A Contribution to the Fungous Flora of Dutch New Guinea*

By Rokuya IMAZEKI

(With PLATE I—XII, Text-figure 1—10, and Table 1)

Contents

Forewords

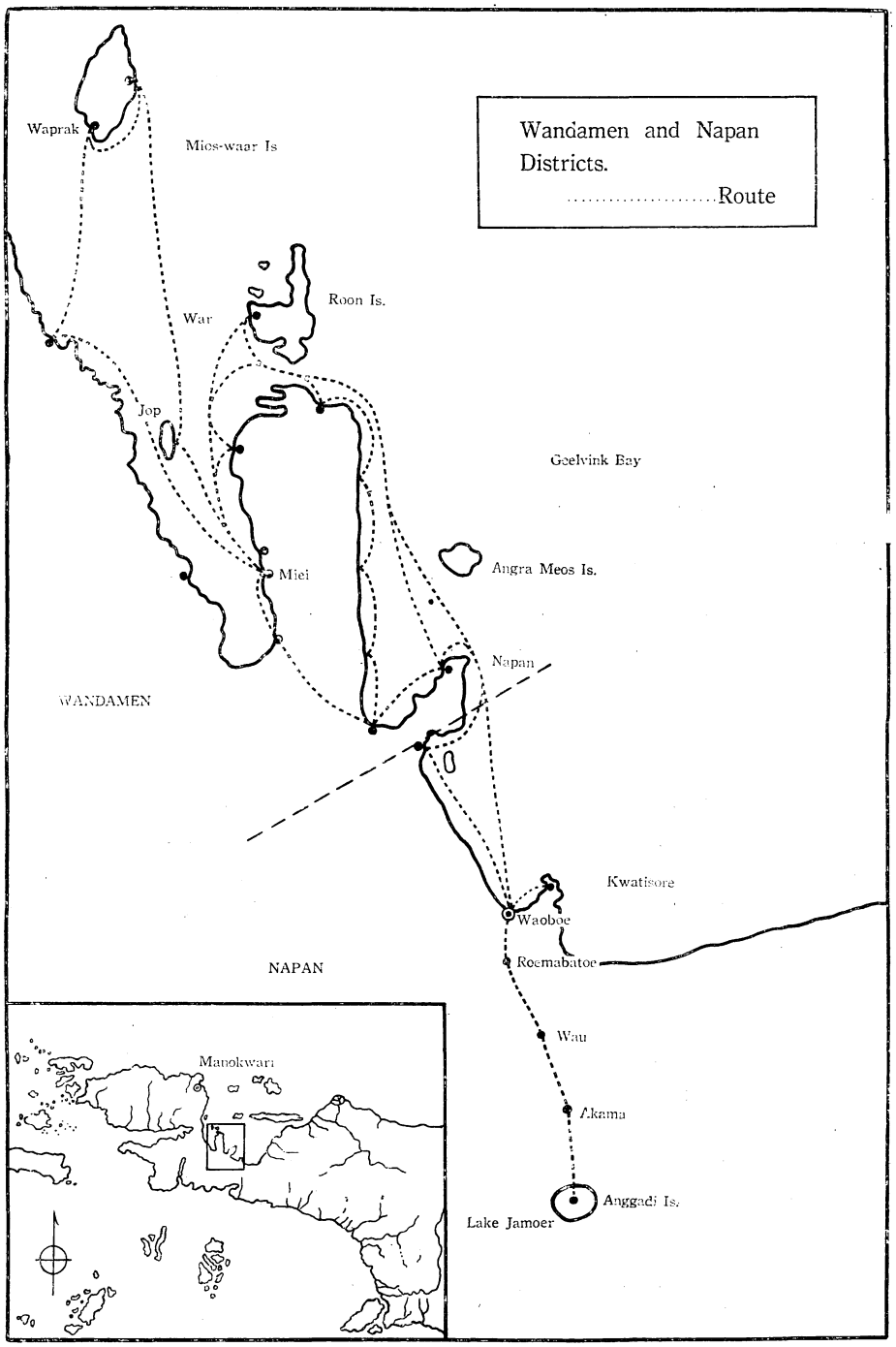
From January to June of 1943, the scientific expedition of the Tokyo Science Museum** was held in the north western part of Dutch New Guinea. The present report deals with the fungous materials collected by Dr. Y. SATAKE, Mr. S. IZIRI, and the late Mr. T. NIIMURA, all the curators of the Museum at that time and the members of the expedition. These materials amount to more than 350 collections, of which about 90 percent are the pore fungi, and others belonging to *Corticiaceae, Agaricaceae,* etc. The data of the collection are as follows:

Manokwari district: Manokwari (February, coll. by Y. SATAKE).

Napan district: Waoboe (March and May, coll. by Y. SATAKE and T. NIIMURA): Miei (April 4, coll. by Y. SATAKE and T. NIIMURA): Kwatisore (May 14, coll. by S. IZIRI and T. NIIMURA): Roemabatoe (April 18, coll. by S. IZIRI and T. NIIMURA): Wati (April 18, coll. by S. IZIRI and T. NIIMURA): Akama (May 1, coll. by S. IZIRI and T. NIIMURA): Angadi Is. in the Lake Yamoer (May 1, coll. by S. IZIRI and T. NIIMURA): Mangga Is. near Waoboe (May 15, coll. by T. NIIMURA): Waprak in Mios Is. in Geelvink Bay (May 8, coll. by Y. SATAKE).

* The present study was written at first in Japanese and sent to the press in 1944. Unfortunately, when the printing was almost finished, the office was destroyed by the war fire in March of 1945. The writer, hence, turned it into English and sent the paper to be read at the 7th Pan-Pacific Science Congress which was held in New Zealand in 1949, but it was not published.

** The former name of the National Science Museum in Tokyo.



In making up the list of species in the following special part, the writer has, for the sake of brevity, omitted the collector's names and dates, merely noting the places. All the specimens are preserved in the herbarium of the National Science Museum, in Tokyo, Japan.

Brief notes on the history of researches on the fungous flora of New Guinea.

Mycofloristical investigations of New Guinea in the past were mostly applied to east New Guinea. In the old German territory, the botanical explorations were made by HOLLRUNG (1886), K. LAUTERBACH and L. KÄRNBACH (1890—1), O. WARBURG (1889), and C. LEDERMANN in the basin district of the river Gogol and in the Finschhafen district. They have collected many fungous specimens which were studied by P. HENNINGS[1-4] and H. and P. SYDOW[5]. In the south eastern part of New Guinea, some English explorers collected fungi which were studied by M. C. COOKE[6]. Dutch New Guinea, however, has long been left untouched, though there are found few fragmental notes written by G. E. MASSEE[7], VAN OVEREEM[8], and C. G. LLOYD.

From these reports, we can eumerate about 130 species of *Polyporaceae*, if no critical considerations about the given names were paid. Most of these 130 species are ones recorded only from east New Guinea. In this p per, the writer reports 71 species of higher Basidiomycetes, of which 65 species belong to the *Polyporaceae*, and 43 species are new to the flora of New Guinea.

Some phytogeographical considerations based on the present collection.

Although it seems to be very interesting that the phytogeographical discussions on the fungous flora of the north western part of Dutch New Guinea may be attempted, it would be rash to secure some conclusions on such a large problem from this short time collection. Furthermore, our present knowledge about the fungous flora of Australia and also other various regions of eastern tropical Asia surrounding New Guinea is very poor.

The writer arranged the Table 1 in order to know the geographical distribution of 71 species listed in this paper. From this table, the writer is able to denote the following notices.

1) 71 species are classified into the following five groups.

(1) P. HENNINGS: in K. SCHUMANN u. HOLLRUNG, Flora von Kaiser Wilhelmsland in Nachrichten über Kaiser Wilhelmsland und den Bismarck-Archipel. (1889).
(2) 〃 : Fungi novo-guineenses, I, in ENGL. Bot. Jahrb., 15, Beih. 33: 4—8 (1893); II, ibid., 18, 44: 20—40 (1894); III, ibid., 25: 495—509 (1898).
(3) 〃 : Fungi Warburgiani, in Hedw., 32: 216—227 (1893).
(4) 〃 ; Monsunia, I : 1—38, Pl, I (1900).
(5) SYDOW, H. et P.: Fungi papuani. Die von C. LEDERMANN in Neu Guinea gesammelten Pilze. ENGL. Bot. Jahrb., 54: 246—261 (1916).
(6) COOKE, M. C.: Fungi of New Guinea, in Grev., 14: 115—8 (1885—6).
(7) MASSEE, G. E.: Fungi in Botany of Wollaston Expedition to Dutch New Guinea 1912—3. Trans. Linn. Soc. Lond., 2. ser. 9: 265—6 (1916).
(8) OVEREEM, C. VAN: Beiträge zur Pilzflora von Niederlandisch-Indien. Bull. Jard. Bot. Buit., ser. 3, 5: 247—293 (1923); 7: 423—442 (1925).

Table 1. Distribution of the fungous species

Species \ Localities	Australia	East New Guinea	Philippines	Micronesia	Formosa	Japan: Kyusyu	Japan: Honsyu	Japan: Hokkaido	Europe	North America	Central & South America	Africa
Auriculariaceae												
Auricularia delicata	+	+	+		+						+	+
Corticiaceae												
Cladoderris infundibuliformis			+									+
C. spongiosa	+		+		+							+
Podoscypha elegans	+	+	+				+				+	+
P. involuta	+	+	+									+
Stereum fasciatum			+	+	+	+	+	+	+	+	+	
Polypraceae												
Amauroderma rugosum	+	+	+	+?	+	+?						+
A. scopulosum		+	+		+							
Coriolus hirsutus	+	+	+	+	+	+	+	+	+	+	+	+
C. meleagris	+	+	+	+	+							
C. Meyenii	+	+	+		+							
C. occidentalis	+	+	+		+						+	+
Cryptoderma lamaoense			+	+	+	+						
C. McGregorii			+			+						
G. pachyphloeum			+		+							+
C. pullum			+	+		+						+
C. substygium			+		+	+						
Daedaleopsis conchiformis				+		+	+					
D. tenuis	+	+	+	+	+						+	+
Elfvingia flabellata, n. sp.												
E. mastopora			+									+
E. polyzonata, n. sp.												
E. tornata	+	+	+	+							+	+
E. Williamsiana			+									
Elmerina foliacea			+									
E. vespacea	+		+									
Favolus alveolarius	+					+	+	+	+	+		
F. ciliaris											+	
F. grammocephalus	+	+	+	+	+						+	
F. novo-guineensis		+										+
*F. russiceps**		+										
*F. spathulatus***			+									
Fomitopsis albo-marginata	+	+	+									
F. caliginosa		+	+		+	+						
F. corrugata	+	+	+	+	+						+	

Species marked with asterisks are the fungi which have been already recorded from elsewhere of the eastern tropics, though it is not shown in the Table.

of Dutch New Guinea collected in 1943.

Species \ Localities	Australia	East New Guinea	Philippines	Micronesia	Formosa	Japan: Kyusyu	Japan: Honsyu	Japan: Hokkaido	Europe	North America	Central & South America	Africa
F. melanopora			+		+						+	+
F. vinosa	+	+	+		+	+	+				+	+
Ganaderma fornicatum			+	+	+						+	
Hexagona apiaria		+	+		+							
H. heteropora			+		+							
Hapalopilus nidulans	+						+	+	+	+		
Ischnoderma novo-guineense, n. sp.												
Microporus affinis	+	+	+	+	+	+	+					
M. flabelliformis	+	+	+	+	+	+	+				+	+
M. rhinocerotis		+	+									
M. xanthopus	+	+	+		+							+
Onnia Cumingii			+		+	+	+					
O. incisa			+									
Phellinus dependens				+							+	
P. gilvus	+	+	+	+	+	+	+		+	+	+	
P. mangrovicus				+								
P. senex	+	+	+		+						+	
P. setulosus	+			+	+	+						
*Polyporellus hemicapnodes****			+									
P. murinus, n. sp.												
*P. obovatus*****			+	+								
P. picipes	+					+	+	+	+	+		
P. Satakei, n. sp.												
P. stereinus	+	+	+								+	
P. subdealbatus			+									
Rigidoporus durus			+		+	+						+
R. lignosus	+	+	+		+						+	
R. rhodophaeus			+		+	+						
R. zonalis	+	+	+	+	+	+	+			+	+	
*Trachydema subresinosum******			+									
Trametes fumoso-avellanea					+						+	
T. leonina			+								+	+
T. Palisotii	+	+	+		+	+	+			+	+	+
T. salmonea, n. sp.												
T. sanguinea	+	+	+	+	+	+	+			+	+	+
Tyromyces ostreiformis			+	+								
Total 71 spp.	30	30	54	22	35	21	15	5	6	9	24	22
							23					

* Ceylon, **Java, *** Ceylon, **** Ceylon, ***** Ceylon and Hainan Ts.

i. Cosmopolitan species: 6 species (8.5%)

Stereum fasciatum Schw.　　*Coriolus hirsutus* (Wulf. ex Fr.) Quel.

Polyporellus picipes (Fr.) Karst.　　*Favolus alveolarius* (Dc. ex Fr.) Quel.

Phellinus gilvus (Schw. ex Fr.) Pat.　　*Hapalopilus nidulans* (Fr.) Karst.

Among them, *Hapalopilus nidulans* and *Polyporellus picipes* are considered as northern elements. It is particularly interesting that the former species which usually grows on conifers in temperate and subarctic regions was collected at this tropical region. This, however, was recorded from Australia.

ii. Pan-tropical elements: 31 species. (44%)

Species grouped here are ones which are distributed throughout the eastern and western tropics.

iii. Pan-Pacific elements: 11 species. (15%)

These species are known only from Pacific regions, namely Japan, Formosa, Philippine Islands, Hainan Is., Borneo, Java, New Guinea, Australia, New Zealand, Micronesia, etc.

Amauroderma scopulosum (Berk.) Imaz.　　*Hexagona apiaria* (Pers.) Fr.

Coriolus meleagris (Berk.) Imaz.　　*Microporus affinis* (Bl. et Nees) Pat.

C. Meyenii (Kl.) Imaz.　　*M. rhinocerotis* (Cke.) Imaz.

Elmerina vespacea (Pers.) Pat.　　*Phellinus mangrovicus* Imaz.

Fomitopsis albo-marginata (Lev.) Imaz.　　*P. setulosus* (Lloyd) Imaz.

F. caliginosa (Berk.) Imaz.

iv. Fareastern tropical elements: 17 species. (24%)

Species grouped here are ones known only from Philippines or other oriental regions, from Ceylon to Philippines or to south Japan.

Cryptoderma lamaoense (Murr.) Imaz.　　*Onnia Cummingii* (Berk.) Imaz.

C. McGregorii (Bres.) Imaz.　　*O. incisa* (Lloyd) Imaz.

C substygium (B. et Br.) Imaz.　　*Polyporellus hemicapnodes* (B. et Br.) Imaz.

Daedaleopsis conchiformis Imaz.　　*P. obovatus* (Jungh.) Imaz.

Elfvingia Williamsiana (Murr.) Imaz.　　*P. subdealbatus* (Murr.) Imaz.

Elmerina foliacea Pat.　　*Rigidoporus rhodophaeus* (Lev.) Imaz.

Favolus russiceps (Berk.) maz.　　*Trachyderma subresinosum* (Murr.) Imaz.

F. spathulatus (Jungh.) Imaz.　　*Tyromyces ostreiformis* (Berk.) Imaz.

v. Endemic species: 6 species. (8.5%)

Elfvingia polyzonata Imaz.　　*Polyporellus murinus* Imaz.

E. flabellata Imaz.　　*P. Satakei* Imaz.

Ischnoderma novo-guineense Imaz.　　*Trametes salmonea* Imaz.

vi. Australian elements: 0 species. (0%)

There is found no species which has been recorded only from Australia or New Zealand. This is to say, nothing is accounted as an Australian descent.

In coclusion, Dutch New Ginea suggests as having a deep Asiatic color as to her fungous flora.

2) Among many regions surrounding north western part of Dutch New

Guinea, Philippine Islannds have the most intimate relationship with this region as to the fungous flora. This fact may be explained by the following figures and their qualitative analysis.

Species common with the Philippine fungi.....54 species among total 71 species.

Species common with the Australian fungi.....30 species among total 71 species.

The percentage of the common species between the former two regions reaches to 76 percent. Among 17 species uncommon between both regions, 6 species are ones newly named in this paper, and other 11 species are ones which have been recorded already from somewhere of the East Asia, though never from the Philippines. It is expected that some of these eleven species will be collected from Philippines in future.

Among the common species between the Philippines and Dutch New Guinea, the following four fungi are the most noticeable ones.

Elfvingia Williamsiana (MURR.) IMAZ. *Onnia incisa* (LLOYD) IMAZ.

Elmerina foliacea PAT. *Polyporellus subdealbatus* (MURR.) IMAZ.

These were described as new about 20—40 years ago, and never have been collected from everywhere outside of the Philippine Islands. Among others, *Cryptoderma McGregorii* (BRES.) IMAZ., *Onnia Cumingii* (BERK.) IMAZ., and *Trachyderma subresinosum* (MURR.) IMAZ. are also to be regarded as Philippine elements, so far as they were originally described from the Philippine Islands and known only from south most part of Japan or Hainan Is. of south China.

3) Comparing with the Formosan and Japanese fungous flora, the following figures are derived from:

Common with Formosa .....35 species (50%)
Common with Kyusyu of Japan .....21 species (30%)
Common with Honsyu of Japan .....16 species (22%)
Common with Hokkaido of Japan .....5 species (7%)
Total .....42 species

Among these 42 species, *Coriolus hirsutus*, and *Phellinus gilvus* are cosmopolitan ones. *Hapalopilus nidulans*, *Polyporellus picipes*, and *Favolus alveolarius* are considered as northern elements and have never been recorded from any part of tropical Asia, whereas they are listed in the fungous flora of Australia. All other 36 species are cosidered as tropical descents. a) Species whose northernmost limit is Formosa: *Auricularia delicta*, *Cladoderris spongiosa*, *Amauroderma scopulosum*, *Coriolus meleagris*, *C. Meyenii*, *C. occidentalis*, *Cryptoderma pachyphloeum*, *Favolus grammocephalus*, *Fomitopsis corrugata*, *F. melanopora*, *Ganoderma fornicatum*, *Hexagona apiaria*, *H. heteropora*, *Microporus xanthopus*, *Phellinus senex*, *Rigidoporus lignosus*, *Trametes fuscoavellanea*. b) Species whose northernmost limit is Kyusyu: *Amauroderma rugosum*, *Cryptoderma lamaoense*, *C. McGregorii*, *C. pullum*, *C. substygium*,

Fomitopsis caliginosa, Phellinus setulosus, Rigidoporus durus, R. rhodophaeus.
c) Species whose northernmost limit is Honsyu: *Podoscypha elegans, Fomitopsis vinosa, Microporus affinis, M. flabelliformis, Onnia Cumingii, Rigidoporus zonalis, Trametes Palisotii.*

4) In the present collection, the following species are found most abundantly: *Amauroderma scopulosum, Coriolus hirsutus, Cryptoderma lamaoense, Elfvingia tornata, E. Williamsiana, Fomitopsis corrugata, Microporus flabelliformis, Trametes Palisotii,* and *T. sanguinea.*

5) In order to arrange the Table 1, the writer referred to the literatures and also to the specimens collected by the writer or the materials which were sent to him by some collecters. They are preserved in the herbarium of the National Science Museum in Tokyo and the Forest Experiment Station. Among them, there are some species which have not been recorded hithertonow from Japan, Formosa, etc. They are as follows:—

Amauroderma scopulosum (Berk.) Imaz. Formosan materials; coll. by Imazeki-R. in the tropical costal forest, at Garanbi, Nov. 4, 1940 (208357).

Coriolus Meyenii (Kl.) Imaz. Formosan materials: coll. by Imazeki-R. at Mt. Arisan, on *Machilus* sp., Mar. 16, 1940 (207937); coll. by Imazeki-R. at Senpei, Kizan distr., prov. Takao, Nov. 8, 1940 (208374); coll. by Imaz.-R. at Kusukusu, Koshun distr., prov. Takao, Nov. 2, 1940 (208353); coll. by Sawada-K., at Taihoku, on *Ficus elastica,* Mar. 13, 1940 (208130).

Coriolus occidentalis (Kl.)Imaz. Formosan materials: coll. by Imaz.-R., at Kanko, Bunzan distr., prov. Taihoku, Mar. 25, 1940 (207995).

Cryptoderma pachyphloeum (Pat.) Imaz. Formosan materials: coll. by Yamamoto-W., May 5, 1937 (208004).

Elfvingia tornata (Pers.) Murr. Micronesian materials: coll. by Ezaki-T. at Ponape Is., July 1939 (208311); coll. by Ezaki-T. at Truk Is., July, 1939 (20831 2); Palau Is. coll. by Satake-Y., Feb. 2, 1943 (213805); coll. by Huzii-K. at Yap Is., July 5, 1915 (201974).

