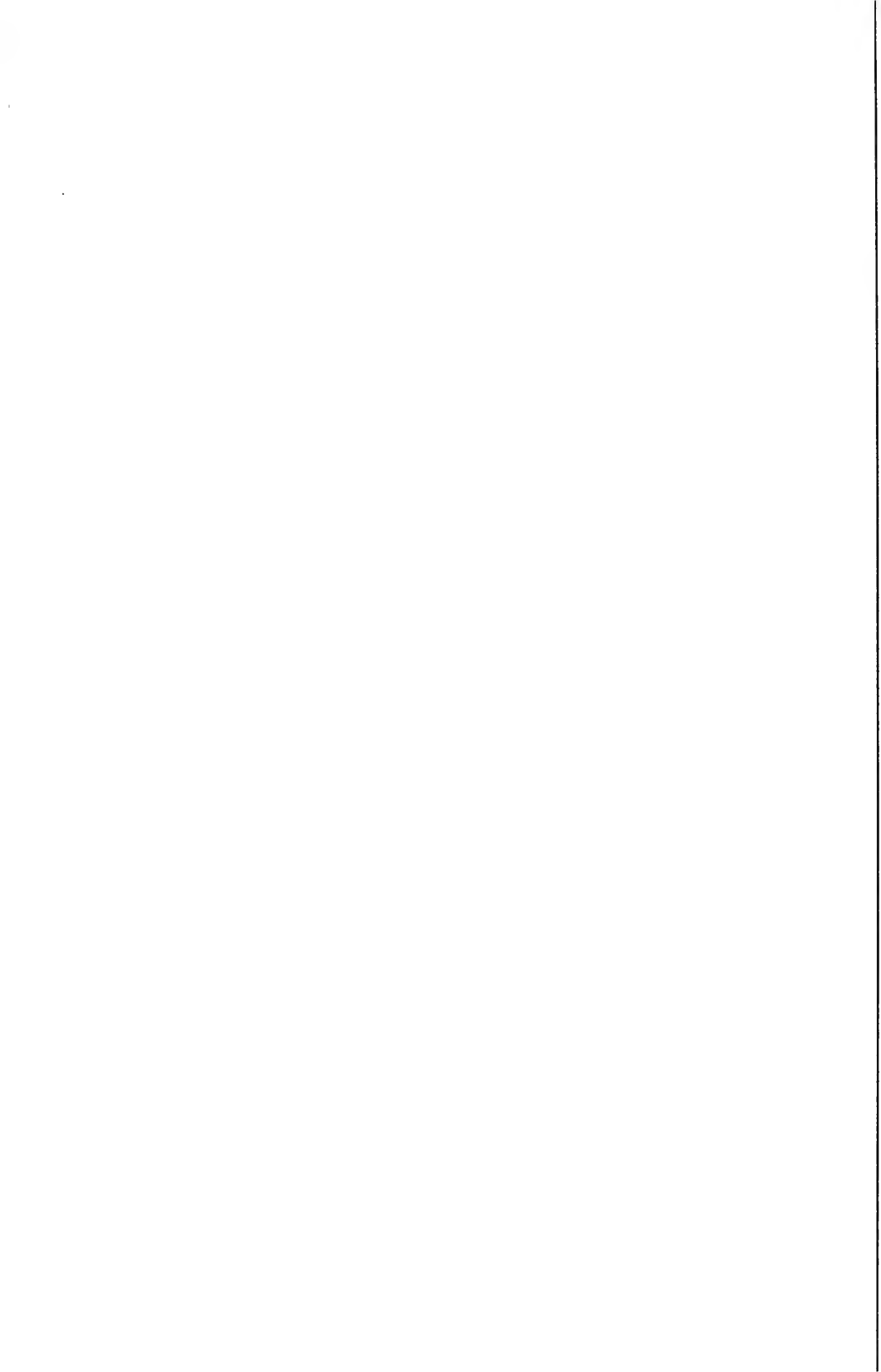


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THE GENERA OF FUNGI

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Illustrated by
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Preface

IN the "Genera of Fungi" published in 1909, 2,909 generic names were included; the present volume contains more than 5,000 names. The great number of genera published since the first edition and their inaccessibility to many students have made it desirable to bring the treatment up to date. The last issue of Saccardo's "Sylloge Fungorum," volume 24, includes only genera published previous to 1919 and 1920, while we have attempted in addition to account for all genera proposed since that time. This has been rendered possible largely by the use of the card index of new genera of fungi maintained by the Bureau of Plant Industry, and also by the list of new genera compiled by Plunkett, Young and Ryan.

Illustrations are given of the type or other representative species of approximately 700 genera, and these comprise some 1800 figures. Many are original, having been made from typical specimens of the species illustrated. The others have been copied or adapted from standard works, largely from the parts of Engler & Prantl's "Pflanzenfamilien" that treat of the fungi. The bibliography of the most important literature on systematic mycology is appended, and the glossary has been enlarged and improved.

In contrast with the first edition, the *Myxomycetes*, *Bacteria* and *Myrobacteria* have been omitted. The *Myxomycetes*, although regarded as belonging to the animal kingdom, are studied by mycologists and preserved in collections of fungi. The genera of this group are, however, very fully and satisfactorily treated by Miss G. Lister in her monograph, while the works of Macbride and Masee are also available to students. The bacteria are largely studied by specialists other than mycologists and the so-called genera are founded in many cases upon physiological, pathological or cultural characters, which it is not convenient, even when possible, to handle in a satisfactory manner in a Key.

The determination of the name of a plant is the first thing necessary in its study or in the investigation of any problem connected with it. In the case of fungi, the great number of genera, the scattered descriptions and their inaccessibility, especially those published since 1920 and which have not appeared in the "Sylloge Fungorum," make it desirable to bring together all the known genera in a form in which tentative identifications at least can be made, and the place of publication cited so that detailed descriptions may be found. Only those who have spent their lives in the study of fungi and have become familiar with the life-histories and morphology of members of the various groups, can have any adequate con-

ception of the difficulties involved in an attempt to prepare a Key for the multitude of genera that have been proposed, many of which are imperfectly known and described. Whether its usefulness will justify the labor involved in the preparation of the work or not remains to be determined. Of errors there are undoubtedly many, especially in the citations, as it has been impossible to verify them all, and we shall be grateful to have them called to our attention as found. No one can realize better than the writers the imperfections of the work. In the present state of knowledge of the genera of fungi, no generally satisfactory Key or system of arrangement is possible.

It is hoped that the treatment given and the illustrations in particular may help to promote the study of mycology by students and amateurs, as well as its progress at the hands of professional mycologists and pathologists. If our efforts result in leading more students to become acquainted with this interesting group of plants and to pursue this fertile field of investigation, we shall feel amply repaid for our labors.

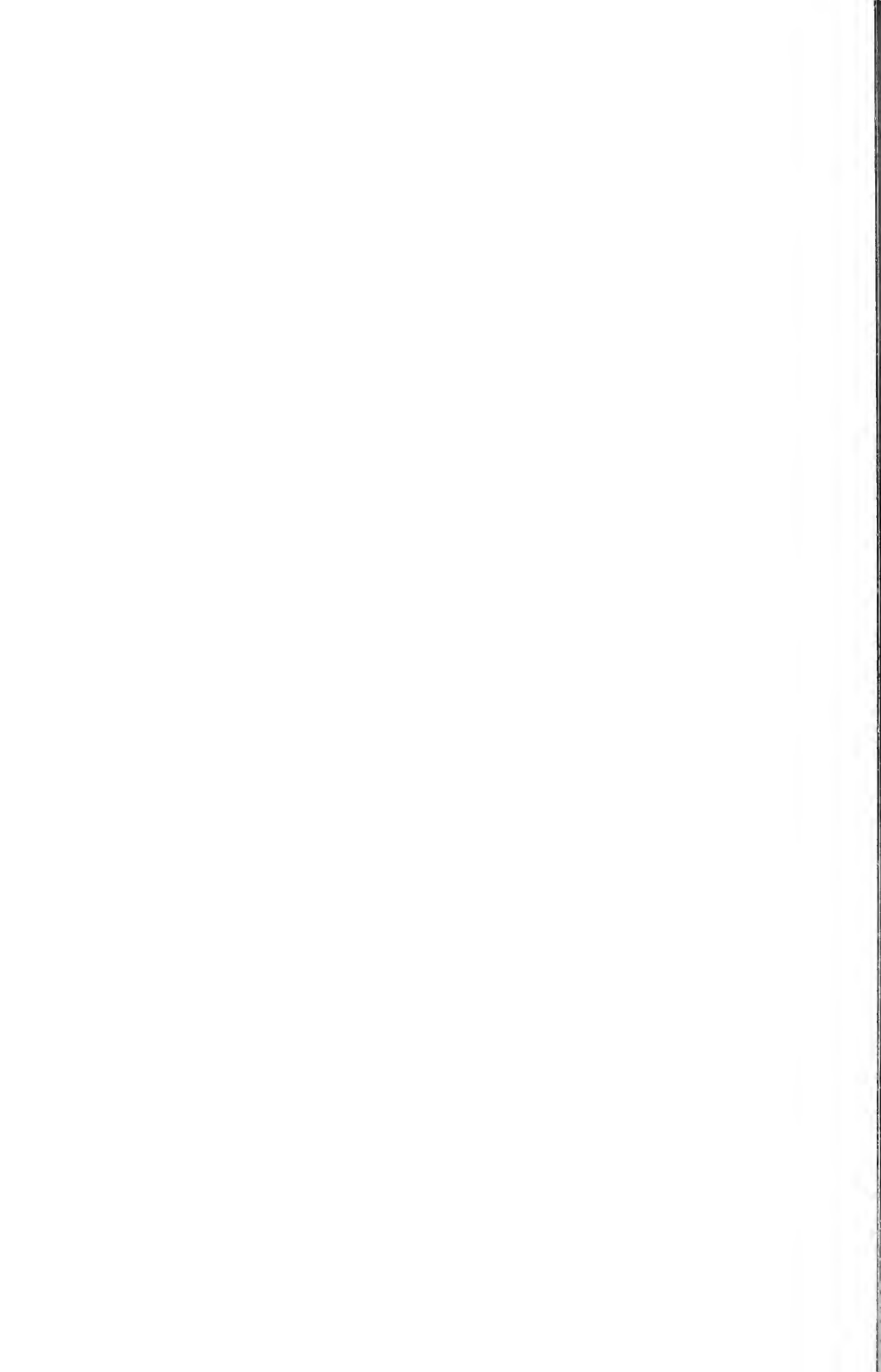
The authors wish to express their obligation to Dr. J. C. Arthur for his kind assistance in the key to the rusts. They are further indebted to Miss Edith Cash for her aid in the bibliographic work, and to Mrs. B. F. Jordan for help in connection with manuscript and proof.

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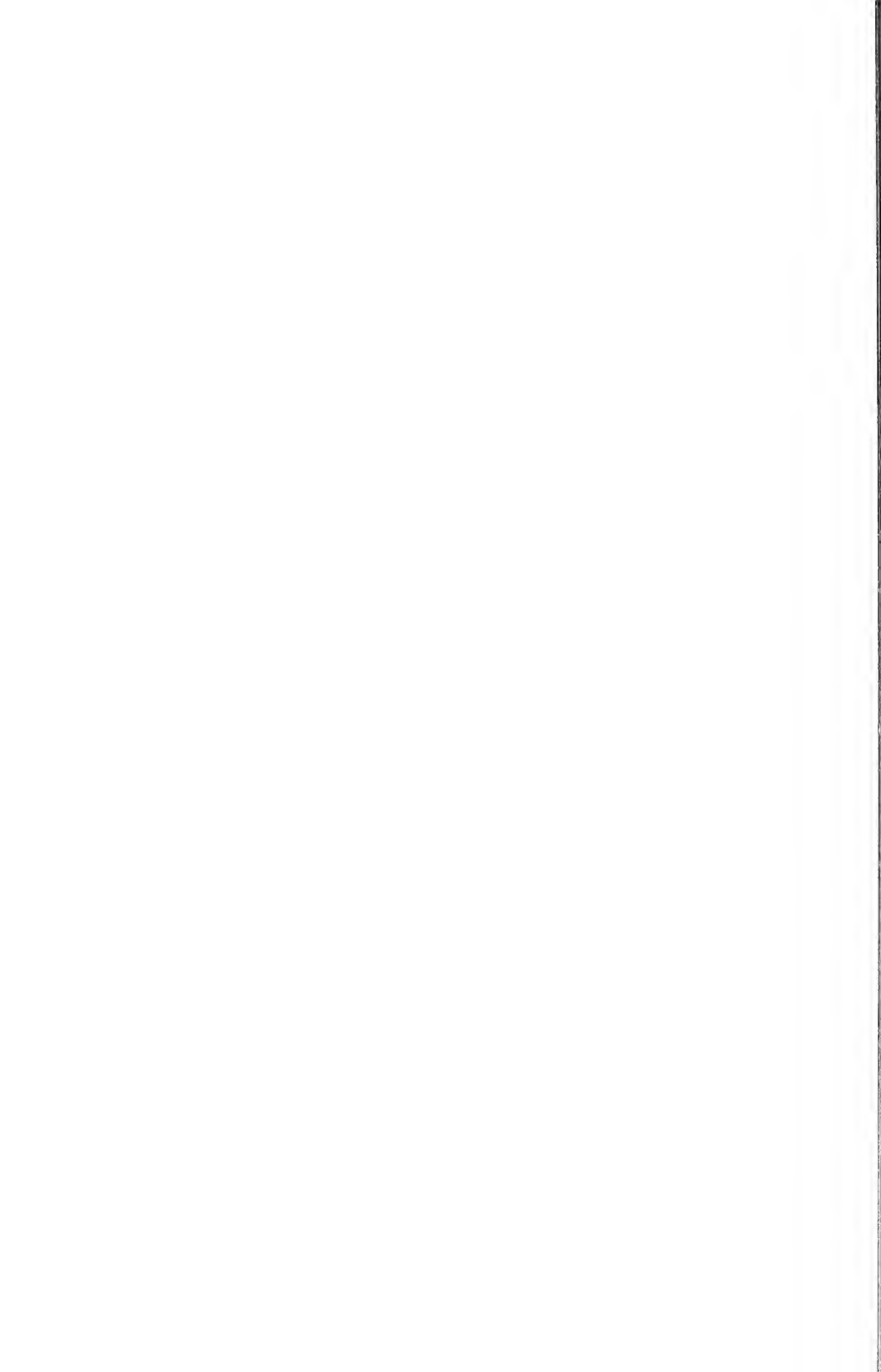
In Memoriam



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Introduction

THE development of systematic mycology during the past quarter of a century has been characterized by three features of much significance. The first of these has been the relative exhaustion of fields long-tilled at home and the consequent tendency to shift the basis of criteria, with the result that sections have been changed into genera and genera into families. A second feature has been due to the increasing exploitation of the Tropics, which has disclosed a large amount of novel material, in certain orders especially. Of even greater interest and significance has been the work of the "revisionists" in testing the foundations of the subject and in removing or refashioning faulty units. The chief worker in the arduous task of reevaluating type specimens and other authentic material has been Hoehnel, but a large part in this has also been taken by Bresadola, Theissen, Sydow, Petrak and Weese, to mention only the most active. Essential as this has been to the development of mycology, it was inevitable that it should reveal great differences as to the facts and even greater ones of interpretation.

In spite of the industry of this group, as well as of others, it is evident that the application of scientific methods to the revision of the fungi is only begun. This is clearly demonstrated by the frequent wide divergence in the treatment of both genera and families, which may be illustrated by several striking examples. Probably the most illuminating instance is afforded by the so-called *Pseudosphaeriaceae*. The concept of a new family based upon a sclerotoid perithecium with paraphysoids in place of paraphyses was first advanced by Hoehnel (1907), who during the course of the next ten years added several genera to the original two, chiefly by transfer from other families. By 1918, Theissen and Sydow had expanded the group to more than a score of genera and had reached the conclusion that "It has already been shown with sufficient clearness that the *Pseudosphaeriales* are to be regarded as an order containing several families, even though a conclusive treatment is not yet possible" (Ann. Myc. 16:34 1918). In the same year, Hoehnel spoke as follows of this expansion of the group: "To what lengths the *Pseudosphaeriaceae*-search may be carried is shown by the following. *Parodiella caespitosa* Winter is treated by Theissen and Sydow as a genuine species of the genus, therefore as one of the *Pseudosphaeriaceae*. The examination of the original specimen of this fungus in Rabenh. Wint., F. europ. No. 3249 convinces me that this is a wholly typical member of the *Sphaeriaceae*" (Ann. Myc. 16:35, 199 1918).

The final blow to the *Pseudosphaeriaceae* was delivered by Petrak five years later. "The comparative study of a large number of forms, regarded either by Hoehnel or Theissen or by both as *Pseudosphaeriaceae*, has shown that, while these are actually of the greatest importance for the taxonomy

of the *Pyrenomycetes*, their true significance has not been placed in the proper light by either Hoehnel or Theissen. We really have here a family (*Pseudosphaeriaceae*) the members of which are much more closely related to the genera of another family (*Sphaeriaceae*) than they are to each other" (Ann. Myc. 21:1 1923).

A similar though less tragic fate has overtaken the *Englerulaceae* as a result of the recension by Petrak (Ann. Myc. 26:386 1928). This family was established by Theissen and Sydow in 1917 and to it were referred some sixteen genera characterized by the slimy histolysis of the perithecium (Ann. Myc. 15:468). Petrak emphasizes the fact that this criterion occurs in different orders and thus is led to reduce the number of genera to six, five of the original family becoming synonyms and five of doubtful character.

Equally significant is the detailed critique by Petrak of the new system of *Fungi Imperfecti* proposed by Hoehnel (Falck Myk. Unters. Ber. 1:301-369 1923). "I shall here endeavor to answer the question whether the new system is a natural one, whether it does justice to the mutual relationships of the genera in so far as possible, and whether, as Hoehnel assumes, 'it actually provides a firm basis for further elaboration, and by others likewise.' Whoever judges Saccardo's system of the fungi without prejudice and with complete objectivity must admit that, however unnatural it may seem otherwise, it would serve very well for practical purposes and for the provisional disposition of the immense host of fungi were its usefulness not greatly reduced by the large number of genera known to him only by the original descriptions. To me it is an established fact that Hoehnel's system exhibits the natural relationships of the genera no better, and in part less well than the old system of Saccardo. Compared with the latter, it has the further great disadvantage of being for practical purposes as good as worthless. For while the beginner can always find his way with a certain security in Saccardo's system, with Hoehnel's he must go astray in the great majority of cases and fall into one error after another" (Ann. Myc. 23:1 1925).

It is superfluous to refer to the many other instances of disagreement or discrepancy in the work of the revisionists. Regardless of the credit due them for devotion to a difficult task, it is obvious that the individual method rarely yields comprehensive and objective results. Still more unfortunate is its lack of permanence, it being a truism that the work of one monographer is usually upset by the next, rendering it all but impossible to build the foundations of mycology broadly, deeply and securely. It has become a matter of critical importance to substitute for the personal equation of the individual worker the cumulative confirmation made possible by cooperation, as well as to suggest a method by which this may be brought about. In science, as in society, it is desirable to limit the independence of the individual only to the extent that the best interests of the group demand, but no mycologist with a broad view of the field can doubt that this point has for some time been passed.

Four principles are considered to be essential for the conversion of mycology into an inclusive and objective science reared upon a secure foundation. In a word, these are usage, uniformity, statistics and experiment. It is evident that the first already constitutes an approach to cooperation, but it lacks conscious direction and to some degree both definiteness and momentum. Furthermore, it sometimes rests upon average rather than optimum values, and then requires to be transmuted into the best usage. The greatest service of the latter is to bring about the highest degree of uniformity in treatment and result compatible with the facts, in short, to insure those objective values that alone can be permanent. For securing these, statistical and experimental methods are indispensable, though it is perhaps an adequate commentary upon the present status of systematic mycology to say that such methods are all but unknown to it. As indicated later, practices in the use of criteria have grown up with little or no scrutiny or question and with but slight endeavor to render them consistent or dependable. No one possesses any real knowledge of the relative merits of criteria and yet every working mycologist continues to act as though he did. However, it must be recognized that experiment *in vitro* provides but one approach to the problem, and that statistics and experiment in nature are fully as important in revealing development and phylogeny.

Probably every working mycologist recognizes and deplors the handicaps under which he must struggle, but too often he fails to recognize his own contribution to them. The outstanding example of this attitude is to be found in Lloyd's "Myths of Mycology," in which the author belabors many a mycologist for faults much less serious than his own. Hoehnel justly criticizes the inadequacy of mycological studies in the following statement in the introduction to his new system: "Since the description of a genus varies with the personal knowledge and the point of view of each author, even when it is drawn up precisely and conscientiously, and since further the great majority of descriptions are inexact, incomplete and often entirely false, it is clear that a very large number of the genera considered by me have been incorrectly interpreted and classified." Yet in spite of his prodigious industry—or perhaps because of it—he has repeatedly committed every one of the sins that he decries. Two of his major series of studies are well-named "fragments" because of the incidental way in which new genera are christened, the lack of diagnoses and indications of relationship, and the frequency with which the promise of later diagnoses is forgotten. Obviously, it is not sufficient to agree with Lloyd, Hoehnel, Petrak and others that mycology suffers seriously from hasty and superficial methods; some procedure must be established and generally adopted that will protect the mycologist from himself as well as his colleagues.

In essence, the remedy is simple, though its application to individualists will be difficult. The first step concerns the individual mycologist whose duty it is to insure that his own work contains none of the defects that he laments in the work of others. This demands not only meticulous thorough-

ness and accuracy in the study of a sufficient quantity of good material, but also the exercise of the same qualities in preparing the results for publication. Diagnoses should be concise but complete, and should specifically take into account all of the generic criteria in the family concerned. Even more imperative is the definite indication of relationship to one or more contiguous genera, together with a clear-cut statement of the differences involved. An admirable way to secure such results is actually to place the proposed genus in the family or sectional key, which will serve also to reveal any weakness in the proposal. To offset personal differences in terminology and interpretation, no genus should be regarded as adequately published unless accompanied by proper illustrations. Finally, the position in family and section should be clearly stated, together with a pertinent account of deviations or discrepancies.

With the task of the individual well performed, the second and even more important step is to speedily insure its confirmation and currency. For this, cooperation is indispensable. Many a genus has passed from one hand to another over a long period without meeting a real test of its validity, and there are still too many that rest upon a single unconfirmed discovery. This condition can be remedied and mycology converted into a body of tested objective knowledge only through some method for the review of genera and species before they are published. Sooner or later all such proposals will be critically examined by other mycologists, and it is obviously to the advantage of all that this be done before publication rather than after. Much uncertainty and not infrequent error will be avoided if the material concerned is submitted to other specialists in the particular field. In the case of genera a cogent argument is afforded by the excessive number of present synonyms, while the over-production of species is attested by Hoehnel's reduction of 17 species of *Diaporthe* on *Salix* to 5, 9 on *Aesculus* to 2, and 7 on *Caprifoliaceae* to 1!

A third essential of the plan proposed is to render much more accessible the original papers and the type material concerned with the publication of new genera. Unfortunately some of the proponents of new genera and species seem to forget that the primary aim and purpose of systematic mycology is the advancement of science and the benefit of mankind rather than the aggrandizement of the individual. No one who has not attempted such a task as the present one can fully appreciate the almost insurmountable difficulties of the existing situation, but every mycologist has made acquaintance with some of them in the course of his own work. This is exemplified in the interval of twelve years between the appearance of volumes 22 and 23 of the "Sylloge Fungorum," but it is even more evident in the numerous omissions in the last two volumes, omissions that are all but unavoidable under the circumstances. This tax upon time and energy, to say nothing of the character of the results, can only be obviated by the clear recognition of his scientific obligations by each mycologist. The first of these is to see that descriptions are drawn in either Latin, English, French or German, and that

publication is made in well-known and widely distributed journals, preferably such as are devoted to fungi. The second duty is to insure that copies of all such papers are sent to the chief mycological centers, such as Berlin, London, Paris, Vienna, and Washington, for example. This should also involve the deposition of co-types of all new genera and species in the herbaria at such centers, to facilitate the labors of future students of the group.

In the hope of furthering the work of mycologists and pathologists the world over, it is definitely planned to issue a new edition of the present book at intervals of three to five years, depending somewhat upon the amount of material that requires attention. In addition to incorporating new and valid genera and determining synonyms, this will also take account of the general progress in the field of systematic mycology. Constructive criticism, both in general and in particular, will be welcomed and utilized, as well as other suggestions designed to render the book more serviceable.

CRITERIA

Since the validity of genera rests upon the value of the criteria employed, it is desirable to pass these in review at the outset. As the criteria necessarily differ in the various groups, their consideration will be restricted chiefly to the *Ascomycetes* and *Deuteromycetes*, in which evolution has been most active and the number of genera by far the largest. Moreover, most of the new genera proposed during the past two decades belong in these two groups. As a consequence, the application of criteria here has been fairly consistent and uniform, and thus furnishes a proper basis for examination.

At present no objective basis exists for the evaluation of criteria and no adequate one is possible until statistical and experimental methods have come more into vogue. Though it is usually assumed that cultural studies yield conclusive evidence as to development and structure, this is not necessarily true. On theoretical grounds, the life-history of a fungus should be the same in culture and in nature only when the essential factors are alike, a condition often absent and in most cases extremely difficult to attain. Evidence already available indicates that the results obtained in culture may depart widely from the behavior exhibited in nature, the recent study of *Cristulariella* by Bowen furnishing a striking example of this (1930). The cultural and natural form differ so much as to warrant placing them in separate genera, and in other cases the difference may be as much as that between families or orders. In consequence, while experiment must be regarded as the corner-stone of a scientific mycology, the experimental procedure must rest squarely upon a proper combination of nature and culture, reinforced by thorough-going statistical studies over a wide natural range.

In the general absence of such studies, it must be recognized that our present utilization of criteria rests upon two subjective processes, namely, observation and usage. However, these constitute a much better basis than

might at first be supposed, since the immediate need is for the systematic cataloguing and identifying of the immense number of forms concerned. The observations and practices of the leading mycologists during more than a hundred years provide the present available foundation for this and have led to more or less definite usage. Through the attrition of divergent views and by virtue of increasing information, the latter becomes in a degree objective and affords a correspondingly safer basis. It is imperative, however, to discriminate between use and usage, and furthermore to recognize that scientific usage must be continuously checked by observation and experiment in order to become uniform and objective in the highest degree possible. No mere lapse of time should be permitted to render current either discrepancy or error, or to validate departures from tested and proven practice.

The following discussion of criteria deals with their application in the present treatment, and this is based in the fullest possible degree upon the practice of leading mycologists as exemplified in Saccardo's "Sylloge Fungorum," Engler and Prantl's "Natürlichen Pflanzenfamilien," and Rabenhorst's "Kryptogamen-Flora" in particular. The rule of uniformity has been carried into effect in occasional instances where exceptions to an otherwise universal usage have persisted to render "keying out" awkward or impossible. The consideration given this matter here is not intended to be exhaustive, but to be informatory and to provide a basis for future elaboration.

HABIT

The actual significance of habit as a generic criterion is of course unknown, but its practical value in many cases is recognized. This is especially true of strict parasitism and saprophytism, as it is likewise of the lichen habit, involving parasitism on algae. The practice of assigning generic rank to the fungicole forms is apparently valid in case of true parasites, while the fimicole habit is likewise generally accepted among *Pyrenomycetes* in particular, though not always dependable. More recently, Hoehnel has insisted that the latter parasitic in other perithecia bear a distinct stamp and deserve to be segregated, and his genera of this type have been tentatively accepted here. Parasites on lichens have in general been accorded generic value, and Saccardo, Zopf, Rehm, and Theissen and Sydow have been especially consistent in thus treating them. Keissler has recently objected to this procedure, in spite of the current practice (1930:179), but the lichenicole genera are fully as valid as the others based upon habit, and probably more so than those lichen genera founded upon a difference in the genus of the algal host. Much more study and information are necessary to determine the exact status of the lichen-inhabiting forms.

The general tendency has been to recognize the uredicole habit as warranting generic segregation, and this has been extended to other distinctive groups of hosts, the ferns in particular being so treated. With respect to parasitism on different organs, a number of long-accepted genera are based primarily if not wholly on the folicole, caulicole or floricole habit. This has

led to the duplication of genera in many cases and has little or no dependable value except in special instances.

At present, the use of habit as a generic criterion is firmly entrenched in mycological practice, but it should be clearly understood that such characters while utilized in the Key are not necessarily considered of generic value by themselves. Sufficient evidence is already available to show that such criteria are in certain groups of little real worth and should be used with great caution. Habit as a criterion appears to fail almost completely in the *Hypocreaceae*, where twenty of the larger genera occur on from three to ten different types of host or matrix.

CONIDIAL STAGES

With increasing knowledge of the life-histories of the *Ascomycetes*, conidial or "nebenfrucht" characters are being adopted in defining and limiting old as well as new genera. Where sufficiently exact knowledge of the development of the various species is available, this may ultimately prove desirable, but too little information of this kind has been published to permit any general application of such criteria in a key. Moreover, our present scanty knowledge of the subject furnishes various examples of the difficulties that arise in attempting to utilize conidial stages for generic segregation. It has been found that ascogenous forms generally regarded as congeneric have very different secondary stages, while widely separated genera may possess similar or nearly identical ones. Further discussion of this theme may be found in "The Problem of a Natural Classification of the *Ascomycetes*" (Shear, 1929). Furthermore, some workers have gone so far as to segregate genera on the basis of the mere association of certain conidial forms with the ascocarp. Such practice is to be deplored, as it can only lead to greater uncertainty and confusion.

The names of the so-called form genera of *Fungi Imperfecti*, which in most cases represent stages in the life-histories of *Ascomycetes*, should be recognized as tentative, until their genetic relation to the perfect form is definitely shown, when they can be reduced to synonymy and discarded, as has already been done in the *Pucciniales*. For present purposes therefore, the most convenient and usable artificial system constitutes the most desirable arrangement of this group. Such attempts as those of Hoehnel to establish a new system of *Fungi Imperfecti* hence serve no useful purpose, except in so far as they increase the readiness with which specimens in hand may be identified. Whoever tries to use Hoehnel's key in this connection is practically certain to concur in the judgment of Petrak, already quoted, that it is much less satisfactory than the Saccardian.

SPORE

The opinion is frequently expressed that the carpologic system of Saccardo is much less natural than one based upon stroma and perithecium as primary criteria. With our present knowledge, no objective determination

of relative merits is possible, but for definiteness and convenience the Saccardian arrangement appears much more preferable. Moreover, since all three criteria must be employed in any system, it is a distinct advantage to first utilize the one most clear-cut and easily determined, and last that which presents the most difficulty. This is the sequence followed in Saccardo's spore sections, in which the spore plays the primary rôle, the perithecium comes next, and the stroma last. Even Winter, who used the stroma for his subdivisions of the *Sphaeriales*, emphasized the undesirability of placing too much stress upon this structure.

In general, the usage with respect to the spore is so definite and universal as to require little comment. In spite of some intergrades, as well as occasional variation within a species, the color and septation of the spore are generally dependable criteria in the *Ascomycetes* and *Deuteromycetes*. The presence, position, number and form of spore appendages are also regularly utilized, but with some exceptions. With respect to other spore characters, the practice has been far from uniform. Thus with regard to the epispore, genera have been separated on the nature of the markings in some groups and not in others. It may prove best not to assign this criterion generic value, though there is no question of its convenience, especially in *Moniliales*, where criteria are often at a premium.

In the present treatment, several spore characters recently employed by some mycologists are not considered to be of generic value. These are unequal cells in didymospores and the form of the cells in phragmospores. A third feature, that of the breaking apart of the cells in scolecospores, is likewise regarded as too variable and unimportant to be utilized. Theissen and Sydow have made regular use of unequal spore-cells, but an examination of the genera erected upon this discloses its weakness. This is the wide range of variation within a genus and often in the same species, while in more than one instance genera based upon equal spore-cells contain species with as much inequality as some in those genera stamped with this character. An examination of all the species concerned in the eight examples of generic subdivision on this basis in "Die Dothideales" demonstrates that this is entirely unwarranted, a fact not entirely unrealized by the authors in the statement made under *Placostroma* (p. 407): "The inequality of the spore-cells is not so sharply marked, as in *Coccooides*, *Coccochorella*, etc., that this species must be generically segregated." The same authors have also based new genera upon both 3- and 4-celled spores, but the unlimited possibilities in this direction render comment unnecessary.

The scolecospore presents some problems peculiar to itself with respect to form, septation and color. Dark scolecospores are rare, but a tinge of color is less infrequent; septation is highly variable, sometimes in the same species, and is seldom if ever to be depended upon. While the extremes of the two characteristic forms, acicular and filiform, are distinctive, they vary and intergrade too much to render them serviceable as a rule. The major difficulty lies in a definite distinction between the phragmospore and

scoleospore, and the most satisfactory solution has been found to lie in the ratio between length and width. A compilation of all the long-spored species of the one and short-spored of the other in *Sphaeriales* discloses the fact that a ratio of 20:1 represents much the most natural dividing line and one that requires the transfer of very few species to make it consistent. A similar study of the *Phomales* demonstrates that a ratio of 10:1 is preferable, the difference being probably explained by the normally smaller size of the pycnidium.

It is obvious that the determination of spore characters must rest upon mature spores; this is especially important in *Ascomycetes* where maturity is sometimes long delayed, winter conditions apparently being often necessary to insure this in nature. Spore color and septation, as given in descriptions, are frequently misleading or erroneous, as color and septation usually depend upon age and condition of development of the spores. Spores in some cases, e.g., *Macrophoma*, may be discharged and appear mature and germinate freely, while later the spores remaining in the pycnidium become brown as in *Sphaeropsis* and sometimes septate as in *Diplodia*. This is also true of spore septation, which in some cases is delayed until after the spores seem to be fully formed and mature and are expelled. Only careful observation of abundant material in different stages of development can determine these points in any particular genus. An examination of the older type specimens by Hoehnel and others has shown that the original descriptions were sometimes based upon immature material that failed to indicate the true nature of the spores as to color and septation, but this in no wise detracts from the value or usefulness of these characters under the proper safeguards. As with all fungus criteria, much more careful observation, statistical study and experiment are necessary to determine just how stable and dependable these characters are in representative genera, as well as in spore sections and higher groups.

STROMA

Among the *Sphaeriales* and *Phomales* in particular, no other structure is so variable and so difficult of interpretation as the stroma, probably because this is a part of the vegetative body and hence more directly affected by the environment. Perhaps the major part of the disagreement between Hoehnel, Theissen and Sydow, and Petrak centers about the facts as to the various types of stromata and their interpretation. The rise and fall of the *Pseudosphaeriaceae* is the outstanding illustration of this, but it is likewise exemplified throughout the stromate and stromoid forms. Probably more new genera have been proposed on the basis of differing interpretations of the stroma than on any other. Petrak in particular has recognized the undesirability of this, but has not always heeded his own conclusions (Ann. Myc. 21:272 1923; 23:83 1925). It is obviously true, as Winter pointed out in discussing *Sordaria* and *Hypocopra*, that many mistakes have been made by basing genera on stromatic characters alone (1887:169).

With regard to the dependability of such criteria, this may vary greatly in different families and even in genera. In some the stroma is fairly constant, in others very variable; effuse, valsoid and pulvinate forms often intergrade, as do sessile and stipitate ones also. However, the most confusing cases are those connecting *Sphaerialcs* and *Dothidealcs*, in which the question arises as to whether a stroma contains perithecia or locules. Here again all possible intermediates occur between stromata in which the perithecia are so distinct that they are easily removable, to those in which the asci are borne in a chamber of the stroma which shows no definite wall. Hoehnel and others have gone so far as to recognize a separate family, *Pseudosphaeriaceae*, to include genera such as *Plcospora* and *Pyrenophora*, in which the perithecia have a somewhat thickened wall that they regard as a stroma with a single locule! In this connection, it is to be noted that Blain has found that stromata "possessing interascicular pseudoparenchyma, the distinguishing feature of the *Pseudosphaerialcs*, are found in the *Dothidealcs* and *Sphaerialcs*" (1927:18).

Recently, Miller has attempted to distinguish between a perithecium and a stroma with a single locule. He concludes that the perithecial wall in the *Sphaerialcs* "is histologically and ontogenetically different from the tissue of the stroma," and defines it "as the specialized tissue which arises from the archicarp, and from the beginning encloses the ascigerous centrum." It is also stated that the ostiole in a true perithecium is schizogenous in origin, while in the locule it is lysigenous (1928:194). Whatever the actual facts are in the case, in order to determine them conclusively and make them available for practical taxonomic purposes, further investigation embracing many more genera and species is imperative.

INSERTION

The position of the ascocarp, stroma or pycnidium with reference to the tissues of the host, i.e., whether innate or superficial, has long been regarded as a criterion of generic significance, and the distinction has been applied with almost complete consistency to the orders concerned. There has been some further tendency to distinguish erumpent forms, but these present the double difficulty of discriminating between both normal insertions, quite apart from the wide variation in the degree of erumpence itself. Innate insertion is likewise modified by concretion with the epiderm to furnish an additional generic criterion.

However, Theissen and Sydow in the *Dothidealcs* (1915) and Hoehnel in the *Phacidiales* and the stromoid *Fungi Imperfecti* have carried this distinction to extremes and have segregated a host of new genera with respect to origin between cuticle and epiderm, between epiderm and mesophyll, or within the latter. The difficulty of determining the facts in many cases and their known invalidity in others prohibit for the present at least the use of such criteria. Still more serious is the fact that the proponents disagree as to the facts in a number of critical cases; for example, Hoehnel states that

he considers Theissen's *Stigmatocaceae*, founded upon insertion, to be a blunder (Ann. Myc. 16:35 1918). In the present key, all the genera that rest upon such a character alone have been restored to their original position.

ASCOMA AND PYCNIDIUM

The usage with respect to criteria drawn from perithecium and apothecium is long-established and fairly satisfactory, a statement that applies almost equally to the pycnidium. This is especially true of texture, structure of the wall, and the presence of ostiole, beak, stalk, and appendages or hairs. Texture may afford a family character, as with the fleshy perithecium of *Hypocreaeaceae* or the gelatinous apothecium of the *Bulgariaceae*, but as a rule it is generic in value as in the distinction between membranous and carbonous perithecia or pycnidia. In the case of structure, the radiate scutellum marks the order *Microthyriales*, but within this generic distinctions are often drawn on the kind or degree of such a structure. With regard to the ostiole, presence or absence is usually generic; however, in the *Perisporiales* absence is characteristic of the order as a whole, while the form of the ostiole sets apart the *Lophiostomaceae* and *Hysteriaceae*. In this connection, it should be noted that Petrak has objected to Hoehnel's practice of utilizing the presence or absence of ostiole in *Phomales* for generic segregation on the grounds of great variability in this respect (Ann. Myc. 21:272 1923).

The presence of a beak, stalk, hairs or appendages has been regularly regarded as a warrant for generic segregation, and this has usually been extended to marked differences in these structures, as for example in the case of an oblique or lateral beak. Furthermore, with respect to hairs, usage has also based distinctions upon the position, and even their color in the case of the apothecium, but their arrangement is highly variable and hence less valid for the perithecium. An exception to this occurs, however in the modified appendages of primitive ascocarps, such as those of the *Erysiphaceae*.

The grouping of perithecia has occasionally been employed for the erection of genera on the cespitose habit, and this though a doubtful character has been utilized for the present. This character is often associated with the presence of a subicle, with respect to which the practice of assigning generic value has been generally accepted. In the *Perisporiales* and *Microthyriales*, Theissen and Sydow have made much use of the presence or absence of a free mycelium, as well as its modification by means of hyphopodia and spines, in which they have been followed for the present.

In the *Discomycetes*, the absence of an exciple has been regularly employed as a generic criterion, and this practice has here been followed in essence, though such genera have been combined into a new family, *Agryriaceae*. The nature of the exciple has long been recognized as of basic value among the lichens, the proper exciple without algal hosts being like that of the other fungi and hence more primitive, while the thalline exciple with algae is derived. The proper exciple is further distinguished as lecideine

when black and carbonous, and biatorine when bright-colored. The cellular structure of the exciple, whether parenchymic or prosenchymic, marks the distinction between *Mollisiaceae* and *Helotiaceae*, as well as between certain genera elsewhere.

Both Hoehnel and Petrak have made use of minor differences in the structure of the wall of perithecium and pycnidium, particularly the number of layers and the character of the cellular pattern, but in the main these must wait much more extensive and systematic study before they can be adopted.

ASCUS

The criteria derived from the asci are primarily origin, number, operculum, number of spores, and reaction to iodine. The method of origin is essentially a family character, as exemplified in the fastigate or corymbose arrangement in *Eurotiaceae* as compared with the umbelloid in other *Pyrenomycetes*, or in the inverted position typical of *Trichothyriaceae*. The presence of a single ascus in the perithecium is of generic value, but it occurs very rarely, except in the lower families, especially the *Erysiphaceae*. The so-called monascous hymenium of *Microthyriales* is a wholly different matter and like the arrangement in *Myriangiaceae* a consequence of other changes. The presence of an operculum or lid is characteristic of the *Pezizaceae*, *Ascobolaceae* and *Helvellaceae* by contrast with the other families of the *Discomycetes*, but it is not here employed as a basis for ordinal separation, since it is considered to make an unnatural division of the phylum.

The number of spores is a criterion long established by usage, though it must be employed with some discretion in the case of lichens particularly, where the variation in general is somewhat greater. It rests primarily upon the overwhelming preponderance of the number 8; 4's and 16's are sometimes associated with 8 and in consequence are less dependable than larger or smaller numbers. As a result, the numbers here regarded as warranting segregation are 1-2, 8, 16-32, and the very high numbers designated as myriosporous. Among the lichens, the low numbers sometimes vary within a species or between closely related ones and hence lack validity.

The question of the value of the color-test with iodine is still an open one, but it has been employed with so much consistency and convenience by Rehm, that it is continued here, pending more exact information as to its validity.

PARAPHYSIS

In the present instance, an endeavor has been made to definitize the use of the term paraphysis by restricting it to the *Ascomycetes* and *Pucciniales*, and employing pseudoparaphysis for more or less similar structures among the *Phomales* and elsewhere. By contrast with these, other incidental filiform features, such as apophysis, periphysis and dendrophysis, etc., are considered to have no particular diagnostic importance for genera at present.

Further investigation is necessary to establish their value. Within the *Pyrenomycetes*, it has proved desirable to take account of the tissue-like bands upon which the *Pseudosphaeriaceae* were based, and to employ this character under the term paraphysoid as a generic criterion in *Sphaeriales* especially. However, as Theissen and Sydow have pointed out, there is every possible gradation between these and true paraphyses.

While the presence or absence of paraphyses had been employed for a considerable number of genera by Saccardo and others, it remained for Theissen and Sydow to apply it consistently in their several monographs (1915, 1917). This widespread application has been criticized by one or two mycologists, but it seems to be justified by the earlier practice and has been adopted here. The objection that its real significance is unknown may be raised against most criteria.

The branching of the paraphysis has usually been regarded as a character of generic significance, as well as special modifications of note, and the formation of a definite epitecium by the tips has likewise been employed.

GENERA

There is a difference of opinion among taxonomists as to whether a genus is an objective entity consisting of a group of species of living organisms differing from other groups of species by distinctive and more or less fixed morphological characters, or whether it is primarily a mental concept of the taxonomist which has no real objective existence as a separate group. In the present state of our knowledge, most fungus genera are to be regarded as tentative concepts, still to be verified or modified by further study and comparison of the species involved, in conformity with accepted practice. It has been fairly well demonstrated in some cases, however, that there are groups of species which differ from other related groups by distinct morphological characters. Such groups may vary greatly in the number of their constituent species and in the number and importance of the different characters involved. In many cases from lack of adequate material and our imperfect knowledge of the species known, and of those perhaps not yet discovered, our generic concepts can not be verified at present. The segregation of genera should therefore in the present state of our knowledge be done with conservatism and caution and serious consideration should be given to the practical as well as the scientific aspects of the subject. The publication of new genera based upon inadequate study, on scanty or imperfect specimens or cultures or characters of unknown value or stability can only add to the present confusion and result in impeding the progress of systematic mycology.

It is manifestly impossible for any individual to become critically familiar with the thousands of genera that have been proposed, even if authentic material of all were available. It should be clearly recognized therefore that the present book is largely a compilation based upon a careful

study of the principal literature of the subject and the critical work of recent mycologists, and the revisionists in particular, as well as upon some forty years of mycological experience on the part of the authors. An attempt is made here to account for all the genera of fungi, with the exception of a very large number of older and generally accepted synonyms. All new genera published since the first edition are included so far as known either as valid names, synonyms or dubia, but for the reasons given earlier, some omissions are unavoidable. In some instances, names have been proposed with the promise of future diagnosis, and in others, names adequately published have completely dropped from sight in later treatments without the slightest mention. In this connection the statement made by Fries in 1849 that "A single long-known and well-developed species correctly observed through all its stages is of more value than a new genus" is in even greater need of being emphasized now than it was in his day. A thorough study of the older genera and species, most of which are still imperfectly known, would contribute more to the advancement of mycology than the continued increase of doubtful new ones.

The adoption of well-established criteria for genera has necessarily led to the rejection of a large number of genera proposed during the past two decades. On the other hand a small number of genera are proposed on the basis of criteria generally recognized, in order to render the Key more uniform and usable.

GENERIC TYPES

Mycological literature is cluttered with numerous genera and species inaccurately or incompletely described, and in many cases not represented by type or authentic specimens. Too often genera have been based upon scanty, immature or worthless material that gave scope to the widest range of interpretation. One of the greatest obstacles to the progress of mycology is this mass of names variously applied and interpreted at different times by mycologists. These must be either attached to definitely known species and to particular specimens available for complete description and positive identification, or permanently discarded. Many of these old generic names have already become more or less definitely applied and established by general usage, and they may be fixed in their current application by the selection of well-known species as types. The present use of names has been evolved by gradual changes at the hands of subsequent mycologists, instead of being definitely fixed on the basis of an exact determination of the type of the original author of the name. Hence, the citation of the original author of an old name may have little to do with its present application. In fact, authors themselves have sometimes changed their descriptions, as well as the types of their genera.

In order that generic names may be as exact as possible in their application, it is now generally admitted by taxonomists that they should be fixed by assigning to each a type species, and the recent International Botanical

Congress held at Cambridge, England, has adopted this plan. To attempt to stabilize many of the early names on the basis of species originally included in them would be impossible, as the type species in some instances are not determinable, and in others the adoption of the original species would lead to such a different application of the names from the present that it would cause much change and confusion. Further discussion of this matter with examples may be found in the paper by Shear on "Mycological Nomenclature" (1929).

In view of what has just been said, the selection of the type of a genus is of the first importance. In order to avoid change and ensuing confusion as far as practicable, the type species should be chosen from the best known or more important species generally included in the genus at present. In selecting the generic names adopted in the present treatment, general usage has been followed in the case of all important genera, instead of priority of publication. An attempt to follow the method of fixing generic names in all cases by using the first or in fact any one of the species originally included by the first user of the name would result in many changes from the present application of familiar and well-established names and combinations.

As a matter of fact, the application of the principle of priority has failed to secure uniformity and stability in botanical nomenclature and if applied strictly to the fungi, this principle would produce a condition approaching chaos (cf. Shear, *Science* 60:254 1924). Since the application of the generic name depends upon the type species and many genera contain species that are not congeneric, it is desirable to select a type that will cause the least change. This in many cases necessitates the choice of a species not included by the original author of the genus. Otherwise, many names would need to be discarded, as the original species is indeterminate or unknown, or applied to a totally different group from the present one.

The recently revised International Code recommends this method of fixing generic types, and an international committee of mycologists has been appointed for the purpose of carrying out this plan. It is hoped that most of the types selected here will be found acceptable and generally adopted. The necessary changes can be made in the next edition.

SYNONYMS

The synonyms given in the list of types (p. 233) have been obtained in four different ways. The first and most important of these has naturally been by the labors of mycologists as recorded in the more recent literature, in which the revisions of Hoehnel, Theissen, Sydow and Petrak occupy the most conspicuous place. No attempt has been made to duplicate the synonymy already given in the "Sylloge Fungorum" or in Zahlbruckner's monograph of the lichens, but in some of the smaller groups such as the phycomycetes and the rusts and smuts, the synonymy is fairly complete. The assignment of type species has been a second source of synonyms.

As has been indicated earlier, a considerable number of recently proposed genera has been reduced to synonymy on the basis of criteria not regarded as of generic value, such as unequal spore-cells, 3- and 4-celled spores, subcuticular and subepidermal insertion, etc. Finally, a smaller group of what might be called tentative synonyms has been obtained by testing them in the key and finding no essential difference between them and genera already in existence. Further study is required to determine their validity.

The genera included in the lists of those of uncertain position or otherwise doubtful have chiefly been so designated by various monographers and especially by the revisionists, while no inconsiderable number have been frankly classed as such by the proposers themselves. Where differences of opinion obtain, certain genera have been listed both as dubia and synonyms; for the same reason a genus will occasionally be found both in the key and as a synonym.

NAMES AND TERMS

In one of the aphorisms of his "Philosophia Botanica," Linné stated that "Ignorant persons impose absurd names," and with the addition of careless and indifferent as epithets, this remark holds good today. A century later, Lindley embodied much the same conclusion in the following: "No one who has had experience in the progress of botany as a science can doubt that it has been more impeded in this country by the repulsive appearance of the names it employs than by any other cause whatever" (1853). Clements has discussed various aspects of this problem in considerable detail (1902), and more recently Hall and Clements have suggested a number of guiding principles to improve the situation (1923).

In palliation of shortcomings in the matter of names, some botanists have contended that "a name is a name," implying that its character is a matter of complete indifference. When it is fully realized that the name of a plant may be employed a hundred times to one contact with the plant itself, it is clear that the quality of names is not a matter of little or no consequence. While it is not necessarily true that "nomenclatorial and taxonomic incompetence go hand in hand," they are too often associated. Slipshod naming is incompatible with mycological work of the first quality, and no one who places the interests of mycology first can be indifferent to this fact. Moreover, general usage lends further warrant to this contention; the great majority of names maintain a fair standard of excellence and are consistent in their form. In view of the paramount rights of the thousands of users of names, it is not too much to ask that each name proposed be short, significant, euphonious, and both properly formed and transliterated.

In harmony with the above, the regular usage has been followed in the matter of transliteration to render this uniform throughout. Names of more than six syllables have been shortened in such a manner as to preserve their

identity. Here again the actual number of sesquipedalian names is not large, but such examples as *Chaetobasidiella vermicularioides*, *Pseudoperisporium erigeronicola*, and *Verticilliodochium tubercularioides* permit no question of the desirability of such abbreviation. Such improvements can properly be made without change of citation, but this has seemed to be impossible in the case of personal hybrids, such as *Raciborskiomyces*. Both brevity and uniformity have also been promoted by rendering consistent in the shorter form the divergent practices with respect to imparasyllabic neuters in *-at*, as in *Lophiostomaceae*, *Phomales*, etc., the doublet, *rr*, before *h*, the double *ii* in personal genitives, etc.

The time and energy demanded by the present treatment have been so far in excess of what was anticipated that the original plan of revising the terminology of mycology to render it more consistent and definite has been relinquished for the present. However, a few steps in this direction have been taken by employing Arthur's terms for the rusts, definitizing the use of paraphysis, paraphysoid and pseudoparaphysis, and bringing the terms among lichens into closer harmony with those used in the other fungi.

THE DICHOTOMOUS KEY

Saccardo long ago emphasized the point that many a fungus must be diligently sought by the tyro in more than one place (*Sylloge Fungorum* 1:VI 1882). This is still true today, but an endeavor has been made to minimize this difficulty by inserting certain genera in two or even three places in the key. The latter has been made as definite and consistent as possible, and its use facilitated by employing the dichotomous method throughout. It is a much simpler and easier task to construct keys after the pattern of Hoehnel (1923), in which there are regularly several and frequently ten or more choices under one heading, few of them worded in the same terms and almost none of them strictly comparable. In such a key, the user is obliged to do most of the work that the author should have done for him, but under much more difficult conditions.

The sequence of criteria in the various families and sections has been as strict as possible. In the *Ascomycetes* and *Phomales* in particular, the great majority of genera differ from their immediate neighbors in but one essential, and in consequence both sequence and definition are as a rule exact. On the other hand, as in *Phycomycetes* and *Gasteromycetes*, the contrast is usually much less definite and the key necessarily partakes of the same character. However, in both cases the sequence in the key serves as a diagnosis for each genus, and one in which the salient criteria stand out much more clearly than in the usual description with its attention to trivial features. Furthermore, the dichotomous key provides a very useful test of proposed genera, since it renders it impossible to take refuge in vague statements as to validity and the differences from related ones. It can be safely said that the number of new genera would be greatly reduced if every author would subject his proposals to the test of such a key.

ORDERS AND FAMILIES

The definition and limitation of the orders and families of fungi is necessarily more uncertain than in the case of genera. In consequence, it is inevitable that mycologists should differ widely in their treatment of these groups. This is especially marked in the case of the *Ascomycetes*, where for example Hoehnel would place the *Microthyriaceae* and *Trichothyriaceae* in the *Perisporiales*, while Theissen and Sydow include them in their *Hemisphaeriales*. Such differences usually arise from divergent views as to the importance of criteria and from lack of knowledge of life-histories and comparative morphology. They also spring from the fact that the complex interrelations of many groups permit placing certain genera with about equal propriety in either of two families or orders, as well as from the lack of uniformity in many genera. Thus, *Physalospora* and *Botryosphaeria* are by some referred to *Sphaeriaceae* and by others to *Dothideaceae*, while *McInanospora*, in which the type possesses gray membranous perithecia though this is black and subcarbonous in others, may be placed with almost equal warrant in either *Hypocreaceae* or *Sphaeriaceae*. In many groups no definite and fixed boundaries exist, and unusual or atypical genera must be sought in more than one place.

It is inevitable that the multiplication of genera on insufficient knowledge and unreliable characters or on vague and trivial ones, should be reflected in the splitting of long-established orders and families. This rarely represents any new knowledge, nor does it advance the understanding of such groups. It constantly shifts the foundations of mycology to the disadvantage of practically every one, and constitutes one of the subjective processes unfavorable to the realization of a sound and scientific basis for mycology. To follow a conservative course in the recognition and limitation of orders and families seems to us to best serve the purpose of the present book and the interests of its users.

THE NATURAL SYSTEM

The system employed in the present book constitutes an endeavor to approximate the natural system in several respects. It appears obvious that there is but one natural system and equally evident that any approach to it is the result of the work of many minds. Hence, in spite of its convenience for reference, it is more or less inexact to give the name of an individual to any particular arrangement. Phylogeny still labors under the handicap of being regarded by many as a labyrinth of personal opinions, and until it is generally recognized that it affords an inviting field for experiment and investigation quite as much as any other, no great progress in it can be expected.

At present, considerations of space permit reference to but two or three basic principles that have been observed in the arrangement of orders and families. The first of these is that the fungus is a physiological adjustment to

the environment and that in consequence fungi are to be found in every major division of the plant kingdom; though rare among mosses and ferns, they are far from uncommon in the flowering plants. From this is derived the second principle that the fungi do not constitute a natural group, and that all the phyletic lines lead sooner or later to holophytic origins. Mycologists, like lichenologists, are specialists and have been fond of thinking of the autonomy of the fungi as something inherent, and they have not infrequently resorted to the most ingenious and specious arguments to support such opinions. From the objective point of view, the autonomy of the fungi rests on grounds no better than that of the lichens, and they were distributed phyletically in the first edition (1909), a treatment long accorded the hysterophytic flowering plants and more recently the lichens (Clements 1896, 1903).

The third principle is that the ecological approach to the morphology and development of the fungi constitutes the best attack upon their evolution and phylogeny. This is primarily because of its inclusive character, nothing that can affect the organism being left out of account, but largely also because it focuses attention upon the three essential processes of spore production, spore protection, and spore distribution. The claims of cytology to be the final arbiter of questions of origin and relationship among the fungi have been much advanced of late, but this can only play a part rather than assume the paramount rôle in this field. Quite apart from the fact that its viewpoint is necessarily restricted is the further consideration that no other approach is so beset with the bypaths of interpretation. The task of tracing the phyletic development of the fungi is one to demand all the resources of investigation, chief among which must be experiment on the largest and broadest scale possible, in both field and laboratory.

System of Classification

PHYCOMYCETES

Order 1. Protococcales

- Plasmodiophoraceae
- Family 1. Olpidiaceae
- 2. Synchytriaceae
- Protomycetaceae
- 3. Chytridiaceae

Order 2. Spirogyrales (Zygomycetes)

- Family 4. Mucoraceae
- 5. Endogonaceae
- 6. Empusaceae
- 7. Ascoideaceae

Order 3. Vaucheriales (Oomycetes)

- Family 8. Saprolegniaceae
- 9. Ancylistaceae
- 10. Peronosporaceae

Order 4. Confervales

- Family 11a. Blastocladiaceae
- 11b. Monoblepharidaceae

ASCOMYCETES

Order 5. Laboulbeniales

- Family 12. Peyritsiellaceae
- 13. Laboulbeniaceae
- 14. Ceratomyxetaceae

Order 6. Gymnasciales

- Family 15. Endomycetaceae
- 16. Saccharomycetaceae
- 17. Monascaceae
- 18. Gymnascaceae

Order 7. Perisporiales

- Family 19. Eurotiaceae
- 20. Erysiphaceae
- 21. Perisporiaceae
- 22. Englerulaceae
- 23. Capnodiaceae
- 24. Trichothyriaceae
- 25. Coryneliaceae

Order 8. Sphaeriales

- Family 26. Sphaeriaceae
- 27. Hypocreaceae
- 28. Lophiostomaceae
- 29. Cyttariaceae
- 30. Verrucariaceae

Order 9. Dothideales

- Family 31. Dothideaceae
- 32. Myriangiaceae
- 33. Mycoporaceae

Order 10. Microthyriales

- Family 34. Polystomellaceae
- 35. Microthyriaceae
- 36. Micropeltaceae

Order 11. Phacidiales

- Family 37. Hysteriaceae
- 38. Graphidaceae
- 39. Phacidaceae
- 40. Stictiaceae
- 41. Trybliaceae

Order 12. Pezizales

- Family 42. Dermateaceae
- 43. Bulgariaceae
- 44. Patellariaceae
- 45. Caliciaceae
- 46. Chrysotrichaceae
- 47. Collemaceae
- 48. Peltigeraceae
- 49. Lecideaceae
- 50. Cladoniaceae
- 51. Parmeliaceae
- 52. Physciaceae
- 53. Mollisiaceae
- 54. Helotiaceae
- 55. Pezizaceae
- 56. Helvellaceae
- 57. Ascobolaceae

Order 13. Agyriales

- Family 58. Agyriaceae
- 59. Exasaceae

Order 14. Tuberales

- Family 60. Onygenaceae
 61. Elaphomycetaceae
 62. Tuberaceae

PROMYCETES**Order 15. Pucciniales**

- Family 63. Pucciniaceae
 64. Melampsoraceae

Order 16. Ustilaginales

- Family 65. Ustilaginaceae
 66. Tilletiaceae
 Graphiolaceae

BASIDIOMYCETES**Order 17. Tremellales**

- Family 67. Auriculariaceae
 68. Tremellaceae
 69. Dacryomycetaceae

Order 18. Agaricales

- Family 70. Hypochnaceae
 71. Thelephoraceae
 72. Clavariaceae
 73. Hydnaceae

74. Polyporaceae
 75. Agaricaceae

Order 19. Lycoperdales

- Family 76. Phallaceae
 77. Lycoperdaceae
 78. Hymenogastraceae
 79. Nidulariaceae

DEUTEROMYCETES**(Fungi Imperfecti)****Order 20. Phomales**

- Family 80. Phomaceae
 81. Zythiaceae
 82. Leptostromaceae
 83. Discellaceae

Order 21. Melanconiales

- Family 84. Melanconiaceae

Order 22. Moniliales

- Family 85. Moniliaceae
 86. Dematiaceae
 87. Tuberculariaceae
 88. Stilbaceae
 Dermophyta
 Sterile Mycelia
 Pseudosaccharomycetes

List of Key Initials

To facilitate reference to books in which specific keys or descriptions are found, references are given after nearly all the genera in the Key. The exceptions are furnished by genera published too recently as a rule to find their way into the various compendia; these may be located by means of the references given in the List of Types and Synonyms (p. 233). The first number after the genus regularly refers to the volume and page of Saccardo's "Sylloge Fungorum" (24 volumes and Addenda). The other references are preceded by an initial, except in families where the initial is given under the name of the family. The following list will serve to identify the authors concerned, while the bibliography will supply the titles.

