VI.—OBSERVATIONS ON THE GROUPS OF FUNGI AND ACKNOWLEDGMENT FOR ASSISTANCE IN DETERMINING SPECIES.

In naming fungi and for the classification of the fungi generally, frequent use has been made of Engler and Prantl's Die Natürlichen Pflanzenfamilien, Saccardo's Sylloge Fungorum, C. G. Lloyd's Mycological Notes and Monographs and Ainsworth and Bisby's Dictonary of Fungi, in which is reproduced as an appendix G. W. Martin's Key to the families of fungi.

The families of the Myxomycetes are listed in the order in which they appear in Lister's Mycetozoa (1925 ed.), the genera being placed in alphabetical order; the classification followed in the Phycomycetes is that used by Fitzpatrick in his book on the Lower Fungi (1930).

The arrangement of the Ascomycetes presented some difficulties. The Endomycetales, 'lower' or degenerate forms, include a number of parasites on humans, and in this group the classification in Dodge's Medical Mycology has been adopted. Species which, according to Dodge, are imperfect forms of Eremascaeae, or Saccharomycetaceae are placed, with the Trichophytonaceae (according to Dodge 'Gymnoascaceae Imperfectae') at the end of the Fungi Imperfecti. In the classification of the Myriangiales, Sphaeriales and Microthyriales the author is in agreement with the views expressed by Hansford in his paper on 'The Foliicolous Ascomycetes' (1946), and these groups have been arranged in accordance with his suggestions.

The nomenclature followed in listing the lichens is that of Zahlbruckner's Catalogus Lichenum Universalis; reference is made to the volume and page of this work on which each species is recorded, whether its occurrence in southern Africa is mentioned or not. This departure from the general rule to include only South African references is made because of the unsatisfactory state of the literature on South African lichens. In two cases Zahlbruckner's nomenclature has not been followed: Magnusson's papers on the genus Acarospora are considered authoritative for that genus, and Motyka's nomenclature in the genus Usnea has been followed as far as available, but his monograph is unfortunately incomplete.

The Myxomycetes (Mycetozoa) are fairly well represented, especially near the coast and in wooded areas; so far the species collected have been those found in temperate and subtropical regions in other parts of the world.

A few Myxomycetes were listed by Kalchbrenner (1882: 143) from specimens sent by MacOwan and Medley Wood, but the study of these organisms in South Africa is largely the work of Miss A. V. Duthie, who made extensive collections in the forests of Knysna and the woods around Stellenbosch. She published lists of South African species in 1917 and 1918. She also sent material to Miss Gulielma Lister, who in her Note to the third edition of Lister's Mycetozoa stated that the collections made by Miss A. V. Duthie in the Cape Province have extended our knowledge of the range of many species. It is probable that a number of species recorded in the third edition of this work from 'Cape Province' or 'South Africa' were collected by Miss Duthie in the areas mentioned above. Comparatively few species have been collected in the forest areas of the eastern Cape, Natal and the Transvaal. This is probably because most of these forests are difficult of access in the wet season and because such delicate organisms cannot be preserved satisfactorily without carrying special equipment.

Phycomycetes are not abundant, presumably because the climate is too dry and temperatures too high for many of the plant parasites. Next to nothing is known of the aquatic forms, but these have frequently been observed and should be an interesting subject for future investigation.

Species of Phytophthora and of the Peronosporaceae on cultivated plants are often troublesome in wet seasons and in the south-western Cape a few species have been found on indigenous plants and on weeds. A study of the Pythiaceae has been made by V. A. Wager, who has been consulted about identifications of species not included in his published work. He has found a number of species of Pythium and Phytophthora on underground parts of plants.

Some of the more common Zygomycetes have been recognised, and of these *Rhizopus nigricans* is perhaps the most widespread; it is extremely destructive to fruit, tubers and other stored parts of plants. No general study has been made of moulds belonging to the Mucorales; a few isolated records such as those of *Circinella Sydowii* and *Syncephalastrum racemosum* from the gold mines, *Cunninghamella* from locust eggs and *Haplosporangium bisporale* from a wilted bean plant are sufficient to indicate that a study of the Zygomycetes would probably reveal the presence in South Africa of moulds belonging to other of the less common genera.

A number of Entomophthorales attack injurious insects such as flies, aphids and locusts; of these *Empusa Grylli* has attracted the most attention as it is periodically a factor in the control of locust swarms.