Fomitopsis caliginosa (Berk.) Imaz. Japanese materials: coll. by Imazeki-R. at Suki-mura, Nisimorokata-g., pref. Miyazaki, Aug. 2, 1938 (206787); coll. by Imazeki-R. at Tasiro-mura, Kimotuki-g., pref. Kagosima, Oct. 29, 1950 (2640 and 2641, in Herb. For. Exp. St.). Formosan materials: coll. by Imazeki-R. at Naihunpo, Niitaka distr, prov. Taichu, Mar. 15, 1940 (207927); Keitao, Takeyama distr., prov. Taichu, Mar. 13, 1940 (207945).

Phellinus senex (Nees et Mont.) Imaz. Formosan materials: coll. by Yamamoto-W., at Taihoku city, on *Melia azedarach* L., Jan. 1936 (208006): coll. by Imazeki-R., at Keitao, Takeyama distr., prov. Taichu, on Mar. 13, 1940 (207946—7, 207951).

Rigidoporus durus (Jungh.) Imaz. Japanese materials: coll. by Imazeki-R. at Suki-mura, Nisimorokata-g., pref. Miyazaki, Aug. 2, 1938 (206615, 206793); Tasiro-mura, Kimotuki-g., pref. Kagosima, on *Symplocos,* Oct. 28, 1950 (2642,

in Herb. For. Exp. St.). Formosan materials: Naihunpo, Niitaka distr., prov. Taichu, Mar. 15, 1940 (207929).

Trachyderma subresinosum (Murr.) Imaz. Hainan Materials: Aug. 1929, coll. by Chu Feng Mei

Trametes fumoso-avellanea Romell. Formosan materials: coll. by Kusano-S., Kuraru, Koshun distr., prov. Takao, Dec. 1908 (212077); coll. by Imazeki-R. Senpei, Kizan distr., prov. Takao, Nov. 8, 1940 (208381).

Acknowledgements

The writer wishes to express his deepest gratitude to Dr. Yoshisuke Satake, Dr. Syozi Iziri, the late Mr. Taro Niimura, and other members of the expedition, for their devoted efforts in the study of natural science of New Guinea, exploring such a tropical savage region where was near the front line of the Pacific War, and collecting a large number of very valuable scietific specimens even at the risk of their own lives. The writer wishes to offer his sincere thanks to Prof. S. Tsuboi, the previous director of the Tokyo Science Museum, and also to Dr. T. Nakai, the present director of the museum, for their constant and kind encouragement offered to the writer in various ways. He also gratefully acknowledges to Prof. Y. Ogura and Prof. M. Honda, in offering him the facilities of referring the literature in the botanical library of the Faculty of Science of the Tokyo University. Lastly, the writer's sincere appreciation must be expressed to Dr. K. Ito, the writer's colleague at the Goverment Forest Experiment Station, and to the curators and other gentlemen of the National Science Museum for their various advices and collaborations offered to him in the course of this study.

New or newly adopted genera of Polyporaceae.

Polyporellus Karsten, Symb. ad Myc. Fenn., Ⅵ, in Medd. Soc. Faun. Fl. Fenn., 5: 23 (1879); Krit. ofv. Finl. Basidsv., in Bidr. Finl. Nat. o. Folk, 48: 290 (1889)—Pilat, Monogr. Eur. *Polyp.* Ⅲ, in Beih. Bot. Cent., 56: 1 (1937), pr. p.

Syn. *Favolus* Fries, em. Ames, Ann. Myc., 11: 240 (1913), pr. p.—Imazeki, Bull. Tokyo Sci. Mus., 6: 93 (1943), pr. p. *Leucoporus* Quelet, Enchir., 165 (1885), pr. p.—Patouillard, Hym. Eur., 136 (1887); Ess. tax., 80 (1900), pr. p.—Bourdot et Galzin, Hym. Fr., 530 (1927), pr. p.—Konrad et Maublanc, Icon. Sel. Fung., 1: 525 (1937), pr. p. *Polyporus* auct. plu ., pr. p. *Polyporus* Murrill, N. Am. Fl., 9: 54 (1907), pr. p.—Donk, Rev. Niederl. Homobas.-Aphyll., Ⅱ: 123 (1933), pr. p.—Bondarzew et Singer, Ann. Myc., 39: 58 (1941)—Cooke, W. B., Lloydia, 3: 87 (1940), pr. p. *Melanopus* Patouillard, Hym. Eur., 137 (1887), pr. p.; Ess. tax., 81 (1900), pr. p.

Fr. annua, lignicola, stipitata vel raro sessili; stipite centrali vel laterali,

saepe distincte incrustato; pileo rotundato-subinfundibuliformi, flabelliformi vel spathulato, superficie saepe pelliculoso-incrustata, glabra vel velutinosa, contextu vivo coriaceo-carnoso, in sicco durescenti fragili, pallido; hymenophoro tubuloso, trama e contextu heterogeneo, generatim subgelatinoso; poris minutis vel minutissimis, raro amplis, circularibus, raro radiatim elongatis, parietibus tenuibus, integris vel subserrulatis; sporis hyalinis, laevibus.

Type species: *Polyporellus brumalis* (Pers. ex Fr.) Karst.

Species of East Asia: *P. brumalis* (Pers. ex Fr.) Karst. *P.elegans* (Bull. ex Fr.) Karst. *P. obovatus* (Jungh.) Imaz., comb. nov. *P. picipes* (Fr.) Karst. *P. Satakei* Imaz., sp, nov. *P. squamosus* (Huds. ex Fr.) Karst. *P. stereinus* (Berk.) Imaz., comb. nov. *P. subdealbatus* (Murr.) Imaz., comb. nov.

Favolus Fries, emend. Imazeki.

Syn. *Favolus* Fr., em. Ames, Ann. Myc., 11: 240 (1913), pr. p.—Imazeki, Bull. Tokyo Sci. Mus., 6: 93 (1943). pr. p. *Polyporus* auct. plur., pr. p. *Leucoporus*, l. c., pr. p.

Fr. annua, lignicola, stipitata vel substipitata; stipite centrali, excentrico vel laterali; substantia coriaceo-flexibili, haud pelliculosa; pileo tenui, applanato, superficie glabra vel squamosa, sub- vel non-pelliculosa, contextu subcarnoso vel suberoso-coriaceo, pallido; hymenophoro tubuloso, trama cum contextu homogenea, poris generatim radialiter elongatis, alveolaris, raro circularibus, mediocris vel amplis, parietibus generatim denticulato-serrulatis; cystidiis nullis; sporis hyalinis laevibus.

Type species: *Favolus alveolarius* Bosc. ex Fries.

Species of East Asia: *F. alveolarius* Bosc. ex Fr. *F. arcularius* (Batsch ex Fr.) Ames. *F. cilialis* Mont. *F. Emerici* (Cke.) Imaz. *F. grammocephalus* (Berk.) Imaz. *F. mikawai* (Lloyd) Imaz. *F. novoguineensis* P. Henn. *F. russiceps* (Berk.) Imaz., comb. nov. *F. spathulatus* (Jungh.) Bres.

Notes:—These two genera were lumped together under the *Favolus* sens. Ames, in the author's previous paper, "The genera of *Polyporaceae* of Nippon, 1943." Now, however, he separates them into two distinct genera, based on the following characteristics. In *Polyporellus*, the context of the pileus and the trama of the hymenophore are heterogeneous, while in *Favolus*, both are homogeneous as represented by *F. alveolarius* or *F. grammocephalus*. The pellicle of the pileus is distinct in the former, whereas it scarcely differentiates in the latter. The crust of the stem in *Polyporellus* developes highly forming a sort of pallisade structure. These features show that the latter is more primitive than the former.

Rigidoporus Murrill, Bull. Torr. Bot. Cl., 32: 475 (1905); N. Am. Fl., 9: 45 (1907)—Overeem, Icon. Fung. Malay., 5: 5 (1924)

Syn. *Fomes* auct. plur., pr. p. *Fomitopsis* KARSTEN, Rev. Myc., 3⁹: 18 (1881), pr. p.—BONDARZEW et SINGER, l. c., 39: 55 (1941), pr. p.—IMAZEKI, l. c., 6: 91 (1943), pr. p. *Polyporus* auct. plur., pr. p.

Fr. annua vel perenni, lignicola, sessili; pileo vulgo applanato, in sicco fere incurvato, superficie glabra, haud vel non incrustata, contextu pallido vel lignicolori, coriaceo-suberoso, sicco lignescenti-durescenti; hymenophoro tubuloso, univel multi-stratoso, trama e contextu heterogenea, colori obscuriori, poris minutis, circularibus, parietibus tenuibus, integris; cystidiis nullis; sporis hyalinis, laevibus.

Type species: *Rigidoporus zonalis* (BERK.) IMAZ.

Species of East Asia: *R. durus* (JUNGH.) IMAZ., comb. nov. *R. lignosus* (KL.) IMAZ., comb. nov. *R. rhodophaeus* (LEV.) IMAZ., comb. nov. *R. ulmarius* (FR.) IMAZ., comb. nov. *R. zonalis* (BERK.) IMAZ., comb. nov.

Notes: The writer previously included the species of this allies in the genus *Fomitopsis*, but, now he adopts the opinion of Dr. van OVEREEM and separates the group from others, placing them under the name *Rigidoporus* MURR., As van OVEREEM considered, *Rigidoporus zonalis*, *R. lignosus* and their allies forms a very natural group. They may be separated from the genus *Fomitopsis* by having a distinct heterogeneous texture between the context and the trama of hymenophore and also having no differentiation of the crust on the upper surface of the pileus.

Trachyderma IMAZEKI, gen. nov.

Syn. *Ganoderma*, subgen. *Trachyderma* IMAZ., Bull. Tokyo Sci, Mus., 1: 49 (1939) *Ganoderma* auct. plur., pr. p. *Elfvingia* sens. IMAZEKI, l. c., 6: 101 (1943), pr. p.

Fr. annua, lignicola; pileo sessili, applanato vel convexo, incrustato, superficie conspicuose asperulato-scruposa vel glabra, opaca vel subvernicosa, contextu pallido, vivo carnoso-succuleti, sicco fere lignescenti-durescenti, incurvato, pallido; hymenophoro unistratoso, tubuloso, obscuriori, poris minutis, circularibus, parietibus tenuibus, integris; cystidiis nullis; sporis Ganodermoideis, giganteis; crusta Elfvingioideis, non palliformibus.

Type species: *T. Tsunodae* (YASUDA) IMAZEKI

Species of East Asia: *T. Tsunodae* (YAS.) IMAZ., comb. nov. *T. subresinosum* (MURR.)IMAZ., comb. nov.

Notes: The writer has placed *T. Tsunodae*, the type of the genus, in the section *Trachyderma* of the genus *Ganoderma* in 1939, and then transferred it to *Elfvingia* when he separated *Elfvingia* from *Ganoderma*. Now, he, furthermore, separates the section *Trachyderma* from *Elfvingia*, raising it to generic rank. The new genus differs from *Ganoderma* and *Elfvingia*, in having a fleshy succulent context when growing and fresh, which, however, becomes very hard in drying. The degree of the crustal differentiation is the most inferior among three genera. It is not varnished as much as in *Ganoderma*. It is

remarkable that the spores are very large, as twice or thrice as those of the other two genera.

List of fungi.

Auriculariaceae

Auricularia delicata (Fr.) P. Hennings

Engl. Bot. Jahrb., 17: 19 et 492 (1893)—Kobayasi-Y., Bull. Cent. Nat. Mus. Manchouk., 4: 21, t. f. 1—5 et Pl. V, f. A, B. (1942) *Hirneola delicata* Bres. ex Bres., Henn. et Magnus, Bot. Jahrb., 17: 492 (1893)—Sawada, in Descr. Cat. Formos. Fungi, 5: 60 (1931)

Specimens: Manokwari (213524)

Corticiaceae.

Cladoderris infundibuliformis (Klotzsch) Fries (Pl. I, f. 1)

Fungi Nat., 21 (1848)—Saccardo, Syll. Fung., 6: 548 (1888)—Lloyd, Syn. *Cladoderris*, 8, f. 527—9 (1913) *Actinostroma infundibuliformis* Kl., in Nov. Act. Acad. Nat. Cur., 19, Suppl. 1: 237 (1843)

Specimens: Roemabatoe (213596)

Cladoderris spongiosa Fries (Pl. I, f. 2)

Fung. Nat., 20 (1848).—Saccardo, l. c., 6: 548 (1888)—Lloyd, l. c., 5, f. 526 (1913)—Sawada, Trans. Nat. Hist. Soc. Formosa, 25: 179 (1935)

Specimens: Waoboe, March, 27 (213744, 213769), Apr. 8 (213743); Akama (213688)

Podoscypha elegans (Fries) Patouillard (Pl. VII, f. 17)

Ess. tax., 71 (1900) *Stereum elegans* Fr., Epicr., 545 (1838)—Saccardo, l. c., 6: 553 (1888)—Lloyd, Synop. Stip. *Stereum*, 23, *f.* 539 (1913)—Burt, Ann. Mo. Bot. Gard., 10: 105 (1920)

Specimens: Manokwari (213521)

Podoscypha involuta (Klotzsch) Imazeki, comb. nov.

Stereum involutum Kl., Linnaea, 7: 499 (1832)—Saccardo, l. c., 6: 560 (1888) —Lloyd, l. c., 40, f. 563 (1913)

Specimens: Manokwari (213522); Roemabatoe (213595)

Stereum fasciatum Schweinitz

Schr. Nat. Ges. Leipzig, 1: 106 (1822)—Saccardo, l. c., 6: 560 (1888)—Burt, l. c., 7: 156 (1920)

Specimens: Manokwari (213523); Miei (213636); Roemabatoe (213594)

Polyporaceae

Amauroderma rugosum (Blume et Nees) Imazeki, comb. nov.

Polyporus rugosus Blume et Nees, Nov. Act. Acad. Nat. Cur., 3: 20 (1826)—Lloyd, Syn. Stip. *Polyp.*, 110 (1912) *Fomes rugosus* Cooke, Grev., 13: 117 (1885)—Saccardo, l. c., 6: 152 (1888) *Ganoderma rugosum* Patouillard, Bull. Soc. Myc. Fr., 5: 68 (1889)—Bresadola, Ann. Myc., 8: 586 (1910)—Sawada, Trans. Nat. Hist. Soc. Formosa, 24: 453 (1934)

Specimens: Waoboe, Mar. 27 (213709), Apr. 8 (213708); Roemabatoe (213552)

Amauroderma scopulosum (Berkeley) Imazeki, comb. nov. (Pl. Ⅱ, f. 6)

Polyporus scopulosus Berk., Hook. Journ. Bot., 6: 143 (1854)—Lloyd, Syn. Stip. *Polyp.*, 128 et 190, f. 425 (1912) *Trametes scopulosa* Bres., Hedw., 51: 317 (1911) *Trametes Rhizophorae* Reichardt, Fungi Hep. et Musci, 139, t. 22, f. 1 (1870)—Saccardo, l. c., 6: 335 (1888) *Whitfordia Warburgiana* Murrill, Bull. Torr. Bot. Cl., 35: 407 (1908) [non *Fomes Warburgianus* P. Henn., Monsunia, 1: 10, Pl. I, f. 3 (1900)]

Specimens: Manokwari (213518—9, 213531—2); Waoboe, May 8 (213748—50), May 11 (213772—3, 213784), May 15 (213751); Miei (213637); Mangga Is. (213545—6); Roemabatoe (213592—3); Wati (213612)

Notes: There are found abundant specimens of this species in the present collection. The species is distributed throughout the eastern tropics and Australia. The writer has also collected this in Formosa some years ago. This is not a *Trametes* as called *T. Rhizophorae* by many authors. Murrill erected a new genus *Whitfordia* based on the Philippine collection. He made a new combination, *Whitfordia Warburgiana*, misunderstanding the Philippine plant as same with *Fomes Warburgianus* P. Henn. of Celebes. Later, C. G. Lloyd corrected the Murrill's mistake and referred it to *Polyporus Rhizophorae*. According to the writer's opinion, the plant may belong to *Amauroderma* by the structure of the crust and the spore character, and represents a unique position in the genus. The brief diagnosis is given below.

"Fr. annua, lignicola, stipitata; stipite brevi, laterali, conspicuoso nigro-incrustato; pileo reniformis vel spathulato, applanato, leniter incurvato, superficie primo tabacinoidea, pulverulenti-tomentosa, dein glaucescentique, distincte incrustata, crusta ex hyphis dense intricatis agglutinatis composita, subpalliformi; poris minutis, circularibus; sporis oblongis vel ovoideis, pallido ochraceis, 5—6.5 ×4—5 μ, laevibus."

Coriolus hirsutus (Wulf. ex Fr.) Quelet

Enchir., 157 (1886) *Polyporns hirsutus* Wulf. ex Fr., Syst. Myc., 1:

367 (1821)—auct. plur. *Polystictus hirsutus* Fr., Nov. Symb. Myc., 86 (1851) —auct. plur. *Coriolus nigro-marginatus* Schw. ex Murrill, Bull. Torr. Bot. Cl., 32: 649 (1906)

Specimens: Manokwari (213505—7); Waoboe, Mar. 26 (213817), May 8 (213818—9); Kwatisore (213536); Mangga Is. (213541)

Coriolus meleagris (Berkley) Imazeki, comb. nov. (Pl. I, f. 3)

Polyporus meleagris Berk., Journ. Linn. Soc., 16: 42 (1878) *Polystictus meleagris* Saccardo, l. c., 6: 227 (1888) *Coriolus Clemensiae* Murrill, Bull. Torr. Bot. Cl., 35: 394 (1908)

Specimens: Waoboe, Apr. 8 (213713), May 2 (213712), May 10 (213711); Manokwari (213527); Miei (213626); Roemabatoe (213554—5)

Coriolus Meyenii (Klotzsch) Imazeki, comb. nov. (Pl. II, f. 9)

Polyporus Meyenii Kl., Nov. Act. Acad. Caes. Nat. Cur., 19, suppl., 236 (1843) *Polystictus Meyenii* Saccardo, l. c., 6: 261 (1888) *Trametes obstinatus* Cooke, Grev., 12: 17 (1883) *Polystictus obstinatus* Sacc., l. c., 6: 257 (1888) *Polystictus Meyenii* var. *obstinatus* Brek., Hedw. 53: 67 (1613) *Coriolus maximus* Murrill, Bull. Torr. Bot. Cl., 34: 467 (1907) [non *Irpex maximus* Berkeley]

Specimens: Manokwari, March 4 (213504); Waoboe, May 15 (213755), March 26 (213756); Roemabatoe (213639)

Notes: This is an eastern tropical plant, known generally as *Polystictus obstinatus* by many authors. It was treated as same as *Polystictus* (or *Irpex*) *maximus* of Central and South America, but this thought was denied by C. G. Lloyd, with whom the writer agrees. The plant grows on *Aleurites*, *Cordia*, *Vitex* and many other deciduous trees in the Philippines and occurs on *Machilus*, *Ficus*, etc. in Formosa.

Coriolus occidentalis (Klotzsch) Imazeki, comb. nov

Polystictus occidentalis Fries, Nov. Symb. Myc., 74 (1851)—Saccardo, l. c., 6: 274 (1888) *Coriolopsis occidentalis* Murr., Bull. Torr. Bot. Cl., 32: 358 (1905) *Trametes occidentalis* Fr., Epicr., 491 (1838)

Specimens: Waoboe (213754)

Cryptoderma lamaoense (Murrill) Imazeki (Pl. I, f. 4—5)

Bull. Tokyo Sci. Mus., 6: 107 (1943) *Pyropolyporus lamaoensis* Murr., Bull. Torr. Bot. Cl., 34: 479 (1907) *Fomes lamaoensis* Sacc. et Trott., Syll. Fung., 21: 287 (1912)—Lloyd, Syn. *Fomes*, 245 (1915)—Yasuda, Bot. Mag. Tokyo, 30: 350 (1916) *Pyropolyporus Williamsii* Murrill, l. c., 34: 479 (1907) *Fomes Williamsii* Sacc. et Trott., l. c., 21: 289 (1912) *Phellinus Williamsii* Pat., Leafl. Philip. Bot., 6: 2249 (1914)

Specimens: Waoboe, May 23 (213776); Wati (213601); Miei (213633); Akama

(213671, 213676, 213691—2); Roemabatoe (213557, 213640, 213645); Mangga Is. (213540); Manokwari (213533)

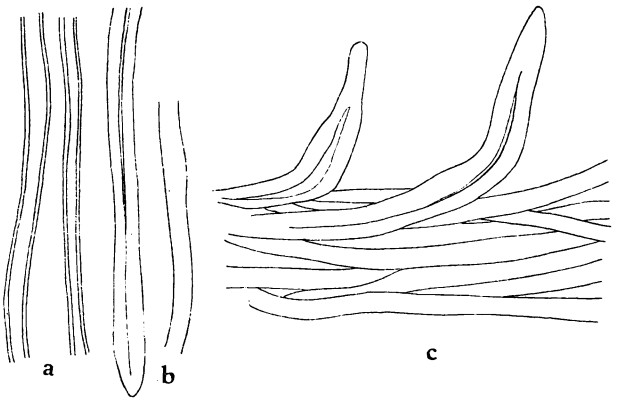


Fig. 1. *Cryptoderma lamaoense* (MURR.) IMAZ.
a. Normal hyphae of the context.
b. Setal hyphae in the context.
c. Setae in the hymenium. (×1000)

Notes: This is widely distributed throughout the eastern tropics and known as a causal fungus of brown root disease of Para-rubber tree.