- C** Clements
- D** Dietel
- F** Fitzpatrick (Phycomycetes)
- F** Fischer (Tuberales, Gasteromycetes)
- H** Hoehnel
- K** Killermann
- L** Lindau
- R** Rehm
- S** Schroeter
- T** Thaxter
- TS** Theissen & Sydow
- Z** Zahlbruckner



General Key to Families

- A. Hyphal filaments 1-celled, very rarely septate, largely aquatic; propagation by zoospores, conidia or both; sex-cells often present, producing resting-spores Phycomycetes p. 23, 30
- B. Hyphal filaments septate, rarely aquatic; propagation by conidia; sex-cells usually absent
 - 1. Spores borne in asci or on true basidia
 - a. Spores borne in asci Ascomycetes p. 24, 42
 - b. Spores borne on true basidia Basidiomycetes p. 28, 157
 - 2. Asci or basidia lacking
 - a. Spores stalked, sessile or internal but not borne on conidiophores, producing a promycelium on germination; conidia often present in the form of aecia or uredia Promycetes p. 28, 147
 - b. Conidia alone present, borne on conidiophores of various form, often contained in pycnidia Deuteromycetes p. 29, 175

PHYCOMYCETES

- A. Mycelium lacking or scanty and consisting of a few delicate hyphae; propagation by amoeboid cells and spores or by sporangia and zoospores; sex-cells rare
 - 1. Mycelium lacking
 - a. Cells typically amoeboid Plasmodiophoraceae p. 30
 - b. Cells not amoeboid
 - (1) Sporangia separate or grouped, but without a soral membrane Olpidiaceae p. 30
 - (2) Sporangia typically enclosed in a soral membrane Synchytriaceae p. 31
 - 2. Mycelium scanty, hyphae typically few and delicate Chytridiaceae p. 32
- B. Mycelium present, typically well-developed and ramose; propagation by zoospores or conidia; sex-cells usually present
 - 1. Typically aquatic fungi propagating by zoospores
 - a. Mycelium mostly well-developed
 - (1) Antheridial tube touching or penetrating the oogone Saprolegniaceae p. 38
 - (2) Antherids producing ciliate antherozoids
 - (a) Hyphae much branched; reproduction by isogametes Blastocladiaceae p. 40
 - (b) Hyphae mostly simple; reproduction by heterogametes Monoblepharidaceae p. 41

- b. Mycelium short, tubular, mostly or entirely developing into sex-cells Ancylistaceae p. 39
- 2. Typically aerial fungi propagating by conidia
 - a. Conidia typically in globose to cylindric sporangia or sporocarps
 - (1) Conidia endogenous, or rarely exogenous
 - (a) Conidia typically in stalked sporangia, rarely on conidiophores Mucoraceae p. 34
 - (b) Conidia in sessile sporocarps, often with chlamydo-spores or the latter alone present Endogonaceae p. 36
 - (2) Conidia exogenous on conidiophores and endogenous in sporangia Ascoideaceae p. 37
 - b. Conidia single, rarely in chains, on the tips of simple or branched conidiophores
 - (1) Conidiophores simple; zygosporous; largely entomogenous Empusaceae p. 37
 - (2) Conidiophores typically ramose, or conidia in chains; oosporous; typically parasites on leaves and stems Peronosporaceae p. 40

ASCOMYCETES

- A. Asci completely or partly enclosed in a definite pericarp which opens variously at maturity
 - 1. Pericarp with a distinct wall, mostly with a regular opening at maturity
 - a. Asci borne in perithecia, which are often reduced to locules in a stroma
 - (1) Perithecia one to many on a receptacle; sex-organs present; typically on insects Laboulbeniales p. 42
 - (2) Perithecia not on a receptacle; sex-organs regularly lacking; rarely on insects
 - (a) Ostiole and paraphyses usually lacking Perisporiales p. 49
 - x. Asci borne on branched hyphae, hence irregularly disposed or in corymboid clusters Eurotiaceae p. 50
 - y. Asci in a basal umbel or parietal layer, or sometimes solitary
 - (x) Aerial mycelium typically present; no erumpent stroma
 - m. Aerial mycelium white; appendages present and usually modified Erysiphaceae p. 52
 - n. Aerial mycelium dark, sometimes lacking; appendages usually absent
 - (m) Perithecia not radiate
 - r. Hyphae not slimy, straight-walled; perithecia parenchymic, the cells polygonal, not slimy Perisporiaceae p. 53
 - s. Hyphae straight-walled; perithecia dissolving in slime as they mature Englerulaceae p. 55

- t. Hyphae constricted or dematioid, or in slimy skeins when straight-walled; perithecia of rounded cells or agglutinate straight-walled meridian hyphae
 (n) Perithecia radiate; asci hanging from the apparent tip **Capnodiaceae** p. 56
 (y) Aerial mycelium lacking; perithecia borne on an innate-erumpent stroma, elongate **Trichothyriaceae** p. 58
- (b) Ostiole regularly present
 x. Perithecial wall distinct; perithecia separate or in a stroma **Coryneliaceae** p. 58
Sphaeriales p. 58
 (x) Perithecia not parasitic on algae, without a thallus
 m. Perithecia dark, membranous to carbonous
 (m) Ostiole papillate or conical, round, not compressed **Sphaeriaceae** p. 59
 (n) Ostiole broad and compressed, the opening linear **Lophiostomaceae** p. 82
 n. Perithecia bright-colored, rarely whitish, fleshy **Hypocreaceae** p. 76
 (y) Perithecia parasitic on algae, typically with a thallus **Verrucariaceae** 84
 (z) Ascoidata at first perithecioid, then cupuloid, in a ramose or alveolate stroma **Cyttariaceae** p. 83
- y. Perithecial wall indefinite or lacking; perithecia reduced to locules in a stroma **Dothideales** p. 88
 (x) Perithecia not parasitic on algae, without a thallus
 m. Locules distinct, perithecium-like, typically ostiolate, with many asci and usually with paraphyses **Dothideaceae** p. 89
 n. Locules mere hollows filled by single asci and separated by stromal tissue or rarely by paraphysoids **Myriangiaceae** p. 92
 (y) Perithecia parasitic on algae, typically with a thallus **Mycoporaceae** p. 94
- b. Asci borne in hysterothecia or dimidiate ascomata
 (1) Asci borne in hysterothecia, the ostiole cleftlike or sometimes stellate
 (a) Not parasitic on algae, thallus lacking **Hysteriaceae** p. 102
 (b) Parasitic on algae, thallus present **Graphidaceae** p. 104
 (2) Asci borne in dimidiate ascomata with a scutellum radiate in whole or in part as a rule
 (a) Scutellum radiate
 x. Apothecia or hypostroma innate or erumpent **Polystomellaceae** p. 95
 y. Apothecia superficial, hypostroma none **Microthyriaceae** p. 98

- (b) Scutellum radiate only at margin or not at all Micropeltaceae p. 100
- c. Asci borne in apothecia
- (1) Apothecia not parasitic on algae, thallus lacking
- (a) Apothecia sunken, then erumpent, usually opening by lobes, sometimes by a cleft Phacidiales p. 102
- x. Apothecia dark to black Phacidiaceae p. 107
- (x) Hypothecium thin Trybliaceae p. 111
- (y) Hypothecium thick Stictiaceae p. 109
- y. Apothecia light-colored, mostly white
- (b) Apothecia typically superficial, opening circularly, sometimes erumpent, as in the first family Pezizales p. 112
- x. Apothecia typically innate-erumpent, leathery or horny, brown or black Dermateaceae p. 114
- y. Apothecia typically superficial
- (x) Asci disappearing early; spores and paraphyses forming a mazaedium Caliciaceae p. 119
- (y) Asci persistent; mazaedium lacking
- m. Apothecia gelatinous Bulgariaceae p. 115
- n. Apothecia not gelatinous
- (m) Apothecia usually dark, carbonous to leathery, rarely waxy Patellariaceae p. 117
- (n) Apothecia usually bright-colored, waxy to fleshy
- r. Apothecia typically waxy, on plants
- (r) Exciple dark, parenchymic all over or at the base; mostly sessile Mollisiaceae p. 133
- (s) Exciple concolorous, rarely dark, prosenchymic; mostly stalked Helotiaceae p. 134
- s. Apothecia typically fleshy, usually terricole, sometimes fimicole
- (r) Apothecia closed at first, then open, cupulate to discoid, rarely ear-shaped Pezizaceae p. 137
- h. Apothecia usually terricole, medium to large; asci mostly cylindrical, not exserted
- i. Apothecia usually fimicole, small; asci broad, exserted from disk at maturity Ascobolaceae p. 140
- (s) Apothecia open from the first, stalked, saddle-shaped to pileate or clavate, terricole as a rule Helvellaceae p. 139
- (2) Apothecia parasitic on algae, thallus typically well-developed

- (a) Asci disappearing early; disk with a mazaedium **Caliciaceae p. 119**
- (b) Asci persistent; mazaedium lacking
- x. Thallus cottony, cobwebby or spongy; algae yellow-green **Chrysotrichaceae p. 120**
- y. Thallus more or less distinctly gelatinous; algae blue-green **Collemaceae p. 121**
- z. Thallus firm, layered, neither cottony nor gelatinous
- (x) Thallus of two kinds, one horizontal, the other erect, i. e., a podetium **Cladoniaceae p. 126**
- (y) Thallus of one kind only, horizontal or erect
- m. Spores typically 2-celled and biguttulate, with a thickened septum, usually traversed by a narrow canal **Physciaceae p. 132**
- n. Spores without thickened septum and intersecting canal
- (m) Apothecia sunken or grown to the thallus on the whole underside **Peltigeraceae p. 123**
- (n) Apothecia typically superficial when mature, not attached broadly
- r. Apothecia with proper exciple **Lecideaceae p. 124**
- s. Apothecia with thalline exciple **Parmeliaceae p. 127**
2. Pericarp without definite opening, merely breaking irregularly or decaying at maturity; mostly hypogean **Tuberales p. 144**
- a. Ascoma not hypogean, opening more or less regularly; gleba typically with capillitium **Onygenaceae p. 144**
- b. Ascoma hypogean, not opening spontaneously
- (1) Gleba powdery, usually with capillitium **Elaphomycetaceae p. 145**
- (2) Gleba firm, loculate, lacunose or veined, without capillitium **Tuberaceae p. 145**
- B. Asci exposed or with a loose hyphal pericarp**
1. Asci solitary or in irregular masses **Gymnascales p. 46**
- a. Asci solitary, on or in mycelial threads, naked or with an individual hyphal wall
- (1) Asci naked **Endomycetaceae p. 46**
- (a) Asci terminal or lateral on a branched septate mycelium
- (b) Asci intercalary or continuous in a short budding mycelium **Saccharomycetaceae p. 47**
- (2) Asci with an individual hyphal wall, terminal on the branches of a septate mycelium **Monascaceae p. 48**
- b. Asci in masses, enclosed by a loose hyphal peridium, the latter sometimes sclerotoid **Gymnasceae p. 48**
2. Asci forming a hymenium-like layer **Agyriales p. 141**
- a. Paraphyses and hypothecium present, or one or the other occasionally lacking **Agyriaceae p. 142**
- b. Paraphyses and hypothecium both lacking **Exsaccaceae p. 143**

PROMYCETES

- A. Spores produced externally as teliospores; aecia and uredia usually present **Pucciniales p. 147**
1. Teliospores typically single and stipitate, sometimes united in a gelatinous mass or a definite body, or more or less fused in series **Pucciniaceae p. 147**
 2. Teliospores sessile, combined in flat crusts, pulvinate masses, or columnar forms, occasionally arising within the epidermal cells or in the mesophyll **Melampsoraceae p. 153**
- B. Spores produced internally in hyphae that disappear to form a more or less powdery spore-mass **Ustilaginales p. 154**
1. Promycelium septate transversely, bearing sporidiales **Ustilaginaceae p. 154**
 2. Promycelium simple, bearing a crown of whorled conidia **Tilletiaceae p. 155**

BASIDIOMYCETES

- A. Hymenium exposed at maturity, variously modified
1. Basidia septate or cylindric-clavate and 2-spored **Tremellales p. 157**
 - a. Basidia septate **Auriculariaceae p. 157**
 - (1) Basidia transversely septate, elongate-cylindric; sterigmata lateral **Tremellaceae p. 158**
 - (2) Basidia vertically or cruciately 2-4-divided; sterigmata terminal, usually subulate **Dacryomycetaceae p. 159**
 - b. Basidia cylindric-clavate, not septate, with 2 blunt terminal sterigmata **Agaricales p. 159**
 2. Basidia not septate, typically 4-spored **Hypochnaceae p. 160**
 - a. Pileus byssoid or lacking
 - b. Pileus present, firm, crustose to cap-like
 - (1) Hymenium smooth, or merely warted or wrinkled **Thelephoraceae p. 160**
 - (a) Pileus resupinate, dimidiate, cupulate or funnel-form, typically leathery or membranous **Clavariaceae p. 162**
 - (b) Pileus typically clavate, filiform or coral-loid, and fleshy
 - (2) Hymenium modified into teeth, tubes or gills
 - (a) Hymenium of teeth or tooth-like granules **Hydnaceae p. 162**
 - (b) Hymenium of tubes or pores **Polyporaceae p. 163**
 - (c) Hymenium of gills or rarely of gill-like veins **Agaricaceae p. 164**
- B. Definite hymenium lacking; spore-mass or gleba gelatinous, powdery or saccate, typically enclosed in a peridium, sometimes elevated at maturity **Lycoperdales p. 168**
1. Gleba more or less gelatinous, enclosed at first in a volva, then raised on a receptacle, the latter usually stalked **Phallaceae p. 169**

2. Gleba firm or powdery, rarely gelatinous, without volva or receptacle but enclosed in a peridium
- a. Peridium epigean
- (1) Gleba typically powdery or cellular, enclosed in a peridium opening by a definite mouth or irregularly
Lycoperdaceae p. 170
- (2) Gleba enclosed in seed-like peridioles borne in a globoid to funnellform peridium
Nidulariaceae p. 173
- b. Peridium hypogean, regularly closed
Hymenogastraceae p. 172

DEUTEROMYCETES (Fungi Imperfecti)

- A. Conidia present
1. Conidia in globoid, cupuloid or hysteroioid pycnidia
Phomales p. 175
- a. Pycnidia perithecium-like, typically globoid, ostiolate or astomous
- (1) Pycnidia brown to black, membranous to carbonous
Phomaceae p. 176
- (2) Pycnidia bright-colored or hyaline, fleshy, sometimes gelatinous or waxy
Zythiaceae p. 186
- b. Pycnidia dimidiate and usually more or less distinctly radiate, rarely hysteroioid
Leptostromaceae p. 189
- c. Pycnidia apothecium-like or hysteroioid, cupulate to discoid, opening circularly or less often by a cleft or lobes, dark and subcarbonous to bright-colored and fleshy
Discellaceae p. 192
2. Conidia not in pycnidia
- a. Hyphae short or obsolete, borne on a more or less parenchymoid stroma
Melanconiales p. 196
- b. Hyphae not on a stroma, typically well-developed, but sometimes short or even lacking
Moniliales p. 200
- (1) Hyphae in more or less loose cottony masses
- (a) Hyphae and conidia hyaline or bright-colored
Moniliaceae p. 201
- (b) Hyphae and conidia both typically dark, or one or the other dark
Dematiaceae p. 209
- (2) Hyphae compacted to form a globose to cylindrical spore-body which is often stalked
- (a) Spore-body typically sessile, globose to pulvinate or applanate, i. e., a sporodochium
Tuberculariaceae p. 219
- (b) Spore-body stalked, capitate to cylindrical, i. e., a synnema
Stilbaceae p. 227
- B. Conidia lacking
Sterile Mycelia p. 231
- C. Conidia present but criteria indefinite; parasites on human skin
Pseudosaccharomycetes p. 411
Dermophyta p. 231

Key to the Genera

PHYCOMYCETES

Order 1. PROTOCOCCALES

Typically 1-celled yellow-green algae, propagating by fission and frequently also by the formation of zoospores; sexual reproduction usually lacking; three fungous families.

Key to Families

- A. Mycelium lacking
 - 1. Cells typically amoeboid Plasmodiophoraceae p. 30
 - 2. Cells not amoeboid
 - a. Sporangia separate or grouped, but without a soral membrane Olpidiaceae p. 30
 - b. Sporangia typically enclosed in a soral membrane Synchytriaceae p. 31
- B. Mycelium present, hyphae typically few and delicate Chytridiaceae p. 32

PLASMODIOPHORACEAE

Fitzpatrick 48

Mycelium none; cells consisting of naked more or less amoeboid protoplasts forming single sporangia which produce 1-8 amoeboid or rarely 1-ciliate spores; parasites in plant tissues, frequently causing hypertrophy of the host; closely related to the **Mycetozoa** and perhaps best regarded as parasitic slime-molds; included here only for convenience.

- A. Spores separate in the host-cells at maturity Plasmodiophora 7:464, F 55
- B. Spores remaining united at maturity
 - 1. Spores united in twos or fours Tetramyxa 7:464, F 59
 - 2. Spores united in larger numbers
 - a. Spores forming a more or less globose hollow body Sorosphaera 7:446, F 60
 - b. Spore-masses forming 2-layered plates, sometimes with a small cavity Sorodiscus F 63
 - c. Spore-mass sponge-like in structure Spongospora F 64

Family 1. OLPIDIACEAE

Fitzpatrick 71; Minden 227

Mycelium lacking; cells endobiotic, globose, elliptic or rarely clavoid, typically forming a simple zoosporangium, or a resting sporangium that produces zoospores after a period of rest, or sometimes fragmenting to yield a number of sporangia; zoospores 1- or 2-ciliate

Subfamily Olpidiae

Zoospores posteriorly 1-ciliate

- A.** Sporangia free in the host-cell
1. Sporangia globose
- a. Sporangia opening by 1-x tubes or by a pore
- (1) Resting spore with 1-x companion-cells; in Spirogyraceae **Pseudolpidiopsis 76**
- (2) Resting spore without companion-cells **Olpidium 73; plate 1**
- b. Sporangia opening by many more or less radiate tubes **Pleotrachelus 78**
2. Sporangia ellipsoid to fusoid or tubular
- a. Sporangia ellipsoid to fusoid, opening at one or both ends by a pore or papilla; in Protozoa **Sphaerita 72**
- b. Sporangia tubular; tubes many, short, in 1-2 rows; in Bacillariaceae **Ectrogella 77**
- B.** Sporangia fixed in host-cell, the walls appressed or fused
1. Sporangial wall appressed to that of host-cell; in algae (Oedogonium) **Plasmophagus 79**
2. Sporangial wall completely fused with that of host-cell; in Phycomyces **Pleolpidium 78**

Subfamily Woroninae

Zoospores laterally biciliate; regularly in Saprolegniaceae

- A.** Sporangia short-cylindric, seriate, filling the host hypha **Rozella 68**
- B.** Sporangia globose to saccoid, not seriate
1. Sporangia 1-x, separate
- a. Resting spore with 1-x companion-cells **Diplophysa 67; 1**
- b. Resting spore without companion-cells **Olpidiopsis 67**
2. Sporangia many, forming a more or less definite sorus **Woronina 69**

Family 2. SYNCHYTRIACEAE

Fitzpatrick 80; Minden 278

Mycelium lacking; cells endobiotic in higher plants, producing galls, early developing a membrane, finally becoming a resting sporangium or dividing to form a sorus of sporangia enclosed in a membrane; zoospores posteriorly 1-ciliate.

One genus

Synchytium 80; 1

Addendum. Protomycetaceae

Mycelium scanty, of delicate septate branching intercellular hyphae bearing terminal or intercalary unicellular chlamydo-spores which finally germinate, producing numerous small simple non-motile spores in the endospore, which is expelled in the form of a globose or cylindric sack, the latter bursting at maturity to free the spores; parasites on higher plants.

A. Chlamydo-spores formed irregularly in the sub-epidermal tissues

1. Chlamydo-spores smooth

Protomyces 7:319, F 305

2. Chlamydospores verrucose Protomycopsis F 306
 B. Chlamydospores forming a continuous layer
 beneath the epidermis Taphridium 18:203, F 306

Family 3. CHYTRIDIACEAE

Fitzpatrick 88, 100; Minden 209

Mycelium present, consisting typically of short delicate more or less branched hyphae, endophytic or epiphytic; sporangia single and terminal or several and intercalary, often with a sterile swollen cell at base; resting spores similar; zoospores 1-ciliate.

The limits of genera are even more indefinite in this family than in the order as a whole. This arises partly from the great difficulty of investigating adequately forms of such transitory nature and relatively infrequent occurrence. It seems probable that it is caused even more by an exceptional degree of plasticity, in nature but also especially in culture, arising from the hypertrophy due to an intense parasitism. These difficulties have been appreciated by Fitzpatrick in particular and his treatment has been adopted in the following key, except for a few minor details.

Subfamily Chytridiæ

Mycelium usually confined to one or two cells of the host, bearing a single sporangium

- A. Mycelium wholly intramatrical
1. Sporangia epibiotic
 - a. Mycelium consisting of delicate more or less branching threads
 - (1) Resting spores intramatrical; on Pandorina Dangeardia 96
 - (2) Resting spores epibiotic or lacking
 - (a) Mycelium usually monophagous; resting spore producing zoospores
 - x. Sporangia with a basal vesicle
 - (x) Sporangia with extramatrical stalk
 - m. Sporangia with a solid apical spine, in open connection with stalk; saprophytes Obelidium 92
 - n. Sporangia without apical spine, a septum between it and the stalk; in Pinnularia Podochytrium 92
 - (y) Sporangia without extramatrical stalk
 - m. Orifice apical
 - (m) Sporangia opening by a lid; in Cylindrocystis Zygorhizidium 93
 - (n) Sporangia without a lid
 - r. Sporangia emitting a vesicle in which the zoospores are formed Rhizidiomyces 93
 - s. Sporangia with internal formation of zoospores
 - (r) Zoospores escaping normally; typically algicole Phlyctochytrium 94; 1

- (s) Zoospores encysting at orifice; in pollen-grains of Typha Achlyella 94
- n. Orifice basal or subbasal
- (m) Sporangia spiny Asterophlyctis 94
- (n) Sporangia smooth
- r. Hyphae drawn out to extremely slender tips Rhizoclostridium 94
- s. Hyphae more or less tubular Siphonaria 95
- y. Sporangia without a basal vesicle Rhizophidium 91; 1
- (b) Mycelium often polyphagous; resting spore serving as a prosperangium, the zoospores forming in the extruded endospore Rhizidium 96; 1
- b. Mycelium not consisting of delicate threads
- (1) Mycelium a delicate stalk with disk-like tip applied to or formed in the wall of host; sporangia long, fusiform, proliferating; algicole Harpochytrium 96
- (2) Mycelium without such a disk
- (a) Resting spores endobiotic, germinating to form an epibiotic sporangium; mycelium a short broad tube; algicole Chytridium 96; 1
- (b) Resting spores epibiotic, germinating by zoospores
- x. Sporangia extruding a vesicle in which the zoospores develop; mycelium a lobed haustorium; in Euglena Saccomyces p. 98
- y. Sporangia not extruding a vesicle; mycelium a filiform or inflated haustorium Phlyctidium 98
- 2. Sporangia and resting spores intramatrical, formed from a swelling at the tip of the germ-tube of the zoospore
- a. Sporangia with a basal vesicle; resting spore spiny; in Characeae Diplophlyctis 98
- b. Sporangia without basal vesicle; resting spore smooth; algicole Entophlyctis 98
- B. Mycelium intramatrical only at the tips, polyphagous, parasitic
- 1. Individual functioning as a sporangium or resting spore
- a. Sporangia with a definite orifice; algicole Rhizophlyctis 99
- b. Sporangia without orifice, the wall breaking to emit the zoospores in a rotating sphere; in Hormotheca Nowakowskia 99
- 2. Individual functioning as a prosperangium, extruding a vesicle in which the zoospores are formed; resting spores produced by copulation
- a. Zoospores ciliate, escaping before germination; in Euglena and Chlamydomonas Polyphagus 100; 1
- b. Zoospores not ciliate, germinating in the sporangia; on Draparnaldia Sporophlyctis 100

Subfamily Cladochytriae

Mycelium wide-spreading, developing terminal and intercalary enlargements, transformed wholly or partly into sporangia or resting spores; genera for the most part poorly defined.

- A.** Zoospores amoeboid, not ciliate; on *Chaetophora* **Amoebochytrium** 101
- B.** Zoospores ciliate, not amoeboid
1. Sporangia present, terminal or intercalary, formed from enlargements of the mycelium; resting spores rare or absent
 - a. Sporangia with a lid, proliferating **Nowakowskiella** 101
 - b. Sporangia without a lid, not proliferating
 - (1) Mycelium of rather broad cylindrical threads; sporangia developed from fusiform swellings and separated by short cylindrical cells **Catenaria** 101
 - (2) Mycelium of extremely delicate ramose threads; swellings globose or irregular **Cladochytrium** 102
 2. Sporangia rare, when present epibiotic and developing directly from the zoospore; resting spores present and abundant **Physoderma** 103; 1

Order 2. SPIROGYRALES

Typically 1-celled or filamentous yellow-green algae without zoospores; sexual reproduction by the conjugation of non-motile usually equal gametes; four fungous families.

Key to Families

- A.** Fructification by means of sporangia and zygospores or one of the two
1. Conidia endogenous in globoid to cylindrical sporangia, rarely exogenous **Mucoraceae** p. 34
 2. Conidia exogenous, single on clavate conidiophores; largely entomophilous **Empusaceae** p. 37
 3. Conidia exogenous on cylindrical conidiophores and endogenous in elongate sporangia **Ascoideaceae** p. 37
- B.** Fructification by means of a definite sporocarp containing zygospores, azygospores or sporangia **Endogonaceae** p. 36

Family 4. MUCORACEAE

Schroeter 119; Fitzpatrick 234

Saprophytes, rarely parasites, with a well-developed branching mycelium in which septa are lacking; propagation by spores (conidia) arising within sporangia, the latter apparently reduced to chains of conidia in one subfamily; reproduction by the fusion of the end-cells or gametes of conjugating tubes; zygospores naked or surrounded by filaments or a web of hyphae.

Key to Subfamilies

- A.** Sporangia present
1. Columella present
 - a. Wall of sporangium uniform, not cutinized, diffuent
 - (1) Sporangioles or conidia present **Choanophorae** p.
 - (2) Sporangioles and conidia lacking as a rule **Mucorae** p.

- b. Wall of sporangium cutinized and persistent above, thin and diffuent below *Pilobolae* p.
2. Columella lacking; zygospor in a dense weft of hyphae *Mortierellae* p.
- B. Conidia present in chains or clusters; representing sporangia**
1. Conidia in chains; zygosporos arising usually from an outgrowth of the fused gametes *Syncephalidae* p.
2. Conidia in clusters on spinose conidiophores; zygosporos arising directly from the fused gametes *Chaetocladidae* p.
- Subfamily Mucorae**
- A. Sporangia of one kind**
1. Sporangiphore repeatedly dichotomous *Sporodinia* 7:206; S 127, F 247
2. Sporangiphore simple or branched but not repeatedly dichotomous
- a. Suspensors of the zygospor with spinose appendages at maturity
- (1) Appendages spreading *Phycomyces* 7:204; S 126, F 248; 2
- (2) Appendages loosely enclosing the zygospor *Absidia* 7:214; S 126, F 244
- b. Suspensors without appendages at maturity
- (1) Aerial mycelium present
- (a) Aerial mycelium stoloniferous *Rhizopus* 7:212; S 125, F 245
- (b) Aerial mycelium with many short spinose branches *Spinellus* 7:205; S 125, F 246
- (2) Aerial mycelium lacking *Mucor* 7:190; S 124, F 250; 2
- (a) Sporangia single, terminal
- (b) Sporangia clustered, lateral
- x. Sporangia globoid; columella cylindrical to conic *Circinella* 7:215, S 125, F 244
- y. Sporangia piriform; columella hour-glass-like *Pirella* 7:216; S 125, F 243
- B. Sporangia of two kinds, primary and secondary**
1. Both kinds of sporangia with columella *Dicranophora* 11:240; S 128, F 254
2. Primary sporangia with, secondary without columella *Thamnidium* 7:211; S 127, F 256; 2

Subfamily Pilobolae

- A. Sporangia seated on a large vesicle, thrown off at maturity** *Pilobolus* 7:184; S 129, F 251; 2
- B. Sporangia not on a vesicle and not thrown off at maturity** *Pilaira* 7:184; S 129, F 253

Subfamily Mortierellae

- A. Sporangia present**
1. Sporangia arising directly from normal hyphae
- a. Sporangiphores erect, branches long-attenuate *Mortierella* 7:220; S 130, F 265; 2

- b. Sporangiphores creeping, branches terete *Herpocladium* 7:225; S 130,
F 268
2. Sporangia arising from a stout creeping hypha
as buds behind the tip *Dissophora* F 268
- B. Sporangia represented by 1-2-spored sporangioles
borne terminally and sometimes laterally also
on short branches from fertile intercalary seg-
ments of the mycelium *Haplosporangium* F 268

Subfamily Choanophorae

- A. Sporangia present, together with sporangioles or
conidia
1. Sporangioles present, conidia lacking; spores
striate lengthwise *Blakeslea* F 259
2. Conidia present, sporangioles lacking; conidia
striate lengthwise *Choanophora* F 261; 2
- B. Sporangia and sporangioles lacking; conidia present,
echinulate *Cunninghamella* F 263

Subfamily Syncephalidae

- A. Sporangiphores ramose
1. Branching more or less dichotomous
- a. Some branches sterile, prong-like; sporangiferous
heads not deciduous *Dispira* F 270
- b. All branches fertile; sporangiferous heads
deciduous *Piptocephalis* 7:225; S 132,
F 272; 2
2. Branching not dichotomous, but cymose or in-
definite; sporangiferous heads not deciduous *Syncephalastrum* 7:232, S 134;
F 273; 2
- B. Sporangiphores not ramose below the apical
vesicle, provided with spur-like rhizoids *Syncephalis* 7:227; S 132, F 273;
2

Subfamily Chaetocladia

- One genus *Chaetocladium* 7:220; S 131,
F 257; 2

Family 5. ENDOGONACEAE

Sporocarps more or less globose or irregular in shape, with a hyphal tomentum or pseudoperidium, sometimes reduced to a nearly naked sorus; producing zygospores or azygospores (chlamyospores) and sometimes in *Endogone*, sporangia; hypogean or epigeal saprophytes.

This is a small group of somewhat doubtful relationship, but regarded by recent workers as exhibiting affinity to the *Mortierellae*.

- A. Pseudoperidium composed of bundles of hyphae
radiating from the surface *Sphaerocreas* 4:679; F 267
- B. Pseudoperidium not composed of radiating hyphal
bundles
1. Sporocarps hollow; spores arranged irregularly
in the wall *Glaziella* 2:581; F 267

2. Sporocarps not hollow
 - a. Sporocarps sclerotoid; spores parallel in a peripheral layer Sclerocystis 7:218; F 267
 - b. Sporocarps not sclerotoid; spores more or less irregularly arranged Endogone 8:905, 14:829; F 265

Family 6. EMPUSACEAE

Schroeter 134; Fitzpatrick 281

Mycelium usually well-developed, tubular or filamentous, mostly parasitic, usually endozoic, rarely saprophytic, at first 1-celled, then septate; propagation by simple conidia terminal on 1-celled clavate conidiophores; zygospores typically globose and naked.

- A. Mycelium entomogenous
 1. Conidia superficial, smooth, discharged forcibly from the conidiophore Empusa 7:291; S 138, F 292; 2
 2. Conidia internal, verrucose Massospora F 289
- B. Mycelium not entomogenous
 1. Mycelium abundant, not intracellular
 - a. Conidium borne on a conical cell, forming spores endogenously Basidiobolus 7:285; S 141, F 283; 2
 - b. Conidium not on a conical cell, producing a germinating tube and secondary conidium Conidiobolus 7:285; S 141, F 286; 2
 2. Mycelium scanty, intracellular; in fern prothalia Completozia 7:286; S 140, F 288

Family 7. ASCOIDEACEAE

Schroeter 145; Fitzpatrick 307

Mycelium abundant, in sap of spermatophytes; conidia clustered or catenate on simple conidiophores; sporangia elongate, arising by copulation or apparently asexually and producing many non-motile spores.

- A. Conidia catenate; sporangia produced by copulation Dipodascus 11:439; S 146, F 307
- B. Conidia clustered; sporangia asexual Ascoidea 10:71; S 145, F 309

Order 3. VAUCHERIALES

Unicellular multinucleate filamentous or saccoid algae and fungi; propagation by zoospores or aplanospores, or in aerial forms by conidia (sporangia) and zoospores; reproduction in the three fungous families by means of unlike gametes, produced in antherids and oogones.

Key to Families

- A. Aquatic fungi, propagating by zoospores or aplanospores
 1. Mycelium mostly well-developed; typically external parasites or saprophytes Saprolegniaceae p. 38
 2. Mycelium scanty, developing mostly or wholly into sporangia and sex-organs; endobiotic, usually in a single host-cell Ancylistaceae p. 39
- B. Aerial fungi propagating by conidia; typically parasites in higher plants Peronosporaceae p. 40

Family 8. SAPROLEGNIACEAE

Schroeter 93; Fitzpatrick 146; Minden 506

Mycelium strongly developed, broadly filamentous, more or less ramose, often constricted; propagation by sporangia producing zoospores or aplanospores; reproduction by means of antherids and oogones, their contents fusing by means of a connecting tube.

Key to Subfamilies

- | | |
|--|---------------------|
| A. Hyphal filaments uniform, not constricted | Saprolegniae |
| B. Hyphal filaments or their branches constricted more or less regularly | Leptomitae |

Subfamily Saprolegniae

- | | |
|--|---|
| A. Zoospores escaping before germination | |
| 1. Sporangia cylindric-clavate to ovoid, zoospores in several rows | |
| a. Zoospores escaping through a terminal pore | |
| (1) Zoospores scattering upon escape | |
| (a) Sporangia ovoid; oogones usually 1-spored | Pythiopsis S 97, F 165; 3 |
| (b) Sporangia clavoid; oogones mostly x-spored | Saprolegnia 7:268; S 97, F 167; 3 |
| (2) Zoospores remaining massed about the pore | Achlya 7:274; S 99, F 167 |
| b. Zoospores not escaping through a common pore | |
| (1) Each zoospore escaping singly through its own lateral pore | Dictyuchus 7:273; S 99, F 162; 3 |
| (2) Zoospores freed by the disintegration of the whole sporangium | Thraustotheca S 100; F 160 |
| 2. Sporangia linear and zoospores 1-rowed, at least above | |
| a. Zoospores escaping through a terminal pore | |
| (1) Sporangia irregular and complex with inflated ramose base with zoospores in several series and filamentous apical portion with a single series | Plectospira F 167 |
| (2) Sporangia not ramose and inflated | |
| (a) Zoospores scattering upon escape | Leptolegnia S 100, F 170; 3 |
| (b) Zoospores remaining massed about the pore | Aphanomyces 7:276; S 100, F 167; 3 |
| b. Zoospores non-motile, escaping by disintegration of the sporangium | Geolegnia F 164 |
| B. Zoospores non-motile, germinating in the sporangium | Aplanes S 101, F 158; 3 |

Subfamily Leptomitae

- | | |
|--|--|
| A. Hyphae uniformly cylindric, without trunk and branches, regularly constricted | |
| 1. Sporangia cylindric, resembling the segments; zoospores escaping singly | Leptomitus 7:265; S 101, F 173; 3 |

2. Sporangia ellipsoid to piriform, broader than the segments; zoospores encysting at the pore
- Apodachlya** S 102, F 173; 3
- B.** Hyphae differentiated into stout trunk and slender branches, the latter usually somewhat constricted, rarely lacking
1. Trunk more or less cylindrical, the branches similar but narrow
- a. Trunk about twice as wide as branches; sporangia all alike, smooth; oogones piriform
- Sapromyces** S 163, F 175
- b. Trunk several times wider than branches; sporangia of two kinds, smooth and spinose; oogones globose
- Araeospora** 14:454; F 177
2. Trunk not cylindrical
- a. Trunk more or less lobed, branches filamentous, numerous, bearing the reproductive cells
- Rhipidium** 7:268; S 103, F 180; 3
- b. Trunk broadly clavate, hardly branched; reproductive cells on short pedicels
- Mindeniella** F 180

Family 9. ANCYLISTACEAE

Schroeter 134; Fitzpatrick 117; Minden 426

Mycelium mostly poorly developed and scarcely distinct from the fruit-body, the latter tubular, when mature divided into vegetative cells, sporangia or oogones and antherids; entire contents of antherid passing into oogone, oospore lying free; sporangia always producing zoospores.

- A.** Hyphae ramose
1. Vegetative cells present, growing by germ-tubes; sporangia lacking
- Ancylistes** 7:280; S 92, F 124; 3
2. Vegetative cells lacking; sporangia present
- Lagenidium** 7:278; S 90, F 122; 3
- B.** Hyphae simple
1. Zoospores escaping normally and encysting at the pore
- Achlyogeton** 7:277; S 89, F 119
2. Sporangia extruding a vesicle bearing zoospores
- Myzocytyum** 7:279; S 90, F 120; 3

Family 10. PERONOSPORACEAE

Schroeter 110; Fitzpatrick 185

Mycelium abundant, filamentous, 1-celled, much branched, typically endophytic; propagation by means of conidia (sporangia) borne on the ends of conidiophores, producing zoospores or a germinating tube, occasionally by means of normal sporangia; reproduction regularly by means of internal oogones and antherids, borne on the ends of lateral branches; oospores solitary, producing zoospores or a germinating tube.

Key to Subfamilies

- A.** Conidia catenate; conidiophores clavate, simple, forming a sorus
- Albuginae**
- B.** Conidia or sporangia not catenate; conidiophores regularly branched, not forming a sorus



- | | |
|--|--------------|
| 1. Conidia borne successively on conidiophores
little different from the hyphae | Pythiae |
| 2. Conidia borne on highly differentiated conidio-
phores | Peronosporae |

Subfamily Pythiae

- | | |
|--|--------------------------------|
| A. Sporangia asymmetric, the insertion eccentric | Pythiogeton F 194 |
| B. Sporangia symmetric, the insertion centric | |
| 1. Wall of sporangium smooth; zoospores present | Pythium 7:270; S 104, F 195; 3 |
| 2. Wall of sporangium echinulate; zoospores lack-
ing | Trachysphaera F 209 |

Subfamily Peronosporae

- | | |
|---|--|
| A. Conidiophores slender, with long slender branches | |
| 1. Conidiophore growing after the formation of
the first conidia, producing new joints | Phytophthora 7:237; S 113,
F 199; 4 |
| 2. Conidiophore not proliferating | |
| a. Conidia papillate at tip | |
| (1) Conidia on sterigmata arising from irregu-
lar disks | Bremia 7:243; S 116, F 219; 4 |
| (2) Conidia on sterigmata without disks | Plasmopara 7:239; S 115, F 215;
4 |
| b. Conidia not papillate at tip | Peronospora 7:244; S 117,
F 221; 4 |
| B. Conidiophores stout, with short thick branches
or swollen and sterigmate at tip | |
| 1. Conidiophores with short thick branches | Sclerospora 7:238; S 114, F 212;
4 |
| 2. Conidiophores with a sterigmate vesicle at tip | Basidiophora S 114, F 214; 4 |

Subfamily Albuginac

- | | |
|-----------|-------------------------------|
| One genus | Albugo 7:233; S 110, F 188; 4 |
|-----------|-------------------------------|

Order 4. CONFERVALES

Typically multicellular filamentous algae, propagating by zoospores and reproducing by the union of isogametes, or by heterogametes borne in antherids and oogones; two small fungous families.

Key to Families

- | | |
|--|--------------------------|
| A. Filaments fastigiately or corymbosely ramose;
reproduction by isogametes | Blastocladaceae p. 40 |
| B. Filaments usually simple; reproduction by
heterogametes in antherids and oogones | Monoblepharidaceae p. 41 |

Family 11a. BLASTOCLADIACEAE

Fitzpatrick 130; Minden 601

Mycelium either fastigiately ramose and constricted, without rhizoids, or with a thick trunk, corymbose branches and rhizoids; propagation by sporangia and zoospores; reproduction by isogametes producing a biciliate zygote.

- A. Mycelium fastigiately ramose and constricted, without rhizoids; sporangia present; gametes unknown
 Gonapodya 14:452; S 107, F 134; 4
- B. Mycelium with a thick trunk, more slender corymbose branches, and rhizoids; sporangia and gametes present
 Blastocladia F 136

Family 11b. MONOBLEPHARIDACEAE

Schroeter 106; Fitzpatrick 138; Minden 462

Filaments mostly simple, arising from a ramose mycelium fixed to the substratum by rhizoids; propagation by zoospores; reproduction by heterogametes produced in antherids and oogones, antherozoids ciliate; oospores solitary.

One genus

Monoblepharis 7:277; S 107; F 138; 4

ASCOMYCETES

Order 5. LABOULBENIALES

Thaxter 197, 2:220; Lindau 491

Receptacle consisting of two to many cells in a row, or parenchyma-like, regularly producing from the cells one or more appendages bearing antherids as a rule; antherozoids normally endogenous, borne within flask-like, simple or compound antherids, rarely produced like conidia, i. e., naked or exogenous; perithecia one to many, stalked or sessile, terminal or lateral on the receptacle, resulting from fertilization by means of a trichogyne; asci seriate, mostly 4-spored; spores usually 2-celled.

This key is merely compiled from those constructed by Thaxter in his first two monographs (1895, 1908) and is fully subject to the statement made in the second (p. 236); "It is not expected that this key will prove useful as a means of determining genera to anyone who has not made himself familiar with the general conditions existing in the group and summarized in the preliminary matter of this and the preceding Monograph." Since this order rests almost wholly upon the monumental researches of Thaxter, those who wish to become in any degree familiar with it must turn to the several monographs (cf. bibliography). These render it unnecessary to attempt to include here the genera published since 1908, a complete key to the order as at present constituted being impossible for anyone but the master of the group himself.

Key to Families

- A. Antherids specially differentiated cells or groups of cells
 - 1. Antherids compound, the antheridial cells endogenous, arising from one or more intercalary cells and discharging into and from a common chamber (eventually free in a compact group in *Distichomyces*) Peyritschiellaceae p. 42
 - 2. Antherids single cells with free efferent tubes Laboulbeniaceae p. 44
- B. Antherids more or less undifferentiated cells of the appendages or their branches Ceratomycetaceae p. 45

Family 12. PEYRITSCHIELLACEAE

- A. Dioecious
 - 1. Perithecia and appendages in pairs to the right and left Dimorphomyces T 264, 2:240;
L 497
 - 2. Perithecia and appendages in a row Dimeromyces T 267, 2:241;
L 497
- B. Monoecious
 - 1. Antherids arising on an appendage
 - a. Antherids lateral Cantharomyces T 271, 2:281;
L 497
 - (1) On a subbasal cell of the appendage

- (2) On short opposite branchlets of the appendage Stichomyces T 2:301
- b. Antherids terminal
- (1) Antherid with a short spine at the tip Haplomyces T 269, 2:275;
L 497
- (2) Antherid without a spine but with a neck-like canal cell Polyascomyces T 2:299
- (a) Ascogenic cells at least 36
- (b) Ascogenic cells few
- x. Stalk of antherid a single cell
- (x) Antheridial cells obliquely in vertical rows
- m. Subbasal cell of receptacle with a sterile appendage Eumonoecomyces T 2:273
- n. Subbasal cell of receptacle without sterile appendage
- (m) Antherids opening by a terminal pore Eucantharomyces T 273, 2:275;
L 497
- (n) Antherids opening by a lateral pore Clidiomyces T 2:280
- (y) Antherid parenchyma-like, many-celled
- m. Antheridial cells with three marginal cells Euhaplomyces T 2:281
- n. Antheridial cells without marginal cells Camptomyces T 274, L 498
- (z) Antherid of several superposed cells bearing single simple antherids directly
- m. Simple antherids two Acallomyces T 2:300
- n. Simple antherids several Acompsomyces T 2:297
- y. Stalk of two cells placed side by side Monoecomyces T 2:268
2. Antherids arising on the receptacle
- a. Perithecia free
- (1) Receptacle of a single row of several to many superposed cells Enarthromyces T 276, 2:267;
L 498
- (2) Receptacle of one or two superposed cells followed by two or three oblique or transverse rows
- (a) Receptacle with one basal cell
- x. Basal cell followed by two tiers of cells Limnaeomyces T 2:261
- y. Basal cell followed by three symmetrical series Dichomyces T 282, 2:249, L 499
- (b) Receptacle with two superposed basal cells Peyritschiella T 278, 2:260;
L 499
- b. Perithecia grown together with distal portion of receptacle
- (1) Base of receptacle of two superposed cells Chitonomyces T 285, 2:263;
L 499
- (2) Base of three superposed cells Hydraeomyces T 293, L 500

Family 13. LABOULBENIACEAE

A. Dioecious

1. Perithecium borne by the basal or subbasal cell of receptacle

a. Perithecium on the single basal cell, spores continuous

Amorphomyces T 295, 2:293;
L 501

b. Perithecium lateral on the subbasal cell

(1) Receptacle terminated by a 2-celled prominence; spores 1-septate

Dioecomyces T 2:293
Smeringomyces T 2:296

(2) Receptacle x-celled, setose

2. Two-celled normal receptacle producing secondary receptacles on which the perithecia are borne

Herpomyces T 2:282

B. Monoecious

1. Antherids in definite series on the appendages

a. Arising directly from cells of the appendages

(1) Appendage one

(a) Antherids in a single or double vertical series

Stigmatomyces T 298, 2:301

(b) Antherids more or less distinctly whorled

Arthrorhynchus T 2:312

(2) Appendages numerous, antherids in 3 vertical series

Idiomyces T 302, L 501

b. Borne on branches of the appendages

(1) Appendage one

(a) Appendage with sterile terminal branchlets, antherids in short series near its base

Rhadinomyces T 305, 2:317;
L 501

(b) Appendage with fertile terminal branchlets bearing antherids laterally

Eucoethromyces T 2:320

(2) Appendages forming a tuft, antherids on lateral branchlets

Corethromyces T 303, 2:318;
L 501

2. Antherids not in definite series on the appendages

a. Receptacle 2-celled

(1) Basal cell with rhizoids

(a) A single receptacle from each rhizoid base

Rhizomyces T 307, 2:322; L 502

(b) Several receptacles from a common rhizoid base

Moschomyces T 368, 2:429;
L 504

(2) Basal cell not from a rhizoid

(a) Appendage single

x. Receptacle of 2 superposed cells

(x) Basal cell spheric, penetrating by a long filament

Ceraeomyces T 2:327

(y) Basal cell elongate

Sphaleromyces T 365, 2:323;
L 504

y. Receptacle of a series of superposed cells

Ectinomyces T 2:429

- (b) Appendages several to many
 - x. Appendages and perithecium in a whorl *Compsomyces* T 366, 2:428; L 504
 - y. Appendages in a row *Clematomyces* T 2:427
- b. Receptacle more than 2-celled
 - (1) Receptacle of seriate regularly superposed cells
 - (a) Plant bilaterally symmetrical *Diplomyces* T 357, L 503
 - (b) Plant asymmetrical
 - x. Receptacle of two contiguous and united rows
 - (x) A single basal cell *Rhachomyces* T 358, 2:421; L 504
 - (y) Basal and subbasal cell present *Distichomyces* T 2:249
 - y. Receptacle of a single row *Chaetomyces* T 364, L 504
 - (2) Receptacle more or less parenchyma-like, at most only part of the cells superposed in series
 - (a) Appendages all on one side *Laboulbenia* T 308, 2:328; L 502
 - (b) Appendages on two sides *Rickia* T 2:247
 - (c) Appendages completely surrounding the perithecium
 - x. Sterile branches few, antheridal cells intercalary in continuous series *Symplectromyces* T 2:314
 - y. Sterile branches ramose, copious antheridal cells free, externally superposed on lower segments of the appendages, associated with rostrate sterile cells *Teratomyces* T 354, 2:315

Family 14. CERATOMYCETACEAE

- A. Receptacle large, very many-celled, parenchyma-like
 - 1. Perithecium with six wall-cells in each row
 - a. Base of trichogyne persistent as a one-celled appendage *Caenomyces* T 372, L 505
 - b. Base of trichogyne not persistent as an appendage *Zodiomyces* T 371, 2:444; L 504
 - 2. Perithecium with 9-10 wall-cells in each row *Euzodiomyces* T 2:444
- B. Receptacle of a series of superposed cells
 - 1. Receptacle bearing appendages from specially differentiated cells below the perithecium *Coreomyces* T 2:411
 - 2. Receptacle bearing no appendages below the perithecium
 - a. Receptacle determinate, of few cells
 - (1) Wall-rows of perithecia few-celled *Autoecomyces* T 2:434
 - (2) Wall-rows of perithecia many-celled *Ceratomyces* T 372, 2:435
 - b. Receptacle indeterminate, of many cells
 - (1) Wall-rows of perithecia few-celled *Hydrophilomyces* T 2:431
 - (2) Wall-rows of perithecia many-celled *Rhynchophoromyces* T 2:432

Order 6. GYMNASCALES

Asci free or in simple prothecia, rarely in a sclerotoid ascoma, solitary or grouped, globoid to saccate, occasionally elongate, 1-many-spored, paraphyses lacking; mycelium well-developed and branched, with cross-walls, or reduced to a few cells multiplying by budding or fission, occasionally developing sex-organs, sometimes massed to form a prothecium, often with appendage-like branches, or a solid sclerotium-like ascoma.

The chief bond in this order is the free ascus or ascus-group, without protective hyphae or these limited to a loose or dense mass termed a prothecium. It serves as the connecting link between the **Phycomycetes** and the **Ascomycetes** proper. In several genera it is practically impossible to determine whether the spore-body is an ascus or a sporangium. The latter seems to be the case in **Ascoidea** and its relatives, and these are in consequence referred to the first group. The **Endomycetaceae** may be placed in either with almost equal warrant. The **Gymnascaceae** lead directly into the **Eurotiaceae** on the one hand and the **Myriangiaceae** on the other, no real dividing line being discernible in the latter case especially. While the **Saccharomycetaceae** are regarded as reduced, it appears certain that this reduction has applied to primitive forms, and that this family has no connection with the **Agyriales**, where reduction has operated upon the highly specialized apothecium.

Key to Families

- A. Asci solitary, on or in mycelial threads, naked or without an individual hyphal wall
 - 1. Asci naked
 - a. Asci terminal or lateral on a branched septate mycelium Endomycetaceae p. 46
 - b. Asci intercalary or continuous in a short budding mycelium Saccharomycetaceae p. 47
 - 2. Asci with an individual hyphal wall, terminal on the branches of a septate mycelium Monascaceae p. 48
- B. Asci in masses, enclosed by a loose hyphal peridium, the latter sometimes sclerotoid Gymnascaceae p. 48

Family 15. ENDOMYCETACEAE

22:767, 24:1304; Schroeter 154

Mycelium typically well developed, branched and septate, rarely scanty, frequently with terminal 1-celled conidia; asci single, without hyphal envelop, terminal or lateral, rarely intercalary, 1-8-spored, occasionally many-spored; spores 1-celled and hyaline or nearly so.

- A. Mycelium saprogenous
 - 1. Asci 1-2-spored Bargellinia 8:823
 - 2. Asci 8-spored
 - a. Asci formed from the spirally wound tips of two branches; spores globose Eremascus 8:822
 - b. Asci formed directly from a single hypha
 - (1) Asci 4-spored, terminal Endyllum
 - (2) Asci 8-spored
 - (a) Asci terminal or lateral, not intercalary
 - x. Asci conglomerate; spores ovoid, not conglobate Byssochlamys 22:596
 - y. Asci not conglomerate; spores globose, conglobate Oleinis 8:822

(b) Asci intercalary; spores ovoid, conglomerate

Oleina 8:822

B. Mycelium biogenous

1. Asci 4-8-spored

a. Asci 4-spored, mostly lateral on long hyphae

Endomyces 8:821; 6

b. Asci 8-spored, on short hyphae from lobed haustoria; fungicole

Podocapsa 8:820

2. Asci many-spored

a. Asci on short hyphae from lobed haustoria; fungicole

Podocapsium 24:1146

b. Asci on long branched hyphae; fruticole

Eremothecium 8:821

Family 16. SACCHAROMYCETACEAE

8:916, 11:457, 14:828, 16:818, 18:198, 22:771, 24:1304

True mycelium lacking, the hyphae reduced to short toruloid chains or to single cells propagating by budding, rarely by fission; asci derived directly from vegetative cells, or by isogamic or heterogamic copulation, 1-16-spored; spores 1-celled, globose to acicular, hyaline, smooth or asperate, germinating by simple budding or by conjugation.

The yeasts are so greatly reduced that their position is far from certain, but they appear to be derived from the primitive **Ascomycetes** rather than from highly specialized forms. They seem to be most closely connected with the **Endomycetaceae**, certain genera having been referred to both by different authors. A considerable number of yeast-like forms do not produce asci, or these have not yet been found, and all such genera have been referred to the **Pseudosaccharomycetes**, at the end of the key. It is probable that many of these are actually **Hyphomycetes**, in which growth has been emphasized at the expense of conidia formation.

A. Asci regularly 1-spored, very rarely 2-spored

1. Spores globoid, asperate

a. Asci produced directly from the cells

Micranthomyces

b. Asci derived from copulation

(1) Asci derived directly from isogamic copulation

Isomyces 22:786

(2) Asci derived indirectly from heterogamic copulation

Nadsonia 22:786

2. Spores ellipsoid, asperate, with median band

Zonosporis 22:785

3. Spores acicular, smooth; haemophile

Monosporella 24:1315

B. Asci not regularly 1-spored, mostly 2-8-spored

1. Spores elongate, fusiform to acicular

a. Spores flagellate; asci 8- or 16-spored

Nematospora 18:201

b. Spores not flagellate; asci 4- or 8-spored

Coccidiascus

2. Spores not elongate

a. Cells arising by fission; asci 4- or 8-spored, derived from isogamic copulation

Schizosaccharis 14:828

b. Cells arising by budding

(1) Spores with 2 walls, the outer breaking at germination; asci 2- or 4-spored

Saccharomycopsis 18:198

(2) Spores with single wall

(a) Spores with median band, hence appearing biapiculate

Williopsis

(b) Spores not banded, globose to ellipsoid

x. Cells apiculate; asci 1-2-spored

Thelis 24:1306

- y. Cells not apiculate
- (x) Cells toruloid; ascogenous cells with tubes but no true copulation; asci 1-4-spored; spores asperate **Torulospora**
- (y) Cells not toruloid
- m. Asci derived from copulation, 1-4-spored; spores hemispheric or hat-shaped **Zygosaccharis 18:198**
- n. Asci not derived from copulation
- (m) Spores hat-shaped; asci 2-4-spored **Hansenula 18:198**
- (n) Spores not hat-shaped
- r. Cells usually cylindric, catenate; asci 2-4-spored **Pichia 18:198**
- s. Cells globose to oblong, rarely catenate
- (r) Asci regularly 4-spored; spores producing a promycelium **Saccharomyces 18:198**
- (s) Asci 2-8-spored; spores not producing a promycelium **Saccharomyces 8:916; 6**

Family 17. MONASCACEAE

Schroeter 148

Mycelium typically well developed, branched and septate, saprophytic, forming conidia; asci sporangium-like, terminal, with an individual hyphal wall; spores many, hyaline to brown.

Spores many; asci enclosed by interwoven hyphae **Monascus S 148**

Family 18. GYMNASCALEAE

8:820, 10:70, 11:437, 14:824, 16:805, 18:195, 24:1145

Mycelium more or less well developed, branched and septate, usually saprophytic, frequently forming conidia; asci grouped, more rarely scattered, in a more or less regular globoid mycelial weft, sometimes dense and differentiated externally into a rudimentary peridium; asci globose to saccate, typically 8-spored, rarely 2-many-spored; spores typically 1-celled and hyaline.

The weft-like ascoma is typical of this family, but it passes gradually into the denser type with rudimentary peridium, distinguishable with difficulty, if at all, from the fruit-body of such genera of the **Myriangiaceae** as **Elsinoe** and **Plectodiscella**. **Penicillium** and **Penicillioopsis** have been included in the **Eurotiaceae (Aspergillaceae)** by Fischer, but the latter are here regarded as comprising perithecial forms only.

- A. Ascoma composed of a globoid weft of hyphae
1. Ascoma saprogenous
- a. Asci 3-8-spored
- (1) Asci 3-5-spored; spores hyaline, minute, globoid **Conidiascus 16:807**
- (2) Asci 8-spored
- (a) Ascoma composed of thin-walled uni-form hyphae
- x. Ascoma stipitate; spores lentiform, furrowed **Rollandina 22:766**

- y. Ascoma sessile; spores globose to globoid
 - (x) Spores bright-colored, hyaline to yellow or red Arachniotus 11:438
 - (y) Spores dark, brown or brown-violet Amaurascus 11:438
- (b) Ascoma of thick-walled, much branched hyphae, united to form a lattice-like peridium
 - x. Hyphal branches similar, with spines or prongs Gymnascus 8:823; 6
 - y. Hyphal branches of two sorts, some becoming especially differentiated appendages
 - (x) Appendages circinate at tip Myxotrichum F 295; 6
 - (y) Appendages comb-like Ctenomyces 8:824
- b. Asci many-spored; spores ellipsoid Myrillium 11:438
- 2. Ascoma biogenous
 - a. Spores 1-celled, hyaline; zoogenous Eidamella 16:805
 - b. Spores x-celled, dark; phytogenous Hexagonella
- B. Ascoma more or less solid and parenchymic, with a rudimentary peridium
 - 1. Ascomata clustered on a stalk Penicilliopsis F 306
 - 2. Ascomata not stalked
 - a. Spores purple, smooth, ovoid Diplostephanus
 - b. Spores hyaline to yellowish
 - (1) Spores globose, large, verruculose Lilliputia 16:816
 - (2) Spores typically ellipsoid and ridged, small Carpenteles

Order 7. PERISPORIALES

Mycelium typically superficial, light-colored or dark, sometimes lacking, rarely forming a membrane or stroma; perithecia closed, breaking into plates or opening irregularly at the top, rarely at the base, sometimes deliquescing, apparently never with a true ostiole, usually globoid and sessile but sometimes elongate or flask-shaped, regularly membranous, occasionally coriaceous but rarely carbonous, often provided with appendages, bristles or hairs; asci one to many, clustered on branched hyphae, disposed irregularly, or most frequently in a basal umbel-like group, globoid to elliptic or clavate, rarely cylindrical or long-stalked; typically without paraphyses; spores various.

This order is distinguished from *Gymnasciales* by the presence of a definite perithecium with a distinct wall. The family *Eurotiaceae* may be placed almost equally well in either group, the branched ascogenous hyphae relating it to *Gymnasciales*, the true perithecium to *Perisporiales*. The chief distinction from the *Sphaeriales* lies in the absence of a true ostiole. The *Trichothyriaceae* approach *Microthyriales* by virtue of the radiate perithecium, but this is not dimidiate, with the asci in hymenia. The order passes so gradually into *Microthyriaceae* and *Sphaeriaceae* that it is impossible to draw sharp lines, the *Capnodiaceae* in particular sometimes possessing a distinct if not typical ostiole, while in some of the *Sphaeriaceae* and *Hypocreaceae*, the ostiole is indistinct or lacking.

The *Perisporiales* seem to have sprung directly from the *Gymnascaceae*, and to have given rise to the two somewhat parallel phyla, the *Sphaeriales* and *Microthyriales*.

Key to Families

- A. Asci borne on branched hyphae, hence irregularly disposed or in corymboid clusters Eurotiaceae p. 50
- B. Asci in a basal umbel or sometimes solitary
1. Aerial mycelium typically present; no erumpent stroma
- a. Aerial mycelium white; appendages present and usually modified Erysiphaceae p. 52
- b. Aerial mycelium dark, sometimes lacking; appendages usually absent
- (1) Perithecia not radiate; asci basal
- (a) Hyphae not slimy, straight-walled; perithecia parenchymic, the cells polygonal, not slimy Perisporiaceae p. 53
- (b) Hyphae straight-walled; perithecia dissolving in slime as they mature Englerulaceae p. 55
- (c) Hyphae constricted or dematioid, or in slimy skeins when straight-walled; perithecia of rounded cells or agglutinate straight-walled meridian hyphae Capnodiaceae p. 56
- (2) Perithecia radiate; asci hanging from the apparent tip Trichothyriaceae p. 58
2. Aerial mycelium lacking; perithecia borne on an innate-erumpent stroma, elongate Coryneliaceae p. 58

As a rule, the **Eurotiaceae** can not be distinguished externally from **Perisporiaceae**, and it is necessary to appeal to the origin or arrangement of the asci. In young or fresh material this can usually be determined positively; in mature or dry specimens it is best decided by the presence or absence of the umbellate arrangement typical of the other families. The first four of these are most intimately related and might well be treated as subfamilies of **Perisporiaceae**. Probably the greatest difficulty is met in separating the latter from the **Capnodiaceae**, the polygonal parenchyma-like cells of the perithecia of the one offering the best criterion, in contrast to the rounded cells or meridian hyphae of the other. The **Trichothyriaceae** are more sharply set off by the radiate wall of the perithecium, and the **Coryneliaceae** by the innate-erumpent stroma and the coriaceous or carbonous elongate perithecia.

The **Perisporiaceae** have probably been derived from the **Eurotiaceae**, and have constituted the central group from which all the others have arisen. The highly developed appendages of the **Erysiphaceae** and the reduced number of asci suggest that they are more specialized rather than the primitive forms of the order, though their development favors the latter view. The other families also represent divergent phyla, two of them, **Englerulaceae** and **Coryneliaceae**, ending blindly, while the other two connect with higher groups, the **Trichothyriaceae** with **Microthyriales**, and the **Capnodiaceae** with **Sphaeriaceae**, as do the **Perisporiaceae** likewise.

Family 19. EUROTIACEAE

1:24, 9:371, 11:253, 14:462; 16:398, 17:524, 22:25, 24:226; Lind. 1:1:297; TS 15:447

Mycelium abundant, superficial or innate, usually saprophytic, mostly straight-walled and without hyphopodia or spines; perithecia typically on the mycelium, the wall usually parenchymic and membranous, consisting of polygonal plates as a rule, breaking up generally or at the tip when mature, ostiole present only in **Micrascus**, appendages present or lacking; asci typically in corymboid clusters on

branched hyphae, these rarely short and approaching the umbelloid grouping, several to many, globose to clavate, few-, rarely many-spored; paraphyses regularly lacking; spores various.

Hyalosporae

Spores 1-celled, globoid to oblong, hyaline or subhyaline.

- A. Perithecia bright-colored, yellow to red, rarely white**
1. Perithecia setose or hairy
 - a. Perithecia with long stiff setae; spores lenticiform **Chaetotheca 11:254**
 - b. Perithecia with soft hairs; spores spiny, globoid, reddish **Aphanascus 10:35**
 2. Perithecia glabrous
 - a. Spores verrucose **Anixiopsis 14:464**
 - b. Spores smooth or ridged, but not verrucose
 - (1) Perithecia circumscissile at base **Dichlaena 24:228**
 - (2) Perithecia breaking up generally **Eurotium 1:25; 8**
- B. Perithecia brown, deep-purple or finally black**
1. Spores with an irregular wing-like appendage **Samarospora 11:254**
 2. Spores not appendaged
 - a. Perithecia brown, finally black; paraphyses present; spores globoid **Mycogala 1:34; 8**
 - b. Perithecia deep-purple, the plates with sutures; paraphyses lacking; spores bean-shaped **Fragosphaeria**

Phaeosporae

Spores 1-celled, globoid to oblong, dark, typically olivaceous to brown.

- A. Perithecia with ostiolate beak, carbonous, usually hairy; spores lunulate; fimicole** **Micrascus A:37, 9:495, L 297; 6**
- B. Perithecia not beaked or ostiolate**
1. Perithecia with appendages or hairs
 - a. Spores globose, conglobate
 - (1) Appendages closely spiral, convolute **Pleurascus 16:1123**
 - (2) Appendages flexuous-tortuose **Arachnomyces 17:532**
 - b. Spores ovoid to elliptic
 - (1) Appendages circinate at apex **Magnusia 1:38; 6**
 - (2) Appendages not circinate, mere hairs or bristles **Cephalotheca 1:36; 6**
 2. Perithecia glabrous
 - a. Spores globose, with a median wing-like ring cut into teeth **Emericella L 297**
 - b. Spores ovoid to oblong
 - (1) Spores conglobate at first
 - (a) Paraphyses present; spores elliptic, verrucose **Guillermundia**
 - (b) Paraphyses lacking; spores cuboid, smooth **Phaeidium 16:405**
 - (2) Spores not conglobate
 - (a) Saprophytic on grass culms **Carothecis 9:377**
 - (b) Parasitic on roots of herbs, chiefly legumes **Thielavia 1:39; 8**

Phaeodidymae

Spores 2-celled, dark

- A. Perithecia hairy
1. Perithecia breaking into plates; paraphyses present; spores appendaged at first **Zopfella L 334**
 2. Perithecia breaking irregularly at tip; paraphyses lacking; spores not appendaged **Zopfia 1:54**
- B. Perithecia glabrous
1. Paraphyses present, branched, clinging to asci and spores; spores smooth, becoming greatly enlarged **Richonia 9:379**
 2. Paraphyses lacking; spores rough or spiny, not enlarged **Testudina 9:378**

Hyalophragmiae

Spores x-celled, hyaline or subhyaline

- Perithecia becoming gelatinous when mature, exposing the asci **Dexteria 24:703**

Phaeophragmiae

Spores x-celled, dark

- A. Paraphyses present; spores clavate, cells not separating **Eosphaeria**
- B. Paraphyses lacking; spores cylindrical, cells separating **Preussia**

Phaeodictyae

Spores muriform, dark

- A. Ascus single; spores muticate **Phanerascus 24:1146**
- B. Asci many; spores with a beak-like hyaline appendage at either end **Ceratocarpia 14:474**

Family 20. ERYSHIPACEAE

1:1, 9:364, 11:253, 14:404, 17:526, 22:19, 24:223

Mycelium or subiculum superficial, white, cobwebby, septate, penetrating the epiderm by means of haustoria and regularly bearing chains of conidia (form genus **Oidium**) on simple upright branches; perithecia without ostiole, always with simple or modified appendages, wall more or less membranous and brittle; asci one to several, globose to ovoid, 2-8-spored, without paraphyses; spores hyaline or light-colored, typically 1-celled.

Hyalosporae

Spores 1-celled, hyaline or light-colored

- A. Perithecia with one ascus
1. Asci 4-8-spored
 - a. Appendages simple, hypha-like **Sphaerotheca 1:3; 7**
 - b. Appendages dichotomous at tip **Podosphaera 1:2; 7**
 2. Asci many-spored **Lanomyces 24:365**
- B. Perithecia with 2-several asci
1. Appendages simple, hypha-like **Erysiphe 1:15; 7**
 2. Appendages branched or otherwise modified

- a. Appendages dichotomous at tip *Microsphaera* 1:10; 7
 b. Appendages modified but not branched
 (1) Appendages lance-like, swollen at base *Phyllactinia* 1:5; 7
 (2) Appendages coiled at tip *Uncinula* 1:6; 7

Hyalodidymae

Spores 2-celled, hyaline or light-colored

- A. Appendages simple or branched, thread-like *Chilomyces* 22:33
 B. Appendages dichotomous at tip *Schistodes* TS 456

Hyalophragmiae

Spores x-celled, hyaline or light-colored

- Appendages simple, thread-like; asci several,
 x-spored *Leucoconis* TS 456

Family 21. PERISPORIACEAE

1:24, 9:371, 11:253, 14:462, 16:398, 17:524, 22:19, 24:222; L 333; TS 447

Mycelium or subiculum superficial, rarely beneath cuticle or epiderm or filling the stomata, septate, not constricted or dematioid, with or without hyphopodia or spines; perithecia regularly on the mycelium, without ostiole, wall parenchymic and membranous of one or two layers of polygonal cells, or sometimes firmer and x-layered, rarely carbonous, appendages present or lacking; asci regularly several to many, globoid to clavate, rarely cylindrical, few-, rarely many-spored, borne in an umbellate basal cluster; paraphyses regularly lacking; spores various.

Hyalosporae

Spores 1-celled, hyaline or subhyaline

- A. Spores globose; mycelium without hyphopodia *Meliolidium*
 B. Spores ellipsoid; mycelium with hyphopodia *Clistosphaera* 24:236, TS 461

Phaeosporae

Spores 1-celled, dark

- A. Mycelium superficial, copious; asci clavate
 1. Paraphysoids present; ostiole more or less distinct *Episoma* 24:241
 2. Paraphysoids absent; ostiole lacking; hyphae with star-like setae *Teratonema* 24:241, TS 463
 B. Mycelium merely hyphae in hymenium of host; asci globose to ovoid; fungicole *Guttularia* 24:240

Hyalodidymae

Spores 2-celled, hyaline

- A. Perithecia or mycelium innate
 1. Perithecia hairy, on a subcuticular or erumpent stroma; asci few-spored *Chevalieropsis* 22:391
 2. Perithecia glabrous, subepidermal; asci many-spored *Pampolysporium* 16:411, TS 460
 B. Perithecia and mycelium superficial
 1. Mycelium and perithecia with setae; perithecia opening irregularly at tip *Rhizalia* 24:364, TS 463
 2. Mycelium without setae; perithecia astomous

- a. Perithecia with appendages, setae or hairs
 (1) Perithecia with appendages of two kinds, long and simple, short and dichotomous *Dichaetis* 22:33
 (2) Perithecia with setae or hairs merely
 (a) Paraphyses present *Chaetostigme* TS 199; 8
 (b) Paraphysoids present *Lasiostemma* 24:248
 (c) Paraphyses lacking *Dimeriella* 22:37, TS 462
- b. Perithecia glabrous
 (1) Asci globose-ellipsoid; hyphae and perithecia yellow, the latter stipitate *Chrysomyces* 24:237, TS 464
 (2) Asci clavate-cylindric; not yellow
 (a) Paraphyses present *Stigme* TS 199
 (b) Paraphyses lacking *Dimerina* 24:245, TS 464

Phaeodidymae

Spores 2-celled, dark

- A. Perithecia with a subcuticular hypostroma
 1. Perithecia separate, single, finally with basal setae *Alina* 22:40, TS 460
 2. Perithecia in a ring about a sclerotial stroma *Lasiobotrys* 1:29, TS 460; 8
- B. Perithecia or mycelium rooted only in the stomata
 1. Mycelium with hyphopodia but not setae; perithecia rooted in the stomata *Stomatogene* 24:236, TS 461
 2. Mycelium with setae but no hyphopodia, rooted in the stomata *Piline* 24:236, TS 461
- C. Perithecia and mycelium superficial
 1. Mycelium with hyphopodia *Wageria* 24:259
 2. Mycelium without hyphopodia
 a. Mycelium with setae; perithecia usually hairy
 (1) Paraphyses present *Chaetostigmella* 24:257, TS 199
 (2) Paraphysoids present *Apiosporina*
 (3) Paraphyses lacking *Phaeodimeris* TS 463, 257
 b. Mycelium without setae; perithecia glabrous
 (1) Asci globose-ellipsoid *Parodiopsis* 24:391, TS 464
 (2) Asci clavate to cylindric
 (a) Paraphyses present
 x. Perithecia on a subiculum; fungicole *Phaeostigme*
 y. Perithecia without subiculum; not fungicole *Parodiella* 1:717, 9:409; 8
 (b) Paraphyses lacking *Dimerium* 1:51, 16:410, TS 464

Hyalophragmiae

Spores x-celled, hyaline

- A. Perithecia separate, not in a disk
 1. Perithecia setose or hairy *Dimeriellopsis*
 2. Perithecia glabrous *Mycophaga*
- B. Perithecia ostiolate, glabrous, in a disk *Paropsis* 24:223

Phaeophragmiae

Spores x-celled, dark

- A. Mycelium with hyphopodia
 1. Mycelium with setae; perithecia setose

- a. Paraphyses present Leptomeliola
- b. Paraphyses absent Meliola 1:60, TS 461; 8
- 2. Mycelium without setae
 - a. Perithecia appendaged or setose Irene 24:358, TS 461
 - b. Perithecia glabrous Irenina
- B. Mycelium without hyphopodia
 - 1. Mycelium with setae
 - a. Paraphysoids present Meliolina 24:360, TS 463
 - b. Paraphysoids lacking Perisporiopsis 17:544
 - 2. Mycelium without setae
 - a. Perithecia setose or hairy Haraea 24:350, TS 463
 - b. Perithecia glabrous
 - (1) Spores with hyaline appendage at either end Ceratosperma 24:223
 - (2) Spores not appendaged Perisporium 1:55; 8

Phaeodictyae

Spores muriform, dark

- Mycelium without hyphopodia; perithecia hairy Pleomerium 24:223

Scolecosporae

Spores acicular to filiform, septate or not, hyaline or dark

- A. Mycelium with hyphopodia Ophiomeliola 16:416
- B. Mycelium without hyphopodia
 - 1. Perithecia hairy Leptascospora 24:223
 - 2. Perithecia glabrous Tonduzia

Family 22. ENGLERULACEAE

22:26, 24:229; TS 467

Mycelium superficial, bright-colored or dark, septate, straight-walled, with or without hyphopodia, sometimes lacking; perithecia superficial, globoid, astomous, sessile or stalked, parenchymic or with meridian hyphae, wholly or partly breaking up by a slimy histolysis; asci single or in basal clusters, mostly without paraphyses.

In a critical account of this family, Petrak (Ann. Myc. 26:385-413, 1928) has eliminated nearly two-thirds of the genera referred to it by Theissen and Sydow in their monograph. Five become synonyms and five are treated as doubtful.