Ascomycetes are present in great numbers in the subcontinent; they are particularly numerous, as might be expected, in forests and wooded areas, but many unusual species have been found in less humid situations. There are indications that a study of the fungus and lichen flora of the arborescent Euphorbias might prove particularly interesting. Some work has been done in Pretoria on leaf inhabiting ascomycetes, especially those belonging to the Meliolaceae and the Microthyriales; the Phyllachoraceae and Valsaceae have also been studied. Mr. C. G. Hansford has been responsible for the identification of some of the leaf parasites, and to him the author is indebted for naming all the hyperparasites and for much advice and help. The Xylariaceae were submitted to Professor Julian Miller, who published the result of his study of the South African collections (1942) and has since kindly identified further specimens which were sent to him. Apart from the Valsaceae and Xylariaceae, ascomycetes growing on wood and decaying vegetable matter have been largely neglected, and so also have the coprophilous species.

Of the Hypocreaceae, *Epichloe cinerea* appears to be the most common species, occurring on a wide range of grasses. The sclerotia of a number of ergots have been collected on various hosts; a number of these have been germinated by Miss E. J. Scott, but her work is not yet complete and these can only be listed as *Claviceps* spp. Where the ascus stage has not been obtained, the records are included in the Fungi Imperfecti as *Sphacelia* spp. A number of samples of ergot from native grasses were analysed by a pharmaceutical firm and said to be deficient in alkaloid and of no value for pharmaceutical purposes. The most common species, *Claviceps Paspali*, has been proved to cause poisoning in cattle, the symptoms being inco-ordination of movement in varying degree up to complete paralysis (Mitchell 1918 b).

Many species of the Sphaeriales on cultivated plants are known only through their parasitic conidial stage or stages and are listed in the Fungi Imperfecti with a reference to the ascus stage, where it is known. When the perfect stage has been found, e.g. in the case of *Valsa leucostoma*, only these rare occurrences are recorded in the ascomycete list, with a cross reference to the more common conidial forms. An exception has been made in the case of common mildews of cultivated plants, which, in order to avoid adding to the long list of *Oidium* spp., are listed with the Erysiphaceae even if the perithecia have not been found.

Discomycetes are fairly abundant, but few have yet been collected and still fewer identified. *Morchella conica* occurs in oak woods and among shrubs in various localities in the Cape Peninsula. Marloth, in 1913, stated that 25 years earlier he found only a few specimens among oaks at the Round House near Cape Town, but gradually the plant has spread and occurs now in various localities in the Cape Peninsula and probably elsewhere. The Tuberales are represented only by *Pseudobalsamea* growing in mushroom beds and by species of Terfezia found in arid regions.

The few Laboulbeniaceae on record are apparently known only from Thaxter's studies of specimens found on insects in museum collections ; no one in South African has scrutinized insects for these peculiar forms.

The lichen flora is remarkably rich and varied, near the coast and in the interior, in forest and in desert, but the records of the lichens of southern Africa are unfortunately in a confused state and some identifications probably not accurate. For this reason, it has been argued by Mr. Garside that publication of a list of species at this stage will tend to perpetuate errors which have been made. If, however, it is borne in mind that the list is intended only as a guide to the very scattered literature on South African lichens and to specimens in South African herbaria, such a record should be of value to future workers and perpetuation of errors avoided.

The first list of African lichens, Stizenberger's ' Lichenaea Africana ' (1890–1895) gives few details about distribution and many of the earlier publications to which he refers are not available in this country. Wainio's Monograph on the genus Cladonia has not been accessible and many details might be filled in were it possible to consult J. Müller's (Arg.) ' Lichenologische Beiträge ' published in Flora (1880–1888).

Although MacOwan and doubtless other collectors numbered their specimens no numbers are quoted by Stizenberger nor by Motyka in his recent monograph on the genus Usnea. This omission makes it impossible to link references to collections quoted by the two authors ; a number of species of Usnea listed by Stizenberger are said by Motyka not to occur in South Africa. In such cases the discrepancy is indicated in a foot note.

It is most unfortunate that no sets of lichens collected by MacOwan, Wilms and earlier collectors are to be found in South Africa, the few MacOwan specimens detected being imperfectly labelled. As indicated elsewhere type specimens are to be found in several European herbaria. In more recent years, van der Byl made extensive collections of lichens, which are to be found in the Department of Botany of the University of Stellenbosch. He sent specimens for identification to Miss Annie Lorrain Smith, to G. K. Merrill, E. A. Wainio and A. Zahlbruckner ; where his records show which of these lichenologists was responsible for the identification of series of numbers, this information is included in the record, unless it has been published. A number of new species were described by Wainio and Zahlbruckner, and in Zahlbruckner's papers on African lichens, the numbers of van der Byl lichens identified, as well as those of the type specimens of new species are quoted.