Pileus sessile, dimidiate, applanate, rather thin, surface remarkably sulcate, covered with thick subcrustal layer, superficial tomentum only visible at the young marginal portion of pileus; setae and setal hyphae imbedded in the context and projecting from hymenium.

Cryptoderma McGregorii (BRESADOLA) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 107 (1943) *Fomes McGregorii* BRESADOLA, Hedw., 53: 58 (1913)—LLOYD, Syn. *Fomes*, 254 (1915)—TROTTER, in SACC. Syll. Fung., 23: 387 (1925)

Specimens: Roemabatoe (213556)

Notes: This was originally written from the Philippines by BRESADOLA, and found also from Kyūsyū of Japan afterward. The present locality is the third record of the species.

Cryptoderma pachyphloeum (PATOUILLARD) IMAZEKI, comb. nov.

Fomes pachyphloeus PAT., Journ. de Bot., 3: 257 (1889)—SACCARDO, l. c., 9: 174 (1891)—LLOYD, Syn. *Fomes*, 261, f. 600 (1915) *Elfvingia Elmeri* MURRILL, Bull. Torr. Bot. Cl., 34: 476 (1907) *Ganoderma Elmeri* SACC. et TROTT., l. c., 21: 295 (1912). *Pyropolyporus Merrillii* MURRILL, l. c., 34: 479 (1907) *Fomes Merrillii* SACC. et TROTT., l. c., 21: 287 (1912)

Secimens: Akama (213648)

Notes: There is found only a single specimen in the present collection.

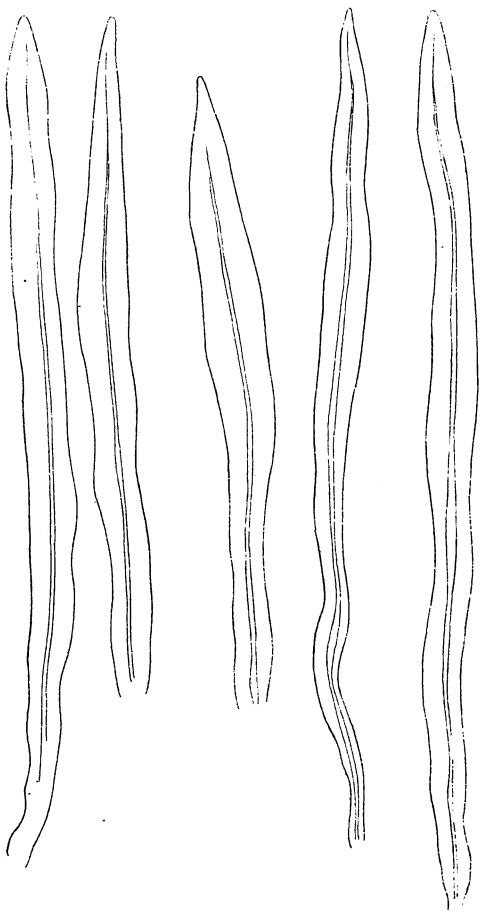


Fig. 2. *Cryptoderma pachyphloeum* (PAT.) IMAZ. Setal hyphae in the context. (×600)

According to HUMPHREY[9], this is one of the most serious wood destroying polypores, causing a heart rot of various useful trees, as *Albizzia procera*, *Ficus* spp., *Hopea acuminata*, *H. philippinensis*, *Parashorea malaanonan*, *Shorea guiso*, *Parkia javanica*, *Pentacme contorta*, *P. mindanensis*, *Rhizophora candelaria*, *R. mucronata*, etc..

Like *Cryptoderma lamaoense*, the present species has setal hyphae in the context. They, however, are imbedded not only in the context and trama but also in the tissue of the subcrust, where they are arranged vertically and project from the surface, giving an appearace of the hymenial surface of the genus *Hymenochaete*. The subcrust is very thick, 750 μ in the present material, 0.1—3mm given by HUMPHREY. Setae in the context are very large, 180—300×8—14.5 μ, whereas those of hymenium are smaller and fewer in number. The context is tawny olive in color, much paler than *C. lamaoense*.

Cryptoderma pullum (MONTGNE) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 107 (1943)　*Polyporus pullus* MONTAGNE, Lond. Journ. Bot., 3: 332 (1844)　*Fomes pullus* CKE., Grev., 14: 19 (1885)—SACCARDO, l. c., 6: 692 (1888)—IMAZEKI, Journ. Jap. Bot., 16: 591, f. 7 (1940)

Specimens: Roemabatoe (213558)

Cryptoderma substygium (BERKELEY et BROOME) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 107 (1943)　*Polystictus substygius* BERK. et BR., in COOKE Nuovo Giorn. Bot. Italy, 10: 17, no. 522 (1878)　*Fomes substygius* SACC., l. c., 6: 195 (1888)　*Polyporus substygius* LLOYD, Synop. *Polyp.* Apus, 364, f. 698 (1915)

Specimens: Akama (213649)

(9) HUMPHREY, C. J. and LEUS, S.: Studies and illustrations in the *Polyporaceae* II. Philipp. Journ. Sci., 47: 535—556, Pl. 1—10 (1932)

Notes: This is distributed throughout the eastern tropics and also is found in Kyūsyū of Japan. The plant has very similar appearance to *Cyclomyces tabacinus*, so that it often has been considered as a variety of *tabacinus* or even as the same with the latter by some mycologists. In the structure of the pileus, however, they are entirely different from each other, as *Cryptoderma substygium* has a distinct subcrustal layer beneath the upper surface of the pileus and a bordering layer at the bottom of the context near the hymenophore, while *C. tabacinus* has nothing of them. These two dark colored layers are distinctly visible even with naked eye by cutting the pileus.

Daedaleopsis conchiformis IMAZEKI

Bull. Tokyo Sci. Mus., 6: 77 (1943)

Specimens: Miei(213639)

Notes: This species was originally known from Japan, and named by LLOYD as *Trametes tricolor*. The writer transferred it to the genus *Daedaleopsis* and gave it a new name *D. conchiformis* IMAZ. in order to avoid the combination *Daedaleopsis tricolor* (LLOYD) which is duplicate of the name *D. tricolor* (BULL. ex FR.) DONK. The species is found rather frequently in Japan, and known from Micronesia by a single collection made by Prof. EZAKI-T. (1939) which was recorded by the present writer in 1941. From this record, it is not strange that the species was collected at Dutch New Guinea.

Daedaleopsis tenuis (HOOKER ex FRIES) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 78 (1943) *Hexagona tenuis* HOOK. ex FR., Epicr., 493 (1838)—SACC, l. c., 6: 366 (1888)—LLOYD, Syn. *Hexag.*, 23, f, 303—4, 306 (1910).

Specimens: Manokwari (213508).

Notes: The speccies is widely distributed throughout the both tropics. It has long been placed in the genus *Hexagona*, and thought as if the representative of that genus. It has, however, no affinity to *H. apiaria*, the type species of the genus *Hexagona* sens. str.. This species is a unique one but it is safe for the writer that it would be placed under *Daedaleopsis* at least if we do not errect some new genus for the species. The species connects with the genus *Daedaleopsis* through *D. conchiformis* or *D. corrngata.*

Elfvingia flabellata IMAZEKI, sp. nov. (Pl. V, f. 13)

Pileo breviter stipitato, reniformi, spathulato vel suborbiculari, supra convexo, infra concavo, margine attenuato, subundulato, 6—20—(27) × 5—14—(17) cm lato. 1—2 cm crasso, superficie crasse incrustata, opaca, glabrella, oblique multizonata, sulcata, radialiter rugulosa, zonis atro-badiis et cinnamomeis, contextu ca 1 cm crasso, badio-castaneo (Chestnut color or Liver brown of RIDGEWAY), 2—5 stratibus durrissimo-crustoideis sepultibus; hymenophoro concolori, stratoso, poris minutis, acie "Cartridge Buff"; stipite laterali, subapplanato, horizontali, 3—(rare 5—

7 cm) longo, 1.5—3 cm crasso; sporis non inventis.

Specimens: Roemabatoe, April 16, 1943, coll. by S. Iziri et T. Nimura (213813—"Typus"); Waboe, May 15 (213854); Wati (213623); Akama (213672, 213693); Miei (213852)

Notes: Comparing with *E. mastopora*, the surface of the pileus of this new species is very clean, without having a spore deposit there. The laterally attached short stem, the thin and incurved pileus, and its more or less undulate thin margin are the general featurs separating this from *E. mastopora*. *E. polyzonata* Imaz. has also no spore deposit on the pileus surface, but it is deep blackish brown or chestnut brown in color and entirely glabrous, and has a remarkable concentric furrows.

Eifvingia mastopora (Leveille) Imazeki, comb. nov. (Pl. Ⅲ, f. 10)

Polyporns mastoporus Lev., Ann. Sci. Nat., Ⅲ, 2: 182 (1844)—Lloyd, Syn. Stip. *Polyp.*, 104 (1912)　*Ganoderma mastoporum* Patouillard, Bull. Soc. Myc. Fr., 5: 71 (1889)　*Fomes mastoporus* Saccardo, l. c., 61: 161 (1888)

Specimens: Waoboe, May 8 (213778), May 15 (213716); Roemabatoe (213641, 213814); Wati (213620, 213622); Akama (213705)

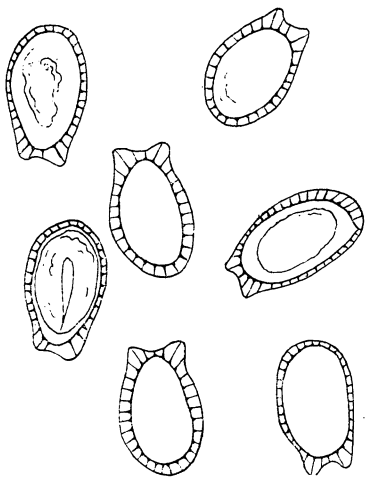


Fig. 3. Spores of *Elfvingia mastopora* (Lév.) Imaz. (×1700)

Notes: C. J. Humphrey and S. Leus[10] have noted in their studies on *Ganoderma applanatum* as follows: "This is a good but apparently highly variable species which forms the nucleus of a group sufficiently distict from the *applanatum* assembrage. It has been given at least twelve different names in the Philippine: namely, *amboinense, applanatum, australe, balabacence, dorsale, fasciatum, gibbosum, mangiferae, nigrolaccatum, testaceum, tornatum,* and *Williamsianum.* The senior author considers *Ganoderma mastoporum* Lev. is more closely allied to the true laccate *Ganoderma*····".

It is not a rare case that such a confusion of opinions concerning the name of pore fungi is present. The true form of *G. mastoporum* is very obvious in the present mycology. Although the writer can not understand why Humphrey and Leus have placed it in *Ganoderma lucidam* group and he has no opportunity to see the type specimen of this, he dared to transfer it to the genus *Elfvingia*, based on the present New Guinean specimens which exactly agree with the

(10) Humphley, C. J. et Leus, S.: A partial revision of the *Ganoderma applanatum* group, with particular reference to its oriental variants, in Philipp. Journ. Sci., 45: 483—589 (1931)

description of *G. mastoporum*.

Elfvingia and *Ganoderma* are separated by the structure of the crust and the presence or absence of luster on the surface of the crust. The present materials have distinct stem and the surface of the crust is frequently lustrous, as if they belong to the genus *Ganoderma*. The structure of the crust, however, is distinctly of *Elfvingia* type, though the outer appearance shows the intermediate of these two genera.

The species is distributed throughout the tropics and is one of the most frequent fungi in Dutch New Guinea, though not having recorded hithertonow from there. The spores are measured 8.5—10.5×5—6—(6.5) μ.

Elfvingia polyzonata IMAZEKI, sp. nov. (Pl. V, f. 14)

Pileo sessili vel breviter stipitato, dimidiato, basi subcuneato, 7—10—(35)×5—12—(25) cm lato, 1.5—2.0—(2.5) cm crasso, applanato, margine incrassato, subtruncato (ad 5 mm crasso), superficie crasse incrustata, radialiter rugulosa, concentrice sulcatissimo-polyzonata, (Black, Hay's brown and Natal brown), glabra, opaca; contextu 5 mm crasso, "Auburn chestnut or Hazel," 2—3 stratibus crustoideis sepultibus; hymenophoro "Seal brown," ad 1 cm crasso, concolori, poris minutissimis, 7—8 a mm, acie subpunctatis (giving an appearance of the hymenophore surface of *Fistulina*), concolori; sporis pallido-ochraceis, ovoideis, apice truncatis vel obtusis, 8.5—10.5×6—6.5 μ.

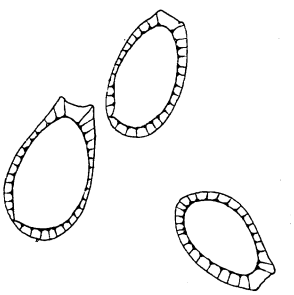


Fig. 4. Spores of *Elfvingia polyzonata* IMAZ. (×2000)

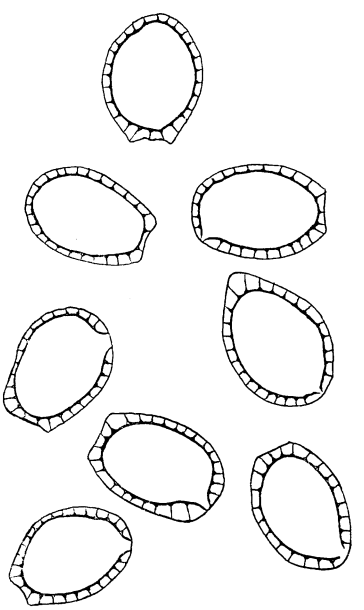


Fig. 5. Spores of *Elfvingia tornata* (LEV.) IMAZ. (×2300)

Specimens: Waoboe, April 17, coll. by Y. SATAKE et T. NIIMURA (213759)—"Typus"; May 23 (213838); Miei (213635, 213852)

Notes: The species is distinguishable from the former two, by its almost flat and even pileus which has remarkable but narrow dense concentric furrows and the black and "Hay's brown" color. It differs from *E. tornata* by having larger spores, no spore deposit on the surface of the pileus, and the more dense sulci of the pileus surface. This has a tendency to form a short stem.

Elfvingia tornata (PERSOON) MURRILL (Pl. VI, f. 16) Bull. Torr. Bot. Cl., 30: 301 (1903) *Polyporus tornatus* PERS., GAUD. Voy. Freyc. Bot., 173 (1826) *Ganoderma tornatus* BRE-

SADOLA, Ann. Myc., 10: 502 (1912)　*Polyporus australis* FRIES, Elench., 108 (1828)　*Fomes australis* CKE., Grev., 14: 18 (1885)—SACCARDO, l. c., 6: 176 (1888)—LLOYD, Syn. *Fomes*, 265 (1915)

Specimens: Waoboe, May 11 (213837), May 23 (213838); Akama (213650, 213681, 213704); Wati (213619, 213853); Roemabatoe (213560, 213812); Kwatisore (213537)

Notes: The species is very near to *E. applanata* but is distinguishable by having more flat and more distinctly sulcate pileus, and also having smaller spores which are 6.2—8.25×4—6.2 μ in size. The spores, however, are usually measured as 6—7×4—4.5 μ, which is a size of naked endospore, because the epispores are very easily broken off.

Elfvingia Williamsiana (MURRILL) IMAZEKI, comb. nov. (Pl. VI, f. 15)

Ganoderma Williamsianum MURRILL, Bull. Torr. Bot. Cl., 34: 478 (1907)—SACCARDO et TROTTER, l. c., 21: 300 (1912)

Specimens: Waoboe (213758, 213774, 213836), March 26 (213835); Roemabatoe (213559, 213572—3); Akama (213659, 213679, 213696—7, 213700, 213706); Wati (213607).

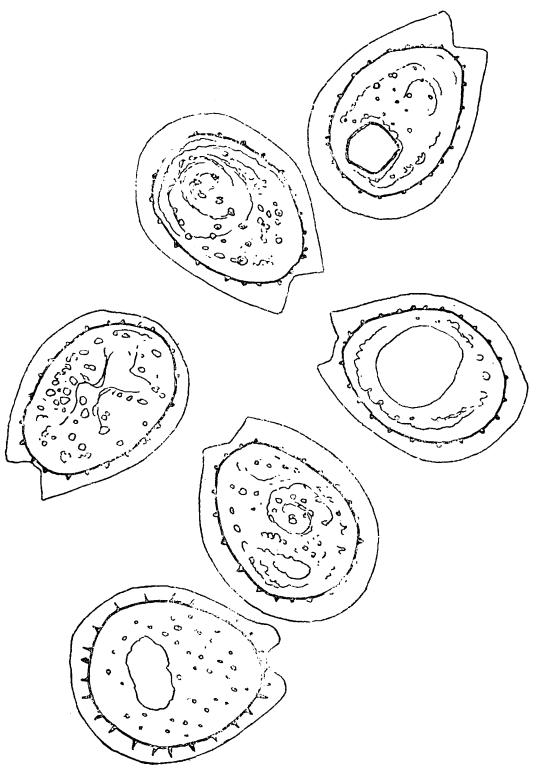


Fig. 6. Spores of *Elfvingia Williamsiana* (MURR.) IMAZ. (×2300)

Notes: This is one of the most aundantly collected species in the region. The pileus is sessile, dimidiate, subungulate or subapplanate, and sometimes it resembles to *Ganoderma boninense* in general appearance. There is found a remarkable deposit of spores on the pileus which seems as if covered with cacao-powder over the surface. The naked surface of the pileus is more or less lustrous, and the fact is suggestive of *Ganoderma* affinity, however, the crustal structure takes an *Elfvingia* type. The spores are 12.5—14×8.3—10.5 μ in size which are much larger than those of *E. tornata*, *E. applanata* and *G. boninense*. It is noticeable that the yellow colored matter dissolves into KOH solution when treated with it, while in *E. tornata* and *mastopora* the dark brown colored substance dissolves.

Elmerina foliacea PATOUILLARD (Pl. Ⅶ, f. 18)

Philipp. Journ. Sci., Bot., 10: 93 (1915) TROTTER, in SACC., Syll. Fung., 23: 453 (1925)—HUMPHREY, Mycologia, 30: 330 (1938)

Specimens: Waoboe, May 11 (213718), March 26 (213717); Manokwari (213509)

Note: It is a new record that the species was found from anywhere outside of the Philippines. This is very near to *Favolus* and also to *Lentinus*. BRESADOLA(11) erected the genus *Elmerina* based on the presence of spinae in the hymenium. The taxonomic discussions are still remained for the future studies.

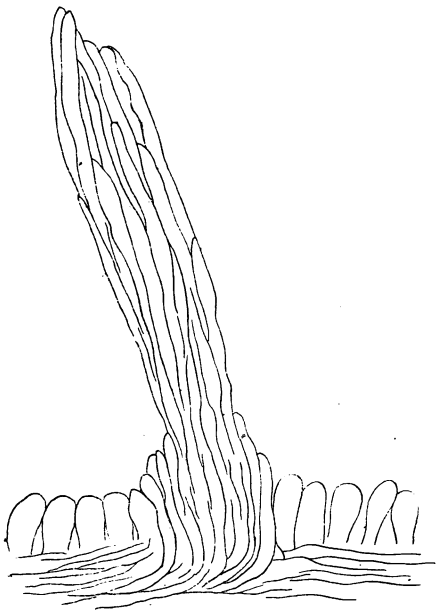


Fig. 7. *Elmerina foliacea* PAT. The spinae projecting from the surface of the hymenium. (×600)

Pileus fan shaped, 5 cm wide, 3.5 cm long, 1—2 mm thick, attached to the substratum with narrow base, fleshy-leathery, whitish when growing, pale or dark brownish in drying, strongly contracting and becoming hard; spinae (multicellular cystidia) projecting from the hymenium and the upper surface of pileus, which are composed of agglutinated hyphal bundle, 70—105 ×13—22 μ large, the spinae in the surface of the pileus distributed throughout the surface, but more concentrated near the basal portion of the pileus; hyphae of the context 3.5—4 μ thick, hyphae of trama 2.5—3 μ thick, both agglutinated; pores radially elongated like *Favolus*, often becoming lamellate.