Phaeodidymae

Spores 2-celled, dark

- A. Perithecia parenchymic, the soft globose cells falling apart
 - 1. Perithecia with persistent 1-celled stalk and single ascus Thrauste 24:234, TS 469
 - 2. Perithecia sessile
 - a. Mycelium with hyphopodia; asci one to many Schiffnerula 22:27, TS 469
 - b. Mycelium without hyphopodia Englerula 17:529, TS 468
- B. Perithecia of meridian hyphae, radiate at tip
 - 1. Ascus single; setae present Linotexis 24:235, TS 470
 - 2. Asci many; setae lacking; mycelium copious, with hyphopodia Parenglerula 24:235, TS 470

Phaeophragmiae

Spores x-celled, dark in mass

Mycelium without hyphopodia; paraphyses present **Hyalotexis****Family 23. CAPNODIACEAE**

1:73, 9:438, 11:270, 14:476, 17:555, 22:59, 24:366; TS 471

Mycelium superficial, rarely subcuticular, dematioid, sometimes straight-walled but the hyphae then agglutinate in skeins, often with setae but hyphopodia only rarely present; perithecia superficial, rarely with innate foot, composed of dematioid cells or of agglutinate, meridian hyphae, never of straight-walled polygonal cells as in **Perisporiaceae**, soft-fleshy or slimy-cartilaginous to tough-leathery, never carbonous, globose to elongate-conical, sessile or stalked, hairy or glabrous; ostiole lacking or indefinite, rarely distinct; asci basal-umbellate or parallel, usually 8-spored and always without true paraphyses; pycnidia often subulate flask-shaped.

This family approaches **Perisporiaceae** so closely on the one hand and **Sphaeriaceae** on the other that genera on the border-line must be traced in both keys concerned.

Hyalosporae

Spores 1-celled, hyaline

Perithecia setose; asci 8-16 spored; spores globoid,
very minute**Oplothecium****Hyalodidymae**

Spores 2-celled, hyaline

A. Perithecia innate with central foot**Adelopus 24:371, TS 482****B.** Perithecia superficial, without central foot

1. Perithecia stalked, globoid to oval

Antenellina

2. Perithecia sessile, globose

a. Mycelium with setae

(1) Perithecia setose, dark

Chaetothyrina 24:370, TS 474

(2) Perithecia glabrous, bright-colored

Dimerosporina 24:369, TS 474

b. Mycelium without setae

(1) Perithecia setose

Ceratochaetopsis(2) Perithecia glabrous; ostiole more or less
distinct**Calyptra 24:371, TS 478****Phaeodidymae**

Spores 2-celled, dark

A. Mycelium subcuticular, with free setae; perithecia
glabrous**Chaetobotrys 17:881, TS 482****B.** Mycelium superficial

1. Mycelium with setae

a. Mycelium with hyphopodia; perithecia gla-
brous

(1) Ascus single

Balladyna 16:411, TS 475

(2) Asci many

Balladynopsis 24:374, TS 475b. Mycelium without hyphopodia; perithecia
setose**Neohoehnelia 24:375, TS 476**

2. Mycelium without setae

a. Perithecia setose

Chaetyllis

b. Perithecia glabrous

(1) Ascus single

Balladynella 24:374, TS 478

(2) Asci many

Dysrhynchis 17:689, TS 478

Hyalophragmiae

Spores x-celled, hyaline

- A. Perithecia stalked or at least vertically elongate
1. Perithecia hairy Hypocapnodium 24:376
 2. Perithecia glabrous
 - a. Mycelium arachnoid, hyphae straight-walled Scorias 1:83, TS 473
 - b. Mycelium leathery, dematioid, walls constricted Antenella 24:367, TS 473
- B. Perithecia sessile, globose
1. Mycelium with setae; perithecia more or less setose Chaetothyrium 9:1061, TS 477
 2. Mycelium without setae
 - a. Perithecia setose Trichomerium 24:223
 - b. Perithecia glabrous Limacinia 14:382, TS 478

Phaeophragmiae

Spores x-celled, dark

- A. Perithecia stalked or at least vertically elongate Capnodaria 1:74, TS 474
- B. Perithecia sessile, globose
1. Mycelium with setae; perithecia more or less setose Setella 24:384, TS 477
 2. Mycelium without setae
 - a. Perithecia setose
 - (1) Ostiole present Capnophaeum 24:384
 - (2) Ostiole absent Aethalomyces
 - b. Perithecia glabrous; ostiole usually present Phragmocapnias 24:385, TS 480

Hyalodictyae

Spores muriform, hyaline

- A. Perithecia stalked or at least vertically elongate, glabrous Paracapnodium 24:367, TS 473
- B. Perithecia sessile, globose
1. Mycelium with setae; perithecia setose Chaetomeris 22:495, TS 478
 2. Mycelium without setae; perithecia glabrous Phaeopeltis 17:873, TS 480

Phaeodictyae

Spores muriform, dark

- A. Perithecia stalked and elongate Capnodium 1:73, 80, TS 473; 8
- B. Perithecia sessile, globose
1. Spores typically muriform Naetrocymbe 22:67, 24:388, TS 481
 2. Spores cruciform-septate Schizocapnodium

Scolecosporae

Spores acicular to filiform, hyaline or dark

- A. Spores hyaline; mycelium with setae Actinocymbe 24:389, TS 478
- B. Spores dark; mycelium without setae
1. Perithecia elongate, with ostiole Ophiocapnis 24:388
 2. Perithecia globose, without ostiole Nematothecium 24:392

Family 24. TRICOTHYRIACEAE

24:506; TS 15:484

Mycelium superficial, usually well-developed, rarely evanescent, dark, cottony or forming a membrane, mostly fungicole; perithecia round, radiate, somewhat flattened, the upper and lower walls somewhat unlike, inverted, the morphological base forming the apex with papilla and pore; asci several to many, small, clavate, hanging from the apex; paraphyses typically lacking; spores various.

Hyalodidymae

Spores 2-celled, hyaline or subhyaline

- | | |
|----------------------------------|------------------------------------|
| A. Mycelium abundant, persistent | Trichothyrium 9:1062, TS 487 |
| B. Mycelium lacking | Loranthomyces 24:507,
TS 487; 8 |

Phaeodidymae

Spores 2-celled, dark

- | | |
|-----------|--------------------------------------|
| One genus | Trichothyriella 24:507,
TS 487; 8 |
|-----------|--------------------------------------|

Hyalophragmiae

Spores 2-celled, hyaline or subhyaline

- | | |
|---------------------------------------|------------------------------------|
| A. Mycelium abundant, persistent | Trichothyriopsis 24:507, TS
487 |
| B. Mycelium lacking; perithecia hairy | Actinopeltis TS 487; 8 |

Family 25. CORYNELIACEAE

9:1073, 11:385, 16:650, 22:513, 24:1104

Aerial mycelium none; stroma innate, then crumpled, flat to pulvinate, black, coriaceous to carbonous; perithecia on the stroma, usually caespitose, elongate, turbinate to flask-shaped, sessile or stipitate, when mature opening widely by means of a cleft or fimbriate-lacerate lobes; asci ovoid, with long slender stalks, 1-8-spored; paraphyses lacking; spores brown to nearly black when mature.

Phaeosporae

Spores 1-celled, brown to black

- | | |
|---|-----------------------|
| A. Perithecia with definite stalk | |
| 1. Perithecia proliferating to form a second at the tip | Sorica 17:621 |
| 2. Perithecia not proliferating | Caliciopsis 8:833; 23 |
| B. Perithecia without definite stalk | Corynelia 9:1073; 17 |

Staurosporae

Spores stellate with 4-5 conical rays

- | | |
|-----------|-------------------|
| One genus | Tripospora 9:1073 |
|-----------|-------------------|

Order 8. SPHAERIALES

Mycelium typically immersed and scanty, sometimes forming a subiculum and frequently compacted into a stroma of various types; perithecia innate to superficial, typically globoid, occasionally depressed, cupulate, conical or cylindrical, regularly ostiolate, rarely astomous, sometimes with a beak or crest, wall fleshy, membranous, coriaceous or carbonous, bright-colored to dark, frequently hairy or setose, separate,

cespitose or composite in a stroma; asci typically clavate to cylindrical and persistent, sometimes stalked, usually 8-spored but the spores varying from one to many, with paraphyses or paraphysoids, or these lacking; spores from minute botuliform to long filiform, hyaline to dark, continuous to septate.

This is the typical order of the **Pyrenomycetes** and the one in which evolution has been the most active. In contrast to the ancestral **Perisporiales**, saprophytism has been developed in a high degree, accompanied by the sinking of the mycelium and the specialization of the perithecium for spore protection and distribution. In one direction this has produced the carbonous wall, in the other a fleshy one, both of sufficient thickness to necessitate the regular development of an ostiole for freeing the spores.

This order is distinguished from the **Perisporiales** primarily by the presence of an ostiole, typically in the form of a perforate papilla or beak. As a rule, the mycelium is immersed instead of superficial, and is often developed into a stromal mass about the perithecia. The persistence of the perithecial wall in the stroma separates it from the **Dothideales**, in which the perithecia have become locules enclosed merely by stromal hyphae. This evolution has apparently taken place in two directions, the massive stroma giving rise to the **Dothideae** and the clypeus to the **Phyllachoreae**. The modification has been so gradual and continuous that the number of intermediate forms is large and these must be sought in both orders. The sphaerials with paraphysoids approach the **Myriangiaceae** to a certain degree, but it does not seem probable that they are phyletically connected. The **Microthyriales** are set apart by the dimidiate and typically radiate ascoma, and usually also by the superficial mycelium and fruit-body.

Key to Families

- | | |
|---|-----------------------|
| A. Perithecia not parasitic on algae, without a thallus | |
| 1. Perithecia dark, membranous to carbonous | |
| a. Ostiole papillate or conical, round, not compressed | Sphaeriaceae p. 59 |
| b. Ostiole broad and compressed, the opening linear | Lophiostomaceae p. 82 |
| 2. Perithecia bright-colored, rarely whitish, fleshy | Hypocreaceae p. 76 |
| B. Perithecia parasitic on algae, typically with a thallus | Verrucariaceae p. 84 |
| C. Ascomata at first perithecioid, then cupuloid, in a ramose or alveolate stroma | Cyttariaceae p. 83 |

Family 26. SPHAERIACEAE

Perithecia innate, erumpent or superficial from the first, typically globose, sometimes lentiform, or cupulate-collapsing, rarely conical or cylindrical, regularly ostiolate, rarely astomous, sometimes beaked, wall typically dark, brown to black, membranous, coriaceous or carbonous, never fleshy and bright-colored, frequently hairy, separate, cespitose or composite in a stroma; stroma scanty and immersed, or producing a subicle or stroma of various forms; asci typically clavate to cylindrical and persistent, mostly 8-spored, paraphyses or paraphysoids present or sometimes lacking; spores various.

The first four families are intimately related, the line of descent being continuous from the central sphaerials to **Hypocreaceae** and **Lophiostomaceae**. In the case of the former, whitish or hyaline forms are scarcely to be distinguished from innate membranous sphaerials, and a similar difficulty recurs in those genera with fleshy-leathery stromata. The thick compressed ostiole with a rimose opening

sets the **Lophiostomaceae** off distinctly from the other two families. This family may constitute an intermediate stage in the evolution of the **Hysteriaceae** from **Sphaeriaceae**, but the emphasis on the ostiole indicates that the carbonous genera of hysteriales have sprung directly from the sphaerials, as a response to the structure of the matrix. The **Verrucariaceae** are lichens derived directly from **Sphaeriaceae** as a consequence of becoming parasitic on blue-green or yellow-green algae and developing a more or less conspicuous thallus. The fifth family is of problematic constitution and position, as indicated later.

Allantosporae

1:88, 9:442, 11:271, 14:478, 16:417, 17:560, 22:67, 24:708, 775

Hyalallantiae

Spores 1-celled, botuliform, hyaline or subhyaline

- A. Perithecia separate or cespitose, without distinct subicle or stroma
1. Perithecia innate, or finally erumpent
 - a. Perithecia typically single or scattered
 - (1) Perithecia beaked Wegelina 16:421
 - (2) Perithecia not beaked
 - (a) Perithecia hairy Enchnoa 1:89
 - (b) Perithecia glabrous
 - x. Perithecia discoid or cupulate Romellia 16:419
 - y. Perithecia globoid Massalongiella 1:89
 - b. Perithecia cespitose or seriate
 - (1) Perithecia in concentric groups between bark and wood
 - (a) Perithecia hairy Coronophorella
 - (b) Perithecia glabrous
 - x. Asci 8-spored
 - (x) Perithecia beaked Calosphaeria 1:95, 16:419; 9
 - (y) Perithecia not beaked Togninia 1:101, 16:480
 - y. Asci many-spored Coronophora 1:103
 - (2) Perithecia merely cespitose, imbedded in bark or wood; stroma sometimes indicated, as below
 - (a) Perithecia imbedded in wood; asci 8-spored Endoxyla 1:181
 - (b) Perithecia imbedded in the bark
 - x. Asci 8-spored Cryptosphaeria 1:182
 - y. Asci many-spored Cryptosphaerella 1:185
 2. Perithecia superficial from the first
 - a. Perithecia setose, ostiole central; asci 8-spored Euacanthé
 - b. Perithecia glabrous, ostiole lateral; asci many-spored Pleurostoma 1:95
- B. Perithecia on a subicle or in a stroma
1. Perithecia with a subicle or mycelial pseudo-stroma
 - a. Perithecia setose
 - (1) Asci 8-spored Acanthonitschkea 22:68
 - (2) Asci many-spored Neotrotteria 24:777
 - b. Perithecia glabrous, typically cupulate-collapsing

- (1) Ostiole present; mycelial spines lacking
 (a) Asci 8-spored
 x. Perithecia beaked, not cupulate **Rostronitschkea** 24:776
 y. Perithecia not beaked **Nitschkea** 1:91, 11:272; 9
 (b) Asci many-spored **Fracchiaea** 1:93; 9
- (2) Ostiole lacking; mycelial spines present **Sydowinula**
2. Perithecia in a stroma, the latter sometimes obsolete
- a. Stroma formed by the changed matrix
- (1) Stroma valsoid, i. e., perithecia in a circle or row
- (a) Asci 4-8-spored **Quaternaria** 1:106
 x. Perithecia 4, rarely 6, in a stroma
 y. Perithecia many, 8-30, in a stroma
 (x) Stroma in the bark; perithecia with ostiole entire; asci sessile or sessile **Valsa** 1:108; 9
 (y) Stroma in or on the wood; perithecia with sulcate ostiole; asci stalked **Eutypella** 1:145, 17:569; 9
Valsella 1:158
- (b) Asci many-spored **Valsella** 1:158
- (2) Stroma eutypoid, i. e., more or less broadly effuse
- (a) Stroma evident
 x. Asci 8-spored **Eutypa** 1:162, 17:569; 9
 y. Asci many-spored **Cryptovalsa** 1:187
- (b) Stroma more or less indistinct or obsolete
- x. Asci 8-spored
 (x) Stroma in the bark **Cryptosphaeria** 1:182
 (y) Stroma in the wood **Endoxyla** 1:181
 y. Asci many-spored **Cryptosphaerella** 1:186
- b. Stroma different from the matrix, diatrypoid
- (1) Asci 8-spored **Diatrype** 1:91, 9:480; 9
 (2) Asci many-spored **Diatrypella** 1:200

Phaeallantiae

Spores 1-celled, botuliform, dark

Stroma pulvinate, different from matrix, erumpent **Phaeotrype** 24:849**Hyalosporae**

1:407, A:58, 9:577, 11:289, 14:515, 16:452, 17:573, 22:71, 24:778

Spores 1-celled, not botuliform, hyaline to subhyaline

A. Perithecia separate to cespitose

1. Perithecia innate, or finally erumpent

a. Perithecia beaked or with stellate ostiole

(1) Perithecia carbonous

(a) Perithecia hairy; beak bent **Camptosphaeria** 1:143(b) Perithecia glabrous; beak straight **Rostrosphaeria**

(2) Perithecia membranous, usually folicole

(a) Ostiole stellate or lobed

x. Ostiole densely hairy-coronate, brown, 3-5-lobed **Paidania** 22:80y. Ostiole not coronate, white, stellate with black, wart-like lobes **Rinia** 17:591

- (b) Ostiole not stellate or lobed, black, beaked
- x. Spores with mucous sheath, long-striate **Amylis**
- y. Spores without mucous sheath
- (1) Perithecia in a pseudostroma **Mamiana** 24:705
- (2) Perithecia not in a pseudostroma **Gnomoniella** 1:413; 9
- b. Perithecia not beaked or stellate
- (1) Perithecia with clypeus or epistroma
- (a) Perithecia with a clypeus, i.e. black adhering epiderm
- x. Paraphyses present **Causalis** 24: 1262
- y. Paraphyses lacking
- (x) Asci 8-spored **Sphaerognomonia** 22:78; 10
- (y) Asci 16-spored **Stevensiella** 24:808
- (b) Perithecia with epistroma splitting radially
- Schizoparme**
- (2) Perithecia without clypeus or epistroma
- (a) Paraphyses present
- x. Perithecia setulose **Physalosporella** 22:290
- y. Perithecia glabrous
- (x) Asci 2-spored **Dicarpella** 24:743
- (y) Asci 8-spored
- m. Spores with a mucous sheath **Myelosperma** 24:815
- n. Spores without mucous sheath
- (m) Perithecia lichenicole **Sporophysa** 17:586
- (n) Perithecia peritheccole **Cryptonectriopsis** 24:742
- (o) Perithecia not in lichens or other perithecia **Physalospora** 1:433; 9
- (b) Paraphysoids present; intramatrical hyphae more or less well developed **Montagnellina** 24:636
- (c) Paraphyses or paraphysoids lacking
- x. Asci 1-2-spored
- (x) Perithecia ostiolate, not lichenicole **Geminispora** 11:292
- (y) Perithecia astomous, then splitting irregularly at apex, lichenicole **Spolverinia** 17:577
- y. Asci 4-8-spored
- (x) Asci globose; spores with an irregular wing **Samarospora** 11:254
- (y) Asci not globose or spores winged
- m. Spores long-caudate at one or both ends **Urospora** 1:488, 14:523
- n. Spores not caudate
- (m) Perithecia lichenicole **Paralaestadia** 17:576
- (n) Perithecia not lichenicole **Phomatospora** 1:420, 432
- z. Asci many-spored
- (x) Perithecia hairy **Polytrichia** 1:451
- (y) Perithecia glabrous **Ditopella** 1:450
2. Perithecia superficial from the first
- a. Perithecia beaked
- (1) Spores with a ring-like appendage **Rostrella** 17:609
- (2) Spores not appendaged
- x. Perithecia hairy **Cerastomis** 2:409
- y. Perithecia glabrous **Ceratostomella** 2:408; 9

- b. Perithecia not beaked
 - (1) Perithecia hairy
 - (a) Asci 8-spored *Trichosphaeria* 1:452; 10
 - (b) Asci 16-spored *Trichosphaerella* 9:604
 - (2) Perithecia glabrous
 - (a) Spores stellate *Inzengaea* 9:610
 - (b) Spores not stellate
 - x. Paraphyses present *Wallrothiella* 1:455
 - y. Paraphysoids present *Epithyma* 24:239
- B. Perithecia with a subicle or stroma
 - 1. Perithecia with a subicle
 - a. Perithecia sunken in a subicle with spines or conidia
 - (1) Subicle with spines; spores not reniform *Scortechinia* A:68, 9:604
 - (2) Subicle with conidia; spores reniform *Nephrospora*
 - b. Subicle without spines or conidia
 - (1) Perithecia hairy; paraphyses present *Miyoshiella* 22:92
 - (2) Perithecia glabrous
 - (a) Subicle crustose; asci very long stalked; paraphysoids present *Pilgeriella* 16:464
 - (b) Subicle cottony; asci not long stalked; paraphyses lacking *Vestergrenia* 16:465
 - 2. Perithecia with a stroma
 - a. Perithecia beaked
 - (1) Paraphyses present *Glomerella* 16:452, 17:573; 10
 - (2) Paraphyses lacking *Hyperus*
 - b. Perithecia not beaked
 - (1) Stroma bright red or yellow; paraphyses lacking *Endothia* 1:601
 - (2) Stroma brown or black
 - (a) Stroma valsiform; perithecia circinate with long necks converging into a common canal *Crytospora* 1:466
 - (b) Stroma not valsiform; perithecia without long necks
 - x. Stroma lineate *Scirrhia* 9:1030
 - y. Stroma pulvinate
 - (x) Stroma sclerotium-like, with black carbonous crust and hyaline center *Mazzantia* 2:591
 - (y) Stroma not sclerotium-like, botryose *Botryosphaeria* 1:456; 10

Phaeosporae

1:214, 9:481, 11:278, 14:489, 16:427, 17:593, 22:94, 24:816

Spores 1-celled, not botuliform, dark, yellow, olive or brown

- A. Perithecia separate to cespitose but without subicle or stroma
 - 1. Perithecia innate, or finally erumpent
 - a. Perithecia persistently innate
 - (1) Perithecia with a clypeus or epistroma
 - (a) Perithecia with a clypeus
 - x. Spores appendaged at one or both ends *Entosordaria* 1:286
 - y. Spores not appendaged
 - (x) Perithecia lichenicole *Anthostomaria* 17:595
 - (y) Perithecia not lichenicole *Anthostomella* 1:278; 10

- (b) Perithecia with a 5-6-radiate epistroma **Erikssonia 14:710, 24:848**
- (2) Perithecia without clypeus or epistroma
- (a) Perithecia beaked **Acanthorhynchus 22:300**
- (b) Perithecia not beaked
- x. Spores with a mucous sheath **Leptomassaria 24:826**
- y. Spores without mucous sheath **Paranthostomella 22:101**
- b. Perithecia finally erumpent
- (1) Asci 8-spored; epiderm rupturing stelately; not lichenicole **Astrocystis 1:293**
- (2) Asci many-spored
- (a) Perithecia lichenicole **Muellerella A:49, 9:483**
- (b) Perithecia not lichenicole **Mesniera 16:440**
2. Perithecia superficial from the first
- a. Perithecia beaked
- (1) Spores lunulate; fimicole **Micrascus A:37, 9:483**
- (2) Spores globoid to elliptic; not fimicole
- (a) Perithecia setose **Chaetocercis 24:1070**
- (b) Perithecia glabrous
- x. Asci 1-spored **Cryptascus 22:298**
- y. Asci 8-spored **Ceratostoma 1:215; 10**
- b. Perithecia not beaked
- (1) Perithecia membranous
- (a) Spores with mucous sheath or tail; usually fimicole
- x. Spores with mucous sheath **Sordaria 1:230; 10**
- y. Spores caudate at one or both ends
- (x) Asci 4-8-spored **Podospora**
- (y) Asci many-spored **Philocopra 1:249**
- (b) Spores without mucous sheath or tail; perithecia typically with long branched or spiral hairs
- x. Spores globoid to elliptic **Chaetomium 1:220; 10**
- y. Spores triangular **Bommerella A:38, 9:486**
- (2) Perithecia typically carbonous; spores not caudate
- (a) Perithecia setose **Coniochaeta 1:269**
- (b) Perithecia glabrous
- x. Perithecia lichenicole **Adelococcus**
- y. Perithecia not lichenicole **Rosellinia 1:252; 10**
- (3) Perithecia coriaceous to corneous; spores caudate at one or both ends **Bombardia 1:277; 10**
- B. Perithecia with subicle or stroma
1. Perithecia with a subicle
- a. Perithecia collapsing into cups; paraphyses absent **Tympanopsis 11:283**
- b. Perithecia not collapsing; paraphyses present
- (1) Perithecia hairy; fungicole **Helminthosphaeria 1:230**
- (2) Perithecia glabrous; not fungicole **Rosellinia 1:252; 10**
2. Perithecia with a stroma
- a. Stroma immersed
- (1) Stroma in wood or bark, valsoid or diatrypoid **Anthostoma 1:293; 10**
- (2) Stroma in leaves, with a hypostroma **Pseudotthiella**

- b. Stroma superficial, carbonous to soft-leathery or sometimes almost fleshy
- (1) Stroma effuse, pulvinate, globoid or cupulate, without sterile base or stalk
- (a) Stroma effuse
- x. Perithecia with long necks; spores without mucous sheath; lignicole **Bolinia 1:352**
- y. Perithecia without necks; spores with mucous sheath; funicole **Hypocopa 1:240; 10**
- (b) Stroma globoid, pulvinate or cupulate, sometimes confluent and crustose
- x. Stroma concentrically zoned **Daldinia 1:393; 11**
- y. Stroma not concentrically zoned
- (x) Stroma solid
- m. Perithecia in several series covered by a fragmenting peridium **Peridoxylum**
- n. Perithecia typically in one series, without fragmenting peridium
- (m) Stroma discoid or cupulate; conidia below upper layer **Nummularia 1:395; 11**
- (n) Stroma pulvinate to hemispheric, often confluent and then crustose; conidia superficial **Hypoxyllum 1:352; 11**
- (y) Stroma more or less hollow
- m. Stroma woody-fleshy, hemispheric, hollow, pale, the surface crested-alveolate **Cerillum 24:650**
- n. Stroma carbonous, black, somewhat hollow, the surface not crested-alveolate **Ustulina 1:350; 11**
- (2) Stroma stipitate, terete, cylindric, clavate, or fruticose, sometimes capitate, discoid or cupulate above
- (a) Stroma broadened into a disk above; spores with mucous sheath **Poronia 1:348; 11**
- (b) Stroma not discoid above; spores without sheath
- x. Perithecia immersed laterally
- (x) Stroma clavate or filiform, often branched **Xylaria 1:309; 11**
Kretschmaria 9:965
- (y) Stromata capitate, forming a crust
- y. Perithecia immersed vertically
- (x) Perithecia in a circle below the truncate disk **Camillea 1:346**
- (y) Perithecia crowded below an operculate disk **Henningsina 16:450**

Hyalodidymae

1:475, 9:611, 11:295, 14:525, 16:468, 17:635, 22:120, 24:849

Spores 2-celled, hyaline or subhyaline, ovoid to oblong or fusoid

A. Perithecia separate or cespitose, rarely subiculoid**1. Perithecia innate, or finally erumpent****a. Perithecia beaked**

- (1) *Perithecia* concentric in groups between bark and wood **Cacosphaeria** 9:699
- (2) *Perithecia* not in concentric groups
- (a) Asci 8-spored
- x. Paraphyses present **Pseudodiaporthe** 22:388
- y. Paraphyses lacking **Gnomonia** 1:561; 11
- (b) Asci many-spored **Rehmiella** 9:675
- b. *Perithecia* not beaked
- (1) *Perithecia* with clypeus or epistroma
- (a) *Perithecia* with clypeus
- x. Spores appendaged both ways; ostiole oblique **Plagiostigma**
- y. Spores not appendaged; ostiole straight
- (x) Paraphyses present **Stegophora**
- (y) Paraphyses lacking **Hypospilina** 2:190
- (b) *Perithecia* with 5-6-radiate epistroma **Periaster**
- (2) *Perithecia* without clypeus or epistroma
- (a) *Perithecia* setose, often about apex only **Venturia** 1:586; 11
- (b) *Perithecia* not setose
- x. Spores with mucous sheath or appendages
- (x) Spores with mucous sheath **Massarinula** 14:536
- (y) Spores caudate at each end **Ceriosporella**
- y. Spores without sheath or appendages
- (x) Paraphyses present
- m. *Perithecia* cespitose, carbonous **Otthiella** 1:739, 17:662
- n. *Perithecia* sparse to gregarious, typically membranous
- (m) *Perithecia* with long branched hairs; typically lichenicole **Arcangelia** 9:696
- (n) *Perithecia* glabrous
- r. *Perithecia* lichenicole **Didymellopsis** 17:657
- s. *Perithecia* not lichenicole **Didymella** 1:545; 11
- (y) Paraphysoids present
- m. *Perithecia* lichenicole **Polycarpella**
- n. *Perithecia* not lichenicole
- (m) Asci few, ovoid **Wettsteinina** 22:406
- (n) Asci many, clavate-cylindric **Pseudosphaerella** 24:631
- (z) Paraphyses and paraphysoids lacking **Mycosphaerella** 1:476; 9:659; 11
2. *Perithecia* superficial
- a. *Perithecia* beaked
- (1) Spores expelled in a mucous mass **Spumatoria** 16:1134
- (2) Spores not expelled in a mucous mass
- (a) *Perithecia* setose; paraphyses lacking **Chaetolentomita** 24:1072
- (b) *Perithecia* glabrous; paraphyses present **Lentomita** 1:584
- b. *Perithecia* not beaked
- (1) *Perithecia* setose or hairy
- (a) Paraphyses present **Gibbera** 1:599
- (b) Paraphyses lacking
- x. *Perithecia* lichenicole **Echinothecium** 16:484
- y. *Perithecia* insecticole **Cantharosphaeria** 24:923
- z. *Perithecia* foli-caulicole, sometimes collapsing **Coleroa**

- (2) *Perithecia* glabrous
- (a) Paraphyses present
- x. Spores short, elliptic to fusoid
- (x) *Perithecia* coarsely warted or ridged
- m. *Perithecia* lichenicole Rhagadostoma
- n. *Perithecia* not lichenicole Bertia 1:581
- (y) *Perithecia* not warted or ridged
- m. *Perithecia* lichenicole Pharcidia 9:676, 17:635
- n. *Perithecia* not lichenicole Melanopsamma 1:575; 11
- y. Spores long, botuliform, fusiform or cylindrical, sometimes continuous Thaxteria 9:687
- (b) Paraphyses lacking
- x. Asci 8-spored
- (x) *Perithecia* with innate basal stroma or foot Monopus 24:634
- (y) *Perithecia* without basal stroma Montemartinia
- y. Asci many-spored Kirschsteinia 22:164
- B. *Perithecia* with a subicle or stroma
1. *Perithecia* with a subicle
- a. *Perithecia* cupulate-collapsing
- (1) Paraphyses present Dimerinopsis
- (2) Paraphyses lacking Winterina
- b. *Perithecia* not cupulate-collapsing
- (1) *Perithecia* hairy
- (a) Ostiole present Apiosporina
- (b) Ostiole lacking Lasiostemma 24:248
- (2) *Perithecia* glabrous
- (a) Paraphyses present
- x. Spores with long hyaline setae at each end Neokeissleria 24:747
- y. Spores without setae Plactogene
- (b) Paraphyses lacking Ascospora
2. *Perithecia* with a stroma
- a. Stroma bright-colored
- (1) Stroma white and soft Melchiora 14:538
- (2) Stroma yellow or red, leathery Endothia 1:601; 12
- b. Stroma black, carbonous or woody
- (1) Stroma superficial; perithecial wall radiate; paraphyses lacking Loranthomyces 24:539; 8
- (2) Stroma immersed, then more or less erumpent; perithecial wall not radiate
- (a) Paraphyses present
- x. *Perithecia* setose Cyphospileia
- y. *Perithecia* not setose
- (x) Spores with appendages
- m. Spores with an appendage at one or both ends Melanidium 1:604
- n. Spores also with two or more appendages at the septum Caudospora
- (y) Spores without appendages
- m. Stroma immersed; conidia on a stroma Melanconis 1:602
- n. Stroma erumpent-superficial; conidia in a pycnidium Myrmaeciella 1:600, L 478

- (b) Paraphyses lacking
 x. Perithecia setose; stroma thin, subcuticular **Montagnina**
 y. Perithecia glabrous; stroma valsoid or diatrypoid
 (x) Spores appendaged at one or both ends **Chorostella 1:623**
 (y) Spores not appendaged
 m. Stroma valsoid **Chorostate 1:606; 12**
 n. Stroma diatrypoid **Diaporthe 1:631**

Phaeodidymae

1:701, 9:723, 11:312, 14:551, 16:498, 17:675, 22:169, 303, 390, 24:762, 924, 1074
 Spores 2-celled, dark, yellow to olive or brown, ovoid to oblong or fusoid

A. Perithecia separate

1. Perithecia innate, or finally erumpent
 a. Perithecia beaked **Rhynchostoma 1:730**
 b. Perithecia not beaked
 (1) Perithecia with clypeus or epistroma
 (a) Perithecia with clypeus
 x. Perithecia setose **Metacoleroa**
 y. Perithecia glabrous
 (x) Paraphyses present
 m. Perithecia membranous; spores not mucose **Stegastroma 24:936**
 n. Perithecia carbonous; spores mucose **Seynesia 2:668**
 (y) Paraphyses lacking **Teratosphaeria 24:538, 635**
 (b) Perithecia with disk-like epistroma **Haplovalsaria**
 (2) Perithecia without clypeus or epistroma
 (a) Perithecia hairy **Pyrenobotrys 24:538, 635**
 (b) Perithecia glabrous
 x. Paraphyses present
 (x) Spores with mucous sheath or appendages
 m. Spores with mucous sheath only **Phorcys**
 n. Spores with appendages, rarely a sheath also **Ceriospora 2:184, 14:19**
 (y) Spores without mucous sheath or appendages
 m. Asci 8-spored
 (m) Perithecia lichenicole **Endococcus 22:176**
 (n) Perithecia not lichenicole
 r. Asci on a central sterile column
 s. Asci basal-peripheral
 n. Asci many-spored; lichenicole
 y. Paraphyses lacking
 (x) Perithecia lichenicole **Sphaerellothecium 17:676**
 (y) Perithecia not lichenicole **Phaeosphaerella 9:723**
2. Perithecia superficial from the first
 a. Perithecia hairy
 (1) Paraphyses present **Protoventuria A:113, 9:74**
 (2) Paraphysoids present **Epipolaeum 24:1132**

- (3) Paraphyses and paraphysoids lacking; fungicole *Acanthostoma* 24:366
- b. *Perithecia* glabrous
- (1) *Perithecia* carbonous; paraphyses present *Amphisphaeria* 1:718; 12
- (2) *Perithecia* membranous
- (a) Asci 8-spored
- x. Paraphyses present; spores with mucous sheath; fimicole *Delitschia* 1:732
- y. Paraphyses lacking
- (x) *Perithecia* cupulate *Gaillardiiella* 14:559
- (y) *Perithecia* not cupulate
- m. *Perithecia* fungicole *Bolosphaera* 24:926
- n. *Perithecia* muscicole *Lizonia* 1:574
- (b) Asci many-spored *Delitschiella* 17:688
- B. *Perithecia* cespitose or forming a crust, no true subicle or stroma
1. *Perithecia* cespitose, with distinct ostiole
- a. *Perithecia* innate-erumpent, ramicole *Oththia* 1:735; 12
- b. *Perithecia* superficial, lichenicole *Sorothelia* A:122, 9:728
2. *Perithecia* forming a crust, ostiole indistinct or lacking *Parodiella* 1:717; 8
- C. *Perithecia* with a subicle or stroma
1. *Perithecia* with a superficial mycelium or subicle
- a. *Perithecia* beaked
- (1) Paraphyses present
- (a) Spores with a mucous sheath *Sydowina*
- (b) Spores without a mucous sheath *Gibellina* A:413, 9:740
- (2) Paraphyses lacking *Rhynchomeliola* A:127, 9:751
- b. *Perithecia* not beaked
- (1) Paraphyses present
- (a) *Perithecia* hairy
- x. Asci 2-spored *Pachyspora* 22:185
- y. Asci 8-spored *Neopeckia* A:26, 9:749
- (b) *Perithecia* glabrous
- x. *Perithecia* carbonous *Aloysiella* 22:188
- y. *Perithecia* membranous
- (x) *Perithecia* fungicole *Pseudodimerium*
- (y) *Perithecia* not fungicole *Lojkania* 22:486
- (2) Paraphysoids present
- (a) Subiculum with spines *Acantharia* 24:1132
- (b) Subiculum without spines
- x. *Perithecia* hairy *Apiosporina*
- y. *Perithecia* glabrous *Hypoplegma* 24:252
- (3) Paraphyses and paraphysoids lacking *Porostigme* 24:948
2. *Perithecia* with a stroma
- a. Stroma discoid to pulvinate
- (1) Stroma phyllogenous
- (a) *Perithecia* superficial *Licopolia* 16:508
- (b) *Perithecia* immersed *Pseudothis* 24:766
- (2) Stroma not phyllogenous
- (a) Paraphyses present
- x. Spores with mucous sheath *Massariovalsa* 9:755
- y. Spores without mucous sheath

- | | |
|--|----------------------------------|
| (x) Stroma valsoid | <i>Valsaria</i> 1:741; 12 |
| (y) Stroma eutypoid | <i>Endoxylina</i> 11:318 |
| (b) Paraphyses lacking | <i>Melanconiella</i> 1:740 |
| b. Stroma erect, subterete, simple or branched | <i>Xylobotryum</i> 11:319, 14:20 |

Hyalophragmiae

2:152, 9:824, 11:332, 14:581, 16:528, 17:692, 22:189, 300, 24:767, 948, 1075

Spores x-celled, hyaline to subhyaline, oblong, cylindrical, or fusiform. The ratio between length and width is less than 20:1; in a few genera of this section the spores are typical in form, but merely 1-septate or even continuous.

- | | |
|--|----------------------------------|
| A. Perithecia separate, sometimes gregarious but rarely caespitose | |
| 1. Perithecia innate, or finally erumpent | |
| a. Perithecia beaked | |
| (1) Perithecia carbonous, lignicole; paraphyses present | <i>Ceratosphaeria</i> 2:227; 12 |
| (2) Perithecia membranous, foliicole; paraphyses lacking | <i>Cryptoderis</i> 2:229, 17:716 |
| b. Perithecia not beaked | |
| (1) Perithecia with a clypeus | |
| (a) Paraphyses present | <i>Clypeothecium</i> |
| (b) Paraphyses lacking | <i>Hypospila</i> 2:189 |
| (2) Perithecia without clypeus | |
| (a) Perithecia hairy | <i>Chaetopyrenis</i> 24:961 |
| (b) Perithecia glabrous | |
| x. Paraphyses present | |
| (x) Spores with a mucous sheath | <i>Massarina</i> 2:153 |
| (y) Spores without a mucous sheath | |
| m. Perithecia membranous | |
| (m) Perithecia on spermaphytes | |
| r. Spores with a seta at each end | <i>Keissleria</i> 2:184, 14:19 |
| s. Spores without setae | <i>Metasphaeria</i> 2:156; 12 |
| (n) Perithecia on thallophytes | |
| r. Perithecia lichenicole | <i>Pharcidiopsis</i> 17:646 |
| s. Perithecia uredicole | <i>Eudarlucia</i> 22:201 |
| t. Perithecia fucicole | <i>Lulworthia</i> 24:1059 |
| n. Perithecia carbonous | |
| (m) Spores with a seta at each end, very long, 20-30-septate | <i>Saccardoella</i> 2:190 |
| (n) Spores without setae, few-septate | |
| r. Perithecia warted or ridged | <i>Bertiella</i> |
| s. Perithecia not warted or ridged | <i>Melomastia</i> 2:213 |
| y. Paraphysoids present | |
| (x) Spores with a mucous sheath | <i>Pseudosphaeria</i> 22:407 |
| (y) Spores without mucous sheath | <i>Phragmosperma</i> 24:1131 |
| z. Paraphyses and paraphysoids lacking | <i>Sphaerulina</i> 2:186 |
| 2. Perithecia superficial from the first | |
| a. Perithecia hairy or setose | |
| (1) Perithecia membranous | |
| (a) Paraphyses present | <i>Aphanostigme</i> |
| (b) Paraphyses lacking | <i>Acanthostigma</i> 2:207 |

- (2) *Perithecia carbonous*
 (a) *Perithecia lichenicole* *Enchnosphaeria* 2:207
 (b) *Perithecia* not lichenicole; spores sometimes faintly septate or continuous *Lasiosphaeria* 2:191, 198; 12
- b. *Perithecia* glabrous
 (1) *Perithecia* stalked, covered with a bright powder *Bombardiastrum* 11:338
 (2) *Perithecia* not stalked or powdery
 (a) Paraphyses present
 x. *Perithecia* soft, membranous *Sporoctomorpha*
 y. *Perithecia* hard, carbonous *Zignoella* 2:214; 12
 (b) Paraphysoids present *Phanerooccus* 24:1132
Baumiella 17:708
- B. *Perithecia* cespitose, glabrous, finally collabent
- C. *Perithecia* with a subicle or stroma
1. *Perithecia* with a subicle
 a. *Perithecia* hairy or setose
 (1) Paraphyses present *Nematostigma* 24:973
 (2) Paraphyses lacking *Pseudoperis*
- b. *Perithecia* glabrous
 (1) Paraphyses present; asci 8-spored *Thaxteriella*
 (2) Paraphyses lacking; asci many-spored *Sydowia* 11:341, 24:964
2. *Perithecia* in a stroma
 a. Stroma white, lanose; lichenicole *Dichosporium* 16:542
 b. Stroma black; not lichenicole
 (1) Stroma immersed, small, valsoid *Calospora* 2:231; 12
 (2) Stroma superficial
 (a) Stroma large, short-stalked, asperate; spores muticate *Petrakiella*
 (b) Stroma small; spores ciliate both ways *Broomella* 2:557; 16

Phaeopragmiae

2:1, 9:759, 11:319, 14:561, 16:510, 17:718, 22:214, 305, 396, 24:768, 979, 1077

Spores x-celled, dark, yellow to olive or brown, oblong, cylindrical or fusiform. The ratio between length and width is less than 20:1, and usually less than 10:1.

- A. *Perithecia* separate, sometimes gregarious, but not cespitose
1. *Perithecia* innate, or finally erumpent
 a. *Perithecia* beaked *Rhynchosphaeria* 16:524
 b. *Perithecia* not beaked
 (1) *Perithecia* with a clypeus *Clypeosphaeria* 2:90; 13
 (2) *Perithecia* without clypeus
 (a) *Perithecia* setose
 x. *Perithecia* fungicole *Litschaueria*
 y. *Perithecia* not fungicole *Pocosphaeria* 11:325
 (b) *Perithecia* glabrous
 x. *Perithecia* fimicole; spores with mucous sheath *Sporormia* 2:123; 13
 y. *Perithecia* not fimicole
 (x) Spores with mucous sheath or appendages
 m. Spores with mucous sheath *Massaria* 2:2; 13

- n. Spores with appendages
 - (m) Spores with stout conical appendage at base **Rebentischia 2:12**
 - (n) Spores with a long seta at each end **Keissleria 2:184, 14:19**
- (y) Spores without sheath or appendages
- m. Paraphyses present
 - (m) Perithecia membranous
 - r. Perithecia lichenicole **Xenosphaeria 17:730**
 - s. Perithecia not lichenicole **Leptosphaeria 2:13, 88; 13**
 - (n) Perithecia carbonous **Trematosphaeria 2:115; 13**
- n. Paraphysoids present **Scleroplella 24:1131**
- o. Paraphyses and paraphysoids lacking
 - (m) Perithecia lichenicole **Phaeospora 16:519**
 - (n) Perithecia not lichenicole **Phaeosphaeria 22:214**
- 2. Perithecia superficial from the first
 - a. Perithecia hairy or setose
 - (1) Paraphyses present **Liasiosphaeris 2:194**
 - (2) Paraphyses lacking **Herpotrichiella 24:973**
 - b. Perithecia glabrous
 - (1) Spores biconic, a 2-3-septate hyaline appendage at each end **Caryospora 2:122**
 - (2) Spores not biconic and appendaged
 - (a) Perithecia fimicole; spores usually with mucous sheath **Sporormia 2:123; 13**
 - (b) Perithecia not fimicole; spores without sheath
 - x. Paraphyses present **Melanomma 2:98; 13**
 - y. Paraphyses lacking **Gillotia 22:253**
- B. Perithecia cespitose
 - 1. Perithecia fungicole **Philonectria 24:1016**
 - 2. Perithecia lignicole **Gibberidea 2:132**
- C. Perithecia with a subicle or stroma
 - 1. Perithecia with a subicle or thin superficial stroma
 - a. Perithecia parasitic on insects **Coccidophthora 24:1018**
 - b. Perithecia lignicole
 - (1) Perithecia on a subicle, submembranous, typically collapsing **Chaetosphaeria 2:92; 13**
 - (2) Perithecia on a thin superficial stroma, not collapsing; spore-cells finally separating **Ohleria 2:96**
 - 2. Perithecia in a stroma, the latter typically immersed
 - a. Stroma lichenicole **Trematosphaeris 17:735**
 - b. Stroma fimicole **Sporormiella**
 - c. Stroma phytogenous
 - (1) Paraphyses present
 - (a) Asci with a single large spore; perithecia valsoid **Titania 9:823**
 - (b) Asci 4-8 spored
 - x. Spores appendaged both ways **Broomella 2:557; 16**
 - y. Spores not appendaged
 - (x) Stroma valsoid

- m. Stroma innate; conidia on a stroma *Aglaospora* 2:133, 135, 140; 13
 n. Stroma erumpent-superficial; conidia
 in a pycnidium *Melogramma* 2:144; 13
 (y) Stroma diatrypoid *Kalmusia* 2:142
 (2) Paraphyses lacking *Cryptosphaerina* 16:521

Hyalodictyae

2:238, 9:872, 11:349, 14:611, 16:554, 17:743, 22:253, 400, 24:1019, 1077

Spores transversely and longitudinally septate, typically muriform, hyaline to subhyaline, oblong to fusiform.

A. Perithecia separate

1. Perithecia innate, or finally erumpent
 a. Perithecia beaked *Rhamphoria* 2:307
 b. Perithecia not beaked
 (1) Perithecia with a clypeus *Peltosphaeria* 9:898; 14
 (2) Perithecia without a clypeus
 (a) Perithecia setose; asci 16-spored *Capronia* 2:288
 (b) Perithecia glabrous; asci typically 8-
 spored, sometimes 1-4-spored
 x. Paraphyses present *Julella* 2:289
 y. Paraphysoids present *Pseudoplea* 24:1131
 z. Paraphyses and paraphysoids lacking
 (x) Perithecia lichenicole *Norrinia*
 (y) Perithecia not lichenicole *Pringsheimia* 11:350; 14
 2. Perithecia superficial from the first
 a. Perithecia hairy *Ophiodictyum* 16:555
 b. Perithecia glabrous *Tichosporella* 11:351; 14
- B. Perithecia with a subicle or stroma**
 1. Perithecia with a subicle
 a. Perithecia setose, globoid *Boerlagella* 14:612
 b. Perithecia glabrous, collapsing *Phaeopeltis* 17:873
 2. Perithecia in a stroma
 a. Perithecia projecting, setose *Berlesiella* 9:914; 14
 b. Perithecia immersed, glabrous
 (1) Stroma immersed; paraphyses present
 (a) Stroma valsoid *Clathridium* 11:350, 2:332
 (b) Stroma diatrypoid *Thyridella* 11:351
 (2) Stroma superficial; paraphyses lacking *Pleomelogramma* 22:401

Phaeodictyae

2:238, 9:872, 11:341, 14:594, 16:554, 17:746, 22:258, 401, 24:711, 1024

Spores transversely and longitudinally septate, typically muriform, dark, yellow, olive or brown, oblong to fusiform.

A. Perithecia separate

1. Perithecia innate, or finally erumpent
 a. Perithecia with a clypeus *Phaeopeltium* 11:344
 b. Perithecia without a clypeus
 (1) Perithecia setose
 (a) Spores compressed, flattened *Comoclathris* 24:1039
 (b) Spores not flattened
 x. Perithecia sclerotoid; paraphysoids
 present *Pyrenophora* 2:277; 14

- y. Perithecia not sclerotoid, often collabent; paraphyses lacking **Chaetoptlea 2:279**
- (2) Perithecia glabrous
- (a) Spores with mucous sheath or appendages
- x. Spores with mucous sheath **Pleomassaria 2:239**
- y. Spores with hyaline beak at each end **Delacourea 2:288**
- (b) Spores without mucous sheath or appendages
- x. Paraphyses present
- (x) Perithecia membranous, often collabent
- m. Spores compressed, flattened **Clathrospora 9:894**
- n. Spores not flattened; asci 2-8-spored **Pleospora 2:241; 14**
- (y) Perithecia coriaceous, not collabent **Karstenula 2:240**
- y. Paraphysoids present; perithecia sclerotoid **Scleroptlea 2:277**
- z. Paraphyses and paraphysoids lacking
- (x) Perithecia lichenicole **Merismatium 16:553**
- (y) Perithecia not lichenicole **Leptosphaerulina 17:746**
2. Perithecia superficial from the first
- a. Perithecia hairy **Pleosphaeria 2:304**
- b. Perithecia glabrous
- (1) Perithecia corrugate-warted **Crotonocarpia 2:306**
- (2) Perithecia not corrugate-warted **Tichospora 2:290; 14**
- B. Perithecia caespitose, usually on a crustose or felted stroma **Cucurbitaria 2:307; 14**
- C. Perithecia with a subicle or stroma
1. Perithecia on a subicle, glabrous **Naetrocymbe 22:66**
2. Perithecia in a stroma
- a. Spores with a mucous sheath **Montagnula 14:603**
- b. Spores without a mucous sheath
- (1) Paraphyses present
- (a) Stroma valsoid **Fenestella 2:325; 14**
- (b) Stroma diatrypoid **Thyridium 2:323**
- (2) Paraphysoids present **Curreya 2:651**

Scolecosporae

2:237, 9:923, 11:351, 14:613, 16:557, 17:767, 22:289, 306, 404, 24:774, 1058, 1077

Spores acicular to filiform, the ratio of length to width 20:1 or more, continuous or septate, hyaline or subhyaline, rarely dark.

Hyaloscoleciae

Spores hyaline to subhyaline

- A. Perithecia separate, rarely caespitose
1. Perithecia innate, or finally erumpent
- a. Perithecia beaked
- (1) Perithecia with a clypeus; beak often lateral; paraphyses lacking **Linospora 2:354; 15**
- (2) Perithecia without a clypeus; paraphyses present
- (a) Perithecia erect; beak straight, not discoid at tip **Ophioceras 2:358, 11:353**

- (b) Perithecia horizontal; beak right-angled, discoid at tip Robergea 2:806
- b. Perithecia not beaked
- (1) Perithecia with a clypeus Ceuthocarpum 14:618
- (2) Perithecia without a clypeus
- (a) Perithecia hairy or setose Ophiochaeta 11:352
- (b) Perithecia glabrous
- x. Spores with mucous sheath or appendages
- (x) Spores with mucous sheath Ophiomassaria 11:353
- (y) Spores with a seta at each end Dilophia 2:357; 15
- y. Spores without sheath or appendages
- (x) Perithecia with several ostioles; paraphyses lacking Criserosphaeria 24:1060
- (y) Perithecia with a single ostiole
- m. Perithecia lichenicole
- (m) Asci 8-spored Rhabdiphora 2:351
- (n) Asci many-spored Neolamyia 2:351
- n. Perithecia not lichenicole
- (m) Paraphyses present
- r. Perithecia globose to conoid Ophiobolus 2:337; 15
- s. Perithecia cylindrical, truncate Cylindrina A:421, 9:937
- (n) Paraphysoids present Ophiocarpella 24:638, 1131
- (o) Paraphyses lacking
- r. Perithecia algicole, astomous; spores just below 20:1 Lulworthia 24:1059
- s. Perithecia graminicole, ostiolate; spores typically filiform Ophiosphaerella 22:290
2. Perithecia superficial
- a. Perithecia hairy; paraphyses lacking Acerbiella 17:768
- b. Perithecia glabrous
- (1) Perithecia fimicole; spores long-awned at each end Bovilla 2:360
- (2) Perithecia not fimicole; spores muticate
- (a) Perithecia globoid to conoid; ostiole normal Leptospora 14:619
- (b) Perithecia elongate-cylindric, ostiole sulcate Bactrosphaeria 14:617
- B. Perithecia with a subicle or stroma
1. Perithecia with a subicle
- a. Paraphyses present Bombardiella 22:292
- b. Paraphyses lacking Trichospermella 24:364
2. Perithecia with a stroma
- a. Stroma superficial; perithecia setose Acanthotheca
- b. Stroma immersed or erumpent
- (1) Stroma erumpent
- (a) Paraphyses present Sillia 1:361; 15
- (b) Paraphyses lacking Naumovia
- (2) Stroma immersed, disk alone emerging
- (a) Necks of perithecia short, scarcely converging; conidia in a pycnidium Vialaea 14:619
- (b) Necks of perithecia long, converging into a disk; conidia on a stroma Cryptospora 2:361; 15

Phaeoscoleciae

Spores dark

- A. Perithecia separate, innate, beaked **Exilispora**
 B. Perithecia immersed in an effuse superficial
 stroma, not beaked **Maurya 14:620**

Family 27. HYPOCREACEAE

2:447, 9:941, 11:354, 14:621, 16:559, 17:777, 22:443, 24:447

Perithecia innate or superficial, typically globoid, occasionally flask-shaped or cylindrical, regularly ostiolate, rarely astomous, sometimes beaked, wall typically fleshy and bright-colored, usually reddish, more rarely yellow, whitish or blue, single, cespitose or composite in a stroma; mycelium scanty and immersed, or producing a subicle or stroma; asci, paraphyses and spores various, as in **Sphaeriaceae**.

As a rule, the **Hypocreaceae** are readily distinguished from the **Sphaeriaceae** by the fleshy bright-colored perithecia. These criteria, together with the presence of a distinct perithecial wall, serve also to separate them from **Dothideaceae**. The **Perisporiales** differ in being typically astomous and in the wall being at most soft-membranous or slimy, never truly fleshy, though occasionally bright-colored. Perhaps the greatest difficulty comes in distinguishing **Hypocreaceae** from the persistently innate **Sphaeriaceae** of foliicole habit, in which the wall is often soft-membranous, but never truly fleshy and bright-colored, and from such stromate forms as **Xylaria** and **Hypoxylum** of more or less fleshy texture when fresh, but usually dark-colored.

The **Hypocreaceae** are regarded as derived directly from the **Sphaeriaceae**, under conditions permitting a larger or more assured water-supply, though a few may have sprung from **Perisporiales**. This line of evolution comes to an end in the group without giving rise to other families.

Allantosporae

17:778, 24:640

Spores 1-celled, botuliform, hyaline or subhyaline

One genus

Allantonectria 17:778; 15**Hyalosporae**

2:477, 9:941, 11:354, 14:621, 16:559, 17:778, 22:443, 24:448

Spores 1-celled, globose to oblong, hyaline or subhyaline, not yellow, olive or brown.

A. Perithecia separate

1. Perithecia innate, or finally more or less erumpent

a. Asci 8-spored

(1) Spores globose; paraphyses present

(2) Spores not globose; paraphyses lacking

b. Asci many-spored; algal hosts often present

2. Perithecia superficial or nearly so

a. Spores hemispheric, spiny

b. Spores not hemispheric and spiny

(1) Perithecia hairy

(2) Perithecia glabrous

Mycaureola**Hyponectria 2:455****Thelocarpum 9:946, Z 213****Clistosoma A:195, 9:943****Notarisiella 2; 452; 15****Nectriella 2:448**

- B.** *Perithecia* cespitose
1. Asci 8-spored Lisiella 9:945
 2. Asci many-spored Chilonectria 2:453; 15
- C.** *Perithecia* with a subicle or stroma
1. *Perithecia* in a subicle
 - a. Paraphyses present; not fungicole Byssonectria 2:456
 - b. Paraphyses lacking; fungicole Peckiella 9:944
 2. *Perithecia* in a stroma
 - a. Stroma elongate, erect
 - (1) Asci 8-spored; stroma capitate Sphaerostilbella 17:778
 - (2) Asci 16-spored; stroma clavate; on insects Podostroma 11:355
 - b. Stroma effuse, globose, verruciform or linear
 - (1) Asci 8-spored
 - (a) *Perithecia* circinate, valsoid Balzania 16:561
 - (b) *Perithecia* not circinate, mostly irregular
 - x. Spores globose Battarina 2:533
 - y. Spores not globose
 - (x) Stroma effuse, phyllogenous
 - m. Spores rostrate above Uropolystigma 24:644
 - n. Spores not rostrate Polystigma 2:458; 15
 - (y) Stroma globoid to verruciform
 - m. Stroma hairy, red; perithecia distinct Selinia 2:457
 - n. Stroma glabrous, amber-like; perithecia loculiform Succinaria
 - (2) Asci many-spored; phyllogenous Moelleriella 14:626

Phaeosporae

2:459, 9:949, 11:355, 14:626, 16:562, 17:781, 22:449, 24:647

Spores 1-celled, dark, typically olivaceous to brown

- A.** *Perithecia* separate
1. *Perithecia* innate, or finally more or less erumpent
 - a. *Perithecia* more or less hairy; spores with mucous sheath Sphaerodermella 22:451
 - b. *Perithecia* glabrous; spores not mucose Baculospora 9:952
 2. *Perithecia* superficial
 - a. *Perithecia* beaked
 - (1) Asci 8-spored Melanospora 2:461; 15
 - (2) Asci many-spored Scopinella 9:953
 - b. *Perithecia* not beaked
 - (1) *Perithecia* hairy Erythrocarpum 9:950
 - (2) *Perithecia* glabrous
 - (a) Spores globose, warted Neocosmospora 16:562
 - (b) Spores ovoid to oblong, smooth Sphaerodes 2:460, C 172
- B.** *Perithecia* with a subicle or stroma
1. *Perithecia* in a subicle
 - a. *Perithecia* beaked Rhynchomelas 2:461, C 172
 - b. *Perithecia* not beaked Sphaeroderma 2:459
 2. *Perithecia* in a stroma
 - a. Stroma with sterile crests; surface alveolate Cerillum 22:454
 - b. Stroma not crested or alveolate

- (1) Stroma more or less globoid; perithecia in one or more layers **Sarcoxylum 16:450**
- (2) Stroma clavate to cylindrical-conic
- (a) Perithecia superficial on stroma **Wawelia 22:453**
- (b) Perithecia immersed
- x. Stroma pendulous, without peridium **Xylocrea 16:451**
- y. Stroma erect; perithecia in several series covered by a fragmenting peridium **Peridoxylum**

Hyalodidymae

2:465, 9:953, 11:356, 14:628, 16:565, 17: 782, 22:455, 24:651

Spores 2-celled, hyaline or subhyaline

A. Perithecia separate or cespitose

1. Perithecia innate

- a. Perithecia with a long beak **Apiosphaeria**
- b. Perithecia not beaked **Charonectria 2:466**

2. Perithecia superficial

a. Perithecia red, yellow or white

(1) Asci 8-spored, alike

- (a) Perithecia beaked; spores ciliate at each end **Rhynchonectria 17:798**

- (b) Perithecia not beaked; spores not ciliate

x. Perithecia hairy **Lasionectria 2:505**

y. Perithecia glabrous

- (x) Perithecia on or with a stilboid base **Sphaerostilbe 2:511; 16**

- (y) Perithecia without base or the latter tubercularoid

m. Perithecia lichenicole **Pronectria 2:498**n. Perithecia not lichenicole **Nectria 2:479; 16**(2) Asci of two kinds, 8- and many-spored **Aponectria 2:516**(3) Asci many-spored, alike **Metanectria 2:517**

b. Perithecia blue or violet

(1) Asci 8-spored

- (a) Perithecia lichenicole **Prolisea 17:807**

- (b) Perithecia not lichenicole **Lisea 2:517**

(2) Asci many-spored **Cyanocephalum 11:360****B. Perithecia with a subicle or stroma**

1. Perithecia with a subicle

- a. Paraphyses present; spores in a broad mucous capsule, ending in a long lash; on submerged stems **Loramycetes**

- b. Paraphyses lacking; spores not mucose or flagellate; typically on basidiomycetes **Hypomyces 2:466; 16**

2. Perithecia immersed in an effuse, globoid or elongate stroma

- a. Perithecia with a long beak **Treleasia 14:640**

b. Perithecia not beaked

(1) Paraphyses present **Lambro 16:589**

(2) Paraphyses lacking

- (a) Stroma elongate, clavate or capitate **Podocrea 17:799**

- (b) Stroma effuse to globoid

x. Stroma with Stilbum **Stilbocrea 16:588**y. Stroma without Stilbum **Hypocrea 2:250; 16**

Phaeodidymae

2:537, 9:981, 14:646, 16:591, 17:808, 22:484, 24:677

Spores 2-celled, dark, typically olivaceous to brown

A. Perithecia separate or cespitose**1. Perithecia innate or erumpent****a. Asci 8-spored**(1) Perithecia beaked; on pyrenomycetes **Passerinula 2:537**(2) Perithecia with broad umbilicate ostiole;
on bark **Spegazzinula 2:537****b. Asci many-spored****Erispora****2. Perithecia superficial****a. Spores with hyaline appendages****Xenonectria****b. Spores without appendages**(1) Perithecia on or with a stilbum-like base **Calostilbe 16:391**(2) Perithecia without a stilbum-like base **Letendreaa 2:538; 16****B. Perithecia with a stroma****1. Perithecia with a long beak, in 2-3 layers****Metadothella 18:162****2. Perithecia not beaked****a. Perithecia superficial on the stroma****Macbridella 22:485****b. Perithecia immersed in the stroma****Phaeocreopsis 16:591****Hyalophragmiae**

2:539, 9:982, 11:363, 14:647, 16:592, 17:808, 22:487, 24:678

Spores x-celled, hyaline or subhyaline

A. Perithecia separate or cespitose**1. Perithecia innate, or more or less erumpent****a. Perithecia with a long beak; in sea-weeds**(1) Paraphyses present; spores normal **Orcadia 24:678**(2) Paraphyses lacking; spores flagellate, bent
double **Trailia 24:690****b. Perithecia not beaked; not in sea-weeds**(1) Perithecia peritheciolate; spores oblong **Debaryella 17:809**

(2) Perithecia not peritheciolate

x. Spores falcate**Cesatiella 2:557****y. Spores not falcate****Micronectriella****2. Perithecia superficial****a. Perithecia red, yellow or white**(1) Perithecia on or with a stilbum-like base **Stilbonectria 9:986**

(2) Perithecia without a stilbum-like base

(a) Spores ciliate at each end**Paranectria 2:552****(b) Spores not ciliate****x. Perithecia discoid to turbinate, margined
by fasciculate setae****Actiniopsis 17:871****y. Perithecia globoid, setae if present not
fasciculate****(x) Perithecia hairy or setose****Trichonectria 22:498****(y) Perithecia glabrous****Calonectria 2:540****b. Perithecia blue, violet or greenish**

(1) Spores appendaged at each end

Lecithium 11:364

(2) Spores not appendaged

Gibberella 2:552; 16

- B. Perithecia with a subicle or stroma**
1. Perithecia with a subicle
 - a. Perithecia hairy
 - (1) Setae of perithecium simple

| | |
|------------------------|-------------|
| (a) Paraphyses present | Byssocallis |
| (b) Paraphyses lacking | Hyalocrea |
 - (2) Setae of perithecium coralloid branched at tip

| | |
|--|------------|
| | Chaetocrea |
|--|------------|
 - b. Perithecia glabrous
 - (1) Paraphyses present

| | |
|--|------------|
| | Subulicola |
|--|------------|
 - (2) Paraphyses lacking

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| | Berkelella 9:989 |
|--|------------------|
 2. Perithecia in stroma
 - a. Stromata seated in a common botryose one; paraphyses lacking; perithecia immersed

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| | Stereocrea 24:684 |
|--|-------------------|
 - b. Stromata not compound
 - (1) Ostiole broad-conic, erumpent; folicole

| | |
|--|-------------|
| | Phyllocelis |
|--|-------------|
 - (2) Ostiole minute or obsolescent
 - (a) Perithecia lichenicole; stroma not hairy

| | |
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| | Pericoccis 9:989 |
|--|------------------|
 - (b) Perithecia not lichenicole; stroma hairy; spores 1-2-caudate

| | |
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| | Puttemansia 18:98 |
|--|-------------------|

Phaeophragmiae

2:539, 9:982, 11:363, 16:599, 22:493

Spores x-celled, dark, typically olivaceous to brown

- A. Perithecia separate or cespitose
 1. Perithecia peritheciolate

| | |
|--|--------|
| | Weesea |
|--|--------|
 2. Perithecia lignicole

| | |
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| | Chiajia 14:648 |
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- B. Perithecia in a stroma
 1. Stroma erect, cylindric; perithecia sparse, immersed

| | |
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| | Loculistroma 22:493 |
|--|---------------------|
 2. Stroma globoid, tuberiform; perithecia dense, superficial

| | |
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| | Peloronectria 16:599 |
|--|----------------------|

Hyalodictyae

2:558, 9:990, 11:364, 14:650, 16:599, 17:814, 22:493, 24:688

Spores muriform, hyaline or subhyaline

- A. Perithecia separate or cespitose
 1. Perithecia red or yellow to whitish
 - a. Perithecia with a stilbum-like base

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| | Megalonectria 2:560 |
|--|---------------------|
 - b. Perithecia without a stilbum-like base
 - (1) Perithecia setose; paraphyses present

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| | Ophiodictyum 16:555 |
|--|---------------------|
 - (2) Perithecia glabrous
 - (a) Paraphyses present

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|--|------------------------|
| | Calyptronectria 22:494 |
|--|------------------------|
 - (b) Paraphyses lacking

| | |
|--|-----------------------|
| | Pleonectria 2:559; 16 |
| | Pleogibberella 9:992 |
 2. Perithecia blue or violet
 - B. Perithecia with a subicle or stroma
 1. Perithecia in a subicle
 - a. Perithecia setose; paraphyses lacking; spores muticate

| | |
|--|--------------------|
| | Chaetomeris 22:495 |
|--|--------------------|
 - b. Perithecia hairy; paraphyses present, dissolving; spores ciliate each way

| | |
|--|-------------------|
| | Ciliomyces 22:494 |
|--|-------------------|

2. Perithecia in a stroma
 a. Stroma cupulate with single central perithecium **Patellonectria 24:1340**
 b. Stroma valsoid with several perithecia **Thyronectria 2:561**

Phaeodictyae

2:558, 9:990, 11:364, 16:600, 17:815

Spores muriform, dark, typically olivaceous to brown

- A. Perithecia separate or cespitose
 1. Perithecia beaked; asci 8-spored **Bivonella 9:989**
 2. Perithecia not beaked
 a. Asci 8-spored **Trotterula**
 b. Asci many-spored **Feracia 17:815**
- B. Perithecia in a stroma
 1. Paraphyses present
 a. Stroma conoid, snow-white **Leucocrea 16:601**
 b. Stroma tuberiform, rimose **Shiraia 16:600**
 2. Paraphyses absent; stroma pulvinate, more or less valsoid **Mattirolia 9:993**

Scolecosporae

2:562, 9:993, 11:365, 14:651, 16:601, 17:815, 22:497, 24:689

Spores acicular to filiform, 20x1 or more, continuous or septate, hyaline to dark.