South African students of lichenology are lamentably few. Mr. S. Garside has long been interested in this subject and many of his collections are quoted in Motyka's monograph of the genus Usnea. Thanks are due to him for the identification of specimens in the Pretoria collections of the Roccellaceae, Stictaceae and Teloschistaceae, families which are his present subject of study.

Basidiomycetes are abundant. The Ustilaginales are represented by most of the important smuts in cereals and a considerable number on wild hosts, notably on grasses of the section Andropogoneae. Fungi of this group were sent for identification to Zundel, who has cited South African specimens in a number of papers and has published a general account of the smuts of southern Africa.

The Uredinales are represented by numerous rusts on cultivated plants and an even greater number on indigenous hosts ; it is thought that the tale of South African rust fungi is by no means complete, and nothing is yet known of the life histories of most of the heteroecious species. The familiar generic names Puccinia and Uromyces have been retained, and in general the nomenclature of Sydow's Monograph (1904–1924) has been followed. More recent classifications, based on spore forms in the life cycle of the rust fungi, are impossible of application to South African species until life histories have been studied. The earliest paper on South African rust fungi is by Pole Evans (1916 a) ; later studies by the author were published in Bothalia.

For identification of numerous Hymenomycetes and for revision of the nomenclature of the whole group, the author is greatly indebted to Miss E. M. Wakefield of Kew Herbarium. Thanks are also due to Miss A. M. Bottomley for her very considerable help in compiling

data about the Hymenomycetes. In earlier years many specimens were examined by C. G. Lloyd, and papers on the South African species of Thelephoraceae and Polyporaceae were published by van der Byl ; a few species of Thelephoraceae were sent to Burt, who included them in his monograph of the family. The Thelephoraceae are fairly well represented, especially in forest and plantations ; of the Clavariaceae 33 species are recorded and 30 species of the Hydnaceae.

Polyporaceae are numerous and have been collected extensively by van der Byl and Keet and in more recent years by Rump. A large number of species has been identified, but the mass of unidentified material not yet studied probably includes species not recorded from South Africa or undescribed. A few of these fungi are actively parasitic and are known to cause injury to trees ; in the forests *Ganoderma applanatum* injures ironwood trees (*Olea laurifolia*) and *Fomes rimosus* causes heartwood of sneezewood (*Ptaeroxylon utile*) ; *Ganoderma lucidum* attacks willows and native Acacias. A number of species cause decay in commercial timber, especially that used underground in the form of mine props.

The Boletoideae are more numerous than indicated in the list, where six out of the eleven species of Boletus recorded are represented by only one or two collections, probably because the fungi often collapse and decay before they can be satisfactorily studied. Marloth (1913 : 23) states that *Boletus edulis* is to be found in almost all the oak woods around Table Mountain, as well as at the Paarl, Stellenbosch and Wellington, appearing in April and May according to the autumnal rains. This fungus attains much larger dimensions than in Europe, weighing not rarely 2 lb. and occasionally 3 lb., the cap being 8 or 10 or even 12 in. in diameter. *Boletus bovinus* occurs more frequently in pine woods.

There has been no critical study of the Agaricaceae, the only publication on this group being a paper by van der Byl on the genus Lentinus. In the more humid regions great numbers of these fungi appear annually, but in more arid districts their appearance is sporadic and dependent on a very variable rainfall. Most of the Agarics become infested with insects and soon break down, especially in hot weather, and they are difficult to identify from dried specimens, even with accompanying notes about size and colour. A study of this group will only be effective when it can be carried out over a period of years by someone familiar with species occurring in other parts of the world.

Many of the cosmopolitan species are common, including edible species of Psaliota, Lepiota and Coprinus. One of the mushrooms most relished by the natives is the ' ikowe ', *Schulzeria Umkowaan*, a large species with white gills ; this mushroom has a long, tough, subterranean stipe, which can always be traced to its origin in a termite comb. *Collybia albuminosa* grows on exposed termite nests, and *Entoloma microcarpum* develops in great numbers on the ' fungus garden ' prepared by the termites, which bring to the surface a spreading layer of finely triturated termite comb.

