BRUNNEOLUS Berk.

Cooke (No. 743) records this species for Queensland.

14. POLYPORUS (PETALOIDES) PETALODES Berk.

Recorded by Cooke (No. 613 bis) for Victoria.

Section 16. Polyporus. Thin, rigid. Strongly zonate, with greyish zones.

15. POLYPORUS (PETALOIDES) GALLO-PAVONIS Berk.

Recorded by Cooke (No. 756) for Queensland. *Polyporus subzonalis* Cooke (No. 661) Lloyd says is a pale form of this.

Section 17. Pileus yellowish-brown, gilvous. Hyphæ deep-yellow under the microscope.

No Australian species recorded.

Section 18. Grammocephalus group. Pileus marked with raised lines.

16. POLYPORUS (PETALOIDES) GRAMMOCEPHALUS Berk.

Lloyd states that *P. muelleri* Kalchbrenner, described from Australia, is this species or a form of it. Cooke (No. 614) also places this fungus as a variety under *P. grammocephalus*, recording it from New South Wales. Cooke gives the typical form for Queensland and New Guinea and var. *Emerici* for the same places. Lloyd in referring to *P. Emerici* from India, says it is like the type of *grammocephalus* but the pores are larger. Lloyd has identified for us a specimen of *P. grammocephalus* from Mummulgum Brush near Casino, Dec., 1916. He adds that the size of the pores is variable.

17. POLYPORUS (PETALOIDES) PLATOTIS Berk.

Cooke (No. 615) says this is apparently only an abnormal distorted condition of *P. grammocephalus*. Lloyd says that from the colour, surface and pores it seems to be a *thick grammocephalus*, "but is much too thick, and apparently does not belong to the section."

18. POLYPORUS (PETALOIDES) FUSCO-LINEATUS Berk.

This is given by Cooke (No. 617) for Queensland. Lloyd says it is an obese form of *grammocephalus* with larger pores.

19. POLYPORUS (PETALOIDES) DORCADIDEUS Berk.

Cooke, (No. 616). Recorded for Queensland.

Section 19. Polyporus. Species dark coloured, almost black at least when dry.

a. Setæfera.

20. POLYPORUS (PETALOIDES) MEGALOSPORUS Mont.

C. G. Lloyd (Mycol. Notes, No. 48, 1917, p. 684) thus describes a specimen forwarded by one of us:—‘Pileus sub-orbicular, 2–3 cm., laterally attached by a short stipe-like base. Colour pale alutaceous. Surface with patches of brown branched hairs. Context and pore tissue pale alutaceous. Pores large, round or slightly elongated, about $\frac{1}{2}$ mm. in diameter. The pore mouths bear brown branched setæ. Spores $6 \times 12\mu$, cylindrical, elliptical, hyaline, transparent, guttulate, smooth.’ Lloyd adds that the species is usually much larger and of a darker colour. Our plants were obtained at Wingham Brush (January, 1917. Spores by our measurements 8.5 to $10.4 \times 5.5\mu$).

b. Without setæ.

21. POLYPORUS (PETALOIDES) OBNIGER Lloyd.

Lloyd (Mycol. Notes, No. 45, 1917, p. 632) thus describes the specimen received from Dr. F. Stoward of Western Australia:—‘Pileus (about $2 \times 3 \times 7$ cm.) with a short lateral stipe, thick, rigid. Surface smooth, black. Context pale isabelline. Pores minute, round, with greyish cinereous mouths (when dry), decurrent to base of stem. Cystidia none. Spores not found.’

Section 20. Polyporus. Coloured context and spores. Included under Ganodermus.

Section 21. Aberrant species forming “new genera.”

22. POLYPORUS (PETALOIDES) POCULA Schweinitz.

Lloyd says this species occurs in Australia. Cooke records *P. cupuliformis* (No. 590) for Victoria, which Lloyd says is *P. pocula*.

Section 22. Polystictus. Pileus pale, usually spathulate or flabelliform, thin. Pores in a thin layer, white or pale, minute.

23. POLYSTICTUS (PETALOIDES) MUTABILIS Berk.

Cooke (No. 736) gives this species for Queensland.

24. POLYSTICTUS (PETALOIDES) OBOVATUS Junghuhn.

Cooke gives *Polystictus Adami* (No. 735) = *Polyporus dilatatus* (sic) Berk. Lloyd points out that *P. Adami* and *P. dilatatus* are really *P. obovatus*, as is *P. rasipes* (Cooke, No. 747).

25. POLYSTICTUS (PETALOIDES) STEREINUS Berk.

Cooke (No. 741) gives this species, which he says equals *P. cognatus* Kalchb., for Queensland and New South Wales. We have specimens, identified by Lloyd, from Mount Irvine (June) and Mount Wilson (June—spores 4.8 to $5.6 \times 2.5\mu$); also from Leura, June.

Section 23. Polystictus. Microporus. Lateral stem.

26. POLYSTICTUS (PETALOIDES) AFFINIS Nees.

Cooke (No. 740) records the species for Queensland and New South Wales.

27. POLYSTICTUS (PETALOIDES) LUTEUS Nees.

Cooke (No. 737) gives this species for the same two States. Lloyd says it runs into *P. affinis*. Lloyd thinks that *P. porphyritis* (Cooke, No. 734) is probably the same as *P. luteus*. Cooke gives this form for Queensland. *P. carneo-niger* (Cooke, No. 738) Lloyd says has the same characters as *P. luteus*, except its black colour.

28. POLYSTICTUS (PETALOIDES) FLABELLIFORMIS Klotzsch.

Cooke (No. 733) records this for Victoria, New South Wales and Queensland. Lloyd has identified specimens for us from Mummulgum Brush near Casino (December, 1916). These were found growing in company with typical *P. xanthopus*, into which, as Lloyd has remarked to us, it seems to run. We also have it from near Wauchope (February, 1916).

Section 24. Polyporus (corresponding to Polystictus but thicker) with colour and pores of the section Microporus.

29. POLYPORUS (PETALOIDES) SUBFULVUS Berk.

Lloyd has identified for us, at first with some doubt, three collections. The localities of two of these are not noted, the third was from Leura (June, 1916). The specimens are in most part resupinate with a raised edge.

Section 25. Red Species.

30. POLYSTICTUS (PETALOIDES) SANGUINEUS Linn.

The common and beautiful vermilion-coloured leathery fungi so frequently found throughout Australia on fallen logs and sticks are referable to the species *P. sanguineus* and *P. cinnabarinus*. They materially assist, by their penetrating mycelium, in the decay of the substance on which they grow; though this is usually worthless material, occasionally useful timber is also attacked. In colour and general appearance these two species are identical, the only difference being that the former is much thinner and contracted with a short lateral stem-like base, whilst the latter has generally a broad attachment. In the neighbourhood of Sydney, typical instances of both forms may be met with, though the latter is more common. Since *P. sanguineus* is the tropical species and the other the temperate one, the occurrence of both might be expected in this area, the thinner form being met with in sheltered areas, especially in swamps, where moisture is abundant. So close is the resemblance between the two, that we referred the question of their being merely varieties of one species to C. G. Lloyd. In his reply he states that he considers them entitled to separate names, although they are really only the tropical and temperate forms of the same species. He adds that he rarely has difficulty in classifying specimens from various parts of the world, except in the case of occasional specimens from districts which may be classed as between the tropics and the temperate regions.

Compared with specimens kindly forwarded by Lloyd, we have typical examples of *P. sanguineus*, growing on fallen logs, from Laurieton, Tuggerah (spores 4.4 to $5.5 \times 2.2\mu$), Terrigal and Berry (spores slightly curved, 5.2 to $6 \times 2\mu$). Most of the specimens from the immediate neighbourhood of Sydney approach more to the *P. sanguineus* type than to *P. cinnabarinus*, but specimens collected at Wellington, Bumberry and Forbes, in the dry west of this state, and at Adelaide, are definitely *P. cinnabarinus*. We have also got *P. cinnabarinus* at Kew (May) which is close to Laurieton where we got *P. sanguineus*.

The following specimens of *P. sanguineus* are in the National Herbarium, Sydney:—Atherton, Q. (E. Betche, September, 1901); Eumundi, Q. (J. Staer, September, 1912); North Queensland (Rev. W. W. Watts, July, 1913); Lord Howe Island (Rev. W. W. Watts, July, 1911); Russell Island, Solomon Group (W. W. Froggatt); Naru Island, Ocean Island Group (F. W. Steel, June, 1908); Funafuti (Mr. Finckh, 1898); New Hebrides (W. T. Quaife, May, 1903 and W. W. Froggatt, July, 1913); Wahroonga (Staer, July, 1910), a specimen sent to Lloyd, more thick and obese than usual. Cooke (No. 746) records it for all the States.

These two species may be found almost at any time of the year after sufficient rain on fallen logs.

31. POLYSTICTUS CINNABARINUS Jacquin.

This is the thicker vermilion species usually found in the cooler parts of Australia. As it is without a stem, it does not strictly belong here, but is so placed by Lloyd on account of its affinity with *P. sanguineus*. Amongst over fifty collections in the National Herbarium, Sydney, the following localities are represented:—Sydney district, Kahibah near Newcastle, Smoky Cape, Upper Hastings, Bulli district, Hill Top, Nepean, Richmond, Blue Mountains, Bathurst, Cobar, Nyngan, Brewarrina, Inverell, Hillgrove,

Pilliga, Kangaroo Valley, Wamberal, Burrenjuck, Mount Jellore viâ Mittagong, Rockhampton (Q.), Adelaide (S.A.), Western Australia. The hosts comprise:—*Melaleuca styphelioides*, *M. parviflora*, nectarine, peachtree (dead limbs), and dead Banksia (Sydney district); red box (Nyngan); decayed ironbark (Conjola); and dead jarrah (Bow River), W.A.

Section 26. Polystictus. White species.

No Australian species recorded.

Other species of Petaloides.

32. POLYSTICTUS (PETALOIDES) PENTZHEI Kalch.

This was unknown to Lloyd.

33. POLYSTICTUS (PETALOIDES) INTONSUS Berk.

Cooke, No. 742. The type from Tasmania does not exist (Lloyd).

34. POLYSTICTUS (PETALOIDES) PEROXYDATUS Berk.

Cooke, No. 744. The type from New South Wales does not exist (Lloyd).

35. POLYSTICTUS (PETALOIDES) LIBUM Berk.

Cooke, No. 745. Queensland, New South Wales. Lloyd says the type is inadequate.

36. POLYSTICTUS (PETALOIDES) VERNICIFLUUS Berk.

Cooke, No. 790, Queensland, Tasmania. The type is inadequate (Lloyd).

Sixth Division—MERISMUS.

Section 27. Spores globose, echinulate.

37. POLYPORUS (MERISMUS) BERKELEYI Fries.

'Pilei imbricate, arising from a short, thick stem or root stalk. Surface pale, dull, slightly tomentose and obscurely zoned. Context $\frac{1}{2}$ to 1 in. thick, white. Spores globose, 8μ , distinctly echinulate.'—Lloyd.

We have found this large and handsome species, of which Lloyd has identified specimens, growing near the base of trunks in the Lisarow district in May 1915 and June 1916. The caps are buffy to bright yellowish tan, velvety to strigose, obscurely but definitely zoned, the growing edges velvety and rolled over. The pores are rather irregular and creamy white. The caps arise from an irregular base as somewhat stipitate, superimposed brackets. The flesh is white, somewhat brownish under the crust; it is rather juicy and the juice milky. Spores white, warty, 7μ .

Section 28. Spores smooth, hyaline. Plants fleshy.

38. POLYPORUS (MERISMUS) FRONDOSUS Fl. Dan.

Cooke (No. 618) records the species for Tasmania.

39. POLYPORUS (MERISMUS) ANTHRACOPHILUS Cooke.

Lloyd says that this species is only known from one or two collections at Kew from Australia. Cooke, No. 622, lists it for Victoria, Queensland and South West Australia.

40. POLYPORUS (MERISMUS) MULTIPLEX Berk.

Lloyd says this fungus is known from a single specimen at Kew from Mueller, Australia, a description of which he believes was never formally published.

Section 29. Merismus—Polystictus. Thin plants having the habits of the section Merismus.

41. POLYSTICTUS (MERISMUS) RIDLEYI Masee.

Lloyd mentions that this is known from one collection at Kew from Tasmania.

Section 30. Merismus caseosus.

42. POLYPORUS (MERISMUS) SULPHUREUS Fries.

Recorded by Cooke (No. 624) for Queensland and Tasmania.

42a. POLYPORUS (MERISMUS) SULPHUREUS var. WILSONIANUS
Lloyd.

Lloyd (Letter 53, 1914, Note 179) records *P. Wilsonianus*, a form of *P. sulphureus*, from the Rev. James Wilson, Victoria. He states it differs from typical *P. sulphureus* in the very thin flesh, 1–2 mm. thick, and in the piriform not globose spores.

43. POLYPORUS (MERISMUS) RETIPORUS Cooke.

Cooke (No. 625) gives this species for Victoria and Queensland. Wakefield (Kew Bull., 1914, p. 157) says that specimens in Kew Herbarium from Victoria labelled *P. retiporus* are *P. australiensis* (which see, Sect. Apus, Polyporus). The acceptance of this as an Australian species should therefore be received with doubt. Lloyd says it is like *P. sulphureus*, but with larger pores and firmer context, and thinks it will prove to be only a form of this species.

¹[44. POLYPORUS (MERISMUS) INTYBACEOUS Fries.

Cooke, No. 619. Not mentioned by Lloyd.

¹45. POLYPORUS (MERISMUS) SCABRIUSCULUS Fries.

Cooke (No. 621) records this for Australia. Lloyd says no type exists.

¹46. POLYPORUS (MERISMUS) LÆTUS Cooke.

Cooke (No. 623). Not mentioned by Lloyd.]

Section 31. Conglobatus carnosus. No Australian species recorded.

Section 32. Conglobatus, Fomes. No Australian species recorded.

Section 32a. Merismatoid.

47. POLYPORUS ROSETTUS Lloyd.

'Submerismatoid. Proceeding from a hard, woody base, it divides into a number of short, irregular lobes. Pores

¹ Position under Section unknown.

small, round, irregular, white. Context very hard, white. Surface fuliginous. Spores $5 \times 3\mu$, hyaline, piriform.' Described from Australian specimens by Lloyd (Mycol. Notes, No. 43, 1916, p. 601).

Specimens have been identified for us by Lloyd. We have found it growing as a large mass at the burnt base of a dead tree at Katoomba in June, 1916 (spores 4.8×2.5 to 3.5μ). We have also specimens on burnt wood from Mount Wilson in June, 1915 (spores 4 to 5×2.5 to 3.4μ).

Seventh Division—SPONGIOSUS.

Section 33. Context pale or white. Spores white.

48. POLYPORUS (SPONGIOSUS) RUFESCENS Persoon.

Cooke (No. 600) records the species for Victoria, Queensland and Western Australia. *P. biennis*, recorded by Cooke (No. 599) for Queensland, and *P. proteiporus* (No. 601) also given by Cooke for the same State, are both, Lloyd states, *P. rufescens*.

49. POLYPORUS (SPONGIOSUS) HYSTRICULUS Cooke.

Cooke (No. 620) records this for Victoria. Known from a single specimen at Kew (Lloyd).

Section 34. Context deeply coloured. Spores supposed to be white.

50. POLYPORUS (SPONGIOSUS) SCHWEINITZII Fries.

This species is parasitic on the roots at the bases of tree trunks, and is said to be a destructive parasite. It may be readily recognised by its irregular cap, sometimes four or more inches across, which is rugged and has a bright ferruginous colour. The stem is sometimes very short, sometimes several inches long, rugged and irregular and dark ferruginous brown. The pores are rather small, run down on to the stem and are greyish-yellow. Often the caps of several adjacent plants grow into each other.

Cooke (No. 597) gives this polypore for Queensland. Lloyd says *P. tabulæformis* (Cooke, No. 598, Queensland) is the same species. We have the following collections:—Grafton (April, 1912); Lisarow (May, 1915); Terrigal (June, 1914); Sydney; at base of living *Angophora lanceolata*, Sydney (March); National Park (July); near Wauchope (February). Spores spherical to oval, 3.5μ , $5.2 \times 3.5\mu$. Milson Island, Hawkesbury River, specimens (April, 1915) have spores irregularly spherical, 3.4 to 4.2μ , whilst those of the Lisarow ones are $7 \times 5.2\mu$. The pores do not seem large and the orifices are pallid greyish.

One of our specimens was sent to Lloyd who says:—‘My first impression was that it was not *P. Schweinitzii*, but on comparing it, I do not note any real difference. The pores are smaller. It does not colour potash solution yellow as does *P. Schweinitzii*, and the appearance of the pore tissue is not the same under the microscope. Still I would not know how to point out any real difference. It is the first specimen I have from Australia. With us it is usually in pine-woods.’

Section 35. Context deeply coloured. Spores coloured, but often faintly.

51. POLYSTICTUS (SPONGIOSUS) TOMENTOSUS Fries.

Recorded by Cooke (No. 724) for Victoria and Queensland.