Elmerina vespacea (PERSOON) BRESADOLA

Hedw., 51: 319 (1911), 53: 71 (1913)—HUMPHREY, Mycologia, 30: 331 (1938) *Hexagona vespacea* PERS., in GAUD. Bot. Voy. Freyc., 170 (1826)—SACCARDO, l. c., 6: 359 (1888)—LLOYD, Synop. *Hexag.*, 33 (1910) *Hexagona albida* BERKELEY, Journ. Linn. Soc. Bot., 16: 47 (1878)—SACCARDO, l. c., 6: 364 (1888)—LLOYD, l. c., 29, 39, f. 313—4 (1910) *Cyclomyces albida* LLOYD, Myc. Writ., 6: 1007 (1920) *Lenzites nivea* COOKE, Grev., 15: 94 (1886)—SACCARDO, l. c., 5: 646 (1888) *Lenzites platyphylla* LEVEILLE, Ann. Sci. Nat. Bot., Ⅲ, 2: 179 (1844)—SACCARDO, l. c., 5: 645 (1888)

Specimens: Waoboe, May 23 (213746)

Notes: This is not a true *Elmerina*. In the present material, the pileus is applanate, 9×5 cm large, and 6 mm thick (the context is about 1 mm thick), and no spina (multicellular cystidium) is found as in other species of the genus. It looks like *Lenzites betulina* in having decidedly lamellate hymenophore, and

(11) BRESADOLA, J.: Hedw., 51: 318 (1911): Hedw., 53: 71 (1912)

something like *Trametes kusanoana* in the external appearance of the pileus. The specimen, however, accords very much with the description of *Lenzites nivea* COOKE, which is regarded as synonymous to *E. vespacea* by many authorities, so that the writer adopted temporalily this name to the material.

Favolus alveolarius (DC. ex FRIES) QUELET

Enchir., 185 (1886)　*Cantharellus alveolarius* FRIES, Syst. Myc., 1: 322 (1821)　*Hexagona alveolarius* MURRILL, Bull. Torr. Bot. Cl., 31: 327 (1904)　*Polyporellus alveolarius* PILAT, Beih. Bot. Cent., 56: 36 (1937)　*Favolus europaeus* FRIES, Epicr., 498 (1838)—auct. plur.　*Favolus canadensis* KLOTZSCH, Linnaea, 7: 197 (1832)

Specimen: Roemabatoe (213561)

Notes: It is interesting that such a northern fungus like this was collected in this tropical region, for the species has never been recorded from Formosa nor Philippines.

Favolus ciliaris MONTAGNE

Ann. Sci. Nat. Bot., Ⅱ, 20: 364 (1843)—SACCARDO, l. c., 6: 391 (1888)　*Polyporus ciliaris* LLOYD, Syn. Stip. *Polyp.*, 176 (1912)

Specimens: Manokwari (213511); Waoboe (213721)

Notes: According to LLOYD, this is frequently found in the tropical America. It resembles to *F. arcularius* but has more small pores. From *F. Tricholoma*, it is said to differ by having larger pores. The margin of the pileus is fringed with long hairs like *F. Tricholoma*.

Favolus grammocephalus (BERKELEY) IMAZEKI (Pl. Ⅶ, f. 19)

Bull. Tokyo Sci. Mus., 6: 95 (1943)　*Polyporus grammocephalus* BERK., Lond. Journ. Bot., 1: 148 (1842)—LLOYD, Syn. Stip. *Polyp.*, 136, f. 437 (1912)　*Leucoporus grammocephalus* PAT., Ess. tax., 82 (1900)　*Polystictus grammocephalus* S. ITO et IMAI, Trans. Nat. Hist. Soc. Sapporo, 16: 121 (1940)　*Polyporus Guilfoylei* YASUDA, Bot. Mag. Tokyo, 30: 67 (1916) [non BERKELEY et BROOME]

Specimens: Manokwari (213510); Waoboe (213722, 213724); Roemabatoe (213562).

Notes: This species is widely distributed throughout the tropics. The present specimens have fairly dark brown colored pileus and seem to accord with the description of *Polyporus perversus* COPEL., but they are believed to be merely a form of *P. grammocephalus*.

Favolus novo-guineensis P. HENNINGS (Pl. Ⅶ, f.20)

ENGL., Bot. Jahrb., 15, Beibl., 33: 7 (1893)—SACCARDO, l. c., 11: 101 (1895)—LLOYD, Myc. Writ., 7: 1193, f. 2408—9 (1923)

Specimens: Waoboe, May 11 (213723); Wati (213603); Roemabatoe (213563, 213590, 213643—4)

Notes: This was originally collected by KÄRNBACH at Gogol district of east New Guinea. Later, LLOYD referrd the specimen of Congo Belge collected by VANDERYST to this species. Comparing with *F. grammocephalus*, the pores of this fungus are much larger and radially elongated.

Favolus russiceps (BERKELEY) IMAZEKI, comb. nov. (Pl. Ⅷ, f. 21)

Polyporus russiceps BERK., Jour. Linn. Soc., 14: 48 (1875)—COOKE, Grev., 14: 115 (1886)—SACCARDO, l. c., 6: 93 (1888)—LLOYD, Syn. Stip. *Polyp.*, 138 (1912).

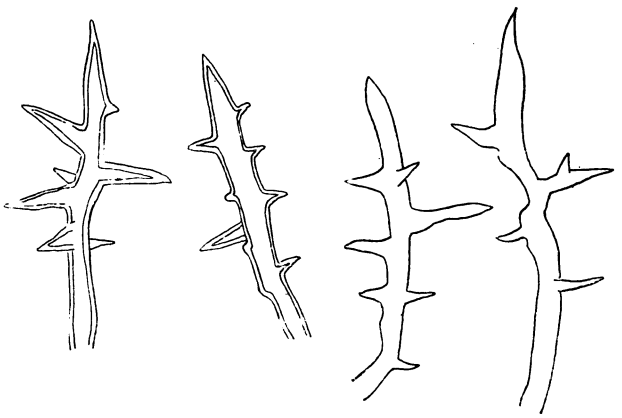


Fig. 8. *Favolus russiceps* (CKE.) IMAZ.
Branched hairs on the surface of the pileus. (×600)

Specimens: Wati (213602)

Notes: According to LLOYD, it is said as known only from Ceylon, but COOKE has already recorded it from south eastern New Guinea. The plant resembles to *F. grammocephalus* in general appearance, but it has dark brown hairs on the surface of the pileus which are thick walled and branched as shown in Fig. 8.

Favolus spathulatus (JUNGHUN) BRESADOLA (Pl. Ⅶ, f. 22)

Hedw., 51: 318 (1911): 56: 298 (1915) *Laschia spathulata* JUNGH., Fl. Crypt. Jav., 75 (1835) *Hymenogramma spathulata* SACCARDO, l. c., 5: 653 (1888) *Polyporus vibecinus* FRIES, Kongl. Vet. Akad. Handl. Stockh., 126 (1848) *Favolus tener* LEVEILLE, Ann. Sci. Nat., Ⅱ, 2: 202 (1844)—SACCARDO, l. c., 6: 396 (1888) *Polyporus palensis* MURRILL, Bull. Torr. Bot. Cl., 34: 472 (1907)—SACCARDO, l. c., 21: 261 (1912) *Hexagona pertenuis* MURRILL, l. c., 35: 401 (1908) *Favolus pertenuis* SACCARDO et TROTTER, l. c., 21: 356 (1912).

Specimens: Waoboe, May 8 (213760); Akama (213651—2); Roemabatoe

(213564)

Notes: This species has been known from Java, Sumatra and Philippines. On the surface of the pileus the radial striation are remarkable as in *F. grammocephalus* but the pileus is much smaller and thinner.

Fomitopsis albo-marginata (Leveille) Imazeki, comb. nov. (Pl. Ⅳ, f. 11)

Polyporus albo-marginatus Leveille, Ann. Sci. Nat. Ⅲ, 2: 191 (1844) *Fomes albo-marginatus* Cooke, Grev., 14: 19 (1885)—Saccardo, l. c., 6: 185 (1888) *Pyropolyporus albo-margainatus* Murrill, l. c., 34: 478 (1907) *Polyporus Kermes* Berleley et Broome, Lond. Journ. Linn. Soc., 14: 49 (1875) *Fomes Kermes* Saccardo, l. c., 6: 188 (1888)—Lloyd, Syn. *Fomes*, 231 (1915) *Fomes pyrrhocreus* Cooke, Grev., 14: 11 (1885) *Polyporus ochrocroceus* P. Henn., Monsunia, 1:145 (1900)

Specimens: Waoboe (213727); Akama (213675).

Notes: Pileus flat, less than 1 cm thick, surface distinctly incrusted with a crust of about 125 μ thick, pulverulent as if covered with cacao powder on the surface, margine white, context orange rufous, very beautiful, turning lilac in color when treated with KOH solution; hyphae 2.5—4 μ, arranged almost radially which are entwined with colorless, slender hyphae of 2.5—3 μ thick.

The species is distributed throughout the eastern tropics and Australia.

Fomitopsis caliginosa (Berkeley) Imazeki, comb. nov.

Polyporus caliginosus Berk., Journ. Linn. Soc., 16: 46 (1878) *Fomes caliginosus* Cooke, Grev., 14: 20 (1885)—Saccardo, l. c., 6: 194 (1888).—Lloyd, Syn. *Fom.*, 237 et 278 (1915) *Pyropolyporus caliginosus* Murrill, Bull, Torr. Bot. Cl., 34: 478 (1907) *Fomes roseo-albus* (Junghun) Bresadola, Ann. Myc., 8: 587 (1910) *Coriolopsis Copelandii* Murrill, Bull. Torr. Bot. Cl., 35: 392 (1908)

Specimens: Roemabatoe (213567, 213569, 213586, 213815); Akama (213656); Wati (213616); Mangga Is., (213542)

Notes: Pileus thin, less than 1 cm thick, surface distinctly incrusted, crust about 100 μ thick, consisting of ascending, deformed and agglutinated hyphae, surface almost black when old, glabrous, often covered with brown spore deposit, context cinnamon, hyphae 2.5—3.5 μ, more or less interwoven; hymenophore stratified, concolorous, tramal hyphae 2.5—3.5 μ thick, longitudinally arranged.

Lloyd said that it is quite light in weight, and is not a typical *Fomes* but rather has the appearance of being a lignescent *Polyporus*. The plant, however, is distinctly stratose and perennial.

Fomitopsis corrugata (Persoon) Imazeki (Pl. Ⅱ, f. 7—8)

Bull. Tokyo Sci. Mus., 6: 92 (1943) *Polyporus corrugatus* Pers., in

GAUD. Voy. Freyc. Bot,. 172 (1826) *Trametes corrugata* BRESADOLA, Hedw., 51: 316 (1911) *Earlliella corrugata* MURRILL, Bull. Torr. Bot. Cl., 34: 468 (1907) *Polystictus Persoonii* FR. ex CKE., Grev., 14: 85 (1885) *Trametes Persoonii* LLOYD, Lett., 60: 15 (1915) *Polystictus Formosae* LLOYD, Myc. Writ., 5: 632, f. 899 (1917) *Favolus subrigidus* MURRILL, Bull. Torr. Bot. Cl., 35: 398 (1908)

Specimens: Waoboe (213820, 213821, 213823—4, 213828) (213822, 213825) (213826—7); Roemabatoe (213807—10); Akama (213653, 213674); Manokwari (213529); Miei (213632)

Notes: This is one of the most abundantly collected species.

Fomitopsis melanopora (MONTAGNE) IMAZEKI (Pl. Ⅳ, f. 12)

Bull. Tokyo Sci. Mus., 6: 92 (1943) *Polyporus melanoporus* MONTAGNE, in Ramon de la Sagara Hist. Phys. Polit. Nat. Cuba, 9: 422 (1841) *Fomes melanoporus* COOKE, Grev., 14: 20 (1885)—SACCARDO, l. c., 6: 196 (1888)—LLOYD, Syn. *Fomes*, 240 (1915) *Nigrofomes melanoporus* MURRILL, Bull. Torr. Bot. Cl., 31: 425 (1904)

Specimens: Waoboe (213761); Akama (213673); Roemabatoe (213585)

Notes: Pileus applanate, dimidiate, about 1 cm thick, context "Seal-brown" or "Aniline black", very hard, almost stony, surface blackish, remarkably sulcate, crust none.

This was originally written from Cuba, and is distributed throughout the tropics. The Japanese plant which had long been called under this name is entirely different from this tropical species, and given the name *F. castanea* by the writer in 1949.

Fomitopsis vinosa (BERKELEY) IMAZEKI, comb. nov.

Polyporus vinosus BERK., Ann. Mag. Nat. Hist., 2: 195 (1852)—LLOYD, Syn. *Polyp.* Apus, 342, f. 679 (1915) *Polystictus vinosus* SACCARDO, l. c., 6: 273 (1888) *Nigroporus vinosus* MURRILL, Bull. Torr. Bot. Cl., 32: 361 (1905) *Coriolus vinosus* PATOUILLARD, Ess. tax., 94 (1900)

Specimens: Roemabatoe (213568)

Notes: According to LLOYD, this is a frequent species and widespread in tropics. In Japan, there occurs very common, growing usually on pine stumps.

Ganoderma fornicatum (FRIES) PATOUILLARD

Bull. Soc. Myc. Fr., 5: 71 (1889)—IMAZEKI, Bull. Tokyo Sci. Mus., 1: 47, f. 14 (1939) *Polyporus fornicatus* FRIES, Epicr., 443 (1838) *Fomes fornicatus* SACC., l. c., 6: 156 (1888) *Fomes amboinensis* (FR.) COOKE, Grev., 13: 118 (1885)

Specimens: Waoboe (213839); Akama (213658, 213677—8, 213699)

Hapalopilus nidulans (FRIES) KARSTEN.

Rev. Myc., Ⅲ, 9: 18 (1881)—DONK, Rev. Niederl. Homob.-Aphyll., 2: 172 (1933). *Polyporus nidulans* FRIES, Syst. Myc., 1: 362 (1821) *Inonotus nidulans* KARSTEN, Bidr. Finl. Nat. Folk, 48: 382 (1889) *Polyporus rutilans* PERS. ex FRIES, Syst. Myc., 1: 363 (1821)—LLOYD, Syn. *Polyp.* Apus, 334 (1915) *Hapalopilus rutilans* MURRILL, Bull. Torr. Bot. Cl., 31: 416 (1904) *Phaeolus rutilans* PATOUILLARD, Ess. tax., 86 (1900)

Specimens: Roemabatoe (213574)

Notes: This species grows on *Picea* and *Abies* in north Japan. It is very interesting that such a northern species was collected in this equatorial region.

Hexagona apiaria (PERSOON) FRIES (Pl. Ⅸ, f. 24—25)

Epicr., 493 (1838)—LLOYD, Syn. *Hexagona*, 6, f, 279 (1910)—SAWADA, Rep. Dept. Agr. Gov. Res. Inst. Formosa, 51: 79 (1931)

Specimens: Manokwari (213534); Waoboe (213762)

Hexagona heteropora (MONTAGNE) IMAZEKI (Pl. Ⅺ, f. 32)

Bull. Tokyo Sci. Mus., 6: 76 (1943) *Polyporus heteroporus* MONT., Ann. Sci. Nat., Ⅱ, 15: 273 (1841) [non FRIES] *Trametes heteropora* BRESADOLA, Hedw., 51: 317 (1911)—LLOYD, Myc. Writ., 6: 1086 (1920) *Fomes heteoporus* SACC., l. c., 6: 191 (1888)

Specimens: Waoboe, April 17 (213763), May 8 (213734), May 15 (213720, 213764); Wati (213608); Roemabatoe (213575)

Notes: This has been called *Trametes heteropora* hithertonow, but the context is similar to *H. apiaria* in the color and consistensy. To *H. apiaria*, the type species of the genus, the present species approaches through several related species, *Hexagona badia* (*Tramenes badia*), *H. fuscella* (*T. fuscella*), *H. aspera* (*T. aspera*), and *H. amplopora* (*T. amplopora*).

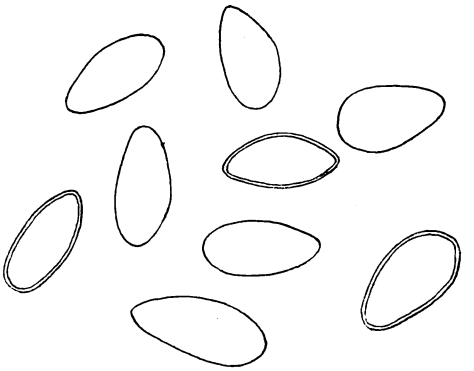
Ischnoderma novo-guineense IMAZEKI, spec. nov. (Pl. Ⅷ, f. 23)

Pileo sessili, plano-applanato, 16×11—12 cm lato, ca 3 cm crasso, supra convexo, infra plano, margine obtiusculo-tenui, superficie glabriuscula, tenuiter incrustata, opaca, parve sulcata, sordide castanea vel badio-umbrina, contextu isabellino, concentrice zonato, in sicco suberoso-levi, ad 2 cm crasso; hymenophoro tubuloso, 2—3 stratoso, cinnamomeo-isabellino, poris parvis, ca 2—3 a mm, acie obtusa, integra.

Crusta 130—200 μ crassa, ex hyphis latericiis, ascendentibus non conglutinatis composita; hyphis in contextu hyalinis, 3.8—6.3 μ crassis, crasse tunicatis, irregulare ordinatis; hyphis in tramis 3.8—6.3 μ crassis, longitudinaliter ordinatis; cystidiis nullis; sporis fusiformibus vel elongato-subovoideis, 12.5—14×6—7.5μ, laevibus.

Specimens: Akama, May 1, 1943, coll. by S. IZIRI et T. NIIMURA (213690 —"Typus").

Notes: In general appearance, it seems like *Ganoderma colossum*, but the spores are entirely different. The genus *Ischnoderma* has been a monotypic one, containing only *I. resinosum*, and is now added this interesting species, but there is left some question in the writer's reference in the spore character which is fairly different from that of *I. resinosum*.



Fig, 9. Spores of *Ischnoderma novo-guineense* IMAZ. (×1500)

Microporus affinis (BLUME et NEES) PATOUILLARD

Ess. tax., 83 (1900). *Polyporus affinis* BL. et NEES, Nov. Act. Acad. Caes. Leop. Cur., 13: 18 (1826) *Polystictus affinis* FR., Nov. Symb. Myc., 59 (1851)

Specimens: Akama (213684); Wati (213611); Roemabatoe (213589)

Microporus flabelliformis (KLOTZSCH) PATOUILLARD

Ess. tax., 83 (1900) *Polyporus flabelliformis* KL., Linn., 8: 483 (1833) *Polystictus flabelliformis* FR., Nov. Symb. Myc., 74 (1851). *Polystictus celebicus* P. HENNINGS, Monsunia, 1: 12 (1900)

Specimens: Manokwari (213513); Waoboe (213340); Akama (213662, 213683, 213701); Roemabatoe (213576—7)

Microporus rhinocerotis (COOKE) IMAZEKI, comb. nov. (Pl. Ⅸ, f. 26)

Fomes rhinocerotis COOKE, Trans. Bot. Soc. Edinb., 13: 150 (1879) *Polyporus rhinocerotis* LLOYD, Syn. Stip. *Polyp.*, 122 (1912); Myc. Writ., 6: 1037, f. 1900 et 1062, f. 1997 (1921) *Polystictus sacer* P. HENN., in ENGLER, Bot. Jahrb., 18; Beih., 44: 29 (1894) [non FRIES]

Specimens: Manokwari (213530)

Notes: It is not a true *Microporus* in the strict sense, but the writer placed it in the genus temporalily.

This was written from Malay by COOKE, and now known from the eastern tropics, as Philippines, Ceylon, Sumatra, etc.. It resembles very much to *Microporus sacer* (FR.) IMAZ., comb. nov. (syn. *Polystictus sacer* FR.) known from Africa, but the pores are far minute as hardily visible to the naked eye.

Microporus xanthopus (FRIES) PATOUILLARD

Ess. tax., 83 (1900) *Polyporus xanthopus* FRIES, Syst. Myc., 1: 350 (1821) *Polystictus xanthopus* FR., Nov. Symb. Myc., 74(1851) *Polyporus*

Perula Beauvais ex Fries, Fpicr., 437 (1838)—Murrill, Bull. Torr. Bot. Cl., 34: 472 (1907)　*Polyporus polychrous* Cesati, Myc. Borneo., 4 (1879)

Specimens: Waoboe, May 8 (213841—2); Miei (213628); Roemabatoe (213578, 213591); Wati (213609, 213617); Akama (213663)

Onnia Cumingii (Berkeley) Imazeki

Bull. Tokyo Sci. Mus., 6: 110 (1943)　*Polyporus Cumingii* Berk., Lond. Journ. Bot., 1: 147 (1842)　*Polystictus Cumingii* Saccardo, l. c., 6: 209 (1880).　*Xanthochrous Cumingii* Patouillard, Ess. tax., 100 (1900).