Hyaloscoleciae

Spores hyaline or subhyaline

- A. Perithecia separate or cespitose
 1. Perithecia innate, or finally more or less erumpent
 a. Perithecia with a single ostiole
 (1) Paraphyses present **Micronectriopsis**
 (2) Paraphyses lacking **Micronectria 9:996**
 b. Perithecia with many ostioles or openings **Coscinnaria 9:1003**
2. Perithecia superficial
 a. Perithecia enclosed in a stroma-like sack **Oomyces 2:564**
 b. Perithecia not in a sack
 (1) Perithecia beaked, conic-cylindric; fimicole **Copranophilus 22:499**
 (2) Perithecia not beaked
 (a) Perithecia cylindric, erect, with a rimose ostiole **Acrospermum 2:807; 22**
 (b) Perithecia globoid; ostiole round
 x. Perithecia red to white
 (x) Paraphyses present **Tubeufia 14:652**
 (y) Paraphyses lacking **Ophionectria 2:563; 16**
 y. Perithecia blue; paraphyses present **Cyanoderma**
- B. Perithecia with a subicle or stroma
 1. Perithecia with a subicle
 a. Paraphyses present
 (1) Perithecia stipitate; wall composed of inflated hyphal apices **Microstelium 16:672**
 (2) Perithecia not stipitate; wall not of inflated hyphal apices **Torrubiella 9:994**
 b. Paraphyses lacking **Barya 2:563, 22:500**

2. Perithecia with a stroma
- a. Stroma stipitate, or arising from a sclerotium or pseudosclerotium
- (1) Stroma from a sclerotium or sclerotium-like body
- (a) True sclerotium, consisting solely of hyphae **Claviceps 2:564; 16**
- (b) Pseudosclerotium, consisting of host-cells and hyphae **Balansia 9:997**
- (2) Stroma without sclerotium, typically stipitate; on insects or fungi **Cordyceps 2:566; 16**
- b. Stroma not stipitate, without sclerotium, pulvinate to effuse, or lanceolate
- (1) Stroma lanceolate, in inflorescences of bamboo **Mitosporium 24:701**
- (2) Stroma globose to pulvinate
- (a) Perithecia superficial, the stroma appearing to be spiny **Echinodothis 17:819**
- (b) Perithecia imbedded in the stroma
- m. Perithecia over entire surface of stroma **Hypocrella 2:579**
- n. Perithecia limited to a portion of the stroma
- (m) Perithecia scattered around periphery; paraphyses present **Dussiella 9:1004**
- (n) Perithecia in a band or zone; paraphyses lacking
- r. Perithecia in a median band, stroma sterile above and below **Mycomalus 16:604**
- s. Perithecia in a superior zone, stroma sterile below **Ascopolyporus 16:605**
- (3) Stroma effuse
- (a) Stroma bright-colored, encircling stems **Epichloe 2:578; 16**
- (b) Stroma black, not encircling stems **Dothichloe**

Phaeoscoleciae

Spores dark, usually brown

- A. Perithecia hairy, superficial, on a buff mycelium **Borenquia 24:702**
- B. Perithecia immersed in a black stroma; spores dilabent **Konradia 16:605**

Family 28. LOPHIOSTOMACEAE

2:672, 9:1074, 11:382, 14:702, 16:650, 17:886, 22:546, 24:1106

Perithecia innate, then becoming more or less erumpent, rarely superficial, simple and separate, very rarely stromate, though the matrix is often blackened and sometimes gives the appearance of a stroma, wall typically carbonous, black, with a massive compressed ostiole, opening by a very narrow cleft; asci clavate-cylindric, usually 8-spored, typically paraphysate; spores various.

The genera of this family are derived directly from *Sphaeriaceae* by hypertrophy of the ostiole, the compression of the latter producing a slit-like opening. In spite of this, they appear to have no close relation to the *Hysteriaceae*.

Hyalosporae

(Not represented)

Phaeosporae

2:673, 17:886

Spores 1-celled, dark; perithecia insculptate **Lophiella** 2:673**Hyalodidymae**

2:675, 9:1075, 11:383, 14:702, 17:886, 22:546

Spores 2-celled, hyaline, oblong to fusoid

- A.** Perithecia hairy, subiculate at base **Lophiotricha** 9:1082
B. Perithecia glabrous
 1. Spores appendaged at each end **Lambottiella** 2:677, 22:547
 2. Spores not appendaged
 a. Perithecia in a subicle, fungicole **Khekia**
 b. Perithecia without subicle, not fungicole **Lophiosphaera** 2:675; 17

Phaeodidymae

2:673, 9:1074, 11:382, 14:702, 16:650, 17:887, 22:548, 24:1106

Spores 2-celled, dark, oblong to fusoid

- A.** Perithecia with a subicle **Byssolophis** 24:1106
B. Perithecia without a subicle **Schizostoma** 2:673; 17

Hyalophragmiae

2:678, 9:1076, 14:703, 16:631, 17:887, 22:548, 24:1106

Spores x-celled, hyaline, oblong to fusiform

- A.** Spores appendaged at each end **Vivianella** 2:687, 22:550
B. Spores not appendaged **Lophiotrema** 2:678; 17

Phaeophragmiae

2:689, 9:1083, 11:383, 14:704, 16:651, 17:887, 22:550, 24:1108

Spores x-celled, dark, oblong to fusiform

- A.** Spores appendaged at one or both ends **Brigantiella** 2:703, 707, 17:889
B. Spores not appendaged **Lophiostoma** 2:689; 17

Hyalodictyae

9:1093, 22:552

Spores hyaline, muriform

- A.** Spores long-caudate at base **Sampaioa**
B. Spores not appendaged **Lophidiopsis** 9:1093

Phaeodictyae

2:710, 9:1091, 11:384, 14:706, 16:653, 17:889, 22:553, 24:1110

Perithecia typically immersed; spores dark, muriform **Platystomum** 2:710, 17:889; 17**Scolecosporae**

2:717, 9:1094, 22:553, 24:1111

Perithecia immersed; spores acicular to filiform **Lophionema** 2:717; 17**Family 29. CYTTARIACEAE**

8:4, 810; 16:695, 803

Ascomata in a stroma, at first closed and more or less loculiform, then widely open and becoming cupuloid, the stroma either branched or globose to turbinate

and alveolate, carbonous, suberose or fleshy and horny when dry; asci clavate to cylindrical, 6-8-spored, paraphyses present or lacking; spores hyaline, 1-2-celled.

This is not regarded as a natural family, but one based largely upon convenience. The **Cordieritaceae** and **Cyttariaceae** have been treated as separate families, though apparently considered to be related by Lindau (Nat. Pflanzenf. 1:1:241, 1897). Saccardo pointed out the relationship of the first family to the **Pyrenomycetes** (Syll. Fung. 8:810, 1889), and it seems probable that both are to be regarded as intermediate between this group and the **Discomycetes**, in which they have been included. They possess in common a stroma with closed ascomata that finally become more or less cupuloid. The texture of the stroma in the one reflects the **Sphaeriaceae**, in the other the **Hypocreaceae**.

- A. Stroma branched, carbonous or suberose; ascumata terminal, superficial; paraphyses lacking
1. Spores 1-celled; stroma much branched above, horny-carbonous **Cordierites 8:810**
 2. Spores 2-celled; stroma fascicled-ramose, suberose **Acroscyphus 8:811**
- B. Stroma globose to turbinate, not branched, fleshy to corneous; ascumata immersed, opening to form an alveolate surface; paraphyses present; spores 1-celled **Cyttaria 8:4; 38**

Family 30. VERRUCARIACEAE

Zahlbruckner 63-92

Mycelium parasitic on blue-green or yellow-green algae, and forming a more or less distinct crustose, foliose or fruticose thallus, the latter usually superficial but sometimes below the surface; perithecia distinct, single, cespitose or united in a stroma, usually globoid and ostiolate, membranous, coriaceous or carbonous; asci 1-many-spored; spores various.

The members of this family differ from the **Sphaeriaceae** only in the presence of algae in the mycelium; in short, they are pyrenomycetes parasitic on algae. At present it is most convenient to draw this distinction as sharply as possible, but it is practically certain that this places the species of more than one natural genus in two separate families. In some cases, the same species may be parasitic on algae or saprophytic on bark, a fact that furnishes one of the chief reasons for including lichens with the other fungi. In the past, considerable confusion has resulted from those fungi that grow as parasites on lichens, but most of these have now been recognized and set apart as distinct genera of **Sphaeriaceae** on the basis of the lichenicole habit.

- A. Perithecia separate, at least not in a stroma
1. Thallus with blue-green algae, Nostoc, Scytonema, Rivularia, etc. **Subfamily Pyrenidiidae**
 - a. Asci 4-8-spored
 - (1) Spores 1-celled
 - (a) Algae Nostoc
 - x. Spores ciliate at one end; asci 4-spored; paraphyses lacking **Cocciscia 90**
 - y. Spores not ciliate; asci 8-spored; paraphyses present, ramose **Rhabdopsora 90**
 - (b) Algae Scytonema; paraphyses ramose **Rhodothrix 91**
 - (c) Algae Rivulariaceae

- x. Spores globose; thallus scaly or crustose **Calotrichopsis 161**
- y. Spores ellipsoid; thallus fruticulose
 - (x) Algal filaments parallel with long axis of branches **Lichina 163**
 - (y) Algal filaments perpendicular to long axis
 - m. Paraphyses present **Lichenyllum 163**
 - n. Paraphyses lacking **Homopsella 163**
- (2) Spores 2-celled
 - (a) Paraphyses present
 - x. Algae Xanthocapsa **Xanthopyrenia 91**
 - y. Algae Nostoc **Pyrenocollema 165; 18**
 - (b) Paraphyses lacking; algae Scytonema or Sirospion **Eolichen 90**
- (3) Spores x-celled; asci 4-spored; paraphyses dissolving **Pyrenidium 91; 18**
- (4) Spores muriform, dark; algae Scytonema **Pyrenoethrix 91**
- (5) Spores filiform; periphyses present **Hassea 90**
- b. Asci many-spored; spores 1-celled
 - (1) Algae Dactylococcus; thallus fine-scaly **Placothelium 90**
 - (2) Algae Calothrix; thallus fruticulose **Lichinella 162**
- 2. Thallus with yellow-green algae, Pleurococcus, Palmella, Trentepohlia, etc.
 - a. Thallus gelatinous or crustose
 - (1) Thallus gelatinous, hyphae loose; spores 2-celled, hyaline **Epigloea 65; 18**
 - (2) Thallus crustose, hyphae compact
 - (a) Algae Cystococcus, in sheathed colonies **Subfamily Moriolae**
 - x. Thallus without pseudoparenchyma **Moriola 64**
 - y. Thallus with pseudoparenchyma
 - (x) Asci 8-spored **Dimerisma 64**
 - m. Spores 2-celled, dark
 - n. Spores x-celled
 - (m) Spores hyaline **Spheconisca 64**
 - (n) Spores dark **Phaeomeris 64**
 - (y) Asci many-spored; spores 1-celled, hyaline **Pleophalis 64**
 - (b) Algae Pleurococcus or Palmella **Subfamily Verrucariae 65**
 - x. Paraphyses persistent **Thelenidia 68**
 - (x) Algae present in the perithecium
 - (y) Algae not present in perithecium
 - m. Perithecia with normal ostiole
 - (m) Spores 1-celled **Thrombium 68**
 - r. Spores hyaline **Phaeothrombis 69**
 - s. Spores dark **Thelidiopsis 69**
 - (n) Spores 2-celled, dark **Geisleria 69**
 - (o) Spores x-celled, hyaline
 - (p) Spores muriform, hyaline or sub-hyaline **Microglaena 69**
 - (q) Spores acicular, septate, hyaline **Gongyia 69**
 - n. Ostiole margined by a broad disk; spores hyaline
 - (m) Spores x-celled **Aspidopyrenis 69**
 - (n) Spores muriform **Aspidothelium 70; 18**

- y. Paraphyses lacking, or soon disappearing
- (x) Asci 1-8-spored
- m. Algae present in the perithecium; spores muriform
- (m) Spores hyaline *Willeya* 68
- (n) Spores dark *Staurothele* 68
- n. Algae not present in perithecium
- (m) Spores 1-celled
- r. Spores globoid to ellipsoid
- (r) Perithecia immersed *Lithoecea* 67
- (s) Perithecia more or less superficial
- h. Spores hyaline *Verrucaria* 66; 18
- i. Spores dark *Phaeosporis* 67
- s. Spores vermiform, clavate at each end *Sarcopyrenia* 66
- (n) Spores 2-celled, hyaline *Thelidium* 67
- (o) Spores x-celled, hyaline *Phragmothele* 68
- (p) Spores muriform
- r. Spores hyaline *Polyblastia* 68
- s. Spores dark *Sporodictyum*
- (y) Asci many-spored; spores 1-celled, hyaline *Trimmatothele* 67
- (c) Algae Trentepohlia
- x. Perithecia upright, with vertical ostiole *Subfamily Pyrenulae* 74
- (x) Paraphyses simple, free
- m. Perithecia with stiff fascicled hairs *Stereochlamys* 81
- n. Perithecia glabrous
- (m) Asci 4-8-spored
- r. Spores 1-celled, hyaline *Coccotrema* 78
- s. Spores 2-celled
- (r) Spores hyaline; cells separating or not *Diporina* 79
- (s) Spores dark *Dipyrenis* 80
- t. Spores x-celled
- (r) Spores hyaline *Porina* 78
- (s) Spores dark *Pyrenula* 80; 18
- u. Spores muriform
- (r) Spores hyaline *Clathroporina* 80
- (s) Spores dark *Anthracotheicum* 81
- v. Spores acicular to filiform
- (r) Asci evanescent *Belonia* 79
- (s) Asci persistent
- h. Perithecia immersed *Rhaphidyllis* 79
- i. Perithecia more or less superficial *Rhaphidopyris* 79
- (n) Asci many-spored; spores hyaline
- r. Spores 1-celled *Holothelis* 79
- s. Spores 2-celled *Dithelopsis* 80
- t. Spores x-celled *Thelopsis* 79
- (y) Paraphyses branched and united, rarely lacking
- m. Ostiole round or dot-like

- (m) Spores 1-celled, hyaline; asci 2-4-spored Monoblastia 75
 - (n) Spores 2-celled
 - r. Spores hyaline Pyrenyllum 77
 - s. Spores dark Microthelia 75
 - (o) Spores x-celled
 - r. Spores hyaline Arthrospyrenia 75
 - s. Spores dark Polythelis 75
 - (p) Spores muriform; asci 1-8-spored Polyblastiopsis 78
 - (q) Spores acicular to filiform Leptorhaphis 77
 - n. Ostiole radiate, torn or lobed; spores 2-celled Asteroporum 92
 - y. Perithecia oblique or horizontal with oblique or lateral ostiole
 - (w) Spores 2-celled, hyaline Subfamily Paratheliae 84
 - (x) Spores x-celled Ditremis 84
 - m. Spores hyaline Pleurotrema 84
 - n. Spores dark Parathelium 84
 - (y) Spores muriform
 - m. Spores hyaline Campylothelium 85; 18
 - n. Spores dark Pleurotheliopsis 85
 - (z) Spores filiform Trichotrema 84
 - (d) Algae Phyllactidium or Cephaleurus Subfamily Strigulae 87
 - x. Perithecia with fascicled nearly horizontal hairs at apex; spores x-celled, hyaline Trichothelium 88
 - y. Perithecia glabrous
 - (x) Paraphyses present, persistent
 - m. Paraphyses simple, free
 - (m) Spores 2-celled, hyaline Phylloporis 88
 - (n) Spores x-celled, hyaline
 - r. Thallus crustose, uniform Phylloporina 87
 - s. Thallus orbicular, lobed at edge Strigula 89; 18
 - (o) Spores muriform, hyaline Phyllobathelium 88
 - n. Paraphyses branched and united
 - (m) Spores 1-celled, dark Haplopyrenula 88
 - (n) Spores x-celled
 - r. Spores hyaline Raciborskiella 88
 - s. Spores dark Microtheliopsis
 - (y) Paraphyses dissolving or lacking; spores hyaline or nearly so
 - m. Paraphyses dissolving in mucus; spores acicular, spirally twisted Phylloblastia 87
 - n. Paraphyses lacking; spores acicular, not twisted Micropyrenula 87
- b. Thallus foliose or scaly-foliose Subfamily Dermatocarpae
 - (1) Algae Pleurococcus Endocarpum 73; 18
 - (a) Perithecia with hymenial algae
 - (b) Perithecia without hymenial algae
 - x. Paraphyses persistent
 - (x) Spores 1-celled, dark; paraphyses simple Anapyrenium 71

- (y) Spores muriform, hyaline; paraphyses branched and united **Psoroglaena 71**
- y. Paraphyses dissolving or lacking
- (x) Paraphyses dissolving in mucus; thallus corticate
- m. Spores 1-celled, hyaline **Dermatocarpum 71; 18**
- n. Spores mostly 2-celled
- (m) Spores hyaline **Placidiopsis 72**
- (n) Spores dark **Heterocarpum 72**
- o. Spores muriform, hyaline to brownish; asci 1-2-spored **Agonomia 73**
- (y) Paraphyses lacking; thallus not corticate **Normandina 71**
- (2) Algae Trentepohlia; spores 1-celled, hyaline **Lepolichen 81**
- (3) Algae Trasiola; spores 1-celled, hyaline **Mastodia 92**
- c. Thallus fruticulose, branched; algae Pleurococcus
- (1) Spores 2-celled, hyaline **Nylanderella 73**
- (2) Spores muriform, dark **Pyrenothamnia 74**
- B. Perithecia in a stroma (Cfr. Pertusariae, p. 128)**
1. Perithecia erect, with separate ostioles **Subfamily Trypetheliae 81**
- a. Spores x-celled
- (1) Spores hyaline **Trypethelium 83; 18**
- (2) Spores dark **Melanotheca 82**
- b. Spores muriform
- (1) Spores hyaline; asci 2-8-spored **Laurera 83**
- (2) Spores dark **Bottaria 83**
- c. Spores acicular to filiform, hyaline **Tomasiella 82**
2. Perithecia oblique or horizontal, the necks long and with a common pore; valsoid **Subfamily Astrotheliae 85**
- a. Spores x-celled
- (1) Spores hyaline **Astrothelium 86**
- (2) Spores dark **Pyrenastrum 86**
- b. Spores muriform
- (1) Spores hyaline **Cryptothelium 86**
- (2) Spores dark **Parmentaria 87**
- C. Perithecia sunken in stroma-like warts; horizontal thallus lacking; asci many-spored; spores 1-celled, hyaline** **Thelocarpum 213**

Order 9. DOTHIDEALES

Perithecia composite in a stroma, without a wall distinct from the stromal tissue and hence reduced to polyascous locules, or irregularly stromoid or discoid with monascous loculiform hollows; the stroma immersed and often forming a clypeus, erumpent, or superficial and usually with a hypostroma; asci many, more or less cylindrical and often with true paraphyses in **Dothideaceae**, or single in the hollows, globose to ovoid, rarely cylindrical, separated by stromal tissue or paraphysoids in **Myriangiaceae**.

This order is not regarded as a natural one, nor are the two families considered to be phylogenetically related. While the presence of a locule affords the warrant

of convenience for associating them, its nature indicates that they are the terminal groups of two distinct phyla. The **Dothideaceae** owe their distinguishing character to the reduction or loss of the perithecial wall as a consequence of the protection afforded by the stroma, and are to be directly related to the **Sphaeriaceae**, the difficulty of separation sometimes being extreme. A similar problem exists with respect to the **Myriangiaceae** and **Gymnascaceae**, the simplest members of the former pertaining equally well to either family, and it appears probable that the two represent a continuous phylum, which may find its terminus in some members of the **Tuberales**, as apparently the **Dothioreae** do in **Discomycetes**.

Key to Families

- A. Perithecia not parasitic on algae, without a thallus
 - 1. Locules distinct, perithecium-like, typically ostiolate, with many asci and usually with paraphyses Dothideaceae p. 89
 - 2. Locules mere hollows filled by single asci and separated by stromal tissue or rarely by paraphysoids Myriangiaceae p. 92
- B. Perithecia parasitic on algae, typically with a thallus Mycoporaceae p. 94

Family 31. DOTHIDEACEAE

Perithecia sunken in a stroma and reduced to polyascous locules with ostioles, the stroma with erect hyphae and then prosenchymic or even parenchymic, or the structure sometimes more irregularly hyphal, frequently involving the epidermis to form a clypeus-like area, typically dark, round to oblong or linear, innate, erumpent or superficial; asci mostly cylindric, 8-spored, usually with paraphyses; spores various.

Subfamily Dothideae

Stroma innate-erumpent or superficial, not clypeate

- A. Stroma innate, becoming more or less erumpent
 - 1. Spores 1-celled
 - a. Spores hyaline
 - (1) Spores allantoid Dothideovalsa 22:407, TS 289
 - (2) Spores not allantoid
 - (a) Paraphyses present
 - x. Asci mostly 3-spored (1-4); wall of locule not distinct and perithecioid Zimmermanniella 17:827, TS 290
 - y. Asci 8-spored; wall more or less distinctly perithecioid Botryosphaeria 1:456, TS 661
 - (b) Paraphyses lacking
 - x. Stroma regularly pulvinoid Amerodothis 24:539, TS 295
 - y. Locules single in stromatic columns united above Catabotrys 24:539, TS 297; 20
 - b. Spores dark
 - (1) Paraphyses present
 - (a) Stroma lichenicole Botryochora 24:542
 - (b) Stroma not lichenicole Bagnisiopsis 24:390, TS 291; 19
 - (2) Paraphyses lacking Auerswaldia 2:626, TS 298

2. Spores 2-celled
- a. Spores hyaline
- (1) Paraphyses present *Didothis* 24:544, TS 305
- (2) Paraphyses lacking
- (a) Stroma of parallel prosenchymic cells *Plowrightia* 2:635, TS 307; 19
- (b) Stroma of interwoven brown hyphae, parenchymic below the locules *Diplochorella* TS 620; 19
- b. Spores dark
- (1) Paraphyses present *Achorella* 24:548, TS 340
- (2) Paraphyses lacking
- (a) Locules imbedded singly in column tips of a botryose stroma *Stalagmites* 24: 636, TS 650; 20
- (b) Locules not in a botryose stroma
- x. Stroma peripheral in a minute hemispheric gall *Crotone* 24:635, TS 629; 19
- y. Stroma pulvinoid, not forming a gall *Dothidea* 2:639, TS 330; 19
3. Spores x-celled
- a. Spores hyaline
- (1) Paraphyses present *Metameris* 24:551, TS 342
- (2) Paraphyses lacking
- (a) Stroma lirelliform *Dangeardiella* 14:683, TS 665; 19
- (b) Stroma pulvinoid, not lirelliform *Phragmodothella* 24:551, TS 343
- b. Spores dark
- (1) Paraphyses present
- (a) Locules imbedded singly in tip of separate stroma columns *Rosenscheldia* 9:1036, TS 648; 19
- (b) Locules not in columns *Dothideopsella* 24:552
- (2) Paraphyses lacking *Phragmodothis* 24:551, TS 344
4. Spores muriform, dark
- a. Paraphyses present *Amylirosa* 24:1338
- b. Paraphyses lacking *Dictyodothis* 24:552, TS 346
- B. Stroma superficial
1. Stroma with innate central foot not more than half its width
- a. Stroma sterile in center, locules in a circle
- (1) Spores 1-celled, hyaline; paraphyses present; stroma glabrous *Yoshinagella* 24:550, TS 265
- (2) Spores 2-celled, dark; paraphyses present; stroma with marginal hyphae
- (a) Locules globose, separate *Trichodothis* 24:548, TS 268
- (b) Locules confluent in a circle *Perischizum* 24:548, TS 269
- b. Stroma uniformly fertile
- (1) Spores 1-celled
- (a) Spores hyaline
- x. Paraphyses present *Coccostromopsis*
- y. Paraphyses lacking *Coccostroma* 24:539, TS 271; 20
- (b) Spores dark; paraphyses present *Auerswaldiella* 24:541, TS 272
- (2) Spores 2-celled
- (a) Spores hyaline
- x. Paraphyses present

- (x) Stroma fungicole
- (y) Stroma not fungicole
 - m. Subicle present
 - n. Subicle none
- y. Paraphyses lacking
- (b) Spores dark
 - x. Paraphyses present; spore-cells equal or unequal
 - y. Paraphyses lacking
- (3) Spores x-celled
 - (a) Spores hyaline; paraphyses present
 - (b) Spores dark; paraphyses lacking
- (4) Spores acicular to filiform, hyaline; paraphyses present
- 2. Stroma without central foot, attached at several points
 - a. Spores 1-celled, hyaline
 - b. Spores 2-celled
 - (1) Spores hyaline; paraphyses lacking
 - (2) Spores dark
 - (a) Paraphyses present
 - x. Stroma fungicole; spores long-falcate
 - y. Stroma not fungicole
 - (x) Subicle present
 - (y) Subicle none
 - (b) Paraphyses lacking
 - x. Stroma with conidial hairs
 - y. Stroma without conidial hairs
 - c. Spores filiform, hyaline

- Parabotryum
- Nowellia
- Microcyclus 17:844, TS 276; 20
- Coccoidella TS 277
- Coccodiscus 17:860, TS 274, 279
- Coccodothella 24:549, TS 280
- Coccodiella TS 281
- Pauahia
- Schweinitziella 9:1005, TS 270
- Leveillinopsis
- Microcyclella 24:544, TS 283
- Castagnella 24:553
- Leveillella 24:549, TS 284
- Dothophaeis 24:549, TS 285
- Discodothis 22:436, TS 287
- Leveillina 24:549, TS 285
- Trichochora 24:553, TS 289

Subfamily Phyllachorae

Stroma persistently innate, forming a clypeus with the epidermis

- A. Spores 1-celled
 - 1. Spores hyaline
 - a. Paraphyses present
 - (1) Spores with appendages
 - (2) Spores without appendages
 - b. Paraphyses lacking
 - (1) Asci 2-spored
 - (2) Asci 8-spored
 - 2. Spores dark
 - a. Paraphyses present
 - b. Paraphyses lacking
- B. Spores 2-celled
 - 1. Spores hyaline
 - a. Paraphyses present
 - b. Paraphyses lacking
 - (1) Stroma round to oblong
 - (2) Stroma linear
 - 2. Spores dark; paraphyses present

- Schizachora 24:565, TS 401
- Phyllachora 2:594, TS 431; 19
- Geminispora 11:292
- Phyllachorella 24:607, TS 576
- Sphaerodothis 16:625, TS 577
- Phaeochora 24:609, TS 401; 20
- Placostroma 24:610, TS 407; 20
- Euryachora 2:625, TS 364, 361; 20
- Scirrhia 2:634, TS 413, 419; 19
- Phaeodothis 17:854, TS 594

- C. Spores x-celled
1. Spores hyaline
 - a. Paraphyses present
 - (1) Stroma lichenicole
Epiphora TS 599
 - (2) Stroma not lichenicole
 - (a) Stroma round to oblong
Telimena 16:631, TS 599
 - (b) Stroma linear
Exarimidium 24:621, TS 424, 423
 - b. Paraphyses lacking
Phragmocarpella 24:624, TS 601
 2. Spores dark
 - a. Paraphyses present
 - (1) Stroma lichenicole
Homostegia 2:649; 19
 - (2) Stroma not lichenicole
 - (a) Stroma round to oblong
Dermatodothis 24:625, TS 369
 - (b) Stroma linear
Rhopographus 2:647, TS 425; 20
 - b. Paraphyses lacking
 - (a) Stroma round to oblong
Clypeostroma 24: 628, TS 609
 - (b) Stroma linear
Rhopographina 24:625, TS 429
- D. Spores muriform, dark; paraphyses present
- E. Spores filiform
1. Paraphyses present
Scolecodothis 24:630, TS 412
 2. Paraphyses lacking
 - a. Asci 8-spored
Ophiodothella 24:629, TS 611; 19
 - b. Asci many-spored
Myriogenis 14:685

Family 32. MYRIANGIACEAE

(Phymatosphaeriaceae)

8;843, 11:440, 16:799, 18:191, 22:579, 24:1133; TS 433

Stroma or ascoma mostly verruciform or pulvinate, sometimes discoid, typically innate, then erumpent, rarely permanently covered or superficial from the first, with an outer more or less differentiated layer or peridium and a central stromatoid mass in which the asci are imbedded singly, and irregularly for the most part; asci in one to several layers and separated from each other by purely stromatic tissue or paraphysis-like filaments; hypothecium merely a part of the ascoma, or parenchymoid and then more or less differentiated from it; hymenial area occupying all the interior, or definitely localized; asci freed by the weathering away of the peridium.

This is one of the most puzzling of groups, and many of the genera can be assigned with equal warrant to families belonging to other orders. The simplest forms, such as *Elsinoe* and *Plectodiscella*, are perhaps best referred to the *Gymnascales*, while the most specialized are distinguished with difficulty from the *Discomycetes*. The *Saccardiae* approach the *Agyriaceae* closely, and certain genera of the *Dothiorae* have been assigned to the *Patellariaceae*. Theissen and Sydow regard this family as directly related to the *Dothideaceae*, and in spite of a difference of interpretation as to this point, it is convenient to include them in the same order on the basis of the stroma. The perithecioid locule of the latter appears to be a very different structure, however, and the order in consequence is best regarded as diphyletic.

A. Ascoma more or less permanently innate, little if at all differentiated

Subfamily *Elsinoae*

1. Ascoma with an epithelial shield composed of one layer of brown polygonal cells *Plectodiscella* 24:1140; 20
2. Ascoma without epithelial shield *Elsinoe* 16:804
- B.** Ascoma erumpent to superficial, with differentiated periderm as a rule
1. Asci separated by stromatic tissue
- a. Asci in several irregular layers **Subfamily Myriangiace**
- (1) Ascoma homogeneous, covered with a hard black slime; spores x-celled, hyaline *Myxomyriangis* 24:1138, TS 438; 20
- (2) Ascoma differentiated externally, not slimy
- (a) Spores 2-celled, brown *Butleria* 24:1134, TS 440
- (b) Spores x-celled
- x. Spores hyaline *Ascostratum* 22:1135, TS 441
- y. Spores dark *Kusanoa* 16:800, TS 440; 20
- (c) Spores muriform
- x. Spores hyaline or subhyaline
- (x) Ascoma uniformly fertile within, no definite hymenial tissue *Ascomycetella* 8:846, TS 440
- (y) Hymenial tissue locally developed, distinct from the sterile base
- m. Ascoma with central innate foot, margined by a radiate subicle *Angatia* 24:1137, TS 439
- n. Ascoma without innate foot and subicle
- y. Spores dark *Myriangium* 16:800, TS 439; 20
- (x) Ascoma fleshy and colored, globose *Myriangina* 11:364, 22:579; 20
- (y) Ascoma membranous, dark, discoid *Cookella* 1:71, 22:585
- b.** Asci in a single hymenium-like layer **Subfamily Saccardiace**
- (1) Spores 2-celled
- (a) Spores hyaline *Leptophyma* 8:844, 22:585
- (b) Spores dark *Allosoma*
- (2) Spores x-celled, hyaline *Eurytheca* 8:846, 22:579
- (3) Spores muriform
- (a) Spores hyaline; subicle more or less evident
- x. Ascoma hairy *Saccardia* 1:24, 22:583
- y. Ascoma glabrous *Calolepis*
- (b) Spores dark *Calopeziza* 24:1216, TS 442
- x. Ascoma hairy, with subicle
- y. Ascoma glabrous
- (x) Subicle present *Dictyonella* 22:583, TS 442; 20
- (y) Subicle lacking *Anhellia* 22:579, TS 442
2. Asci separated by paraphysoids or paraphysis-like threads **Subfamily Dothiorace**
- a. Asci one to few, ovoid
- (1) Ascus single; ascoma arising in a stoma *Monascostroma* 22:1131
- (2) Asci several; ascoma not arising in a stoma
- (a) Spores 2-celled, hyaline, without mucose sheath *Wettsteinina* 22:406; 20
- (b) Spores x-celled, hyaline, with mucose sheath *Pseudosphaeria* 22:407

- b. Asci many, clavate to cylindrical; paraphysoids often very like paraphyses
- (1) Asci 8-spored; spores hyaline
- (a) Spores 1-celled Bagnisiella 2:589, 22:407; 20
- x. Ascoma attached broadly
- y. Ascoma with central innate foot Yoshinagaia 17:860; 20
- (b) Spores x-celled Leptodothiora 24:1265
- (c) Spores muriform Dothiora 8:764; 20
- (2) Asci many-spored; spores hyaline
- (a) Spores 2-celled Hariotia 9:672
- (b) Spores x-celled
- x. Ascoma fungicole Endodothiora
- y. Ascoma not fungicole Sydowia 11:341, 24:964
- (c) Spores muriform Keisslerina 24:1265

Family 33. MYCOPORACEAE

Zahlbruckner 92(77)

Mycelium parasitic on Trentepohlia or Palmella, forming a uniform thallus without a cortex; perithecia reduced to locules in a stroma as in **Dothideaceae**, to which family the genera might well be referred.

- A. Spores transeptate; algae Trentepohlia
1. Spores 2-celled
- a. Spores hyaline Chlorodothis 93
- b. Spores dark Sciodothis 93
2. Spores x-celled
- a. Spores hyaline Nothostroma 93
- b. Spores dark Mycoporis 93
3. Spores needle-shaped Mycoporellum 93
- B. Spores muriform; algae Palmella Mycoporum 93

Order 10. MICROTHYRIALES

Mycelium typically superficial, light-colored or dark, sometimes lacking, often forming an innate hypostroma, more rarely membranous; ascomata or apothecia halved or dimidiate, flat to convex, typically radiate, but only at the margin or not at all in **Micropeltaceae**, opening by a pore or cleft, or astomous and then splitting irregularly, mostly superficial, occasionally innate or erumpent; hymenium single (polyascous) or several, in this case the asci separated singly or in groups by densely branched threads or tissue masses arising from the hypothecium; asci typically parallel and basal, clavate to cylindrical; paraphyses lacking or poorly developed, except in a few genera where they form a typical epithecium, as in the true **Discomycetes**.

Theissen and Sydow regard this order as belonging to the **Discomycetes**, though in large part divergent in form, manner of opening and usual absence of epithecium (Ann. Myc. 15:397, 1917). However, it is interesting to know that two years earlier they had included the **Polystomellaceae** in the **Dothideales** (Ann. Myc. 13:158, 1915). On the other hand, Hoehnel referred a number of the genera to his order **Phacidiales** (Ber. Deut. Bot. Ges. 35:416, 1917), and placed the **Microthyriaceae**, together with the **Trichothyriaceae**, in the **Perisporiales** (loc. cit.). With the leading students of the group disagreeing so seriously as to its limits and relationships, it is evident that it offers many difficulties to the general worker. However, the scutellum or cover of the apothecium, which is always halved or dimidiate, and

radiate in the two largest families and marginally so in most genera of the third, serves as a definite mark of recognition.

The opposing views are probably to be reconciled by the assumption that the order has arisen from **Perisporiales** through the **Trichothyriaceae** and has undergone fairly rapid and direct evolution into the discomycete type, as indicated by Hoehnel's reference of several genera to the **Phacidiaceae**. This development was more or less parallel to the much more extensive evolution of the sphaerial type, which in the main line of descent is supposed to have led through the **Hysteriaceae** to the **Phacidiaceae** also. As a consequence, the latter are regarded as diphyletic at least, and the **Discomycetes** necessarily so likewise. The order is overwhelmingly tropical in distribution, and its peculiar morphology and evolution are probably to be ascribed to this fact.

Key to Families

- | | |
|---|-------------------------------|
| A. Scutellum radiate | |
| 1. Apothecia or hypostroma innate or erumpent | Polystomellaceae p. 95 |
| 2. Apothecia superficial, hypostroma none | Microthyriaceae p. 98 |
| B. Scutellum radiate only at margin or not at all | Micropeltaceae p. 100 |

Though differences in insertion are not regarded as family criteria, the separation of the first two families is more or less warranted by the fact that the majority of the **Polystomellaceae** possess a hypostroma. The original limits of this family, as drawn by Theissen and Sydow in their monograph on the **Dothideales** (Ann. Myc. 13: 158, 1915), appear much more natural, and the **Stigmateaceae** and appended genera of their latter treatment have been included in it (Ann. Myc. 15: 399, 403, 1917). Moreover, their family **Trichopeltaceae**, characterized by a membranous mycelium or subiculum, has been merged in the **Microthyriaceae**. They have followed Theissen in terming the order, **Hemisphaeriales**, and the third family, **Hemisphaeriaceae**, but these names have been replaced in accordance with the sound principle that the designations of families and orders should be based upon a representative genus.

Family 34. POLYSTOMELLACEAE

22:514, 24:393; TS 13:158, 15:399

Ascoma covered, erumpent, or typically superficial with an innate hypostroma, dimidiate with radiate scutellum, round to more or less elongate; hymenium round or linear, single or several and then concave and more or less locule-like, arranged radially, circularly or irregularly; asci usually many in each hymenium, mostly basal, parallel and clavate; paraphyses present or lacking.

- | | | |
|--|------------------------|-----------------------------|
| A. Ascoma subcuticular, persistently covered or finally erumpent; paraphyses present | | Subfamily-Stigmateae |
| 1. Ascoma persistently covered | | |
| a. Scutellum with a single hymenium beneath | | |
| (1) Spores 1-celled | | |
| (a) Spores hyaline | Parastigmatea | |
| (b) Spores dark | Entopeltis | 24:394, TS 401 |
| (2) Spores 2-celled | | |
| (a) Spores hyaline | | |
| x. Ascoma round | Diplocarpum | 24:911 |
| y. Ascoma elongate | | |
| (x) Ascoma lichenicole | Lichenopeltella | |
| (y) Ascoma not lichenicole | Leptopeltis | 24:394, TS 401 |

- (b) Spores dark
 x. Hymenium discoid
 y. Hymenium ring-like, loculoid
 (3) Spores x-celled, hyaline
 (4) Spores muriform, hyaline
- b. Scutellum with several concave hymenia beneath
 (1) Spores 1-celled, hyaline
 (2) Spores 2-celled, hyaline
 x. Hymenia rounded; spore-cells equal or unequal
 y. Hymenia linear
 (3) Spores x-celled, dark
2. Ascoma finally erumpent
 a. Spores 1-celled, dark; hymenium usually single, ring-like
 b. Spores 2-celled, dark; hymenia several, linear, irregular
- B. Ascoma superficial, with innate hypostroma
 1. Hymenia linear
 a. Hymenia arranged radially
 (1) Ascoma attached at the center
 (a) Ascoma setose; hymenia often irregularly radiate; spores 2-celled, brown; paraphyses present
 (b) Ascoma glabrous; spores 2-celled, brown
 x. Hymenia stellately arranged
 y. Hymenia flabellately arranged
 (2) Ascoma attached at several points
 (a) Ascoma with conidial hairs; spores 2-celled, hyaline; paraphyses lacking
 (b) Ascoma without conidial hairs; spores 2-celled, dark; paraphyses present
 b. Hymenia arranged in a more or less complete ring
 (1) Ascoma attached at the center
 (a) Spores 1-celled, dark; asci 16-spored
 (b) Spores 2-celled; asci 8-spored
 x. Spores hyaline; paraphyses present
 y. Spores dark
 (x) Hymenia with radial rifts; paraphyses lacking
 (y) Hymenia without radial rifts
 m. Paraphyses present
 n. Paraphyses lacking
 (2) Ascoma attached at several points
 (a) Spores 2-celled
 x. Spores hyaline; paraphyses lacking
 y. Spores dark; paraphyses present
 (b) Spores muriform, hyaline; paraphyses present
- Stigmatea 1:541, TS 401; 21
 Cycloschizella
 Stigmatodothis 24:400, TS 401
 Vizella 2:662, TS 401; 21
 Coscinopeltis 24:394, TS 402; 21
 Munkiella 24:395, TS 402
 Pseudolembosia 24:403, TS 401
 Melanochlamys 24:401, TS 402; 21
 Blasdalea 16:634, TS 403; 21
 Aulacostroma 24:402, TS 403; 21
 Subfamily Parmulineae
 Chaetaspis 24:419, TS 406
 Parmulina 24:415, TS 406
 Rhipidocarpum 24:415, TS 406
 Parmulariella 24:404, TS 407
 Schneepia 24:404, TS 407; 21
 Cyclostomella 24:404, TS 407
 Cycloschizum 24:404, TS 407
 Inocyclus 24:416, TS 408; 21
 Dielsiella 24:404, TS 407; 21
 Polycyclus 24:416, TS 408
 Polycyclina 24:408, TS 408
 Cocconia 8:738, TS 408; 21
 Mendogia 16:669, TS 408

- c. Hymenia arranged irregularly
- (1) Ascoma attached at the center; spores 2-celled, dark
- (a) Paraphyses present *Monorhiza* 24:415, TS 408
- (b) Paraphyses lacking *Monorhizina* 24:415, TS 409
- (2) Ascoma attached at several points, spores 2-celled
- (a) Spores hyaline
- x. Paraphyses present *Cyclotheca* 24:408, TS 409; 21
- y. Paraphyses lacking *Lauterbachella* 24:405, TS 409
- (b) Spores dark
- x. Paraphyses present
- (x) Free mycelium present
- m. Hypostroma forming subcuticular bands *Lembosiodothis* 24:411, TS 409
- n. Hypostroma not forming subcuticular bands
- (y) Free mycelium lacking *Macowaniella*
- y. Paraphyses lacking *Hysterostomina* 24:410, TS 409
- Hysterostomella* 24:409, TS 409
- Subfamily Polystomelleae*
2. Hymenia rounded or discoid
- a. Ascoma attached at the center; spores 2-celled, dark
- (1) Hypostroma forming subcuticular bands
- (a) Free mycelium present
- x. Paraphyses present; mycelium with straight setae *Dothidasteris* 24:411, TS 409; 21
- y. Paraphyses lacking; setae twisted *Scolionema* 24:411, TS 410
- (b) Free mycelium lacking; paraphyses present *Dothidasteroma* 24:411, TS 410
- (2) Hypostroma not forming bands
- (a) Ascoma setose, single *Asterodothis* 24:411, TS 410
- (b) Ascoma glabrous, in a composite group *Polyrhizum* 24:412, TS 410
- b. Ascoma attached at several points
- (1) Free mycelium present; spores 2-celled
- (a) Spores hyaline; paraphyses present *Armatella* 24:409, TS 410
- (b) Spores dark
- x. Paraphyses present *Hysterostoma* 24:412, TS 411
- y. Paraphyses lacking *Placasterella* 24:412, TS 411
- (2) Free mycelium lacking
- (a) Hymenia beneath a common scutellum, separated only by hyaline plectenchym; spores 2-celled, hyaline
- x. Paraphyses present *Polystomella* 9:1063, TS 411
- y. Paraphyses lacking *Rhagadolobium* 24:1264, TS 411
- (b) Hymenia with separate or divided scutella
- x. Spores 1-celled, hyaline; paraphyses present *Microdothella* 24:406, TS 412
- y. Spores 2-celled
- (x) Spores hyaline
- m. Paraphyses present *Synpeltis* 24:409, TS 412
- n. Paraphyses lacking *Leptodothis* 24:409, TS 412

- (y) Spores dark
 m. Hypothecium hyaline; hymenia irregularly disposed
 (m) Paraphyses present Palawania 24:414, TS 412
 (n) Paraphyses lacking Melanoplaca 24:414, TS 412
 n. Hypothecium carbonous, black; hymenia in a crown around a sterile center; paraphyses present Marchalia 24:406, TS 412
 z. Spores x-celled
 (x) Spores hyaline; paraphyses present Gillettiella 14:691, TS 413
 (y) Spores dark; paraphyses lacking Actinodothis 24:417, TS 413
 (c) Hymenia with separate scutella, in concentric rows; spores muriform, hyaline; paraphyses present Pleostomella 24:418, TS 413

Family 35. MICROTHYRIACEAE

2:658, 9:1053, 11:379, 14:686, 16:633, 17:861, 22:514, 24:393; TS 413

Ascomata or apothecia superficial, without hypostroma, dimidiate with radiate scutellum, round or linear, on a filamentous or membranous mycelium or subiculum, or this lacking, ostiolate, laciniate, cleft or astomous; hymenium single, rarely several and then somewhat loculoid; asci typically many, basal, parallel or convergent, saccate to clavate, rarely cylindrical; paraphyses lacking, or present and then sometimes forming an epithecium.

A. Free mycelium none

Subfamily Microthyriaceae

1. Scutellum with a single hymenium beneath

a. Ascoma rounded

(1) Spores 1-celled, hyaline

(a) Asci 8-spored

x. Paraphyses present

Myiocoprum 2:659, TS 416

y. Paraphyses lacking

Peltella 24:423, TS 416

(b) Asci many-spored

Myiocoprella 24:532

(2) Spores 2-celled

(a) Spores hyaline

x. Ascoma setose; paraphyses lacking

Chaetothyriopsis

y. Ascoma glabrous

(x) Lichenicole; paraphyses lacking

Microthyris

(y) Not lichenicole; paraphyses present

Microthyrium 2:662, TS 416; 17

(b) Spores dark; paraphyses present

Seynesia 2:668, TS 416; 17

(3) Spores x-celled

(a) Spores hyaline

x. Ascoma more or less hairy; paraphyses lacking

Caenothyrium 24:430, TS 417

y. Ascoma glabrous

(x) Paraphyses present

m. Scutellum dissolving at tip, then wholly

Actinomyxa 24:533

n. Scutellum persistent, usually ostiolate

Phragmothryium 24:430,
TS 416

(y) Paraphyses lacking; lichenicole

Micropeltopsis

(b) Spores dark; paraphyses lacking

Halbania 24:420, TS 417

b. Ascoma linear

(1) Spores 2-celled

- (a) Spores hyaline
 x. Paraphyses present
 y. Paraphyses lacking
 (b) Spores dark
 x. Paraphyses present
 y. Paraphyses lacking
 (2) Spores filiform; paraphyses present
 2. Scutellum with several hymenia beneath
 a. Spores 2-celled, hyaline
 b. Spores x-celled, dark
 c. Spores muriform, hyaline
 (1) Asci imbedded singly in the peripheral zone
 (2) Asci imbedded singly but not peripheral
 B. Free mycelium present, not membranous
 1. Scutellum with a single hymenium beneath
 a. Ascoma rounded
 (1) Spores 1-celled
 (a) Spores hyaline
 x. Paraphyses present
 y. Paraphyses lacking
 (b) Spores dark; paraphyses lacking
 (2) Spores 2-celled
 (a) Spores hyaline
 x. Spores caudate; hyphopodia present
 y. Spores not caudate; hyphopodia lacking
 (x) Paraphyses present
 (y) Paraphyses lacking
 (b) Spores dark
 x. Hyphopodia present
 (x) Paraphyses present
 (y) Paraphyses lacking
 m. Ascoma mucose-diffuent, encrusted
 n. Ascoma not mucose and encrusted
 y. Hyphopodia lacking
 (x) Ascoma setose, mucose-encrusted;
 paraphyses lacking
 (y) Ascoma glabrous, not encrusted
 m. Mycelium with setae
 n. Mycelium without setae
 (m) Paraphyses present
 (n) Paraphyses lacking
 (3) Spores x-celled
 (a) Spores hyaline
 x. Paraphyses present
 y. Paraphyses lacking
 (b) Spores dark
 x. Asci 2-spored; paraphyses lacking
 y. Asci 8-spored; paraphyses lacking
 (x) Hyphopodia present
 (y) Hyphopodia lacking
 (4) Spores muriform (reddish)
 b. Ascoma linear
 (1) Spores 1-celled, dark; paraphyses lacking
- Camposia
 Aulographella 24:427, TS 417
 Lembosina 24:429, TS 417
 Morenina 24:430, 502, TS 417
 Hadotia 22:574
 Thyrosoma
 Pycnopeltis 24:431, TS 418
 Stephanotheca 24:432, TS 417
 Pycnoderma 24:433, TS 418
 Subfamily Asterineae
 Calothyriella 24:436, TS 418
 Stegothyrium
 Calothyris
 Caudella 24:438, TS 418
 Calothyrium 24:439, TS 418
 Calothyriolum 24:441
 Parasterina 24:478, TS 420
 Englerulaster 24:490, TS 420
 Asterina 1:39, TS 421; 21
 Asteromyxa 24:488, TS 419
 Thallochaete 24:488, TS 419
 Asterinella 24:479, TS 418
 Clypeolina 24:488, TS 419
 Halbaniella 24:502, TS 421
 Beelia
 Amazonia 22:504, TS 421; 21
 Meliolaster
 Kriegeriella 24:432
 Yatesula 24:505, TS 421
 Lembosiella 9:1101, TS 422

- (2) Spores 2-celled
 (a) Spores hyaline; hyphopodia lacking
 x. Paraphyses present *Lembosiopsis* 24:440, TS 422
 y. Paraphyses lacking *Aulographis* 2:727, TS 422
 (b) Spores dark
 x. Hyphopodia present
 (x) Paraphyses present *Lembosia* 2:741, TS 422
 (y) Paraphyses lacking *Morenella* 24:498, TS 423
 y. Hyphopodia lacking
 (x) Paraphyses present *Echidnodes* 24:498, TS 422
 (y) Paraphyses lacking *Echidnodella* 24:498, TS 422
2. Scutellum with several hymenia beneath; spores 2-celled, dark; paraphyses lacking *Symphaster* 24:490, TS 418; 21
- C. Free mycelium present as a thalloid membrane, radiately prosenchymic, rarely parasitic on algae; hymenia several under each scutellum; paraphyses lacking *Subfamily Trichopelteae*
1. Mycelium a thallus with algae (*Trentepohlia*); spores filiform; paraphyses present *Rhaphidocyrtis*
2. Mycelium thalloid, without algae
 a. Mycelial membrane linear, branched
 (1) Spores 2-celled
 (a) Spores hyaline *Trichopeltina* 24:508, TS 426
 (b) Spores dark *Trichopeltella* 24:508, TS 426
 (2) Spores x-celled, hyaline *Trichopeltis* 9:1068, TS 427; 21
- b. Membranes rounded, mostly confluent
 (1) Spores 2-celled
 (a) Spores hyaline *Brefeldiella* 9:1063, TS 427
 (b) Spores dark *Pycnocarpum* 24:509, TS 427; 21
 21
 Phragmoscutella
 Pycnoderma 24:433, TS 418
- (2) Spores x-celled, hyaline
 (3) Spores muriform, hyaline

Family 36. MICROPELTACEAE

(Hemisphaeriaceae)

Theissen *Ann. Myc.* 11:469; TS 15:427

Ascomata or apothecia typically superficial, without hypostroma, rarely subcuticular, dimidiate, but the scutellum not radiate or sometimes at the margin only, parenchymic or plectenchymic, regularly round, with an apical pore or astomous, free mycelium usually lacking, occasionally superficial and reticulate, without hyphopodia; hymenia single or several beneath the scutellum, hypothecium poorly developed, epithecium indistinct or lacking; asci one to many in a hymenium, mostly clavate, paraphyses present or absent.

- A. Scutellum open reticulate, blue-green, radiate at margin, typically without evident mycelium; hymenium single *Subfamily Dictyopeltineae*
1. Spores 1-celled, hyaline; paraphyses present *Dictyothyrina* 24:512, TS 429
2. Spores 2-celled
 a. Spores hyaline
 (1) Paraphyses present; scutellum with pore *Dictyothyrium* 24:512, TS 429
 (2) Paraphyses lacking; scutellum astomous *Dictyopeltis* 24:513, TS 430
- b. Spores dark; paraphyses present *Phaeaspis*

3. Spores x-celled, hyaline
 a. Paraphyses present *Micropeltis* 2:669, TS 430; 17
 b. Paraphyses lacking
 (1) Ascoma on a subiculum *Mitopeltis*
 (2) Ascoma without subiculum *Micropeltella* 24:519, TS 430
4. Spores filiform, hyaline
 a. Paraphyses present *Scolecopeltium*
 b. Paraphyses lacking *Scolecopeltis* 24:524, TS 430;
 21
- B. Scutellum parenchymic, brown, radiate at margin, typically without evident mycelium; hymenia single or several**
1. Ascoma subcuticular
 a. Spores 2-celled, brownish; paraphyses lacking *Aphysa* 24:400, TS 402
 b. Spores x-celled, hyaline; paraphyses present
 (1) Ascoma cespitose or stromoid; ostiole elongate *Moesziella*
Stigmatophragma
 (2) Ascoma solitary; ostiole round
2. Ascoma superficial
 a. Scutellum with a single hymenium beneath
 (1) Spores 1-celled, hyaline
 (a) Paraphyses present, ascoma stromoid *Griggsia* 24:639
 (b) Paraphyses lacking; ascoma separate *Haplopeltis* 24:525, TS 430
 (2) Spores 2-celled, hyaline
 (a) Ascoma round, astomous
 x. Paraphyses present *Clypeolum* 2:667, TS 430
 y. Paraphyses lacking *Microthyriella* 24:526, TS 431
 (b) Ascoma linear, with a cleft; paraphyses lacking *Schizothyrium* 2:723, TS 431
Phragmothyriella 24:528, TS 431
 (3) Spores x-celled, hyaline; paraphyses lacking *Saccardinula* 9:1071
 (4) Spores muriform, hyaline
- b. Scutellum with several hymenia beneath
 (1) Spores 2-celled, hyaline; paraphyses lacking
 (a) Each hymenium of several asci *Polyclypeolum* 24:527, TS 431
 (b) Each hymenium of a single ascus
 x. Ascoma setose *Chaetoplaca* 24:531
 y. Ascoma glabrous *Eremotheca* 24:528, TS 431
 (2) Spores x-celled, hyaline; each hymenium of a single ascus *Eremothecella* 24:529, TS 432
- C. Scutellum wavy plectenchymic; mycelium present, reticulate**
1. Spores 2-celled, hyaline
 a. Scutellum with ostiole; hymenium single
 (1) Ascoma setose; paraphyses lacking *Chaetopeltopsis* 24:530, TS 432
 (2) Ascoma glabrous
 (a) Paraphyses present *Stomiopeltis* 24:529, TS 432
 (b) Paraphyses lacking *Stomiopeltella* 24:529, TS 432
 b. Scutellum astomous
 (1) Hymenium single; paraphyses present *Metathyriella*
 (2) Hymenia several; paraphyses lacking *Plochmopeltis* 24:529, TS 432
2. Spores x-celled, hyaline; ascoma astomous, paraphyses present *Protopeltis*

Subfamily Haplopeltineae

Subfamily Plochmopeltineae

Order 11. PHACIDIALES

Apothecia superficial, erumpent, or innate and then sometimes concrete with the epiderm, elongate, elliptic or round, typically opening by a cleft or splitting into lobes, usually dark, but light-colored in one family, varying in texture from carbonous to membranous, coriaceous, corneous or waxy, but never fleshy or gelatinous, separate or gregarious, occasionally cespitose or stromate; asci typically cylindrical and 8-spored, paraphyses regularly present, often forming an epithecium, filiform, clavate or branched; hypothecium usually thin, well-developed only in one family; spores various.

The limits of this order have been somewhat extended in the present treatment, owing to the practical difficulties in the way of defining the families sharply. There has been general agreement as to the **Stictidaceae** owing to the light color of the apothecium, but the genera with dark apothecia have been treated very differently by Saccardo, Rehm, and Hoehnel. This is best exemplified by the **Hypodermiaceae**, which are distributed among the families of his **Phacidiales** by Hoehnel, placed in a separate family next **Hysteriaceae** by Rehm, and distributed in this family by Saccardo. By virtue of their thick hypothecium, the **Trybliaceae** may be placed almost equally well in the **Pezizales**, but they are retained here because of the cleft or lobed opening.

This order is considered to be diphyletic, the **Hysteriaceae** being derived from the **Sphaeriaceae** and in turn passing directly into the cleft forms of **Phacidaceae** and perhaps **Trybliaceae** as well. The round apothecium as a rule appears to have arisen from the ascoma of the **Microthyriales**, a number of genera placed by Theissen and Sydow in the **Stigmateteae** having been transferred to **Phacidiales** by Hoehnel.

Key to Families

- | | |
|---|----------------------------|
| A. Algal host-cells lacking | |
| 1. Apothecia dark | |
| a. Apothecia opening by a narrow cleft | Hysteriaceae p. 102 |
| b. Apothecia opening by lobes or a wide cleft | |
| (1) Hypothecium thin | Phacidaceae p. 107 |
| (2) Hypothecium thick | Trybliaceae p. 111 |
| 2. Apothecia light-colored, mostly white | Stictidaceae p. 109 |
| B. Algal host-cells present, forming a more or less evident thallus | |
| | Graphidaceae p. 104 |

Family 37. HYSTERIACEAE

2:721, 9:1100, 11:385, 14:710, 16:657, 17:893, 22:557, 24:1112; Rehm 1

Apothecia erumpent or superficial as a rule, sometimes innate and concrete with the epidermis, elongate-elliptic, oblong or linear, occasionally extended vertically, typically black, carbonous or membranous, opening by a narrow cleft, or this wider and exposing the disk, typically separate, very rarely cespitose or stromate; asci mostly cylindrical and 8-spored, paraphyses regularly present, usually much branched at the tip and concrete into an epithecium; spores various.

The elongate cleft ascoma distinguishes this family readily from the **Sphaeriaceae**. The rimose opening resembles that of the **Lophiostomaceae**, but the form of the ascoma and the absence of the thickened ostiole render their separation a simple matter. The fruit-body has usually been called a perithecium or hysterothecium, but the presence of an epithecium justifies the application of the term apothecium, first used by Rehm. This is further warranted by the difficulty experienced in drawing a clear line between this and the three succeeding families, by general consent assigned to the **Discomycetes**. Genera with hysteroïd apothecia appear

in all of these, and have in consequence received widely varying treatment at the hands of different workers.

The **Hysteriaceae** have apparently been derived directly from the **Sphaeriaceae** and hence represent a second line of evolution connecting **Pyrenomycetes** with **Discomycetes**. The carbonous forms with narrow cleft are essentially elongate perithecia, while the membranous ones with wider opening pass imperceptibly into **Phacidiaceae** and **Trybliidae**.

Hyalosporae

2:721, 9:1100, 11:385, 14:710, 16:657, 22:557, 24:1112

Spores 1-celled, hyaline or subhyaline, ovoid to oblong

A. Paraphyses present

Hypodermella 11:385

B. Paraphyses lacking

Bifusella 24:1257

Phaeosporae

2:727

Spores 1-celled, dark, ovoid to oblong

Apothecia superficial on a subicle; paraphyses present

Farlowiella 2:727, 9:1100

Hyalodidymae

2:727, 9:1101, 11:388, 14:711, 16:659, 17:895, 22:558, 24:1112

Spores 2-celled, hyaline or subhyaline, ovoid to fusoid

A. Apothecia membranous

1. Apothecia innate, more or less concrete with the epiderm

Hypoderma 2:784, R 29, 31; 22

2. Apothecia erumpent to superficial

a. Apothecia typically oblong, opening by a cleft

Aulographum 2:727, R 4, 8; 22

b. Apothecia typically rounded, opening by lobes

Schizothyrium 2:722, R 63, 75

B. Apothecia carbonous, erumpent or superficial; subiculum more or less developed

Glonium 2:731, R 4, 10; 22

Phaeodidymae

2:740, 9:1103, 11:387, 14:711, 16:659, 17:897, 22:561

Spores 2-celled, dark, ovoid to fusoid

A. Apothecia carbonous, conchiform; cleft narrow and straight

Bulliardella 17:902

Hyalophragmiae

2:765, 9:1112, 11:388, 14:715, 16:664, 17:903, 22:565, 24:1113

Spores x-celled, hyaline to subhyaline, oblong to cylindrical

A. Apothecia parasitic, densely gregarious or caespitose

1. Apothecia densely gregarious, corticole; spores long 1- or 2-celled

Dichaena 2:771, R 49; 22

2. Apothecia radiately disposed, folicole

Aldona 16:667

B. Apothecia saprophytic

1. Apothecia membranous or corious, innate

a. Apothecia membranous; cleft narrow

Glioniella 2:765, R 29, 35; 22

b. Apothecia corious; cleft gaping

Pseudographis 2:769, R 90, 94; 22

2. Apothecia carbonous, superficial; cleft narrow

Hysteroglonium

Phaeophragmiae

2:743, 9:1108, 11:387, 14:715, 16:664, 17:907, 22:567, 24:1116

Spores x-celled, dark, oblong to cylindrical

- A. Apothecia innate, submembranous **Hypodermopsis 17:908**
- B. Apothecia erumpent to superficial
1. Apothecia carbonous or subcarbonous
- a. Apothecia upright, conchiform, fragile **Mytilidium 2:760, 765, R 7, 23; 22**
- b. Apothecia horizontal, not conchiform, firm **Hysterium 2:743, R 5, 13; 22**
2. Apothecia coriaceous or subcoriaceous **Trybliella 2:757**

Hyalodictyae

2:772, 9:1116, 11:389, 14:717, 16:668, 17:909, 22:570, 24:1119

Spores muriform, hyaline or subhyaline, ovoid to oblong

- A. Apothecia innate, concrete with epiderm, membranous; spores with mucous sheath **Hysteropsis 9:1118, R 30, 36**
- B. Apothecia erumpent-superficial, carbonous; spores without mucous sheath **Gloniopsis 2:772, R 17**

Phaeodictyae

2:776, 9:1119, 11:389, 14:717, 16:668, 17:912, 22:573, 24:1120

Spores muriform, dark, ovoid to oblong

- A. Apothecia innate, membranous, thin **Graphyllum 16:1145, 17:913; 22**
- B. Apothecia erumpent-superficial, carbonous or corio-carbonous, firm **Hysterographium 2:776, R 6, 16; 22**

Scolecosporae

2:784, 9:1123, 11:389, 14:719, 16:669, 17:713, 22:574, 24:1123

Spores acicular to filiform, hyaline or dark, continuous or septate

- A. Apothecia innate or erumpent
1. Apothecia membranous, elongate, applanate; paraphyses typically simple, hooked at tip **Lophodermium 2:791, R 31, 37; 22**
2. Apothecia coriaceous, conic-discoïd; paraphyses much branched above **Ostropa 2:804, R 186, 187**
- B. Apothecia superficial
1. Apothecia horizontal, elongate **Hadotia 22:574**
2. Apothecia vertical, conchiform or dolabriform **Lophium 2:799, R 7, 26; 22**

Family 38. GRAPHIDACEAE

Zahlbruckner 102(87)

Mycelium parasitic on yellow-green algae, forming a crustose, foliose or fruticose thallus, the latter sometimes immersed or lacking, and the mycelium then parasitic on lichens or bark; apothecia single, cespitose or united in a stroma, typically oblong to elongate with a cleft, more rarely disk-shaped and with an irregular often stellate opening, more or less carbonous.

The sole distinction between this family and the **Hysteriaceae**, as well as certain hysterioid **Discomycetes**, lies in the presence of algal hosts and thus typically of a thallus. Species with rudimentary or obsolete thallus must be sought in both places, and it is necessary to place several genera in two different families.

The above pages refer respectively to the second and first editions of Zahlbruckner's monograph, and those in the key to the second.

- A. Apothecia separate, single or cespitose**
1. Thallus lacking, parasitic on lichens or on bark **Subfamily Arthoniae**
- a. Parasitic on lichens
- (1) Spores 1-celled **Phacopsis** R 419
- (2) Spores 2-celled **Conida** R 420
- (3) Spores x-celled **Celidium** R 425
- b. Parasitic on bark
- (1) Spores 2-celled **Lecideopsis** R 432
- (2) Spores x-celled **Arthonia** R 435; 23
- (3) Spores muriform **Arthothelium** R 438
2. Thallus present, crustose or uniform
- a. Apothecia without an exciple, i.e., not margined **Subfamily Arthoniae**
- (1) Algae *Palmella* or *Protococcus*; spores hyaline
- (a) Spores 2-celled **Allarthonia** 106
- (b) Spores x-celled **Plearthonis** 106
- (c) Spores muriform **Allarthothelium** 107
- (2) Algae *Trentepohlia*
- (a) Spores 2-x-celled
- x. Spores hyaline
- (x) Spores 2-celled **Coniocarpum** 106
- (y) Spores x-celled **Arthonia** 104
- y. Spores brownish to brown, x-celled
- (x) Perithecia cespitose; spores brownish **Synarthonia** 107
- (y) Perithecia not cespitose; spores brown
- Gymnographa** 110
- Arthothelium** 106
- (b) Spores muriform
- (3) Algae *Phyllactidium*; spores hyaline
- (a) Spores 2-celled **Merarthonis** 107
- (b) Spores x-celled **Arthoniopsis** 107
- (c) Spores muriform **Trichophyma** 107
- b. Apothecia margined with a distinct proper exciple as a rule **Subfamily Graphidae**
- (1) Thallus without cortex
- (a) Algae *Palmella*
- x. Apothecia with a single hymenium
- (x) Spores hyaline or subhyaline **Xylographa** 108
- m. Spores 1-celled
- (m) Hypothecium clear or brownish **Lithographa** 108
- (n) Hypothecium black, carbonous **Aulaxina** 109
- n. Spores x-celled
- (y) Spores dark
- m. Spores x-celled **Encephalographa** 109
- n. Spores finally muriform **Xyloschistes** 110
- y. Apothecia with 2-4 parallel hymenia; spores hyaline
- (x) Spores 1-celled **Ptychographa** 109
- (y) Spores x-celled **Diplogramma** 109
- (b) Algae *Trentepohlia*
- x. Asci 1-8 spored
- (x) Spores hyaline
- m. Spores transeptate
- (m) Paraphyses simple, not united

- r. Tips of paraphyses little thickened, smooth
 - (r) Spores 2-celled **Anomorpha 114**
 - (s) Spores x-celled **Graphis 112; 23**
- s. Tips of paraphyses clavate and warted or spiny **Psorographis 118**
- (n) Paraphyses ramose and united **Opegrapha 110; 23**
- n. Spores muriform
 - (m) Paraphyses simple, not united
 - r. Tips of paraphyses not thickened, smooth **Graphina 115**
 - s. Tips of paraphyses clavate, warted or spiny **Acanthothecis 117; 23**
 - (n) Paraphyses ramose and united **Helminthocarpum 118**
- (y) Spores dark **Melaspilea 111**
- m. Spores 2-celled
- n. Spores x-celled
 - (m) Paraphyses simple, not united **Phaeographis 114**
 - (n) Paraphyses ramose, united **Sclerographis 111**
- o. Spores muriform **Phaeographina 11b**
- y. Asci many-spored; spores fusoid to acicular
 - (x) Paraphyses simple, not united **Graphinella 118**
 - (y) Paraphyses ramose, united **Spirographa 111**
- (c) Algae Phyllactidium; spores x-celled **Fouragea 118**
- x. Spores hyaline; paraphyses ramose, united **Micrographa 118**
- y. Spores dark; paraphyses simple, not united **Subfamily Dirinae**
- (2) Thallus with a cortex; algae Trentepohlia; spores x-celled
 - (a) Spores hyaline
 - x. Paraphyses simple, not united **Dirina 122; 23**
 - y. Paraphyses ramose, united **Cyclographa 123**
 - (b) Spores dark **Dirinastrum 123**
- 3. Thallus present, fruticose, erect, rarely crustose-fruticose; spores x-celled **Subfamily Roccellae**
- a. Hyphae of cortex parallel with thallus surface
 - (1) Apothecia elongate, furrowed; spores hyaline **Ingaderia 123**
 - (2) Apothecia round
 - (a) Hypothecium black; spores hyaline
 - x. Exciple with algae **Dendrographa 124**
 - y. Exciple without algae **Roccellaria 124**
 - (b) Hypothecium hyaline; spores brownish, spiny **Darbishirella 124**
- b. Hyphae of cortex perpendicular to surface
 - (1) Apothecia elongate, furrowed
 - (a) Apothecia immersed; hypothecium hyaline **Roccellographa 125; 23**
 - (b) Apothecia superficial; hypothecium black **Reinkella 125**
 - (2) Apothecia round
 - (a) Spores hyaline; apothecia entire
 - x. Hypothecium hyaline

- (x) Algae present below the hypothecium **Pentagenella 126**
- (y) Algae lacking below the hypothecium **Combea 126**
- y. Hypothecium black
 - (x) Thallus crustose-fruticose **Roccellina 125**
 - (y) Thallus distinctly fruticose **Roccella 125; 23**
- (b) Spores dark; apothecia deeply lobed
 - x. Medulla hyaline throughout **Schizopelte 126**
 - y. Inner medullary layer black **Simonyella 127**
- B. Apothecia in a stroma, mostly immersed** **Subfamily Chiodectae**
 - 1. Algae Trentepohlia**
 - a. Paraphyses simple and free**
 - (1) Spores x-celled
 - (a) Spores hyaline **Glyphis 119**
 - (b) Spores dark **Sarcographa 119**
 - (2) Spores muriform
 - (a) Spores hyaline **Enterodictyum 120**
 - (b) Spores dark **Sarcographina 120**
 - b. Paraphyses ramose and reticulately united**
 - (1) Spores x-celled
 - (a) Spores hyaline **Chiodectum 120; 23**
 - (b) Spores dark **Sclerophyllum 121**
 - (2) Spores muriform
 - (a) Spores hyaline **Minksia 121**
 - (b) Spores dark **Enterostigma 122**
 - 2. Algae Heterothallus; spores x-celled, hyaline** **Rotularia 122**
 - 3. Algae Phyllactidium; spores hyaline**
 - a. Spores 2-celled; paraphyses ramose and united** **Mazosia 122**
 - b. Spores x-celled; paraphyses simple and free** **Pycnographa 122**

Family 39. PHACIDIACEAE

Apothecia innate, often concrete with the epiderm and splitting with it into lobes or a cleft, or free and then more or less erumpent and splitting separately, discoid or elongate, black, membranous to carbonous, separate or gregarious, or crowded in black stroma-like areas of the leaf; hypothecium poorly developed as a rule; asci mostly cylindric and 8-spored, occasionally stalked and clavate; paraphyses usually numerous, often hooked or branched at the tip, sometimes sparse but very rarely absent; spores various.