Eighth Division—PELLOPORUS.

Section 36. Pelloporus Polyporus. Context fleshy, tough, rather brittle, mostly more obese than the next section.

52. POLYPORUS (PELLOPORUS) LUTEO-NITIDUS Berk.

Recorded in Cooke (No. 725) for Queensland.

Section 37. Pelloporus Polystictus. Context thin, flexible.

53. POLYSTICTUS (PELLOPORUS) PERENNIS Linn.

Given by Cooke (No. 726) for Queensland.

54. POLYSTICTUS (PELLOPORUS) OBLECTANS Berk.

Lloyd considers that the Australian plant is specifically distinct from *P. cinnamoneus* which it closely resembles, but differs in having large pores and more erect fibrils on the pileus. Cooke (No. 728) gives *P. oblectans* for Victoria, Queensland, Western Australia and Tasmania. In view of what Lloyd says, the record of *P. cinnamoneus* for 'Australia' (Cooke, No. 727) had better be considered a misidentification for *P. oblectans*. Lloyd says that Fries considered *P. bulbipes* (Cooke, No. 729 = *P. cladonia* Berk., and *P. perdurus* Kalch.) to be *P. oblectans*. Cooke's record of *P. parvulus* (No. 730) for Victoria must also be considered that of a synonym (Lloyd).

This small pliable (when fresh) cinnamon-coloured polypore is common in the Sydney district in autumn, especially in sandy soil (April). We make the spores pale brownish, 7 to $7.3 \times 5.2\mu$ (Lloyd gives $8 \times 5\mu$). We have it also from the Blue Mountains (April) and Bumberry (Oct.); also from Ararat, Victoria (E. J. Semmens, No. 5).

The following collections are in the National Herbarium, Sydney:—Parramatta (E. C., March, 1908); Upper Lane Cove (Miss P. Clarke, 1913); Cheltenham (E.C., and A. A. Hamilton, Feb., 1911); Gladesville (Miss M. Flockton, Feb., 1911); Cook's River (A.A.H., June, 1908); Neutral Bay (J.B.C., May, 1910); Hill Top (E.C., Feb., March); Lawson (D. Wiles, 1912); Leura (A.A.H., March and T. Steel, Feb.); Scarborough (A.A.H., May, 1913); Milson Island, Hawkesbury River (J.B.C., July, 1912).

Specimens obtained at Mount Lofty, South Australia, in July 1914, by one of us, have slightly stouter stems than is usual in New South Wales specimens, and some collected by us in Western Australia have this character still more pronounced and the pileus not so silky-looking.

Ninth Division—OVINUS.

Section 38. With sclerotium.

[We propose to deal more fully with the Australian species in this section in a separate paper.]

55. POLYPORUS (OVINUS) MYLITTÆ Cooke.

This *Polyporus* is the fruiting body of the well-known 'Native Bread' and has been rarely seen. The 'Native Bread' itself is commoner and consists of a large rounded mass of fungal hyphæ often several pounds in weight. From this buried mass, when favourable opportunities arise, the fruiting bodies develop and appear above ground.

56. POLYPORUS (OVINUS) MINOR-MYLITTÆ (Berk.)

A smaller form of 'Native Bread,' referred to by Berkeley as '*Mylitta minor*,' has fruiting bodies with dark brown caps, very different in appearance from the white and 'yolk of egg' ones of the larger *Mylitta*. We propose to distinguish it as above by Berkeley's name. It is not uncommon in New South Wales.

57. POLYPORUS (OVINUS?) BASILAPILOIDES McAlpine & Tepper.

The 'stone-making fungus,' described by McAlpine and Tepper as '*Laccocephalum basilapiloides*,' and from the description doubtfully referred by Lloyd to the Division *Amaurodermus*, is from an examination of the type made by us certainly not an *Amaurodermus*, having elongated, smooth, white spores. It is probably referable to *Ovinus*, and from its false sclerotium to this section.

Section 39. Stipe usually mesopodal. Pores small.

58. POLYPORUS (OVINUS) OVINUS Schaeffer.

Recorded by Cooke (No. 583) for Victoria.

Section 40. Stipe central. Pores large.

No Australian species recorded.

Section 41. Stipe usually excentric or irregular. Pores small.

59. POLYPORUS (OVINUS) CONFLUENS Albertini.

Cooke (No. 620) records the species for Queensland and Lord Howe Island.

Section 42. Stipe excentric. Pores large.

60. POLYPORUS (OVINUS) PES-CAPRÆ Persoon.

Cooke (No. 584) records it for Victoria.

Section 43. Melanopus. Pores large.

61. POLYPORUS (OVINUS) SQUAMOSUS Fries.

Cooke (No. 603) records it for Queensland. *Favolus Boncheanus* Klotsch (Cooke, No. 896, Queensland) is a 'small smoothish form of squamosus with uncoloured stipes'—Lloyd.

A specimen growing on wood obtained by Miss P. Clarke at Chatswood, in April, 1914, we are referring to this species though uncertain about it. The edge of the pileus is thin, irregular and reflexed. The surface is earthy-brown and covered with small scurfy scales. The pores are minute, very shallow, whitish and decurrent on to the almost central dark brown tomentose stem. The whole is somewhat flabelliform and slightly depressed, $2\frac{1}{2}$ ins. broad and about the same in height.

Lloyd (Letter 53, 1914, Note 174) records a specimen from J. Simmonds, Australia. It differed from European examples in having smaller, innate scales and in the stem not being black.

61a. POLYPORUS (OVINUS) SQUAMOSUS var. LENTINOIDES
(*P. lentinoides* Hennings).

In March, 1914, one of us collected on burnt ground at Milson Island, Hawkesbury River, N.S.W., a large stipitate polypore 6 ins. in diameter, growing deeply and possibly attached to an underground root. The pileus was slightly convex, reddish tan and smooth. The flesh was thick ($\frac{3}{4}$ in.), white and rather soft and spongy. The pores, $\frac{3}{8}$ in.

deep, were lacerated, thin and pure white or slightly creamy. There was a more or less central stipe 3 ins. long and $1\frac{1}{4}$ ins. thick, apparently whitish but covered with adherent sandy dirt. From the base arose a slender secondary stem bearing a small deformed pileus attached to the larger one; the spores were elongated, white, $8\cdot6$ to $10\cdot4 \times 3\cdot8\mu$. Lloyd has kindly identified this as *Polyporus lentinoides* Henn., originally from Brazil. He adds:—"In reality only a scaleless form of *Polyporus squamosus* with which it agrees in all particulars excepting the scales. Practically the same plant, but a little more fleshy, is known in Europe as *Polyporus Roskovii* Fr."

62. POLYPORUS (OVINUS) TUMULOSUS Cooke.

Given by Cooke (No. 586) for Queensland.

63. POLYPORUS (OVINUS) TASMANICUS Masee.

Known from one collection from Tasmania at Kew (Lloyd). We have a specimen collected at Neutral Bay, Sydney (March, 1915).

Section 44. Melanopus. Pores small.

64. POLYPORUS (OVINUS) HARTMANNI Cooke.

This is a thick, fleshy polypore with a rich somewhat chestnut-brown, rather velvety cap, and a short thick stem attached excentrically and not centrally, which is also dark brown and velvety. It is found growing near the base of trees, and appears to be parasitic and of some importance from a forestry point of view.

Cooke (No. 585) gives this species for Queensland.

We obtained a clump of this species on the ground at Bulli Pass, N.S.W., in April 1914. The largest were 3 ins. in diameter with an excentric stipe. The pores were minute and whitish. Our specimens agree exactly with the description given by Lloyd, but the spores are 7 to $8\cdot5 \times 3\cdot5\mu$, whilst he gives them as $12 \times 5\mu$. Lloyd has kindly confirmed their identification for us.

We have also specimens from Gladesville (M. Flockton, determined by Lloyd who gives the spore as elongated, $5 \times 12 \mu$, hyaline, smooth); Wamberal (E.C., April, 1912); Jellore Creek, viâ Mittagong, on roots of Eucalyptus (E.C., April, 1916).

¹[65. POLYPORUS (OVINUS) MYELODES (*P. myclodes*, err. typ.)
Kalch.

Unknown to Lloyd. Cooke (No. 587) records it for Queensland.]

Tenth Division—LENTUS.

Section 45. Lentus. Pores small.

(a) White.

66. POLYPORUS (LENTUS) TRICHOLOMA Montague.

Cooke (No. 592) gives this for Queensland. As regards *L. similis* (Cooke, No. 593), Lloyd says the type is very scanty, but is probably this species. *Polyporus stipitarius* is *L. tricholoma* (Lloyd). He says that *P. Armitii*, referred by Cooke to *P. stipitarius*, is surely not so if the figure in "Grevillea" is at all like it. No type of *P. Armitii* exists.

(b) Greyish or fuliginous brown.

67. POLYPORUS (LENTUS) BRUMALIS Pers.

Cooke (No. 589) gives this species for Queensland.

(c) Colour yellow or reddish-brown.

68. POLYPORUS (LENTUS) VIRGATUS Berk.

We have specimens, identified by Lloyd, found on a fallen trunk at Lisarow in June, 1916.

(d) Microporus. Thin, rigid, with minute white pores in a very thin layer. Colour reddish-bay or sienna brown.

69. POLYPORUS (LENTUS) XANTHOPUS Fries.

Cooke (No. 732) records this for Victoria, New South Wales, Queensland and New Guinea. *L. cupreonitens* is a

¹ Position under Section unknown.

synonym. Lloyd says that no type exists of *P. quadrans* Berk. (Cooke, No. 731) which from the description seems to be *L. xanthopus*. We have specimens of a variety of *L. xanthopus* from Melville Island, Northern Territory (W. S. Campbell, 1911) which possibly is *L. quadrans*. They resemble a very short-stemmed *L. xanthopus* in all particulars, save that the pores are a dark fawn to cinnamon. The margin of the pileus is pale, not brown as should be the case with *L. quadrans*.

We have typical forms from the Northern Territory (*per* South Australian Museum); Eumundi, Q. (J. Staer, 1911); Atherton near Cairns, Q. (E. Betche, 1901 and R. Mitchell, 1911); Kuranda near Cairns (A. J. Vogan, 1910); Barron Falls, Q. (Mrs. Fraser, Sep., 1917); Rockhampton, Q. (D. Dixon); between Cooktown and Cairns (W. Seymour); Marshall Falls, Alstonville, N.S.W. (D. Tanner, Sep., 1911); Mummulgum Brush near Casino (J.B.C., Dec., 1916, growing in company with *Polystictus flabelliformis*, both identified by Lloyd); Port Moresby, New Guinea (Mr. Pratt, 1911); Russell Island, Solomons (W. W. Froggatt, 1909).

70. POLYPORUS (LENTUS) ARCULARIUS Batsch.

This is a common species, found growing on fallen logs and half-buried pieces of wood. Beyond assisting in disintegrating fallen timber, it is of no importance from a forestry point of view. It has usually a yellow-brown cap, up to $1\frac{1}{2}$ ins. in diameter, depressed in the centre and sometimes slightly scaly, the pores are large, and the stem is central, slender, and coloured like the cap.

Recorded by Cooke (No. 591) for Victoria, New South Wales and Queensland. Lloyd says that *Favolus squamifer* Berk. (Cooke, No. 895) is close to, if not the same as, *L. arcularius*. *Polyporus alveolarius* (Cooke, No. 594) Lloyd says, from the figure, is *L. arcularius*. Of *P. collybioides* Kalch., recorded for Australia, Lloyd says the type is in-

adequate, and Cooke says it is synonymous with *P. alveolarius* (i.e. *L. arcularius*).

This species is fairly common round Sydney and the Hawkesbury River district (records from January to March and August to December). The largest specimen we have measures $1\frac{1}{2}$ ins. across. In some, the scales of the pileus are very dark, as is the stem. Spores white, elongated, ends rather pointed, $7\cdot2$ to 8×2 to $3\cdot4\mu$. Also on living trunks of *Eucalyptus rostrata*, Moree, January, 1917; Narrabri, November (spores $8 \times 5\mu$); Mount Irwin (Darnell-Smith), January, 1915; Flinders Island, Bass Straits, November, 1912.

The following collections are in the National Herbarium, Sydney:—Helensburgh (A. A. Hamilton, October, 1913); Penshurst, (E. Cheel, February, 1908, January, 1911); Botanic Gardens (E. Cheel, December, 1907), on trunk of *Ligustrum sinensis*; Randwick (R. Nichol, March, 1910); Narrabeen (E. Cheel, November, 1908); Schofields (E. Cheel, December, 1908); Cook's River (A. A. Hamilton, March, 1909); near Dubbo (J. B. Cleland, September, 1911); St. Mary's (A. A. Hamilton, August, 1910); Kogarah (E. Cheel, October, 1909); Rookwood (Miss A. Spencer, July, 1910); National Park (F. Hallman, November, 1908).

71. POLYPORUS (LENTUS) LENTUS Berk.

Cooke (No. 588) records this for Victoria.

Section 46. Lentus. Subgelatinous when fresh (tending towards *Laschia*). No species recorded for Australia.

Section 47. Lentus. Aberrant species as to shape. Infundibuliform, gibbous or very minute. No species recorded for Australia.

Of *Polyporus pisiformis* Kalchbrenner, Australia, (Cooke, No. 596, Victoria), Lloyd says:—"Type" is a little incipient sessile undeveloped pad, about the size and appear-

ance of a wart. Should never have been named at all, and most certainly should never have been put in the section of Lentus of *stipitate* fungi where Cooke placed it.”

Eleventh Division—MELANOPUS.

Section 48. Stipe pleuropodal or central, rarely lateral. Pores minute.

72. POLYPORUS (MELANOPUS) VARIUS Pers.

Lloyd has identified for us specimens from Mummulgum Brush near Casino (December, 1918). These plants are larger (2 ins. across) and stouter than our common *P. Pancheri*. The cap is of a brownish tan and slightly striate, the pores are pallid whitish.

72a. POLYPORUS (MELANOPUS) VARIUS var. BLANCHETIANUS Mont.

Lloyd considers this a small form of *P. varius*, and has identified as *P. Blanchetianus* specimens from Miss M. Flockton from Port Jackson.

72b. POLYPORUS (MELANOPUS) VARIUS var. PANCHERI Patouillard.

Lloyd says that this and seven other ‘species’ might easily be considered as forms of *M. varius* (Cooke, No. 608). *M. picipes* (Cooke, No. 605) is a black form of *M. varius* with a velvety stem. *M. dictyopus* (Cooke, No. 613) is the typical smaller form of *M. varius-picipes*, usually known as *M. infernalis* of Berkeley (Cooke, No. 607), to which latter the Australian form, *M. Pancheri*, is referred at Kew. Of *Polyporus Strangeri* Kalch., Lloyd says that the type is unknown, but from the description it seems to be *M. dictyopus* (i.e. *M. Pancheri*). *M. elegans* (Cooke, No. 609) is another variety with such a constant smaller size that it is generally held to be a good species (Lloyd). From these remarks of Lloyd, it seems best, at present at any rate, to consider all these Australian records as belonging to the

one species (or a variety of one species) and to refer them to *M. Pancheri* (or *M. varius* var. *Pancheri*) pending the examination and comparison of further material.

This is a small species, occasionally with a cap as large as $1\frac{1}{2}$ inches across, growing on the ground usually attached to buried sticks or wood. Though some specimens are white or pale coloured, the cap and stem are usually a dark sooty brown, the former being somewhat striate, whilst the pores are minute and white or pallid.

Our Australian specimens vary considerably amongst themselves. The stipe, even in specimens taken together, varies from about central to quite lateral. The other points of difference affect more colonies than individuals. The colour of the cap varies from almost black through a dark greyish-brown to a lighter greyish-fawn, and is in one specimen a dark chestnut. In several, the plants were at first pure white, later becoming pale stony-brown. The striations are more or less in evidence. The pores are usually 5.2 to 8×2.5 to 3μ , in the chestnut-coloured specimens being 3.5 to $5 \times 2\mu$. Growing usually attached to buried pieces of wood (in this resembling *M. melanopus*). Sydney district, common (January, March to June); Bulli (April); Hawkesbury River; Lisarow (June)—all in New South Wales. Mount Lofty, S.A. In the National Herbarium, Sydney, there are specimens from the following localities:—Longueville, on dead stump (E.C., May, 1909); Leura (A. A. Hamilton, March, 1910, and T. Steel, Feb., 1911); Mosman (A.A.H., May, 1912); Hill Top (E.C., July, 1915); Gladesville (Miss M. Flockton, April, 1916).

73. POLYPORUS (MELANOPUS) MELANOPUS Schumann.

Cooke (No. 604) records this for Victoria and Queensland.

Section 49. Stipe pleuropodal or central. Pores medium.
No Australian species recorded.

Section 50. Stipe pleuropodal or central. Pores large, favoloid.

No Australian species recorded.

Section 51. Stipe lateral but the pileus is not spathulate. Pores minute.

74. POLYPORUS (MELANOPUS) NEPHRIDIIUS Berk.

Recorded by Cooke (No. 739) for Queensland.