Specimens: Roemabatoe (213580)

Notes: Only a single specimen was collected.

Onnia incisa (Lloyd) Imazeki, comb. nov. (Pl. X, f. 31)

Polystictus incisus Lloyd, Myc. Writ., 7: 1155, pl. 219, f. 2267 (1922); 7: 1238, f. 2628 (1924)

Specimens: Akama (213647)

Notes: The species has been collected three times till now, the two from the Phillippines (Luzon and Mindanao) and the other from Dutch New Guinea by J. Laur. The present fungus is the fourth one. Thus the plant is a good material to prove the intimate phytogeographical relation which may exist between the Philippines and western New Guinea. This is not a species allied to *Polyporellus obovatus* as Lloyd noticed.

Phellinus dependens (Murrill) Imazeki, comb. nov.

Pyropolyporus dependens Murrill, N. Am. Fl., 9: 106 (1908)　*Fomes dependens* Sacc. et Trott., l. c., 21: 292 (1912)—Lloyd, Syn. *Fomes*, 254, f. 597 (1915)—Imazeki, Journ.Jap. Bot., 16: 590, f. 8 (1940)　*Cryptoderma dependens* Imazeki, Bull. Tokyo Sci. Mus., 6: 107 (1943)

Specimens: Akama (213686); Waprak (213551)

Notes: The species had been known from the western tropics till the writer recorded it from Palau Is. This is the second collection from the Eastern Hemisphere.

Phellinus gilvus (Schweinitz ex Fries) Patouillard

Ess. tax., 97 (1900)　*Polyporus gilvus* Fries, Elench. Fung., 1: 108 (1828)—Lloyd, Syn. Apus *Polyp.*, 346 (1915)　*Hapalopilus gilvus* Murrill, Bull. Torr. Bot. Cl., 31: 418 (1904)

Specimens: Waoboe, April 17 (213765), May 23 (213768)

Pbellinus mangrovicus (Imazeki) Imazeki, comb. nov.

Fomes mangrovicus Imaz., Journ. Jap. Bot., 17: 176, f. 2 (1941)

Specimens: Waoboe, April 17 (213766), May 23 (213846); Mangga Is. (213539)

Phellinus senex (Nees et Montagne) Imazeki, comb. nov. (Pl. XII, f. 34)

Polyporus senex Nees et Mont., Ann. Sci. Nat. II, 5: 70 (1836) *Fomes senex* Cooke, Grev., 13: 118 (1885)—Saccardo, l. c., 6: 164 (1888)—Lloyd, Syn. *Fomes*, 259, f. 593 (1915) *Xanthochrous senex* Patouillard, Ess. tax. 101 (1900).

Specimens: Waoboe, April 17 (213767); Akama (213666—7, 213687, 213767)

Phellinus setulosus (Lloyd) Imazeki

Bull. Tokyo Sci. Mus., 6: 104 (1943) *Fomes setulosus* Lloyd, Syn. *Fomes*, 243 (1915); Myc. Writ., 5: 713, f. 1069 (1917)—Trotter, in Sacc., Syll. Fung., 23: 392 (1925)—Imazeki, Journ. Jap. Bot., 16: 589, f. 6 et 7 (1940)

Specimens: Akama (213703)

Polyporellus hemicapnodes (Berkeley et Broome) Imazeki, comb. nov. (Pl. X, f. 29)

Polyporellus hemicapnodes Berk. et Br., Journ. Linn. Soc. Bot., 14: 47 (1875)—Saccardo, l. c., 6: 85 (1888)—Lloyd, Syn. Stip. *Polyp.*, 182, f. 484 (1912)—Bresadola, Ann. Myc., 10: 443 (1912)—Petch, Ann. Roy. Bot. Gard. Perad., 6: 90 (1915)

Specimens: Wati (213605).

Polyporellus murinus Imazeki sp. nov. (Pl. X, f. 27)

Pileo lateraliter vel dorsi-lateraliter stipitato, flabelliformi, basi cuneato, antice orbiculo, in sicco valde inflexo, margine acutissimo, integro, 4—7—(10)×4—6—(10) cm lato, 2.5—5 mm crasso, superficie pubescenti, subzonata et subsulcata, radialiter rugulosa, avellaneo vel muricolori (Drab), contextu 2 mm crasso, pallido, in sicco rigido-lignescenti; hymenophoro 1.5—3mm crasso, tubuloso, obscurioli, poris minutissimis, 8—10 a mm, acie integra; stipite 0.8—1.8 cm longo, 0.3—0.7—1.2 cm crasso.

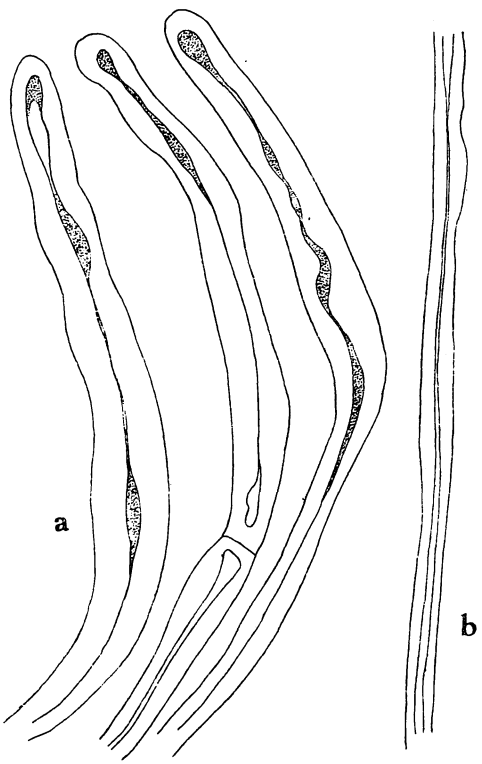


Fig. 10. *Polyporellus murinus* Imaz.
a. Hairs on the surface of the pileus.
b. Hyphae of the context. (×600)

Subcuta obsoleti, pubibus superficialibus erectis, crasse tunicatis, 10—17.5 μ crassis; hyphis in contextu 5—6.5 μ et 2—3 μ crassis, radialiter ordinatis; hyphis in tramis 2.5—3 μ crassis, longitudinaliter ordinatis; sporis (?) globosis, hyalinis, laevibus, 3.5—4 μ in diametris.

Specimens: Akama, May 1 st, 1943, coll. by S. Iziri et T. Niimura (213685 —"Typus"), May 20 (213670); Waoboe(213782)

Notes: Pileus is covered with powdery hairs which are erecting, clavate, thick walled, and with brownish contents.

Polyporellus obovatus (Junghun) Imazeki, comb. nov. (Pl. X, f. 28)

Polyporus obovatus Jungh., Fl. Crypt. Jav., 65 (1838)—Saccardo, l. c., 6: 90 (1888)—Petch, Ann. Roy. Bot. Gard. Perad., 6: 124 (1916) *Polystictus obovatus* Bresadola, Ann. Myc., 8: 585 (1910)—Lloyd, Syn. Stip. *Polyp.*, 141, f. 445 (1912) *Leucoporus obovatus* Patouillard, Philip. Journ. Sci., 10: 89 (1915) *Microporus obovatus* Imazeki, Bull. Tokyo Sci. Mus., 6: 95 (1943)

Specimens: Waoboe, May 11 (213740)

Notes: The cuticle of the pileus consists of deformed hyphae which are densely entangled, but form a poorly differentiated layer of about 50 μ thick. Hyphae of the context are radially arranged, with distinct clamp connections, thin walled and 3.8—5 μ thick, and the hyphae of trama are longitudinally arranged, agglutinating and 2.5 μ thick (much thinner than those of the context). Spores (?) are subglobose, 4×3 μ.

Polyporellus picipes (Fries) Karsten

Hattsv., 2: 31 (1874)—Pilat, Beih. Bot. Cent., 56: 57 (1937) *Polyporus picipes* Fries, Epicr., 440 (1838)—auct. plur. *Leucoporus picipes* Quelet, Enchir., 165 (1886) *Melanopus picipes* Patouillard, Hym. Eur., 137 (1887) *Polyporus varius* Fries, auct. plur.

Specimens: Manokwari (213512)

Polyporellus Satakei Imazeki, spec. nov. (Pl. X, f. 30)

Pileo flabelliformi, breviter lateraliteque stipitato, basi cuneato, siccitate rigidescenti, valde inflexo, margine acutissimo, integro, subrotundato, 2—6×3—6 cm lato, 2—4 mm crasso, superficie obsolete zonata, atro-castanea et latericia, immaculata, fumoso-pubescenti, ad marginem glabrescenti, contextu pallido; hymenophoro 0.5—1 mm crasso, poris radialiter elongatis, subfavoloideis, subminutis; stipite 5 mm longo, fumoso-pubescenti.

Subcrusta ex hyphis deformatis, intricatim composita, ochraceo-ferruginea sub microcopico; hyphis in contextu 3—6 μ crassis, radialiter ordinatis, hyalinis; hyphis in tramis 2.5—3 μ crassis, longitudinaliter ordinatis, valde agglutinatis; sporis non visis; cystidiis nullis.

Specimens: Waoboe, May 8 th, 1943, coll. by Y. Satake (213739—"Typus")

March 26, (213738)

Notes: From the external appearance of the pores, this looks like a *Favolus*, but microscopically it has characteristics of *Polyporellus*.

Polyporellus stereinus (Berkeley et Curtis) Imazeki, comb. nov.

Polyporus stereinus Berk. et Curt., Journ. Linn. Soc. Bot., 10: 308 (1868)—Bresadola, Hedw., 56: 292 (1915) *Polystictus stereinus* Saccardo, l. c., 6: 220 (1888)—Lloyd, Syn. Stip. *Polyp.*, 142 (1912)

Specimens: Roemabatoe (213579)

Notes: The pores are so extremely minute that they can hardily be visible to the naked eye and are likely impressed as if it is a *Stereum*. The pileus is almost black and glabrous, consists of strongly agglutinated hyphae and becomes cartilaginous in drying.

Polyporellus subdealbatus (Murrill) Imazeki, comb. nov.

Microporellus subdealbatus Murrill, Bull. Torr. Bot. Cl., 34: 471 (1907); 35: 402 (1908) *Polystictus subdealbatus* Sacc. et Trott., l. c., 21: 309 (1912) —Bresadola, Hedw., 53: 65 (1913)

Specimens: Waoboe, March 27 (213737), May 8 (213736); Akama (213664); Wati (213610)

Notes: The plant looks very like *P. obovatus* in general appearance, but differs from the latter by having a scarcely differentiated cuticle and more gelatinised context. The context consists of radially arranged hyphae of 4 μ thick, and subagglutinated; trama consists of longitudinally arranged and compactly agglutinated hyphae of 2.5 μ thick. Pores are very minute.

The species differs from *P. Satakei* by the pore form, from *P. murinus* by the structure of cuticle, from *P. obovatus* by the dark color of the pileus and the texture of the context. It is entirely different from *Coriolus elongatus* with which Bresadola compared. It has been known only from the Philippines.

Rigidoporus durus (Junghun) Imazeki, comb. nov,

Polyporus durus Jungh., Crypt. Jav., 62 (1838)—Saccardo., l. c., 6: 147 (1888)—Lloyd, Syn. *Polyporus* Apus, 341 (1915) *Nigroporus durus* Murrill, Bull. Torr. Bot. Cl., 34: 471 (1907)

Specimens: Waoboe, April 8 (213725); Mangga Is. (213547)

Notes: This is distributed throughout the eastern tropics and Australia, and has been collected in Formosa and Kyusyu of Japan by the writer. It causes a white pocket rot on frondose woods, according to the writer's collection at Kyusyu.

"Pileus up to 8×5cm large, imbricate, dimidiate, applanate, with thin and more or less acute margine, incurved, surface wood brown with a shade of pale dusky brown color, pruinose, glaucous, context stony hard in dried specimens, dingy cinnamon, near "Army brown," zoned as if wood grain; surface of the

hymenophore seal brown to dusky brown, glaucous, pores very minute."

Rigidoporus lignosus (KLOTZSCH) IMAZEKI, comb. nov. (Pl. XII, f. 36)

Polyporus lignosus KLOTZSCH, Linnaea, 8: 485 (1833)—SACCARDO, l. c., 6: 146 (1888) *Fomes lignosus* BRESADOLA, Hedw., 53: 60 (1913)—LLOYD, Syn. *Fomes*, 230, f. 580—1(1915) *Polyporus auberianus* MONTAGNE, Ann. Sci. Nat., II, 17: 399 (1842) *Fomes auberianus* MURRILL, Bull. Torr. Bot. Cl., 32: 91 (1905) *Rigidoporus microporus* (SWARTZ) van OVEREEM, Icon. Fung. Malay., 5: 1—5, T. V, f. 1—9 (1924), pr. p.

Specimens: Roemabatoe (213642); Miei (213627); Wati (213621); Akama (213696).

Notes: This is one of the most serious wood destroying fungi and also known as a causal fungus of white root rot disease of Para-rubber trees, coffee, cacao, tea and other many useful tropical plants.

PATOUILLARD, BRESADOLA, LLOYD, PETCH, etc. considered this species as distinct from *R. zonalis*, while van OVEREEM compiled these two under the name *Rigidoporus microporus* with more than twenty synonyms. PETCH[12] noticed on the difference between these two as follows: "*Polyporus zonalis* is easily distinguished from *Fomes lignosus*, when fresh, by the livid gray, sometimes pallid hymenium, and by the upper surface being wood color or reddish when wet, instead of the deep red-brown of *F. lignosus*." These discrepancies are recognized by BRESADOLA, LLOYD, and others. On the contrary, van OVEREEM considered they belong to the same species, because the color of the pileus is very variable and apt to change by the oldness of the fruitbodies and by the environmental condition.

The original home of both plants is tropical region. In Japan, there is found only *R. zonalis*, while *R. lignosus* has a northern limit of distribution in Formosa. *R. zonalis* in Japan is always annual, more small, and never takes such a deep red brown in color as said in *R. lignosus*.

WEIR[13] stated that both species differs not only in their morphology of the fruitbodies, but also in the type of rot. He noted the wood rotten by *R. lignosus* is colored uniformly whitish or yellowish, while *R. zonalis* causes a white pocket rot.

Although the writer has not ascertained the type of rot of both species, he thinks it to be right that both should be separated as distinct species.

Rigidoporus rhodophaeus (LEVEILLE) IMAZEKI, comb. nov.

Polyporus rhodophaeus LEV., Ann. Sci. Nat. III, 2: 190 (1844) *Fomes*

(12) PETCH, T.: A preliminary list of Ceylon *Polypori*, in Ann. Roy. Bot. Gard. Perad., 6: 120, 130 (1916)

(13) WEIR, G. R.: A pathological survey of the Para rubber tree (*Hevea brasiliensis*) in the Amazon valley. Bull. U. S. Dept. Agr., No. 1380: 1—129, Pl. I—XXXIII (1926)

rhodophaeus Cooke, Grev., 14: 18 (1885)—Saccardo, l. c., 6: 175 (1888)
Fomitopsis rhodophaea Imazeki, Bull. Tokyo Sci. Mus., 6: 92 (1943)
Polyporus semilaccatus (Berkeley) Lloyd, Syn. Apus *Polyp.*, 337 (1915)
Polyporus zonalis var. *semilaccatus* Berk., Journ. Linn. Soc. Bot., 16: 46 (1878)
Fomes semilaccatus Cooke, Grev., 14: 18 (1885)—Saccardo, l. c., 6: 203 (1888)
Coriolopsis semilaccata Murrill, Bull. Torr. Bot. Cl., 34: 466 (1907)

Specimens: Waoboe, May 8 (213726); Roemabatoe (213565)

Rigidoporus zonalis (Berkeley) Imazeki, comb. nov.

Polyporus zonalis Berk., Journ. Bot., 6: 504 (1847)—Saccardo, l. c., 6: 145 (1888)—Lloyd, Syn. *Polyp.*, Apus 336, f. 675 (1915) *Fomitopsis zonalis* Imazeki, l. c., 6: 92 (1943)

Specimens: Waoboe, May 8 (213829—832), Mar. 26 (213833); Manokwari (213528)

Trachyderma subresinosum (Murrill) Imazeki, comb. nov. (Pl. XI, f. 33)

Fomes subresinosus Murrill, Bull. Torr. Bot. Cl., 35: 410 (1908)—Lloyd, Syn. *Fomes*, 215, f. 571 (1915) *Ganoderma subresinosum* Humphrey, Mycologia, 30: 332 (1938)

Specimens: Wati (213618); Akama (213689); Waoboe (213782)

Notes: This species was originally writen from the Philippines and placed in the genus *Fomes* sens. str. by Murrill. Lloyd adopted the name without question, saying it is not rare in tropical Asia, Africa, Ceylon, India and the Philippines. Later, Humphrey reexamined the type and other many specimens, and after discovering its Ganodermoid spores which are "very large, ovate, thin walled, olive buff to deep olive buff (Ridgeway) under higher power, with fine but distinct striations under oil immersion," he came to the conclusion that "it is a typical laccate *Ganoderma*, with pale context, though in his description Murrill gives the spores as smooth, hyaline, 3—4 μ." The writer also found the similar spores from the present specimens, which are 12—13.7 × 16—17.5 μ in large. He, therefore, agrees with Humphrey, but he can not place it in the genus *Ganoderma*, because it has a fleshy succulent context and the poorly differentiate crust.

The writer has a specimen collected in Hainan Is. of southern China.

Trametes fumoso-avellanea Romell

Rih. Sv. Vet. Akad. Handl., 23: (3), 16: 37 (1901)—Saccardo, l. c., 16: 164 (1902) *Fomitella fumoso-avellanea* Murrill, N. Am. Fl., 9: 100 (1908) *Daedalea fusco-stratosa* Lloyd, Myc. Writ., 7: 1270, f. 2773 (1924), syn. nov.

Specimens: Akama (213660)

Notes: This species was originally described from Paraguay, and is said to be rarely collected in the Central and South America. In the East, so far as

the writer knows, it has been known only from Formosa. The present colletion is the second record from the East, the fact being very interesting. Brief diagnosis is given below:

Pileus dimidiate, almost flat or subresupinate (entirely resupinate in the Formosan specimen), anoderm, context suberose, Wood brown or Buffy brown of RIDGEWAY (something alike to the color of *Fomitopsis pubertatis* and *supina*); hymenophore often 2—3 stratified, pores medium to large, porose to daedaloid; cystidia (paraphyse) fusiform. It causes a pocket rot of the hard wood.

Trametes leonina (KLOTZSCH) IMAZEKI, comb. nov.

Polystictus leoninus KL., Linnaea, 8: 486 (1833)　*Polyporus leoninus* SACCARDO, l. c., 6: 235 (1888)—LLOYD, Syn. *Polystictus*, Sect. *Microporus*, etc., 64 et 68, f. 352—3 (1910)　*Funalia leonina* PATOUILLARD, Ess. tax., 95 (1900)

Specimens: Waoboe, March 17 (213745)

Tramenes Palisotii (FRIES) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 73 (1943)　*Daedalea Palisotii* FRIES, Syst. Myc., 1:335 (1821)—TENG, Sinensia, 7: 243 (1933)　*Lenzites Palisotii* FRIES, Epicr., 404 (1838)—SACCARDO, l. c., 5: 650 (1888)　*Daedalea repanda* PERSOON, GAUD., Bot. Voy. Freyc., 168 (1826)　*Lenzites repanda* FR., Epicr., 404 (1838)—SACCARDO, l. c., 5: 650 (1888)—auct. plur.　*Daedalea amanitoides* BEAUVAIS ex MURRILL, Bull. Torr. Bot. Cl., 34: 480 (1907)

Specimens: Manokwari (213847—8, 213516); Waoboe (213843—5); Miei (213631); Akama (213707, 213856); Wati (213625); Roemabatoe (213851)

Trametes salmonea IMAZEKI, spec. nov. (Pl. XII, f. 35)

Pileo dimidiato-sessili, tenui, applanato, 10×5—6 cm lato, 3—6 mm crasso, margine attenuato, acuto, superficie opaca, obsolete zonata, subsulcata, "light Congo pink" or "light vinaceous fawn," contextu 2—4 mm crasso, suberoso-coriaceo, "buff pink," pulcherrimo; hymenophoro tubuloso, 1—2 mm crasso, poris minutis, 8—9 a mm, rotundatis, acie integra, "Tilleul buff" or "Shell pink" (RIDGEWAY).

Hyphis in contextu 2.5—5 μ crassis, crasse tunicatis, subradialiter ordinatis; hyphis in tramis similaribus; sporis non inventis.