It is an open question whether the genera with elongate and cleft membranous apothecia belong to the **Hysteriaceae** or to the **Phacidiaceae**; they have been placed in the former by Saccardo and by Rehm, in the latter by Hoehnel. To minimize the difficulty for the beginner especially, such genera have here been included in both keys. There is further disagreement as to the presence of paraphyses, two or three genera having been described on the basis of their absence. This may be explained by those species in which the paraphyses are sparse, and the latter are perhaps entirely lacking only in **Dothiora**, which belongs more properly in **Myriangiaceae**.

Hyalosporae

8:705, 11:431, 10:48, 14:813, 16:783, 18:155, 22:742, 24:1254

Spores 1-celled, hyaline, ovoid to oblong

- A. Apothecia round, opening by lobes**
 - 1. Apothecia concrete above with the epiderm** **Phacidium 8:709, R 66; 24**
 - 2. Apothecia not concrete with epiderm** **Pseudophacidium 8:776, R 94**

B. Apothecia elongate to effuse, splitting with a cleft
or irregularly

1. Apothecia elongate, with a cleft

a. Paraphyses present

Hypodermella

b. Paraphyses lacking

Bifusella 24:1257

2. Apothecia effuse, splitting irregularly

Cryptomyces 8:707, R 106; 24

Phaeosporae

14:814, 22:746, 24:1263

Spores 1-celled, dark, spherical to oblong

A. Apothecia in black stroma-like folicole spots

Criella 8:756

B. Apothecia not in black stroma-like spots

1. Spores spherical

Bonanseia 22:746

2. Spores elliptic to oblong

Phaeophacidium 14:814

Hyalodidymae

Spores 2-celled, hyaline, elliptic to oblong

A. Apothecia elliptic to oblong, opening by a cleft;

asci typically long-stalked

Hypoderma 2:784, R 31

B. Apothecia round to ellipsoid, opening by lobes;

asci not long-stalked

Schizothyrium 2:723, R 75; 24

Phaeodidymae

10:49, 22:748, 22:1263

Spores 2-celled, dark, ovoid

Apothecia and epiderm concrete above, the latter
operculate or laciniate; asci 2-4-spored; spore-cells
unequal

Keithia 10:49; 24

Hyalophragmiae

8:740

Spores x-celled, hyaline, fusoid

A. Apothecia round, concrete with the epiderm,
laciniate

Sphaeropezia 8:740, R 72; 24

B. Apothecia elongate, with a cleft

1. Apothecia folicole, branched or radiate

Aldona 16:667

2. Apothecia corticole, single, not radiate

Pseudographis 2:769, R 72

Phaeophragmiae

17:908

Spores x-celled, dark, fusoid

Apothecia innate, membranous; cleft narrow

Hypodermopsis 17:908

Hyalodictyae

8:764, 16:790, 22:1265

Spores muriform, hyaline or subhyaline, ovoid to fusoid

A. Paraphyses present

1. Apothecia round, opening by lobes

Tridens

2. Apothecia elongate, opening by a cleft

Hysteropsis 9:1118, R 36

B. Paraphyses lacking; apothecia round, opening irregularly

1. Asci 8-spored

Dothiora 8:764, R 108; 24

2. Asci many-spored

Keisslerina 24:1265

Phaeodictyae

16:1145, 17:913, 24:1122

Spores muriform, dark, ovoid to fusoid

Apothecia innate, membranous, linear, with a cleft *Graphyllum* 16:1145; 22

Scolecosporae

2:744, 10:51, 11:432, 14:817, 16:789, 18:163, 22:749, 24:1123

Spores acicular to filiform, typically hyaline, continuous or septate

A. Apothecia concrete with epiderm

1. Apothecia in black folicole stroma-like spots

Rhytisma 8:752, R 82; 24

2. Apothecia not in stroma-like spots, laciniate with the epiderm

Coccomyces 8:744, R 76; 24

B. Apothecia not concrete with the epiderm

1. Apothecia round, opening by lobes

Coccophacidium R 97

2. Apothecia oblong to elongate, opening by a cleft

a. Apothecia with a linear cleft

Lophodermium 2:791, R 37

b. Apothecia opening broadly, exposing the hymenium

Clithris 18:165, R 101; 24

Family 40. STICTIDACEAE

8:647; Rehm 112

Apothecia innate, never concrete with the epiderm, finally more or less erumpent as a rule, opening by lobes, by a cleft or lid or circularly, round to elongate, white or bright-colored, or rarely dark but at least never black, typically waxy, rarely membranous, separate or grouped; hymenium well exposed at maturity in most cases, hypothecium poorly developed; asci mostly cylindric, 8-spored; paraphyses usually numerous, and swollen at the tip, rarely subulate, simple or branched; spores various.

This family contains many genera with elongate apothecia, but these are readily separated from similar forms in the *Hysteriaceae* by the color and consistency, as well as by the fact that the disk is widely exposed at maturity. The *Ostropae* may be placed almost equally well in either.

Subfamily Eustictidae

Rehm 113

Apothecia waxy, not deeply sunken, finally opening widely and exposing the hymenium more or less completely.

Hyalosporae

8:648, 10:44, 11:428, 14:806, 16:776, 18:146, 22:733, 24:1244

Spores 1-celled, hyaline, globose to oblong

A. Spores globose

1. Asci 8-spored

Lindauella 16:777

2. Asci many-spored

Flaminia 16:777

- B. Spores elliptic to oblong
1. Paraphyses long-pointed, much longer than asci *Stegia* 8:733, R 135; 24
 2. Paraphyses blunt, swollen or branched
 - a. Paraphyses filiform or forked
 - (1) Apothecia round
 - (a) Apothecia blackish; ascus-pore blue with iodine *Trochila* 8:728, R 127
 - (b) Apothecia bright-colored
 - x. Ascus-pore blue with iodine
 - (x) Paraphyses enlarged and colored above *Ocellaria* 8:654, R 133
 - (y) Paraphyses little if at all enlarged or colored *Habrosticktis* R 137
 - y. Ascus-pore not blue with iodine *Naevia* 8:658, R 145
 - (2) Apothecia oblong or linear
 - (a) Hymenium blue with iodine *Xylographa* 8:664, R 153; 24
 - (b) Hymenium not blue with iodine *Briardia* 16:776, R 151
 - b. Paraphyses irregularly branched above
 - (1) Asci 8-spored *Propolis* 8:648, R 148; 24
 - (2) Asci many-spored *Propolina* 8:654

Phaeosporae

- Spores 1-celled, dark, oblong; paraphyses much forked, forming an epithecium *Stictophacidium* 8:735, R 1215

Hyalodidymae

8:666, 10:45, 11:428, 14:808, 16:778, 18:147, 24:1248

Spores 2-celled, hyaline or bright-colored, elliptic to oblong

- A. Paraphyses present
1. Spores with 1-2 cilia at either end; hysterooid *Iridionia* 16:788
 2. Spores not ciliate
 - a. Paraphyses filiform or forked; apothecia round
 - (1) Asci not blue with iodine *Naeviella* R 164
 - (2) Asci blue with iodine
 - (a) Ascus-pore alone blue with iodine *Diplonaevia* 8:666, R 161
 - (b) Whole hymenium blue with iodine *Diplocrytis* R 158
 - b. Paraphyses irregularly branched
 - (1) Apothecia round; ascus-pore not blue with iodine *Propolidium* 8:667
 - (2) Apothecia elongate; ascus-pore blue with iodine *Xyloglyphis* R 170
- B. Paraphyses lacking *Coccopeziza* 10:45

Hyalophragmiae

8:669, 10:46, 11:429, 14:808, 16:778, 18:148 22:734, 24:1248

Spores x-celled, hyaline, oblong to fusoid

- A. Paraphyses filiform or forked; apothecia round
1. Asci not blue with iodine *Merostictis* R 164
 2. Asci blue with iodine
 - a. Ascus-pore alone blue with iodine *Phragmonaevia* 8:674, R 160
 - b. Whole hymenium blue with iodine *Cryptodiscus* 8:669, R 158; 25
- B. Paraphyses branched; apothecia elongate *Xylogramma* 8:677, R 169; 25

Phaeophragmiae

8:676, 24:1248

Spores x-celled, dark, oblong to fusoid

- A. Apothecia parasitic on leaves *Eupropolella*
 B. Apothecia saprophytic on stems and twigs *Eupropolis* 8:676

Hyalodictyae

8:704, 11:431, 14:812, 16:782, 18:151

Spores muriform, hyaline to subhyaline, ovoid to fusoid

- A. Asci 1-spored *Pleostictis* 8:703
 B. Asci typically 8-spored *Melittosporium* 8:704, R 172

Scolecosporae

681, 10:46, 11:429, 14:810, 16:781, 18:152, 22:737, 24:1251

Spores acicular to filiform, typically hyaline, continuous or septate

- A. Asci 8-spored
 1. Apothecia pilose *Lasiostrictis* 8:696
 2. Apothecia not pilose
 a. Paraphyses present
 (1) Paraphyses filiform or nearly so; apothecia lobed *Stictis* 8:681, R 175; 25
 (2) Paraphyses much branched
 (a) Spores acicular, vermiform, cells not separating; apothecia opening by a cleft *Naemacyclus* 8:701, R 173
 (b) Spores long-filiform, cells separating; apothecia opening circularly *Schizoxylum* 8:697, R 101; 25
 b. Paraphyses lacking; apothecia opening by a lid *Moutoniella* 18:163
Carestiella 14:810
- B. Asci many-spored

Subfamily Ostropae

Rehm 185

Apothecia membranous or leathery, grey to darkish, deeply sunken, the scarcely opened tip alone erumpent.

- A. Spores 1-celled, elliptic; asci clavate *Laquearia* 8:586, R 187
 B. Spores many-celled, filiform; asci long-cylindric
 1. Apothecia cask-shaped, partly erumpent; paraphyses branched *Ostropa* 2:804, R 188; 25
 2. Apothecia with only the thick ostiole erumpent; paraphyses filiform *Robergea* 2:806, R 189

Family 41. TRYBLIDIACEAE

Rehm 191

Apothecia innate, then erumpent or superficial, opening by lobes or rarely by a cleft, round to elliptic, brown or black, membranous to corneous, usually separate, occasionally cespitose or stromate; hymenium exposed at maturity, hypothecium well developed, thick; asci mostly cylindric, 8-spored; paraphyses numerous, much branched or swollen at the tip; spores various.

This family differs from **Phacidiaceae** only in the better developed hypothecium and hymenium, and from **Dermateaceae** in opening by lobes or a cleft rather than

circularly. In neither case is the line a sharp one, and Rehm is probably correct in stating that the genera will probably be assigned finally to one or the other of these two families (p. 191). However, Hoehnel takes the opposite view, and has transferred a number of genera from the latter especially to *Tryblidiaceae* (Ann. Myc. 15:321).

- | | |
|--|--|
| A. Apothecia separate to gregarious | |
| 1. Spores 1-celled, hyaline | <i>Hysteropeziza</i> R 132 |
| 2. Spores 2-celled | |
| a. Spores with a mucous sheath, hyaline | <i>Tryblidiopsis</i> 8:786, R 193; 25 |
| b. Spores without a mucous sheath | |
| (1) Spores hyaline | <i>Heterosphaeria</i> 8:775, R 198; 25 |
| (2) Spores dark | <i>Caldesia</i> R 290; 27 |
| 3. Spores x-celled, hyaline | |
| a. Spores with a mucous sheath | <i>Tryblis</i> R 195 |
| b. Spores without a mucous sheath | <i>Odontotrema</i> 8:679, R 204; 25 |
| 4. Spores muriform, hyaline, at first with mucous sheath | <i>Tryblidium</i> R 196; 25 |
| 5. Spores filiform | |
| a. Apothecia innate, then erumpent | <i>Odontura</i> R 207 |
| b. Apothecia superficial, short-stalked; exciple of two layers | <i>Asterocalyx</i> 24:1243 |
| B. Apothecia caespitose or stromate | |
| 1. Spores 1-celled, hyaline | <i>Henriquesia</i> 2:726 |
| 2. Spores x-celled | |
| a. Spores hyaline | <i>Scleroderris</i> 8:594, R 208; 25 |
| b. Spores dark | <i>Phaeoderris</i> 8:599 |

Order 12. PEZIZALES

Apothecia innate, erumpent, or superficial and then often found on moist soil, typically globoid at first, later opening circularly as a rule to form a discoid, scutellate, cupuliform or reversed body, frequently with a stalk, leathery, gelatinous, waxy or fleshy, separate to caespitose but rarely stromate; exciple typically distinct, often well-differentiated, infrequently lacking, hypothecium well-developed, often very thick; asci usually cylindric, 8-spored, with a lid or operculum in the fleshy forms as a rule; paraphyses practically universal, filiform, clavate or sometimes branched, often forming an epithecium; spores various, but prevailingly hyaline.

The extent of this order has been narrowed by the reference of the three lower families to the *Phacidiales*, on the basis of differences in the manner of opening, as well as in texture and form to some degree. The form of the *Helvellaceae* appears to be widely divergent, but the development of the apothecium indicates that they are properly included here. Ecologically, the forms without exciple represent a specialized type due to reduction, and these have been grouped in a new order, *Agyriales*, probably polyphyletic in nature. Boudier, and more recently Seaver, has divided the order into two primary groups, *Operculates* and *Inoperculates*, but a single character of this kind hardly affords a satisfactory basis for phylogeny.

The *Pezizales* have evidently been derived directly from the *Phacidiales*, and it would seem in response to a gradually increasing supply of water and food. The order terminates blindly in three diverging groups, *Geoglosseae*, *Agyriales* and *Tuberales*, but is thought to have continued its specialization into the *Pucciniales* from which the *Basidiomycetes* have sprung.

Key to Families

- A.** Apothecia not parasitic on algae, without a thallus
1. Apothecia typically innate-erumpent, leathery or horny, brown or black Dermateaceae p. 114
 2. Apothecia typically superficial
 - a. Asci disappearing early; spores and paraphyses forming a mazaedium Caliciaceae p. 119
 - b. Asci persistent; mazaedium lacking
 - (1) Apothecia gelatinous Bulgariaceae p. 115
 - (2) Apothecia not gelatinous
 - (a) Apothecia usually dark, carbonous to leathery, rarely waxy Patellariaceae p. 117
 - (b) Apothecia usually bright-colored, waxy to fleshy
 - x. Apothecia typically waxy, on plants
 - (x) Exciple dark, parenchymic all over or at the base; mostly sessile Mollisiaceae p. 133
 - (y) Exciple concolorous, rarely dark, prosenchymic; mostly stalked Helotiaceae p. 134
 - y. Apothecia typically fleshy, usually terricole, sometimes fimicole
 - (x) Apothecia closed at first, then open, cupulate to discoid, rarely ear-shaped
 - m. Apothecia usually terricole, medium to large; asci mostly cylindric, not exerted Pezizaceae p. 137
 - n. Apothecia usually fimicole, small; asci broad, exerted from disk at maturity Ascobolaceae p. 140
 - (y) Apothecia open from the first, stalked, saddle-shaped to pileate or clavate, terricole as a rule Helvellaceae p. 139
- B.** Apothecia parasitic on algae, thallus typically well-developed
1. Asci disappearing early; disk with a mazaedium Caliciaceae p. 119
 2. Asci persistent; mazaedium lacking
 - a. Thallus cottony, cobwebby or spongy; algae yellow-green Chrysotrichaceae p. 120
 - b. Thallus more or less distinctly gelatinous; algae blue-green Collemaceae p. 121
 - c. Thallus firm, layered, neither cottony nor gelatinous
 - (1) Thallus of two kinds, one horizontal, the other erect, i.e. a podetium Cladoniaceae p. 126
 - (2) Thallus of one kind only, horizontal or erect
 - (a) Spores typically 2-celled and biguttulate, with a thickened septum, usually traversed by a narrow canal Physciaceae p. 132
 - (b) Spores without thickened septum and intersecting canal

- x. Apothecia sunken or grown to the thallus on the whole underside **Peltigeraceae p. 123**
- y. Apothecia typically superficial when mature, not attached broadly
 - (x) Apothecia with proper exciple **Lecideaceae p. 124**
 - (y) Apothecia with thalline exciple **Parmeliaceae p. 127**

Family 42. DERMATEACEAE

Rehm 241

Apothecia innate at first, then erumpent or superficial, rounded or angled by mutual pressure, rarely one-sided or clavate, opening circularly, mostly leathery or horny, brownish to black, separate or cespitose and then often with a stroma-like base; hypothecium usually well-developed, thick; asci regularly cylindrical and 8-spored, paraphyses present, various; spores various.

This family is to be distinguished from the closely related **Tryblidiaceae** with rounded apothecia chiefly by the fact that the opening is circular instead of lobed. Lobes or teeth occur in one or two genera with very large apothecia, but all such forms appear to belong properly in the **Pezizaceae**, as Rehm has placed them, and they are retained here only because of their more or less leathery consistence.

Hyalosporae

8:547, 10:36, 11:422, 14:794, 16:782, 18:121, 22:710, 24:1224

Spores 1-celled, hyaline, globose to oblong

- A. Apothecia large, usually stalked or radicate at base
 - 1. Apothecia ear-shaped, more or less vertical
 - a. Spores globose **Midotiopsis 18:121**
 - b. Spores ovoid to oblong **Midotis 8:547**
 - 2. Apothecia urceolate or turbinate
 - a. Apothecia stalked
 - (1) Exciple and hypothecium prosenchymic **Urnula 8:548, R 974; 35**
 - (2) Exciple and hypothecium parenchymic **Choriactis 18:121**
 - b. Apothecia sessile; exciple parenchymic, hypothecium prosenchymic **Scytopezis 18:122**
- B. Apothecia small, sessile or substipitate
 - 1. Apothecia on a stromoid base
 - a. Ascus-pore blue with iodine; spores often 1-2-celled **Dermatea 8:550, R 246; 26**
 - b. Ascus-pore not blue with iodine
 - (1) Margin thick sulcate, forming claw-like projections over disk **Godroniopsis**
 - (2) Margin normal **Pezolepis**
 - 2. Apothecia without a stromoid base
 - a. Asci 8-spored
 - (1) Spores globose **Encoeliella**
 - (2) Spores ovoid to oblong
 - (a) Paraphyses lance-shaped, pointed **Cenangiopsis**
 - (b) Paraphyses filiform or branched **Cenangium 8:556, R 219; 26**
 - b. Asci many-spored, or 8- and many-spored **Tympanis 8:578, R 264; 26**

Phaeosporae

16:764, 18:127, 22:715, 24:1230

Spores 1-celled, dark, ellipsoid

- Apothecia coriaceous, mostly cespitose **Phaeangium 16:764**

Hyalodidymae

8:587, 10:37, 11:424, 14:798, 18:127, 22:716, 24:1231

Spores 2-celled, hyaline, elliptic to oblong

Apothecia coriaceous, single or cespitose **Cenangella 8:587****Phaeodidymae**

18:128

Spores 2-celled, dark, elliptic to oblong

Apothecia coriaceous, patellate **Phaeangella 18:128****Hyalophragmiae**

8:594, 16:765, 18:129

Spores x-celled, hyaline, oblong to fusoid

A. Apothecia coriaceous, cespitose, patellate **Stilbopeziza 22:757**B. Apothecia waxy-coriaceous, urceolate, pilose;
spores variably 1-x-celled **Crumenula 8:600, R 235; 26****Phaeophragmiae**

2:757

Spores 2-celled, dark, oblong to fusoid

Apothecia elliptic-oblong, opening widely by a cleft **Trybliidiella R 234; 26****Scolecosporae**

8:601, 10:37, 11:425, 18:130, 24:1233

Spores filiform, hyaline

A. Apothecia coriaceous, urceolate **Godronia 8:601, R 237; 26**
B. Apothecia corneous, patellate, cespitose **Durandia 24:1234****Family 43. BULGARIACEAE**

Rehm 444

Apothecia usually superficial from the first, more rarely innate-erumpent, cupulate to discoid, opening circularly, typically smooth, gelatinous-waxy or gelatinous-fleshy, horn-like when dry, frequently stalked, separate to cespitose; hypothecium gelatinous, thick, epithecium sometimes lacking; asci regularly cylindric and 8-spored, paraphyses and spores various.

The gelatinous texture of the apothecium distinguishes this family more or less readily from all others of the order, though a few genera approach the **Mollisiaceae** and **Pezizaceae** closely. The exciple is more frequently lost in gelatinous forms, apparently because of a lessened need of protection. All such genera are assembled in the **Agyriaceae**, but those with gelatinous apothecia are also keyed here for convenience.

Hyalosporae

8:607, 10:38, 11:425, 14:801, 16:766, 18:131, 22:719, 24:1234

Spores 1-celled, hyaline, globose to oblong

A. Spores globose **Pulparia 8:612**

B. Spores elliptic to bacillar

1. Apothecia in a lens-shaped gelatinous stroma **Physmatomyces 16:770**

2. Apothecia not in a stroma

a. Exciple present

(1) Apothecia lichenicole; asci 16-spored **Ahlesia 8:633**

(2) Apothecia not lichenicole

- (a) Apothecia stipitate **Ombrophila 8:613, R 475; 26**
 (b) Apothecia sessile
 x. Asci 8-spored
 (x) Apothecia veined or ridged outside,
 large, terricole **Sarcosoma 10:42, R 497**
 (y) Apothecia smooth outside, small, not
 terricole
 m. Disk convolute or gyrose **Haematomyces 8:633**
 n. Disk smooth **Orbilina 8:621, R 453**
 y. Asci many-spored **Myridium 8:631**
- b. Exciple lacking
 (1) Asci 8-spored
 (a) Apothecia margined by changed paraphyses, microscopic **Gloeopeziza 10:41**
 (b) Apothecia without modified paraphyses **Agyrium 8:634, R 450; 26**
 (2) Asci many-spored **Agyrina 8:636**

Phaeosporae

8:636, 10:41, 14:804, 16:770, 18:140, 22:726, 24:1240

Spores 1-celled, dark, elliptic to fusoid

Apothecia erumpent or superficial, substipitate or sessile, turbinate to discoid **Bulgaria 8:636, R 494; 26**

Hyalodidymae

8:639, 10:42, 11:427, 14:805, 16:771, 18:142, 22:728, 24:1241

Spores 2-celled, hyaline or subhyaline, elliptic to fusoid

- A.** Apothecia parasitic; paraphyses forming an epithecium
 1. Parasitic on algae and liverworts **Paryphedria 10:43, R 484**
 2. Parasitic on leaves of spermatophytes **Bulgariastrum 24:1241**
B. Apothecia saprophytic; epithecium lacking **Calloria 8:639, R 462; 26**

Phaeodidymae

10:42, 16:771, 18:142

Spores 2-celled, dark, elliptic to fusoid

Apothecia subturbinate, sessile **Sorokinia 10:42**

Phragmosporae

8:641, 10:43, 11:427, 16:773, 18:143, 22:730, 24:1242

Spores x-celled, hyaline, spores ovoid to fusoid

Apothecia turbinate to disciform, sessile or substipitate **Coryne 8:644, R 485; 26**

Hyalodictyae

18:145, 22:732

Spores muriform, hyaline, ovoid

Apothecia erumpent, cupulate, then plane **Dictyonina 18:144**

Phaeodictyae

8:646, 10:44, 18:144, 22:732

Spores muriform, dark, ovoid to oblong

- A.** Hymenium sinuate-gyrose, not margined **Haematomyxa 8:646**
B. Hymenium smooth, margined **Sarcomyces 10:44**

Scolecosporae

8:646, 14:805, 16:775, 18:145, 22:732, 24:1243
 Spores acicular to filiform, typically hyaline

- A. Apothecia with an exciple
 - 1. Apothecia pilose; spores very long filiform **Ophiogloea 18:145**
 - 2. Apothecia not pilose; spores acicular
 - a. Apothecia clavate-cylindric, on a subicle **Holwaya 8:646; 26**
 - b. Apothecia not clavate-cylindric or on a subicle **Orthoscypha**
- B. Apothecia without an exciple **Agyriopsis 14:805**

Family 44. PATELLARIACEAE

Rehm 277

Apothecia mostly superficial from the first, more rarely innate-erumpent, cupulate to discoid, sometimes boat-shaped or oblong, opening circularly, typically smooth, usually dark or black, carbonous, leathery or corneous; hypothecium typically well-developed, thick, epithecium rarely lacking; asci clavate to cylindric, usually 8-spored, paraphyses and spores various.

This family is to be distinguished from the **Dermateaceae** chiefly by the fact that the apothecia are typically superficial rather than erumpent, but several genera are more or less intermediate in this respect. The corneous forms approach the **Bulgariaceae** closely, while the waxy apothecia pass readily into **Helotiaceae**. The relationship to the lichens is close, and the main line of evolution of the lichens is thought to have sprung from this family. It is practically certain that a considerable number of natural genera are artificially divided into lichen and non-lichen groups, and the tendency in the family is further shown by the numerous lichenicole genera.

Hyalosporae

8:769, 10:52, 11:433, 14:818, 16:791, 18:165, 22:752, 24:1272
 Spores 1-celled, hyaline, globose to oblong

- A. Asci 8-spored; spores not globose
 - 1. Apothecia oblong to elongate, cleft **Placographa 22:753, R 313**
 - 2. Apothecia round
 - a. Apothecia lichenicole
 - (1) Apothecia with an exciple **Rhymbocarpus 14:819**
 - (2) Apothecia without an exciple **Nesolechia 10:53, R 315**
 - b. Apothecia not lichenicole
 - (1) Paraphyses branched, forming an epithecium
 - (a) Asci saccate to clavate
 - x. Subicle present, radiate **Actinoscypha 8:774**
 - y. Subicle lacking **Patinella 8:769, R 310; 27**
 - (b) Asci narrow, cylindric **Starbaeckia 10:53**
 - (2) Paraphyses simple, epithecium none **Psilothecium 18:168; 27**
- B. Asci many-spored; spores globose **Biatorella 8:469, R 303; 27**

Phaeosporae

10:55, 22:754, 24:1276

Spores 1-celled, dark, ovoid to ellipsoid

- Apothecia patellate, margined, black **Lagerheimia 10:55**

Hyalodidymae

8:779, 10:56, 11:434, 14:820, 16:792, 18:173, 22:755

Spores 2-celled, hyaline, elliptic to fusoid

A. Apothecia lichenicole

1. Asci 8-spored

Scutula R 321

2. Asci many-spored

Pleoscutula 24:1285**B. Apothecia not lichenicole**

1. Apothecia setose

Johansonia 8:785

2. Apothecia glabrous

Patellea 8:783, R 283; 27**Phaeodidymae**

8:779, 10:56, 11:434, 14:820, 16:792, 18:173

Spores 2-celled, dark, elliptic to fusoid

A. Asci 8-spored

1. Apothecia on a radiate subicle, folicole

Woodiella 16:794

2. Apothecia not on a subicle

a. Apothecia round

(1) Apothecia innate, then erumpent

(a) Apothecia lichenicole, with an epithecium

Abrothallus 8:739, R 358; 27

(b) Apothecia folicole; paraphyses few or none

Pachypatella 24:1278

(2) Apothecia superficial

(a) Apothecia lichenicole

Epilichen 18:177, R 350

(b) Apothecia not lichenicole

Karschia 8:779, R 345; 27

b. Apothecia irregularly elliptic to oblong

Melaspilea 10:58, R 362**B. Asci many-spored**

1. Paraphyses lacking

Ravenelula 8:782

2. Paraphyses present

Pleospilis 18:179**Hyalophragmiae**

8:786, 10:59, 11:434, 14:821, 16:795, 18:179, 22:756, 24:1286

Spores x-celled, hyaline, elliptic to fusoid

A. Apothecia lichenicole**Mycobilimbia 10:60, R 327****B. Apothecia not lichenicole**

1. Hypothecium and exciple thin; apothecia rolled together when dry

Durella 8:790, R 286; 27

2. Hypothecium and exciple thick; apothecia not rolled together when dry

Patellaria 8:795, R 329; 27**Phaeophragmiae**

8:786, 10:59, 11:434, 14:821, 16:795, 18:179

Spores x-celled, dark, elliptic to fusoid

A. Asci 8-spored

1. Apothecia innate-erumpent

Pseudotryblidium 10:65, R 370

2. Apothecia superficial

a. Apothecia lichenicole

Leciographa 10:61, R 372

b. Apothecia not lichenicole

Mycolecidea 10:61, R 372**B. Asci many-spored****Baggea 2:760, R 369; 27**

Dictyosporae

8:802, 11:435, 14:823, 18:185, 22:758, 24:1293

Spores muriform, hyaline to subhyaline, ovoid to oblong

- | | |
|-------------------------|---------------------------|
| A. Asci 1-spored | Pleopatella 22:754 |
| B. Asci 8-spored | Tryblidaria 18:186 |

Scolecosporae

8:807, 10:65, 11:435, 14:823, 16:708, 24:1294

Spores bacillar to filiform, hyaline to subhyaline

- | | |
|--|-------------------------------------|
| A. Apothecia sessile | |
| 1. Exciple thin, parenchymic; spore-cells separating | Bactrospora 10:67, R 344 |
| 2. Exciple thick, typically prosenchymic; spore-cells not separating | |
| a. Apothecia lichenicole | Mycobacidia 10:66, R 337; 27 |
| b. Apothecia not lichenicole | Pragmopara R 339 |
| B. Apothecia stalked, turbinate | |
| a. Apothecia lichenicole | Lahmia 10:65, R 341 |
| b. Apothecia not lichenicole | Parathalle R 343 |

Family 45. CALICIACEAE

Rehm 388, Zahlbruckner 95 (80)

Mycelium inconspicuous and saprophytic, or parasitic on algae, forming a powdery, crustose, foliose or fruticose thallus; apothecia sessile or stalked, cup- to top-shaped, opening more or less completely, asci disappearing very early and the disk then covered with a persistent mass of spores and paraphyses, i.e. a mazaedium; exciple prosenchymic, horny, proper or thalline.

- | | |
|--|----------------------------------|
| A. Mycelium saprophytic, at least not forming a thallus | |
| 1. Spores 1-celled, globose or globoid, rarely ellipsoid | |
| a. Spores hyaline or subhyaline | |
| (1) Algae present but not forming a thallus | Farriola 98 |
| (2) Algae lacking | Roesleria 8:826, R 396 |
| b. Spores dark or at least brownish | |
| (1) Spores globose, smooth, dark | |
| (a) Apothecia black, nearly sessile | Sphinctrina 98, R 389; 23 |
| (b) Apothecia bright-colored, with a slender stalk | Eucyphelis R 392 |
| (2) Spores ellipsoid, reticulate, brownish; apothecia nearly sessile | Sphinctrinopsis |
| 2. Spores typically 2-x-celled | |
| a. Spores 2-celled | |
| (1) Apothecia sessile | Acolium R 398; 28 |
| (2) Apothecia with a slender stalk | Mycocalicium R 401 |
| b. Spores x-celled | Stenocybe 97, R 413; 28 |
| B. Mycelium forming a thallus with algae | |
| 1. Thallus crustose | |
| a. Spores 1-celled, typically globose to globoid | |

- (1) Asci 8-spored
 (a) Spores hyaline or yellowish; disk globose **Coniocybe 97; 28**
 (b) Spores dark; disk more or less flat
 x. Apothecia sessile
 (x) Thallus with a cortical layer **Carlusia 98**
 (y) Thallus without a cortical layer **Holocyphis 99**
 y. Apothecia stalked **Chaenotheca 95; 28**
Tylophorella 100
- (2) Asci many-spored
 b. Spores 2-celled, dark
 (1) Apothecia sessile
 (a) Algae *Pleurococcus* **Cyphelium 98; 23**
 (b) Algae *Trentepohlia* **Ditylis 99**
 (2) Apothecia stalked
 (a) Apothecia with a long stalk **Calicium 96; 28**
 (b) Apothecia with a short thick stalk **Pyrgidium 98**
- c. Spores x-celled
 (1) Proper exciple alone present **Pyrgillus 99; 28**
 (2) Thalline exciple also present **Tylophorum 99**
- d. Spores more or less muriform
 (1) Algae *Pleurococcus* **Pseudacolium 99**
 (2) Algae *Trentepohlia* **Schistophorum 100**
2. Thallus foliose
 a. Thallus of horizontal scales with marginal apothecia; spores 1-celled, dark, globose **Calycidium 100**
 b. Horizontal scales sterile; apothecia on cylindrical podetia; spores 2-celled, dark, oblong **Tholurna 100; 28**
3. Thallus fruticose
 a. Thallus hollow; apothecia on the under side; spores 1-celled, dark, globose **Pleurocybe 101**
 b. Thallus with solid medulla; apothecia terminal
 (1) Spores 1-celled, dark, globose; apothecia enclosed in a globose thalline exciple opening irregularly at the top **Sphaerophorus 102; 28**
 (2) Spores 2-celled, dark, elliptic; apothecia without thalline covering, goblet-like **Acrosocyphus 102**

Family 46. CHRYSOTRICHACEAE

Zahlbruckner 134, 147 (117, 127)

Apothecia disciform, margined; asci persistent, mazaeidium lacking; thallus uniform, cobwebby, cottony or spongy, loose, without layers, with *Palmella*, *Pleurococcus*, *Trentepohlia* or *Cladophora* as algal hosts.

- A. Thallus with *Palmella* or *Pleurococcus*; spores hyaline
 1. Spores 1-celled **Crocynia 135**
 2. Spores x-celled **Chrysothrix 135; 28**
- B. Thallus with *Trentepohlia*; spores hyaline
 1. Spores 1-celled **Holocoenis 149**
 2. Spores 2-celled **Coenogonium 148**
- C. Thallus with *Cladophora*; apothecia lacking **Racodium 149**

Family 47. COLLEMACEAE

Zahlbruckner 153, 164, 149, 160, 154, 158, 167, 168

Thallus more or less gelatinous when moist, mostly without distinct layers, scaly, foliose or fruticose, rarely crustose, always with blue-green algae as hosts; apothecia disciform or urceolate, with persistent asci; spores typically hyaline.

- A. Thallus with Gloeocapsa, Chroococcus or Xanthocapsa** **Subfamily Pyrenopsidae**
1. Algae Gloeocapsa
 - a. Thallus crustose, scaly or dwarf fruticose
 - (1) Spores 1-celled
 - (a) Asci 8-spored
 - x. Apothecia biatorine or almost leccidine **Lecopyrenopsis 155**
 - y. Apothecia lecanorine **Pyrenopsis 155**
 - (b) Asci many-spored **Pleopyrenis 155**
 - (2) Spores 2-celled **Cryptothele 155**
 - b. Thallus foliose, a single leaf attached in the middle **Phylliscidium 155**
 - c. Thallus fruticose, attached by delicate rhizoids **Synalissa 155**
 2. Algae Chroococcus
 - a. Thallus crustose; apothecia more or less open **Pyrenopsidium 155**
 - b. Thallus foliose, a single leaf attached in the middle; apothecia closed **Phylliscum 156; 28**
 3. Algae Xanthocapsa
 - a. Thallus crustose
 - (1) Spores 1-celled
 - (a) Hymenium with an epithecial mass of algae and hyphae **Gonohymenia 157**
 - (b) Hymenium without epithecial mass
 - x. Asci normally 8-spored; pseudoparenchymic cortex lacking **Psorotichia 157**
 - y. Asci many-spored; pseudoparenchymic cortex present **Forssellia 157**
 - (2) Spores 2-celled; apothecia closed **Collemopsidium 157**
 - b. Thallus foliose, of a single umbilicate leaf, often lobed
 - (1) Thallus pseudoparenchymic **Anema 157**
 - (2) Thallus not pseudoparenchymic
 - (a) Spores 1-celled
 - x. Hyphae loose, reticulate at margin **Thyrea 158**
 - y. Hyphae dense, perpendicular to margin **Jenmania 158; 28**
 - (b) Spores 2-celled **Paulia 159**
 - c. Thallus fruticose, erect
 - (1) Thallus without layers
 - (a) Asci 8-spored **Peccania 159**
 - (b) Asci many-spored **Pleoconis 160**
 - (2) Thallus layered, with a cortex **Phloeopeccania 160**
- B. Thallus with Nostoc**
1. Apothecia biatorine
 - a. Spores 1-celled
 - (1) Spores globoid to fusoid, straight
 - (a) Thallus crustose, scarcely gelatinous **Leprocollema 165; 29**
 - (b) Thallus scaly or dwarf fruticose, gelatinous **Leciophysma 166**

- (c) Thallus fruticose, Ramalina-like
 (2) Spores needle-shaped, twisted
- b. Spores 2-x-celled
 (1) Spores 2-celled; thallus without cortex
 (2) Spores x-celled; thallus with cortex
2. Apothecia lecanorine
 a. Spores 1-celled
 (1) Paraphyses simple, scarcely united
 (a) Thallus scaly or dwarf-fruticose
 x. Thallus without cortex
 y. Thallus with pseudoparenchymic cortex
 (b) Thallus large-leaved; spores thick-walled or mucose
 (2) Paraphyses ramose and united; thallus crustose
- b. Spores 2-celled
- c. Spores x-celled
 (1) Thallus without cortex
 (a) Spermagonia present
 (b) Spermagonia lacking
 (2) Thallus with pseudoparenchymic cortex or pseudoparenchymic throughout
- d. Spores muriform
 (1) Thallus without cortex
 (2) Thallus with pseudoparenchymic cortex or pseudoparenchymic throughout
- C. Thallus with Scytonema or Stigonema
 1. Thallus crustose to scaly
 a. Thallus without cortex
 (1) Spores 1-celled
 (2) Spores x-celled
 b. Thallus with cortex above
2. Thallus dwarf fruticose, much branched, dark
 a. Apothecia sunken in swellings of the thallus
 (1) Spores 1-celled; paraphyses present
 (2) Spores 2-3-celled; paraphyses lacking
 b. Apothecia superficial
 (1) Thallus without pseudoparenchymic cortex or central medulla
 (a) Paraphyses capitate, dark
 (b) Paraphyses not capitate
 x. Asci 8-spored
 (x) Spores 1-celled, globose to ovoid
 (y) Spores x-celled, acicular
 y. Asci typically many-spored
 (2) Thallus with large-celled pseudoparenchymic cortex and central medulla
 (a) Spores 1-celled
 (b) Spores 2-celled
- D. Thallus with Rivularia
 1. Apothecia disciform; thallus scaly to granular
 a. Apothecia lecideine; algae horizontal
 b. Apothecia lecanorine; algae erect
- Ramalodium 172
 Koerberia 170
- Hormothecium 168
 Arcotomia 170
- Lempholemma 166
 Lemmopsis 167
- Physma 167
- Gyrocollema
 Dicollema
- Collemis 168
 Collemodes 170
- Leptogiopsis 171
- Collema 168; 29
- Leptogium 170; 29
 Subfamily Ephebae
- Pterygiopsis 152
 Petractis 145
 Porocyphus 152
- Ephebeia 151
 Ephebe 151; 29
- Spilonema 150
- Thermutis 150; 29
 Trichobacidia 153
 Zahlbrucknerella 150
- Leptogidium 152
 Polychidium 152
 Subfamily Lichinae
- Pterygium 161
 Steinera 162

- 2. Apothecia more or less perithecioid; thallus dwarf fruticose
 - a. Algal filaments in the middle of the thallus and parallel with the long axis of the branches Lichinodium 162
 - b. Algal filaments absent from the middle but marginal beneath the cortex
 - (1) Algae parallel with the long axis of the branches Lichina 163
 - (2) Algae perpendicular to the long axis
 - (a) Paraphyses present
 - x. Asci 8-spored Lichenyllum 163
 - y. Asci many-spored Lichinella 162
 - (b) Paraphyses lacking Homopsella 163

Family 48. PELTIGERACEAE

Zahlbruckner 142, 173, 189 (122, 176, 190)

Thallus firm, not at all gelatinous, crustose or foliose, more or less lobed and sometimes erect at the margin but never truly fruticose, typically attached to the substratum by rhizoids or by a navel, with a pseudoparenchymic cortex on one or both sides or pseudoparenchymic throughout; apothecia typically sunken in the thallus or grown together with it on the whole lower surface, more or less margined by the thallus, but without a proper exciple.

- A. Thallus uniform to crustose; algae Protococcus or Pleurococcus Subfamily Caleniæ
 - 1. Spores transeptate, usually 2-3-celled
 - a. Paraphyses soon dissolving in slime to form a dark epithecium; spores x-celled Phlegmophiale 142
 - b. Paraphyses persistent
 - (1) Paraphyses simple
 - (a) Paraphyses free; no algae below hymenium Asterothyrium 144
 - (b) Paraphyses united
 - x. Algae present below hymenium; apothecia without byssoid or coralloid marginal hyphae Gonolecania 143
 - y. Algae not present below hymenium; apothecia with byssoid or coralloid marginal hyphae Byssolecania 142
 - (2) Paraphyses ramose and united
 - (a) Spores 2-celled Actinoplaca 143
 - (b) Spores x-celled
 - x. Hymenium at first enclosed in a membrane Calenia 144
 - y. Hymenium without membrane Tapellaria 143
 - 2. Spores muriform
 - a. Asci 1-spored; hypothecium without algae below
 - (1) Paraphyses simple, free Lopadiopsis 143
 - (2) Paraphyses ramose, united
 - (a) Upper surface of thallus with stiff black hairs Tricharia 144

- (b) Upper surface without stiff black hairs
 - x. Epithecium with hymenial algae **Gonothecis 143**
 - y. Epithecium without hymenial algae **Sporopodium 143**
- b. Asci 8-spored; hypothecium with algae below **Arthotheliopsis 143**
- B. Thallus foliose or foliose-scaly, rarely subfruticose; algae Scytonema, Nostoc or Palmella** **Subfamily Heppiace**
 - 1. Apothecia not marginal; thallus uniform and typically pseudoparenchymic throughout; algae Scytonema
 - a. Thallus of interwoven hyphae, not parenchymic **Pseudoheppia 173**
 - b. Thallus pseudoparenchymic throughout
 - (1) Spores 1-celled **Heppia 173; 29**
 - (2) Spores muriform **Latzelia 175**
 - 2. Apothecia typically marginal or even with the thallus; thallus layered; algae Nostoc or Palmella **Subfamily Peltigerae**
 - a. Thallus foliose, usually large-leaved
 - (1) Apothecia on upper side of thallus
 - (a) Apothecia marginal on lobes of thallus; lower surface of thallus netted, without cortex
 - x. Algae Nostoc **Peltigera 189; 29**
 - y. Algae Palmella (Dactylococcus) **Peltidea 191**
 - (b) Apothecia superficial, lower surface with cortex below the apothecia; algae Nostoc, Palmella or both **Solorina 188; 29**
 - (2) Apothecia on lower side of elongate thallus lobes; thallus completely corticate on both sides
 - (a) Algae Nostoc **Nephromium 189**
 - (b) Algae Palmella **Nephroma 188**
 - b. Thallus minute of small triangular scales radiating from the apothecium; asci many-spored; spores 2-celled **Solorinella 188**

Family 49. LECIDEACEAE

Zahlbruckner 131, 191, 200, 209 (114, 129, 138, 144)

Thallus firm, not gelatinous, crustose, scaly or foliose, exceptionally dwarf fruticose, with rhizoids or a navel in the larger forms, with or without cortex; apothecia superficial or somewhat sunken at first, with a characteristic proper exciple that is very rarely lacking, but without a true thallic exciple. The absence of the latter distinguishes this family from the **Parmeliaceae**.

- A. Thallus uniform or crustose** **Subfamily Lecanactidae**
 - 1. Thallus with Trentepohlia
 - a. Proper exciple thin or incomplete
 - (1) Spores x-celled; paraphyses ramose, united **Schismatomma 132; 30**
 - (3) Spores muriform; paraphyses simple, free **Melampyidium 133**
 - b. Proper exciple well-developed, carbonous

- (1) Paraphyses simple
 - (a) Spores 1-celled Pseudolecianactis 131
 - (b) Spores 2-celled Catinaria 131
- (2) Paraphyses ramose, often united
 - (a) Spores 2-celled Arthoniactis 131
 - (b) Spores x-celled Lecanactis 131; 30
 - (c) Spores many-celled, acicular Scolecactis 132
- 2. Thallus with Pleurococcus or Palmella
 - a. Exciple with an external byssoid mass of hyphae Subfamily Byssolomae
 - (1) Spores x-celled
 - (a) Spores hyaline; exciple dark within Byssoloma 133
 - (b) Spores dark; exciple hyaline Asteristium 134
 - (2) Spores muriform Amphischizonia 134
 - b. Exciple without external byssoid mass Subfamily Lecideae
 - (1) Asci 1-8-spored, rarely 16-32-spored
 - (a) Spores 1-celled
 - x. Spores hyaline
 - (x) Asci 1-2-spored; spores large, thick-walled Mycoblastus 195
 - (y) Asci 8-spored
 - m. Exciple black, carbonous Lecidea 192; 30
 - n. Exciple hyaline or colored, not carbonous Biatora 193; 30
 - (z) Asci 16-32-spored Pleolecis 195
 - y. Spores dark Orphniospora 195
 - (b) Spores 2-celled
 - x. Spores hyaline
 - (x) Paraphyses simple Megalospora 197
 - m. Spores thick-walled, large
 - n. Spores thin-walled, small to medium
 - (m) Thallus with cortex Thalloedema 199
 - (n) Thallus without cortex
 - r. Exciple and hypothecium dark or black Catillaria 196
 - s. Exciple and hypothecium clear or bright Biatorina 196
 - (y) Paraphyses ramose, in a slimy hyemenium Diphanis 200
 - y. Spores dark; paraphyses ramose Catocarpus 200
 - (c) Spores x-celled
 - x. Spores elliptic to long-fusoid
 - (x) Thallus not corticate, crustose-uniform Bacidia 197; 30
 - (y) Thallus corticate, warty to scaly Toninia 198
 - y. Spores acicular to filiform Scoliciosporum 198
 - (d) Spores muriform
 - x. Spores hyaline
 - (x) Spores with mucous sheath; paraphyses ramose Phalodictyum 200
 - (y) Spores without mucous sheath; paraphyses simple Lopadium 199; 30
 - y. Spores dark, with mucous sheath Rhizocarpum 200
 - (2) Asci myriosporous Biatorella 214

- B. Thallus scaly or foliose, with Pleurococcus or Palmella
1. Thallus scaly, often with rhizoids; disk not furrowed
- a. Spores 1-celled
- (1) Hypothecium pseudoparenchymic **Phyllopsora 201**
- (2) Hypothecium not pseudoparenchymic
- (a) Exciple clear or bright **Psoromaria 181**
- (b) Exciple dark to black **Psora 195**
- b. Spores x-celled; hypothecium pseudoparenchymic **Psorella 201**
2. Thallus mostly with one large leaf; disk often furrowed
- a. Spores 1-celled; disk typically furrowed **Subfamily Gyrophorae**
- b. Spores 2-celled **Gyrophora 210; 31**
- (1) Spores hyaline **Charcotia 212**
- (2) Spores dark **Dermaticum 212**
- c. Spores x-celled **Agyrophora 210**
- d. Spores muriform **Umbilicaria 211; 31**
- C. Thallus dwarf fruticose, of low erect furcate podetia; horizontal thallus lacking; spores hyaline, 2-celled **Sphaerophoropsis 196; 30**

Family 50. CLADONIACEAE

Zahlbruckner 201 (139)

Thallus of two kinds, the primary horizontal on the substratum, crustose, scaly to foliose, the secondary consisting of erect clavate, cupulate or filiform, simple to much branched podetia; algae typically Pleurococcus; apothecia terminal or lateral, mostly convex to globose, with proper exciple only, except in **Chlorocaulum**; spores colorless.

- A. Apothecia with proper exciple
1. Podetia short, simple, rarely forked; apothecia terminal
- a. Podetia equal or little broadened above
- (1) Podetia scattered over the surface
- (a) Hypothecium clear
- x. Spores 1-celled **Baeomyces 203; 30**
- y. Spores 2-celled **Dibaeis 203**
- z. Spores x-celled
- (x) Spores fusoid to bacillar, few-celled **Cyanobaeis 203**
- m. Algae blue-green **Heteromyces 203**
- n. Algae yellow-green **Gomphillus 203**
- (y) Spores filiform, very many celled **Pilophorum 205; 30**
- (b) Hypothecium dark; spores 1-celled **Gymnoderma 203; 30**
- (2) Podetia marginal on a foliose thallus
- b. Podetia broadened above into lobes or tongues bearing the hymenium on one side
- (1) No algae below the hymenium; medulla uniform **Glossodium 204**
- (2) Algae below the hymenium; medulla with thicker strands **Thysanothecium 204**

- 2. Podetia funnellform, cupulate, filiform or more or less ramose, large as a rule
 - a. Spores 1-celled; podetia mostly hollow; cephalodia lacking Cladonia 205; 30
 - b. Spores x-celled or muriform; podetia solid; cephalodia present
 - (1) Spores x-celled Stereocaulum 208; 30
 - (2) Spores muriform Argopsis 209; 30
- B. Apothecia with thalline exciple
 - 1. Spores 1-celled Lachnocaulum 208
 - 2. Spores x-celled Chlorocaulum 208

Family 51. PARMELIACEAE

Zahlbruckner. 220, 217, 213, 136, 144, 229, 238, 175, 182

Thallus of one kind, podetia lacking, firm, not gelatinous, crustose, scaly, foliose or fruticose, often with rhizoids, typically layered, algae usually yellow-green, but blue-green in two subfamilies; apothecia characterized by a thalline exciple, which is sometimes lacking, superficial, rarely immersed.

- A. Thallus typically crustose, sometimes scaly or lobed at the margin
 - 1. Thallus with Pleurococcus or Palmella, rarely Protococcus
 - a. Asci mostly 8-spored, 1-32-spored, but not myriosporous
 - (1) Disk conspicuous, not more or less closed and perithecioid Subfamily Lecanorae
 - (a) Spores 1-celled
 - x. Asci 1-8-spored
 - (x) Paraphyses simple, free
 - m. Spores straight, elliptic to oblong
 - (m) Thallus bright yellow; pycnoconidia elliptic Candelariella 228
 - (n) Thallus rarely bright yellow; pycnoconidia more or less cylindrical
 - r. Cortex pseudoparenchymic Psoroma 180; 31
 - s. Cortex not pseudoparenchymic Lecanora 221; 31
 - n. Spores crescentic to falcate; thallus uniformly pseudoparenchymic
 - (y) Paraphyses ramose and united
 - y. Asci many-spored Harpidium 221
 - Ochrolechia 225
 - Myriolecis 223
 - (b) Spores 2-celled
 - x. Paraphyses simple, free
 - (x) Sterigmata exobasidial Lecania 226
 - (y) Sterigmata endobasidial
 - m. Thallus uniform, crustose Icmadophila 226; 31
 - n. Thallus lobed at margin Solenopsora 227
 - y. Paraphyses ramose, united Calenia 144
 - (c) Spores x-celled
 - x. Apothecia superficial
 - (x) Asci 1-8-spored
 - m. Thallus with cortex Haematomma 227
 - n. Thallus without cortex

- (m) Paraphyses furcate above; spores moniliform, 30-40-celled **Conotrema 140**
- (n) Paraphyses simple; spores not moniliform **Adermatis 226**
Dyslecanis 226
- (y) Asci many-spored
- y. Apothecia immersed; thallus without cortex
 - (x) Paraphyses simple, free **Phlyctella 228**
 - (y) Paraphyses ramose, united **Phlyctidia 228**
- (d) Spores muriform
 - x. Spores hyaline or subhyaline •
 - (x) Apothecia superficial, broad; hymenium with algae below **Myxodictyum 227**
 - (y) Apothecia immersed, small; no algae below hymenium **Phlyctis 227**
Diploschistes 141; 31
 - y. Spores dark
- (2) Disk small, more or less closed and perithecioid; apothecia mostly sunken in verrucae **Subfamily Pertusariae**
 - (a) Spores 1-celled
 - x. Paraphyses simple, free; hymenium perforate **Perforaria 217**
 - y. Paraphyses ramose, united; hymenium not perforate **Pertusaria 217; 31**
 - (b) Spores 2-celled; paraphyses ramose, united **Varicellaria 220**
Subfamily Acarosporae
- b. Asci myriosporous; spores mostly 1-celled
 - (1) Apothecia superficial
 - (a) Thallus bright yellow **Pleochroma 229**
 - (b) Thallus not bright yellow **Maronea 215**
 - (2) Apothecia typically immersed, with mostly narrow disk **Acarospora 216; 31**
- 2. Thallus with Trentepohlia or Phyllactidium; thalline exciple sometimes disappearing in age **Subfamily Gyalectae**
 - a. Thalline exciple present and persistent
 - (1) Spores 1-celled, hyaline **Jonaspis 145**
 - (2) Spores 2-celled
 - (a) Spores hyaline **Lecaniopsis 147**
 - (b) Spores dark at last **Diplopetopsis**
 - (3) Spores x-celled
 - (a) Spores hyaline
 - x. Apothecia proliferating repeatedly from margin, forming erect forking chains of apothecia **Polystroma 140**
 - y. Apothecia not in chains
 - (x) Algae Trentepohlia
 - m. Exciple and hypothecium hyaline **Ocellularia 137**
 - n. Exciple and hypothecium dark, hard **Sagiolechia 145**
 - (y) Algae Phyllactidium **Phyllophtharmaria 139**
 - (b) Spores dark **Phaeotrema 137**
 - (4) Spores muriform
 - (a) Spores hyaline
 - x. Paraphyses simple

- (x) Paraphyses free
- (y) Paraphyses united
- y. Paraphyses ramose, united
- (b) Spores dark
- x. Paraphyses simple, free
- y. Paraphyses ramose, united
- (x) Apothecia sunken in groups in a stroma
- (y) Apothecia not in a stroma
- b. Thalline exciple present at first, then more or less completely disappearing
- (1) Algae Trentepohlia
- (a) Asci 1-8-spored
- x. Spores 2-celled
- y. Spores x-celled
- z. Spores muriform
- (b) Asci many-spored
- x. Spores 2-celled
- y. Spores x-celled
- (2) Algae Phyllactidium or Phycopeltis
- (a) Spores 2-celled
- (b) Spores x-celled
- B. Thallus typically foliose or fruticose, sometimes small-leaved or scaly; thalline exciple sometimes lacking
- 1. Thallus with Pleurococcus, Protococcus, Palmella, or Cystococcus
- a. Asci mostly 8-spored, from 1-32-spored
- (1) Thallus foliose, horizontal or erect, rarely fruticose, typically dorsiventral
- (a) Thallus with cyphellae or pseudocyphellae, or with clavate cephalodia
- x. Lower side of thallus with cyphellae or pseudocyphellae
- (x) Apothecia with thalline exciple
- m. Spores 2-celled
- (m) Spores hyaline
- (n) Spores dark
- n. Spores x-celled
- (m) Spores hyaline
- (n) Spores dark
- (y) Apothecia with proper exciple only
- y. Lower side without cyphellae or pseudocyphellae; thallus with cephalodia
- (x) Algae Protococcus
- (y) Algae Cystococcus
- (b) Thallus typically without cyphellae, etc.
- x. Asci 1-8-spored
- (x) Thallus with cortex on both surfaces
- m. Apothecia superficial
- (m) Lower cortex without rhizoids, spongy, with matted hyphae
- (n) Lower cortex more or less cellular, usually with rhizoids

Thelotrema 137; 31

Phyllobrassia 139

Phanotylum 140

Leptotrema 139

Tremotylum 139

Gyrostomum 139; 31

Microphiale 145

Bryophagus 146

Gyalecta 146; 31

Ramonia 147

Pachyphiale 147

Lecaniopsis 147

Semigyalecta 147

Subfamily Stictae

Diphanosticta 186

Diphaeostica 186

Phanosticta 186

Sticta 186

Dysticta 186

Lobaria 182; 31

Cystolobis 185

Subfamily Parmeliae

Anzia 235

- r. Sterigmata exobasidial Parmeliopsis 231
- s. Sterigmata endobasidial
 - (r) Lower surface of thallus with cyphellae Pseudoparmelia 236
 - (s) Lower surface without cyphellae Parmelia 233; 32
- n. Apothecia marginal or terminal; thallus often more or less fruticose
 - (m) Disks upright from the beginning Cetraria 236; 32
 - (n) Disks on the under side of thallus lobes, which later twist to bring them upright Nephromopsis 238
- (y) Thallus with cortex on upper surface alone
- m. Apothecia superficial; thallus without cyphellae
 - (m) Exciple with algae Physcidia 230
 - (n) Exciple without algae Megalopsora 230
- n. Apothecia terminal; cyphellae present Heterodea 230
- y. Asci many-spored Candelaria 231
- (2) Thallus fruticose, erect or hanging, often long and hair-like; radial, rarely dorsiventral in structure Subfamily Usneae
- (a) Spores 1-celled or lacking
 - x. Medulla traversed by solid strands of variable number and size Letharia 240
 - y. Medulla uniform, without strands
 - (x) Cortex formed of hyphae running lengthwise; asci 4-8-spored; spores hyaline to brownish Alectoria 241; 32
 - (y) Cortex pseudoparenchymic, hyphae more or less perpendicular to the long axis
- m. Medulla of hyphae running lengthwise
 - (m) Medulla loose, not horny; apothecia unknown Thamnolia 246
 - (n) Medulla firm, horny
 - r. Thallus low, podetium-like; apothecia unknown Siphula 247
 - s. Thallus fruticose, elongate; apothecia present
 - (r) Thallus dorsiventral, without fibrous branches; medulla and cortex not separable Everniopsis 240
 - (s) Thallus radial, usually with fibrous branches; medulla and cortex readily separable Usnea 245; 32
- n. Medulla of hyphae running in all directions
 - (m) Thallus more or less hollow
 - r. Thallus swollen, tubular Dactylina 240
 - s. Thallus not swollen and tubular

- (r) Thallus fruticose, erect Dufourea 240; 32
- (s) Thallus podetium-like; apothecia unknown Endocena 247
- (n) Thallus flattened, not hollow, dorsiventral Evernia 239; 32
- (b) Spores 2-celled Ramalina 242; 32
- (c) Spores muriform, dark, large; asci 1-spored Oropogon 242
- b. Asci myriosporous; apothecia cespitose on a one-leaved thallus Glypholecia 216
- 2. Thallus with Scytonema or Nostoc
- a. Thallus large-leaved, with cyphellae, pseudocyphellae, or cephalodia Subfamily Stictinae
- (1) Lower surface of thallus with cyphellae or pseudocyphellae
- (a) Apothecia with thalline exciple Podostictina 186
- x. Spores hyaline
- y. Spores dark
- (x) Spores 2-celled Stictina 186
- (y) Spores x-celled Merostictina 186
- (b) Apothecia with proper exciple only Dystictina 186
- (2) Lower surface without cyphellae; cephalodia usually present
- (a) Apothecia with thalline exciple Phycodiscis 185
- (b) Apothecia with proper exciple only Lobarina 185
- b. Thallus scaly to small-leafy, sometimes crustose, rarely large-leafy, without cyphellae, etc. Subfamily Pannariae
- (1) Lower surface of thallus with distinct forked veins; spores hyaline, x-celled Hydrothyria 177
- (2) Lower surface scarcely or not at all veined; spores 1-2-celled
- (a) Upper cortex well-developed, distinct
- x. Upper cortex with hyphae perpendicular to it Erioderma 181
- (x) Upper cortex hairy or pilose
- (y) Upper cortex not hairy
- m. Apothecia with thalline exciple
- (m) Algae Nostoc
- r. Spores 1-celled
- (r) Upper and lower cortex well-developed Pannaria 180; 32
- (s) Lower cortex lacking Lepidogium 177
- s. Spores 2-celled; both cortexes present Hueella 180
- (n) Algae Scytonema; spores 2-celled Massalongia 178
- n. Apothecia with proper exciple only
- (m) Spores 1-celled Parmeliella 178
- (n) Spores x-celled Placynthium 178
- y. Upper cortex of horizontal hyphae Coccocarpia 181
- (b) Upper cortex indistinct; algae occupying nearly whole width of thallus Lepidocollema 177; 32

Family 52. PHYSCIACEAE

Zahlbruckner 247-256 (226-234)

Thallus crustose, foliose or fruticose, as in Parmeliaceae; apothecia mostly with thalline exciple, sometimes with proper exciple alone; spores normally 2-celled, with more or less thickened cross-wall often traversed by a line-like canal connecting polar guttae, or sometimes 1-x-celled or muriform.

A. Spores 2-celled, rarely 1-celled**1. Spores hyaline****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Caloplaca 249; 32**

(2) Apothecia with proper exciple only

(a) Spores 1-celled **Protoblastenia 248**(b) Spores 2-celled **Blastenia 248**(c) Spores x-celled **Bombyliospora 249****b. Thallus with cortex, foliose or fruticose**(1) Thallus foliose, spreading, dorsiventral,
with rhizoids **Xanthoria 251; 32**

(2) Thallus fruticose, erect

(a) Algae Protococcus; no central solid
strand **Theloschistes 251; 32**(b) Algae Pleurococcus; central solid strand
present **Lethariopsis 253****2. Spores dark****a. Thallus without cortex, uniform or crustose**

(1) Apothecia with thalline exciple

(a) Asci 8-spored **Rinodina 254; 32**(b) Asci many-spored **Pleorinis 254**(2) Apothecia with proper exciple only **Buellia 253; 30****b. Thallus with cortex, foliose or fruticose**(1) Upper cortex of perpendicular hyphae,
pseudoparenchymic

(a) Apothecia with thalline exciple

x. Hypothecium hyaline **Physcia 257; 32**y. Hypothecium black **Dirinaria 257**(b) Apothecia with proper exciple only **Pyxine 256**(2) Upper cortex of hyphae parallel with long
axis, not pseudoparenchymic; apothecia
with thalline exciple **Anaptychia 258; 32****B. Spores x-celled****1. Spores hyaline****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Meroplacis 250**(2) Apothecia with proper exciple only **Xanthocarpia****b. Thallus with cortex, fruticose** **Niorma 252****2. Spores dark****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Merorinis 256**(2) Apothecia with proper exciple only **Diplotomma****b. Thallus with cortex, foliose; exciple proper** **Phragmopyxine 257****C. Spores muriform, dark****1. Thallus without cortex, uniform or crustose** **Dictyorinis 256****2. Thallus with cortex, foliose** **Hyperphyscia 258**

Family 53. MOLLISIACEAE

Rehm 503

Apothecia innate-crumpent, or superficial from the first, mostly scutellate to discoid, opening circularly, typically smooth, mostly fleshy-waxy, disk dark-gray to bright-colored, frequently on a subicle; hypothecium thin for the most part, epithecium obsolescent, exciple characteristically parenchymic and brown; asci mostly cylindrical and 8-spored, paraphyses filiform or lance-pointed; spores typically hyaline.

This family is closely related to both **Patellariaceae** and **Helotiaceae**, as well as the smaller forms of the **Pezizaceae**. As a rule, it may be readily distinguished from all of these by the brown parenchymic exciple and the poorly developed hypothecium.

Subfamily Eumollisiae

Apothecia superficial from the beginning

Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- | | |
|--------------------------------------|----------------------------------|
| A. Apothecia on a subicle | |
| 1. Spores globose | <i>Hyphodiscus</i> 22:673 |
| 2. Spores elliptic to oblong | <i>Tapesia</i> 8:371, R 573; 33 |
| B. Apothecia not on a subicle | |
| 1. Spores globose | <i>Mollisiella</i> 18:64 |
| 2. Spores elliptic to oblong | |
| a. Paraphyses filiform | <i>Mollisia</i> 8:321, R 511; 33 |
| b. Paraphyses lance-pointed | <i>Mollisiopsis</i> 22:668 |

Hyalodidymae

Spores 2-celled, hyaline, elliptic to oblong

- | | |
|---|---------------------------------|
| A. Apothecia on a subicle | |
| 1. Spores with a mucous sheath | <i>Stictoclypeolum</i> 18:110 |
| 2. Spores without a mucous sheath | |
| a. Asci 1-spored; spores biscuit-shaped | <i>Psorotheciopsis</i> 16:746 |
| b. Asci 8-spored; spores not biscuit-shaped | <i>Linhartia</i> 16:744 |
| B. Apothecia not on a subicle | <i>Niptera</i> 8:480, R 549; 33 |

Hyalophragmiae

Spores x-celled, hyaline, elliptic to fusoid

- | | |
|---|--------------------------------|
| A. Apothecia on a subicle or thallus | |
| 1. Spores ciliate at each end | <i>Ciliella</i> 16:748 |
| 2. Spores not ciliate | |
| a. Apothecia on a subicle of hyphae | <i>Trichobelonium</i> 16:747 |
| b. Apothecia on a parenchymic thallus | <i>Pazschkea</i> 14:788 |
| B. Apothecia not on a subicle or thallus | |
| 1. Spores appendaged at base | <i>Strossmayera</i> 22:700 |
| 2. Spores not appendaged | <i>Belonidium</i> 8:496, R 561 |

Hyalodictyae

Spores muriform, hyaline, ovoid to oblong

- | | |
|---|----------------------------|
| A. Asci 1-4-spored; spores with a mucous sheath | <i>Gonothecium</i> 16:751 |
| B. Asci 8-spored; spores without a mucous sheath | <i>Dictyomollis</i> 22:702 |

Scolecosporae

Spores acicular, hyaline, usually septate

Spores 10-15 times longer than wide, not filiform **Belonopsis 16:752, R 571****Subfamily Pyrenopezizae**

Apothecia innate, then erumpent or more or less superficial

Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- A. Apothecia bright-colored, in spots on living leaves
1. Apothecia setose **Bioscypha**
 2. Apothecia not setose **Pseudopeziza 8:723, R 596**
- B. Apothecia dark-brown without, not on living leaves
1. Apothecia setose **Pirottaea 8:386, R 636**
 2. Apothecia not setose, often rough with projecting cells
 - a. Apothecia on a subicle **Spilopezis 24:1199, R 620**
 - b. Apothecia not on a subicle
 - (1) Paraphyses filiform **Pyrenopeziza 8:354, R 608; 33**
 - (2) Paraphyses lance-pointed **Pyrenopezis 24:1198**

Phaeosporae

Spores 1-celled, brownish, ovoid to elliptic

Apothecia waxy-leathery, bright and downy outside **Velutaria 8:488, R 645****Hyalodidymae**

Spores 2-celled, hyaline, elliptic to fusoid

- A. Apothecia bright-colored, in spots on living leaves **Fabraea 8:735, R 599; 33**
- B. Apothecia dark-brown without, not on living leaves **Dibelonis R 638**

Phaeodidymae

Spores 2-celled, brownish, elliptic to fusoid

Apothecia bright-colored, in spots on living leaves **Phaeofabraea 22:748****Hyalophragmiae**

Spores x-celled, hyaline, oblong to fusoid

- A. Apothecia bright-colored, in spots on living leaves **Neofabraea**
- B. Apothecia dark-brown without, not on living leaves **Beloniella R 640**

Hyalodictyae

Spores muriform, hyaline, ovoid to fusoid

Apothecium folicole; epithecium present **Protoscypha****Family 54. HELOTIACEAE**

Rehm 647

Apothecia typically superficial from the first, rarely innate-erumpent or arising from a sclerotium, mostly stalked, sometimes sessile, cupulate to discoid, waxy or

waxy-fleshy, typically bright-colored, frequently setose or hairy; hypothecium usually well-developed, epithecium only rarely so, exciple prosenchymic and bright-colored as a rule; asci mostly cylindrical and 8-spored, paraphyses filiform or lance-pointed; spores typically hyaline.