Section 52. Stipe lateral but pileus not spathulate. Pores medium or large.

75. POLYPORUS (MELANOPUS) PUSILLUS Fries.

Recorded by Cooke, under *Favolus pusillus* (No. 898) for Tasmania.

Section 53. Petaloides. Stipe lateral. Pileus spathulate, tapering to the stipe.

76. POLYPORUS (MELANOPUS) GUILFOYLEI Berk.

Originally described from Australia. Cooke (No. 611), Queensland.

¹[77. POLYPORUS (MELANOPUS) GLABRATUS Kalchb.

Cooke (No. 610), Victoria. The type was unknown to Lloyd.]

II. SYNOPSIS OF THE GENUS FOMES.

(According to C. G. Lloyd.)

First General Division, PALLIDUS. Context and pores pale, white, isabelline or pale yellowish, pale rose or cinnamon. Spores hyaline.

Section 54. Large. Context white, soft, friable.

„ 55. Large. Context white, hard.

„ 56. Small. Context white or isabelline.

„ 57. Context pale yellow.

„ 58. Context isabelline, hard.

„ 59. Context isabelline, soft, punky.

¹ Position under Section unknown.

Section 60. Context pinkish cinnamon.

„ 61. Context cinnamon.

„ 62. Context pink or rose colour.

Second General Division, *DEPALLENS*.

Section 63. Pores darker than context, usually fading out in old specimens.

Third General Division, *AURANTIACUS*. Context orange rufous.

Section 64. Spores hyaline (or very pale coloured).

„ 65. Spores coloured.

Fourth General Division, *BICOLORIS*.

Section 66. With bicoloured tissue, the pores a dark brown, the flesh a light buff.

Fifth General Division, *FUNALIS*.

Section 67. Pileus with a thick pad of dense, brown hairs. analagous to section *Funalis* in *Polystictus*.

Sixth General Division, *FUSCUS*. Context some shade of brown, Spores not truncate.

Section 68. Setæ none. Spores hyaline.

„ 69. Setæ present. Spores hyaline.

„ 70. Setæ none. Spores coloured.

„ 71. Setæ present. Spores coloured.

Seventh General Division, *GANODERMUS*. Context brown. Spores truncate.

Section 72. Fomes-Ganodermus. Pores with thin walls.

„ 73. Ponderosus-Fomes-Ganodermus. Pores with thick walls.

„ 74. Stipitate Fomes of the Section Ganodermus.

First General Division—*PALLIDUS*.

Context and pores pale, white, isabelline, or pale yellowish, pale rose or cinnamon. Spores hyaline.

Section 54. Large. Context white, soft, friable.

No Australian species recorded.

Section 55. Large. Context white, hard.

78. FOMES CONNATUS Fries.

Recorded by Cooke (No. 71) for Queensland.

79. FOMES ANNOSUS Fries.

Syn. *Polyporus hypopolius* Kalch., probably, (Cooke, No. 658); *Fomes contrarius* B. and C. (Cooke, No. 694).

Recorded by Cooke, under the above two synonyms, for Queensland.

Section 56. Small. Context white or isabelline.

80. FOMES CLELANDII Lloyd, (Mycol. Notes, No. 40, Feb. 1916, p. 550).

“Pileus sessile, small, 1 to 2 cm. in diameter. Surface black, regular, dull. Context isabelline. Pores minute with white mouths. Cystidia none. Spores elliptical, 6 to 7×7 to $8\frac{1}{2}\mu$, subhyaline, opaque, smooth. When this was received it was referred with doubt (cfr. Note 297, Letter 59) to *Fomes scutellatus*, an American species, with which it exactly accords to the eye. We have since found that the spores of *Fomes scutellatus* are entirely different, and hence must re-name the Australian plant.”—Lloyd. Tuggerah (J.B.C., October, 1914).

81. FOMES OHIENSIS Berk.

“Pileus small, dimidiate, usually less than 2 cm. in diameter, $\frac{1}{2}$ cm. thick, white, hard. Surface smooth, even, with no distinct crust. Context and pores white. Pores small, round, regular. Spores obovate, truncate at base, hyaline, smooth, 12 to $14 \times 8\mu$.”—Lloyd.

This species is very closely allied to the common Australian *Polyporus ochroleucus* found so frequently on fence-rails. In America it is found in the same situations. Lloyd has identified for us as this species, a specimen found at Lisarow in August, 1916 (spores truncate, 10.4 to 12×7 to 7.5μ). Except that the pores are smaller than our

specimens of *P. ochroleucus*, it very closely resembles this species.

Section 57. Context pale yellow.

82. FOMES PINICOLA Swartz.

Syn. *Fomes marginatus* Fr. (Cooke, No. 677)—Lloyd.

“Pileus applanate or unguulate. Surface with a thin resinous crust, at first white, soon reddish, finally black. Context pale yellow, punky, but hard. Pores minute, round. Pore layers about a cm. thick, pale yellow, harder than the context. Spores $3\frac{1}{2}$ to 4×7 to 10μ , obovate, hyaline, smooth.”—Lloyd.

Recorded by Cooke as *Fomes marginatus* for Victoria and New South Wales.

Section 58. Context colour isabelline. Context hard.

83. FOMES HEMITEPHRUS Berk.

“Pileus unguulate, with dull surface, becoming dark in old specimens, with indistinct crust (orange colouration under the crust). Context hard, woody, yellowish isabelline colour. Pores minute, hard, with concolorous tissue.”—Lloyd.

Recorded by Cooke (No. 711) for Victoria. Lloyd records a specimen (under *Fomes martius*), presumably from New South Wales, forwarded by W. W. Froggatt. Lloyd has identified several specimens for us. We have them from the following localities:—Mount Wilson and Mount Irvine, June, 1915 (applanate, about an inch thick, with a zonate pileus and an orange shade under the crust); Kurrajong Heights; Leura (A. A. Hamilton, September, 1912); Tuggerah Lakes (S. J. Johnston, April, 1910); Belmore Falls (E.C., September, 1907); also from Russell Falls, Tasmania (E.C., March, 1910).

Section 59. Context isabelline, soft, punky.

No Australian species recorded.

Section 60. Context pinkish cinnamon.

84. FOMES SEMITOSTUS Berk.

Syn. *Fomes tasmanicus* Berk, probably (Cooke, No. 695).

Recorded by Cooke, as above, for Tasmania.

85. FOMES DOCHMIUS Berk.

Recorded by Cooke (No. 678) for Queensland.

86. FOMES CONCAVUS Cooke.

Recorded by Cooke (No. 679) for Queensland.

Section 61. Context cinnamon.

87. FOMES FERREUS Berk.

Recorded by Cooke (No. 713) for Queensland.

Section 62. Context pink or rose colour.

88. TRAMETES CARNEA Nees.

Recorded by Cooke as *Fomes carneus* (No. 717) for Victoria, South Australia and Queensland.

89. TRAMETES FEEI Fries.

Syn. *Polystictus Feei* Fries., Epic. 476; Cooke, Handb. of Australian Fungi, No. 768. "Pileus thin, pink colour, appanate (10 to 14 × 4½ cm.) Surface appressed, fibrillose, with a zonate effect, glaucescent. Context thin, punky. Pores minute, round."—Lloyd.

Recorded by Cooke, as above, for all the States except South Australia.

In identifying for one of us (J.B.C.) a specimen as *Trametes Feei*, Lloyd says it "corresponds to the Brazilian plant, although the specimen is an evident *Fomes*." This example was over a foot wide and about 3 ins. from front to back. We have collected a similar specimen at Mount Wilson in June, 1915.

90. TRAMETES LILACINO-GILVA Berk.

Syn. *Polystictus lilacino-gilvus* Berk., Ann. Sci. Nat. III, 324; Cooke, Handb. of Aust. Fungi, No. 767. "Pileus

appanate, usually thin, rose or pink colour, with surface strongly rugose, fibrillose. Context concolorous, punky. Pores medium round, concolorous. Spores oblong, hyaline, smooth, $4 \times 8\mu$. It differs (from *T. Feei*) in having notably larger pores and more strongly fibrillose surface."—Lloyd. Recorded by Cooke for all the States except New South Wales, and South Australia. Of this common species we have many specimens, viz:—Milson Island, Hawkesbury River, (J.B.C., May, August); Terrigal (J.B.C., June, 1914) identified by Lloyd; Hill Top, (J.B.C., October, 1913) spores elongated, oblique, 7 to $8.3 \times 3.5\mu$ —when moist pileus dark brown, radiately fibrous, then light brown, not definitely zoned, edge rounded and fluffy white, pores purplish-pink and pruinose with spores; Berry (J.B.C., October, 1913, spores $7 \times 2.5\mu$); National Park, (July, 1916); Taree District (H. Lyne, March, 1917); Victoria (September, 1913)—shed spores somewhat twisted, 7 to $8.5 \times 3.5\mu$; Mount Lofty, S.A. (J.B.C., July, 1914). In the National Herbarium, Sydney, there are specimens from the following localities:—Smoky Cape (F. W. Raffills, October, 1905); Chatswood (F.C. Lovegrove, August, 1903); Hornsby (A. A. Hamilton, October, 1909); Wahroonga (J. Staer, July, 1910); Lidcombe (A. Spencer, June, 1910); Grose Vale (Miss Campbell, Sept., 1912, duplicates of this determined by Lloyd); Gooseberry Island, near Dapto (E.C., April, 1912); Upper Lane Cove River (Miss P. Clarke, 1912); Gulgong; near Adelaide (J.B.C., 1898); Western Australia (J.B.C., February, 1908).

90a. TRAMETES LILACINO-GILVA var. STOWARDII Lloyd.

As *T. Stowardii*, Lloyd describes (Mycol. Notes, No. 48, 1917, p. 683) a form of *T. lilacino-gilva* with a strongly rugose pileus. Habitat Western Australia.

90b. TRAMETES LILACINO-GILVA var. EUCALYPTI Kalch.

Syn. *Polystictus eucalypti* Kalch, Grev. iv, 73; Cooke, No. 769.

Recorded by Cooke for Victoria and Queensland.

91. TRAMETES PLEBEIA Berk.

Syn. *Polyporus plebius* (Cooke, No. 664).

Recorded by Cooke for Queensland.

92. TRAMETES ROSEA Lloyd.

T. rosea Lloyd, Letter 59, 1914, Note 302.

Lloyd's description of the specimen sent to him by one of us (J.B.C.)—the locality from which it came has not been noted—is as follows:—'Context punky, dry, pale salmon (light ochraceous salmon). Pores white, medium large, $\frac{1}{2}$ mm. diameter, indistinctly stratified, forming imperfect layers in the manner of *Fomes annosus*. Spores 3×5 mic., hyaline, smooth.' He adds:—'The specimen received from you is evidently imperfectly developed. It is largely resupinate with imperfectly developed pilei. It agrees exactly with *Trametes roseola* as to context colour but differs from all other species in this section in having large pores. Its method of pore development is much like that of *Fomes annosus*. This is unnamed, similar to *Fomes annosus* in pore development only. Pores much larger, about five times. Context colour and texture different.'

93. TRAMETES CUPREO-ROSEA Berk.

'Pileus thin, rigid, attached by a reduced base ($6 \times 9 \times \frac{1}{2}$ cm.); surface striate fibrillose, pale rosy colour (pale buff). Context thin, hard. Pores medium to large, $\frac{1}{2}$ mm., round, at length long, sinuate, dædaloid, $\frac{1}{2} \times 2$ mm., rigid, with thin walls. Tissue concolorous.'—Lloyd.

Lloyd (Letter 63, 1916, p. 8) has identified specimens from Dr. Stoward of Western Australia.

Second General Division—DEPALLENS.

Section 63. Pores darker than the context, usually paling out in old specimens.

94. FOMES LIGNOSUS Klotzsch.

Syn. *Polyporus lignosus* Klotzsch (Cooke, No. 662).

Recorded by Cooke for Victoria.

Third General Division—AURANTIACUS.

Section 64. Context orange rufous. Spores hyaline (or very pale coloured).

95. FOMES KERMES Berk.

Syn. *Fomes pyrrochreas* Cooke.

Lloyd has seen at Kew, under the above synonym, specimens from Australia.

Section 65. Context orange rufous. Spores coloured.

No Australian species recorded.

Fourth General Division—BICOLORIS.

Section 66. Pores dark brown. Flesh light buff.

No Australian species recorded.

Fifth General Division—FUNALIS.

Section 67. Pileus with a thick pad of dense, brown hairs, analogous to section *Funalis* in *Polystictus*.

No Australian species recorded.

Sixth General Division—FUSCUS.

Section 68. Context brown. Setæ, none. Spores hyaline.

A—Context light brown.

96. FOMES INFLEXIBILIS Berk.

Syn. *Polyporus recurvus* Berk.

Recorded by Cooke (No. 699) for Queensland.

97. FOMES EXOTEPHRUS Berk.

Recorded by Cooke (No. 693) for Queensland.

B—Medium or Large Species.

98. FOMES FOMENTARIUS Linn.

'Pileus unguulate, with a hard, smooth, greyish crust. Context punky, dark brown (antique brown). Pores minute, with glaucous, pruinose mouths. Pore tissue paler than the context. Setæ, none. Spores hyaline, large, oblong, 5×16 mic.'—Lloyd.

Recorded by Cooke (No. 695) for New South Wales. We have never met with it.

99. FOMES CALIGINOSUS Berk.

Lloyd states that *Fomes endapalus* Berk (Cooke, No. 704), recorded for Queensland and New South Wales, has been identified as this species. The specimens from Australia that he has seen seem to him however to differ from young plants of *F. caliginosus*.

C—Small Species, 1–3 cm.

No Australian species recorded.

D—Plants dark purplish black. Context dark brown, with a purplish shade.

No species recorded for Australia.

Section 69. Context brown. Setæ present. Spores hyaline.

A—Context Light Brown.

100. FOMES POMACEUS Persoon.

‘Pileus half unguiform, but usually more inclined to take a subresupinate form with the pileus imperfectly developed. Surface at first fulvous, tomentose on the margin, later cinerous; after wintering turns dark, but not black as in *Fomes igniarius*. Context fulvous brown (amber brown), intermediate between the colour of context of *Fomes igniarius* and *robustus*. Pores minute, round, annual layers 5–6 mm. Setæ usually abundant, with thickened bases, projecting 12–16 mm. Spores globose, hyaline, 5–6 μ .’—Lloyd.

Lloyd states this species attacks plum, cherry, and other cultivated trees. He has identified a specimen from Western Australia (Letter 63, November 1916, p. 8—Dr. F. W. Stoward).

101. FOMES ROBUSTUS Karsten.

‘Pileus unguulate, with a hard, rimose, black crust. Context light fulvous. ‘Rhei’ colour would be the best name

for it, being the colour of commercial rhubarb root. Pores minute, with pore tissues concolorous. Spores globose, hyaline, $7-8\mu$, guttulate when fresh. No setæ found by me. (I am informed that setæ have been found in a Swedish specimen)'—Lloyd.

We have the following specimens:—A large sporophore, $7\frac{1}{2}$ ins. wide, 5 ins. broad and 3 ins. deep (Milson Island, Hawkesbury River, on fallen Eucalyptus, 1912); two small sporophores, the largest 2 ins. broad, on *Leptospermum* sp. (Mount Irvine, June 1915, spores not seen and no setæ detected—the small size of the branches of this shrub probably accounts for the small size of the fruiting body); a small sporophore growing on the small trunk of *Leptospermum flavescens* (Wiseman's Ferry, August 1915, a few doubtful colourless spores seen, no setæ detected); medium sized sporophore on *Casuarina* sp. (Stockton, October 1915, spores spherical, 7μ , $7.5 \times 7\mu$, some doubtful setæ seen); locality not noted (spores hyaline, 7.3 to 5μ , no setæ seen); large specimen, locality not noted; on dead *Kunzea coriifolia* (Sydney, May, 1917); on dead *Casuarina* (Kendall, May, 1917); Narrabri, November, 1916; on *Angophora lanceolata* (Sydney, October, 1916, hyaline spores, 5.5 to 8μ); near Wauchope (February, 1917); Manly (November, 1916, spores 7 to 8μ); on living *Eucalyptus rostrata* (Moree, January, 1917); on *Angophora lanceolata*, (Hawkesbury River, November, 1916); at base of living *E. rostrata* (Adelaide Parklands, April, 1917, spores 5.5 to 7.2μ); on living *Robinia pseudacacia* (near Adelaide, April, 1917).

In identifying another specimen for us in which we had found pale brownish, almost hyaline, subspherical spores (8.5×7 , $7 \times 5.2\mu$) and no setæ, Lloyd adds:—'I did not find spores, but from context, colour, and your spore notes, "almost colourless," I judge it is this species. You have *F. robustus* typically in Australia, also a form with setæ.

I have always found the spores of *F. robustus*, however, hyaline.' As we have met with these faintly tinted spores in other specimens, possibly another species is involved.