Specimens: Roemabatoe, April 15 th, 1943, coll. by S. IZIRI et T. NIIMURA (213571—"Typus"); Akama (213654)

Trametes sanguinea (LINN. ex FRIES) IMAZEKI,

Bull. Tokyo Sci. Mus., 6: 73 (1943)　*Polyporus sanguineus* L. ex FR., Syst. Myc., 1: 371 (1821)　*Polystictus sanguineus* FR., Nov. Symb. Myc., 59 (1851)—SACCARDO, l. c., 6: 229 (1888)—LLOYD, Syn. Stip. *Polyp.*, 144 (1912)　*Microporus sanguineus* PATOUILLARD, Ess. tax., 83 (1900)　*Pycnoporus*

sanguineus MURRILL, Bull. Torr. Bot. Cl., 31: 421 (1904) *Trametes cinnabarina* f. *sanguinea* PILAT, Ann. Myc., 38: 73 (1940)

Specimens: Manokwari (213517); Waoboe (213771); Miei (213630); Kwatisore (213538); Akama (213669); Roemabatoe (213583—4); Wati (213624)

Tyromyces ostreiformis (BERKELEY) IMAZEKI

Bull. Tokyo Sci. Mus., 6: 83 (1943) *Polyporus ostreiformis* BERK., Journ. Linn. Soc. Bot., 16: 46 (1878)—SACCARDO, l. c., 2: 110 (1888)—LLOYD, Syn. Stip. *Polyp,*. 307 (1915)

Specimens: Waoboe (213747).

LABORATURY OF FOREST MYCOLOGY, GOVERNMENT FOREST EXPERIMENT STATION, MEGURO, TOKYO, JAPAN.

Explanation of Plates

PLATE I.

Fig. 1. *Cladoderris infundibuliformis* (KL.) FR. (213596) ×1/3

Fig. 2. *Cladoderris spongiosa* FR. (213688) ×1/2

Fig. 3. *Coriolus meleagris* (PERS.) IMAZ. (213555) ca ×1/2

Fig. 4. *Cryptoderma lamaoense* (MURR.) IMAZ. (213640) ca ×2/5

Fig. 5. Ditto, the type of rot. ca ×2/5

PLATE II.

Fig. 6. *Amauroderma scopulosum* (BERK.) IMAZ. (213773, 213637) ×2/5

Fig. 7, 8. *Fomitopsis corrugata* (KL.) IMAZ. (213674) ca ×1/2

PLATE III.

Fig. 9. *Coriolus Meyenii* (KL.) IMAZ. (213755) ca ×1/3

Fig. 10. *Elfvingia mastopora* (LEV.) IMAZ. (213814, 213620, 213634) ca ×1/4

PLATE IV.

Fig. 11. *Fomitopsis albo-marginata* (LEV.) IMAZ. (213675) ca ×2/5

Fig. 12. *Fomitopsis melanopora* (MONT.) IMAZ. (213673) ca ×2/5.

PLATE V.

Fig. 13. *Elfvingia flabellata* IMAZ. (213813, Typus) ca ×1/5

Fig. 14. *Elfvingia polyzonata* IMAZ. (213757, Typus) ca ×1/4

PLATE VI.

Fig. 15. *Elfvingia Williamsiana* (MURR.) IMAZ. (213679) ca ×1/3

Fig. 16. *Elfvingia tornata* (LEV.) MURR. (213812, 213704) ca ×1/4

PLATE VII.

Fig. 17. *Podoscypha elegans* (FR.) PAT. (213521) ca ×1/2

Fig. 18. *Elmerina foliacea* PAT. (213718) ca ×1/2

Fig. 19. *Favolus grammocephalus* (BERK.) IMAZ. (213133) ca ×1/2

Fig. 20. *Favolus novo-guineensis* P. HENN. (213759) ca ×1/2

PLATE VIII.

Fig. 21. *Favolus russiceps* (BERK.) IMAZ. (213760)　ca ×1/2

Fig. 22. *Favolus spathulatus* (JUNGH.) IMAZ. (213605)　ca ×1/2

Fig. 23. *Ischnoderma novo-guineense* IMAZ. (213690, Typus)　ca ×1/4

PLATE IX.

Fig. 24. *Hexagona apiaria* FR. (213534)　ca ×1/4

Fig. 25. Ditto, pore surface.　ca ×1/2

Fig. 26. *Microporus rhinocerotis* (CKE.) IMAZ. (213530)　ca ×2/5

PLATE X.

Fig. 27. *Polyporellus murinus* IMAZ. (213685, Typus)　ca ×1/2

Fig. 28. *Polyporellus obovatus* (Jungh.) IMAZ.　ca ×1/2

Fig. 29. *Polyporellus hemicapnodes* (B. et BR.) IMAZ. (213605)　ca ×1/2

Fig. 30. *Polyporellus Satakei* IMAZ. (213739—Typus)　ca ×1/2

Fig. 31. *Onnia incisa* (LLOYD) IMAZ. (213649)　ca ×1/2

PLATE XI.

Fig. 32. *Hexagona heteropora* (MONT.) IMAZ. (213764)　ca ×2/5

Fig. 33. *Trachyderma subresinosum* (MURR.) IMAZ. (213618, 213782)　ca ×1/4

PLATE XII.

Fig. 34. *Phellinus senex* (MONT. et NEES) IMAZ. (213687)　ca ×2/5

Fig. 35. *Trametes salmonea* IMAZ. (213571, Typus)　ca ×3/8

Fig. 36. *Rigidoporus lignosus* (KL.) IMAZ. (213642)　ca ×1/4

西部蘭領ニューギニアの菌類

（摘　要）

今　關　六　也

(1) 太平洋戦争たけなわな，昭和 18 年 (1943) の 1 月から 6 月にかけて，日本海軍から西部ニューギニアに自然科学研究団が派遣された。これに参加した国立科学博物館（当時の東京科学博物館）の動植物及び地学部研究員は一班をつくつて， Vogel Kopf の首の部にあたる Geelfvink 湾の南岸地方，即ち Wandamen 及び Napan 地区を中心として調査，研究を行つた。

同班が採集した標本は動植鉱物ともに極めて大量に上るが，参加した諸氏には全く専門外である菌類標本も，総点数 340 点（個体数は 1,500 余りに達する）であつた。本研究はこの時の資料に基いたものである。これらの内訳は若干の未決定種を除き，

Auriculariaceae	キクラゲ科	1 種
Corticiaceae	ウロコタケ科	5 種
Polyporaceae	サルノコシカケ科	65 種
計		71 種

である。

(2) ニューギニアの高等菌類については，19 世紀の末から 20 世紀の初めにかけて，主として英，独人により数回の探険と研究が行われたが，その対象となつた地方は主に東部地方に限られ，西部ニューギニアについては，極めて僅かの断片的な報告があるに過ぎない。

(3) この資料は暗黒の大陸と云われる熱帯ニューギニアの菌類研究資料として，学界に寄与するところが大であるばかりではない。特に筆者が強い印象をうけたのは，この赤道直下の熱帯地方の菌類相が，意外に台湾及び日本の菌類相に類似性をもつて居り，日本列島の菌類研究に大きな参考になることであつた。

元来日本の菌類は，その地理的環境，条件から，南北両方の要素がいりまじつており，極めて多種多様な内容をもつている。北海道から本州・九州・台湾にかけて，中央部を縦走する山岳地帯には，北方系即ち欧洲，シベリアから樺太，北海道を経て南下する北方要素があるのに対して，海岸に沿う低地帯には熱帯色の豊かな南方分子が，相当多量に北上しているのである。

菌類のように分布が広い，いわゆるコスモポリタンな種が多い植物群の研究には，特に広い見解・視野が必要で，欧・米はもちろん，アジア大陸から南方・熱帯の菌類についても広く且つ正確な知識を養うことが大切である。

この度の資料がその意味において，日本及び台湾の菌類研究上に非常な参考になることはいうまでもない。筆者がかつて台湾南端の熱帯海岸林で採集した資料を *Amauroderma scopulosum* と同定し，また従来わが国で *Fomes melanoporus* とされていたクロサルノコシカケを再検討することができたのは，何れも熱帯本場の典型的標本に対する正確な認識の上に立つて始めて為し得たことである。しかもこれは1例にすぎない。

(4) 採集品 71 種について，世界における分布状態を示すと Table 1 の通りである。この表から次の事実を知ることができる。

71 種 の 中	濠洲との共通種	30 種
〃	比島　〃	54 〃
〃	台湾　〃	35 〃
〃	九州　〃	22 〃
〃	本州　〃	15 〃

(5) 71 種を質的に分析すると，

a）汎世界的分布種	6 種
b）汎熱帯種	31 種
c）汎太平洋種（日・台・比・海南島・ボルネオ・爪哇・ニューギニア・濠・新西蘭・ミクロネシア等に分布する種）	11 種
d）東亜熱帯種（印・錫・比・台・日本南部等の間に分布）	17 種
e）固有種（新種）	6 種
f）濠洲種	0 種

(6) 上記の量的比較，及び質的分析によつて判るように，西部ニューギニアは全く東亜熱帯色の濃厚な菌類相をもつている。特に比島との共通種が最高で，76% に達していることは，比島の菌類が他の東亜熱帯諸地方にくらべてよく研究されている為もあるが，両者間の親近性を物語るものである。両者間の非共通種の中には，本文で新たに報告される新種6があり，その残りの 10 種の大半は比島にも発見される可能性の高いものである。

更にまた *Elfvingia Williamsiana, Elmerina foliacea, Onnia incisa, Polyporellus subdealbatus* の4種は，未だかつて比島以外の地から発見されたことがなかつたものであり，両地方間の親近性を裏付ける好資料であろう。

(7) 台湾の菌と比較すると，共通種は 35 種，50% で，これまた相当の高率である。

このうち台湾を北限とする種とは，

Auricularia delicata, Cladoderris spongiosa, Amauroderma scopulosum, Coriolus meleagris, C. Meyenii, C. occidentalis, Cryptoderma pachyphloeum, Favolus grammocephalus, Fomitopsis corrugata, F. melanopora, Ganoderma fornicatum,

Hexagona apiaria, H. heteropora, Microporus xanthopus, Phellinus senex, Rigidoporus lignosus, Trametes fumoso-avellanea などである。

(8) 九州とは 21 種，約 30% が共通で，九州を北限とするものには，*Amauroderma rugosum* (シユツケツマンネンタケ), *Cryptoderma lamaoense* (シマサルノコシカケ), *C. McGregorii* (ツクシサルノコシカケ), *C. pullum* (ヒメヒズメタケ), *C. substygium* (キヌハダタケモドキ), *Fomitopsis caliginosa* (クロブドウタケ), *Phellinus setulosus* (コブサルノコシカケモドキ), *Rigidoporus durus* (ヨソオイサルノコシカケ), *R. rhodophaea* (オウスルメタケ) がある。九州では日向の南部，大隅半島は一つの北限界をなすもので，以上のうち2～3は日本ではこの地方にだけ産するもののようである。

(9) 本州にまで北上する南方分子には次の如きものがある。*Podoscypha elegans* (タチウロコタケ), *Fomitopsis vinosa* (ブドウタケ), *Microporus affinis* (ツヤウチワタケ), *M. flabelliformis* (ウチワタケ), *Onnia Cumingii* (サジタケ), *Rigidoporus zonalis* (スルメタケ), *Trametes Palisotii* (チリメンタケ)。

(10) 筆者はかつて，日本産サルノコシカケ科の諸属と題して，新しい分類体系を世に問うたが，今回の研究によつて若干の訂正を行つた。即ち本文で新たに採用した属及び新たに設けた新属として次の如きものがある。

Polyporellus KARSTEN

筆者は前著"日本産サルノコシカケ科の諸属"に於いて *Favolus* FRIES emend. AMES なる属の中に上記の諸種を包括し，*Polyporellus* KARST. をその異名とした。然るに今回ニューギニア産の熱帯系標本を多数観察する機会を得，従来の解釈の不備を知り，旧 *Favolus* 属から *F. brumalis* その他を引き抜き，*Polyporellus* KARST. を復活し是に所属せしめた。即ち旧 *Favolus* sens. AMES を *Polyporellus* と *Favolus* FRIES emend. IMAZEKI の2属に分割したのである。

両属の本質的区別点は傘の肉と実質の質的異同にある。即ち *Polyporellus* では実質の菌糸は傘の肉の菌糸に比し明らかに繊細で，而も一般に膠着性がある為，乾燥した子実層托は多少に拘らず傘の肉よりも暗色且稍々半透明状をおび，又硬化して弾性を失い脆弱となる。是に対し *Favolus* emend. IMAZ. では両部の菌糸は同形同大で，典型的には (例 *F. alveolarius, F. grammocephalus* 等) 両者全く等質 (homogeneous) である。以上の他，両属は傘面に於ける表皮の分化にも差あり，*Polyporellus* では一般にその発達顕著であり，*Favolus* では殆ど分化しない。要するに *Favolus* は原始的であり，*Polyporellus* は進歩的であり，その関係は *Trametes* と *Tyromyces* のそれに類似する。

本属の基準種は *P. brumalis* オツネンタケモドキである。また日本産としては *P. brumalis* の他に *P. elegans* (BULL. ex FR.) KARST. ウスキアシグロタケ (新称), *P. picipes* (FR.)

KARST. アシグロタケがある。

本属の和文の記載を記すと次の様になる。

子実体は1年生，樹上生，一般に有茎，極めて稀に無茎，茎は中心生乃至側生，屢々明瞭な表皮を被むる；傘は円形，扇形又は笹形等，表面は一般に薄皮を被むり，平滑又は密毛をおびる；傘の肉は生時強靱な肉質乃至革肉質，乾けば收縮，硬化するも強靱性を失う，類白色；子実層托は管孔状，実質は傘の肉と異質，即ち実質を構成する菌糸は傘肉に比し纖細，且一般に膠着性を有す；孔口は円形，稀に放射状に長い蜂窩状，一般に微細，孔縁は薄く全縁又は細鋸歯縁；胞子は無色，平滑，嚢状体を欠く。

次に *Favolus* 属の解釈も変つてくる。

Favolus FRIES, emend. IMAZEKI

子実体は1年生，樹上生，有茎又は短脚状基脚を有する；茎は中心生，偏心生又は側生，茎の肉は強靱な革質；傘は薄質，扁平，表面は平滑又は鱗被を有し，表皮の分化は極めて不充分，傘の肉は稍々肉質或は革肉質乃至革栓質，類白色；子実層托は管孔状，実質は傘の肉と同質，孔口は一般に放射状に長い蜂窩状又は円形，中又は大形，孔縁は一般に不整細鋸歯縁，胞子は無色，平滑；嚢状体を欠く。

Rigidoporus MURRILL

筆者は前著に於いて本属を *Fomitopsis* の中に包括せしめたが，van OVEREEMの "*Rigidoporus* ist eine gut natürliche Gattung" なる考えに従い是を独立せしめる。*Fomitopsis* は元来可成り多型的な内容を有し，再検討の必要が多分にあつたが，今回 *Rigidoporus* を分割し，些かその純化を図つた。主なる特徴は，殻皮の分化が殆ど無いこと及び傘の肉と実質とが異質なことにある。

基準種は *R. zonalis* で，日本には *R. rhodophaeus* (LEV.) IMAZ. オウスルメタケ，*R. zonalis* (BERK.) IMAZ. スルメタケがある。

属の特徴は次の通りである。

子実体は1年生又は多年生，樹上生，無茎；傘は一般に扁平，乾燥すれば強く下方に屈曲する，傘の表面は無毛平滑，殻皮の分化は全く又は殆ど無い，傘の肉は類白色乃至淡黄色革栓質，乾けば著しく硬化，木質となる，子実層托は管孔状，1又は多層，実質は傘の肉と異質，色も一般に濃色，孔口は細小，円形；嚢状体を欠く，胞子は無色，平滑。

Trachyderma IMAZEKI, gen. nov.

Ganodermoideae の大部分では傘の肉がコルク質乃至木質で，一般に肉桂色又は焦茶色或は栗褐色などの色を呈するのに対して，本属では，生時肉質・多湿で強靱性に乏しく，しかも乾燥すると收縮，硬化して，木質様になるばかりでなく，肉の色は殆んど白く，他のマンネンタケ属，コフキタケ属と異る。また本属の2種共に，胞子は淡黄色をおび，広卵形，他属の胞

子にくらべて著しく巨大であることにも異彩がある。筆者は前著において *T. Tsunodae* を *Elfvingia*（コフキタケ属）においたが，今回海南島，比島，ニューギニアなどに産する *T. subresinosum* と共に *Elfvingia* から独立させる確信を得た。

属の記載は次の通りである。

子実体は1年生，樹上生；傘は無柄，扁平乃至山形をなし，表面に分化著しからざる殻皮を被むる，殻皮の面は著しく粗荒又は平滑，無光沢又は鈍光沢をおびる；傘の肉は類白色，生時肉質，多湿，柔軟，乾けば收縮して著しく堅硬となる；子実層托は1層，管孔状；胞子は卵形，淡黄色，*Ganoderma* 型；殻皮の構造は *Elfvingia* 型で柵状組織をなさない。

基本種：*Trachyderma Tsunodae* (Yasuda) Imazeki エビタケ。

Elmerina Patouillard

本属は熱帯固有のもので我国には産しない。

Daedalea に近縁で子実層に多細胞なる刺状体があることを最も顕著な特長とする。東亜特産の属で，1912 年 Bresadola が新設してより Patouillard, Trotter, Humphrey 等の採用することゝなつたが，Lloyd は是に反対している。蓋し Lloyd の如く Fries 式分類を踏襲する保守派にとつては，かゝる属を採用するならば他との調和が乱れ，徒らに困乱を增すのみであるから已むを得ない。然し乍ら Lloyd も云う様に，かゝる刺状体は独り本属のみならず *Lentinus* にもあり，又 *Hexagona, Daedaleopsis* 等にも存在するので，単に刺状体の存在のみを以て1属を設けるのは不自然であり，この点本属には尙多大の研究余地が残されている。筆者は今回本属を用いたが，内容的には将来多少の変更を加える必要が起ることを予想する。然し Humphrey も云う様にその結論を得るには尙多数の熱帯系 *Polyporaceae* に関する組織構造上の知識を深めてからでなければならない。

(11) こゝに報告された 71 種の菌の，ニューギニア以外の地方における分布は Table 1 に示した通りである。その大部分は従来の記録文献から拾つたものであるが，中には筆者自身が採集し，或は筆者の手元に，他の研究者から送られた実物資料にもとづいたものもある。これらのものには，未だ学界に発表されていないものがあるので，これをまとめると次の通りである。

1. Amauroderma scopulosum (Berk.) Imaz.

   資料：台湾高雄州恒春郡鵝鑾鼻熱帯性海岸林，Imazeki-R., 1940—XI—4 (208357)

2. Corioius Meyenii (Kl.) Imaz.

   資料：台湾，阿里山対高岳，*Machilus*上，Imazeki-R., 1940—III—16 (207937)；高雄州旗山郡扇平，Imazeki-R., 1940—XI—8 (208374)；同恒春郡高士仏，Imazeki, 1940—XI—2 (208353)；台北市，*Ficus elastica*上，Sawada-K., 1940—III—13 (208130).

3. Coriolus occidentalis (Kl.) Imaz.

資料：台湾，台北州文山郡乾溝，Imazeki-R., 1940—Ⅲ—25 (207995).

4. Cryptoderma pachyphloeum (Pat.) Imaz.

資料：台湾，花蓮港州玉里，Yamamoto-W., 1937—Ⅴ (208004).

5. Elfvingia tornata (Pers.) Murr.

資料：南洋群島，ポナペ島，Ezaki-T., 1939—Ⅶ (208311)；トラツク島，Ezaki-T. 1939—Ⅶ (208312)；パラオ，コロール島，Satake-Y., 1943—Ⅱ—2 (213805)；ヤツプ島，Huzii-K., 1945—Ⅷ—5 (201974).

6. Fomitopsis caliginosa (Berk.) Imaz.

和名：クロブドウタケ（新）　資料：宮崎県西諸県郡須木村，Imazeki-R., 1938—Ⅷ—2 (206787)；台湾，台中州新高郡内茅埔，Imazeki-R., 1940—Ⅲ—15 (207927)；同，竹山郡鶏頭，Imazeki-R., 1940—Ⅲ—13 (207945)；鹿児島県肝属郡田代村内の牧，Imazeki-R. et Nukumizu-T., 1950—Ⅹ—29 (林試 2640, 2641).

7. Fomitopsis dura (Jungh.) Imaz.

和名：ヨソオイサルノコシカケ（新）　資料：宮崎県西諸県郡須木村，Imazeki-R., 1938—Ⅷ—2 (206615, 206793)；台湾，台中州新高郡内茅埔，Imazeki-R., 1940—Ⅲ—15 (207929)；鹿児島県肝属郡田代村内の牧，ハイノキ *Symplocos prunifolia*, Imazeki-R. et Nukumizu-T., 1950—Ⅹ—28 (林試 2642).