This family is distinguished from the related **Mollisiaceae** by the bright-colored prosenchymic exciple and the thick hypothecium. The line between it and the **Pezizaceae** is less marked, but the small waxy apothecia of phytogenous habit serve to separate them more or less clearly.

Subfamily Helotiae

Apothecia not hairy

Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- | | |
|---|------------------------------|
| A. Apothecia on a subicle | Eriopeziza R 693; 33 |
| B. Apothecia not on a subicle | |
| 1. Apothecia rising from a sclerotium, long stalked | Sclerotinia 8:195, R 803; 33 |
| 2. Apothecia not arising from a sclerotium | |
| a. Apothecia green, arising typically from a green substratum | Chlorosplenium 8:315, R 752 |
| b. Apothecia not green with a green substratum | |
| (1) Apothecia margined by a row of triangular teeth | |
| (a) Apothecia stalked | Cyathicula 8:304, R 740; 33 |
| (b) Apothecia sessile | Pezoloma 24:1194 |
| (2) Apothecia without a toothed margin | |
| (a) Asci typically 8-spored | |
| x. Spores globose | Helotiopsis |
| y. Spores elliptic to fusoid | |
| (x) Apothecia stalked | |
| m. Paraphyses lance-pointed | Helolachnum 22:680 |
| n. Paraphyses filiform, blunt | |
| (m) Ascus-pore blue with iodine | Helotium 8:210, R 772; 33 |
| (n) Ascus-pore not blue with iodine | Phialea 8:251, R 708 |
| (y) Apothecia sessile | |
| m. Apothecia not peritheciolate | Pezizella 8:275, R 653 |
| n. Apothecia peritheciolate | Cryptopezia |
| (b) Asci many-spored | Comesia 8:468 |

Phaeosporae

Spores 1-celled, dark, elliptic to oblong

- | | |
|--|---------------------|
| A. Apothecia arising from a sclerotium | Lambertella 24:1207 |
| B. Apothecia not from a sclerotium | Phaeociboria |

Hyalodidymae

Spores 2-celled, hyaline, elliptic to fusoid

- | | |
|-------------------------------------|------------------------|
| A. Apothecia stalked | |
| 1. Stalk with ridges or folds | Lanzia 8:479 |
| 2. Stalk without ridges or folds | Hymenoscypha R 781; 33 |
| B. Apothecia sessile | |
| 1. Apothecia margined by teeth | Pezizellaster 24:1190 |
| 2. Apothecia without marginal teeth | Eubelonis R 685 |

Hyalophragmiae

Spores x-celled, hyaline, elliptic to fusoid

- A. Apothecia margined by a row of triangular teeth
1. Apothecia stalked Davincia 18:101
 2. Apothecia sessile Merodontis 18:102
- B. Apothecia without marginal teeth
1. Apothecia stalked Masseea 18:99
 - a. Apothecia on a subicle
 - b. Apothecia not on a subicle
 - (1) Spores 1-ciliate at each end Belospora 24:1182, R 744
 - (2) Spores muticate Rutstroemia R 763
 - (a) Paraphyses colored, forming an epithecium
 - (b) Paraphyses colorless, epithecium lacking Belonioscypha R 743
 2. Apothecia sessile Belonium 8:492, R 685

Phaeophragmiae

Spores x-celled, dark, oblong

- Apothecia short-stalked; paraphyses colored Scelobonium 8:496

Scolecosporae

Spores acicular to filiform, hyaline, continuous or septate

- A. Apothecia stalked, cupulate; paraphyses capitate; spores filiform, continuous Pocillum 8:605, R 747; 33
- B. Apothecia sessile, scutellate; paraphyses not capitate; spores acicular, septate Gorgoniceps 8:504, R 690

Subfamily Dasyscyphae

Rehm 284

Apothecia hairy

Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- A. Spores globose Lachnellula 8:390, R 862; 33
- B. Spores elliptic to fusoid
1. Paraphyses lance-pointed
 - a. Apothecia stalked
 - (1) Apothecia margined by a row of teeth Lachnaster 24:1202
 - (2) Apothecia without marginal teeth Lachnum R 870; 33
 - b. Apothecia sessile Dyslachnum 24:1201
 2. Paraphyses filiform, blunt
 - a. Apothecia divided above into 3-6 lobes, black Arenaea 18:75
 - b. Apothecia entire, rarely if ever black
 - (1) Apothecia setose with distinct bristles
 - (a) Setae shining, clear, non-septate, nearly solid Phalothrix R 831
 - (b) Setae dull, usually septate, hollow
 - x. Apothecia stalked Dasyscypha 8:432, R 832; 33
 - y. Apothecia sessile
 - (x) Apothecia superficial Dasypezis R 829, 842
 - (y) Apothecia deeply imbedded Endoscypha
 - (2) Apothecia villous with projecting hyphae Hyphoscypha 18:87

Hyalodidymae

Spores 2-celled, hyaline, elliptic to fusoid

Apothecia sessile; paraphyses filiform; spores finally 2-celled

Lachnella 8:391, R 853; 33**Hyalophragmiae**

Spores 8-celled, hyaline, oblong to cylindrical

A. Paraphyses bearing conidia at the tips

Diplocarpa 18:110

B. Paraphyses without conidia at the tips

1. Apothecia on a subicle

Arachnopeziza 8:499, R 698

2. Apothecia without a subicle

Lasiobelonia 8:502**Scolecosporae**

Spores filiform, hyaline, more or less septate

A. Paraphyses lance-pointed

Erinella 8:507

B. Paraphyses filiform, blunt

*Dasyscyphella***Family 55. PEZIZACEAE**

Rehm 913, Lindau 178

Apothecia typically superficial and terrestrial, sometimes erumpent, rarely phylogenous, urn-shaped, cupulate or disciform, stalked or sessile, fleshy or fleshy-waxy, bright-colored to brown, rarely black, frequently hairy, setose or ciliate; hypothecium usually well-developed, epithecium mostly lacking, exciple present and not specially differentiated, rarely lacking; asci typically cylindrical, 8-spored, regularly opening by an operculum or lid, rarely by a slit; paraphyses present, filiform as a rule; spores simple, mostly hyaline.

The fleshy texture and terrestrial habit serve to distinguish this family from the **Helotiaceae**, though the genus *Pitya* is more or less intermediate between the two. The transition to the **Helvellaceae** is almost imperceptible, several genera fitting almost equally well in either, and this is likewise true of the relationship to the **Ascobolaceae**. As with the **Bulgariaceae** in particular, the texture of the cup renders the protection of the exciple less necessary, and this feature becomes obsolete in a few genera, properly included in the **Agyriaceae**.

The sculpturing of the spore-wall is a feature in several genera, ranging from fine points to warts, reticulations or striae. With the exception of *Aleuria* and its relatives, the range of variation within the genera concerned is too great to warrant its use, and *Aleuria* itself is retained largely because of custom.

Subfamily Pezizae

Apothecia glabrous or at least without definite hairs or setae

Hyalosporae

Spores 1-celled, hyaline, globose to fusoid

A. Asci turning blue with iodine

1. Apothecia ear-like, cleft on one side

Iotidea R 1028

2. Apothecia not ear-like

a. Spores globose

Plicariella R 993; 34

b. Spores elliptic to fusoid

(1) Apothecia with a long slender stalk

Tarzetta R 1021; 35

(2) Apothecia sessile or subsessile

- (a) Apothecia with a milky juice
 - (b) Apothecia without milky juice
 - x. Apothecia on a subicle
 - y. Apothecia not on a subicle
 - (x) Apothecia leathery, black
 - (y) Apothecia fleshy, not black
 - m. Apothecia sunken, deeply and radially lobed, very large
 - n. Apothecia superficial, not lobed
- B. Asci not turning blue with iodine
1. Apothecia ear-like, cleft on one side
 2. Apothecia not ear-like
 - a. Spores globose
 - (1) Apothecia substipitate, parasitic
 - (2) Apothecia sessile, terrestrial
 - b. Spores elliptic to fusoid
 - (1) Apothecia stalked
 - (a) Stalk narrow, cylindrical, mealy-rough
 - (b) Stalk mostly short and thick, not mealy
 - x. Stalk deeply furrowed, large and thick
 - y. Stalk smooth or slightly furrowed at most
 - (x) Apothecia persistently cup-shaped
 - (y) Apothecia finally open and flat
 - (2) Apothecia sessile
 - (a) Spores reticulate
 - (b) Spores smooth or rough, but not reticulate
 - x. Apothecia on a subicle; exciple obsolescent
 - y. Apothecia not on a subicle; exciple present

Galactinia 8:106; 35

Melachroia R 997

Urnula 8:548, R 999; 35

Sarcosphaera R 1019; 35

Peziza 8:73, R 1000; 35

Otidea 8:94, R 1023; 34

Pitya 8:209, R 925; 34

Lamprospora 8:105, 111, R 927; 34

Macropodia 8:158, R 984; 34

Acetabula 8:59, R 981; 34

Geopyxis 8:63, R 971; 34

Discina 8:99, R 976; 34

Aleuria R 968; 34

Pyronema 8:107; 34

Humaria 8:118, R 934; 34

Phaeosporae

Spores 1-celled, dark or brownish, globose to fusoid

A. Spores globose

Phaeopezia 8:471, R 995

B. Spores ellipsoid

1. Apothecia stalked

Podaleuris 18:88, 24:1208

2. Apothecia sessile

Aleurina 18:88

Subfamily Scutelliniae

Apothecia hairy or setose

Hyalosporae

Spores 1-celled, hyaline, globose to fusoid

A. Spores globose

1. Apothecia on a subiculum, white-hairy; exciple obsolescent

Pyronemella 8:194, R 1038

2. Apothecia not on a subiculum; exciple present

a. Apothecia dark to black, more or less strigose at base

Pseudoplectania 8:165, R 1039; 35

b. Apothecia bright-colored, hairy or setose

Sphaerospora 8:188, R 1037; 35

- B.** Spores elliptic to fusoid
1. Apothecia sunken, opening by lobes Sepultaria 8:166, R 1075; 35
 2. Apothecia superficial
 - a. Apothecia stalked
 - (1) Apothecia dark to black
 - (a) Stalk long, slender and mealy-rough Macropodia 8:158, R 984; 34
 - (b) Stalk short, thick, with brown hairs and rhizoids Plectania 8:163, R 1070; 35
 - (2) Apothecia and hairs bright-colored Sarcoscypha 8:153, R 1070; 35
 - b. Apothecia sessile
 - (1) Apothecia dark hairy or ciliate
 - (a) Apothecia with long cilia at margin
 - x. Paraphyses equal, clavulate, blunt Scutellinia 8:173, R 1042; 35
 - y. Paraphyses unequal, pointed, brown Desmazierella 8:386, R 1041; 35
 - (b) Apothecia without long cilia at margin Pelodiscus 18:35, 16:1147
 - (2) Apothecia bright hairy or ciliate
 - (a) Apothecia with long cilia at margin Neottiella 8:190, R 1068
 - (b) Apothecia without long cilia at margin Leucopezis 24:1198

Phaeosporae

Spores 1-celled, dark, elliptic to fusoid

- A.** Apothecia stalked, rough-mealy Phaeomacropus 16:740
B. Apothecia sessile, hairy-ciliate Trichaleuris 24:1207

Family 56. HELVELLACEAE

Rehm 1134, Schroeter 162

Ascoma typically terrestrial and stalked, occasionally phytogenous or sessile, saddle-shaped, conical, club-shaped, or capitate, rarely discoid or flat, mostly smooth, fleshy or fleshy-cartilaginous, rarely gelatinous; hypothecium and exciple not indicated, the hymenium on the outside of the fruiting body; asci typically cylindrical, 8-spored, opening by an operculum; paraphyses present, filiform as a rule; spores mostly hyaline.

The sessile genera represent one line of evolution from the **Pezizaceae**, while the simpler forms of **Helvella** are closely related to **Macropodia**. **Morchella** represents the highest development in the direction of the reticulate hymenium, and the **Geoglossae** in that of the clavate fruit-body.

Subfamily Rhizinae

Ascoma sessile, flat, arched or irregularly globose

- A.** Spores globose; ascoma inflated Sphaerosoma 8:56, R 1140; 36
B. Spores elliptic to fusoid; ascoma flat
 1. Ascoma with rhizoids below; spores fusoid, pointed Rhizina 8:57, R 1138; 36
 2. Ascoma without rhizoids; spores elliptic, rounded at ends Psilopezia 8:152, R 1140

Subfamily Helvellae

Ascoma stalked, cap- or saddle-shaped, or columnar

- A.** Ascoma with distinct stalk
 1. Hymenium ridged in both directions, i.e. alveolate Morchella 8:8, R 1200; 36

2. Hymenium smooth, convolute, or ridged lengthwise
- a. Hymenium saddle-like, more or less lobed **Helvella 8:17, R 1179; 36**
 - b. Hymenium globose, convolute **Gyromitra 8:15, R 1189**
 - c. Hymenium cap- or bell-shaped, smooth or ridged lengthwise **Verpa 8:29, R 1195; 36**
- B. Ascoma columnar, entirely covered by the hymenium **Underwoodia 10:1**

Subfamily Geoglossae

Ascoma stalked, capitate or clavate

- A. Hymenium distinct from stem, capitate or pileate
1. Spores x-celled, fusoid
 - a. Ascoma gelatinous **Leotia 8:609, R 1164; 36**
 - b. Ascoma fleshy-waxy **Cudoniella 8:41, R 1166**
 2. Spores acicular or filiform, septate or not
 - a. Ascoma fleshy-leathery, cap-like, margin involute; spores acicular, septate **Cudonia 8:527, R 1169; 36**
 - b. Ascoma waxy-gelatinous, button-shaped, solid; spores filiform, continuous **Vibrissea 8:51, R 1170; 36**
- B. Hymenium clavate or spatulate, little or not at all distinct from the stalk
1. Spores hyaline
 - a. Spores 1-celled
 - (1) Spores globose **Neolecta 8:40**
 - (2) Spores elliptic **Mitrula 8:32, R 1146; 36**
 - b. Spores x-celled, fusoid
 - (1) Hymenium covering the whole club; ascoma yellow, brown or black **Microglossum 8:39, R 1151**
 - (2) Hymenium on one side only **Hemiglossum 10:2**
 - c. Spores filiform; ascoma spatulate **Spathularia 8:48, R 1158; 36**
 2. Spores dark
 - a. Spores 1-celled **Phaeoglossum**
 - b. Spores acicular or clavate, many-septate
 - (1) Hymenium with spines or setae **Trichoglossum**
 - (2) Hymenium glabrous
 - (a) Ascoma viscid-gelatinous; paraphyses extending down the stalk **Gloeoglossum**
 - (b) Ascoma not viscid-gelatinous; paraphyses not extending down the stalk **Geoglossum 8:42, R 1153; 36**

Family 57. ASCOBOLACEAE

Rehm 1078, Lindau 188

Apothecia typically superficial and fimicoid, sessile, rarely short-stalked, scutellate to discoid, soft-fleshy or somewhat gelatinous, usually bright-colored, smooth or sometimes hairy; hypothecium mostly well-developed, except thin or even lacking; asci broad-cylindrical or clavate, with an operculum, rarely with a slit, typically projecting from the hymenium at maturity; paraphyses mostly simple; spores simple, often colored, and variously sculptured.

This family might well be included in the *Pezizaceae*, as has been done by recent authors (cf. Seaver N. A. Cup-Fungi, 1928) but it is fairly well marked by

the fimicole habit and exerted asci and is retained as a matter of usage. However, it is necessary to refer the genera without exciple to the next family, **Agyriaceae**, which represents the stage of reduction consequent upon a more assured water and food supply.

Subfamily Ascophanae

Spores colorless

- | | |
|---|------------------------------|
| A. Spores globose | |
| 1. Asci 4-spored, opening by a slit | Boudierella 14:792 |
| 2. Asci 8-spored, opening by a lid | Cubonia 8:527 |
| B. Spores elliptic to fusoid | |
| 1. Asci 8-spored | |
| a. Apothecia setose | Lasiobolus 8:536, R 1096; 37 |
| b. Apothecia glabrous | Ascophanus 8:528, R 1085; 37 |
| 2. Asci many-spored | |
| a. Ascus single | Thelebolus R 1106 |
| b. Asci several to many | |
| (1) Apothecia fimbriate with delicate hairs | Streptotheca 10:34 |
| (2) Apothecia glabrous | Rhyarobolus R 1099; 37 |

Subfamily Ascobolae

Spores colored

- | | |
|---|------------------------------|
| A. Spores globose | Boudiera 8:512, R 1113; 37 |
| B. Spores elliptic to fusoid | |
| 1. Spores in a gelatinous mass in ascus | Saccobolus 8:524, R 1115; 37 |
| 2. Spores free in the ascus | |
| a. Apothecia hairy or ciliate | Dasybolus 11:421 |
| b. Apothecia glabrous | Ascobolus 8:514, R 1120; 37 |

Order 13. AGYRIALES

Apothecia reduced by the loss of the exciple, more rarely of hypothecium or paraphyses also, typically convex or discoid, gelatinous to fleshy, bright-colored, rarely black and carbonous to membranous, superficial, rarely erumpent; hypothecium usually present but much reduced, parenchymic, exceptionally prosenchymic; asci ovoid to clavate, paraphyses mostly present, occasionally forming an epithecium; spores various.

This is a new order characterized by the progressive reduction of the apothecium until asci and spores alone remain. By contrast with the **Gymnascales** it represents a highly specialized group instead of a primitive one, but as usual this distinction is difficult to apply in practice. The presence of a uniform hymenium is taken as the distinguishing feature of reduced forms of **Discomycetes**, usually with the presence of paraphyses and a parenchymic hypothecium.

On the basis of texture at least, the **Agyriales** are a polyphyletic order, containing gelatinous, fleshy and membranous forms closely related to **Bulgariaceae**, **Pezizaceae**, **Ascobolaceae** and **Mýriangiaceae**, and probably derived from these families. From the first three it is separated by the absence of exciple, though in a few genera this feature is in the process of disappearing. It is best distinguished from **Mýriangiaceae** by the uniform hymenium and the regular presence of genuine paraphyses, though occasional puzzling intermediates occur.

Key to Families

- A. Paraphyses and hypothecium present, or one or the other occasionally lacking **Agyriaceae p.**
 B. Both paraphyses and hypothecium lacking **Exasaceae p.**

Family 58. AGYRIACEAE

22:586, 24:1142

Apothecia without an exciple or the latter incomplete, convex to discoid, gelatinous, fleshy or rarely more or less membranous, bright-colored, rarely black, typically superficial; hypothecium regularly present and parenchymic; asci ovoid to clavate, mostly 8-spored, paraphyses regularly present, occasionally forming an epithecium; spores various.

Hyalosporae

Spores 1-celled, hyaline, globose to fusoid

- A. Exciple present but incomplete
 1. Exciple prosenchymic, lateral, lacking below; paraphyses branched, forming an epithecium **Discomycella 24:1144**
 2. Exciple represented only by apophyses with inflated cells and long points; paraphyses simple **Solanella 22:627**
- B. Exciple entirely lacking
 1. Asci typically 8-spored
 a. Apothecia black, membranous or firm-waxy, usually with an epithecium
 (1) Apothecium membranous, superficial, not lichenicole **Phillipsiella 22:584**
 (2) Apothecia firm-waxy, lichenicole, typically erumpent **Nesolechia 10:53**
- b. Apothecia bright-colored, gelatinous to fleshy
 (1) Apothecia gelatinous
 (a) Hymenium covered with mucus; algicole **Gloeopeziza 10:41, 14:804**
 (b) Hymenium without mucus; not algicole
 x. Apothecia with gyrose or folded hymenium **Haematomyces 8:633**
 y. Apothecia with smooth hymenium **Agyrium 8:634, R 450; 26**
 (2) Apothecia fleshy
 (a) Apothecia on a cottony subicle; hypothecium thick
 x. Spores globose; apothecia white-hairy **Pyronemella 8:194, R 1038**
 y. Spores ellipsoid; apothecia not hairy **Pyronema 8:107, R 962; 34**
 (b) Apothecia without subicle; hypothecium thin **Ascocalathium 14:30**
2. Asci many-spored
 a. Asci 16-spored; spores globose; apothecia without a disk-like hypothecium **Agyrina 8:636**
 b. Asci many-spored; spores fusoid; apothecia with a disk-like hypothecium **Zukalina 14:32; 37**

Phaeosporae

Spores 1-celled, dark, globose to fusoid

- A. Apothecia effuse, phytogenous; hypothecium lacking **Medeolaria**
 B. Apothecia minute, fimicole; hypothecium parenchymic **Ascodesmis 8:824**

Hyalodidymae

Spores 2-celled, hyaline, ovoid to fusoid

- A. Apothecia superficial**
1. Paraphyses present
 a. Paraphyses much branched, moniliform; hypothecium none **Atichia 22:769, R 500**
 b. Paraphyses branched at tip, not moniliform; hypothecium present, thin **Lecideopsella 22:588**
 c. Paraphyses simple, inflated at tip; hypothecium somewhat thick **Agyronella 22:588**
2. Paraphyses lacking; hypothecium present **Henningsiella 22:586**
B. Apothecia erumpent; paraphyses present **Didymascus 14:816**

Phaeodidymae

Spores 2-celled, dark, ovoid to fusoid

- Apothecia erumpent, foliicole; paraphyses filiform; asci 4-spored **Didymascella 18:162**

Hyalophragmiae

Spores x-celled, hyaline, oblong

- Apothecia superficial, membranous, dark, with yellow bulbiform base; paraphyses present; foliicole **Mollerliella 8:845**

Phaeophragmiae

Spores x-celled, dark, oblong

- Apothecia superficial, waxy, dark; paraphyses present, forming an epithecium; lignicole **Microdiscus 24:1143**

Hyalodictyae

Spores muriform, hyaline, oblong

- Apothecia superficial, submembranous, dark; paraphyses lacking; foliicole **Zukaliopsis 17:554**

Phaeodictyae

Spores muriform, dark, oblong

- A. Apothecia superficial, with gyrose or folded hymenium** **Haematomyxa 8:646**
B. Apothecia erumpent; hymenium plane **Ramosiella 24:1142**

Scolecosporae

Spores acicular to filiform

- Apothecia superficial, gelatinous; paraphyses filiform **Agyriopsis 14:895**

Family 59. EXASCACEAE

8:811, 10:67, 11:435, 14:823, 16:803, 18:196, 22:763, 24:1300; Schroeter 158

Apothecia reduced to a hymenium without exciple, hypothecium, or paraphyses, mostly parasitic, occasionally saprophytic; asci globose to clavate, arising directly from the hyphae, or disposed on a base of parallel hyphae, few to many-spored; spores simple, hyaline.

A. Asci typically 4-8-spored

1. Parasitic

a. Hymenium deforming the host; asci arising from separate hyphae, typically 8-spored; spores globose

Exascus 8:816; 37

b. Hymenium not deforming the host, folicole; asci arising from a hyphal layer, 4-spored; spores cylindrical

Ascosorus

2. Saprophytic; asci 8-spored, arising from a hyphal layer; spores elliptical

Ascocorticium 10:71; 37

B. Asci many-spored

1. Asci more or less globose

Taphridium 18:203

2. Asci clavate to cylindrical

Taphrina 8:812; 37

Order 14. TUBERALES

Ascoma typically more or less globose, with a differentiated peridium that crumbles or breaks away irregularly, occasionally stalked, fleshy, waxy, leathery, carbonous or corneous; ascogenous tissue or gleba with hollows, locules or veins, or solid and then becoming powdery; asci mostly saccate to oblong, irregularly disposed, 1-many-spored; spores usually hyaline, simple, often sculptured, sometimes mixed with capillitium when powdery; rarely parasitic, usually saprophytic and subterranean.

This is probably not a natural order, though the several families appear to be more nearly related to each other than to the **Gymnasciales**, where Fischer placed the first two (*Nat. Pflanzenfl.* 1:1:309, 1897). The group is regarded as diphyletic, such simple forms as **Genea** in the **Tuberaceae** being derived from cup-fungi like **Sphaerosoma**, while the **Onygenaceae** seem to be the connecting link between the sclerotoid **Gymnascaceae** and the **Elaphomycetaceae**.

Key to Families

A. Ascoma not hypogean, opening more or less regularly; gleba typically with capillitium

Onygenaceae p. 144

B. Ascoma hypogean, not opening spontaneously

1. Gleba powdery, usually with capillitium

Elaphomycetaceae p. 145

2. Gleba firm, loculate, lacunose or veined, without capillitium

Tuberaceae p. 145

Family 60. ONYGENACEAE

8:861, 10:80, 11:440, 16:807, 22:589, 24:1145; Fischer 309, 310

Ascoma globoid or ovoid, sessile to stipitate, membranous to waxy, with a distinct peridium of one or more layers; gleba waxy or corneous, then becoming powdery, usually with a capillitium; asci more or less saccate, mostly 8-spored and evanescent; spores simple, hyaline or subhyaline.

A. Ascoma stipitate as a rule; capillitium not vertical

1. Stalk simple; ascoma glabrous; gleba uniform; epizoic

Onygena 8:861, F 309; 6

2. Stalk branched above; ascoma floccose at first; gleba plurilocular; humicole

Dendrosphaera 22:589

- B. Ascoma sessile, the entire top opening and exposing the columnar mass of vertical capillitium and spores

Trichocoma F 310; 6

Family 61. ELAPHOMYCETACEAE

8:863, 10:80, 11:441, 22:589; Fischer 311

Ascoma hypogean, tuberiform, woody, crustose or corneous, not spontaneously dehiscent, peridium well developed; gleba loculate or veined, at last powdery; asci globoid to ovoid, 1-8-spored; spores simple, typically dark and with a several-layered wall.

- A. Gleba with sterile veins; asci normal; spores typically opaque; spore-wall thick, of several layers
- B. Gleba without sterile veins; spores light-colored, wall not thick and layered

Elaphomyces 8:863, F 311; 38

Mesophellia 7:56

Family 62. TUBERACEAE

8:872, 10:80, 11:442, 14:826, 16:808, 18:205, 22:590, 24:1147; Fischer 278

Ascoma hypogean, tuberiform, very rarely epigean, fleshy or waxy to indurated, not opening spontaneously; gleba typically lacunose or veined, never becoming powdery, without capillitium; asci globose to cylindrical, 1-8-spored; spores 1-celled, hyaline or dark, often beautifully sculptured.

Hyalosporae

Spores 1-celled, hyaline, globose to elliptic

- A. Gleba with one or more cavities, but not veined
1. Asci cylindrical or elongate
- a. Spores verrucose, spinose or reticulate
- (1) Ascoma broadly stipitate; canals or chambers closed
- (2) Ascoma not stipitate
- (a) Gleba with one or more chambers opening to the outside
- x. Spores globose
- y. Spores ovoid to elliptic
- (b) Gleba without canals opening to the outside
- b. Spores smooth
- (1) Ascoma with a single large closed cavity
- (2) Ascoma with winding canals or irregular chambers
- (a) Canals reaching the surface
- x. Ascoma with a definite cavity into which the canals open
- y. Ascoma without central cavity; gleba cerebro-convolute
- (b) Canals not reaching the surface; ascoma lanate
2. Asci saccate, globoid to oblong
- a. Spores verrucose, spinose or reticulate, globose

Napomyces

Pseudogenea 16:808

Genea 8:873; 38

Hydnotryopsis 24:1150

Hydnocystis 8:876; 38

Barssia

Pseudohydnotrya 16:608; 38

Geopora 8:877

- (1) Asci 2-4-spored; spores with recurved spines
 (2) Asci 8-spored
 b. Spores smooth, ellipsoid
 (1) Ascoma hypogean, large; gleba with irregular canals
 (a) Canals reaching the surface
 (b) Canals not reaching the surface
 (2) Ascoma epigean, on fungi; gleba with radiate locules
 B. Gleba solid, typically with veins, sometimes locules also
 1. Spores reticulate or alveolate; asci 2-4-spored
 a. Gleba with distinct veins
 b. Gleba marbled with brown spots
 2. Spores smooth; asci 2-8-spored
 a. Spores globose; asci cylindrical
 b. Spores ovoid to ellipsoid; asci globoid to clavate
 (1) Ascoma villous; gleba not veined
 (2) Ascoma not villous; gleba veined
 (a) Ascoma narrowed to the basal mycelium, whitish, smooth; asci 8-spored, with a broad stalk
 (b) Ascoma not narrowed or with basal mycelium, dark, verrucose; asci 4-8-spored, not stalked
- Terfeziopsis 16:916
 Hydnobolites 8: 879
 Pseudobalsamia 22:591
 Balsamia 8:877; 38
 Eoterfezia 18:205
 Delastria 8:904; 38
 Piersonia 16:812
 Stephensia 8:880; 38
 Phaeangium 11:442
 Tirmania 11:444
 Picoa 8:899

Phaeosporae

Spores 1-celled, dark, globose to elliptic

- A. Gleba with canals or chambers, not veined
 1. Spores verrucose, globose; asci ovoid to cylindrical
 2. Spores smooth, ovoid
 B. Gleba more or less solid, veined
 1. Veins of two colors
 a. Some veins white; asci globoid to ellipsoid, mostly 1-4-spored, arranged irregularly
 b. No veins white; asci clavate to cylindrical, 8-spored, arranged more or less regularly
 2. Veins of one color
 a. Asci elongate, with paraphyses, in palisade-like meandering veins
 b. Asci typically globose to oblong, without paraphyses, arranged irregularly in masses separated by veins
- Hydnotrya 8:879; 38
 Genabea 8:878
 Tuber 8:882; 38
 Pachyphloeus 8:881
 Choeromyces 8:900
 Terfezia 8:902; 38

PROMYCETES

Order 15. PUCCINIALES

Parasites; apothecia reduced to a mass of asci with the ascus-wall fused with the spore-wall, i. e., teliospores with one or more cells; conidia normally present, produced in aecia (aecidia), uredia, or pycnia (spermagonia), all of which are frequently developed; the telia and the conidia forms may occur upon the same host or upon different hosts, any two or more may be associated, or any stage except the pycnia may exist alone; the aecia normally possess a peridium, uredia and telia only rarely, though paraphyses not infrequently occur; teliospores typically with 1 or more germination pores in each cell, giving rise to a promycelium with sporidioles; promycelium exserted and filamentous, merely proliferated, or entirely internal.

The conidial stages of rusts lend strong support to the ecological view that the telium is a reduced apothecium, probably to be derived from that of the **Agyriales**. Chiefly as the result of an assured water-supply, the apothecium has become reduced to a mass of asci and spores, in which the fusion of the two walls has provided the necessary protection at maturity. The intense parasitism of the group has rendered possible a new and very active evolution that has dealt especially with the number and association of the four spore-forms (cf. Arthur 1906).

Two families are recognized in accordance with the treatment of Dietel (Nat. Pflanzenf. 6:35 1928), but there is no clear dividing line between them. The **Pucciniaceae** are regarded as ancestral and the **Melampsoraceae** as derived from them by more or less reduction.

Key to Families

- A. Teliospores typically single and stipitate, sometimes united in a gelatinous mass or a definite body, or more or less fused in series Pucciniaceae p. 147
- B. Teliospores sessile, combined in flat crusts, pulvinate masses, or columnar forms, occasionally arising within the epidermal cells or in the mesophyll Melampsoraceae p. 153

Family 63. PUCCINIACEAE

Dietel 48; 7:528

Teliospores typically stipitate, rarely sessile, seriate and somewhat united laterally, 1-x-celled, promycelium exserted, proliferate, or internal; aecia mostly with a peridium, but this occasionally rudimentary or lacking, or replaced by paraphyses; uredia rarely with a peridium, sometimes with paraphyses, urediospores separate, not catenate.

When missing spore-forms are not indicated in the key, all four stages are found. The geographical distribution and host-plants are likewise given for such genera as are more or less restricted in either respect.

Amerosporae

Teliospores 1-celled, colored or hyaline, sometimes lacking

A. Telia present

1. Spores or sporogenous hyphae exerted through the stomata
 - a. Teliospores exerted in loose twisted threads; I—; Tropics / **Skierkia 16:271, D 53**
 - b. Sporogenous hyphae exerted, singly or in fascicles
 - (1) Promycelium typical, i. e., external, filiform and sterigmate
 - (a) Sporogenous hyphae single; 0 I II—; Rubus, Java **Gerwasia 21:597, D 51**
 - (b) Sporogenous hyphae fascicled; 0 I—; Rubiaceae esp., Tropics **Hemileia 7:585, D 52**
 - (2) Promycelium short, stout, half-exserted at spore-base; sporidioles sessile
 - (a) Promycelium 2-celled; II—; Olea, East Indies **Cystopsora 21:607, D 52**
 - (b) Promycelium 4-celled; Phillyrea, Mediterranean **Zaghouania 17:268, D 53**
2. Spores or sporogenous hyphae not exerted through the stomata
 - a. Teliospores sessile, hyaline, not seriate
 - (1) Aecia with peridium
 - (a) Promycelium typical, arising from spore-apex
 - x. Teliospores in a single layer; I—; Nyssa, N. A. **Aplopsora D 56**
 - y. Teliospores in an x-layered mass; Urticaceae esp., Trop-Subtrop. **Cerotelium 21:606, D 56**
 - (b) Promycelium internal; heteroecious **Ochropsora 21:604, D 56**
 - (2) Aecia without peridium
 - (a) Telia and uredia enclosed by brown curved cylindric paraphyses; Trop. Am. **Olivea 23:663, D 54**
 - (b) Paraphyses lacking or rudimentary
 - x. Teliospores in fascicles arising from a basal cell; 0 I II—; Pithecolobium, Paraguay **Chaonia 14:290, D 54**
 - y. Teliospores not in fascicles from a basal cell
 - (x) Promycelium apical; II—; S. Hem. **Chrysocelis 23:664, D 55**
 - (y) Promycelium internal; 0 I II—; Java **Goplana 16:318, D 55**
 - b. Teliospores sessile, seriate usually colored, often more or less united laterally; pycnia subepidermal
 - (1) Telia with a peridium; 0 I II—; Sida, Argentina **Dietelia 14:291, D 96**
 - (2) Telia without peridium
 - (a) Teliospores imbedded in a gelatinous mass; 0 I II—; Capparis, India **Masseella 14:292, D 93**

- (b) Teliospores not in a gelatinous mass
- x. *Telia* pulvinate, erumpent; chains of spores short; I II—; *Senecio*, *Eupatorium*, Calif-Guatem. Baeodromus 21:371, D 93
 - y. *Telia* columnar to filiform, superficial
 - (x) *Telia* short-cylindric, falling apart in 1-layered disks; I II—; *Cordia*, C-S Am. Alveolaria 11:212, D 94
 - (y) *Telia* elongate to filiform, not falling apart in disks
 - m. Promycelium typical, exserted; I II— Cionothrix D 94
 - n. Promycelium internal; I II—; *Tournefortia*, Ecuador Trichopsora 11:206, D 94
- c. Teliospores stipitate
- (1) Pycnia typically subcuticular
- (a) Teliospores single, without a cyst
 - x. Teliospores hyaline
 - (x) Uredospores with median pores; 0 I—; *Mimoseae* Maravalia D 66
 - (y) Uredospores without pores; I—; *Rubus* Spirechina D 60
 - y. Teliospores dark
 - (x) Teliospores with pores
 - m. Teliospores with 2 pores; wall of three layers; I—; *Crotalaria*, Guatemala Haplopyxis 23:829, D 65
 - n. Teliospores with 3-x pores
 - (m) Uredia present; I— Pileolaria 7:552, D 67
 - (n) Uredia lacking; 0 I II—; *Rosa*, N. A. Ameris D 58
 - (y) Teliospores without pores; 0 I—; *Alchimilla*, Eur., Java Trachyspora D 57
 - (b) Teliospores united in chains or pairs, or with a cyst
 - x. Teliospores in chains resembling x-celled spores; I—; *Rosa*, *Rubus*, Am., Japan Kuehneola 23:788, D 60
 - y. Teliospores in pairs without cysts
 - (x) Each spore with a basal cell; 0 I—; *Erythrina*, C. Am. Dichirinia D 67
 - (y) Basal cell lacking; 0 I II—; *Mimosa*, Cuba Diabole D 67
 - z. Teliospores single or paired, with a cyst, or in 3's without a cyst; *Mimosa*, Australia Uromycladium 21:593, D 67
- (2) Pycnia subepidermal
- (a) Teliospores hyaline; aecia when present without peridium or the latter very evanescent
 - x. *Telia* resembling uredia; 0 I II—; *Hippocratea*, Porto Rico Botryorhiza D 80
 - y. *Telia* normal

- (x) Promycelium escaping through a small apical pore; I—; Trop. Am. **Argomycetella D 77**
- (y) Promycelium formed by proliferation of spore-apex; 0 I—; Japan, India **Blastospora 21:596, D 78**
- (z) Promycelium internal; I II—; Mikania, Costa Rica **Chrysella D 78**
- (b) Teliospores yellow to dark; aecia when present with persistent, sometimes rudimentary peridium
- x. Aecia present; wall of teliospore swelling little or not at all
- (x) Teliospores applanate, radially ribbed around a central pit; stalk strongly inflated; 0 II—; Ipomoea, Cape Colony **Trochodium 23:662, D 80**
- (y) Teliospores not applanate and ribbed, or stalk strongly inflated **Uromyces 7:531, D 80; 39**
- y. Aecia lacking; wall of teliospore swelling strongly in water
- (x) Exospore warted; wall swelling chiefly at apex; I II—; Sapindaceae esp. **Ctenoderma 23:662, D 80**
- (y) Exospore ribbed; wall swelling uniformly; 0 I—; Zygophyllum, Cape Colony **Dichlamys 23:662, D 80**
- B. Telia absent**
1. Spores in aecia
- a. Aecia with cupulate peridium
- (1) Aeciospores germinating to form a promycelium **Endophyllum 7:767, D 92**
- (2) Aeciospores not forming a promycelium **Acidium 7:774, D 97**
- b. Aecia not cupulate
- (1) Aecia with vesiculose peridium opening irregularly; Pinaceae, Ephedra **Peridermium 7:835, D 96**
- (2) Aecia with rudimentary peridium; Mikania, Trop. Am. **Endophylloides, D 93**
2. Spores in uredia
- a. Spores catenate (i. e., in aecia without peridium)
- (1) Spores germinating to form a promycelium; Rubus, N. A. **Kunkelia 23:827, D 59**
- (2) Spores not forming a promycelium **Caecoma 7:863, D 97**
- b. Spores not catenate
- (1) Uredia exserted, margined by brown incurved pseudoparaphyses; Lindsaea, Brazil **Calidion 23:950, D 54**
- (2) Uredia merely erumpent as a rule, without pseudoparaphyses **Uredo 7:838, D 98**

Didymosporae

Teliospores 2-celled, colored or hyaline

- A. Sporogenous hyphae exserted through the stomata; 0 I—; Ferns, S. A. **Desmella 23:830, D 51**

- B. Sporogenous hyphae not exerted through the stomata
1. Teliospores stipitate
 - a. Teliospores divided lengthwise
 - (1) Teliospores hyaline or nearly so, with apical pore; 0 I—; Tropic Am. *Sphenospora*, D 68
 - (2) Teliospores brown, with 2 lateral pores; 0 I—; Tropics, Subtropics *Diorchidium* 7:736, D 68
 - b. Teliospores divided crosswise
 - (1) Teliospores with appendages on stalk; uredia with cylindrical pseudoparaphyses *Prospodium* 21:662, D 65
 - (2) Teliospores without appendages
 - (a) Uredia with pseudoparaphyses
 - x. Pseudoparaphyses capitate; teliospores with indistinct pores; Ranunculaceae, *Prunus* *Tranzschelia*, D 57
 - y. Pseudoparaphyses cylindrical; teliospores with 2 pores in each cell, the wall 3-layered *Uropyxis* 7:735, D 65; 39
 - (b) Uredia without pseudoparaphyses
 - x. Telia regularly on Cupressaceae, oblong to corniculate, united in gelatinous masses; teliospores sometimes x-celled *Gymnosporangium* 7:737, D 75; 39
 - y. Telia not on Cupressaceae, not united in gelatinous masses
 - (x) Telia with a definite peridium
 - m. Telia alone present, sunken in gall-like outgrowths *Xenosteles* 23:830, D 91
 - n. All stages present; teliospores in both uredia and telia; *Anaphalis*, Japan *Miyagia*, D 91
 - (y) Telia without definite peridium
 - m. Uredia present
 - (m) Teliospores hyaline or nearly so; pycnia and aecia lacking; *Bambusa*, Japan *Stereostratum*, D 66
 - (n) Teliospores colored; pycnia and aecia present *Puccinia* 7:600, D 84; 39
 - n. Uredia lacking
 - (m) Aecia present, without peridium; teliospores with one pore in each cell; *Rubus*, *Alchimilla* *Gymnoconia* 14:369, D 59
 - (n) Aecia lacking
 - r. Teliospores colored, with 3-layered wall, 4-8 pores in each cell and typical promycelium; *Aegiphila*, *Adesmia* S. A. *Cleptomycetes* 23:830, D 65
 - s. Teliospores hyaline, pores lacking, promycelium not typical
 - (r) Promycelium proliferating from the end of each cell; Tropic Am. *Chrysocyclus*, D 79
 - (s) Promycelium internal *Chrysospora* 11:206, D 79

2. Teliospores sessile, seriate, often laterally united
- a. Telia with a peridium; pores lacking; I II— **Puccinosira 11:205, D 96; 39**
 - b. Telia without a peridium
 - (1) Teliospores all 2-celled
 - (a) Telia hemispheric to globoid, attached only at the middle, gelatinous; 0 I II—; Amelanchier, Eriobotrya, China, Japan **Coleopuccinia 9:313, D 77**
 - (b) Telia columnar to filiform, not gelatinous
 - x. Telia columnar, brown; I II—; Brazil **Didymopsora 16:315, D 94**
 - y. Telia filiform, black; I II—; Berberis, India **Gambleola 16:314, D 94**
 - (2) Teliospores 1- and 2-celled; telia pulvinate; Astilbe, Asia **Pucciniostele 16:321, D 94**

Phragmosporae

Teliospores 2-x-septate transversely, typically colored

- A. Wall of teliospore 3-layered, the middle layer swelling in water; aecia, uredia and telia with a border of paraphyses; Benthamantha, Coursetia, Ariz-Ecuador **Phragmopyxis 14:361, D 65**
- B. Wall of teliospore not 3-layered; telia at least without paraphyses
 1. Aecia present, with well-developed peridium; telia gelatinous **Gymnosporangium 7:737, D 75**
 2. Aecia present, without peridium; telia not gelatinous
 - a. Aecia with pseudoparaphyses; teliospores stipitate **Phragmidium 7:742, D 62; 39**
 - b. Aecia without pseudoparaphyses; teliospores sessile; II—; Sanguisorba, N. Hem. **Xenodochus 7:750, D 63**
 3. Aecia lacking; primary and secondary uredia present; Potentilleae, N. Hem. **Frommea 23:826, D 61; 39**

Dictyosporae

Teliospores more or less radially septate or muriform

- A. Cells of teliospore 3, forming a triangle
 1. Each cell with a single pore **Triphragmium 7:768, D 64; 40**
 2. Each cell with 2-x pores
 - a. Teliospores chestnut-brown, warted; 0 II—; Ranales, Eurasia **Triphragmiopsis, D 69**
 - b. Teliospores opaque black-brown, spinose or appendaged, 0 I— **Nyssopsora, D 69**
- B. Cells of teliospore more than 3, forming a head without cysts
 1. Stalk of teliospore simple
 - a. Teliospores smooth, septa vertical; 0 I—; Fabaceae, Brazil **Anthomyces 16:325, D 70**
 - b. Teliospores spinose, septa irregular; 0 I—; Fabaceae esp., Tropics **Sphaerophragmium 11:209, D 70**

2. Stalk composed of several hyphae; teliospores smooth, septa vertical, cells in two layers; 0 I II—; *Canarium*, Philippines **Anthomycetella 23:807, D 70**
- C. Cells of teliospore forming a head with cysts, 3-x in number
1. Heads 3-celled; stalk simple; I II—; *Fabaceae*, Costa Rica **Cystomyces, D 70**
2. Heads x-celled
- a. Heads with a compound stalk **Ravenelia 7:770, D 72; 40**
- b. Heads sessile; 0 I—; *Securinega*, China, Japan **Nothoravenelia 21:745, D 73**

Family 64. MELAMPSORACEAE

Dietel 35; 7:586

Teliospores sessile, firmly united into 1-x-layered crusts, pulvinate masses or columnar bodies, 1-celled, or x-celled and in this case often developed in the epidermal cells or in the mesophyll, promycelium exerted or internal; aecia with or without peridia; uredia often with a peridium or with pseudoparaphyses, the spores single or in short chains.

The limits of several genera are not accurately drawn with respect to the spore character, and these are included in the section *Phragmosporae* in spite of the fact that the spores of a few species are 2-celled or even 1-celled.

Amerosporae

Teliospores 1-celled, colored or hyaline

- A. Aecia with peridium, or lacking
1. Uredospores typically in short chains; uredia without peridium
- a. Telia pulvinate; teliospores separate in cylindrical sometimes ramose chains; promycelium exerted **Chrysomyxa 7:759, D 44; 39**
- b. Telia flat; teliospores laterally united into a waxy layer; promycelium internal
- (1) Teliospores cylindrical or sometimes clavoid
- (a) Teliospores in a single layer; *Angiosperms* **Coleosporium 7:751, D 45**
- (b) Teliospores in short rows; I II—; *Pinus* **Gallowaya, D 46**
- (2) Teliospores ellipsoid, later elongated; 0 I—; *Fagus*, Chile **Micronegeria, D 46**
2. Uredospores typically single, not in chains; uredia often with peridium or pseudoparaphyses
- a. Teliospores united in a 1-layered crust or single in the mesophyll
- (1) Teliospores in the epidermal cells; N. Hem. **Melampsorella 7:596, D 40**
- (2) Teliospores beneath the epidermis
- (a) Uredia with peridium; *Betulaceae*, N. Hem. **Melampsoridium 21:605, D 41**
- (b) Uredia without peridium; 0 I—; *Hypericum*, Eur., Afr. **Mesopsora, D 41**

- b. Teliospores seriate; telia lentiform to columnar
- (1) Teliospores in x-layered subepidermal crusts; 0 I—; Asia Phacopsora 14:289, D 42
- (2) Teliospores in exserted columns, often corneous
- (a) Uredia with a peridium; chiefly N. Hem. Cronartium 7:597, D 42; 39
- (b) Uredia with pseudoparaphyses; 0 I—; Malaysia Crossopsora 23:854, D 43
- B. Accia without peridium
1. Teliospores hyaline or nearly so; II—; India, Afr. Chnoopsora 21:600, D 47
2. Teliospores more or less intensely brown; N. Hem. Melampsora 7:586, D 47; 39

Phragmosporae

Teliospores typically x-celled, rarely 2- or 1-celled, hyaline or colored

- A. Telia on ferns
1. Teliospores scattered irregularly in the mesophyll, rarely in a subepidermal crust Uredinopsis 17:269, D 36
2. Teliospores not in the mesophyll, but in the epidermis
- a. Uredospores of two kinds, with pores; 0 I—; N. Hem. Hyalopsora 17:268, D 37
- b. Uredospores of one kind, without pores Milesia 7:768, D 38
- B. Telia not on ferns
1. Teliospores in the epidermal cells; 0 II—; Vaccinium, N. Hem. Calyptospora 7:766, D 39; 40
2. Teliospores beneath the epidermis; chiefly N. Hem. Pucciniastrum 7:762, D 40

Order 16. USTILAGINALES

Parasites chiefly in the interior of plant tissues and especially in fruits and flowers, mycelium usually inconspicuous until fruiting occurs; asci represented by erect parallel fertile hyphae in a few genera, but for the most part no longer recognizable in the hyphal knots in which the spores are produced; sporogenous hyphae disappearing at maturity to leave a dense mass of spores, often in a gall-like deformation of the host-organ; conidia often present; spores germinating to produce a promycelium bearing sporidioles, or sometimes developing into a mycelial thread, simple, variously colored or ornamented.

Key to Families

- A. Promycelium septate transversely, bearing sporidioles at the septa and apex Ustilaginaceae p. 154
- B. Promycelium simple, bearing a crown of whorled conidia Tilletiaceae p. 155

Family 65. USTILAGINACEAE

Dietel 6; 7:449

Spores typically arising from the complete division of the mycelium to form powdery masses, single or united in balls, but rarely agglutinate; promycelium

septate transversely, the sporidioles arising at the septa and usually the apex also, often increasing further by proliferation; mycelium rarely produced directly from the promycelium.

- A. Spores single, not united in balls**
1. Sori traversed by many sterile bundles of hyphae Farysia 23:631, D 13
 2. Sori without sterile hyphal bands
 - a. Spores powdery
 - (1) Sori with a more or less permanent peridium Sphacelotheca 7:499, D 11; 40
 - (2) Sori without a peridium Ustilago 7:741, D 7; 40
 - b. Spores agglutinate into a carbonous mass
 - (1) Sori produced in chambers within the host-plant; Polygonum Melanopsichium 17:484, D 11
 - (2) Sori on the surface of the host-plant, at first with a thin peridium Cintractia 7:480, D 12
- B. Spores united by pairs or in balls**
1. Spores united by pairs
 - a. Sori with a double peridium; Cissus, Tropics Mycosyrinx 17:484, D 14
 - b. Sori without peridium; Carex, Elyna, Eur., Am. Schizonella 7:500, D 14
 2. Spores united in larger numbers in balls
 - a. Spores loosely united, readily separable by pressure Sorosporium 7:511, D 14; 40
 - b. Spores firmly united
 - (1) Spore-balls fertile throughout
 - (a) Promycelium simple or dichotomous with a single apical sporidiole Thecaphora 7:507, D 14
 - (b) Promycelium simple, sporidioles lateral and terminal; chiefly Poaceae Tolyposporium 7:501, D 15; 40
 - (c) Promycelium ramose, sporidioles lateral; Andropogon, N. A. Tolyposporella 14:427, D 15
 - (2) Spore-balls with fertile surface, sterile interior; Cyperaceae, Am. Testicularia 7:150, D 15

Family 66. TILLETIACEAE

Dietel 16; 7:481

Spores massed in superficial or erumpent sori or permanently included in the tissues of the host-plant, single or united in balls and then often associated with sterile empty spores; promycelium simple, with apical whorls of sporidioles; spores colored or hyaline.

- A. Spores single**
1. Spores with simple membrane
 - a. Sporidioles not more than 12 in each whorl
 - (1) Sori powdery, largely in fruits; chiefly Poaceae Tilletia 7:481, D 16; 40
 - (2) Sori not powdery, in leaves and stems
 - (a) Spores bright-colored to brownish Entyloma 7:487, D 17; 40
 - (b) Spores dark brown Melanotaenium 7:496, D 18
 - (3) Sori in galls on roots; mostly Juncaceae and Cyperaceae Entorrhiza 7:497, D 19

- b. Sporidioles very many in a terminal head;
Poaceae, N. Hem. *Neovossia* 16:375, D 19
2. Spores with double membrane, inner layer hyaline, outer dark-brown; Rhynchospora, Brazil *Perichlamys* 14:430, D 19
- B.** Spores united in groups of several to many
1. Spore-balls with very inconspicuous sterile spores on the surface *Tuburcinia* 7:507, D 19
2. Spore-balls with distinct sterile spores on the surface or inside
- a. Fertile spores few in each ball
- (1) Sori with a peridium; Solanum, S. A. *Polysaccopsis* 16:381, D 22; 40
Urocystis 7:515, D 20
- (2) Sori without peridium
- b. Fertile spores many in each ball; on hydrophytes
- (1) Spore-balls with a single outer layer of fertile spores
- (a) Interior of ball filled with a network of hyphae; Hydrocharis, Spirodela, N. Hem. *Tracya* 11:236, D 22
- (b) Interior of ball filled with sterile parenchymic cells; Potamogeton, Sagittaria *Doassansiosis* 23:630, D 23
- (2) Spore-balls with fertile spores in the interior
- (a) Spore-balls with a surface layer of sterile spores *Doassansia* 7:502, D 24; 40
- (b) Spore-balls without sterile surface layer; N. A. *Burrillia* 11:236, D 24

Addendum. GRAPHIOLACEAE

Sori erumpent, single or several enclosed in a compact black peridium; sporogenous hyphae arising from the base, erect, dense, typically producing lateral whorls of four initials which divide transversely to form spores; parasites on leaves of palms.

This family is of very uncertain relationship and has often been included in the *Deuteromycetes*.

- A.** Sori single, typically with inner peridium; sporogenous hyphae, separated by hyphal bundles, falling apart after the production of spore-initials; spores globose or oblong *Graphiola* 7:522
- B.** Sori several in a stroma, inner peridium lacking; sporogenous hyphae not separated by hyphal bundles, and not falling apart but shrunken and persistent; spores mostly triangular, plate-like *Stylina*

BASIDIOMYCETES

Order 17. TREMELLALES

Killermann 103

Pileus typically gelatinous, horny when dry, reviving when wet, sometimes waxy, membranous or coriaceous, but then with divided basidia; hymenium regularly amphigenous or superior, smooth or somewhat convolute, occasionally enclosed in a more or less definite peridium; basidia globose to terete, transversely or vertically divided, or in one family merely terete-clavate and furcate, 1-4-sterigmate; spores mostly simple occasionally septate; conidia often present with the spores.

This order is related on the one hand to the **Uredinales** and **Ustilaginales**, and on the other to the **Agaricales**, the septate or furcate basidia distinguishing it from the latter especially. The form of the pileus often suggests that of several other families, **Clavariaceae**, **Hydnaceae**, etc.; in the case of **Dacryomitra** it closely resembles a tiny **Morchella** or **Verpa**.

Key to Families

- A. Basidia septate
 - 1. Basidia transversely septate, elongate-cylindric, sterigmata lateral Auriculariaceae p. 157
 - 2. Basidia vertically or cruciately 2-4-divided, sterigmata terminal, usually subulate Tremellaceae p. 158
- B. Basidia not septate, cylindric-clavate, with 2 blunt terminal sterigmata Dacryomycetaceae p. 159

Family 67. AURICULARIACEAE

6:762; K 105

Characters of the order, but the basidia transversely septate, elongate-cylindric and the sterigmata terminal; hymenium enclosed in a more or less definite peridium in a few genera perhaps better referred to the **Gasteromycetes**.

- A. Hymenium exposed, without peridium
 - 1. Pileus or at least the hymenium gelatinous
 - a. Entire pileus gelatinous
 - (1) Pileus crustose, effuse or convex
 - (a) Basidia with piriform basal cell, but no sterile threads inmixed Jola 14:245, K 106
 - (b) Basidia with sterile threads inmixed, but no piriform basal cell Platygløea 6:771, K 106; 41
 - (2) Pileus large, firm, free, more or less ear-shaped Hirneola 6:764, K 108; 41
 - b. Hymenium alone gelatinous, lower layer coriaceous; pileus large, free, more or less ear-shaped Auricularia 6:762, K 108; 41
 - 2. Pileus not at all gelatinous, byssoid or coriaceous
 - a. Pileus byssoid
 - (1) Basal cell of basidia bearing a lateral saccate cell Saccoblastia 14:244; 41
 - (2) Basidia without lateral saccate cell Helicobasis 6:666, K 106

- b. *Pileus corioides*
 (1) Basidia at first globose, then cylindrical **Septobasidium 11:118, K 107**
 (2) Basidia clavate **Patouillardina K 108**
- B. Hymenium with more or less complete and definite peridium
1. *Pileus* from waxy to fleshy or gelatinous; spores hyaline **Pilacrella 14:246, K 109**
2. *Pileus* becoming powdery; spores dark **Pilacre 4:579, K 109**

Family 68. TREMELLACEAE

6:780; K 111

Characters of the order, but the basidia vertically or cruciately 2-4-divided, sterigmata terminal, usually subulate; typically gelatinous or fleshy-waxy; an incomplete peridium present in one genus.

- A. Hymenium exposed, without peridium
1. Basidia seriate, obliquely septate; *pileus* globoid, gelatinous **Sirobasidium 14:248, K 111**
2. Basidia not seriate, cruciately divided by 3 vertical septa
- a. *Pileus* with spines
- (1) *Pileus* crustose **Protohydnum 14:251, K 118**
- (2) *Pileus* more or less irregularly cap-shaped, often with lateral stalk; spines inferior **Tremellodon 6:479, K 119; 42**
- b. *Pileus* without spines
- (1) *Pileus* byssoid **Stypella 14:246, K 113**
- (2) *Pileus* crustose, applanate or cupuloid, hymenium mostly smooth
- (a) Hymenium wrinkled or alveolate **Protomerulius 11:142, K 117**
- (b) Hymenium with setose papillae **Heterochaete 14:247, K 113**
- (c) Hymenium smooth
- x. *Pileus* more or less cupuloid
- (x) *Pileus* hairy; spores obovate **Gloeosoma K 115**
- (y) *Pileus* not hairy; spores cylindrical, often curved **Hirneolina 17:208, K 114; 41**
- y. *Pileus* applanate
- (x) *Pileus* fleshy-gelatinous, mostly lilac-red **Tulasnella 14:234, K 114**
- (y) *Pileus* more or less waxy
- m. Spores reniform; conidia ovoid **Sebacina 6:540, K 113; 41**
- n. Spores ovoid to oblong, curved; conidia hamate **Exidiopsis 14:248, K 115**
- (3) *Pileus* thick-gelatinous, folded or ascending, often convolute-funneliform
- (a) *Pileus* typically dark, often folded
- x. *Pileus* papillose; spores reniform **Exidia 6:772, K 115; 41**
- y. *Pileus* not papillose; spores cylindrical, curved **Craterocolla 6:778, K 115**
- (b) *Pileus* usually yellow to brown or red, convolute, foliose or funneliform
- x. Spores hyaline **Seismosarca 9:260, K 117**
- (x) Hymenium with gloeocystidia
- (y) Hymenium without gloeocystidia

- m. Pileus cerebroid or convolute-foliose Tremella 6:780, K 115; 41
- n. Pileus funnellform; hymenium more
or less ridged Gyrocephalus 6:795, K 117
Phaeotremella 23:580, K 117
- y. Spores dark; pileus of Tremella
- B. Hymenium in a more or less complete stalked
peridium Hyaloria 14:252, K 119

Family 69. DACRYOMYCETACEAE

6:796; K 119

Characters of the order, but the basidia not septate, cylindric-clavate, with 2 blunt terminal sterigmata; pileus typically gelatinous, golden-yellow.

- A. Pileus crustose, waxy; spores 2-celled Ceracea 6:805, K 120
- B. Pileus pulvinate, gelatinous; spores x-celled Dacryomyces 6:796, K 120; 41
- C. Pileus erect, cupulate or stalked
 - 1. Pileus only partly covered with hymenium
 - a. Pileus cupulate, fleshy; spores x-celled, very
large Femsjonia 6:779, K 122
 - b. Pileus stalked
 - (1) Pileus capitate, firm-fleshy; spores 2-celled Ditiola 6:813, K 120
 - (2) Pileus spatulate or cornucopiod, gelati-
nous; spores x-celled Guepinia 6:805, K 120; 41
 - 2. Pileus covered with hymenium on all sides
 - a. Pileus clavate or capitate, simple, gelatinous;
hymenium often ridged Dacryomitra 6:811, K 122; 41
 - b. Pileus subulate or ramose, Clavaria-like, car-
tiliginous Calocera 6:732, K 123; 42

Order 18. AGARICALES

Pileus rarely gelatinous, sometimes waxy, membranous or woody, but chiefly leathery or fleshy, crustose or resupinate to dimidiate or cap-like, rarely cupulate or byssoid, typically stalked in the fleshy forms; hymenium superior, amphigenous or regularly inferior in dimidiate and pileate species, ranging from smooth, warted or convolute to teeth, tubes, or lamellae; basidia simple, more or less clavate, typically 4-sterigmate, often intermixed with cystidia; spores mostly simple, hyaline or colored.

This order has evidently been derived from the Tremellales, and it passes gradually into the Lycoperdales, from the most highly specialized family, Agaricaceae. The pileus and hymenium are often most variable, with the consequence that family and generic criteria are obscured.

Key to Families

- A. Pileus byssoid or lacking Hypochnaceae p. 160
- B. Pileus present, firm, crustose to cap-like
 - 1. Hymenium smooth, or merely warted or
wrinkled
 - a. Pileus resupinate, dimidiate, cupulate or fun-
nel-form, typically leathery or membra-
nous Thelephoraceae p. 160
 - b. Pileus typically clavate, filiform or coralloid,
and fleshy Clavariaceae p. 162

- | | |
|---|----------------------------|
| 2. Hymenium modified into teeth, tubes or gills | |
| a. Hymenium of teeth or tooth-like granules | Hydnaceae p. 162 |
| b. Hymenium of tubes or pores | Polyporaceae p. 163 |
| c. Hymenium of gills or rarely of gill-like veins | Agaricaceae p. 164 |

The line of evolution is practically continuous from the **Thelephoraceae** through **Hydnaceae** and **Polyporaceae** to the **Agaricaceae**, while the **Clavariaceae** are probably a lateral offshoot of the first family. The **Hypochnaceae** may be regarded as primitive or reduced forms, but the predominance of parasitism indicates the latter, corresponding to **Exascaceae** among **Ascomycetes**.

Family 70. HYPOCHNACEAE

Killermann 131-133

Pileus lacking or byssoid, rarely somewhat crustose, mostly parasitic and often forming galls; hymenium loose, of simple clavate basidia mostly with 2-6 sterigmata; spores typically simple, hyaline or colored, smooth or spiny.

- | | |
|---|-------------------------------------|
| A. Pileus present, byssoid, loose; saprogenous as a rule | |
| 1. Spores globose or subglobose, spinose or asperate, usually yellow; basidia 4- (2-6) sterigmate | |
| a. Cystidia present | Tomentellina K 134 |
| b. Cystidia lacking | Hypochnus 6:653, K 133; 42 |
| 2. Spores cylindrical to bacillar, smooth; basidia 6-x-sterigmate | Aureobasis 11:131, K 134 |
| B. Pileus reduced to a loose group of basidia; typically biogenous and usually folicole | |
| 1. Spores 1-celled | |
| a. Spores globose; basidia obpiriform, 2-sterigmate | Urobasidium 11:131, K 131 |
| b. Spores oblong to fusoid | |
| (1) Basidia cylindrical, 2-sterigmate | Kordyana 16:199, K 132 |
| (2) Basidia clavate, x- (mostly 6) sterigmate | Microstroma 4:9, K 131; 53 |
| 2. Spores finally x-celled, mostly curved; basidia 4-sterigmate | |
| (1) Cystidia present, clavate, fascicled | Botryoconis |
| (2) Cystidia lacking or not fascicled | Exobasidium 6:664, K 131; 42 |

Family 71. THELEPHORACEAE

6:513; K 135

Pileus resupinate to dimidiate, funnellform or cupuloid, leathery or membranous, more rarely waxy, fleshy, gelatinous or corky; hymenium superior, inferior or amphigenous, smooth or with flat tubercles or ridges; cystidia or papillae frequently present, highly variable; spores simple, hyaline or dark.

Generic distinctions are exceedingly difficult to draw in this family on the basis of form, texture and hymenial surface, and this difficulty has been aggravated by the attempt to base genera upon the form of the various outgrowths of the hymenium. The terminology employed for these has been indefinite and confused, and it is impossible to draw a clear line between papillae, spines, cystidia, gloeocystidia and paraphyses (dendrophyses, dichophyses, etc.).

- A. Parasitic on algae**
1. Algae *Chroococcus*
 - a. Algae in middle layer, medulla above and below
Cora 6:685, Z 259
 - b. Algae in upper layer, medulla below only
Corella Z 261
 2. Algae *Scytonema*
Dictyonema 6:687, Z 261
- B. Not parasitic on algae**
1. Pileus resupinate, effuse, rarely cupuloid when mature
 - a. Pileus consisting of one layer
 - (1) Spores hyaline
 - (a) Basidia forming an even layer with the much branched paraphyses
Asterostromella 21:381, K 142
 - (b) Hymenial layer with projecting papillae or cystidia
 - x. Papillae present, of fascicled hyphae
 - (x) Papillae feathery
Epithele 21:381, K 140
 - (y) Papillae columnar, smooth or asperate
Bonia 11:123, K 140
 - y. Cystidia present, stellate or simple
 - (x) Cystidia stellate
Asterostroma 9:236, K 140
 - (y) Cystidia simple
 - m. Cystidia typically subulate
Peniophora 6:640, K 138
 - n. Cystidia spinose or short-branched, often blunt
Aleurodiscus K 142
 - (c) Cystidia lacking
Corticium 6:603, K 136; 42
 - (2) Spores dark
 - (a) Cystidia present
Coniophorella 17:183, K 141
 - (b) Cystidia lacking
Coniophora 6:647, K 140; 42
 - b. Pileus consisting of several layers
 - (1) Cystidia present, hyaline or dark
Hymenochaete 6:588, K 144
 - (2) Cystidia lacking
Stereum 6:551, K 143; 42
 2. Pileus typically erect, funnelliform, cupulate, terete or clavate, often stipitate
 - a. Pileus leathery
 - (1) Pileus urceolate, small, hard; hymenium smooth
Hypolyssus 6:521; K 148
 - (2) Pileus large, funnelliform, flabelliform or clavarioid
 - (a) Hymenium with ramose ribs; pileus funnelliform
Cladoderris 6:547, K 148
 - (b) Hymenium smooth or roughened, not ribbed
Thelephora 6:521, K 146; 42
 - b. Pileus firm-fleshy or fleshy-gelatinous
 - (1) Pileus clavate, margin involute; cystidia present
Skepperia 6:603, K 148
 - (2) Pileus scutellate to funnelliform or clavate; cystidia lacking
 - (a) Pileus scutellate; hymenium smooth
Cytidia 21:380, K 142
 - (b) Pileus funnelliform to clavate; hymenium ribbed
Craterellus 6:514, K 148; 42
 - c. Pileus membranous, cupulate to cylindrical
 - (1) Pileus cupulate, single
Cyphella 6:667, K 149
 - (2) Pileus cylindrical, cespitose
Solenia 6:424, K 149; 42

Family 72. CLAVARIACEAE

6:690; K 151

Pileus erect, simple or much branched, clavate or capitate to coralloid, rarely foliose, typically fleshy, sometimes leathery or waxy, rarely subgelatinous; hymenium smooth, not discrete, amphigenous; cystidia lacking; spores typically simple, hyaline, rarely brownish.