The following are in the National Collection, Sydney:—New South Wales—Peakhurst (W. Buckingham, June, 1899); Peshurst, on *Eucalyptus* (E.C., July, 1907); Botany (L. Abrahams, November, 1908); Narrabeen (E.C., November, 1908); Gladesville (Miss M. Flockton, April, 1910) identified by C. G. Lloyd; Hornsby (A. A. Hamilton, October, 1909); Grose Vale (Miss Campbell, September, 1912) duplicates determined by Lloyd; Centennial Park, Sydney, (W. Forsyth June, 1909); Botanic Gardens on *Banksia ericifolia* (R. Bruce, June, 1910); Brewarrina (W.W. Froggatt, July, 1914) duplicates determined by Lloyd; Casino (D. J. McAuliffe, October, 1914); Kangaroo Flat, Walcha (W. Craigie, September, 1909); Narrandera on *Eucalyptus rostrata* (D. G. Stead, September, 1913). Lloyd (Letter 53, 1914) records a specimen from W. W. Froggatt, Australia, found on Needlewood (*Hakea* sp.).

Tasmania—Hobart on *Eucalyptus viminalis* (E.C., March, 1910).

Western Australia—On tea-tree (Dr. Tidswell, June, 1909).

102. FOMES SETULOSUS Petch.

'Pileus unguulate, with a smooth, brownish surface. Context fulvous (tawny of Ridgway), hard, woody, the pore tissue a shade lighter than the context. Pores very minute with brown mouths. Pore layers 2–3 mm. wide. Spores globose, hyaline, 8μ . Setæ very abundant, with thick bases and abruptly contracted and slender points, projecting 12–14 μ .'—Lloyd. Lloyd adds that the context colour differs from that of *F. robustus* which on Ridgway's scale is yellow ochre; also that the setæ are very abundant, but in *F. robustus* rare or none. He says further, that in Aus-

tralia there seems to be an intermediate plant close to *F. robustus*. This probably refers to a specimen recorded by him (Letter 53, 1914) from J. Simmonds, Australia, as *F. robustus* var. *setulosus*. He has determined as *F. setulosus* specimens from Miss M. Flockton, probably from Port Jackson district.

103. FOMES CONCHATUS Persoon.

'Pileus usually thin, conchoid, with a sulcate, brown surface. Context light brown. Pores minute, concolorous. Setæ numerous, slender, with bases slightly thickened, projecting 20–28 mic. Spores hyaline, globose, $4\frac{1}{2}$ –5 mic.' Lloyd.

Recorded by Cooke (No. 680) for Queensland and Victoria.

We have specimens, found growing on a Casuarina stump at Milson Island, Hawkesbury River, in March 1915, which Lloyd has identified as this species, adding 'agrees in all characters, though thicker than the usual European collections'; some specimens from this source have a blackish, rimose crust like that of *F. rimosus*. Another collection, evidently the same species, found growing through the bark of a Peppermint Gum (*Eucalyptus piperita*) in a more or less *Poria* fashion with illdeveloped pilei, at Neutral Bay, Sydney, in August, September and other months, Lloyd states is 'close to *Fomes conchatus* of Europe, that is, similar in context colour and microscopic details. The coloured setæ you will find in a section point to this species. *Polyporus gilvus* has the same setæ but the context colour is not the same'; spores hyaline, 4.3 to 5×2 to 2.5μ . Other specimens are from Milson Island (September, spores $5.5 \times 2.5\mu$); Terrigal (June, 1914); Berry, on fallen trunk (October, spores $5 \times 3.5\mu$); locality not noted (spores 4.5 to 5×3.2 to 3.5μ); on dead Casuarina (The Oaks, June, 1914).

103a. FOMES CONCHATUS var. SALICINUS (F. SALICINUS Bull).

'Growing on willow, *Fomes conchatus* is usually sub-resupinate, or with a thick, imperfect pileate development. The context colour is also darker.'—Lloyd.

Recorded in Cooke (No. 691) for Queensland.

104. FOMES LINEATO-SCABER Berk.

Fomes lineato-scaber Berk. and Broome, Linn. Trans., ii, 59, t. 11, f. 1; Cooke, Handb. of Aust. Fungi, No. 697.

'Pileus dimidiate, descending behind, rigid, brown (10 c.m. broad, 6 c.m. long); margin pallid, frequently zoned, lineate radiate, rough; hymenium rhubarb colour; pores punctiform, dissepiments obtuse (300 μ diam.). On trunks, Queensland.'—Cooke.

In identifying a specimen sent to him, Lloyd says:—'To the eye, every feature, surface, context colour, pores, this is so much like *Trametes strigata* that I thought it must be a *Fomes* form of that species. The pores are stratified and it has setæ on the hymenium and belongs to Section 70 of the *Fomes* pamphlet. *Trametes strigata* has no setæ as far as I can find. When I observed the type of *Fomes lineato-scaber*, which is in the British Museum, I thought it a *Fomes* form of *Trametes strigata*, but I find on examination that it agrees with this specimen that you send in having setæ on the hymenium. It is a true *Fomes* with stratified pores, but was omitted from my *Fomes* Synopsis as I was under the impression that it was only a *Fomes* form of *Trametes strigata*.' This specimen was collected by one of us (J.B.C.) on Flinders Island, Bass Straits, in November 1912. We have specimens from Milson Island, Hawkesbury River, very like this but also indistinguishable from examples of *Polyporus gilvus*, with which we place them.

B—Context Dark Brown.

105. FOMES IGNIARIUS Linn.

'Pileus unguate (often resupinate or subresupinate), with a hard, black, usually rimose crust. Context dark brown (argus brown), hard, woody. Pores minute, with concolorous tissue, and brown mouths. Pore layers 1–2 mic. (?mm) thick. Hyphæ deeply coloured. Subhymenial layer hyaline, cellular. Setæ rare, with swollen bases, projecting 12–16 mic. Spores globose, hyaline, 5–6 mic., smooth.'

Recorded by Cooke (No. 687) for all the States. We have not as yet encountered the species, and think it probable that the plants so determined were *F. robustus* or *F. rimosus*. Lloyd has examined a doubtful specimen from Australia.

106. FOMES ROBINSONIÆ Murrill.

Syn. *Fomes squarrosus* Wilson. Lloyd now considers *F. squarrosus* to be *F. Robinsoniæ*.

'Pileus unguate, with a black, rough, rimose crust. Context hard, dark brown (antique brown). Pores minute, round, with concolorous mouths. Pore layers indistinct. Setæ few, slender. Spores hyaline, globose, 4 mic.'—Lloyd.

Recorded by Lloyd from Victoria.

A small specimen, about 3 ins. broad, obtained at The Oaks in June, 1914, is referred to this species, probably, by Lloyd, who says its microscopic characters are the same, but the context and texture appear a little different. In our specimen, the spores were oval, colourless, 4·5 to 5·2 or $7 \times 3\cdot4$ to $4\cdot2\mu$; setæ thick walled, acuminate, brown, $34 \times 7\mu$, $27 \times 8\cdot5\mu$.

We have the following in addition:—On *Angophora lanceolata*, Sydney; at base of Eucalyptus, near Eulah Creek, Narrabri, November, 1916.

Section 71. Context brown. Setæ none. Spores coloured.

A—Context Light Brown.

107. FOMES RIMOSUS Berk.

'Pileus unguiform, with a black, rimose surface, usually very rough, no distinct crust. Context bright yellow-brown (raw sienna). Pores minute, hard, annual layers 3 to 4 mm. thick. Pore mouths concolorous, when young velutinate to touch. Hyphæ deep bright yellow. Setæ none. Spores globose, deeply coloured, 5 mic.'—Lloyd.

Recorded by Cooke (No. 688) on gum tree trunks for New South Wales, Western Australia and Tasmania. Lloyd records a specimen from Dr. E. C. Stirling, Adelaide, departing from the type in being narrow, unguulate and with pores slightly larger.

We have the following specimens:—Jerilderie (Dr. Ferguson, October, 1913), spores yellow-brown, spherical or somewhat triangular or oval, 5.2 to 6μ —identified by C. G. Lloyd—another sporophore collected at the same time was 4 ins. in width; on *Casuarina* sp., Milson Island, Hawkesbury River, $3\frac{1}{2}$ ins. wide, $2\frac{1}{4}$ ins. deep, $1\frac{1}{4}$ ins. high (October 1915, spores oval to triangular, yellow-brown, 7 to $8 \times 3.5\mu$); Milson Island (J.B.C., August), spores yellow-brown, 5.2 to $6 \times 3.4\mu$; on *Casuarina* sp., Baan Baa near Boggabri, January, 1917; on *Casuarina Luehmanni*, Pilliga Scrub, Narrabri, November, 1916; on *Angophora lanceolata*, Hawkesbury River, November 1916, a huge sporophore, $7\frac{1}{2}$ ins. high \times 6 ins. \times 5 ins. (spores brown, subspherical to triangular, 6.5 to 7.5×5 to 5.5μ); on *Eucalyptus crebra* or *E. melanophloia*, Narrabri, November, 1916 (approaching the var. *badius* in the pores being larger, spores yellow-brown, 6.8 to $7.5 \times 5\mu$, identified by Lloyd).

107a. FOMES RIMOSUS var. NIAOULI (F. NIAOULI Patouillard).

'Pileus unguiform, or thick, applanate, with dark brown or black, matted, tomentose surface. Context colour dark

brown (Argus). Pores minute, with concolorous tissue and darker brown velutinate mouths. Setæ none. Spores globose, 6 mic., deeply coloured.'—Lloyd.

In identifying a specimen for us, Lloyd says:—'*Fomes Niaouli* Pat. I doubt if really distinct from *F. rimosus*. The spores in this specimen were brown, oval, $7 \times 5\mu$. No setæ were seen.

108. FOMES SCABER Berk.

Recorded for Tasmania (Berkeley) and Australia (Lloyd).

B—Context Dark Brown.

109. FOMES PECTINATUS Klotzsch.

Recorded by Cooke (No. 701) for Queensland.

110. FOMES PULLUS Montague.

Recorded by Cooke (No. 696) for Queensland.

111. FOMES TEPPERI Lloyd.

'Pileus unguulate, with black, rimose surface. Context dark brown (russet). Pores large, long, seemingly not stratified. Setæ, none. Subhymenial cells forming a thick layer. Spores are many, subhyaline, 6 to 7μ , globose; a few are deeply coloured, of the same size and shape.'—Lloyd.

The name of this species suggests that the type came from South Australia, where Mr. Tepper has collected for C. G. Lloyd. We have specimens, identified by Lloyd, collected at Baan Baa near Boggabri in New South Wales, in January, 1917, on a dead rough-barked tree *Acacia* (*A. Cheelii*, confused with *A. glaucescens*). There were numerous pale yellowish-brown oval to irregularly polygonal spores, $8.5 \times 6\mu$, $7.8 \times 6\mu$, etc.

Section 72. Context brown (orange-brown in one species). Setæ present. Spores coloured.

A—Context Light Brown.

112. FOMES YUCATENSIS Murrill.

'This is similar in every particular to *Fomes rimosus*, excepting that it has setæ.'—Lloyd. Lloyd has identified

for us as this species, a *Fomes* growing about twelve feet up the trunk of a fine specimen of *Eucalyptus saligna* at Lisarow in August, 1916. Spores distinctly brown-tinted, 6 to 7 μ ; dark brown, pointed setæ, 17 \times 7 μ . This is evidently a timber-destroying species of economic importance.

B—Context Dark Brown.

113. FOMES LINTEUS Berk.

Recorded by Cooke (No. 700) for Queensland. As Lloyd says that he believes this species is only known from the type at Kew from Nicaragua, this record seems very doubtful.

Seventh General Division—GANODERMUS.

Section 73. Fomes—Ganodermus.

A—Pores with Thin Walls. Spores Smooth or Punctate.

114. FOMES APPLANATUS Persoon.

Syn. *Ganoderma applanatum* Pat. in Bull. Soc. Myc. Fr. 1889, p. 67; Wakefield, Kew Bull. (1915), 364.

'Pileus usually applanate, with a brown, rather soft crust when fresh. Context colour dark brown (bay brown). Pores minute, with brown tissue and white mouths. Spores coloured, obovate, 6 \times 10 mic., truncate at the base, with smooth, punctate surface.'—Lloyd.

We have the following specimens:—Helensburgh, W. Craigie, August, 1909, determined by Lloyd, and J.B.C., (Oct. 1914, spores thick-walled, oval, finely warted, brown, 9.2 to 10 \times 6 to 7 μ); Lisarow (J.B.C., April, 1915, and June, 1916); Thirroul (J.B.C., April); National Park, July, 1916; Wingham, November, 1916; Mount Wilson, May, 1915; Flinders Island, Bass Straits (J.B.C., November, 1912). We have also a series of small unguulate poorly developed sporophores taken in October and November 1914, December 1915, and June 1916, from the base of a specimen of *Angophora lanceolata* at Mosman, Sydney, which have very

short pores and very thick context—the young plants are covered with a beautiful greyish-brown bloom—the spores are thick-walled, brown, smooth, 8.5 to 11×5.5 to 7μ ; Lilyvale and Mount Keira (A. A. Hamilton, June, 1910); Upper Fern-tree Gully, Victoria (E.C., February, 1908); Russell Falls, Tasmania (E.C., March, 1910); Adelaide, S.A. (J.B.C., 1898); Mount Chincogan (T. McDonough, May, 1910).

114a. FOMES APPLANATUS var. LEUCOPHÆUS (F. LEUCOPHÆUS Montagne.)

A form of *F. applanatus* with a hard pale or white crust (Lloyd). Lloyd has identified for us as this form, a specimen obtained ten feet up the trunk of a tree at Mount Irvine in June, 1915.

114b. FOMES APPLANATUS var. AUSTRALIS (F. AUSTRALIS Fries).

F. applanatus Cheel, Proc. Linn. Soc. N.S.W., xxv, (1900) 672.

A tropical form with thin context and long pores (Lloyd).

A specimen of this variety identified as *F. australis* by Lloyd, is in the National Herbarium, Sydney; the pileus is over 14×9 ins., and grew in the fork of the branches, about four and a half feet from the ground, of an exotic Acacia (*A. horrida*), which eventually died through its attack. We have also the following specimens:—Mount Wilson (J.B.C., June, 1915), and on *Ligustrum lucidum*, Paddington (E. Bennett, February, 1912).

114c. FOMES APPLANATUS var. OROFLAVUS (F. OROFLAVUS Wilson).

A tropical form with yellow pore mouths (Lloyd).

One of us (E.C.) collected a specimen of this plant at Upper Fern-tree Gully, Victoria, in February, 1908, and there are also specimens in the National Herbarium, Sydney, from Nauru Island (Ocean Island Group) collected by T. W. Steel in June, 1908.

114d. FOMES APPLANATUS var. NIGRO-LACCATUS (F. NIGRO-LACCATUS Cooke).

Tropical forms with a slight, black, resinous exudation on the crust (Lloyd).

B—Spores Rough.

No Australian species recorded.

Section 74. Ponderosus-Fomes-Ganodermus. Pores hard, heavy, minute, with thick walls. Spores smooth or punctate.

No Australian species recorded.

Section 75. Stipitate Fomes of the Section Ganodermus.

No Australian species recorded.

III. POLYPORUS (SECTION APUS).

(Comprising Sessile Species of the Genus Polyporus.)

I. Context and pores white or pale when growing, spores hyaline.

Pileus with thin but distinct crust Section 76

Pileus without distinct crust—

Flesh (dry) fragile, crumbly ,, 77

Flesh hard, firm ,, 78

Very thin plants ,, 79

White, turning reddish in drying ,, 80

White, turning bluish in drying ,, 81

Flesh dry, soft and cottony ,, 82

Flesh dry, light and spongy ,, 83

II. Context white or pale, pores coloured, spores hyaline.

Thin plants, pileus less than a cm. thick ,, 84

Thick plants, unguulate ,, 85

Thin plants, with gelatinous pores ,, 86

III. Context and pores coloured, spore hyaline.

Context isabelline or yellow ,, 87

Context orange-red, soft, spongy ,, 88

Context vinaceous or purple...	...	...	Section	89
Context olive...	...	...	„	90
Context brown. Setæ none...	...	...	„	91
Context brown. Setæ present	...	...	„	92
IV. Context and spores coloured. Spores not truncate.				
Context pale (white?) or isabelline. Setæ none	„			93
Context yellow. Setæ none...	...	...	„	94
Context brown. Setæ none...	...	...	„	95
Context brown. Setæ present	...	...	„	96
Context brown, light, spongy, fibrillose. Setæ none	„			97
V. Polyporus—Ganodermus. Context brown. Spores coloured, truncate.				
Context soft, spongy...	...	...	„	98
Context firm, not spongy	...	...	„	99
Polyporus—Amaurodermus	...	...	„	100

First General Division—Context and pores white or pale when growing, spores hyaline.

Section 76. Pileus with thin but distinct crust.

A—Flesh firm and fragile.

115. POLYPORUS BETULINUS Bull.

Recorded by Cooke (No. 654) for Queensland on beech.

116. POLYPORUS ALBELLUS Peck.

Syn. *Polyporus chioneus* Cooke, Handb. of Aust. Fungi, No. 635.