8. Phellinus senex (Nees et Mont.) Imaz.

資料：台湾，台北市，*Melia azedarach* L.上，Yamamoto-W., 1936—Ⅰ (208006)；台中州竹山郡鶏頭，Imazeki-R., 1940—Ⅲ—13 (207946～7, 207951).

9. Trametes fumoso-avellanea Romell

資料：台湾，高雄州恒春郡クラル，Kusano-S., 1908—Ⅻ (212077)；同旗山郡扇平，Imazeki-R., 1940—Ⅺ—8 (208381).

PLATE I

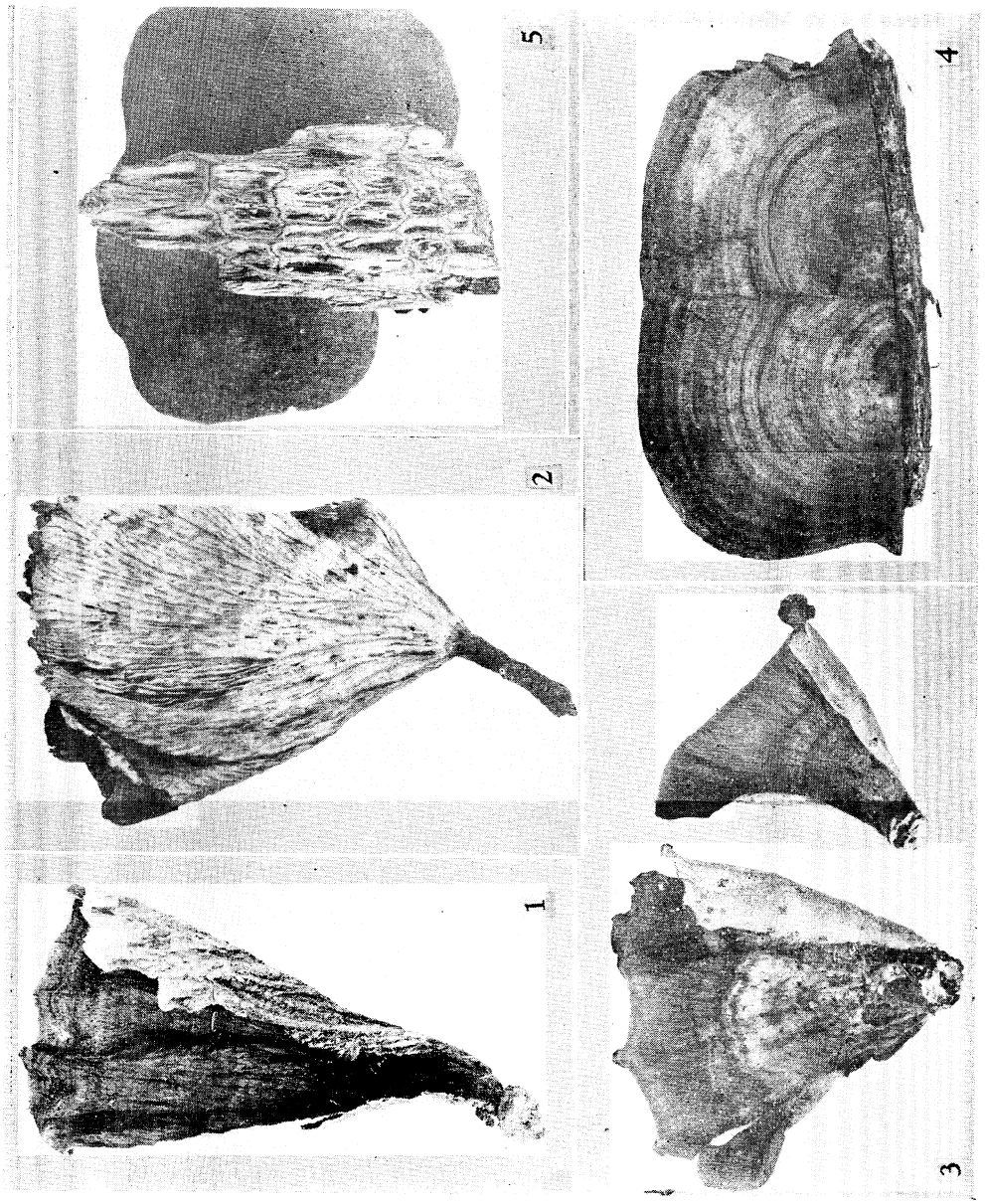


PLATE Ⅱ

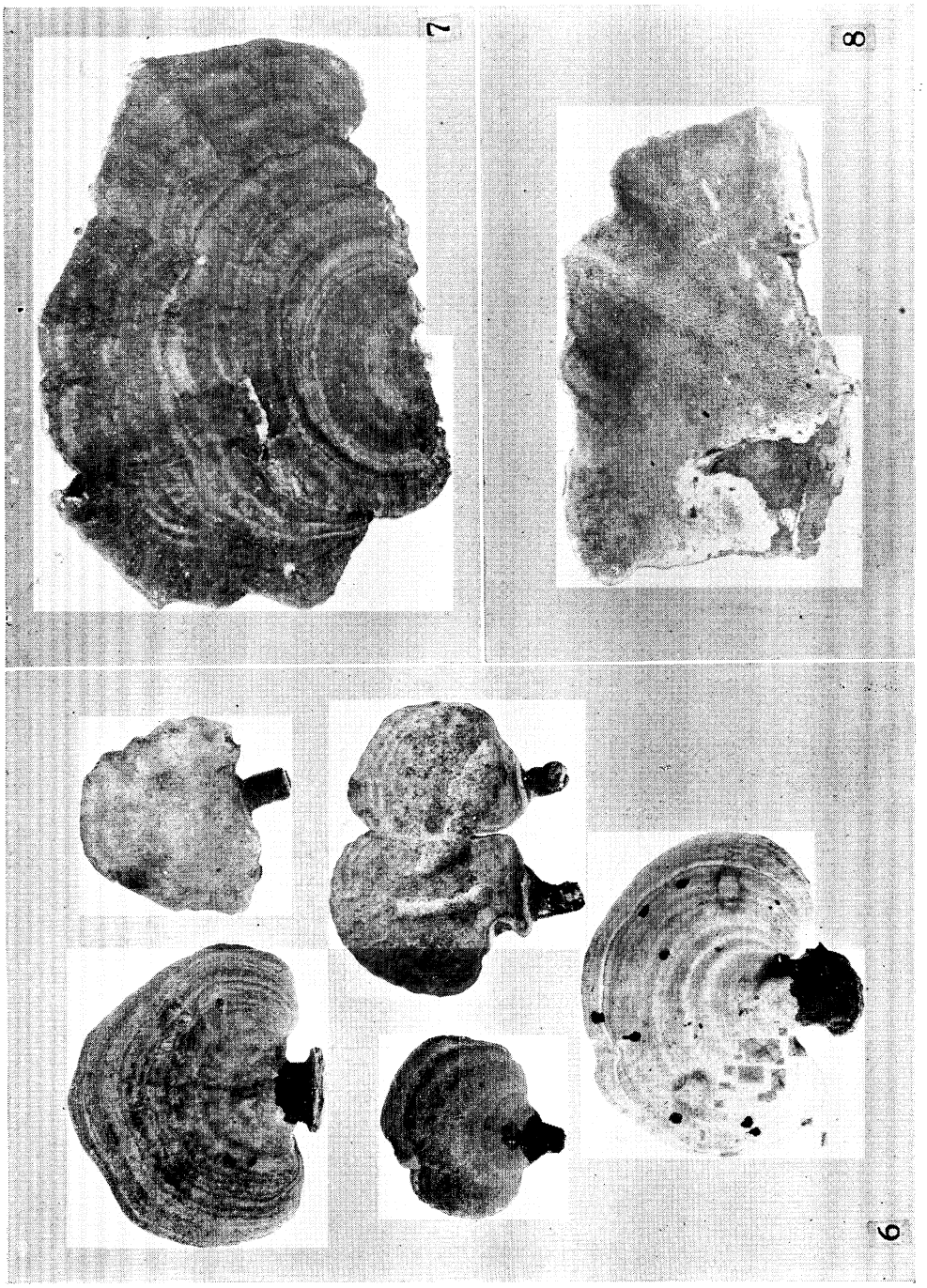


PLATE Ⅲ

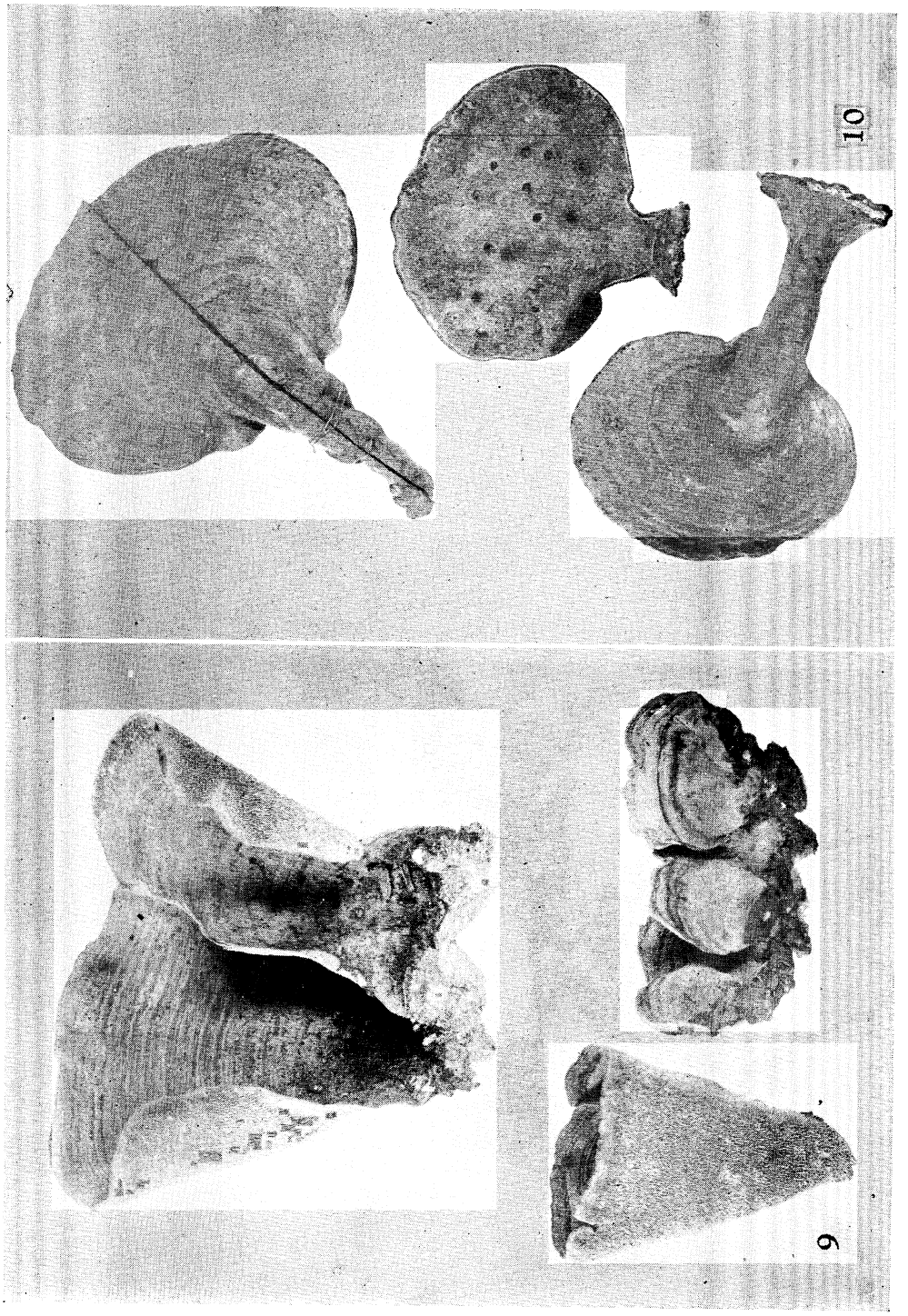


PLATE Ⅳ