- A. Pileus with many crowded leaf-like branches; fleshy Sparassis 6:690, K 157; 42
- B. Pileus without leaf-like branches
 - 1. Pileus capitate, hollow, more or less globoid, waxy Physalacria 6:759; K 151; 42
 - 2. Pileus not capitate and hollow, but filamentous, clavate or coralloid
 - a. Pileus typically fleshy, large and coralloid, sometimes filamentous or clavate Clavaria 6:692, K 152; 42
 - b. Pileus waxy, cartilaginous or leathery, small, simple or ramose
 - (1) Pileus tomentose, leathery, much branched Lachnocladium 6:738, K 156
 - (2) Pileus not tomentose, mostly simple
 - (a) Pileus simple, clavate to filamentous
 - x. Stipe short or none; basidia 2-sterigmate Pistillaria 6:752, K 152; 42
 - y. Stipe long-filiform, usually from a sclerotium; basidia 4-sterigmate Typhula 6:743, K 152
 - (b) Pileus ramose, cartilaginous Pterula 6:740, K 156

Family 73. HYDNACEAE

6:429; K 158

Pileus resupinate, dimidiate or cap-like, occasionally coralloid, leathery, corky or fleshy; hymenium typically with teeth or warts, sometimes pore-like or lamelloid, occasionally wrinkled, exceptionally reduced to groups of teeth without a pileus; cystidia often present; spores simple, hyaline or dark.

- A. Hymenium consisting of crests or warts
 - 1. Hymenium of crests or ridges
 - a. Crests with edge incised; pileus membranous Lopharia 6:500, K 161; 43
 - b. Crests not incised; pileus fleshy-waxy Phlebia 6:497; K 160
 - 2. Hymenium with warts or granules
 - a. Warts semi-globose, smooth; cystidia lacking Grandinia 6:500, K 160
 - b. Warts penicillate, ciliate; cystidia present Odontia 6:506, K 159; 43
- B. Hymenium consisting of teeth, often poriform or lamelloid
 - 1. Teeth distinct
 - a. Hymenophore lacking; teeth subulate, recurved, cespitose Mucronella 6:512, K 159
 - b. Hymenophore present
 - (1) Cystidia present; pileus resupinate
 - (a) Cystidia simple; pileus corky Hydnochaete 14:211, K 162; 43
 - (b) Cystidia stellate; pileus floccose-membranous Asterodon 11:111, K 162
 - (2) Cystidia lacking
 - (a) Pileus crustose, waxy; teeth blunt, stout Radulum 6:493, K 161; 43

- (b) Pileus mostly cap-like and stipitate, sometimes coralloid, leathery to woody or fleshy; teeth usually long and subulate
Hydnum 6:430, K 162; 43
2. Teeth forming pore- or lamella-like structures
- a. Hymenium porous-reticulate, crustose
- (1) Gloeocystidia present
Gloeothele K 169
- (2) Gloeocystidia lacking
Grammothele 6:505, K 169
- b. Hymenium with more or less lamella-like teeth; pileus cap-like to crustose
- (1) Teeth with spiny-serrate margins
Echinodontium 16:176, K 168
- (2) Margins not spiny-serrate
- (a) Pileus leathery, mostly crustose to dimidiate
Irpex 6:482, K 166
- (b) Pileus mostly fleshy, pileate and stipitate
Sistotrema 6:480, K 168

Family 74. POLYPORACEAE

6:1; K 169

Pileus resupinate, dimidiate or cap-like, rarely volvate or annulate, fleshy, leathery or woody, exceptionally waxy or gelatinous; hymenium concrete with the hymenophore or readily separable from it, consisting of pores arranged regularly or irregularly, sometimes lamelloid, very rarely rudimentary and reticulate; cystidia often present, multiform; spores typically 1-celled, hyaline or colored.

- A. Pileus tough-fleshy to leathery or woody, rarely gelatinous or waxy
1. Pileus waxy or gelatinous, at least the hymenium; pores mostly alveolate or reticulate
- a. Pileus waxy; hymenium with shallow net-like pores
Merulius 6:411, K 171; 45
- b. Pileus gelatinous, at least the hymenium; pores alveolate
- (1) Entire pileus gelatinous
Laschia 6:404, K 202
- (2) Hymenium alone gelatinous
Gloeoporus 6:403, K 202
2. Pileus tough-fleshy to leathery, corky or woody, sometimes perennial; hymenium concrete with hymenophore; tubes grown together
- a. Hymenium covered by a volva-like membrane
Cryptoporus 17:125, K 177; 43
- b. Hymenium not volvate
- (1) Pileus with tubes in layers, woody, perennial
Fomes 6:150, K 188; 43
- (2) Tubes not stratified in layers
- (a) Pores rounded, mostly small and crowded
- x. Pileus tough-fleshy, thick, stipitate to dimidiate
Polyporus 6:55, K 177; 43
- y. Pileus coriaceous or membranous, thin
- (x) Pileus resupinate
- m. Tubes wart-like, separate
Poria 6:292, K 174
- n. Tubes not separate
Porothelium 6:421, K 174
- (y) Pileus stipitate to dimidiate
Polystictus 6:208, K 184
- z. Pileus suberose, typically resupinate to dimidiate; tubes unequally sunken
Trametes 6:334, K 194; 43

- (b) Pores hexagonal, large; pileus leathery to corky, mostly dimidiate **Hexagonia 6:356, K 196**
- (c) Pores elongate, the tubes lamelloid, sometimes passing into distinct lamellae
- x. Pileus resupinate; hymenium with fine forked parallel veins **Hymenogramme 5:652, K 200**
- y. Pileus dimidiate to cap-like and stipitate
- (x) Lamellae concentric **Cyclomyces 6:389, K 200; 45**
- (y) Lamellae not concentric
- m. Hymenium labyrinthine, the pores multiform
- (m) Pores with crowded cystidia **Elmerina 23:453, K 201**
- (n) Pores without cystidia **Daedalea 6:370, K 197; 43**
- n. Hymenium radiately lamelloid or lamellose
- (m) Lamellae mostly continuous and distinct; pileus typically dimidiate **Lenzites 5:637; K 199**
- (n) Lamellae forking regularly to form elongate rhomboidal pores; pileus mostly stipitate **Favolus 6:390, K 200**
- B. Pileus fleshy, typically putrescent, rarely tough**
1. Pileus fleshy and putrescent; hymenium separable from hymenophore; tubes concrete
- a. Pileus fleshy-membranous, small and delicate; spores hyaline, cylindrical **Filoboletus 16:142, K 209**
- b. Pileus fleshy, large; spores typically colored, globose to fusoid
- (1) Pileus and stipe beautifully squarrose-scaly; spores dark-brown, verrucose **Strobilomyces 6:49, K 209; 43**
- (2) Pileus and stipe not squarrose-scaly; spores smooth
- (a) Pores round or polygonal
- x. Hymenium separating readily from hymenophore **Boletus 6:2, K 205**
- y. Hymenium not separating readily; pores compound **Boletinus 6:51**
- (b) Pores tortuose, labyrinthine **Gyrodon 6:51, K 209**
- (c) Pores lamelloid **Phylloporus 21:255, K 210**
2. Pileus fleshy, becoming somewhat tough, spatulate; hymenium not separable; tubes discrete **Fistulina 6:54, K 203; 43**

Family 75. AGARICACEAE

5:8; K 210

Pileus typically cap-shaped and stipitate, occasionally excentric, lateral, dimidiate or inverted, fleshy to leathery, corky or woody, sometimes enclosed in a cap-veil that persists at the base of the stipe as a volva; hymenium of radiating lamellae or gills, rarely of ridges or veins, often protected by a gill-veil that usually remains on the stipe as a ring, regularly inferior; gills covered with basidia bearing typically 4 sterigmata and spores, sometimes with cystidia; spores typically 1-celled, hyaline or variously colored.

Leucosporae

5:8; K 247

Spores hyaline, white or only very dilutely colored even in spore-prints, green in a few species, globose to fusoid, smooth or rough.

- A. Edge of the gills split or revolute; pileus leathery; stipe none or lateral Schizophyllum 5:654, K 253; 44
- B. Edge of gills normal
1. Pileus fleshy and putrescent, rarely reviving when wet
- a. Edge of gills obtuse or gills fold-like
- (1) Gills decurrent, dichotomous, somewhat waxy Cantharellus 5:482, K 248; 44
- (2) Gills not decurrent
- (a) Gills thick; pileus typically agaricole Nyctalis 5:499, K 252
- (b) Gills thin, vein-like; pileus not agaricole Arrhenia 5:498, K 248
- b. Edge of gills acute
- (1) Trama of pileus more or less vesiculose; spores globose or globoid, usually spiny
- (a) Gills with white or bright-colored milky sap Lactarius 5:423, K 260
- (b) Gills without milky sap Russula 5:453, K 262
- (2) Trama of pileus not vesiculose; spores typically smooth
- (a) Gills more or less fleshy and separable into two layers
- x. Stipe excentric or none; pileus sometimes inverted Pleurotus 5:339, K 266
- y. Stipe central or nearly so
- (x) Hymenophore discrete from the fleshy stipe
- m. Stipe volvate
- (m) Stipe annulate Amanita 5:8, K 280; 44
- (n) Stipe not annulate Amanitopsis 5:20, K 283
- n. Stipe not volvate
- (m) Stipe annulate Lepiota 5:27, K 276; 44
- (n) Stipe not annulate Schulzeria 5:72, K 278
- (y) Hymenophore homogeneous and confluent with the fleshy or fibrous-elastic stipe
- m. Stipe annulate, without a volva Armillaria 5:73, K 278
- n. Stipe not annulate or volvate
- (m) Gills sinuate or adnate, not decurrent Tricholoma 5:87, K 274; 44
- (n) Gills typically decurrent Clitocybe 5:141, K 272
- (z) Hymenophore confluent with the cartilaginous stipe but heterogeneous from it
- m. Gills decurrent; cap umbilicate Omphalia 5:308, K 267
- n. Gills not decurrent
- (m) Cap very thin, diaphanous, ephemeral, but not diffuent; typically tropical Hiatala 5:305, K 271

- (n) Cap not diaphanous and ephemeral
 - r. Margin of the young cap turned in
 - s. Margin of the young cap straight
- (b) Gills waxy rather than fleshy, splitting with difficulty
- 2. Pileus fleshy-leathery, leathery, corky or woody, persistent, reviving when wet
 - a. Pileus fleshy-leathery or gelatinous-leathery
 - (1) Gills wide, distinct
 - (a) Stipe discrete from the hymenophore; gills not decurrent
 - x. Pileus tough-fleshy or leathery
 - y. Pileus gelatinous-leathery
 - (b) Stipe and hymenophore continuous; gills decurrent; stipe often lateral or lacking
 - x. Edge of gills acute
 - (x) Edge typically serrate
 - (y) Edge entire
 - y. Edge of gills obtuse; gills dichotomous
 - (2) Gills fold-like, edges canaliculate or crisp
 - b. Pileus corky or woody
 - (1) Gills tomentose
 - (2) Gills glabrous

Collybia 5:200, K 271; 44

Mycena 5:251, K 268

Hygrophorus 5:387, K 250

Marasmius 5:503, K 256; 44

Heliomyces 5:569, K 259

Lentinus 5:571, K 254

Panus 5:614, K 253

Xerotus 5:630, K 256

Trogia 5:635, K 253; 44

Tilotus 5:652

Lenzites 5:637, K 199

Rhodosporae

5:656; K 241

Spores rosy, salmon-colored or rosy-rust-colored in spore-prints, paler under the microscope.

- A. Stipe excentric or none; typically lignicole
- B. Stipe central or nearly so
 - 1. Hymenophore discrete from stipe
 - a. Stipe volvate
 - (1) Stipe annulate also
 - (2) Stipe not annulate
 - b. Stipe not volvate
 - (1) Stipe annulate
 - (2) Stipe not annulate
 - 2. Hymenophore homogeneous and confluent with the stipe
 - a. Gills decurrent
 - (1) Stipe fleshy-fibrous
 - (2) Stipe cartilaginous
 - b. Gills adnexed, sinuate or free
 - (1) Stipe fleshy-fibrous; gills sinuate
 - (2) Stipe cartilaginous; gills not sinuate
 - (a) Cap convex; margin at first inflexed
 - (b) Cap campanulate; margin straight from the first

Claudopus 5:733, K 241; 45

Metraria 9:82, K 246

Volvaria 5:656, K 246

Annularia 5:663, K 246

Pluteus 5:665, K 244; 45

Clitopilus 5:698, K 243; 45

Eccilia 5:729, K 242

Entoloma 5:679, K 244; 45

Leptonia 5:706, K 242

Nolanea 5:716, K 242

Ochrospora

5:735; K 216

Spores ochraceous to dark ferruginous

- A.** Gills separating readily from hymenophore, decurrent; margin more or less persistently involute Paxillus 5:983, K 216
- B.** Gills not separating readily from hymenophore
1. Gill-veil cobwebby, hanging curtain-like from the margin, often disappearing completely with age Cortinarius 5:889, K 222
2. Gill-veil not cobwebby Crepidotus 5:876, K 217; 45
- a.** Stipe excentric or none; typically lignicole
- b.** Stipe central or nearly so
- (1) Stipe volvate or annulate
- (a)** Stipe volvate Locellina 5:761, K 216, 229
- (b)** Stipe annulate Pholiota 5:736, K 227
- (2) Stipe not volvate or annulate
- (a)** Pileus and gills very delicate, deliquescing Bolbitius 5:1073, K 220
- (b)** Pileus and gills not deliquescing
- x.** Stipe fleshy
- (x)** Gills adnate or decurrent; typically lignicole Flammula 5:809, K 226; 45
- (y)** Gills mostly sinuate; typically humicole
- m.** Pileus fibrillose, silky or scaly Inocybe 5:672, K 220
- n.** Pileus smooth, typically viscid Hebeloma 5:791, K 227
- y.** Stipe cartilaginous
- (x)** Gills decurrent Tubaria 5:872, K 218
- (y)** Gills not decurrent
- m.** Margin of pileus inflexed at first Naucoria 5:828, K 218; 45
- n.** Margin of pileus straight from the first
- (m)** Stipe discrete from hymenophore; gills free Pluteolus 5:859, K 218
- (n)** Stipe homogeneous with hymenophore; gills adnate or adnexed Galera 5:860, K 217

Melanosporae

5:991; K 230

Spores purple to dark-purple or black, or the gills black

- A.** Spores purple or dark-purple
1. Hymenophore discrete from stipe
- a.** Stipe volvate
- (1) Stipe annulate also Chitoniella 14:149, K 241
- (2) Stipe not annulate Chitonia 5:992, K 241
- b.** Stipe not volvate
- (1) Stipe annulate Agaricus 5:993, K 239; 45
- (2) Stipe not annulate Pilosace 5:1010, K 241
2. Hymenophore continuous with stipe
- a.** Stipe annulate Stropharia 5:1012, K 237

- b. Stipe not annulate or only slightly so
- (1) Margin of pileus cortinate; stipe sometimes with incomplete or vanishing annulus *Hypholoma* 5:1027, K 237; 45
- (2) Margin of pileus not cortinate
- (a) Gills decurrent *Deconica* 5:1058, K 235
- (b) Gills not decurrent
- x. Margin of pileus inflexed at first *Psilocybe* 5:1043, K 235
- y. Margin of pileus straight from the first *Psathyra* 5:1060, K 235
- B. Spores dark or black, not purple
1. Gills deliquescing into a black fluid *Coprinus* 5:1070, K 231; 45
2. Gills not deliquescing
- a. Gills exposed above, the trama remaining as a volva at the base of stipe; stipe expanded into a disk bearing the gills *Montagnites* 5:1140, K 230
- b. Pileus and gills normal
- (1) Pileus fleshy or fleshy-membranous
- (a) Spores globose to elliptic; gills not decurrent
- x. Stipe annulate *Anellaria* 5:1125, K 235
- y. Stipe not annulate
- (x) Pileus fleshy, not striate; gills variegated *Panaeolus* 5:1118, K 234
- (y) Pileus membranous, striate; gills uniform *Psathyrella* 5:1126, K 234
- (b) Spores elongate, fusoid; gills decurrent *Gomphidius* 5:1137, K 230; 45
- (2) Pileus leathery-horny; spores minute, globose, hyaline *Anthracophyllum* 5:1139, K 256

Order 19. LYCOPERDALES

Spore-body consisting of a fertile gleba with or without hymenium, borne on a receptacle arising from a volva or with a closed peridium that opens variously at maturity, typically terrestrial, hypogean in one family, occasionally lignicole; spores borne on basidia, 1-celled, hyaline or colored.

Key to Families

- A. Gleba more or less gelatinous, enclosed at first in a volva, then raised on a receptacle, the latter usually stalked *Phallaceae* p. 169
- B. Gleba firm or powdery, rarely gelatinous, without volva or receptacle but enclosed in a peridium
1. Peridium epigeal
- a. Gleba typically powdery or cellular, enclosed in a peridium opening by a definite mouth or irregularly *Lycoperdaceae* p. 170
- b. Gleba enclosed in seed-like peridioles borne in a globoid to funnelliform peridium *Nidulariaceae* p. 173
2. Peridium hypogean, regularly closed *Hymenogastraceae* p. 172

This order is closely connected with the **Agaricales**, the **Lycoperdaceae** probably having been evolved from the **Agaricaceae** through such genera as **Gyrophragmium**, **Secotium** and **Podaxon**. The **Phallaceae** have apparently been derived from some point on this same phylum, while the **Hymenogastraceae** are thought to represent hypogean forms arising from both families. The **Nidulariaceae** are most closely related to such types as **Pisolithus** with peridioles.

Family 76. PHALLACEAE

7:2; Fischer 276

Gleba more or less gelatinous, borne on a receptacle at first enclosed in a volva, the receptacle pileiform and stalked, or more or less clathrate and usually sessile.

- A.** Gleba covering outside of receptacle, the latter pileiform or stalk-like, sometimes appendaged
1. Receptacle pileiform; gleba on outer surface of pileus
 - a. Stalk with an appendage below the pileus
 - (1) Appendage long, net-like; volva smooth; gleba not becoming lattice-like **Dictyophora 7:3, F 295; 46**
 - (2) Appendage short, hidden, collar-like; volva aculeate; gleba becoming lattice-like **Echinophallus 16:226, F 295**
 - b. Stalk without appendage
 - (1) Upper part of volva remaining on pileus and enclosing the gleba **Cryptophallus 14:254**
 - (2) Upper part of volva not enclosing gleba at maturity
 - (a) Gleba continuous over apex of pileus **Aporophallus 11:153**
 - (b) Gleba interrupted at apex of pileus, more or less reticulate **Phallus 7:8, F 292; 46**
 2. Receptacle without hanging pileus; gleba borne directly on the apex of the stalk-like receptacle **Mutinus 7:12, F 290, 555; 46**
- B.** Gleba on inside of the hollow receptacle, which is clathrate or lobed
1. Receptacle hollow and clathrate, or formed of a few vertical branches united at apex
 - a. Receptacle stalked
 - (1) Gleba dimorphous, apex with sterile radiate lamellae, lower part with convolute subclathrate lobes **Dictyobole 17:213; 46**
 - (2) Gleba not dimorphous
 - (a) Meshes of the gleba polygonal, in several series **Simblum 7:16, F 284; 46**
 - (b) Meshes of the gleba vertically elongate, in a single series **Colus 7:21, F 285; 46**
 - b. Receptacle sessile or nearly so
 - (1) Walls of the receptacle thick, consisting of several layers of chambers
 - (a) Walls with wing-like appendages **Blumenavia 11:154, F 283**
 - (b) Walls without wing-like appendages **Clathrus 7:18, F 283; 46**

- (2) Walls of the receptacle ribbon-like or delicate
- (a) Walls ribbon-like, hollow; not stipitiform at base **Ileodictyum** F 283
- (b) Walls delicate, with 1-2 layers of chambers; stipitiform at base **Clathrella** 16:228, F 284
2. Receptacle divided above into free laciniae or lobes
- a. Receptacle expanded above into a horizontal border with deeply divided lobes **Aseroe** 7:25, F 288; 46
- b. Receptacle divided directly into lobes
- (1) Receptacle cupulate with many simple lobes **Calathiscus** 7:24, F 289
- (2) Receptacle of a few simple lobes
- (a) Gleba on the outside of the lobes **Lysurus** 7:22, F 286; 46
- (b) Gleba on the inside of the lobes **Anthurus** 7:23, F 286; 46
- (3) Receptacle of many furcate lobes, subcoralloid **Kalchbrennera** 7:14, K 289

Family 77. LYCOPERDACEAE

7:48; Fischer 313-346

Epigeal; gleba powdery or firm, not at all gelatinous, enclosed in a peridium, the latter usually globoid to pyriform, sessile or stipitate, membranous, furnished with a definite mouth or opening more or less irregularly; gleba sometimes with a percurrent or incomplete columella, typically powdery, often with capillitium, or sometimes containing more or less distinct sack-like units; spores 1-celled, hyaline or colored.

- A. Peridium with a percurrent columella, stipitate
1. Gleba lamelloid, poroid or with labyrinthine chambers
- a. Gleba lamelloid or poroid; stipe appendaged
- (1) Gleba with radiate lamellae; capillitium none **Gyrophragmium** 7:51, F 303; 47
- (2) Gleba with vertical tube-like chambers; capillitium present **Polyplocium** 7:55, F 302
- b. Gleba with anastomosing septa or chambers
- (1) Peridium globoid, more or less pileiform at maturity; capillitium none
- (a) Trama-plates or septa decurrent on the stipe **Macowanites** 7:179, F 299; 48
- (b) Trama-plates not decurrent, arising from peridium or upper part of columella **Secotium** 7:51, F 300; 47
Cauloglossum 7:57, F 299; 47
- (2) Peridium clavate **Podaxon** 7:58, F 332; 47
2. Gleba merely spongy, with hyphal strands; capillitium typically present
- a. Peridium opening at base about the stipe **Chaenoderma** 9:268, F 333
- b. Peridium not opening around stipe but splitting lengthwise

- B.** Peridium without percurrent columella, the latter infrequent and incomplete
- 1.** Gleba floccose or at least without distinct sack-like areas
- a.** Peridium with distinct inner and outer walls
- (1) Peridium stalked
- (a) Capillitium present
- x. Endoperidium alone persistent; capillitium not ornamented
- (x) Peridium opening by an apical pore; fixed to stipe *Tylostoma* 7:60, F 342; 47
- (y) Peridium without apical pore, opening irregularly; easily separable from stipe *Queletia* 7:65, F 343
- y. Two or more peridial layers persisting; capillitium typically ornamented
- (x) Endoperidium sack-like, fixed at apex of exoperidium, the mouth with bright-colored teeth; stipe not volvate *Mitromyces* 7:68, F 339; 47
- (y) Endoperidium otherwise
- m. Stipe volvate at base; gleba campanulate *Battarrea* 7:65, F 344
- n. Stipe not volvate at base; gleba globose *Sphaericeps* 7:60, F 345
Battarreopsis 17:223
- (b) Capillitium lacking
- (2) Exoperidium sessile, typically stellate-laciniate; endoperidium usually with one, rarely many mouths
- (a) Columella present, short and incomplete; capillitium sparsely branched *Geaster* 7:70, F 320; 47
- (b) Columella lacking; capillitium much branched *Astraeus* F 341
- b.** Exoperidium a papery, warted or spiny cortex, usually disappearing more or less completely
- (1) Capillitial threads more or less uniform, without larger trunk and smaller branches
- (a) Gleba sterile below, forming a stalk-like base
- x. Peridium with definite apical mouth *Lycoperdum* 7:106, F 316; 47
- y. Peridium without definite mouth, opening by long slits *Calvatia* 7:105, F 316
- (b) Gleba fertile throughout, stalk-like base lacking
- x. Outer peridium circumscissile; inner with basal mouth, becoming inverted *Catastoma* 11:165, F 318; 47
- y. Outer peridium falling away; inner with apical pore or irregular opening *Globaria* F 318
- (2) Capillitial threads with distinct trunk and attenuate branches
- (a) Gleba sterile below *Bovistella* F 319
- (b) Gleba fertile throughout

- x. Endoperidium papery, with apical openings; capillitial threads smooth, long acuminate Bovista 7:96, F 319; 47
- y. Endoperidium thick, opening by irregular lobes; capillitial threads with spiny branches Mycenastrum F 320
- 2. Gleba with distinct sack-like areas or peridioles
 - a. Gleba with peridioles
 - (1) Stipe with persistent cupulate volva; capillitium present Dictyocephalus 17:238
 - (2) Stipe not volvate; capillitium rudimentary Pisolithus 7:146, F 338; 47
 - b. Gleba without peridioles, finally powdery
 - (1) Peridium stalked, corky, opening irregularly; capillitium present Phellorina 7:145, F 334
 - (2) Peridium sessile or nearly so
 - (a) Peridium with two walls, outer firm, splitting stellately, the inner evanescent Sclerangium F 338
 - (b) Peridium with one wall
 - x. Wall not distinct, fleshy; capillitium lacking; spores spiny Corditubera 14:266, F 335
 - y. Wall more or less distinct, leathery or membranous; capillitium rudimentary; spores smooth or warty
 - (x) Gleba with saccules; peridium more or less contracted below, not on a subiculum Scleroderma 7:134, F 336; 47
 - (y) Gleba with elongate seriate chambers; peridium with a broad base arising from a stroma-like subiculum Lycogalopsis F 312
- C. Peridia numerous on a stroma, the latter often stipitate; mouth fimbriate-dentate; capillitium ramose Broomeia 7:93, F 324; 47

Family 78. HYMENOGASTRACEAE

7:154; Fischer 309

Hypogean, rarely if ever truly epigean; gleba fleshy to cartilaginous or somewhat gelatinous, not powdery, but more or less putrescent, usually loculate or with trama-plates, the peridium with wall sometimes poorly developed or even lacking at maturity, irregularly globoid, sometimes with short stalk-like base or rhizoids, astomous, the surface merely cracking or breaking away, or the gleba putrescent; capillitium lacking; spores 1-celled, hyaline or colored.

- A. Trama-plates arising radially from a basal columella-like mass; peridium wall separating readily from gleba, sometimes lacking
 - 1. Peridium wall present
 - a. Peridium volvate
 - (1) Peridium silky, reticulate-sulcate; volva gelatinous; spores yellow, globose, crested Clathrogaster 16:250
 - (2) Peridium waxy-gelatinous, not sulcate; spores hyaline Torrendia 17:241

- b. Peridium not volvate
- (1) Peridium elongate-cylindric; spores globose, reticulate, brownish-orange Protoglossum 11:158, F 306
- (2) Peridium tuberiform or piriform
- (a) Spores with longitudinal ridges or furrows Chamonixia 16:251, F 556
Martellia 16:252
- (b) Spores spinose
- (c) Spores smooth
- x. Peridium with an interrupted mucous layer here and there beneath
- (x) Peridium hypogean, tuberiform, falling apart irregularly at maturity Protuberia 11:155, F 306
- (y) Peridium epigean, piriform, opening by slits Phallogaster 11:155, F 304
Hysterangium 7:155, F 306; 48
- y. Peridium without mucous layer
2. Peridium wall lacking, at least at maturity
- a. Peridium elongate-cylindric; spores smooth Gymnoglossum 11:158
- b. Peridium tuberiform or piriform; spores furrowed lengthwise Gautieria 7:177, F 304; 48
- B. Trama-plates arising typically from the peridium and not radial; peridium wall separating difficultly or not at all from the gleba
1. Peridium with rhizoids over the surface or at least about the base
- a. Spores globose, warty Sclerogaster 11:169, F 312
- b. Spores smooth
- (1) Chambers of gleba filled with mucus at first Leucogaster 9:281, F 311
- (2) Chambers of gleba hollow
- (a) Spores hyaline Rhizopogon 7:161, F 311; 48
- (b) Spores colored Melanogaster 7:164, F 334
2. Peridium without rhizoids
- a. Spores spinose, globose
- (1) Gleba percurrent by a columella Arcangeliella 16:255
- (2) Gleba without columella
- (a) Peridium with sterile base Octaviana 7:158, F 310
- (b) Peridium without sterile base Hydnangium 7:175, F 310
- b. Spores not spinose, but smooth, verrucose or rugose
- (1) Gleba with branching columella and sterile base Dendrogaster 17:240
- (2) Gleba without columella or sterile base Hymenogaster 7:168, F 308; 48

Family 79. NIDULARIACEAE

7:28; Fischer 326

Peridium funnellform to cupulate or globoid, leathery or fleshy-leathery, opening over the entire top and exposing one to many lentiform or globoid peridioles, the latter usually attached by a funiculus to the wall of the peridium; spores 1-celled, hyaline, smooth; epigean, humicole, fmicole or lignicole.

A. Peridium with several to many peridioles

1. Peridium globoid, without epiphragm, opening by a tear; peridioles without funiculus

Nidularia 7:28, F 326; 48

2. Peridium cylindric to cupulate, with epiphragm
- a. Peridioles with funiculus
- (1) Mouth of peridium with a distinct seam;
spores mixed with filaments **Cyathus 7:32, F 326; 48**
- (2) Mouth without seam; spores not mixed
with filaments **Crucibulum 7:43, F 326; 48**
- b. Peridioles without funiculus, densely crowded
in mucus **Nidula 17:125; 48**
- B. Peridium with a single viscous peridiole; wall
double, the outer splitting stellately; minute **Sphaerobolus 7:46, F 346; 48**

DEUTEROMYCETES (Fungi Imperfecti)

As the name implies, these are secondary or propagative stages of other fungi, principally **Ascomycetes**. In consequence, they do not constitute a natural class, but form an artificial group kept together for convenience. Many of them are found in association with the perfect form in nature, while the number of those linked up by means of experimental cultures is steadily increasing. An enormous number of new genera have been described during the past quarter of a century, many of them on trivial or very variable criteria.

A natural system of secondary stages is obviously out of the question, short of their assignment to the perfect forms. However, the grouping into orders approximates this in some measure in view of the fact that pycnidium and stroma often reflect the structure of the perfect form. Even among the **Hyphomycetes** the resemblances probably indicate some community of relation to the perfect forms, but the entire situation is complicated by the fact that some of the latter possess two or more very dissimilar propagative stages, while essentially the same type of secondary form may occur in widely separated orders of **Ascomycetes**.

The **Phomales** are distinguished by the presence of the pycnidium, which reflects the evolution of the perithecium and its final transition into the apothecium. The **Melanconiales** represent a probable final condition of the latter in which the protective cover has been suppressed, resulting in a simple stroma. The **Hyphomycetes** or **Moniliales** are mycelial forms without differentiated pycnidia or stroma, though the latter is sometimes so closely simulated in the **Tuberculariaceae** as to warrant their inclusion in **Melanconiales**, as Hoehnel has done (1923:301).

Order 20. PHOMALES

Fruiting-body a pycnidium, the latter varying from globose to conic or elongate, usually with a distinct ostiole, to dimidiate with a simple pore or astomous, or to hysterioid, discoid or cupulate and opening by a cleft, lobes or circularly, single, cespitose or with a subicle or stroma, the latter effuse, valsoid or dothideoid, immersed, erumpent or superficial from the first, membranous to carbonous, waxy or fleshy, typically dark but sometimes bright-colored; conidia borne on simple or branched conidiophores or basidia, or the latter sometimes lacking and the conidia then arising directly from the pycnidial wall, rarely endogenous; conidia various, hyaline or dark, globose to filiform.

Key to Families

- A. Pycnidia perithecium-like, typically globoid, ostio-
late or astomous
 - 1. Pycnidia brown to black, membranous to car-
bonous **Phomaceae** p. 176
 - 2. Pycnidia bright-colored, or hyaline, fleshy,
sometimes gelatinous or waxy **Zythiaceae** p. 186
- B. Pycnidia dimidiate and usually more or less dis-
tinctly radiate, rarely hysterioid **Leptostromaceae** p. 189
- C. Pycnidia apothecium-like or hysterioid, cupulate
to discoid, opening circularly or less often by a
cleft or lobes, dark and subcarbonous to bright-
colored and fleshy **Discellaceae** p. 192

The four families reflect more or less accurately the structure of the corresponding perfect forms. The **Phomaceae** correspond chiefly to **Sphaeriaceae** and **Dothideaceae**, the **Zythiaceae** to **Hypocreaceae**, the **Leptostromaceae** to **Microthyriales**, and the **Discellaceae** to the **Phacidiales** and xeric **Pezizales**. The **Patellinae**, referred to **Zythiaceae** by Saccardo on the basis of color and texture, are primarily forms of **Discomycetes** and hence belong in the **Discellaceae**. The latter appear to pass gradually and completely into the **Melanconiaceae**.

Family 80. PHOMACEAE

(Sphaerioidaceae)

Pycnidia globoid, conic or lentiform, membranous, carbonous or sub-coriaceous, innate, erumpent or superficial, ostiolate or astomous, separate or with a subicle or stroma, which is variously loculate, typically dark; conidia various, borne on simple or ramose basidia, or arising from the pycnidial wall.

Hyalosporae

3:1, 10:100, 11:472, 14:844, 16:825, 18:220, 22:823

Conidia 1-celled, hyaline, globose, ovoid, ellipsoid or botuliform

A. Pycnidia separate, sometimes cespitose, without subicle or stroma

1. Pycnidia innate, or finally more or less erumpent

a. Pycnidia with a clypeus

(1) Pycnidia with ostiole

(a) Conidia ciliate

Ciliochora

(b) Conidia not ciliate

x. Basidia ramose; conidia acro-pleurogenous

Plectophomopsis

y. Basidia simple

(x) Conidia acrogenous

m. Basidia bacillar, fasciculate

Scleromeris

n. Basidia papillate, not fasciculate

Phomachora

(y) Conidia pleurogenous

Clypeochorella

(2) Pycnidia without ostiole; basidia ramose

Plectosira

b. Pycnidia without a clypeus

(1) Pycnidia rostrate or cylindrical

(a) Pycnidia rostrate

x. Pycnidia hairy

Chaetosphaeronema

y. Pycnidia glabrous

(x) Basidia ramose; conidia usually expelled in a ball

m. Spores allantoid

Pleuonaema H 34

n. Spores ovoid to ellipsoid

Sphaeronema 3:185; 49

(y) Basidia simple

Ceratophoma H 35

(z) Basidia none; conidia histogenic

Pseudophoma H 5

(b) Pycnidia vertical, oblong to cylindrical

x. Basidia ramose; conidia pleurogenous

Pleurophomella H 335

y. Basidia simple

(x) Conidia acrogenous

Chondropodiella

(y) Conidia acro-pleurogenous

Glutinium 11:500, H 337

(2) Pycnidia not rostrate or cylindrical

(a) Pycnidia hairy or setose

x. Setae stellately ramose

Staurochaeta 3:218, H 30

- y. Setae or hairs not stellate
 (x) Basidia ramose *Pyrenochaeta* 3:219, H 27, 28
 (y) Basidia simple; conidia expelled in mucus; fungicole *Pycnis* H 32
 (z) Basidia none *Sclerochaeta* H 6
- (b) Pycnidia glabrous
 x. Conidia catenate or ciliate
 (x) Conidia catenate
 m. Conidia globose *Myrioconium* H 259
 n. Conidia not globose
 (m) Chains of spores connected, often net-like *Peckia* 3:217, H 119
 (n) Chains of spores simple
 r. Pycnidia with ostiole *Sirophoma* H 37
 s. Pycnidia without ostiole *Sirococcus* 3:217, H 297
 (y) Conidia ciliate or caudate
 m. Outer wall of conidium torn into 2-3 strips resembling cilia *Tiarosporella*
 n. Cilia distinct, terminal
 (m) Apex 1-ciliate
 r. Pycnidia membranous; conidia lunate *Ciliophora*
 s. Pycnidia carbonous; conidia cylindrical *Strasseria* 18:284, H 253
 (n) Apex x-ciliate *Neottiospora* 3:216, H 36; 49
- y. Conidia neither catenate nor ciliate
 (x) Pycnidia with ostiole
 m. Basidia ramose
 (m) Basidia reticulately fused *Plectophoma* 22:905, H 38
 (n) Basidia not reticulately fused
 r. Conidia acrogenous *Dendrophoma* 3:178, H 39; 49
 s. Conidia pleurogenous *Pleurophoma* H 40
 t. Conidia acro-pleurogenous
 (r) Pycnidia membranous *Pleurophomopsis*
 (s) Pycnidia sclerotoid *Dendrodomus*
- n. Basidia typically simple
 (m) Pycnidia fungicole
 r. Pycnidia oidicole *Cicinnobolus* 3:216, H 41
 s. Pycnidia pycnicole *Mycosticta*
 t. Pycnidia lichenicole *Lichenosticta* 16:851, H 42
 (n) Pycnidia not fungicole
 r. Pseudoparaphyses present, long-filiform *Lichenophoma*
 s. Pseudoparaphyses absent
 (r) Pycnidia in discolored areas, maculicole *Phyllosticta* 3:3, H 45; 49
 (s) Pycnidia not maculicole
 h. Spores lunate *Selenophoma* 22:916, H 51
 i. Spores not lunate
 (h) Pycnidia with a columella *Cyclodomus* 22:950, H 229
 (i) Pycnidia without columella
 + Pycnidia membranous *Neophoma*
 - Pycnidia coriaceous to carbonous *Phoma* 3:65, H 47; 49

- o. Basidia obsolete or none; conidia histogenic
 - (m) Spores globose or trigonous
 - r. Spores globose; floricole **Hapalosphaeria 22:868, H 33**
 - s. Spores trigonous; ramicole **Trigonosporium 16:892, H 31**
 - (n) Spores not globose or trigonous
 - r. Pycnidia coriaceous or carbonous, more or less sclerotoid **Plenodomus 3:184, H 13**
 - s. Pycnidia membranous **Phyllostictina**
 - (y) Pycnidia without ostiole
 - m. Basidia ramose
 - (m) Pycnidia with central columella; conidia acrogenous **Conostroma**
 - (n) Pycnidia without columella; conidia acro-pleurogenous **Pleuroplaconema**
 - n. Basidia simple
 - (m) Pycnidia membranous to subcarbonous **Phomopsis 18:264, H 257; 49**
 - (n) Pycnidia sclerotoid **Sclerotiopsis 3:184, H 122**
 - o. Basidia obsolete or none; conidia histogenic
 - (m) Conidia more or less catenate **Sirostromella H 2**
 - (n) Conidia not catenate
 - r. Conidia involved in mucus **Coleophoma H 273**
 - s. Conidia without mucus **Dothichiza 3:671, H 11**
2. Pycnidia superficial
- a. Pycnidia rostrate or cylindrical
 - (1) Pycnidia rostrate; conidia pleurogenous **Plectonaemella H 20**
 - (2) Pycnidia cylindrical, cornucopioid; conidia acrogenous **Cornucopiella H 203**
 - b. Pycnidia neither rostrate nor cylindrical
 - (1) Pycnidia hairy or setose
 - (a) Pycnidia membranous; ostiole present; basidia filiform **Trichocicinnus 22:935, H 26**
 - (b) Pycnidia corio-carbonous; ostiole none; basidia none **Pyrenochaetina H 123**
 - (2) Pycnidia glabrous
 - (a) Conidia catenate; ostiole none; basidia none **Sirolegniella**
 - (b) Conidia not catenate
 - x. Pycnidia densely gregarious in asteroma-like spots; ostiole present **Asteromella 3:182**
 - y. Pycnidia not in asteroma-like spots
 - (x) Ostiole present
 - m. Pycnidia more or less stipitate; foliicole **Rhizosphaera 22:917**
 - n. Pycnidia not stipitate; lignicole **Aposphaeria 3:169, H 24**
 - (y) Ostiole absent
 - m. Basidia ramose **Ligniella**
 - n. Basidia none; conidia histogenic
 - (m) Pycnidia with hypostroma in the stomata **Rhizophoma**
 - (n) Pycnidia without hypostroma **Sclerophomina H 7**

- B. Pycnidia with a subicle**
1. Pycnidia rostrate **Leptoxyphium**
2. Pycnidia not rostrate
- a. Pycnidia hairy or setose
- (1) Hairs cruciately branched **Staurophoma 22:935, H 29**
- (2) Hairs or setae not branched
- (a) Ostiole present **Chaetasbolisia**
- (b) Ostiole none **Chaetophomella**
- b. Pycnidia glabrous
- (1) Conidia catenate
- (a) Basidia present, filiform **Sirosphaera**
- (b) Basidia none **Sirosperma**
- (2) Conidia not catenate
- (a) Pycnidia pedicellate **Podoxyphium**
- (b) Pycnidia not pedicellate
- x. Ostiole present
- (x) Basidia ramose **Dothiorellina H 21**
- (y) Basidia simple
- m. Subicle white **Dasysticta H 22**
- n. Subicle dark **Dasystictella**
- (z) Basidia obsolete or unknown **Asbolisia**
- y. Ostiole none
- (x) Subicle radiate **Asteroma 3:201, H 350**
- (y) Subicle not radiate
- m. Conidia of 2 kinds, fusoid and hamate **Placophomopsis**
- n. Conidia of one kind
- (m) Pycnidia biogenous, folicole
- r. Pycnidia folicole **Chaetophoma 3:199, H 126**
- s. Pycnidia fungicole **Phomyces**
- (n) Pycnidia saprogenous **Lasiophoma**
- C. Pycnidia with a stroma**
1. Stroma innate or erumpent
- a. Stroma valsoid or dothideoid
- (1) Stroma valsoid; basidia typically simple, sometimes ramose or obsolete
- (a) Pycnidia fungicole; conidia allantoid **Cryptosporiopsis**
- (b) Pycnidia not fungicole
- x. Conidia allantoid, expelled in cirrhi **Cytospora 3:252, H 281; 49**
- y. Conidia globose to bacillar
- (x) Conidia globose to ovoid, cirrhose **Cytosporella 3:251, H 266**
- (y) Conidia oblong to bacillar
- m. Stroma circumscissile, with a lid at top; basidia filiform; conidia cirrhose **Rabenhorstia 3:243, H 334; 49**
- n. Stroma not circumscissile with a lid
- (m) Conidia cirrhose; basidia obsolete or none **Ceuthospora 3:277, H 277**
- (n) Conidia not cirrhose; basidia filiform **Fusicoccum 3:247**
- (2) Stroma dothideoid
- (a) Conidia ciliate **Diachorella H 247**
- (b) Conidia not ciliate
- x. Stroma substipitate, with peridium which persists as a cup about the margin **Bothrodiscus 22:950, H 332**

- y. Stroma sessile, without peridium
 (x) Basidia ramose **Pleurostromella**
 (y) Basidia simple
 m. Basidia fasciculate **Scleromeris**
 n. Basidia not fasciculate
 (m) Ostiole present **Phomachora**
 (n) Ostiole none; hypostroma usually present **Podoplaconema**
3. Stroma not valsoid or dothideoid
 (1) Stroma discoid, pulvinate, globoid, or botryose
 (a) Pycnidia hairy; conidia cirrhose **Lasiostroma**
 (b) Pycnidia glabrous
 x. Conidia catenate **Sirodothis**
 y. Conidia not catenate
 (x) Conidia ciliate **Placonema** 18:293
 (y) Conidia not ciliate
 m. Basidia ramose **Endothiella** 22:965, H 313
 n. Basidia filiform **Dothiorella** 3:235, H 235; 49
 o. Basidia short or obsolete **Placosphaeria** 3:244, H 244
- (2) Stroma lineate or effuse, sometimes basal only
 (a) Stroma lineate
 x. Conidia connate in fours **Gamosporella** 10:238, H 300
 y. Conidia not in fours **Hypodermina** H 264
 (b) Stroma effuse or merely basal
 x. Stroma effuse; pycnidia immersed
 (x) Stroma fungicole, on Cyttaria **Anthracoderma** 10:238, H 299
 (y) Stroma not fungicole **Epheliopsis** 22:951
 y. Stroma basal; pycnidia exerted
 (x) Pycnidia single in stroma columns; basidia papillate; conidia globoid **Sphaerophoma**
 (y) Pycnidia not in stroma columns; basidia none; conidia histogenic, allantoid **Botryophoma**
2. Stroma superficial
 a. Stroma setose, papillate with ostioles **Chaetocytostroma**
 b. Stroma glabrous
 (1) Stroma on animal hairs; basidia very short **Trichophila** 10:423, H 256
 (2) Stroma phytogenous
 (a) Stroma suberose, large, hypoxyloid; conidia not falcate **Phellostroma** H 267
 (b) Stroma subcarbonous; conidia falcate **Ascochytopsis** 22:951, H 305

Phaeosporae

3:291, 10:251, 11:511, 14:919, 16:905, 18:302, 22:966

Conidia 1-celled, dark, globose, ovoid, elliptic to fusoid, rarely botuliform

- A. Pycnidia separate, sometimes cespitose, without subicle or stroma
 1. Pycnidia innate or finally more or less erumpent
 a. Pycnidia with ostiole
 (1) Pycnidia rostrate or cylindrical
 (a) Pycnidia rostrate **Naemosphaera** 10:259, H 333

- (b) Pycnidia cylindric; opening funnel-form **Endocalyx** 22:1454, H 206
- (2) Pycnidia not rostrate
- (a) Pycnidia hairy **Conithyriopsis** 22:977, H 75
- (b) Pycnidia not hairy
- x. Pycnidia fungicole in apothecia, pycnidia, etc. **Cryptophaella** H 3
- y. Pycnidia not fungicole
- (x) Basidia filiform; conidia large **Sphaeropsis** 3:291, H 71; 49
- (y) Basidia obsolete or none; conidia small **Coniothyrium** 3:305; 49
- b. Pycnidia without ostiole
- (1) Pycnidia lichenicole **Lichenonium**
- (2) Pycnidia in Rhizopogon **Microthecium**
- (3) Pycnidia not fungicole
- (a) Conidia catenate **Sirothecium** 10:270, H 129
- (b) Conidia not catenate
- x. Pycnidia carbonous **Phaeodomus** 22:984
- y. Pycnidia membranous **Coniella**
2. Pycnidia superficial
- a. Pycnidia with ostiole
- (1) Pycnidia hairy **Cladochaete** 22:986, H 76
- (2) Pycnidia glabrous **Epistigme**
- b. Pycnidia without ostiole
- (1) Pycnidia hairy **Chaetomella** 3:321; 49
- (2) Pycnidia glabrous
- x. Conidia globose **Coniothyrina** 22:977, H 130
- y. Conidia elliptic or limoniform **Oothecium**
- B.** Pycnidia with a subicle
1. Pycnidia fungicole; ostiole present **Cicinnobella** H 150
2. Pycnidia not fungicole; ostiole none; subicle dark
- a. Subicle radiate **Asteropsis**
- b. Subicle not radiate **Capnodiastrum** 10:272, H 131
- C.** Pycnidia with a stroma
1. Stroma innate or erumpent
- a. Stroma valsoid or dothideoid
- (1) Stroma valsoid
- (a) Spores mucose; pseudoparaphyses present **Pleosphaeropsis**
- (b) Spores not mucose; pseudoparaphyses none
- x. Basidia reticulately branched **Cytosphaera**
- y. Basidia simple **Melanconiopsis** 16:915
- (2) Stroma dothideoid
- (a) Conidia trigonous **Readerella** H 245
- (b) Conidia not trigonous
- x. Stroma forming a clypeus **Spilomyces**
- y. Stroma not forming a clypeus; pycnidia botryose **Pseudohaplis**
- b. Stroma not valsoid or dothideoid, but pulvinate, botryose, effuse, or lineate
- (1) Conidia catenate; pseudoparaphyses present **Cytoplea** 3:325, H 236

- (2) Conidia not catenate; pseudoparaphyses none
- (a) Conidia globoid **Lasmeniella**
- (b) Conidia not globoid
- x. Stroma botryose to pulvinate
- (x) Pycnidia in dense botryose groups, basal stroma mostly well developed **Haplosporella 3:323, H 77; 49**
- (y) Pycnidia in a globoid or pulvinate stroma
- m. Pycnidia in 2-3 layers, the upper more or less superficial **Botryphaeria**
- n. Pycnidia in one layer
- (m) Ostiole present; basidia ramose **Phaeocystostroma**
- (n) Ostiole none; basidia simple **Pseudothiopsella**
- y. Stroma lineate; basidia none **Placodiplodia**
2. Stroma superficial **Pycnodothis**

Hyalodidymae

3:384, 10:295, 11:522, 14:942, 16:925, 18:335, 22:1012

Conidia 2-celled, hyaline, ovoid, elliptic or fusoid

A. Pycnidia separate

1. Pycnidia innate or finally erumpent
- a. Pycnidia with a clypeus **Ascochyulina**
- b. Pycnidia without clypeus
- (1) Pycnidia rostrate
- (a) Pycnidia or at least the beak hairy **Cryptorhynchella**
- (b) Pycnidia glabrous **Rhynchophoma 3:414, H 63**
- (2) Pycnidia not rostrate
- (a) Pycnidia hairy **Didymochaete 14:953**
- (b) Pycnidia glabrous
- x. Conidia catenate; ostiole none; basidia ramose **Sirodiplospora**
- y. Conidia not catenate
- (x) Pycnidia maculicole
- m. Conidia with 3 cilia at apex **Robillardia 10:317, H 59**
- n. Conidia muticate **Ascochyta 3:384, H 52; 49**
- (y) Pycnidia not maculicole
- m. Conidia appendaged
- (m) Conidia setulose at apex **Kellermannia 10:337; 50**
- (n) Conidia setulose at each end
- r. Pycnidia uredicole **Darluca 3:410, H 58; 49**
- s. Pycnidia not uredicole **Darlucis**
- (n) Conidia with cap-like appendages **Tiarospora 10:311, H 61**
- n. Conidia not appendaged
- (m) Basidia ramose **Diplodinis**
- (n) Basidia simple, bacillar to filiform
- r. Pycnidia fungicole **Davisiella**
- s. Pycnidia not fungicole **Diplodina 3:411, H 56; 49**
- (o) Basidia obsolete or none **Diploplodomus H 15**
2. Pycnidia superficial
- a. Pycnidia rostrate or cylindrical
- (1) Pycnidia corniform, with beak more or less curved **Ceratopycnis 22:1034, H 66**
- (2) Pycnidia cylindrical; conidia ciliate **Hoehneliella 18:654, H 204**

- b. Pycnidia not corniform or rostrate
 (1) Pycnidia fungicole; conidia in 4's, lanciform **Lonchospermella** 22:915, H 65
 (2) Pycnidia not fungicole
 x. Conidia ciliate at both ends, appendaged in middle **Corollospora**
 y. Conidia not appendaged or ciliate; subicle sparse **Puccinospora** 10:317, H 134
- B.** Pycnidia with a subicle
 1. Pycnidia with ostiole
 a. Pycnidia elongate-linear, vertical, sometimes branched **Microxyphiella**
Chaetodiplodia 22:1048, H 67
 b. Pycnidia globoid **Puccinospora** 10:317, H 134
 2. Pycnidia without ostiole; subicle sparse
- C.** Pycnidia with a stroma
 1. Stroma valsoid or dothideoid
 a. Stroma valsoid; basidia simple **Cytodiplospora** 11:528, H 294
 b. Stroma dothideoid
 (1) Basidia present, persisting laterally at the end of the conidia **Cytotriplospora**
Diploplacis
 (2) Basidia none
 2. Stroma not valsoid or dothideoid
 a. Stroma verruciform or pulvinate
 (1) Stroma innate **Botryella** H 68
 (2) Stroma superficial **Pazschkella** 16:942, H 237
 b. Stroma effuse
 (1) Stroma innate, of dark upper and hyaline lower layer **Thoracella** 16:941, H 289
 (2) Stroma superficial, uniform **Placosphaerella** 14:948, H 288
- Phaeodidymae**
 2:329, 10:275, 11:518, 14:297, 16:915, 18:319, 22:989
 Conidia 2-celled, dark, ovoid to elliptic or fusoid
- A.** Pycnidia separate
 1. Pycnidia innate or finally erumpent
 a. Pycnidia rostrate, glabrous; basidia bacillar **Pellionella** 18:329, H 79
 b. Pycnidia not rostrate
 (1) Pycnidia hairy **Chaetodiplis**
 (2) Pycnidia glabrous
 (a) Conidia mucose, very large **Macrodiplodia** 3:374, H 82
 (b) Conidia not mucose and very large
 x. Ostiole present **Diplodia** 3:329, H 81; 50
 y. Ostiole none; basidia obsolete or none **Didymosporis** 22:1001, H 133
 2. Pycnidia superficial
 a. Pycnidia rostrate and hairy **Rhynchodiplodia** 18:329, H 78
 b. Pycnidia not rostrate
 (1) Pycnidia hairy **Chaetodiplodia** 3:374; 50
 (2) Pycnidia glabrous **Diplodiella** 3:375, H 83
Diblastospermella
- B.** Pycnidia with a subicle, globose, astomous
C. Pycnidia cespitose or stromate
 1. Pycnidia cespitose or botryose, more or less stromate **Botrydiplis** 3:377, H 84
 2. Pycnidia in a dothideoid stroma **Paradiplodia**

Hyalophragmiae

3:418, 10:330, 11:533, 14:962, 16:947, 18:358, 22:1051

Conidia x-celled, hyaline, oblong to fusoid, typically with distinct septa

- A. Pycnidia separate**
1. Pycnidia innate or erumpent
 - a. Conidia ciliate or setose
 - (1) Setae at apex only
 - (a) Seta single Kellermannia 10:337; 50
 - (b) Setae three Bartalinia 16:951, H 86
 - (2) Seta one at each end Cryptostictella H 87
 - b. Conidia consisting of basal cell with 2-6 parallel septate branches Chiroconium H 310
 - c. Conidia muticate and normal
 - (1) Pycnidia elongate-vertical, attenuate both ways Mastomyces 3:356, H 347
 - (2) Pycnidia globose Stagonospora 3:445, H 88; 50
2. Pycnidia superficial, hairy Dasypyrena H 91
- B. Pycnidia with a subicle**
1. Pycnidia elongate-vertical Polychaetum
 2. Pycnidia globoid Asteromidium 10:338, H 89
- C. Pycnidia with a stroma**
1. Stroma innate or erumpent
 - a. Pycnidia distinct, botryose Botryogene
 - b. Pycnidia as locules only
 - (1) Stroma innate, phyllachoroid Septoriella H 238
 - (2) Stroma erumpent, dothideoid Staganostromella
 2. Stroma superficial, botryose Microperella H 338

Phaeophragmiae

3:418, 10:317, 11:528, 14:953, 16:943, 18:362, 22:1058

Conidia x-celled, dark, oblong to fusoid, typically with distinct septa

- A. Pycnidia separate**
1. Pycnidia innate or erumpent
 - a. Pycnidia rostrate Ceratopycnis H 101
 - b. Pycnidia not rostrate
 - (1) Pycnidia hairy Wojnowicia 14:960, H 93
 - (2) Pycnidia glabrous
 - (a) Conidia united in groups
 - x. Conidia united into a fascicle Eriosporina 11:532, H 100
 - y. Conidia stellately united Prosthemium 3:444, H 118; 50
 - (b) Conidia free from each other
 - x. Conidia appendaged or mucose
 - (x) Conidia caudate at base with the persistent filiform basidium Uroconis 18:368, H 99
 - (y) Conidia with mucous sheath Macrodiplis
 - y. Conidia not appendaged or mucose Hendersonia 3:418, H 97; 50
 2. Pycnidia superficial
 - a. Conidia catenate; pycnidia glabrous Alysisporium
 - b. Conidia not catenate
 - (1) Pycnidia elongate-obconic, hairy Angiopoma 3:442, H 205
 - (2) Pycnidia globose, glabrous
 - (a) Basidia dendroid ramose; conidia mostly paired Hendersoniella 18:368, H 96

- (b) Basidia not dendroid; conidia single
B. Pycnidia with a radiate subicle
C. Pycnidia locules in a stroma

Diplozythia 18:417; 50
 Couturea 3:442, H 111
 Hendersonula 3:445, H 239

Hyalodictyae

16:955, 22:1085

Conidia muriform, hyaline, ovoid, oblong or fusoid

- A.** Pycnidia innate or erumpent
 1. Pseudoparaphyses present
 2. Pseudoparaphyses lacking
B. Pycnidia superficial, elongate-vertical, on a subicle.

Camarographium
Hyalothyris 16:955, H 110

Polychaetella**Phaeodictyae**

3:450, 10:338, 11:536, 14:964, 16:951, 18:369, 22:1075

Conidia muriform, dark, ovoid, oblong or fusoid

- A.** Pycnidia separate
 1. Pycnidia innate or erumpent
 a. Pycnidia with a clypeus
 b. Pycnidia glabrous
 (1) Conidia mucose
 (a) Conidia with a mucous sheath
 (b) Conidia with globoid mucous appendage at base
 (2) Conidia not mucose
 2. Pycnidia superficial
 a. Pycnidia hairy
 b. Pycnidia glabrous
 (1) Basidia mostly dichotomous
 (2) Basidia simple or obsolete
B. Pycnidia with a subicle, elongate-vertical
C. Pycnidia with a stroma
 1. Pycnidia cespitose on a basal stroma
 2. Pycnidia reduced to locules

Pleocouturea**Myxocyclus** 22:1084, H 116

Shearia
Camarosporium 3:459, H 115;
 50

Piringa 22:1088, H 113

Sclerotheca
Cytosporium 3:470, H 112
Fumagospora

Pseudodichomera H 117
Dichomera 3:471, H 240; 50

Scolecosporae

3:374, 10:349, 11:538, 14:964, 16:951, 18:369, 22:1086

Conidia hyaline or subhyaline, rarely dark, acicular to filiform, typically 10:1 or more, or continuous when shorter

- A.** Pycnidia separate
 1. Pycnidia innate or erumpent
 a. Pycnidia with a clypeus
 b. Pycnidia without a clypeus
 (1) Pycnidia rostrate or spiniform
 (2) Pycnidia not rostrate or spiniform
 (a) Pycnidia hairy
 (b) Pycnidia glabrous
 x. Conidia 4-6 on a basidium
 y. Conidia single
 (x) Basidia ramose; conidia attached by a delicate extension

Cytostaganis**Sphaerographium** 3:396, H 344**Trichoseptoria** 11:548, H 90**Eriospora** 3:600, H 105**Scopophoma**

- (y) Basidia simple to obsolete
- m. Pycnidia maculicole Septoria 3:474; 50
- n. Pycnidia not maculicole
- (m) Pycnidia complete, rami-caulicole
- r. Pycnidia globose or depressed, membranous Rhabdospora 3:578, H 104; 50
- s. Pycnidia conoid, coriaceous Micropera 3:604
- (n) Pycnidia incomplete or opening widely
- r. Pycnidia incomplete, folicole; spores acicular Phleospora 3:577
- (r) Spores hyaline Phaeophleospora
- (s) Spores dark Phaeophleospora
- s. Pycnidia opening widely, exposing the gelatinous spore-mass, ramicole; spores filiform Gelatinosporis 3:596
2. Pycnidia superficial
- a. Pycnidia rostrate or terete Cornularia 3:598
- b. Pycnidia not rostrate
- (1) Pycnidia hairy Ciferria
- (2) Pycnidia glabrous
- (a) Conidia 3-x on a basidium Gamospora 10:402, H 402
- (b) Conidia single
- x. Ostiole present; pycnidia not maculicole Leptochlamys
- y. Ostiole none; pycnidia maculicole Pseudoseptoria 22:1135
- B. Pycnidia with a subicle
1. Conidia hyaline; pycnidia not maculicole Chaetophiophoma 22:1136
2. Conidia dark; pycnidia maculicole Phaeoseptoria 22:1121
- C. Pycnidia with a stroma
1. Pycnidia distinct in the stroma
- a. Conidia setose-penicillate at each end Dilophospora 3:600, H 270
- b. Conidia muticate Cytosporina 3:601, H 284; 50
2. Pycnidia reduced to locules
- a. Stroma dothideoid Hemidothis H 231
- b. Stroma phyllachoroid Linochora H 249

Family 81. ZYTHIACEAE

(Nectrioidaceae)

Pycnidia globoid, rarely conic or lentiform, fleshy, rarely waxy or gelatinous, innate, erumpent or superficial, ostiolate or astomous, separate or with a subicle or stroma, typically bright-colored; conidia various, typically on simple or ramose basidia.

This family differs from the Phomaceae only in the bright color and fleshy texture of the pycnidia. It resembles the subfamily Patellinae of the Discellaceae in these respects, but the pycnidium is perithecium-like and not cupulate or hysterioid.

Hyalosporae

3:613, 10:404, 11:552, 14:988, 16:983, 18:407, 22:1140

Conidia 1-celled, hyaline, globose or ovoid to oblong

- A. Pycnidia separate
1. Pycnidia innate or more or less erumpent

- a. Pycnidia cylindric to conic; pseudoparaphyses present **Lagynodella**
- b. Pycnidia globose
- (1) Conidia catenate
- (a) Pycnidia innate, clypeus-like; basidia none **Blennoriopsis**
- (b) Pycnidia erumpent; basidia present **Sirozythia** 18:410, H 159
- (2) Conidia not catenate
- (a) Conidia ciliate
- x. Ostiole present **Eleutheris** 22:1142, H 151
- y. Ostiole none **Mastigospora** H 160
- (b) Conidia muticate
- x. Conidia geminate on minute sterigmata **Tremellidium**
- y. Conidia not geminate
- (x) Conidia allantoid **Allantozythia**
- (y) Conidia not allantoid
- m. Ostiole present
- (m) Pycnidia blue or violet **Cyanophomella** H 149
- (n) Pycnidia of other colors
- r. Basidia present **Zythia** 3:614, H 146; 50
- s. Basidia none **Plenozythia**
- n. Ostiole none
- (m) Basidia simple **Leptodermella** H 161
- (n) Basidia none **Sarcophoma** H 10
2. Pycnidia superficial
- a. Pycnidia rostrate or elongate to cylindric
- (1) Conidia catenate **Trelesiella** 14:989, H 141
- (2) Conidia not catenate **Sphaeronemina** H 145
- b. Pycnidia globose
- (1) Pycnidia hairy
- (a) Ostiole present; fungicole **Cicinnobella** 18:302, H 150
- (b) Ostiole none; cadavericole **Collacystis** 3:616, H 158
- (2) Pycnidia glabrous; conidia x-ciliate **Ciliospora** 18:410, H 152
- B. Pycnidia with a stroma
1. Stroma superficial
- a. Pycnidia in stroma columns; conidia lobed **Xenostroma** H 342
- b. Pycnidia not in columns; conidia not lobed
- (1) Pycnidia completely immersed **Dothiorina** H 320
- (2) Pycnidia superficial or nearly so, lichenicole **Verrucaster** 50
2. Stroma innate or somewhat erumpent
- a. Conidia globose, large; stroma 2-layered **Matula** H 317
- b. Conidia not globose or stroma 2-layered
- (1) Basidia present
- (a) Basidia long, much branched **Microdiscula** H 318
- (b) Basidia simple or merely forked
- x. Stroma crustose, oblong; pycnidia with more or less convergent necks **Siroplaconema**
- y. Stroma not crustose; pycnidia without necks **Rhodosticta**
- (2) Basidia none **Sirogloea**

Phaeosporae

10:409, 18:416

Conidia 1-celled, dark, globose to ovoid or oblong

A. Pycnidia separate

1. Conidia ciliate

a. Conidia 1-ciliate at apex

Mastigonetrum H 164

b. Conidia 1-ciliate at base

Caudosporella H 165

2. Conidia muticate

Harknessia 3:320, H 163; 49**B. Pycnidia with a stroma****Martinella** 10:409, H 330**Hyalodidymae**

3:621, 10:409, 11:553, 16:986, 18:416, 22:1145

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

A. Pycnidia separate

1. Pycnidia innate or erumpent, more or less clypeate; basidia flask-shaped

Clypeopycnis

2. Pycnidia superficial

a. Pycnidia dark blue or violet

Cyanochyta H 152b

b. Pycnidia bright-colored, not blue or violet

Stylonectria H 152c**B. Pycnidia with a botryose, short-stalked stroma****Fuckelia** 3:244, H 343**Phaeodidymae**

3:621

Conidia 2-celled, dark, ellipsoid

Pycnidia erumpent, rather widely open

Pseudodiplodia 3:621, H 168**Hyalophragmiae**

3:621, 10:410, 18:417, 22:1146

Conidia hyaline, x-celled, elliptic to fusoid

A. Pycnidia separate1. Conidia catenate; stroma somewhat developed **Sirozythiella** H 324

2. Conidia not catenate

a. Pycnidia clypeate; conidia 1-ciliate at apex **Ciliosporella**

b. Pycnidia not clypeate; conidia not ciliate

(1) Conidia 4-radiate, the radii septate

Chiastospora 3:621, H 156

(2) Conidia not radiate

(a) Pycnidia blue or violet; pycnidia usually cespitose on a basal stroma

Stagonstroma H 154

(b) Pycnidia not blue or violet; basal stroma none

Stagonopsis 3:621, H 153**B. Pycnidia in a stroma****Aschersonia** 3:619, H 326; 50**Scolecosporae**

3:622, 10:410, 18:418, 22:1146

Conidia acicular or filiform, hyaline, continuous or septate

A. Pycnidia separate or cespitose, without distinct stroma

1. Pycnidia innate or somewhat erumpent

a. Basidia present, simple; pycnidia cespitose

Phlyctaeniella

b. Basidia none; pycnidia separate; fungicole

Scolecozythia

2. Pycnidia superficial, rostrate; conidia cuspidate
at both ends **Mycorhynchus 18:418, H 155**
- B. Pycnidia with a stroma
1. Stroma innate; folicole **Polystigmina 3:622, H 327; 50**
2. Stroma more or less erumpent; ramicole **Chromocytospora 22:1147**

Family 82. LEPTOSTROMACEAE

Pycnidia dimidiate, hemispheric, sometimes elongate and hysterooid, but typically with more or less radiate scutellum, membranous to carbonous, usually superficial but often innate-erumpent, ostiolate or astomous, separate or with subicle or stroma, typically dark; conidia and basidia various.

The hysterooid genera of this family approach the similar types of **Discellaceae** very closely, but they can be distinguished as a rule by the presence of a more or less radiate scutellum.