‘Pileus dimidiate, sessile, usually $1\frac{1}{2}$ to 2 ins. in diameter, often imbricate, but rarely, if ever, subresupinate. Surface smooth, with a very thin crust. Colour of surface usually grayish or yellowish, sometimes white. Flesh drying white, fragile. Pores small, round, drying slightly alutaceous. Spores allantoid, 1×4 to 5 mic., cylindrical, curved.’—Lloyd.

Recorded by Cooke under the above synonym for Victoria, New South Wales, and Queensland.

117. POLYPORUS PORTENTOSUS Berk.

Syn. *Polyporus portentosus* Berk., Hook. Journ. 1845; Cooke, Hand. of Aust. Fungi, No. 655.

'Pileus usually large, 3 - 4 inches in diameter, 2 - 3 inches thick. Surface with a distinct, thin, pale yellowish crust. Flesh pure white, fragile, chalky. Pores minute, pure white.'—Lloyd.

Recorded in Cooke for all the States except Queensland. Some at least of the Victorian records refer to *P. australiensis* (which see).

We have a specimen of a decayed large white polypore from Hill Top, found under a fallen log, which may be this species. Of portion of a very large polypore collected by one of us (J.B.C.) on Flinders Island, Bass Straits, in November, 1912, Lloyd says:—"I believe this specimen is *P. portentosus*, though it is somewhat doubtful. I have a plant from Geo. K. Hinsby, which agrees exactly with the type at Kew. The tissue of the pores is white the same as the context. In your specimen the pores are discoloured. The cuticle of the type is thin but distinct. The surface of your specimen is similar as to colour but does not have a distinct cuticle. Spores allantoid, $1.5 \times 7\mu$ in your specimen." The pores in our specimen are $\frac{1}{4}$ in. deep. Our measurements of the spores were $5 \times 1.7\mu$, elongated.

118. POLYPORUS TEPHRONOTUS Berk.

Polyphorus tephronotus Berk., Fl. Tasm., II, 252, t. 182, f. 5; Cooke, Handb. of Aust. Fungi, No. 626, fig. 54.

Syn. *Polyporus angustus* Berk., Fl. Tasm. II, 253, t. 182, f. 6—resupinate form (Lloyd); Cooke, Handb. of Aust. Fungi, No. 632.

'Pileus dimidiate, thin 5 - 6 mm. Surface smooth, with a thin but distinct crust, slightly yellowish. Flesh white,

soft, brittle. Pores very minute, discoloured slightly, with a waxy appearance. Spores not found (allantoid?).—Lloyd.

Recorded in Cooke for Tasmania. We have not met with the species.

119. POLYPORUS PELLICULOSUS Berk.

Cooke, Handb. of Aust. Fungi, No. 650.

Syn. *Polyporus spiculifer*, Cooke, (No. 651). A "thin form with the tomentum collected into very distinct nodules."—(Lloyd).

Recorded for Queensland, Victoria and Tasmania.

B—Flesh soft, spongy.

120. POLYPORUS EUCALYPTORUM Fries.

Polyporus eucalyptorum Fries in Lehmann's *Plantæ Preiss.*, II, p. 135 (1846-47); Fries, *Epicr.*, 462; Cooke, Handb. of Aust. Fungi, No. 656; Baker, *Proc. Linn. Soc. N.S.W.*, XXIV (1899), 447; Cheel, ditto, XXXII, (1907), 203.

Syn. *Polyporus hololeucus* Kalchbrenner, *Hedw.* xv, 114 (Lloyd); *Polyporus leucocreas* Cooke (Lloyd). *Xylostroma gigantea* Cheel, *Proc. Linn. Soc. N.S.W.*, xxxv (1910), 308 and 309, and *Ann. Rep. Bot. Gdns.*, 1910 (1911), 11.

'Pileus unguulate (or thick, appanate), 3 to 5 inches in diameter. Crust very soft, pale, at length dark, easily separating. Context very soft, white, spongy, crumbly, fragile. Pores medium, round, white, fragile, 6 to 12 mm. long. Spores abundant, 8 to 10 mic., many smaller, subglobose, with granular or guttulate contents.'—Lloyd.

Cooke records the species from Victoria and Western Australia. Cheel and Baker *loc. cit.*, have both recorded it, the former for the Botanic Gardens, Sydney, and Hill Top, the latter for Gerogery on Stringybark (*Eucalyptus capitellata*). McAlpine (*System. Arrang. of Aust. Fungi*, 1895) adds South Australia to Cooke's localities.

We have examined a fine series of specimens in the National Herbarium, Sydney and in our private collections from the following localities, which are referable to this species:—Pittwater, (A. Maclellan, September, 1907); Nepean River, between Mulgoa and Norton's Basin (W. Craigie, October, 1908); Botany, (L. Abrahams, November, 1909); Wamberal, (E. Cheel, April, 1911); Government Domain on *Eucalyptus pilularis* and *E. resinifera* (W. Briggs, March, 1912 and E. Cheel, June, 1915); Botanic Gardens, on *E. tereticornis* (E. Cheel, April, 1916); Milson Island, Hawkesbury River (J.B.C., June, 1912) on *E. corymbosa*; Tenterfield (J.B.C., August, 1917) on *E. cinerea* F.v.M. var. *nova-anglica*, Maiden. We have also seen specimens on Eucalypts in the Mount Lofty Range, South Australia (pore mouths bright yellow). The spores of our specimens measured $10 \times 8.5\mu$ in one, and 8 to 9×6 to 7μ , elliptical and very pale yellow in the shed mass in another.

The flat sheets of sterile mycelium found in felled tree trunks have been referred to as *Xylostroma gigantea* by one of us (E.C., *loc. cit.*). The following specimens of this nature are in the National Collection, Sydney:—From Stringybark (*Eucalyptus eugenioides*), Walcha; from *E. Caleyi*, Inverell District; from 'Red Gum,' Wilgo and Cobargo; from 'White Gum,' Cross Roads near Sutton Forest; from Parkes.

Section 77. Context and pores white or pale, flesh fragile, crumbly.

121. POLYPORUS IMMACULATUS Berk.

Syn. *P. verecundus* Berk. and Curt., Cooke, Handb. of Aust. Fungi, No. 629 (Lloyd).

Cooke records this species from Fiji. Lloyd states it occurs in Australia (p. 303).

122. POLYPORUS CRETACEUS Berk.

Recorded by Lloyd for Tasmania.

Section 78. Context and pores white or pale. Flesh drying hard, firm.

A—Surface anodern, or pubescent with projecting hyphæ.

123. POLYPORUS FUMOSUS Pers.

Syns. *Polyporus rhinocephalus* Berk., Fl. Tasm. II, 253, t. 182, and Cooke, Handb. of Aust. Fungi, No. 645 (type appears to be *P. fumosus*—Lloyd); *P. demissus* Berk., Hook. Journ. 1845, 52, and Cooke, Handb. of Aust. Fungi, No. 644 (type appears to be *P. fumosus*—Lloyd).

‘Pileus thin, smooth, with dull, soft surface. Context, when dry, hard, firm, but brittle; white when fresh, darker when dried. Pores small, round, irregular, white at first, but becoming fuliginous, or dark, in drying. Spores $2\frac{1}{2} \times 5$ mic. *Polyporus fumosus* is quite a frequent plant, usually on willow. It is the same, in fact as *Polyporus salignus*, with small pores. When it is in its prime, and growing, it is white; but on drying it turns more or less smoke coloured. It is often confused with *Polyporus adustus*, and many specimens in the museums are labelled as being *Polyporus fumosus*. Dried specimens may be confused sometimes, but the difference is marked in the fresh plant. *Polyporus adustus* has deep, smoke coloured pores when growing; *Polyporus fumosus* has white pores, turning smoky in drying, but when dry rarely deep enough in colour to be confused with *Polyporus adustus*. With *Polyporus salignus*, however the case is different. It is the same plant as *Polyporus fumosus* with larger pores. When growing white, it is usually called *Polyporus salignus*. In drying or after it turns ‘smoky’ it becomes *Polyporus fumosus*. When fresh, *Polyporus fumosus* has a pleasant odour, as noted by Persoon.’—Lloyd.

Under the two synonyms given above, Cooke records this species respectively for Tasmania and Western Australia. Specimens collected by one of us (J.B.C.) at Kurrajong

Heights (August, 1912), Lloyd states seem to be exactly the same as the American plants. The spores of these were 4.3 to $5 \times 3\mu$. We have also specimens from Tuggerah (October, 1914). Another collection obtained on an old Casuarina stump at Milson Island, Hawkesbury River, in September, 1914, Lloyd also thinks is this species though it is doubtful, as the pores do not turn 'smoky'—the spores are 5.5 to 7×2.5 to 3.5μ .

124. POLYPORUS EPILEUCUS Fries.

This has been recorded by Cooke (No. 627) for Queensland, but from Lloyd's description of the species, we doubt the identification.

B—Surface strigose with brown hairs.

No Australian plants recorded.

C—Spores large, hyaline, truncate, corresponding to *Ganoderma* spores.

125. POLYPORUS OCHROLEUCUS Berk.

Polyporus ochroleucus Berk., Hook. Journ. 1845, 53.

Syn. *Trametes ochroleucus* Cooke, Handb. of Aust. Fungi, No. 847; Wakefield, Kew Bull. 1915, 366; *Fomes compressus* Berk., Hook. Journ. 1845, and Cooke, Handb. of Aust. Fungi, No. 709 (Lloyd).

'Pileus usually well formed, regular, ungluate (3 to $4 \times 1\frac{1}{2}$ to 2 cm.). Surface with indistinct crust, smooth, or more or less appressed, strigose, fibrillose, faint indications of zones. Colour usually pale with a slight ochraceous tint, rarely decidedly yellowish. Context thin, hard; at first pale, in old specimens becoming dark. Pores small, $\frac{1}{4}$ mm., regular, long, minute, rigid. Spores peculiar, oblong, truncate at base, 8×16 mic., hyaline.'—Lloyd.

This species is very common, especially on fences and fallen timber in Australia, and is doubtless, in many instances, an active agent in their early rotting. We have

met with a telephone post being destroyed by its attack. Systematic destruction of the fruiting bodies will probably tend to diminish the incidence of attack. It is recorded by Cooke for all the States except South Australia. Lloyd, has received specimens from Mr. Tepper, probably from Adelaide, and we have Adelaide examples in our collection. Spores in our specimens 12 to 17×5.2 to 8.8μ . We have specimens from Sydney (August and June), National Park (July, August), Hawkesbury River (November), Berry (October), Orange (October), The Oaks (June), Murwillumbah (April), Narrabri (May and November), Mummulgum near Casino (December), near Wauchope (February)—in New South Wales, and from Adelaide.

The following specimens are in the National Collection, Sydney:—Bowral and Penshurst (E.C., 1907); Hillgrove (Lewis, 1910); Scone (J.L.B., 1907); Muswellbrook (W. F. Blakely, 1911); Botanic Gardens, Sydney (E. Bernard, March, 1912, and J. Nichol, August, 1910); Hill Top (E.C., January 1911 and April 1914); La Perouse (A. A. Hamilton, April, 1910); Thornleigh (J. Staer, August 1910); on *Eucalyptus* sp., Lilyvale (A. A. Hamilton, April 1912); Jellore Creek (E.C., April, 1912); Gladesville (Miss Flockton, April 1910); Leura (A.A.H., April 1908); Hornsby (A.A.H., Oct. 1909); Upper Fern-tree Gully, Victoria (E.C., February 1908); Willoughby (A. G. Hamilton); Bowral (R. Nichol, March, 1898); Rookwood (A. G. Hamilton, June 1910).

D—Pileus a hollow globe, bearing the pores on upper side of the interior. No Australian species recorded.

E—Trametes.

128. TRAMETES CUBENSIS Mont.

Recorded by Cooke as *Polyporus Cubensis*, (No. 663), for Queensland.

Section 79. Very thin white plants.

No Australian species recorded.

Section 80. White when fresh, but turning reddish in drying or with reddish spots on the surface.

127. POLYPORUS FRAGILIS Fries.

Recorded by Cooke (No. 633) for Victoria.

Section 81. White when fresh, turning blue when touched.

128. POLYPORUS CÆSIUS Schrader.

Polyporus cæsius Fries, Syst. Myc. I, p. 360; Massée, Brit. Fung. Flora, I, p. 252.

'Pileus sessile, white, turning blue at once when touched, and drying greyish. Flesh soft, white, turning blue when broken. Pores large, sinuate, with uneven edges. Spores $1\frac{1}{2} \times 5\mu$, rod-shape, straight, hyaline, smooth. This is a frequent plant, usually on pine. It occurs more rarely on frondose wood, and we have collected it on willow. It is common in Europe and America, and recorded in Africa. There should be no trouble in telling *Polyporus cæsius*, for it is the only species that turns blue when touched. The dried specimens have a greyish-white cast by which they may be recognised.'—Lloyd.

Plants collected by one of us (J.B.C.) at Mount Wilson in June, are stated by Lloyd to be exactly the same as dried specimens of this species. No note was made at the time as to whether the flesh turned blue on being bruised, though we believe it did. Further specimens, also identified by Lloyd, obtained on logs on the Blue Mountains on the following June were quite white when gathered. On section, the flesh occasionally or in spots turned greyish-green. The tubes slowly turned a bluish-grey-green. The flesh cut soft like a cheese. There was no smell. The spores are not straight, but *slightly curved*, 4.2 to 5×1 to 1.5μ ; the spores of typical *P. cæsius* Lloyd gives as straight.

Section 82. Context very soft and cottony.

No Australian species recorded.

Section 83. Context when dry, spongy and light.

A—Pores large, sinuate.

129. POLYPORUS BOREALIS Fries.

Cooke records this species (No. 652) for Victoria.

B—Pores small, round.

130. POLYPORUS PELLIS Jarvis.

Lloyd records this for Queensland.

Second General Division.—Context white or pale, pores coloured, spores hyaline.

Section 84. Thin plants, less than a cm. thick.

131. POLYPORUS ADUSTUS Willd.

Polyporus adustus Masse, Brit. Fung. Flora V, 2, 1, p. 249; Cooke, Handb. of Aust. Fungi, No. 646.

Syn. *Polyporus strumosus* ? Cooke, Handb. of Aust. Fungi (No. 657)—Lloyd.

From Lloyd's remarks we gather that *P. strumosus*, recorded by Cooke for Victoria, is probably *P. adustus*. Cooke records *P. adustus*, as such, for Victoria and Queensland.

132. POLYPORUS CAMPYLUS Berk.

Recorded by Cooke (No. 637) for Tasmania.

Section 85. Thick, unguulate plants.

133. POLYPORUS AUSTRALIENSIS Wakefield.

Polyporus australiensis Wakefield, Kew Bull. (1914), 157.

The original description of this species is in Latin which may be briefly translated as follows:—'Pileus flesh-coloured, sessile, thickened at the base, 5 to 10 cm. or more in diameter, 1 to 2 cm. thick in the medial part gradually increasing up to 3 cm. at the base; cuticle smooth, bright orange or more or less of an orange colour tinged red; context in dried specimens tough and contracted, somewhat

pallid. Pores flesh-coloured, contracted in dry specimens, the mouths about 1 mm. diameter, 2 to 9 mm. long. Spores not seen.'

The localities given are as follows:—Coomera River and Toowoomba in Queensland, and Grampians in Victoria. Specimens from the latter are in Kew Herbarium labelled *P. portentosus* Berk.; Geographe Bay (in Herb. Kew as *P. stypticus* Fr.); also a specimen from Victoria (without specific locality) labelled *P. retiporus* Cook.

The author further states that it is 'a very distinct species near to *P. sulphureus*, and said to have a very strong odour when fresh. It differs from *P. portentosus*, *retiporus*, and *stypticus*, with which it was confused in the early records quoted above, in the brilliant orange-yellow tints in pileus and pores, and in the yellowish flesh. (Ridgway, tab. III, 15b).'

We have specimens of this species collected by one of us (E.C.) on a dead Eucalyptus stump, on the Nattai River near Colo, viâ Hill Top, March, 1914. These specimens were somewhat hoof-shaped, 8 × 12 cm. and 9 cm. thick, the pores orange red coloured when fresh, the upper part or surface of pileus being of a rich cream colour tinged with ochre and orange red. Spores globose, smooth, transparent, about 3 μ diam. In the National Herbarium collection there is also a fine specimen collected at Albany, Western Australia, by Mr. J. Staer (February 1911). When fresh, the specimens had a very strong not unpleasant odour, which is retained in the dried specimens in the herbarium for a long period. The National Collection has also specimens from Nowra (A.H.S. Lucas and A.A. Hamilton, 1916). One of us has a specimen from Malanganee, 25 miles west of Casino, on a stump, August, 1917. We have also received from Mr. Brittlebank portion of a large growth found on a post at Drouin, Gippsland, which from the context and the

odour appears to belong to an immature plant of this species. Lloyd (Letter No. 63, 1916) has identified Western Australian specimens forwarded by Dr. Stoward.