The parasitic *Armillaria mellea* has caused serious damage, chiefly in the plantations of the northern Transvaal, where it spread to trees in plantations from stumps of indigenous trees not removed when the native bush was cleared.

Several poisonous species occur fairly commonly, but comparatively few cases of mushroom poisoning have been reported ; this is probably because mushrooms are avoided as an article of diet by many people, who are not confident that they can recognise the edible varieties. *Amanita muscaria* is often abundant under oaks or pine trees ; the vivid colouring of this species acts as a danger signal and it is not known to have caused poisoning. In a number of cases which have been reported the information is incomplete and it has been impossible to discover what fungi are responsible.

Cases of poisoning have occurred which were directly due to *Amanita phalloides ;* the first record of poisoning by this fungus reported to Pretoria was in 1925, when it was the cause of three deaths in the Harrismith district. Marloth (1912 : 21) states that numerous cases of poisoning have been caused by this plant ; he mentions that a cook at Elsenburg College, an Indian who had come from Natal, was thrown into terrible agony for 36 hours merely by having eaten some rice boiled in a pot which his mate had just used for stewing some of the Amanita ; the mate died the same day. Marloth adds that the squirrels on

the Cape woods, which are fond of *Boletus edulis*, do not touch the *Amanita phalloides* although both kinds of fungus grow often intermingled.

Amanita pantherina is an equally dangerous species and is known to have been responsible for several cases of poisoning. A fatal case was reported from Cape Town in 1927 (Silbauer and Mirvish 1927). On May 15 of that year an impoverished family of three adults and four children gathered mushrooms on the slopes of Table Mountain and 4.30 p.m. all partook of a meal of these fungi, which, in later investigations by Dr. Marloth, proved to be in part *Amanita pantherina*. At 6.15 p.m. a doctor was summoned and he found the two youngest children in a state of coma ; while he was examining them the mother complained of feeling dizzy and became drowsy and semi-conscious. The whole family was taken to hospital. The mother died at 6 a.m. on May 17th, a girl aged 14 at 3.40 p.m. on the same day ; the three younger children, aged 2½, 3½ and 10 died on the morning of the 18th. The father and an elder son aged 18 lived until the following day, but not one of the family survived.

An unnamed species of Hebeloma, common in the neighbourhood of Pretoria, is considered by some a good edible variety ; others after eating a small portion of this mushroom are soon attacked by headache, dizziness and cramp.

The Gasteromycetes are well represented and a number of particularly interesting species have been found. Several papers on fungi of this group have been published by Verwoerd and N. J. G. Smith ; a comprehensive account of the Gasteromycetes of Southern Africa has recently been written by Miss A. M. Bottomley for publication in Bothalia.

Many Fungi Imperfecti parasitic on cultivated plants and a smaller number on indigenous hosts are known, but very few of these species have been traced to the ' perfect ' form. Mildews are extremely common on a wide range of hosts, and for the sake of completeness—with the exception of certain common species on cultivated plants (see notes on ascomycetes)—these are listed as *Oidium* spp. and grouped according to the family of the host.

Maize becomes seriously infected with *Diplodia Zeae*, which Mitchell (1918 a) proved to be a cause of inco-ordination of movement and paralysis in cattle. He was able to produce symptoms of poisoning after having fed 20 lb. of artificially infected maize to bovines. Theiler (1927) found that 2–3 lb. of maize infected with *Diplodia Zeae* caused poisoning within 2 days ; results of feeding experiments with pigs and horses were negative.

The Cerebella spp. found on a number of grasses are not parasitic on these plants but are saprophytes growing on the honey dew secretion associated with the Sphacelia stage of Claviceps spp. The fungi of this genus need study, not only as they occur on grasses, but in culture, before the species can be determined. With the exception of *Cerebella Cynodontis*, which was described by Sydow from a South African specimen, these fungi have not been assigned to a species.

For assistance with the identification of a number of Fungi Imperfecti, thanks are due to Miss E. M. Wakefield and to the Director and staff of the Imperial Mycological Institute. Mr. C. G. Hansford has kindly identified the hyperparasites. The species of Helminthosporium on cereals and grasses were identified by Miss K. M. Putterill, formerly on the staff of the Cryptogamic Herbarium, Pretoria.

STATISTICAL SUMMARY.

Summary of the number of Genera, species and varieties recorded in each family and group.