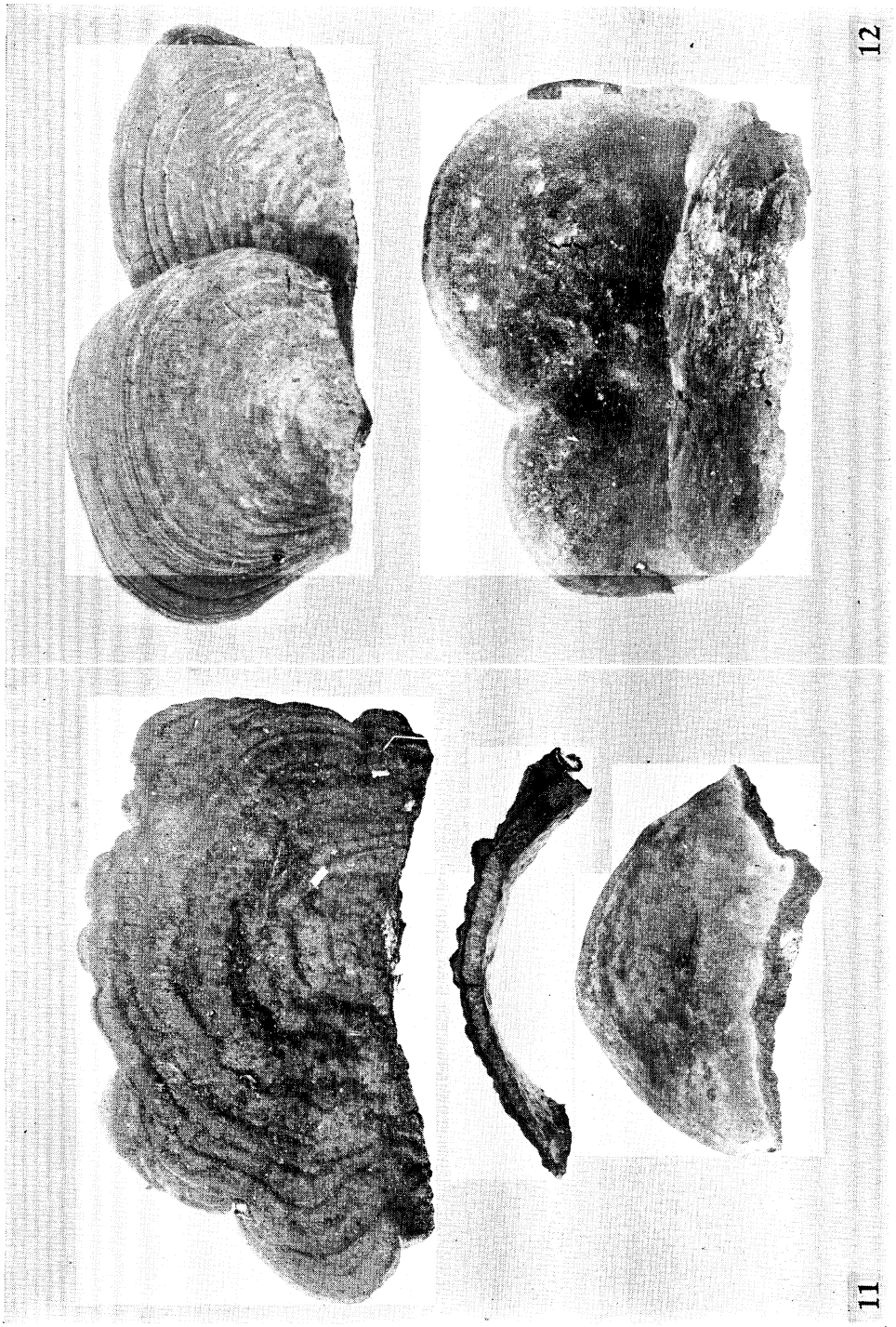


PLATE V

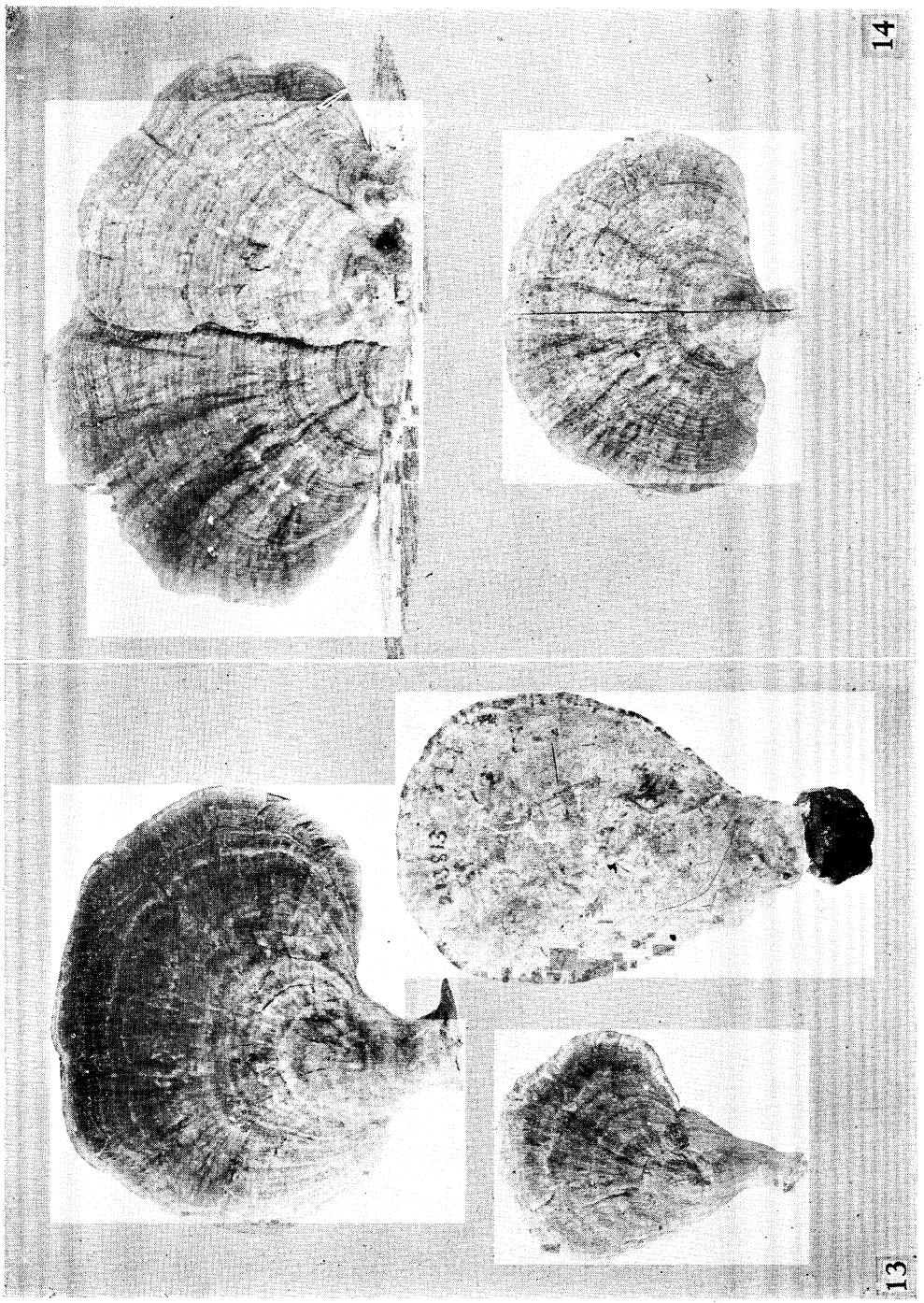


PLATE VI

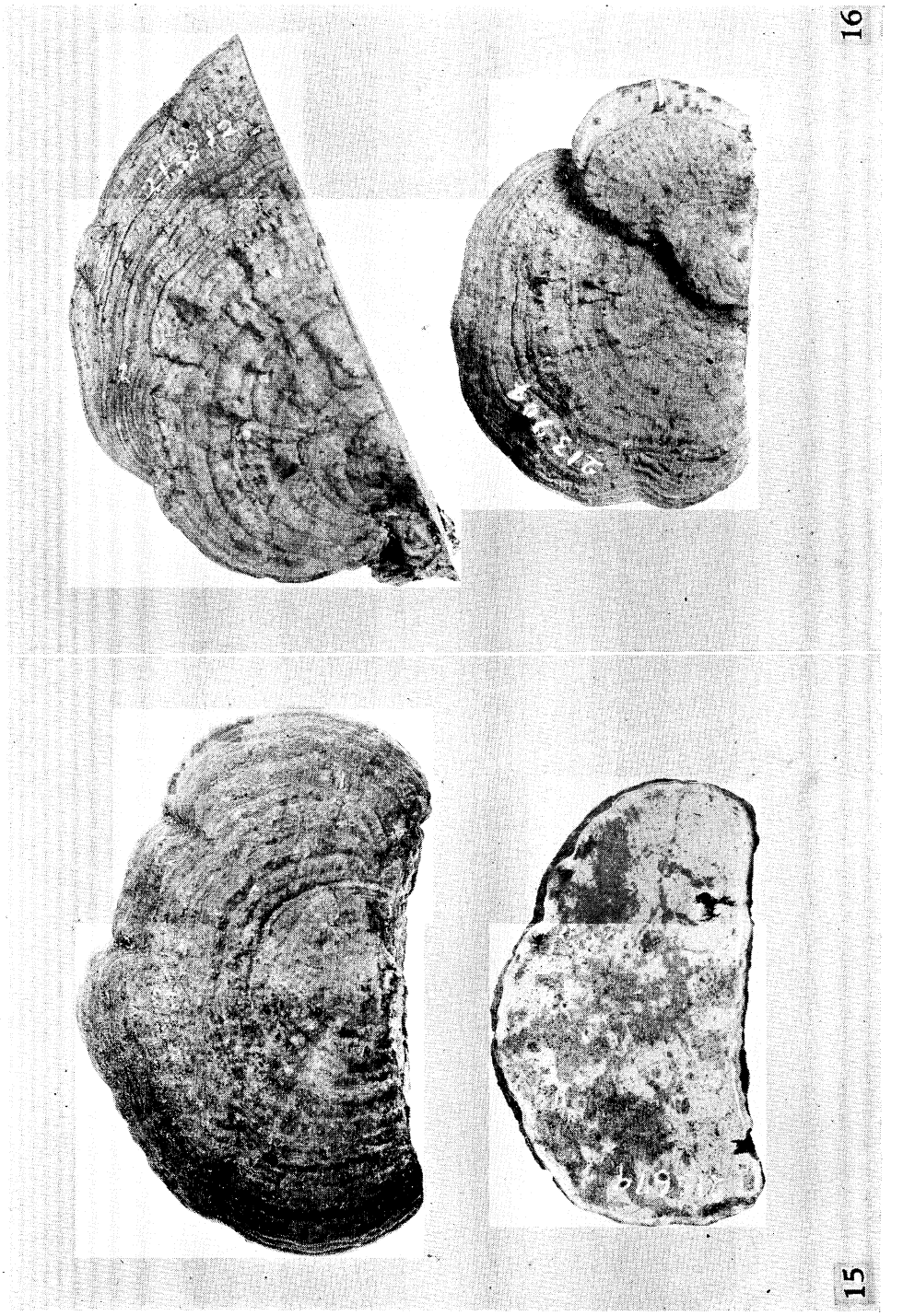


PLATE Ⅶ

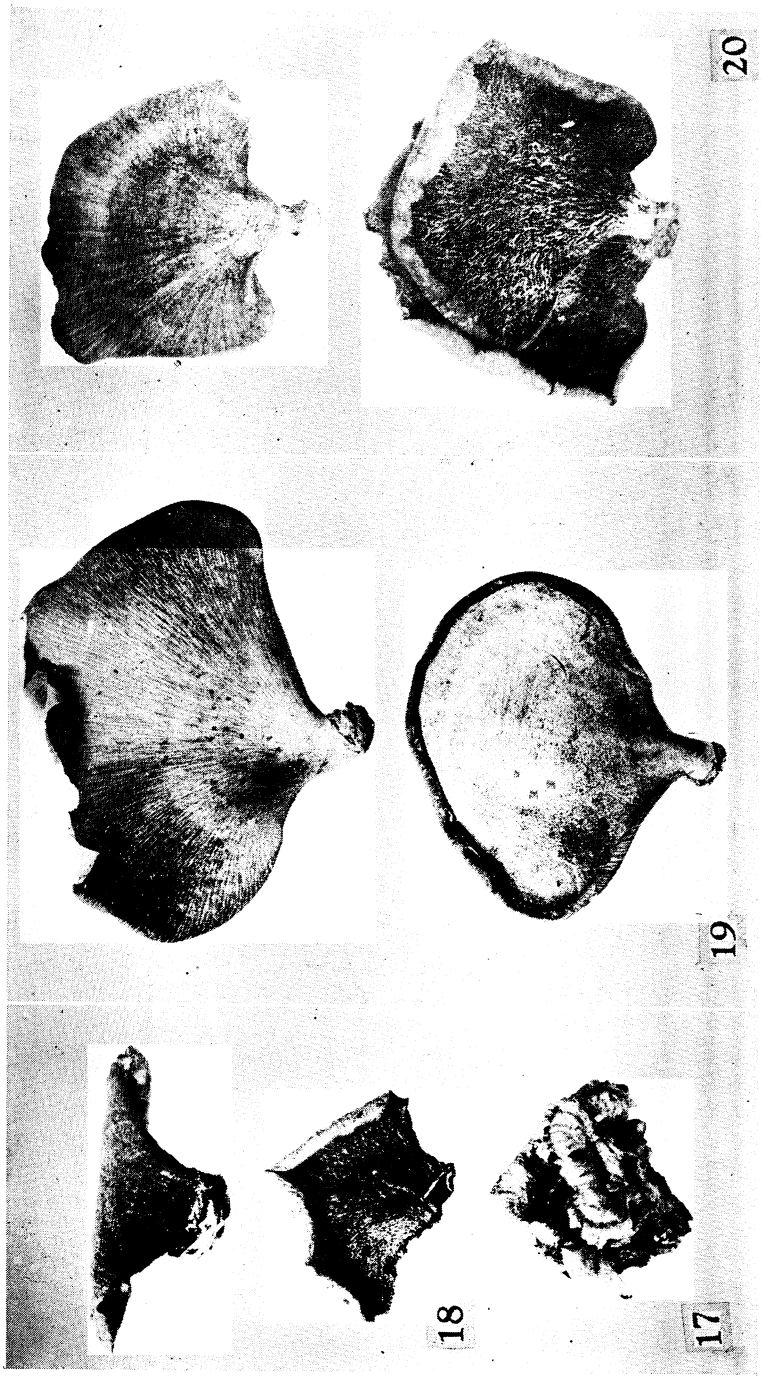


PLATE Ⅷ

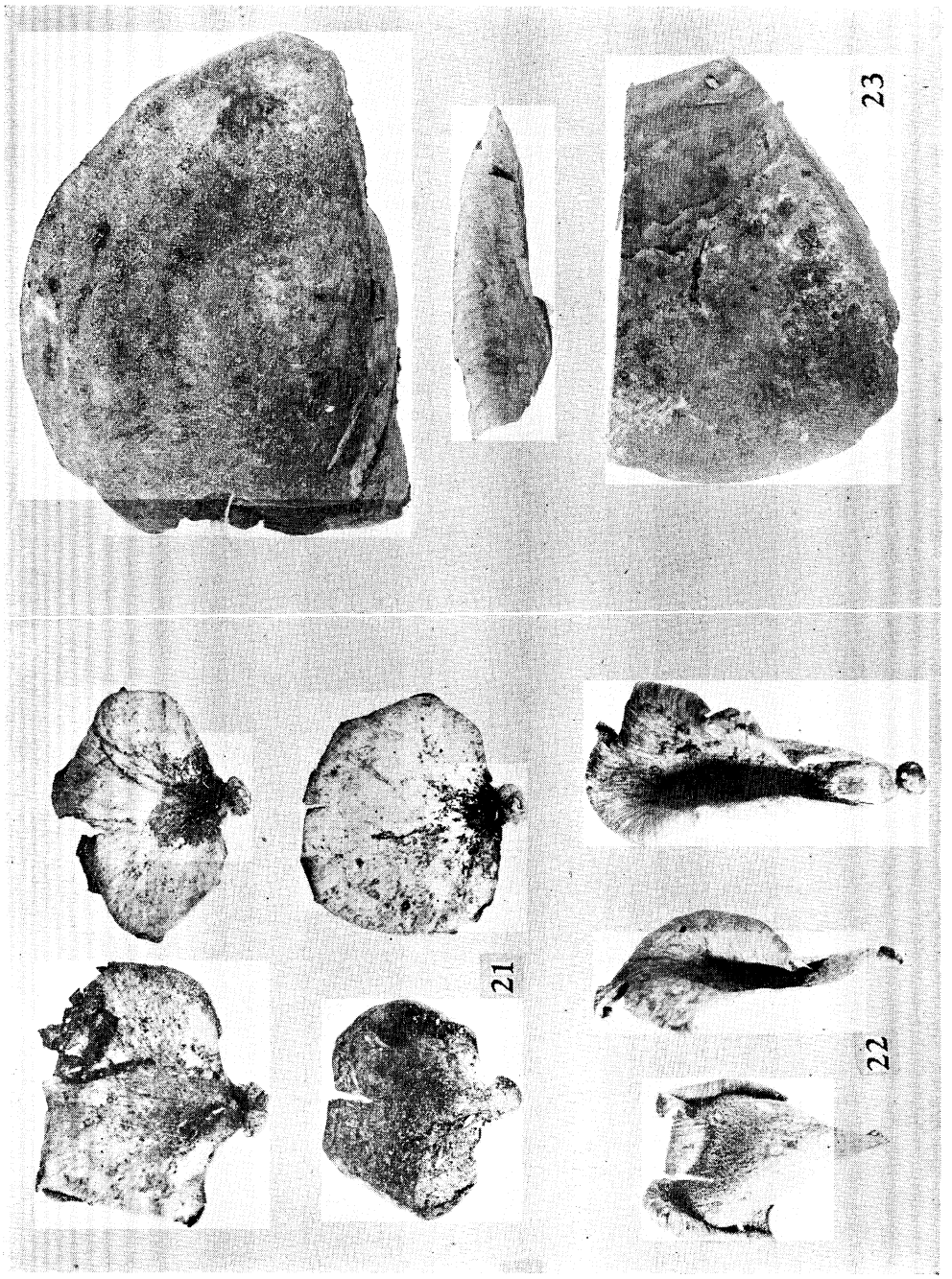
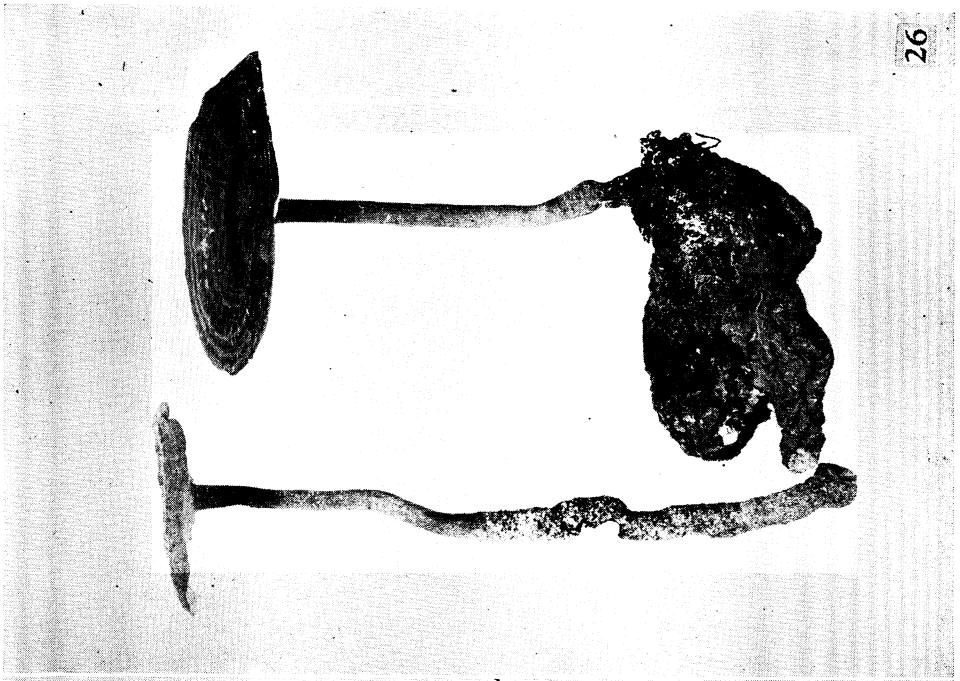


PLATE Ⅸ



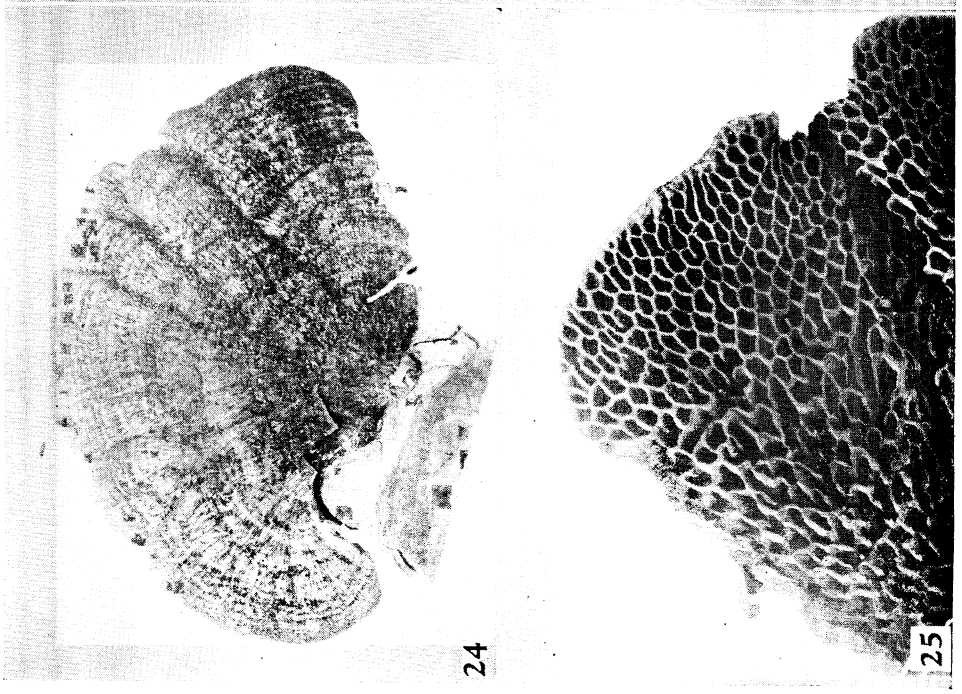


PLATE X

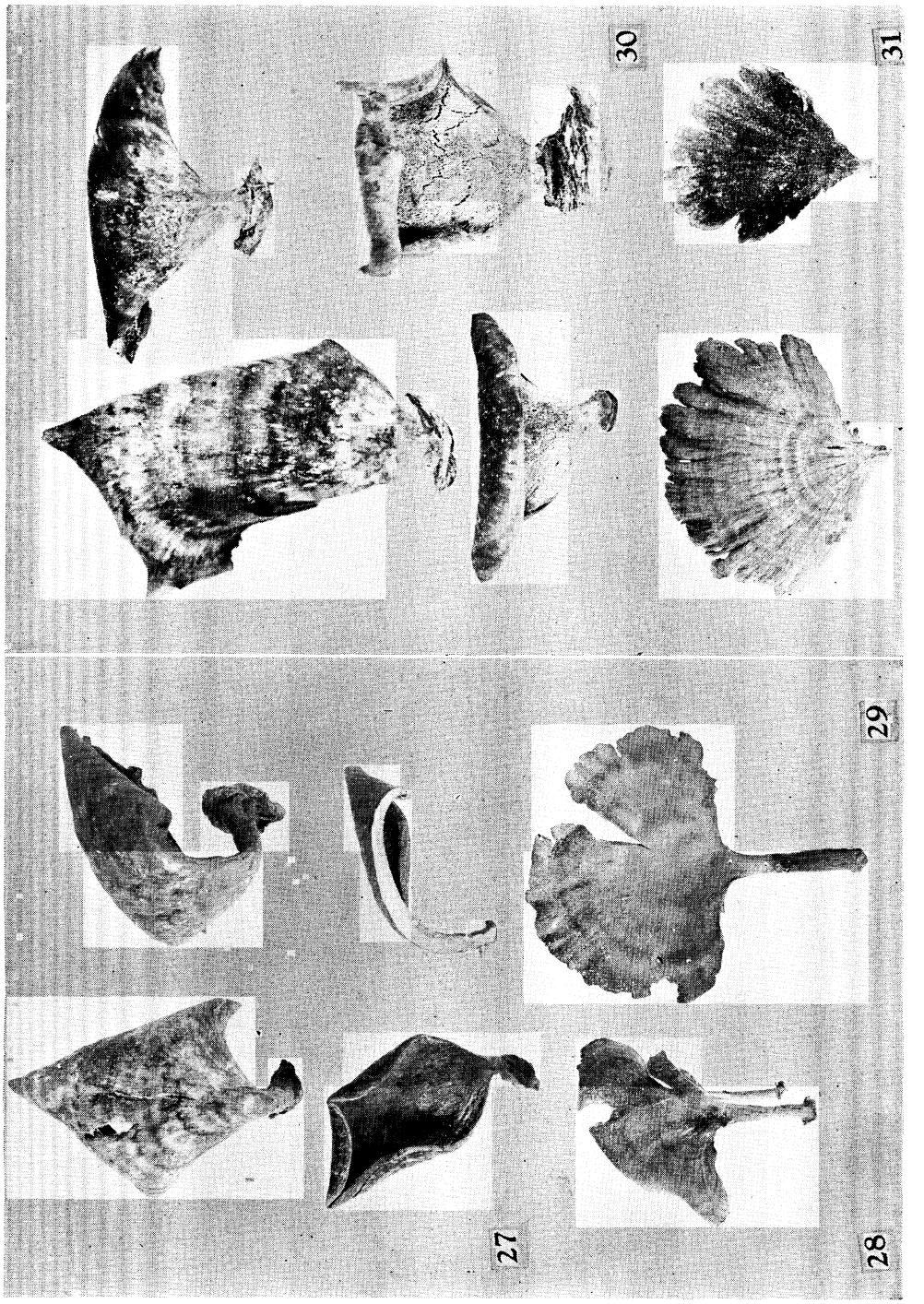


PLATE XI

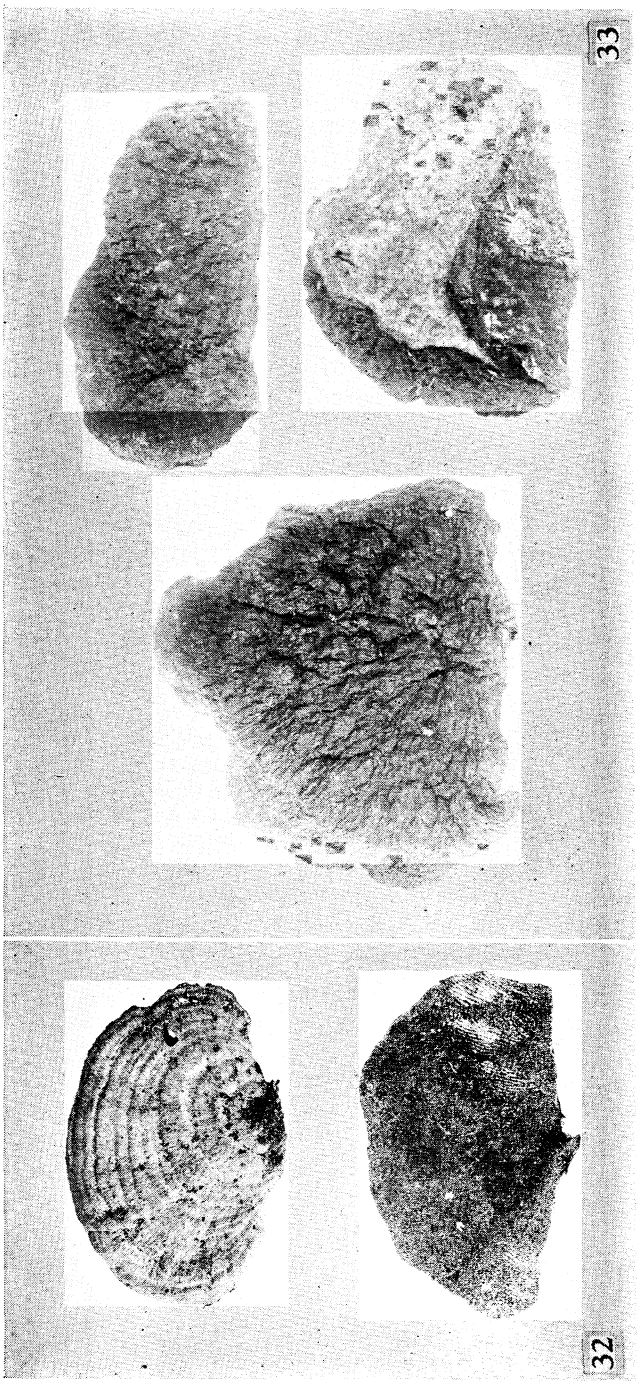


PLATE XII