Section 85. Thin plants, somewhat gelatinous when fresh.

134. POLYPORUS DICHROUS Fries.

'Pileus thin, dimidiate, usually imbricate. Surface smooth, white, no crust. Flesh white, thin, firm. Pores small, dark purplish-brown, gelatinous. Spores allantoid, 4 to 5 × 1.5 μ , hyaline, curved.'—Lloyd.

Recorded by Cooke (No. 647) for Victoria. We have specimens identified by Lloyd obtained on a fallen pine log (*Callitris*) near Forbes in August, 1915.

Third General Division—Context and pores coloured, spores hyaline.

Section 86. Context isabelline or yellow.

135. POLYPORUS RUTILANS Pers.

Recorded as *P. nidulans* (No. 638) by Cooke for Queensland—a synonym, (Lloyd).

136. POLYPORUS ZONALIS Berk.

Polporus zonalis Berk., Ann. Nat. Hist. x, 375; Cooke, Handb. Aust. Fungi, No. 660.

'Pileus thin (4–6 mm.), rigid, drying hard, incurved. Surface reddish-brown, with narrow, concentric, raised zones. Context thin, hard, pale ochraceous. Pores minute, 3–4 mm. long; when old, brown, but my impression is that they are orange when fresh. Spores abundant, globose, 4–5 mic., hyaline, smooth.'

This is a common species throughout the tropical world—Lloyd.

Recorded by Cooke for Victoria and Queensland. Lloyd's Australian specimens from W. W. Froggatt indicate its occurrence also in New South Wales.

136a. POLYPORUS ZONALIS var. RIGIDUS Lev.

Polyporus rigidus in Lloyd's Syn. of Genus Polyp. p. 337.

'This is close to *Polyporus zonalis*, the same general nature and surface. It differs from *zonalis* in having pale pores, with only slightly ochraceous tissue when recent, and never dark as they are in *Polyporus zonalis*. Spores 4 to 6 μ , are a shade larger, and the surface is not so strongly zoned.'—Lloyd.

Specimens, collected at Katoomba in June, 1916, have been identified by Lloyd. A few doubtful spores, sub-spherical and 3 μ in diameter, seen.

137. POLYPORUS SEMILACCATUS Berk.

'Pileus sessile, applanate, thin (4–8 mm.), rigid. Surface smooth, brown, variegated with darker, imperfect zones or blotches. Context firm but punky, dark isabelline (clay colour). Pores minute (1–1½ mm. long), darker than the context, rigid. Spores not found.'—Lloyd.

Recorded by Cooke (No. 718) for Queensland as *Fomes cinereo-fuscus* Curry, which species Lloyd states is discoloured *P. semilaccatus*.

Lloyd has identified specimens for us collected at Eumundi, Queensland, by J. Staer.

138. POLYPORUS ANEBUS Berk.

Polyporus anebus Berk., Hook. J., 1847, 504; Cooke, Handb. of Aust. Fungi, No. 666.

'Pileus thin, 5·8 mm., rigid, sessile, imbricate. Surface hard, smooth, brownish-yellow, no distinct crust. Flesh pale yellow (cinnamon-buff), firm, dry, fissile. Pores minute, 2–3 mm. long, slightly darker than the flesh. Hyphæ pale yellow. Setæ none. Spores subglobose, 3 to 4 mic., hyaline, smooth.'

Recorded by Cooke from Queensland.

We have specimens from Mount Wilson, collected in June 1915 which have been identified by Lloyd.

138a. POLYPORUS ANEBUS var. BICOLOR (*P. bicolor* Jungh.)

Syn. *Fomes oblinitus* Berk., Cooke, Handb. of Aust. Fungi, No. 715 (Lloyd).

Lloyd states that this is the same as *P. anebus*, except that the pileus develops a reddish stain and sometimes the surface is entirely dark reddish. Under the above synonym Cooke records it for New South Wales.

Section 87. Context orange, red, soft, spongy.

No Australian species recorded.

Section 88. Context vinaceous or purple.

139. POLYPORUS DURUS Jungh.

Lloyd mentions that he has seen Australian specimens. Recorded by Cooke as *Polyporus cartilagineus* (No. 659), *P. testudo* (No. 665), and *Fomes ponderosus*, probably, (No. 707), all for Queensland.

140. POLYPORUS VINOSUS Berk.

'Pileus thin, usually sessile, dimidiate, dark vinaceous colour (dark livid purple). Surface smooth, concolorous. Context thin, brittle, hard, more brown than the surface. Pores minute, dark, concolorous with the surface. Spores allantoid, $1\frac{1}{2} \times 4$ to $4\frac{1}{2}\mu$, hyaline.'—Lloyd.

Lloyd has identified specimens for us collected at Port Moresby, New Guinea, by A. E. Pratt.

Section 89. Context olive.

141. POLYPORUS SUPINUS Swartz.

'Pileus dimidiate, imbricate, often resupinate behind usually with a thin margin. Surface, when fresh, white, dull; when young, minutely pubescent, soft to the touch; when old often spotted with red spots behind. Context dark olive (Dresden brown), hard, firm. Pores minute, 2–4 mm. long, with isabelline tissue and adustus mouths. Spores 4×8 mic., oblong, hyaline, smooth with granular contents.'—Lloyd.

This species has not been recorded for Australia, but is inserted on account of the following species.

142. POLYPORUS SUBOLIVACEUS Berk.

'This has the same context colour and is quite close to *Polyporus supinus*, and the old herbarium specimens can hardly be told apart. Fresh specimens, however, appear quite different. *Polyporus subolivaceus* is unicolorous, with a uniform pileus, surface and context colour, while in *Polyporus supinus* there is a strong contrast between the context and surface colour.'—Lloyd.

One of us, J.B.C., collected plants at Thirroul, in April, 1909, which Lloyd has identified as this species, 'a rare plant heretofore only known to me from Brazil.'

Section 90. Context brown. Setæ none.

No Australian species recorded.

Section 91. Context brown. Setæ present.

143. POLYPORUS GILVUS Schwein.

Polyporus gilvus, Cooke, Handb. of Aust. Fungi, No. 641.

Syn. *Fomes homalopilus* (*P. carneofulvus*) Cooke, loc. cit., No. 716; *Fomes rubiginosus* (*P. Lawrencii*) Cooke, loc. cit., No. 702.

'Pileus sessile, applanate, thin $\frac{1}{2}$ - $1\frac{1}{2}$ cm., often imbricate. Surface brown, even, usually slightly rugulose. Context hard, firm, of the growing plant often bright gilvous (yellow ochre) varying to brown (cinnamon brown) when old. Ordinarily the context is more brown than yellow. Pores are small, round, 3 - 10 mm. long, with brown tissue and mouths. Setæ abundant, slender, sharp, projecting 12 - 16 mic. Spores hyaline $3\frac{1}{2} \times 4-5$ mic., smooth.'—Lloyd.

Recorded by Cooke for Queensland and Western Australia.

We have the following specimens:—Tuggerah (J.B.C., October, 1914), identified by Lloyd who adds:—'The flesh

of your plant is more ligneous than, not so brittle as, that of our common American plant, but surely the same species'—our specimens have acuminate, dark brown cystidia, $26 \times 5\mu$ and spores apparently yellow-brown and somewhat irregular, 3.5 to 5×2 to 2.5μ ; Milson Island, Hawkesbury River (J.B.C., November, 1914), cystidia present; Neutral Bay; Dungog (J.B.C., November, 1916).

Specimens from the following localities are in the National Herbarium, Sydney:—Smoky Cape near Trial Bay (F. W. Raffills, 1905); Guy Fawkes (J. Staer, November, 1909); Tuggerah Lakes (April, 1915); Hornsby and Chatswood (A. A. Hamilton, August, 1913 and October, 1911); Rookwood (A. Spencer, June, 1910); Penshurst (E.C., July, 1907); Thornleigh (J. Staer, August, 1910); Parramatta (E.C., March, 1908); Neutral Bay (J.B.C., 1912); Middle Harbour (A. A. Hamilton, October, 1909); Milson Island, Hawkesbury River (E.C., July, 1912); Thirroul (E.C., April, 1910); Hill Top (E.C., April, 1914); Grose Vale (Miss Campbell, Sep., 1912); Leura (A. A. Hamilton, Feb. 1911).

143a. *POLYPORUS GILVUS* var. *SCRUPOSUS* Fries.

Polyporus scruposus, Cooke, Handb. of Aust. Fungi, No. 642; *P. isidioides* (*P. stenoloma*), Cooke, Handb. of Aust. Fungi, No. 643.

'Perfectly smooth forms of *Polyporus gilvus* rarely occur, but the form called *Polyporus scruposus* is excessively rough, with little tubercles and granules. It was named from the United States, but these rough forms are more common and strongly marked in Africa than in the States. As it grades into the type form in all degrees, it is difficult to maintain even as a form.'—Lloyd.

Recorded by Cooke for all the States except South Australia. Lloyd (Letter 63, 1916) also records it for Western Australia.

We have specimens of *P. gilvus* probably referable to this form, from Sydney, on sawn log of firewood (J.B.C., Oct., 1914); Narrabeen (J.B.C., December, 1915); brown cystidia, locality not known.

143b. *POLYPORUS GILVUS* var. *INAMÆNUS* Montague.

Polyporus inamænus, Lloyd, Syn. of the Genus *Polyporus*, p. 348.

'This is an indurated subfomes form of *Polyporus gilvus*. Sometimes it shows distinct pore layers. *Polyporus gilvus* takes this form more commonly in warm countries, but we have specimens from California and Dakota.'—Lloyd.

Lloyd records this for Australia (E. Jarvis).

143c. *POLYPORUS GILVUS* var. *LICNOIDES* Mont.

Polyporus licnoides, Lloyd, Syn. of the *Polyporus*, p. 349.

'This is the most pronounced, tropical form. It is thin (type 2 mm.), more flaccid, and tends towards *Polystictus*. In the most highly specialized 'type' form there are smooth, reddish zones in the pileus, but they are present and absent in the same collection.'—Lloyd.

We have specimens, identified by Lloyd, collected at the Spit, Sydney, in July, 1916 (acuminate brown setæ, 30 to 34 × 7 to 8.5 μ); also on a fallen log near Eulah Creek, Narrabri, in November, 1916.

144. *POLYPORUS RADIATUS* Sow.

'Pileus dimidiate, sessile, triquetrous, with thin margin. Surface minutely velutinate, at length strongly rugulose, radiate. Flesh hard, dry, yellowish-brown. Pores concolorous, small, about $\frac{1}{2}$ cm. long, with mouths that glisten silvery when turned to the light. Setæ rare, short, thick. Spores hyaline, 4–5 × 5–6 μ .'—Lloyd.

Lloyd has referred, with doubt, a specimen collected by one of us at the base of a *Leptospermum* bush on Milson

Island, Hawkesbury River (March—spores white, pear-shaped, 3.6 to $4.2 \times 2.5\mu$).

145. POLYPORUS DRYADEUS Persoon.

'Pileus sessile, often large, a foot even in diameter, 2 to 3 inches thick. Surface with a thin but distinct crust, brown. Context medium, soft, reddish-brown colour (Sudan brown), with a sheen. Pores small, round, subconcolorous, 1 to 2 cm. long. Setæ straight, rare, 8×40 mic. Spores globose, smooth, hyaline or pale coloured, 7 to 8 mic.'—Lloyd.

One of us (J.B.C.) has collected this species growing about ten feet up on the trunk of a Eucalypt in the Mount Lofty Range, South Australia, in July 1914. Though it has not been recorded for New South Wales, its description is given here, as in other parts of the world it is a destructive timber parasite. Lloyd, in identifying our specimen, states:—'This grew on Eucalypts and is the first specimen known from Australia. It appears at first sight to the eye a little different from the European plant, surface with a pale more pronounced crust but microscopic features agree exactly. There is an indication on the specimen of a mycelial core, a feature only known on the related species *Polyporus corruscans* of Europe.' The spores of our specimen are oval, 8.5 to 8.8×6 to 7μ .

Fourth General Division—Context and spores coloured.

Spores not truncate.

Section 92. Context pale (white?) or isabelline. Setæ none.

146. POLYPORUS DIELSII Hennings.

Lloyd says this is a very large species, only known from a piece at Berlin, which came from Australia.

Section 93. Context yellow. Setæ none. No Australian species recorded.

Section 94. Context brown, setæ none.

A—Plants very minute.

No Australian species recorded.

B—Pores large.

147. POLYPORUS DECIPIENS Berk.

Polyporus decipiens (Berk.), Lloyd, *Apus Polyporus*, p. 355, (1915) fig. 390; *Letter 60*, p. 4 (Note 34) 1915.

Syn. *Hexagona decipiens* Berk., *Journ. Linn. Soc., Bot.* XIII, p. 166 (1873); Cooke, *Handb.* No. 894; *Trametes decipiens* Berk., *Bres. MS.* in *Herb. Kew*; Wakefield, *Kew Bull.* (1915) 366.

'Pileus sessile, dimidiate, triquetrous, unicolorous, dark brown. Surface brown, hard, tomentose, rigid. Flesh hard, firm, brown, descending into the pores. Pores rigid, trametoid, 4 to 8 mm. long, round or elongated, large, 1 to 2 mm. Setæ none. Spores abundant, large, elliptical, 8×16 mic., deeply coloured.'—Lloyd.

We have the following specimens:—On trunk of living tree, Peakhurst (E.C., July, 1901); on *Acacia doratoxylon*, Mount Boppy; *Casuarina*, Western Line (L. Abrahams, October, 1911); on log, Milson Island, Hawkesbury River (J.B.C., July, 1912), identified by Lloyd as *Hexagona decipiens*, who, in placing it under *Polyporus* points out that no true *Hexagona* has coloured spores; on fallen log, Kurrajong Heights (J.B.C., August, 1912); Wellington (J.B.C., October, 1914)—spores brown, 15.5 to 19×6.5 to 7.5μ ; locality not noted; Hornsby (W. F. Blakely, June, 1914). The Hornsby specimens were determined by Mr. Lloyd. The specimens recorded by Miss Wakefield, were collected at Moruya, and are stated to be well-marked by the large, elliptical, brown spores, $15 - 20 \times 7.5 - 9\mu$.

We have also specimens from Bumberry, near Manildra, September, spores brown, 15.5 to 17×8.5 to 10.4 . Mr. C. Brittlebank has forwarded us Victorian specimens from the Mallee, collected by J. Dickson on *Casuarina Luehmanni*, in November, 1916, spores brown, 17 to 20×8 to 11μ .

C—Pores small.

149. POLYPORUS SPADICEUS Berk.

As *Fomes spadiceus*, recorded by Cooke (No. 618) for Queensland.

150. POLYPORUS PUBERTATIS Yasuda.

'Pileus sessile ($3 \times 6 \times 1 \frac{1}{2}$ cm.), unicolorous dark brown (verona brown). Surface minutely pubescent, soft to touch. Flesh concolorous, hard, slightly punky. Pores minute, round, 3 to 5 mm. long, with concolorous tissue and mouths. Setæ, none. Spores abundant, $3 \times 5\mu$, elliptical, pale coloured.'—Lloyd. A Japanese species.

Lloyd has identified a specimen for us obtained on a fallen log in Mummulgum Brush, near Casino, in December 1916—spores pallid brownish, $4 \times 2.5\mu$; no setæ.

Section 95. Context brown. Setæ present.

A—Surface tomentose or hispid.

151. POLYPORUS HISPIDUS Baglietto.

Recorded by Cooke (No. 648) for Queensland.

152. POLYPORUS CUTICULARIS Bulliard.

'Pileus applanate, dimidiate, imbricate. Surface tomentose with appressed, brown hairs, zonate when young. Context varying from 3 to 10 mm. thick, hard, fibrillose, ferruginous brown (Sudan brown). Pores small, varying in size, angular or irregular, 5×8 mm. long, with concolorous tissue. Mouths often stuffed or overgrown, when fresh strongly glancing. Setæ very scanty, sometimes not found at all, straight. Spores abundant, globose or subglobose, deeply coloured, largest 7×7 to 8μ , many smaller, 4 to 5×5 to 6μ .'—Lloyd. Common on beech and maple logs in America.

Lloyd has identified a specimen for us found growing on a living trunk at Mummulgum, near Casino, in December,

1916—spores dark brown, oval, 5 to 6 × 3·5 μ ; one brown acuminate seta seen.

153. *POLYPORUS CORRUSCANS* Fr. (*P. RHEADES* Pers.).

'Pileus sessile, dimidiate, subglobose or unguulate, often imbricate. Surface tomentose, velutinate, with short, fine brown hairs. There is at first developed a mycelial core, hard, amorphous, grumous, dark brown. Flesh fibrillose, ferruginous brown (Sudan brown). At first zonate, soft, watery and spongy, at length dry, hard. Pores small, round, about 1 cm. long, with tissue concolorous with the context, when fresh the mouths silvery and glancing. Hyphæ deeply coloured. Setæ scanty and rare, often not found. Spores very abundant, globose or compressed globose, 5-7 × 6-7 μ , deeply coloured, smooth.'—Lloyd.