Group and Family.	Genera.	Species.	Varieties.	Forms.
Myxomycetes—				
Ceratiomyxaceae	1	1	2	—
Physaraceae	10	45	4	—
Didymiaceae	2	5	2	—
Stemonitaceae	4	13	2	—
Amaurochaetaceae	1	1	—	—
Heterodermaceae	2	4	—	—
Tubulinaceae	1	1	—	—
Reticulariaceae	2	2	—	—
Lycogalaceae	1	3	—	—
Trichiaceae	2	9	—	—
Arcyriaceae	2	9	—	—
TOTAL NUMBER OF MYXOMYCETES	28	93	10	—
Phycomycetes—				
Chytridiales—				
Plasmodiophoraceae	3	3	—	—
Woroninaceae	1	1	—	—
Synchytriaceae	1	3	—	—
Cladochytriaceae	1	1	—	—
Blastocladiales—				
Blastocladiaceae	1	1	—	—
Saprolegniales—				
Saprolegniaceae	1	1	—	—
Peronosporales—				
Albuginaceae	1	10	—	—
Pythiaceae	2	17	1	—
Peronosporaceae	4	16	—	—
Mucorales—				
Mucoraceae	3	10	—	—
Pilobolaceae	1	1	—	—
Choanophoraceae	1	1	—	—
Piptocephalaceae	1	1	—	—
Entomophthorales—				
Entomophthoraceae	2	10	—	—
TOTAL NUMBER OF PHYCOMYCETES	24	77	1	—

Group and Family.	Genera.	Species.	Varieties.	Forms.
Ascomycetes—				
Laboulbeniales—				
Laboulbeniaceae	3	5	—	—
Peyritschiellaceae	3	3	—	—
Endomycetales—				
Ashbyaceae	2	2	—	—
Endomycetaceae	1	1	—	—
Coccidioideaceae	2	2	—	—
Sacchararomycetaceae	2	4	—	—
Taphrinales—				
Protomycetaceae	1	1	—	—
Taphrinaceae	1	4	—	—

Group and Family.	Genera.	Species.	Varieties.	Forms.
Myriangales—				
Myriangiaceae	2	2	—	—
Dothideaceae	15	19	—	—
Parodiellinaceae	4	4	—	—
Erysiphaceae	6	29	1	—
Meliolaceae	8	102	3	—
Eurotiaceae	3	3	—	—
Sphaeriales—				
Chaetomiaceae	1	5	—	—
Sordariaceae	4	12	—	—
Sphaeriaceae	22	44	2	—
Ceratostomataceae	1	3	—	—
Hypocreaceae	21	69	—	—
Lophiostomataceae	1	1	—	—
Mycosphaerellaceae	21	79	—	—
Gnomoniaceae	4	6	—	—
Valsaceae	13	35	—	—
Phyllachoraceae	9	81	2	—
Capnodiaceae	4	6	—	—
Chaetothyriaceae	2	3	—	—
Coryneliaceae	3	3	—	—
Melogrammataceae	2	3	1	—
Microthyriales—				
Stigmateaceae	6	9	—	—
Microthyriaceae	21	51	1	—
Asterinaceae	7	65	4	—
Trichothyriaceae	2	3	—	—
Trichopeltaceae	1	2	—	—
Hemisphaeriaceae	7	13	—	—
Hysteriales—				
Hysteriaceae	4	6	1	—
Phacidiales—				
Phacidiaceae	2	3	—	—
Pezizales—				
Pezizaceae	17	34	—	—
Helvellaceae	2	3	—	—
Helotiales—				
Dermateaceae	8	13	—	—
Orbiliaceae	3	4	—	—
Hyaloscyphaceae	1	1	—	—
Helotiaceae	10	18	—	—
Patellariaceae	9	11	—	—
Tuberales—				
Tuberaceae	2	4	—	—
TOTAL NUMBER OF ASCOMYCETES	274	835	15	—
Lichenes—				
Pyrenocarpeae—				
Verrucariaceae	2	6	1	—
Dermatocarpaceae	3	7	—	—
Pyrenulaceae	8	48	3	1
Trypetheliaceae	3	5	—	—
Paratheliaceae	1	1	—	—
Astrotheliaceae	1	1	—	—
Strigulaceae	1	6	1	—
Pyrenidiaceae	1	1	—	—
Mycoporaceae	2	2	—	—
Gymnocarpeae—				
Caliciaceae	1	4	—	—
Cypheliaceae	1	2	—	—
Sphaerophoraceae	1	1	—	—
Arthoniaceae	2	32	1	—