Lloyd has identified specimens from W. W. Froggatt (Letter No. 63, Note 472, 1916), presumably from New South Wales.

B—Surface smooth or at length smooth.

154. *POLYPORUS PATOUILLARDII* Rick.

Polyporus Patouillardii Lloyd, Letter No. 56 (Note 253), 1915; Letter No. 58 (Note 268). 1915; Synopsis, Sect. Apus of the Genus *Polyporus* (1915) 365.

'Pileus sessile, applanate, 2 - 3 cm. thick. Surface smooth, brown, dull. Flesh brittle, hard, faintly zonate, with a satiny lustre, dark brown (antique brown). Pores small, round, 1 - 1½ cm. deep, pale yellowish-brown, more yellow than the context. Imbedded in the pore tissue are thick, deeply coloured, rigid hyphæ. Setæ scattered, thick, straight, projecting 20 mic. Spores abundant, elliptical, 4 - 6 mic., pale colored.

Rev. Mr. Rick has named and distributed this from Brazil (No. 25 as *lineatoscaber*) and we have specimens to correspond. It has peculiar coloured flesh, with a lustre on

the order of *Polyporus dryadeus*. Many polypores have what is called 'glancing' pore mouths, when the shade of colour appears different according to the angle of the light. This is the only species in which we have noted the same effect on the context. The peculiar setæ found in the pore tissue are not found in the context. Other species of this same genus (*Oxyuris*) have these setæ in both context and pore tissue. This plant from the American tropics is only recently known from Brazil, but has lately reached me from E. D. Merrill, Philippines, G. Yamada, Japan, and E. Cheel, Australia.'—Lloyd.

In Lloyd's Note 268, the following reference is made to this specimen from Australia:—'*Polyporus Patouillardii*, sent by E. Cheel, Australia. This is the first specimen known from Australia, and its occurrence is of much interest. Very recently, 1907, it was named from Brazil by Rick, then we got specimens from Japan, G. Yamada, then from Philippines, E. D. Merrill, and now it comes from Australia. (Compare Synopsis *Polyporus*, page 366, and Note 253, Letter 56.) The Australian plant differs slightly from the Brazilian plant, in fact enough to make a 'new species' if one wants to multiply the species, but the difference can only be noted on comparison, and of course, from one specimen we cannot say it is constant. The context of the Australian plant is coarser to the eye, and the microscope shows the hyphæ slightly thicker and of much deeper colour. The different hyphæ of the pore tissue are not in evidence, and I find no setæ. The spores are slightly smaller, $3 \times 5\mu$. These differences would ordinarily constitute 'a species,' but I feel it is practically the same plant, and it would only obscure the subject to propose one. The history of *Polyporus Patouillardii* which has all developed in the last three years, is evidence of what little is known relatively about foreign polypores.'

The specimen was obtained at Stanwell Park (H. Stephens, October, 1913).

Section 96. Context brown. Light, spongy, fibrillose. Setæ none.

155. POLYPORUS FRUTICUM Berk.

Recorded by Cooke (No. 649) for Queensland.

Fifth General Division—Polyporus—Ganodermus. Context brown; spores coloured, truncate.

Section 97. Context soft, spongy.

No Australian species recorded.

Section 98. Context firm, not spongy.

A—Spores rough.

No Australian species recorded.

B—Spores smooth or slightly rough.

No Australian species recorded.

Section 99. Polyporus (Amaurodermus).

No Australian species recorded.

IV. HEXAGONA.

Section I.—Setosa. Surface clothed with dense branched hairs.

Section II.—Velutina. Surface with fine soft pubescence.

Section III.—Ungulaformis (hoof-shaped). Thick, hard, and long pores.

Section IV.—Applanata. Pileus generally flattened and texture usually softer.

Section V.—Tenuis. Pileus very thin, with rather small shallow pores.

Section VI.—Pallida. Context white or pale ochraceous.

Section VII.—Pseudofavola. Pileus more or less fleshy, tough.

Section I—Setosa.

156. HEXAGONA APIARIA (Pers.), Lloyd.

Syn. *H. Wightii* Klotsch in Cooke's Handb. Aust. Fungi, No. 882; Baker, in Proc. Linn. Soc. N.S.W., XXII, p. 238, (1897).

The specimens recorded by Mr. Baker are from Lismore, New South Wales, collected by Mr. Baeuerlen. We have not examined these.

157. *HEXAGONA CRINIGERA* Fr.

Cheel, Reports, 1911 (1912), 12.

We have a solitary specimen of this species from Port Moresby, collected by A. E. Pratt in July, 1911.

Section II—Velutina.

No Australian species recorded.

Section III—Ungulaformis

158. *HEXAGONA GUNNII* Hook.

Hooker, Journ. Bot. IV, p. 57; Cooke, Handb. Aust. Fungi No. 887; Lloyd, Syn. Gen. Hexagona, p. 15 (1910); Cheel, Reports, 1911 (1912) 12.

Lloyd has examined the Australian specimens at Kew, England, where there are several collections made in Tasmania and Australia. In the National Herbarium, Sydney, and in our private collections there are specimens from the following localities:—Adelaide, South Australia (J.B.C., 1898); Hobart, Tasmania, on *Eucalyptus viminalis* Labill., (E.C., March, 1910); Conjola, on Blackbutt (W. Heron, 1891); Cobar, (L. Abrahams, July, 1911); Parramatta, on Eucalyptus trunks (J.B.C., July, 1912), identified by Lloyd.

Section IV—Applanata.

No Australian species recorded.

Section V—Tenuis.

159. *HEXAGONA TENUIS* Hook.

Hooker in Kunth. Syn. 10; Cooke, Handb. Aust. Fungi No. 891; Cheel, Proc. Linn. Soc. N.S.W., xxxii, p. 203, 1907, Reports 1913 (1914) 17; Lloyd, Letter No. 19, 1908, and Syn. Gen. Hexagona, p. 23, 1910.

This is a very common species, usually found on dead branches. It has a very wide range, having been recorded

by Cooke (*l.c.*) from Queensland, South Australia, North East Australia and Cape York. In the National Herbarium there are specimens from the following localities:—Hill Top and Hazelbrook (J. H. Maiden, 1903 and 1906) on Coachwood (*Ceratopetalum apetalum*); Pittwater (A. Maclellan, September, 1907); Helensburgh (W. Craigie, August, 1909); Hornsby and Lilyvale (A. A. Hamilton, October, 1910); Willoughby (A. G. Hamilton, July, 1910); Grose Vale, (Miss Campbell, September, 1912, determined by Lloyd). We have also specimens from Mount Wilson and from the Hawkesbury River, both taken in June. The shed spores of New South Wales plants are elongated, sausage-shaped, granular, $13\cdot8$ to $15\cdot5 \times 5\mu$.

160. *HEXAGONA TENUIS* var. *UMBRINELLA* Fr.

Lloyd (Letter 63, 1916) has identified for us as *H. umbrinella*, specimens from Helensburgh (A. A. Hamilton, October, 1913). He considers *H. umbrinella* as a form of *H. tenuis* with a dark reddish-brown rugulose surface.

161. *HEXAGONA TENUIS* var. *SUBTENUIS* Berk.

Cooke, Handb. Aust. Fungi, No. 891; Baker, Proc. Linn. Soc. N.S.W., xxii, p. 238, 1897.

This, according to Lloyd (Syn. Gen. *Hexagona*, p. 26), 'was originally named by Berkeley from India.' The Australian specimens recorded under this name are very probably intermediate forms between *H. tenuis* and *H. rigida*.

The following are probably thick forms of *Hexagona tenuis*, and may be *H. subtenuis* of Berkeley. On silky oak (*Grevillea robusta*) Hyde Park and Botanic Gardens (C. Robbie, A. Grant and E.C.); Leura (A. A. Hamilton, August, 1910); Cronulla (J. Staer, July, 1910); Blackheath (Rev. W. W. Watts, July, 1911); Tuggerah Lakes, N.S.W., and Eumundi, Q., (J. Staer, September, 1912); Milson

Island (J.B.C., July, 1912); Smoky Cape (F. W. Raffills, October, 1905).

162. *HEXAGONA RIGIDA* Berk.

Berk., Journ. Linn. Soc. (Bot.) XVI, p. 54, 1878; Cooke, Handb. Aust. Fungi, No. 887.

This was originally described by Berkeley from specimens collected at Lord Howe Island.

In the National Herbarium, Sydney, there are specimens from Lord Howe Island collected by Mr. J. H. Maiden in April, 1898, and Rev. W. W. Watts in July, 1911, also specimens received through the Curator of the Australian Museum in 1897, which we feel sure belong to this species.

163. *HEXAGONA SIMILIS* Berk.

Berk., Hook. Lond. Journ. Bot., v, p. 4, 1846; Cooke, Handb. Aust. Fungi, No. 893; Lloyd, Letters No. 38, p. 2, and 60, p. 4, 1915, and Syn. Gen. Hexagona, p. 27, 1910.

We have specimens of this species from Helensburgh, collected by A. A. Hamilton in October, 1913, and from Cowan Creek, Hornsby, on dead Casuarina, collected by W. F. Blakely in June, 1915. Specimens of the latter collection have been identified as this species by Lloyd.

Section VI—Pallida.

No Australian species recorded.

Section VII—Pseudofavola.

No Australian species recorded.

¹ [164. *HEXAGONA OLIVACEA*.

Lloyd (Letter 53, p. 14, 1914) has identified a specimen from Dr. Stoward, Western Australia, as *H. olivacea*. We do not find the species mentioned in his synopsis of the genus *Hexagona*.]

¹ Position under Section unknown.

MERULIUS.

MERULIUS LACRYMANS Sch.

Specimens of this are recorded by Cooke in Handb. of Australian Fungi, for Queensland and Western Australia. We have no authentic specimens for this State so far, although it may possibly be found here when the whole of the specimens in our collections have been worked up.

MERULIUS UMBRINUS Fr.

Specimens of this species have been identified by Lloyd, collected at Wamberal by one of us (E.C.) in April, 1911, Mr. Lloyd remarks, 'The plant has the same coloration and the same general nature as *Merulius lacrymans*, but *umbrinus* is supposed to be a thinner species.'

V. LISTS OF AUSTRALIAN POLYPORES OF THE GENERA FOMES, POLYPORUS AND HEXAGONA.

Compiled from Lloyd's Works with additions from Cooke's Handbook of Australian Fungi.

(* indicates that Australian specimens have been seen or identified by Lloyd. These numbers do not necessarily correspond with those given in the text.)

I.—STIPITATE POLYPORES.

- | | | | |
|----|---|-------------------------|--|
| 1* | <i>Polyporus (Ganodermus) lucidus</i> | var. <i>japonicus</i> , | N.S.W. |
| 2 | " | " | <i>amboinensis</i> |
| 3* | " | " | <i>fornicatus</i> |
| 4* | " | " | <i>ochrolaccatus</i> , New Guinea |
| 5* | <i>Polyporus (Amaurodermus) rudis</i> , | N.S.W. | (Records of <i>A. rugosus</i> probably refer to this.) |
| 6 | " | " | <i>leptopus</i> ? |
| 7* | <i>Polyporus (Lignosus) superpositus</i> , | N.S.W. | |
| 8 | " | " | <i>scopulosus</i> |
| 9* | <i>Polyporus (Petaloides) fusco-maculatus</i> ? | | |
| 10 | " | " | <i>annulatus</i> ? N.S.W. |

- 11* *Polyporus (Petaloides) rhipidium*, N.S.W.
 12 " " *rubidus*, N.S.W.
 13 " " *brunneolus*
 14 " " *petalodes*
 15* " " *gallo-pavonis*
 16* " " *grammocephalus*, N.S.W.
 17* " (*Petaloides*?) *platotis*
 18* " (*Petaloides*) *fusco-lineatus*
 19* " " *dorcadideus*
 20* " " *megalosporus*, N.S.W.
 21* " " *obniger*, N.S.W.
 22* " " *pocula*
 23 *Polystictus (Petaloides) mutabilis*
 24 " " *obovatus*
 25* " " *stereinus*, N.S.W.
 26 " " *affinis*, N.S.W.
 27* " " *luteus*, N.S.W.
 28* " " *flabelliformis*, N.S.W.
 29* " " *subfulvus*, N.S.W.
 30 " " *sanguineus*
 31 " " *cinnabarinus*
 32 " " *Pentzkei*
 33 " " *intonsus*
 34 " " *peroxydatus*, N.S.W.
 35 " " *libum* (type inadequate), N.S.W.
 36 " " *vernicifluus* (type inadequate)
 37* *Polyporus (Merisnus) Berkeleyi*, N.S.W.
 38 " " *frondosus*
 39* " " *anthracophilus*
 40* " " *multiplex*
 41* *Polystictus* " *Ridleyi*
 42 *Polyporus* " *sulphureus*
 42a* " " " var. *Wilsonianus*
 43 " " *retiporus* ?
 44 " " *intybaceus*
 45 " " *scabriusculus*

- 46 *Polyporus (Merismus) lætus*
 47 " " *rosettus*, N.S.W.
 48* *Polyporus (Spongiosus) rufescens*
 49* " " *hystericulus*
 50* " " *Schweinitzii*, N.S.W.
 51 *Polystictus* " *tomentosus*
 52 *Polyporus (Pelleporus) luteo-nitidus*
 53 *Polystictus* " *perennis*
 54 " " *oblectans*, N.S.W.
 55* *Polyporus (Ovinus) mylitta*, N.S.W.
 56 " " *minor-mylitta*, N.S.W.
 57 " " *ovinus*
 58 " " *confluens*
 59 " " *pes-capræ*
 60* " " *squamosus*, N.S.W. ?
 60a* " " " var. *lentinoides*, N.S.W.
 61 " " *tumulosus*
 62 " (*Ovinus* ?) *basilopiloides* (*Laccocephalum basilapiloides*)
 63* " (*Ovinus*) *tasmanicus*, N.S.W.
 64* " " *Hartmanni*, N.S.W.
 65 " " *myclodes*
 66* *Polyporus (Lentus) tricholoma*
 67 " " *brumalis*
 68* " " *virgatus*, N.S.W.
 69 " " *xanthopus*, N.S.W.
 70 " " *arcularius*, N.S.W.
 71 " " *lentus*
 72* *Polyporus (Melanopus) varius*, N.S.W.
 72a* " " " var. *Blanchetianus*, N.S.W.
 72b* " " " var. *Pancheri*, N.S.W.
 73 " " *melanopus*
 74 *Polystictus* " *nephridius*
 75 *Polyporus* " *pusillus*
 76* " " *Guilfoylei*
 77 " " *glabratus*

II.—FOMES.

78. *Fomes connatus*
 79 " *annosus*
 80* " *Clelandii*, N.S.W.
 81* " *Ohiensis*, N.S.W.
 82 " *pinicola*, N.S.W.
 83* " *hemitephrus*, N.S.W.
 84* " *semitostus?*
 85 " *dochmius*
 86* " *concauus*
 87 " *ferreus*
 88 *Trametes carnea*
 89* " *Feei*, N.S.W.
 90* " *lilacino-gilva*, N.S.W.
 90a* " " " var. *Stowardii*
 90b* " " " " *eucalypti*
 91 " *plebeia*
 92 " *rosea*
 93* " *cupreo-rosea*
 94 *Fomes lignosus*
 95* " *kermes*
 96 " *inflexibilis*
 97 " *exotephrus*
 98 " *fomentarius*, N.S.W.
 99 " *caliginosus* (or *endapalus*), N.S.W.
 100* " *pomaceus*
 101* " *robustus*, N.S.W.
 102* " *setulosus*
 103* " *conchatus*, N.S.W.
 103a " " var. *salicinus*
 104* " *igniarius?* N.S.W.
 105* " *Robinsoniae* (*squarrosus*), N.S.W.
 106* " *lineato-scaber*, N.S.W.
 107* " *rimosus*, N.S.W.
 107a* " " var. *Niaoulii*, N.S.W.
 108* " *scaber*

- 109 *Fomes pectinatus*
 110 „ *pullus*
 111* „ *Tepperii*, N.S.W.
 112* „ *Yucatensis*, N.S.W.
 113 „ *linteus?* N.S.W.
 114* „ *applanatus*, N.S.W.
 114a* „ „ var. *leucophæus*
 114b* „ „ „ *australis*, N.S.W.
 114c* „ „ „ *oroflavus*
 114d* „ „ „ *nigrolaccatus*

The following in Cooke's List are not referred to by Lloyd—
 they are probably *Porias*.

- 115 *Fomes obliquus* Pers., N.S.W.
 116 „ *luridus* Kalk., N.S.W.

III.—SECTION APUS OF THE GENUS POLYPORUS.