Group and Family.	Genera.	Species.	Varieties.	Forms.
Cryptotheciaceae	1	1	—	—
Graphidiaceae	8	48	3	—
Chiodectonaceae	4	10	2	1
Dirinaceae	1	1	—	—
Roccellaceae	2	10	6	1
Lecanactidaceae	3	7	—	—
Pilocarpaceae	1	1	—	—
Chrysothricaceae	1	1	—	—
Thelotremaceae	4	13	2	—
Diploschistaceae	3	12	3	1
Gyalectaceae	3	3	—	—
Coenogoniaceae	1	2	—	—
Ephebaceae	1	1	—	—
Pyrenopsidaceae	4	6	—	—
Collemaceae	4	26	7	1
Heppiaceae	1	3	1	—
Pannariaceae	5	12	5	—
Stictaceae	2	28	11	4
Peltigeraceae	3	11	—	4
Lecideaceae	7	167	14	14
Phyllopsoraceae	1	4	2	—
Cladoniaceae	4	25	19	11
Gyrophoraceae	2	5	2	1
Acarosporaceae	3	45	3	—
Pertusariaceae	1	48	4	—
Lecanoraceae	9	82	13	9
Parmeliaceae	2	131	39	12
Usneaceae	6	98	14	6
Caloplacaceae	3	86	12	6
Teloschistaceae	2	18	12	7
Buelliaceae	2	91	13	6
Physciaceae	3	42	12	7
Lichenes Imperfecti	1	5	—	—
TOTAL NUMBER OF LICHENS	126	1,159	205	92
Basidiomycetes—				
Hemibasidii—				
Ustilaginales—				
Ustilaginaceae	8	103	—	—
Tilletiaceae	4	21	—	—
Graphiolaceae	1	1	—	—
Uredinales—				
Melampsoraceae	6	17	1	—
Pucciniaceae	16	312	1	—
Uredineae Imperfectae	3	145	1	—
Eubasidii—				
Hymenomyceteae—				
Tremellales—				
Auriculariaceae	4	30	2	—
Tremellaceae	4	18	—	—
Dacryomycetaceae	6	13	—	—
Hymenomycetales—				
Exobasidiaceae	2	6	—	—
Hypochnaceae	1	2	—	—
Thelephoraceae	14	118	3	—
Clavariaceae	3	32	1	—
Hydnaceae	11	30	—	—
Polyporaceae	21	359	4	—
Agaricaceae	50	329	23	—

Group and Family.	Genera.	Species.	Varieties.	Forms.
Gasteromyceteae—				
Hymenogastrales—				
Hymenogastraceae	8	17	—	—
Secotiaceae	4	5	—	—
Phallales—				
Phallaceae	4	7	—	—
Clathraceae	7	10	—	—
Sclerodermales—				
Sclerodermataceae	2	16	—	—
Arachniaceae	1	5	—	—
Lycoperdales—				
Lycoperdaceae	10	72	—	—
Tulostomataceae	5	24	—	—
Nidulariales—				
Nidulariaceae	2	11	—	—
Sphaerobolaceae	1	1	—	—
TOTAL NUMBER OF BASIDIOMYCETES	198	1,704	39	—
Fungi Imperfecti—				
Sphaeropsidales—				
Sphaerioidaceae	42	250	—	—
Nectrioidaceae	2	2	—	—
Leptostromataceae	8	11	—	—
Excipulaceae	3	4	—	—
Melanconiales—				
Melanconiaceae	20	117	—	—
Moniliales—				
Actinomycetaceae	1	11	—	—
Mucedinaceae	34	133	1	—
Dematiaceae	43	229	3	—
Tuberculariaceae	19	62	22	11
Stilbaceae	8	15	1	—
Eremascaceae Imperfectae	5	11	—	—
Saccharomycetaceae Imperfectae	3	6	—	—
Trichophytonaceae	8	11	—	—
Mycelia Sterilia	3	7	—	—
TOTAL NUMBER OF FUNGI IMPERFECTI	199	880	27	11
TOTALS—				
MYXOMYCETES	28	93	10	—
PHYCOMYCETES	24	77	1	—
ASCOMYCETES	274	835	15	—
LICHENS	126	1,159	205	—
BASIDIOMYCETES	198	1,704	39	—
FUNGI IMPERFECTI	199	880	27	—
GRAND TOTAL	849	4,748	297	—