- 117 *Polyporus betulinus*
 118 „ *albellus*, N.S.W.
 119* „ *portentosus*, N.S.W.
 120* „ *tephronotus*, N.S.W.
 121* „ *pelliculosus*
 122* „ *eucalyptorum*, N.S.W.
 123 „ *immaculatus*
 124* „ *cretaceus*
 125* „ *fumosus*, N.S.W.
 126 „ *epileucus*
 127* „ *ochroleucus*, N.S.W.
 128 *Trametes cubensis*
 129 *Polyporus fragilis*
 130* „ *cæsius*, N.S.W.
 131 „ *borealis*
 132* „ *pelles*
 133 „ *adustus*
 134* „ *campylus*
 135* „ *australiensis*, N.S.W.
 136* „ *dichrous*, N.S.W.

- 137 *Polyporus rutilans*
 138* „ *zonalis*, N.S.W.
 138a „ „ var. *rigidus*, N.S.W.
 139* „ *semilaccatus*
 140* „ *anebus*, N.S.W.
 140a „ „ var. *bicolor*, N.S.W.
 141* „ *durus*
 142* „ *vinosus*, New Guinea
 143* „ *subolivaceus*, N.S.W.
 144* „ *gilvus*, N.S.W.
 144a* „ „ var. *scruposus*, N.S.W.
 144b* „ „ „ *inamœnus*
 144c* „ „ „ *lichnoides*, N.S.W.
 145* „ *radiatus*, N.S.W.
 146* „ *dryadeus*
 147* „ *Dielsii*
 148* „ *decipiens*, N.S.W.
 149 „ *spadiceus*
 150* „ *pubertatis*, N.S.W.
 151 „ *hispidus*
 152* „ *cuticularis*, N.S.W.
 153* „ *corruscans* (*P. rheades*)
 154* „ *Patouillardii*, N.S.W.
 155* „ *fruticum*

The following species in Cooke's Handbook are not referred to by Lloyd :—

- 156 *Polyporus corrivalis*
 157 „ *Gunnii*
 158 „ *argentatus*
 159 „ *fœdatus*

To these may be added :—

- 160 *Polyporus strumosus* (perhaps *P. adustus*)
 161 „ *ascoboloides* (type destroyed)

IV.—HEXAGONA.

- 162 *Hexagona apiaria*, N.S.W.
 163 „ *hirta*

164*	<i>Hexagona Gunnii</i>	N.S.W.
165	" <i>sulcata</i> var. <i>durissima</i>	
166*	" <i>tenuis</i> ,	N.S.W.
166a	" " "	var. <i>polygramma</i>
166b*	" " "	" <i>umbrinella</i> , N.S.W.
166c	" " "	" <i>subtenuis</i> , N.S.W.
167	" <i>rigida</i>	
168	" <i>similis</i> ,	N.S.W.
169*	" <i>olivacea</i>	

VI. COOKE'S LISTS OF CERTAIN AUSTRALIAN POLYPORES CORRECTED IN THE LIGHT OF LLOYD'S INVESTIGATIONS.

[In these lists, opposite the species recorded in Cooke, whose number precedes each species, is given the correct identification revealed by C. G. Lloyd's researches.]

I — STIPITATE POLYPORES.

583	<i>Polyporus ovinus</i> = <i>P. (Ovinus) ovinus</i>
584	" <i>pes-caprae</i> " <i>pes-caprae</i>
585	" <i>Hartmanni</i> " <i>Hartmanni</i>
586	" <i>tumulosus</i> " <i>tumulosus</i>
587	" <i>myelodes (myclodes)</i> unknown (Lloyd)
588	" <i>lentus</i> = <i>P. (Lentus) lentus</i>
589	" <i>brumalis</i> " <i>brumalis</i>
590	" <i>cupuliformis</i> = <i>P. (Petaloides) pocula</i>
591	" <i>arcularius</i> = <i>P. (Lentus) arcularius</i>
592	" <i>tricholoma</i> " <i>tricholoma</i>
593	" <i>similis</i> " <i>tricholoma</i> , probably (type very scanty)
594	" <i>alveolarius (collybioides)</i> = <i>P. (Lentus) arcularius</i>
595	" <i>stipitarius</i> " <i>tricholoma</i>
596	" <i>pisiformis</i> . Type too young and indescribable
597	" <i>Schweinitzii</i> = <i>P. (Spongiosus) Schweinitzii</i>
598	" <i>tabulaeformis (spectabilis)</i> " <i>Schweinitzii</i>
599	" <i>biennis</i> " <i>rufescens</i>

600	<i>Polyporus rufescens</i>	„	<i>rufescens</i>
601	„ <i>proteiporus</i>	„	<i>rufescens</i>
602	„ <i>histriculus</i>	„	<i>histriculus</i>
603	„ <i>squamosus</i> = <i>P. (Ovinus) squamosus</i>		
604	„ <i>melanopus</i> = <i>P. (Melanopus) melanopus</i>		
605	„ <i>picipes</i>	„	<i>varius</i> , black form
606	„ <i>Strangeri</i>	„	<i>dictyopus</i> probably, type unknown
607	„ <i>infernalis</i>	„	<i>dictyopus</i> , a form of <i>varius</i>
608	„ <i>varius</i>	„	<i>varius</i>
609	„ <i>elegans</i>	„	<i>elegans</i>
	„ „ var. <i>nummularius</i>		
610	„ <i>glabratus</i> . Type unknown		
611	„ <i>Guilfoylei</i> = <i>P. (Melanopus) Guilfoylei</i>		
612	„ <i>Leprieurii</i>	„	<i>Leprieurii</i> . New Guinea only.
613	„ <i>dictyopus</i>	„	<i>dictyopus</i> , a form of <i>varius</i>
613 (bis)	„ <i>petaloides</i> = <i>P. (Petaloides) petalodes</i>		
614	„ <i>grammocephalus</i>	„	<i>grammocephalus</i>
	„ „ var. <i>Emerici</i>		
	„ „ „ <i>Muelleri</i>		
615	„ <i>platotis</i> = <i>P. (Section?) platotis</i>		
616	„ <i>dorcadideus</i> = <i>P. (Petaloides) dorcadideus</i>		
617	„ <i>fusco-lineatus</i>	„	<i>fusco-lineatus</i>
618	„ <i>frondosus</i> = <i>P. (Merismus) frondosus</i>		
619	„ <i>intybaceus</i> . Not mentioned by Lloyd		
620	„ <i>confluens</i> = <i>P. (Ovinus) confluens</i>		
621	„ <i>scabriusculus</i> . No type exists		
622	„ <i>anthracophilus</i> = <i>P. (Merismus) anthracophilus</i>		
623	„ <i>lætus</i> . Not mentioned by Lloyd		
624	„ <i>sulfureus</i> = <i>P. (Merismus) sulphureus</i>		
625	„ <i>retiporus</i>	„	<i>sulphureus</i> var. <i>reti-</i> <i>porus</i> (<i>P. retiporus</i> ?) and <i>P. australiensis</i> .

- 661 *Polyporus subzonalis* = *P. (Petaloides) gallopavonis* pale form.
- 668 *Fomes nigripes* = *P. (Amaurodermus) leptopus* probably, no
type exists
- 669 „ *rudis* „ *rudis*
- 670 „ *pullatus* Type too poor for recognition
- 671 „ *rugosus* = *P. (Amaurodermus) rudis* probably, when
referring to Australian specimens
- 672 „ *amboinensis* Probably not the true *P. (Ganodermus)*
amboinensis
- „ „ var. *gibbosus*
- 673 „ *lucidus* = *P. (Ganodermus) lucidus*
- 674 „ *superpositus* = *P. (Lignosus) superpositus*
- 714 „ *scopulosus* „ *scopulosus*
- 724 *Polystictus tomentosus* = *P. (Spongiosus) tomentosus*
- 725 „ *luteonitidus* = *P. (Pelleporus) luteonitidus*
- 726 „ *perennis* „ *perennis*
- 727 „ *cinnamoneus* „ *oblectans*, prob-
ably, as referring to Australian specimens.
- 728 „ *oblectans* = *P. (Pelleporus) oblectans*
- 729 „ *bulbipes (cladonia, perdurans)* = *P. (Pelleporus)*
oblectans
- 730 „ *parvulus* = *P. (Pelleporus) oblectans*, probably,
as referring to Australian specimens
- 731 „ *quadrans* = *P. (Lentus) zanthopus*, probably, no
type exists
- 732 „ *zanthopus (cupreo-nitens)* = *P. (Lentus) zanthopus*
- 733 „ *flabelliformis* = *P. (Petaloides) flabelliformis*
- 734 „ *porphyrites* „ *luteus*, probably
- 735 „ *Adami (dilatatus)* „ *obovatus*
- 736 „ *mutabilis* „ *mutabilis*
- 737 „ *luteus* „ *luteus*
- 738 „ *carneo-niger* „ *carneo-niger*
- 739 „ *nephridius* = *P. (Melanopus) nephridius*
- 740 „ *affinis* = *P. (Petaloides) affinis*
- 741 „ *stereinus (cognatus)* = *P. (Petaloides) stereinus*
- 742 „ *intonsus* No type exists

- 743 *Polystictus brunneolus* = *P. (Petaloides) brunneolus*
 744 ,, *peroxydatus* No type exists
 745 ,, *libum* Type inadequate
 746 ,, *sanguineus* = *P. (Petaloides) sanguineus*
 747 ,, *rasipes* ,, *obovatus*
 770 ,, *cinnabarinus* ,, *cinnabarinus*
 790 ,, *vernicifluus* Type inadequate
 895 *Favolus squamifer* = *P. (Lentus) arcularius*, probably.
 896 ,, *Boucheanus* = *P. (Ovinus) squamosus* var. *Boucheanus*
 898 ,, *pusillus* = *P. (Melanopus) pusillus*
 899 ,, *rhipidium* = *P. (Petaloides) rhipidium*
 1351 *Mylitta australis* = *P. (Ovinus) mylittæ*

II.—FOMES.

- 658 *Polyporus hypopolius* = *Fomes annosus*, from the description.
 662 ,, *lignosus* ,, *lignosus*
 664 ,, *plebius* = *Trametes plebeia*
 676 *Fomes scansilis* = *Fomes australis*, diseased form.
 677 ,, *marginatus* ,, *pinicola*
 678 ,, *dochmius* ,, *dochmius*
 679 ,, *concavus* ,, *concavus*
 680 ,, *conchatus* ,, *conchatus*
 681 ,, *australis* ,, *applanatus*, var. *australis*
 ,, ,, var. *arculatum*
 682 ,, *chilensis* = *Fomes australis*
 683 ,, *applanatus* ,, *applanatus*
 684 ,, *orbiformis* Type inadequate
 685 ,, *nigrolaccatus* = *Fomes nigrolaccatus*
 686 ,, *fomentarius* ,, *fomentarius*
 687 ,, *igniarius* = *Fomes igniarius*. Australian references:
 are probably to *F. rimosus* or *F. robustus* (J.B.C. and E.C.)
 688 ,, *rimosus* = *Fomes rimosus*
 689 ,, *fulvus* Original figure and description inadequate.
 690 ,, *gryphæformis* No type exists.
 691 ,, *salicinus* = *F. conchatus*, var. *salicinus*

- 692 *Fomes hemileucus* As *Polyporus*, Lloyd says the description was applied to three species, viz. *Trametes cubensis*, *Polyporus modestus* and *P. valenzuelianus*.
- 693 „ *exotephrus* = *F. exotephrus*
- 694 „ *contrarius* Probably *F. annosus*
- 695 „ *tasmanicus* Probably *F. semitostus* Type very poor
- 696 „ *pullus* = *F. pullus*
- 697 „ *lineato-scaber* = *F. lineato-scaber*
- 698 „ *spadiceus* = *Polyporus spadiceus*
- 699 „ *inflexibilis* (*Polyporus recurvus*) = *F. inflexibilis*
- 700 „ *linteus* „ „ *linteus*
- 701 „ *pectinatus* „ „ *pectinatus*
- 702 „ *rubiginosus* (*Polyporus Laurencii*) = *Polyporus gilvus*
- 703 „ *Gourliei* = *Polystictus occidentalis* Type very poor.
- 704 „ *endapalus* = *F. endapalus*, possibly young *F. caliginosus*
- 705 „ *Curreyi* = *Trametes strigata*
- 706 „ *strigatus* „ „ (? J.B.C and E.C.)
- 707 „ *ponderosus* = *Polyporus durus*, probably
- 708 „ *annosus* = *F. annosus*
- 709 „ *compressus* = *Polyporus ochroleucus*
- 710 „ *connatus* = *F. connatus*
- 711 „ *hemitephrus* „ *hemitephrus*
- 712 „ *Palliseri* ? What species
- 713 „ *ferreus* = *F. ferreus*
- 714 „ *scopulosus* = *Polyporus (Lignosus) scopulosus*
- 715 „ *oblinitus* „ „ *bicolor*
- 716 „ *fasciatus* ? What species
- 717 „ *carneus* = *Trametes carnea*
- 718 „ *cinereo-fuscus* = *Polyporus semilaccatus*, discoloured.
- 719 „ *homalopilus* (*Polyporus carneofulvus*) = *P. gilvus*
- 720 „ *incrassatus* „ „ *reniformis* = *F. leucophæus*
- 721 „ *obliquus* Not referred to by Lloyd, probably a *Poria*
- 722 „ *luridus* „ „ „ „ „ „ „ „
- 723 „ *bistratosus* Type a *Poria*

III.—POLYPORUS (APUS).

- 626 *Polyporus tephronotus* = *P. tephronotus*
 627 „ *epileucus* „ *epileucus*
 628 „ *corrivalis* No reference by Lloyd
 629 „ *verecundus* (Fiji) = *P. immaculatus*, probably
 630 „ *semidigitaliformis* Type too poor
 631 „ *Gunnii* No reference by Lloyd
 632 „ *angustus* = *P. tephronotus*
 633 „ *fragilis* „ *fragilis*
 634 „ *stypticus* „ *australiensis* [vide Wakefield, Kew
 Bull. (1914), 157]
 635 „ *chioneus* „ *albellus*
 636 „ *argentatus* No reference by Lloyd
 637 „ *campylus* = *P. campylus*
 638 „ *nidulans* „ *rutilans*
 639 „ *faedatus* No reference by Lloyd
 640 „ *rubidus* = *P. rubidus*
 641 „ *gilvus* „ *gilvus*
 642 „ *scruposus* „ *scruposus*, a form of *P. gilvus*
 643 „ *isidioides* (= *P. stenoloma*) = *P. scruposus*
 644 „ *demissus* = *P. fumosus*, apparently
 645 „ *rhinocephalus* = *P. fumosus*
 646 „ *adustus* „ *adustus*
 647 „ *dichrous* „ *dichrous*
 648 „ *hispidus* „ *hispidus*
 649 „ *fruticum* „ *fruticum*
 650 „ *pelliculosus* „ *pelliculosus*
 651 „ *spiculifer* „ „ as a form
 652 „ *borealis* „ *borealis*
 653 „ *substuppeus* The Australian specimens evidently
 differ from the type.
 654 „ *betulinus* = *P. betulinus*
 655 „ *portentosus* „ *portentosus*, some records probably
 to *P. australiensis*
 656 „ *eucalyptorum* = *P. eucalyptorum*

- 657, *Polyporus strumosus* = *P. strumosus* (perhaps *P. adustus*)
 658 ,, *hypopolius* From the description, *Fomes annosus*
 659 ,, *cartilagineus* = *P. durus*
 660 ,, *zonalis* ,, *zonalis*
 661 ,, *subzonalis* ,, *gallo-pavonis*, pale form (Stipitate Polypore)
 662 ,, *lignosus* = *Fomes lignosus*
 663 ,, *cubensis* = *Trametes cubensis*
 664 ,, *plebius* ,, *plebeia*
 665 ,, *testudo* = *P. durus*
 666 ,, *anebus* ,, *anebus*
 667 ,, *ascoboloides* Type destroyed
 698 *Fomes spadiceus* = *P. spadiceus*
 702 ,, *rubiginosus* (*Polyporus Laurencii*) = *P. gilvus*
 707. ,, *ponderosus* = *P. durus*, probably
 709 ,, *compressus* ,, *ochroleucus*
 715 ,, *oblinitus* ,, *bicolor*
 716 ,, *homalopilus* (*Polyporus carneofulvus*) = *P. gilvus*.
 847 *Trametes* (*Polyporus*) *ochroleucus* = *P. ochroleucus*

IV.—HEXAGONA.

- 882 *Hexagona Wrightii* = *Hexagona apiaria*
 883 ,, *crinigera* ,, *hirta*
 884 ,, *durissima* ,, *sulcata* var. *durissima*
 885 ,, *Muelleri* ,, *rigida*
 886 ,, *sericea* = *Polystictus villosus*
 887 ,, *Gunnii* = *Hexagona Gunnii*
 888 ,, *rigida* ,, *rigida*
 889 ,, *umbrinella* ,, *tenuis*, var. *umbrinella*
 890 ,, *discolor* (*Favolus discolor*) No type exists
 891 ,, *tenuis* = *Hexagona tenuis*
 ,, ,, var. *subtenuis* = *Hexagona tenuis*, var. *subtenuis*
 892 ,, *polygramma* = *Hexagona tenuis* var. *polygramma*
 893 ,, *similis* ,, *similis*
 894 ,, *decipiens* = *Polyporus decipiens*