Hyalosporae

3:625, 10:412, 11:553, 14:992, 16:986, 18:419, 22:1148

Conidia 1-celled, hyaline, globose to oblong

- A. Pycnidia separate
1. Pycnidia innate or erumpent
- a. Conidia catenate
- (1) Pycnidia stellately arranged; conidia globose-ellipsoid **Piggotia 3:636, H 228**
- (2) Pycnidia not stellate; conidia bacillar **Crandallia 14:998, H 221**
- b. Conidia not catenate
- (1) Conidia ciliate at each end; ostiole none **Tracyella 18:424, H 220**
- (2) Conidia not ciliate
- (a) Pycnidia opening by a cleft
- x. Pycnidia oblong to elongate **Leptostroma 3:639, H 225; 51**
- y. Pycnidia rounded **Labrella 3:647**
- (b) Pycnidia ostiolate or astomous, but without a cleft
- x. Pycnidia with several ostioles **Massalongina**
- y. Pycnidia with single ostiole or none
- (x) Basidia ramose; conidia acropleurogenous **Pleurothyriella**
- (y) Basidia simple; conidia typically acrogenous **Leptothyrium 3:626, H 223; 51**
- (z) Basidia none; conidia histogenic **Myxothyrium**
2. Pycnidia superficial
- a. Pycnidia bright-colored, fleshy; conidia catenate **Creothyrium**
- b. Pycnidia not bright or fleshy
- (1) Pycnidia stellate, rimose **Actinothecium 3:638, H 213**
- (2) Pycnidia not stellate
- (a) Conidia catenate
- x. Basidia present **Sirothyriella H 207**
- y. Basidia none **Sirothyrium**
- (b) Conidia not catenate
- x. Ostiole present, columellae absent; conidia lateral on bacillar basidia **Acarella**
- y. Ostiole none; columellae present; conidia on lageniform basidia **Columnothyrium**

B. Pycnidia with subicle or thalloid mycelium**1. Basidia present****a. Basidia ramose**

(1) Subicle with setae; ostiole none

Merismella

(2) Subicle without setae

(a) Ostiole present; basidia moniliform

Plectopeltis

(b) Ostiole none; basidia not moniliform

Plenotrichum**b. Basidia simple**

(1) Pseudoparaphyses present

Gloeodes

(2) Pseudoparaphyses lacking

(a) Subicle of broad dendroid fibers

Trichopeltulum 10:418, H 211

(b) Subicle effuse, hyphal

Eriothyrium 10:418, H 210**2. Basidia none****a. Ostiole present****Elachopeltis****b. Ostiole none, stellately dehiscent**

(1) Subicle membranous; conidia in a mucous layer

Diedickeia

(2) Subicle asterinoid; conidia not in a mucous layer

Peltaster**C. Pycnidia with a stroma, the latter innate, phyllog-enous; conidia botuliform****Melasmia 3:673, H 219; 51****Phaeosporae**

3:653, 10:423, 14:996, 18:429, 22:1159

Conidia 1-celled, dark, globose to oblong

A. Pycnidia separate**1. Pycnidia erumpent****a. Pycnidia single, linear, rimose****Phaeolabrella****b. Pycnidia stellately arranged****Piggotia 3:636, H 228****2. Pycnidia superficial****Pirostoma 3:653, 14:996****B. Pycnidia with a subicle****1. Pycnidia subcuticular****Manginula****2. Pycnidia superficial****a. Subicle with hyphopodia****Asterostomella 10:423, H 213****b. Subicle without hyphopodia****Asterostomula H 214****C. Pycnidia with a stroma****1. Stroma innate or erumpent****Lasmenia 10:424, 14:246****2. Stroma superficial****a. Pycnidia more or less superficial****Peltostroma 18:430, H 251****b. Pycnidia immersed as locules****Poropeltis 18:430, H 252****Hyalodidymae**

10:426, 11:557, 18:431, 22:1162

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

A. Pycnidia separate**1. Conidia catenate, also laterally ciliate****Chaetalysis****2. Conidia not catenate****a. Conidia falcate, cuspidate at apex****Kabatia 18:433, H 380; 51****b. Conidia not falcate and cuspidate**

(1) Basidia present

Leptothyrella 10:426

(2) Basidia none

Discotheciella**B. Pycnidia with a subicle; conidia ciliate at each end****Discosiella H 291**

Phaeodidymae

10:426, 18:431, 22:1161

Conidia 2-celled, dark, ovoid to oblong or fusoid

A. Pycnidia separate

1. Pycnidia innate or erumpent; basidia none

Didymochora

2. Pycnidia superficial; basidia present

Diplopeltis 10:426, H 208**B. Pycnidia with a subicle****Leprieurina****C. Pycnidia with a stroma**

1. Stroma innate-erumpent

Seynesiopsis 18:431

2. Stroma superficial

Peltostromella 22:1161, H 215**Hyalophragmiae**

3:653, 10:426, 11:557, 14:996, 16:992, 18:434, 22:1162

Conidia x-celled, hyaline, oblong to fusoid

A. Pycnidia innate to erumpent

1. Conidia ciliate at each end; pycnidia ostiolate

Discosia 3:653, H 296; 51

2. Conidia not ciliate; pycnidia rimose

Cystothyrium 10:427, H 227**B. Pycnidia superficial**

1. Pycnidia with a subicle; columella absent

Septothyrella 18:434, H 216

2. Pycnidia without subicle; columella present, forming an immersed hypostroma at base

Rhizothyrium**Phaeophragmiae**

14:997, 18:435

Conidia x-celled, dark, oblong to fusoid

A. Pycnidia separate, innate to erumpent

1. Conidia ciliate at one or both ends

Labridium 14:997, H 307

2. Conidia not ciliate; cells ternately disposed

Pseudodictya**B. Pycnidia superficial, with a subicle****Peltosoma****C. Pycnidia with a stroma****Phragmopeltis** 18:435, H 250**Scolecosporae**

3:658, 10:428, 11:557, 14:997, 16:992, 18:436, 22:1163

Conidia acicular to filiform, typically hyaline, continuous or septate

A. Pycnidia separate

1. Pycnidia innate to erumpent

a. Conidia cilio-penicillate at apex

Giulia 18:435, H 269

b. Conidia muticate

(1) Pycnidia elongate, rimose; conidia acropleurog-enous

(a) Basidia umbellately ramose

Petasodes 14:998

(b) Basidia simple

Leptostromella 3:659, H 248; 51

(2) Pycnidia rounded; conidia acropleurog-enous

Pleurothyrium

2. Pycnidia superficial

a. Pycnidia hairy

Tassia

b. Pycnidia globose

(1) Conidia curved to vermiform

Melophia 3:658

(2) Conidia not curved

- (a) Basidia present; pycnidia more or less fimbriate at margin **Actinothyrium** 3:658, H 546; 51
- (b) Basidia none **Stigmopeltis**
- B. Pycnidia with a subicle **Thyrinula**
- C. Pycnidia with a stroma
1. Stroma innate, striiform; basidia lageniform **Placothyrium**
2. Stroma superficial
- a. Basidia present **Trachythyriolum**
- b. Basidia none **Ischnostroma** H 218

Family 83. DISCELLACEAE

(Excipulaceae)

Pycnidia often globoid at first, then becoming scutellate or discoid, or elongate, hysterooid, boat-shaped, membranous to carbonous or fleshy to gelatinous, dark or bright-colored, innate, erumpent or superficial; conidia and basidia various.

The genera with bright-colored fleshy pycnidia are distinguished from those of the **Zythiaceae** by the scutellate or discoid form, while the hysterooid ones open widely and lack the radiate scutellum of the **Leptostromaceae**.

Subfamily Discellae

Pycnidia dark, membranous to carbonous, rarely fleshy

Hyalosporae

3:665, 10:432, 11:558, 14:999, 16:993, 18:436, 22:1166

Conidia 1-celled, hyaline, globose to oblong

- A. Pycnidia innate or erumpent
1. Pycnidia patelloid, at least finally sc
- a. Conidia catenate
- (1) Basidia present; chains of conidia simple **Sirexipula** 22:1171, H 255
- (2) Basidia obsolete; chains often ramose **Desmopeltella**
- b. Conidia not catenate
- (1) Conidia strongly falcate **Neopatella** 22:1166, H 121
- (2) Conidia not falcate
- (a) Pycnidia globoid, dehiscing irregularly to become cupuloid **Traversoa**
- (b) Pycnidia cupulate or scutellate-discoid **Stictopatella**
2. Pycnidia hysterooid or lacinate
- a. Pycnidia hysterooid
- (1) Conidia catenate **Lophodermopsis** 22:1159, H 120
- (2) Conidia not catenate **Psilospora** 3:679, H 331; 51
- b. Pycnidia lacinate **Sporonema** 3:677, H 260
- B. Pycnidia superficial
1. Pycnidia setose or hairy
- a. Conidia ciliate
- (1) Conidia 1-ciliate at each end **Dinemasporium** 3:683, H 177; 51
- (2) Conidia x-ciliate at apex **Polynema** 3:687, H 176
- (3) Conidia cruciate-aristate **Stauronema**
- b. Conidia not ciliate
- (1) Basidia present **Amerosporium** 3:680, H 170
- (2) Basidia none **Xenopeltis**

2. *Pycnidia* glabrous
 a. Conidia long-ciliate at apex, short-ciliate at base *Heteropatella* 3:670, H 180
 b. Conidia not ciliate
 (1) *Pycnidia* membrano-carbonous; basidia oval to piriform *Agyriellopsis* 18:438, H 124
 (2) *Pycnidia* fleshy; basidia bacillar *Catinula* 3:673, H 193

Phaeosporae

10:439, 18:441, 22:1172

Conidia 1-celled, dark, globose to oblong

- A. *Pycnidia* innate to erumpent
 1. *Pycnidia* hairy or setose; conidia not catenate *Coniothyris* 10:439, H 173
 2. *Pycnidia* glabrous
 a. Conidia catenate *Vouauxiella*
 b. Conidia not catenate *Myxormia* 3:734, H 175
 B. *Pycnidia* superficial, glabrous *Phaeodiscula* 10:439, H 174

Hyalodidymae

3:687, 10:440, 11:560, 14:1002, 16:993, 18:442, 22:1173

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

- A. *Pycnidia* discoid to patellate, typically erumpent
 1. *Pycnidia* setose; conidia ciliate at each end *Pseudolachnea* 22:1174
 2. *Pycnidia* glabrous
 a. Conidia catenate, ciliate at one end *Acarosporium* H 290
 b. Conidia not catenate
 (1) Conidia ciliate at each end *Dinemasporis* 22:1169, H 64
 (2) Conidia not ciliate *Discella* 3:687, H 293; 51
 B. *Pycnidia* hysteroïd or irregularly gaping
 1. *Pycnidia* elongate, hysteroïd; conidia not catenate *Scaphidium* 18:443, H 135
 2. *Pycnidia* globoid at first, then irregularly and widely gaping; conidia catenate *Siropatella* 18:443, H 166

Hyalophragmiae

3:688, 10:441, 11:560, 14:1002, 18:443, 22:1174

Conidia x-celled, hyaline, oblong to fusoid

- A. *Pycnidia* innate to erumpent
 1. *Pycnidia* discoid to patellate
 a. Conidia rostrate at apex *Excipulina* 3:688
 b. Conidia not rostrate, hamate or sigmoid *Oncospora* 3:691, H 304
 2. *Pycnidia* hysteroïd *Stagonopatella*
 B. *Pycnidia* superficial
 1. *Pycnidia* hairy
 a. Conidia forficulate or x-shaped *Ypsilonia* 3:215, H 182
 b. Conidia normal *Excipularia* 3:689, H 306
 2. *Pycnidia* glabrous
 a. Basidia forked; conidia rostrate at base *Japonia* 22:1175, H 298
 b. Basidia simple; conidia not rostrate *Harposporella* H 301

Phaeophragmiae

10:443, 18:444

Conidia x-celled, dark, oblong to fusoid

A. Pycnidia innate to erumpent

1. Pycnidia discoid; conidia of 3-5 parallel or divergent parts, united by basal cells; basidia none
2. Pycnidia hysterioid; conidia normal; basidia present

Sirothecium**B. Pycnidia superficial, discoid or cupulate, hairy****Dichaenopsis 18:444, H 140**
Excipularia 3:688**Phaeodictyae**

10:443

Conidia muriform, dark, fusoid

Pycnidia laciniate; conidia catenate

Taeniphora 10:443, H 139**Scolecosporae**

3:690, 10:443, 14:1002, 16:993, 18:445, 22:1175

Conidia acicular to filiform, typically hyaline, continuous to septate

A. Pycnidia separate

1. Pycnidia innate to erumpent
 - a. Pycnidia discoid to cupulate
 - (1) Pycnidia laciniate; conidia filiform
 - (a) Conidia catenate, not curved
 - (b) Conidia not catenate, curved
 - (2) Pycnidia sublaciniate; conidia acicular
 - b. Pycnidia globose-oblong, more or less cleft; conidia neither hamate nor catenate
2. Pycnidia superficial, scutellate

Pseudocenangium 10:445,
H 179**Protostegia 3:690, H 392; 51**
Pilidium 3:689**Phlyctaena 3:593, H 286; 50**
Septopatella**B. Pycnidia with a stroma**

1. Pycnidia with pectinate-ciliate margin
2. Pycnidia glabrous

Ephelidium**Ephelis 3:691, H 198****Subfamily Patellinae**

Pycnidia bright-colored, fleshy to gelatinous

Hyalosporae

3:622, 10:411, 11:553, 18:419, 22:1145

Conidia 1-celled, hyaline, globose to oblong

A. Pycnidia separate

1. Pycnidia innate to erumpent
 - a. Pycnidia discoid
 - (1) Pycnidia hairy, somewhat stipitate
 - (2) Pycnidia glabrous
 - (a) Conidia catenate
 - x. Basidia ramose
 - y. Basidia simple, bacillar
 - z. Basidia none
 - (b) Conidia not catenate

Crocicreas 3:183, H 171; 49**Sirexipulina****Libertiella 3:616, H 192****Discozythia**

- x. Basidia very short or obsolete **Selenophomopsis**
- y. Basidia ramose
 - (x) Hymenium sinuous **Gyrostroma**
 - (y) Hymenium smooth **Hainesia** 3:698
- b. Pycnidia more or less hysteroïd and rimose or lacinate
 - (1) Conidia catenate (scolecospore-like at first) **Schizothyrella** 3:690, H 272
 - (2) Conidia not catenate
 - (a) Basidia branched; conidia pleurogenous **Pseudopatellina** 22:1145, H 162
 - (b) Basidia simple; conidia acrogenous **Scleropycnium**
- 2. Pycnidia superficial
 - a. Pycnidia hairy
 - (1) Conidia catenate **Sirocyphis** H 187; 50
 - (2) Conidia not catenate
 - (a) Pycnidia pendent, ribbed and lobed at margin **Hyphostereum** H 186
 - (b) Pycnidia not pendent or lobed **Cyphina** 3:623, H 188
 - b. Pycnidia glabrous
 - (1) Pycnidia short-stipitate; basidia ramose; conidia pleurogenous **Pseudozythia** 18:409, H 190
 - (2) Pycnidia not stipitate
 - (a) Conidia catenate, acrogenous; basidia ramose **Siroscyphella** H 189
 - (b) Conidia not catenate
 - x. Conidia x-ciliate at each end **Entomopatella**
 - y. Conidia not ciliate
 - (x) Basidia ramose **Ollula** 10:411, H 191
 - (y) Basidia simple **Patellina** 3:622
- B. Pycnidia with a stroma, sometimes incomplete
 - 1. Stroma superficial; basidia simple **Munkia** 10:408, H 311
 - 2. Stroma innate; basidia ramose **Microdiscula** H 318

Phaeosporae

Conidia 1-celled, colored or dark, elliptic to oblong

- A. Conidiome not a pycnidium, large, shell-like, superficial; basidia ramose, with filiform pseudoparaphyses; conidia yellow to red **Michenera** 6:652, H 183
- B. Pycnidia minute, patellate, erumpent; conidia catenate **Trullula** 3:731, H 195

Hyalodidymae

Conidia 2-celled, hyaline, globose to oblong

- A. Pycnidia separate
 - 1. Conidia catenate **Siropatella** H 166
 - 2. Conidia not catenate
 - a. Pycnidia scutellate, erumpent; basidia ramose; conidia acropleurogenous **Myriellina**
 - b. Pycnidia hysteroïd, rimose
 - (1) Basidia ramose; conidia pleurogenous **Cystotricha** 3:413, H 167
 - (2) Basidia simple or obsolete; conidia acrogenous **Fioriella** 18:432, H 9
- B. Pycnidia with a stroma; basidia simple **Diplozythiella**

Hyalophragmiae

11:553

Conidia x-celled, hyaline, fusoid

Pycnidia hysterioid, erumpent; basidia very short **Stagonopattella****Phaeophragmiae**

Conidia x-celled, dark, cylindric

Pycnidia scutellate, erumpent; basidia short-ramose **Lecanosticta****Scolecosporae**

10:411

Conidia filiform, hyaline, continuous or septate

A. Pycnidia innate-erumpent

Trichocrea 10:410, H 169

B. Pycnidia superficial

1. Pycnidia with a subicle

Trichosperma 10:411, H 200

2. Pycnidia without a subicle

Pyrenotrichum 3:184, H 199**Order 21. MELANCONIALES****Family 84. MELANCONIACEAE**

Pycnidia lacking, represented by a stroma-like stratum; strata typically bearing simple or ramose basidia upon which the conidia arise, forming acervuli or masses, which are immersed or erumpent, black, gray or light-colored, waxy, horny or gelatinous; conidia various.

The spore-body of this family closely approaches the discoid form frequent in the **Discellaceae** on the one hand and the sporodochium of the **Tuberculariaceae** on the other. Hoehnel places the latter and **Melanconiaceae** in the same group, **Gymnostromaceae**, distinguishing the one as innate-erumpent or superficial and the other as persistently innate (1923:309), but this distinction appears to be neither valid nor practicable. While the superficial resemblance is often great, the sporodochium proper is to be regarded as a compacting of hyphae and conidiophores rather than a new development from a reduced fruit-body with short or obsolescent basidia.

Hyalosporae

3:698, 10:446, 11:562, 14:1004, 16:995, 18:447, 22:1176

Conidia 1-celled, hyaline or subhyaline, globose to fusoid

A. Masses or acervuli setose; conidia oblong to fusoid, rarely cylindric

1. Setae marginal

Colletotrichum 3:735

2. Setae scattered throughout, simple or ramose

Vermicularia 3:221; 49

B. Masses not setose

1. Conidia ciliate or setose

a. Conidia catenate, x-flagellate

Mastigonema

b. Conidia not catenate

(1) Conidia with ramose awn at apex

Pestalozziella 3:737; 51

(2) Conidia with 3 divergent setae

Eriosporella H 342

2. Conidia not ciliate

a. Conidia catenate

(1) Conidial rows forming heads

- (a) Rows more or less clearly spiral *Hyperomyxa* H 339
 (b) Rows not spiral
 x. Rows on a central axis *Conoplea* H 339
 y. Rows on the tip of the basidium, often
 ramose *Thyrsidiella* H 339
- (2) Conidial rows not forming heads
 (a) Masses oblong, hysterioid, dark, hard *Hypodermium* 3:728
 (b) Masses discoid to pulvinate
 x. Masses bright-colored, soft, subgelati-
 nous *Myxosporella* 3:729
 y. Masses dark, not gelatinous *Bloxamia* 3:734
- b. Conidia not catenate
 (1) Masses linear *Rhabdogloeum*
 (2) Masses discoid to pulvinate
 (a) Conidia 1-x on each basidium
 x. Basidia ramose *Discosporella* H 373
 y. Basidia simple
 (x) Masses with brown setae *Protocoronis* 21:241
 (y) Masses without setae
 m. Basidia bacillar; conidia 2-3 *Rhabdogloeopsis*
 n. Basidia broadly clavate; conidia 3-8
 (m) Masses byssoid, yellow; on roots *Aureobasis* 11:131, K 134
 (n) Masses minute, white, exerted
 from the stomata; in leaves *Microstroma* 4:9, K 131; 53
- (b) Conidia single
 x. Conidia allantoid *Naemospora* 3:746; 52
 y. Conidia not allantoid
 (x) Basidia ramose, long
 m. Masses bright-colored, red or rose;
 basal stroma thin; folicole *Hypogloeum*
 n. Masses hyaline to brownish; basal
 stroma thick, sometimes sublocu-
 late; ramicole *Cytogloeum*
 (y) Basidia typically simple
 m. Masses folicole or fruticole *Gloeosporium* 3:699; 51
 n. Masses ramicole
 (m) Basidia arising from inner side of
 vertical hyphae, more or less
 knobbed *Cryptosporiopsis*
 (n) Basidia normal *Myxosporium* 3:728

Phaeosporae

3:748, 10:471, 11:571, 14:1018, 16:1008, 18:469, 22:1206

Conidia 1-celled, dark, globose to oblong or fusoid

A. Conidia catenate or capitate

1. Conidia catenate

a. Conidial chains separate

Trullula 3:731; 52

b. Conidial chains radiate in a mucose head

Thyrsidium 3:761

2. Conidia capitate or clustered at the tip

Botryconis

B. Conidia single

1. Conidia globose to oblong or fusoid

a. Conidia globose to oblong

(1) Masses setose

Melanconium 3:749; 52

(2) Masses not setose

Chaetobasis

- b. Conidia fusoid, often arcuate Cryptomela 3:760
- 2. Conidia tetraedric or scyphiform
 - a. Conidia tetraedric; basidia short Vanderystiella 22:1193
 - b. Conidia scyphiform; basidia long, septate below, filiform above Scyphospora

Hyalodidymae

3:766, 10:475, 11:572, 14:1020, 16:1009, 18:472, 22:1210

Conidia 2-celled, hyaline or subhyaline, ovoid to fusoid

- A. Conidia ciliate
 - 1. Conidia 1-ciliate at apex, stalked below Monotrichum
 - 2. Conidia 3-4 ciliate at each end Gloeosporiella 11:575
- B. Conidia muticate
 - 1. Masses setose; basidia with 1-3 sterigmata Fominia
 - 2. Masses not setose
 - a. Masses bright-colored, carnosule; not folicole Septomyxa 3:766
 - b. Masses pale to black; folicole Marsonia 3:767

Phaeodidymae

3:763, 10:475, 11:572, 14:1029, 16:1009, 22:1213

Conidia 2-celled, dark, ovoid to fusoid

- A. Conidia 1-3-ciliate at apex Neobarclaya 14:46, 10:475
- B. Conidia not ciliate
 - 1. Masses saprogenous, mostly on twigs Didymosporium 3:763; 52
 - 2. Masses biogenous, on leaves Phaeomarsonia 22:1214

Hyalophragmiae

3:801, 10:480, 11:575, 14:1022, 16:1012, 18:474, 22:1214

Conidia 2-x-septate, hyaline or subhyaline, oblong to fusoid or clavate

- A. Conidia catenate; basidia ramose Endocladis
- B. Conidia not catenate
 - 1. Conidia ciliate
 - a. Conidia 1-x-ciliate at apex Pestalozzina 11:580
 - b. Conidia 1-ciliate at each end Pseudodiscosia
 - c. Conidia 2-ciliate at each end Diploceras 10:484
 - d. Conidia cruciate 4-celled, each cell ciliate Entomosporium 3:657; 51
 - 2. Conidia not ciliate
 - a. Conidia ramose or united at base
 - (1) Conidia irregularly united or ramose at base Titaeospora
 - (2) Conidia united at base into a radiate or stellate group Prosthemiiella 3:803
 - b. Conidia not ramose or united Septogloeum 3:801; 52

Phaeophragmiae

3:771, 10:480, 11:575, 14:1022, 16:1012, 18:475, 22:1217

Conidia 2-x-septate, dark, at least in part, oblong to cylindrical

- A. Conidia ciliate
 - 1. Conidia catenate
 - a. Conidia 1-ciliate above Siridium 3:782
 - b. Conidia 1-ciliate above, 1 lateral cilium below Siridina H 309

2. Conidia not catenate
- a. Conidia ciliate at one end only
- (1) Conidia ciliate at the apex
- (a) Conidia 1-ciliate above **Monochaetia 18:485**
- (b) Conidia 2-4-ciliate above **Pestalozzia 3:784; 52**
- (2) Conidia 1-ciliate at base **Cryptostictis 3:443**
- b. Conidia ciliate at two points
- (1) Conidia 1-ciliate at each end **Amphichaeta 18:486**
- (2) Conidia 1-ciliate above, 2-3-ciliate in middle **Heteroceras**
- B. Conidia not ciliate
1. Conidia catenate **Sirdiella 11:580**
2. Conidia not catenate
- a. Conidia stellate-lobed, lobes x-septate **Asterosporium 3:782; 52**
- b. Conidia not stellate-lobed
- (1) Conidia attenuate into a beak at one or both ends
- (a) Conidia hyaline-rostrate at apex only **Scolecosporium 3:782; 52**
- (b) Conidia rostrate-curved at both ends **Toxosporium 14:1030**
- (2) Conidia not rostrate
- (a) Conidia cirrhose protruded and atro-inquinant **Stilbospora 3:771**
- (b) Conidia not cirrhose and atro-inquinant **Coryneum 3:774; 52**

Hyalodictyae

22:1230.

Conidia muriform, hyaline, globose or oblong

- A. Masses fleshy, rosy; conidia rose-colored, rounded **Thyrsideina 22:1230**
- B. Masses pale; conidia not rose-colored, oblong **Hyalodictyum**

Phaeodictyae

3:803, 10:508, 11:565, 14:1035, 16:1022, 18:488, 22:1229

Conidia muriform, dark, globose, ovoid or oblong

- A. Conidia united into rough dictyospore-like bodies
1. Conidial bodies imbedded in mucus; basidia dissolving into mucus **Endobotrya 3:470, H 338**
2. Conidial bodies and basidia not mucose **Endobotryella H 338**
- B. Conidia true dictyospores
1. Conidia catenate by cylindrical isthmi **Phragmotrichum 3:806; 52**
2. Conidia not catenate
- a. Conidia 2-3-ciliate at apex **Morinia 10:508**
- b. Conidia not ciliate
- (1) Masses saprogenous, mostly ramicole **Steganosporium 3:806**
- (2) Masses biogenous **Stigmopsis**

Scolecosporae

3:737, 10:498, 11:582, 14:1031, 16:1018, 18:488, 22:1231

Conidia acicular to filiform, hyaline, typically continuous

- A. Conidia flagellate at one end **Pseuderospora**
- B. Conidia muticate
1. Conidia fasciculate at apex of basidium; on plant hairs **Trichodytes 14:1031**

2. Conidia single
- a. Masses white to dark, foliicole or ramicole;
conidia often curved
- (1) Masses setose at margin Pseudostegia 22:1237
- (2) Masses not setose Cylindrosporium 3:737, 740; 52
- b. Masses bright-colored
- (1) Conidia acrogenous Libertella 3:744
- (2) Conidia acropleurogenous Libertina H 395

Staurosporae

18:493

Conidia star-shaped, hyaline

- A. Masses phyllogenous, bright-colored; conidia 4-radiate, rays continuous Asteroconium 18:493
- B. Masses lignicole, dark; conidia 3-4-radiate, rays septate Asterosporium 3:782; 52

Order 22. MONILIALES

Hyphae usually well-developed, but sometimes short or obsolete, loose and cobwebby, cottony, fasciculate, or compacted into a definite sporodochium or synnema, rarely arising from a distinct stratum or stroma and never enclosed in a pycnidium, typically superficial; conidiophores typically definite and often much differentiated into a wide variety of forms; conidia various.

The members of this order are readily distinguished from the **Phomales** by the absence of a pycnidium, and from the **Melanconiales** by the lack of a basal stroma or stratum as a rule. As has been previously indicated, however, species with compact spore-bodies and short or obsolete conidiophores must be sought in both the **Tuberculariaceae** and **Melanconiaceae**.

Key to the Families

- A. Conidia present
1. Hyphae in more or less loose cottony masses
- a. Hyphae and conidia hyaline or bright-colored Moniliaceae p. 201
- b. Hyphae and conidia both typically dark, or one or the other dark Dematiaceae p. 209
2. Hyphae compacted to form a globose to cylindrical spore-body which is often stalked
- a. Spore-body stalked, capitate to cylindrical, i. e., a synnema Stilbaceae p. 227
- b. Spore-body typically sessile, globose to pulvinate or applanate, i. e., a sporodochium Tuberculariaceae p. 219
- B. Conidia lacking Dermophyta 231
Sterile Mycelia p. 231
Pseudosaccharomycetes p. 411

The essential differences between the four families are indicated in the above key. The first two families are morphologically identical, and the criterion of color serves merely to facilitate the recognition of the numerous form-genera, which are the outcome of a very active evolution. The **Tuberculariaceae** are characterized by the evolution of the cottony mycelium into a compact sporodochium, and the **Stilbaceae** by the further development into an erect more or less stalked synnema.

Family 85. MONILIACEAE

Hyphae hyaline or bright-colored, loose and cottony, rarely fasciculate; sterile and fertile hyphae or conidiophores both present as a rule, the latter differentiated by means of vesicles, whorls, basidia, sterigmata, etc.; conidia concolorous, i. e., hyaline or bright-colored.

Hyalosporae

4:2, 10:510, 11:586, 14:1037, 16:1023, 18:495, 22:1238

Conidia 1-celled, hyaline or bright-colored, globose to ovoid or cylindrical

Micronemeae

Hyphae very short or obsolete, or little different from the conidia

A. Conidia catenate

1. Saprogenous

a. Conidia endogenous, chains arising in the hyphae

(1) Conidial branches dichotomous, not arcuate

Glycophila 4:11

(2) Conidial branches simple, arcuate

Malbranchea 4:11

b. Conidia exogenous, arising on the hyphae

(1) Conidia globose, elliptic or fusiform

(a) Hyphae short, simple or nearly so

x. Conidia globose or suboblong

Oospora 4:11

y. Conidia fusiform, acute each way

Fusidium 4:25; 53

(b) Hyphae longer, distinctly ramose

Monilia 4:31; 53

(2) Conidia cuboid or bacillar

(a) Hyphae distinct, often ramose

x. Conidia cuboid

Geotrichum 4:39

y. Conidia bacillar or cylindrical

Polyscytalum 4:38

(b) Hyphae nearly obsolete; conidia bacillar

Cylindrium 4:36

2. Biogenous

a. Mycelium endogenous, hyphae escaping through the stomata

Oidiopsis 18:507

b. Mycelium on the surface of leaves or other parts

(1) Conidia globose, connected by isthmi

Paepalopsis 4:47

(2) Conidia ovoid to elliptic, without isthmi

Oidium 4:40; 53

B. Conidia not catenate

1. Conidia capitate; hyphae obsolescent or lacking; biophilous

Glomerularia 4:10; 53

2. Conidia not capitate, usually solitary

a. Saprogenous

(1) Conidia globose to ellipsoid, separate

Chromosporium 4:6; 53

(2) Conidia fusoid-falcate, variously united by twos or threes

Selenotila 11:587

b. Biogenous

(1) Fungicole

(a) Conidia globoid, verrucose

Coccosporella 11:586

(b) Conidia ovoid, smooth

Myceliophthora 11:587

(2) Folicole; hyphae vermiform-tortuous

Ophiocladium 11:587

Macronemeae

Hyphae elongate and distinct from the conidia

- A. Conidia capitata**
- 1. Conidia catenate** **Aspergillae**
- a. Conidiophores inflated at apex**
- (1) Conidiophores dichotomous, branches curved **Dispira 4:77**
- (2) Conidiophores simple or nearly so
- (a) Conidia elongate to lanceolate, papillate, pleurogenous **Spermatoloncha 22:1251**
- (b) Conidia globose to ellipsoid
- x. Conidia acrogenous **Aspergillus 4:64; 71**
- y. Conidia acropleurogenous **Dimargaris 4:76**
- b. Conidiophores little or not at all inflated**
- (1) Conidia enclosed in mucus **Gliocladium 4:84**
- (2) Conidia not in mucus
- (a) Conidia globoid; conidiophores unequally verticillate at tip **Penicillium 4:78; 53**
- (b) Conidia doliform; conidiophores equally verticillate at tip **Amblyosporium 4:77; 53**
- 2. Conidia not catenate** **Cephalosporiae**
- a. Conidia globose to ellipsoid**
- (1) Conidia borne on little stalks or sterigmata
- (a) Conidiophores verticillate-ramose **Spicularia 4:63**
- (b) Conidiophores simple
- x. Conidia capitata **Corethrospis 4:62**
- y. Conidia in a long club **Basidiobotrys 22:1262**
- (2) Conidia sessile or nearly so
- (a) Conidiophores greatly inflated at tip
- x. Apical vesicle globose-inflated **Rhopalomyces 4:50; 53**
- (x) Vesicle hexagonally areolate
- (y) Vesicle muriculate or verrucose
- m. Vesicles terminal on simple conidiophores **Oedocephalum 4:47**
- n. Vesicles lateral on sigmoid, ramose conidiophores **Sigmoidomyces 4:50**
- y. Apical vesicle disciform, stellate-lobed **Coronella 4:51**
- (b) Conidiophores much less or not at all inflated
- x. Conidia involved in mucus
- (x) Conidiophores verticillate-ramose at tip **Gliobotrys 18:510**
- (y) Conidiophores simple **Hyalopus 4:51; 53**
- y. Conidia not in mucus
- (x) Conidiophores with a single head
- m. Head globoid or slightly clavate
- (m) Head composed chiefly of ramose chains of basidia, with 2 conidia on each bi-lobed apical one **Cristulariella**
- (n) Head otherwise **Cephalosporium 4:56**
- r. Sterile hyphae long, decumbent **Haplotrichum 4:53; 53**
- s. Sterile hyphae scanty

- n. Head elongate-conic **Doratomyces 4:53**
- (y) Conidiophores with 2-x heads
- m. Conidia on the upper side of radiate-verticillate sterigmata **Coemansiella 4:55**
- n. Conidia in more definite heads
- (m) Conidiophores divaricately 2-3-fid; head single on each tip **Trichoderma 4:59**
- (n) Conidiophores long, with many short laterals bearing 3-x spines, each of the latter with a head **Botryosporium 4:54; 53**
- b. Conidia cylindric or bacillar
- (1) Conidia covered with mucus **Acontium 18:512**
- (2) Conidia without mucus **Cylindrocephalum 4:63**
- B. Conidia acrogenous on verticillate branches**
1. Conidia catenate **Verticilliae**
- a. Entomogenous **Nomuraea 18:533**
- b. Phytogenous **Spicaria 4:166**
2. Conidia not catenate
- a. Conidiophore a series of obconic whorls; conidia fusoid, curved, united in eights **Articularia 22:1300**
- b. Conidiophores not a series of whorls **Pachybasium 4:149**
- (1) End branches very short, ampulliform
- (2) End branches longer, obclavate to terete
- (a) Conidia solitary or loosely grouped
- x. Conidia globose to ellipsoid **Verticilliosis 11:600**
- (x) Tips of branches clavate, in twos at right angles
- (y) Tips of branches normal **Corymbomyces 18:533**
- m. Conidia conglutinate into a stratum
- n. Conidia not conglutinate **Verticillium 4:150; 54**
- (m) Conidia separating readily from the tips **Cladobotryum 4:160**
- (n) Conidia not separating readily from tips
- y. Conidia cylindric or elongate
- (x) End branches 1-spored **Acrocyllindrium 4:161**
- m. End branches straight **Graphidium 22:1292**
- (m) Biogenous, floricole **Uncigera 4:162**
- (n) Saprogenous
- n. End branches uncinata **Calcarisporium 4:162**
- (y) End branches x-spored **Coemansia 4:162**
- m. End branches inflated-verrucose at apex **Sceptromyces 4:166**
- n. End branches incurved, with seriate conidia below
- (b) Conidia capitate or densely spicate
- x. Conidia on short stalks **Gloeosphaera 18:535**
- y. Conidia sessile **Acrostalagmus 4:163; 54**
- (x) Conidia capitate, involved in mucus **Clonostachys 4:165**
- m. Conidiophores asperate
- n. Conidiophores smooth
- (y) Conidia long-spicate, the spikes in a dense cluster

- C. Conidia borne more or less irregularly on simple or ramose but not inflated or verticillate hyphae **Botrytidae**
1. Conidia smooth or scarcely roughened
- a. Saprogenous
- (1) Conidia typically pleurogenous
- (a) Conidiophores 2-x-furcate **Haplaria 4:85; 53**
- (b) Conidiophores simple or nearly so
- x. Conidia globose to ellipsoid **Acladium 4:87**
- y. Conidia short cylindrical **Cylindrotrichum 4:88**
- (2) Conidia acrogenous or acropleurogenous
- (a) Some intermediate joints of the hyphae swollen and denticulate conidia-bearing **Physospora 4:88**
- (b) Intermediate joints equal
- x. Conidia-bearing hyphae of two sorts, the upright alone denticulate **Blastomyces 10:329**
- y. Conidia-bearing hyphae of one sort
- (x) Conidiophores ramose
- m. Conidia globose to ellipsoid
- (m) Both sterile and fertile hyphae procumbent
- r. Sterile hyphae intracellular **Meria 16:1031**
- s. Sterile hyphae superficial
- (r) Conidiophores vaguely branched
- h. Conidia acropleurogenous **Sporotrichum 4:96; 54**
- i. Conidia on a one-sided sympodium **Monopodium 10:543**
- (s) Conidiophores dichotomous; conidia acrogenous on spine-like branches **Langloisula 10:535**
- (n) Fertile hyphae (conidiophores) erect or ascending
- r. Conidia solitary, acrogenous
- (r) Conidiophores spiny-ramose at apex **Plectothrix 18:525**
- (s) Conidiophores not spiny-ramose **Monosporium 4:113; 54**
- s. Conidia loosely grouped about the apex
- (r) Conidia involved in mucus **Tolypomyria 4:137**
- (s) Conidia without mucus
- h. Conidia on inflated muriculate apices **Phymatotrichum 16:1033**
- i. Conidia not on such apices **Botrytis 4:116; 54**
- n. Conidia fusoid to cylindrical
- (m) Conidiophores mostly procumbent **Sporotrichella 10:534**
- (n) Conidiophores erect or ascending
- r. Conidia fusoid, biseriate on the upper side of short curved branches **Martensella 4:138**
- s. Conidia acrogenous

- (r) End branches long, terete *Cylindrophora* 4:138
 (s) End branches very short, ellipsoid *Cylindrodendrum* 4:139
- (y) Conidiophores simple or nearly so
 m. Conidiophores denticulate; conidia usually grouped
 (m) Hyphae everywhere denticulate, bearing conidia only at tip *Xenopus* 18:524
 (n) Hyphae denticulate or proliferous at tip alone
 r. Apex denticulate, x-spored *Rhinotrichum* 4:91; 53
 s. Apex inflated-ampulliform, 1-spored *Olpitrichum* 11:594
 n. Conidiophores not denticulate, solitary
 (m) Hyphae forming a crust-like stratum *Hyphoderma* 4:89
 (n) Hyphae loose, cobwebby *Acremonium* 4:89; 54
- b. Entomogenous; much branched; conidia solitary, acrogenous *Chantransiopsis*
 c. Biogenous, folicole; conidia acrogenous, solitary or sometimes subcatenate *Ovularia* 4:139
2. Conidia asperate, spiny or tuberculose-stellate
 a. Conidia globose
 (1) Conidia intercalary, verrucose; terminal one with a seta *Chaetoconidium* 10:544
 (2) Conidia not intercalary or setose
 (a) Conidia acrogenous; hyphae loose, cobwebby *Sepedonium* 4:146
 (b) Conidia pleurogenous; hyphae dense
 x. Sterile hyphae granulate; mass resembling a sporodochium; conidia asperate *Volutellis*
 y. Sterile hyphae not granulate; mass forming a subgelatinous pellicle; conidia spiny *Pellicularia* 4:149
 b. Conidia oblong to cylindric, spiny *Ramulaspera* 18:532
 c. Conidia tuberculose-stellate, globose *Asterophora* 4:148; 54
- D. Conidia grouped on inflated joints of the hyphae *Gonatobotrytae*
 1. Joints muricate or punctate
 a. Conidia catenate, forming a globose head *Gonatorhodis* 10:548
 b. Conidia not catenate *Gonatobotrys* 4:169; 54
 2. Joints smooth; conidia not catenate *Nematogonium* 4:170

Hyalodidymae

4:176, 10:548, 11:600, 14:1057, 16:1038, 18:539, 22:1305

Conidia 2-celled, hyaline or bright-colored, globose to oblong or fusoid

A. Conidia catenate

1. Conidiophores ramose, dichotomous or verticillate
 a. Conidia ellipsoid *Didymocladium* 4:185
 b. Conidia cylindric *Hormiactina*

2. Conidiophores simple
- a. Conidia ovoid; conidiophores short Diploospora
 - b. Conidia oblong to cylindric; conidiophores longer; chains binate or ternate, acropleurogenous Hormiactis 4:186
- B. Conidia not catenate
1. Saprogenous
- a. Conidia smooth
 - (1) Conidiophores ramose
 - (a) Conidiophores verticillate or dichotomous
 - x. Conidiophores verticillate Diplocladium 4:176
 - y. Conidiophores dichotomous; sterigmata subternate Cylindrocladium 11:600
 - (b) Conidiophores more or less irregularly ramose Diplosporium 4:178
 - (2) Conidiophores simple or nearly so
 - (a) Conidiophores inflated at apex or joints
 - x. Conidiophores denticulate inflated at apex only Diplorhinotrichum 18:540
 - y. Conidiophores inflated at both joints and apex Arthrobotrys 4:181; 54
 - (b) Conidiophores not inflated
 - x. Conidia spirally pleurogenous Haplariopsis 18:539
 - y. Conidia acrogenous or acropleurogenous, capitate or solitary
 - (x) Conidia capitate Cephalothecium 4:180; 54
 - (y) Conidia solitary
 - m. Conidiophores very short, like the sterile hyphae Didymopsis 4:182
 - n. Conidiophores long, unlike the sterile hyphae Trichothecium 4:178
 - b. Conidia echinulate; conidial cells unequal Mycogone 4:183; 54

2. Biogenous

 - a. Conidia obliquely beaked, cylindric Rhynchosporium 18:540
 - b. Conidia not obliquely beaked
 - (1) Conidiophores more or less dichotomous
 - (a) Conidia piriform, binate; hyphae gemmiferous; lichenicole Lindauopsis 22:1306
 - (b) Conidia fusoid-cylindric, single; hyphae normal; not lichenicole Ramulariopsis 22:1307
 - (2) Conidiophores simple
 - (a) Conidiophores spirally twisted Bostrichonema 4:185
 - (b) Conidiophores not spirally twisted Didymaria 4:184

Hyalophragmiae

4:188, 10:551, 11:601, 14:1059, 16:1041, 18:544, 22:1309

Conidia x-celled, hyaline or bright-colored, ovoid to oblong or cylindric

Micronemeae

Hyphae very short and little different from the conidia

- A. Conidia catenate, cylindric; hyphae very short or obsolete Septocylindrium 4:223

MONILIACEAE

B. Conidia not catenate

1. Conidiophore 3-celled, upper cell much inflated Milowia 4:222
2. Conidiophore not inflated, often obsolete
 - a. Conidia ciliate at apex and upper septum Mastigosporium 4:220
 - b. Conidia not ciliate
 - (1) Conidia cylindric, cohering at base and forming a radiate capitule Psammina 10:498
 - (2) Conidia not coherent into a radiate capitule
 - (a) Hyphae lacking or very short
 - x. Conidia ellipsoid; mycelium endophytic Amastigis
 - y. Conidia long fusoid, often curved Fusoma 4:220
 - (b) Hyphae distinct, creeping
 - x. Conidia in mucose glomerules Rotaea 4:222
 - y. Conidia in subglobose fascicles, not mucose Paraspora 4:222

Macronemeae

Hyphae manifest and distinct from the conidia

A. Saprogenous

1. Conidia capitate or fascicled
 - a. Conidia capitate
 - (1) Conidiophores vesiculose at tip; fimicole Cephalophora 18:544
 - (2) Conidiophores not vesiculose; rarely fimicole
 - (a) Conidiophores verticillate Mucrosporium 4:190
 - (b) Conidiophores simple Dactylaria 4:194
 - b. Conidia fascicled; conidiophores irregularly ramosae
 - (1) End branches lageniform, rostrate, bearing a dense fascicle of conidia Moeszia
 - (2) End branches dichotomous, terete; conidia single but forming a loose fascicle Candelospora
2. Conidia solitary
 - a. Conidiophores ramosae
 - (1) Conidiophores verticillate Dactylium 4:188
 - (2) Conidiophores more or less irregularly ramosae
 - (a) End branches corymbose-fascicled; conidia dolioloid Gueguenia 22:1328
 - (b) End branches single; conidia fusoid to clavate Blastotrichum 4:191; 54
 - b. Conidiophores simple or nearly so
 - (1) Sterile hyphae obsolete
 - (a) Conidia doliform; conidiophores granulate Pithomyces 4:693
 - (b) Conidia ellipsoid to cylindric; conidiophores smooth Dactylella 4:193
 - (2) Sterile hyphae present, often abundant
 - (a) Conidia with a whorl of 3-5 blunt appendages at the apex Triposporina
 - (b) Conidia not appendaged

- x. Conidia at right angles to the conidiophore, forming secondary pleurogenous conidia successively to produce dendroid masses Varicosporium 22:1329
 - y. Conidia not at right angles or in dendroid masses; fimicole Monacrosporium 4:193
- B. Biogenous**
- 1. Conidia mucose-conglobate, allantoid, often continuous Allantospora 14:1043
 - 2. Conidia otherwise
 - a. Conidia with a filiform seta at apex Trichoconis 18:545
 - b. Conidia not ciliate
 - (1) Conidia obclavate-piriform Piricularia 4:217
 - (2) Conidia cylindrical or clavoid, often catenate, sometimes 1-2-celled Ramularia 4:196; 54

Hyalodictyae

11:608, 18:561, 22:1330

Conidia muriform, hyaline, globose to elliptic

- A. Conidiophores with clavate-nodose joints; conidia usually 2-3 catenate** Gilletia
- B. Conidiophores not clavate-nodose**
 - 1. Conidia stipitate, smooth; forming gall-like bodies Coniodictyum 22:1330
 - 2. Conidia not stipitate, verrucose; on germinating seeds Stemphyliopsis 18:561

Scolecosporae

4:218, 22:1331

Conidia more or less broadly filiform, septate, hyaline

- Biogenous, folicole; conidia typically much more than 10 times longer than wide Cercosporella 4:218

Staurosporae

4:230, 10:567, 11:608, 14:1067, 16:1049, 18:559

Conidia forked or lobed, radiate or stellate, hyaline or bright-colored, septate or continuous

- A. Conidia globose to cylindric, with 2-3 divergent sterigma-like appendages permanently attached** Tetracladium 14:1067
- B. Conidia themselves lobed, radiate or stellate**
 - 1. Conidia lobed, the lobes more or less parallel
 - a. Conidia 1-celled, 6-lobed, outer divisions arcuate Monogrammia
 - b. Conidia 5-celled, bilobate-furcate, lobes parallel, contiguous Pedilospora 18:559
 - 2. Conidia long-digitate, the divisions prismatic Prismaria 4:230
 - 3. Conidia radiate or radiate-sarciniform
 - a. Conidia 3-5-radiate
 - (1) Conidia ciliate
 - (a) Conidia 5-radiate, 3 cells 1-ciliate, 2 muticate Titaea 4:231; 54
 - (b) Conidia 4-radiate, all cells 1-ciliate Lemonniera 14:1067

- (2) Conidia not ciliate, 3-radiate; rays 4-5-septate
Trinacrium 4:231
- b. Conidia radiate-sarciniform, a central cell with an enclosing circle of 5-6 others
- (1) Conidia with 3 long setae from the base of the central cell; marginal cells 5, all in one plane
Aorate
- (2) Conidia not setulose; marginal cells 6; central cell larger, colored; lobes in 3 planes
Stephanoma 4:753, 11:608

Helicosporae

4:233, 10:568, 11:608, 22:1332

Conidia spirally curved, hyaline or bright-colored, cylindrical

- A. Conidia catenate; conidiophores and chains ramose
Helicodendrum
- B. Conidia not catenate
1. Conidia concentrically coiled
Helicomycetes 4:233; 54
2. Conidia spirally twisted into a conic or ovoid tube
Helicoum 11:609

Family 86. DEMATIACEAE

Hyphae typically dark, olive to brown or black, rarely hyaline but the conidia then dark, loose and byssoid, more or less rigid, rarely fasciculate; sterile and fertile hyphae or conidiophores both present as a rule, the latter differentiated by means of vesicles, whorls, basidia, sterigmata, etc.; conidia typically dark, but sometimes hyaline.

Amerosporae

2:235, 10:569, 11:610, 14:1068, 16:1059, 18:563, 22:1337

Conidia 1-celled, dark, or sometimes hyaline but the hyphae then dark, globose to oblong

Micronemeae

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate
1. Conidia of two sorts, the larger catenate, the smaller glomerate
Heterobotrys 4:267
2. Conidia alike
- a. Hyphae dark
- (1) Conidial chains breaking up readily
- (a) Conidia globose to oblong
Torula 4:247; 55
- (b) Conidia clavate
Gongromeriza 4:263
- (2) Conidial chains breaking with difficulty or not at all
- (a) Chains curved
Gyroceras 4:266
- (b) Chains straight or nearly so
Hormiscium 4:263
- b. Hyphae hyaline
Torulina 18:566
- B. Conidia not catenate
1. Conidia in heads or racemes, piriform to lageniform
Echinobotryum 4:268; 55

2. Conidia solitary, globose to fusoid
 a. Conidia globose to elliptic
 (1) Sterile hyphae nearly obsolete **Coniosporium 4:238; 55**
 (2) Sterile hyphae elongate **Cordella 10:586**
 b. Conidia fusoid or elongate **Fusella 4:246**

Macronemeae

Hyphae manifest and distinct from the conidia

- A. Conidia dark, rarely subhyaline
 1. Conidia endogenous
 a. Conidia catenate
 (1) Conidia of two kinds, endogenous and exogenous
 (a) Both kinds of conidia catenate, the endogenous smaller cylindrical hyaline, the exogenous larger ovate fuscous **Thielaviopsis 11:612**
 (b) Exogenous conidia not catenate **Chalaropsis**
 (2) Conidia alike
 (a) Conidiophores ramose
 x. Conidiophores verticillate-aggregate; conidia at first capitulate, then catenulate **Rhacodiella**
 y. Conidiophores not verticillate nor conidia capitulate **Sporendonema 11:515**
 (b) Conidia simple or nearly so
 x. Conidia mucose, finally conglobate at the apex; saprogenous **Gliomastix 22:1347**
 y. Conidia not mucose or conglobate; biogenous **Columnophora**
 b. Conidia not catenate
 (1) Conidia arising singly in substipitate vesicles **Conioscypha 18:572**
 (2) Conidia several from a lageniform or elongate terminal cell of 2-3-celled branches **Cadophora**
2. Conidia exogenous
 a. Conidia catenate
 (1) Conidiophores spirally twisted, forming a head of conidia **Helicocephalum 10:512**
 (2) Conidiophores not spirally twisted
 (a) Conidiophores with verticillate basidia on the swollen nodes **Gonatorhodum 4:168**
 (b) Conidiophores torulose, muriculate, intermixed with long rigid setae **Lacellina**
 (c) Conidiophores otherwise
 x. Conidial chains simple; sterile hyphae creeping
 (x) Conidiophores vesiculose-inflated at apex **Rhopalocystis**
 (y) Conidiophores not vesiculose-inflated
 m. Conidia verruculose, the chains botryose-aggregate, forming irregular heads **Pachytrichum**
 n. Conidia not verruculose

- (m) Conidiophores simple or sparingly ramose
 - r. Chains of conidia terminal, solitary
 - (r) Conidia connected by cylindrical isthmi **Prophytromma 4:309**
 - (s) Conidia without isthmi **Catenularia 4:303**
 - s. Chains of conidia lateral **Dematium 4:308**
 - (n) Conidiophores more or less dendroid-ramose **Hormodendrum 4:310; 55**
 - y. Conidial chains ramose; sterile hyphae erect and mixed with the fertile ones **Hormiactella 4:311**
- b. Conidia not catenate
- (1) Conidia capitate
 - (a) Saprogenous
 - x. Conidiophores simple, with or without basidia
 - (x) Conidiophores with basidia
 - m. Basidia terminal, umbellate **Stachybotrys 4:269; 55**
 - n. Basidia lateral, irregularly disposed **Periconia 4:270**
 - (y) Conidiophores without basidia
 - m. Conidia globose **Trichobotrys 18:571**
 - n. Conidia fusoid, sometimes subhyaline **Acrotheca 4:276**
 - y. Conidiophores ramose at the apex
 - (x) Conidiophores scopiform at apex; conidia oblong, 1-3 at each tip **Acrodesmis**
 - (y) Conidiophores with 2-3-furcate spine-bearing branches; conidia globose **Cephalotrichum 4:275**
 - z. Conidiophores ramose much below the apex
 - (x) Conidiophores furcate or dichotomous
 - m. Conidiophores 1-furcate **Synsporium 4:278**
 - n. Conidiophores repeatedly dichotomous **Dicyma 18:570**
 - (y) Conidiophores verticillately or irregularly ramose; heads mucose
 - m. Conidiophores verticillately ramose **Leptographium**
 - n. Conidiophores with short more or less opposite branches **Phialophora**
 - (b) Biogenous
 - x. Conidia globose; conidiophores swollen above, bearing 3-4 basidia **Haplobasidium 10:578**
 - y. Conidia ovoid to oblong
 - (x) Conidiophores swollen above, without basidia; conidia globoid **Stachybotryella 18:570**
 - (y) Conidiophores ramose above; conidia oblong **Periconiella 4:275**
- (2) Conidia verticillate-pleurogenous
 - (a) Hyphae dark, nodose-inflated and denticulate; conidia ovoid **Gonatobotryum 4:278; 55**
 - (b) Hyphae hyaline, not nodose-inflated and denticulate, but with thick septa

- x. Conidia globoid-angulate, stipitellate **Goniosporium 4:280**
- y. Conidia oblong to fusoid, not stipitellate **Arthrinium 4:279**
- (3) Conidia mostly single and acrogenous, rarely clustered and acropleurogenous
 - (a) Conidiophores vesiculose-inflated or ramose
 - x. Conidiophores vesiculose-inflated
 - (x) Vesicles pleurogenous **Oedemium 4:297**
 - (y) Vesicles acrogenous, with a hilum at tip **Cystophora 4:298**
 - y. Conidiophores ramose
 - (x) Saprogenous
 - m. Conidiophores erect
 - (m) Branches circinate or spirally twisted
 - r. Branches circinate at apex; conidia intercalary, muriculate **Acrospora 4:282**
 - s. Branches spirally twisted; conidia not intercalary **Streptothrix 4:282; 55**
 - (n) Branches straight, sometimes furcate, rarely none **Virgaria 4:280**
 - n. All hyphae more or less creeping
 - (m) Branches curved or lash-like **Campotrichum 4:295**
 - (n) Branches not curved
 - r. Conidia spiny **Zygodemus 4:283; 55**
 - s. Conidia smooth
 - (r) Conidia sessile **Trichosporium 4:288**
 - (s) Conidia on stalks or basidia
 - h. Conidia on tooth-like sterigmata **Rhinocladium 4:295**
 - i. Conidia on doliform basidia **Basisporium 18:533**
 - (y) Biogenous
 - m. Conidia pleurogenous, sessile, on radiate hyphae from a sclerotium parasitic in the ovaries of grasses **Ustilaginodes 17:492**
 - n. Conidia not from a sclerotium
 - (m) Conidiophores vesiculose at tip; conidia 4-8-superposed, verruculose **Hemispora 22:1346**
 - (n) Conidiophores not vesiculose; conidia solitary, smooth **Glenospora 4:298; 55**
- (b) Conidiophores simple or nearly so
 - x. Sterile hyphae lacking or obsolescent **Monotospora 4:299**
 - y. Sterile hyphae present
 - (x) Conidia verrucose, pedicellate **Zygodesmella**
 - (y) Conidia not verrucose or pedicellate
 - m. Sterile hyphae bearing curved blunt bristles and 2-3-celled conidiophores **Pirostomella**
 - n. Sterile hyphae without bristles
 - (m) Conidia in pairs at the apex **Microclava**
 - (n) Conidia single
 - r. Conidia in a dense cylindric mass **Microtypha 22:1352**
 - s. Conidia not in a dense mass **Acremoniella 4:302**

B. Conidia hyaline or subhyaline

1. Conidia acrogenous on short heteromorphic basidia on the lower part or at the base of erect hyphae
 - a. Conidia capitata-glomerate; sterile hyphae much branched below **Myxotrichella 4:317, 14:57**
 - b. Conidia not capitata
 - (1) Conidia loosely catenate **Stirochaete 4:316**
 - (2) Conidia not catenate
 - (a) Erumpent; conidia 1-setose above, fusoid, curved **Ellisiella 4:315**
 - (b) Superficial; conidia not setose
 - x. Sterile hyphae ramose
 - (x) Hyphae irregularly ramose; basidia verticillate **Costantinella 16:1054**
 - (y) Hyphae repeatedly dichotomous; basidia terete, basal **Circinotrichum 4:314**
 - (z) Hyphae reticulate-anastomosing; basidia clavate, basal **Dictyochoaeta**
 - y. Sterile hyphae simple
 - (x) Conidia globose
 - m. Biogenous; setae marginal **Peziotrichum 11:614**
 - n. Saprogenous; setae not marginal **Botryotrichum 4:313**
 - (y) Conidia bacillar
 - m. Sterile hyphae tortuose **Sarcopodium 4:312:55**
 - n. Sterile hyphae circinate **Helicotrichum 4:313**
 2. Conidia on normal hyphae
 - a. Conidia endogenous, catenate
 - (1) Sterile hyphae present; conidiophores verticillate-ramose, end branches with oblong cysts **Cystodendrum**
 - (2) Sterile hyphae obsolete; conidiophores simple
 - (a) Conidia in simple chains **Chalara 4:333**
 - (b) Conidia conglutinate into a long curl **Cirromyces 18:627**
 - b. Conidia exogenous
 - (1) Conidia capitata
 - (a) Conidiophores verticillately ramose **Stachylidium 4:331:56**
 - (b) Conidiophores pencillately ramose; conidia mucose **Scopularia 4:330**
 - (c) Conidiophores simple, with basidia at tip
 - x. Basidia verticillate **Fuckelina 4:330**
 - y. Basidia irregular **Pimina 16:1054**
 - (2) Conidia not capitata
 - (a) Conidiophores ramose
 - x. Conidiophores erect
 - (x) Conidiophores verticillately ramose **Verticicladium 4:327**
 - (y) Conidiophores more or less irregularly ramose
 - m. Conidia 1-ciliate at each end, falcate **Eriomene 4:326**
 - n. Conidia not ciliate
 - (m) Conidia globose to ovoid **Mesobotrys 4:324; 55**

- (n) Conidia oblong-cylindric **Chaetopsis**
- (o) Conidia falcate **Menispora 4:325**
- y. Conidiophores more or less decumbent
- (x) Conidia muriculate, not on spines **Actinochaete 22:1359**
- (y) Conidia smooth, borne on spines
- m. Conidiophores nodose-spiny here and there **Gonytrichum 4:329; 56**
- n. Conidiophores spiny but not nodose **Cladorhinum 4:330**
- (b) Conidiophores simple
- x. Conidiophores with a single lateral curved basidium at the base; conidia 2-4 **Zygosporium 4:328**
- y. Conidiophores with many pleurogenous conidia **Chloridium 4:320**

Didymosporae

4:341, 10:595, 11:616, 14:1077, 16:1056, 18:575, 22:1364

Conidia 1-celled, dark, rarely hyaline, ovoid to oblong or fusoid

Micronemeae

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate **Bispora 4:343; 56**
- B. Conidia not catenate
- 1. Mycelium circinate **Cycloconium 4:343**
- 2. Mycelium obsolete **Dicoccum 4:342**

Macronemeae

Hyphae manifest and distinct from the conidia

- A. Conidia ciliate or muriculate
- 1. Conidia 1-ciliate at apex; sterile setae among the conidiophores **Beltrania 4:377; 56**
- 2. Conidia muriculate; sterile setae none
- a. Saprogenous; hyphae decumbent **Trichocladium 4:376**
- b. Biogenous; hyphae erect, fasciculate **Hadronema 22:1365**
- B. Conidia not ciliate or muriculate
- 1. Conidia capitate
- a. Conidiophores simple
- (1) Conidiophores with a muriculate vesicle at tip **Muchmoria 22:1364**
- (2) Conidiophores not inflated at tip **Cordana 4:376**
- b. Conidiophores bearing muriculate vesicles at apex and at tips of short laterals **Cephalomyces 22:1365**
- c. Conidiophores with intercalary muriculate vesicles **Arthrobotryella**
- 2. Conidia not capitate
- a. Conidia more or less catenate at first, the chains often short
- (1) Hyphae and conidia of two kinds, hyaline and dark; dark conidia 2-celled catenate, hyaline conidia 1-celled, not catenate **Epochnium 4:375**
- (2) Hyphae and conidia of one kind

- (a) Joints of conidiophore more or less inflated and clavoid Cladotrichum 4:370; 56
- (b) Joints not inflated
 - x. Conidiophores erect; conidia long-catenate Diplococcium 4:374
 - y. Conidiophores somewhat decumbent; conidia 2-3 in chains, often solitary Cladosporium 4:350
- b. Conidia not catenate
 - (1) Conidiophores beautifully flexuous or torulose Polythrincium 4:350; 56
 - (2) Conidiophores not flexuous or torulose
 - (a) Conidiophores inflated, repeatedly ramose; conidia rhomboid Pseudobeltrania 18:578
 - (b) Conidiophores with somewhat globose denticulate joints, bearing 1-x conidia, simple Gonyella
 - (c) Conidiophores not inflated, simple or sparsely branched
 - x. Conidia verrucose Asperisporium
 - y. Conidia not verrucose
 - (x) Conidia acrogenous Fusicladium 4:345
 - (y) Conidia acropleurogenous
 - m. Conidiophores simple, short, fasciculate, mostly erect Scolecotrichum 4:347
 - n. Conidiophores more or less ramose, longer, somewhat decumbent Cladosporium 4:350

Phragmosporae

4:380, 10:606, 11:621, 14:1082, 16:1060, 18:581, 22:1379

Conidia 2-x-celled, dark, rarely hyaline, ovoid to cylindrical or vermicular

Micronemeae

Hyphae very short or little different from the conidia

- A. Conidia catenate
 - 1. Conidia connected by isthmi Polydesmus 4:401
 - 2. Conidia without isthmi Septonema 4:397; 56
- B. Conidia not catenate
 - 1. Conidia 1-3-rostellate at apex
 - a. Conidiophores dichotomous and broadened at apex Urosporium 4:397
 - b. Conidiophores not dichotomous or broadened Ceratothorium 4:395
 - 2. Conidia muticate
 - a. Conidia ovoid to cylindrical, straight
 - (1) Saprogenous Clasterosporium 4:382
 - (2) Phyllogenous Stigmia 4:394
 - b. Conidia fusoid-falcate Fusariella 4:395; 56

Macronemeae

Hyphae long or distinctly different from the conidia

- A. Conidia endogenous
 - 1. Conidia catenate, dark Sporoschisma 4:486; 56
 - 2. Conidia not catenate, hyaline Excioconis

B. Conidia exogenous

1. Conidia catenate

a. Conidia connected by isthmi

Peyronelia

b. Conidia without isthmi

Dendryphium 4:487

2. Conidia not catenate

a. Conidia capitate or verticillate

(1) Conidia acrogenous, capitate

(a) Conidiophores ramose at tip; heads mucose

Atractina 18:584

(b) Conidiophores simple, with sterigmata; heads not mucose

Acrothecium 4:483; 56

(2) Conidia pleurogenous, verticillate

(a) Conidia verticillate at the apex

Spondylocladium 4:482

(b) Conidia subverticillate at the enlarged middle; tip of conidiophore naked and rostrate

Rhynchomyces 18:584

b. Conidia not capitate or verticillate, solitary or few in a group

(1) Conidia ciliate

(a) Conidia dark, 2-(1-3) ciliate at apex

Camarosporium 4:482

(b) Conidia hyaline, 1-ciliate at each end

Eriomenella 4:326

(2) Conidia not ciliate

(a) Conidiophores with nodes or cyathiform appendages

x. Conidiophores with nodes; conidia acrogenous and also pleurogenous on the nodes

Dendryphiella

y. Conidiophores with a cup-like membrane at 1-2 septa; conidia acrogenous, large

Endophragma

(b) Conidiophores otherwise

x. Conidia echinulate

Heterosporium 4:480

y. Conidia smooth

(x) Saprogenous

m. Hyphae of two kinds, one torulose with 2-celled conidia, the other not torulose, with x-celled conidia

Hyphosoma

n. Hyphae of one kind

(m) Conidia of two kinds, one subfusoid, dark, the other filiform-falcate, hyaline

Jainesia

(n) Conidia of one kind

r. Sterile hyphae present

(r) Hyphae intracellular, algicole; conidia torulose

Blodgettia 10:664

(s) Hyphae not intracellular; conidia not torulose

h. Conidia falcate; conidiophores with basidia

Drepanospora 4:430

i. Conidia ellipsoid; basidia lacking

Stemphyliomma 22:1394

s. Sterile hyphae lacking

(r) Conidia ovoid, few-septate

Brachysporium 4:423

- (s) Conidia elongate, typically many-septate Helminthosporium 4:402; 56
- (y) Biogenous
- m. Hyphae creeping
- (m) Hyphae radiate, without setae; conidia ellipsoid Ophiotrichum 10:617
- (n) Hyphae not radiate, with setae
- r. Hyphae with hyphopodia; conidia long-rostellate Chiropodium
- s. Hyphae without hyphopodia; conidia long, not rostellate Chaetotrichum
- n. Hyphae erect, fasciculate; conidia ovoid Cercosporidium 18:594

Dictyosporae

4:496, 10:665, 11:632, 14:1090, 16:1075, 18:612, 22:1399

Conidia muriform, dark, rarely hyaline, globose to oblong

Micronemeae

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate Sirodesmium 4:516; 56
- B. Conidia not catenate
- 1. Conidia 3-4-rostrate at apex Tetraploa 4:516
- 2. Conidia not rostrate
- a. Conidia composed of parallel chains of cells
- (1) Chains never separating Dictyosporium 4:513; 56
- (2) Chains separating Spira 4:514
- b. Conidia irregularly muriform or sarciniform
- (1) Conidia with a conic point at each side Oncopodium 18:616
- (2) Conidia muticate
- (a) Conidia sarciniform, irregular, often coalescent Coniothecium 4:508
- (b) Conidia globose to oblong
- x. Conidia globose-ovoid, aggregated, on ramose hyphae Stigmella 4:507
- y. Conidia ovoid-oblong, single, on short simple hyphae Sporodesmium 4:497; 56

Macronemeae

Hyphae long or distinctly different from the conidia

- A. Conidia of two kinds, dark sarciniform and sub-hyaline falcate Sarcinella 4:458; 57
- B. Conidia alike
- 1. Conidia catenate
- a. Conidia connected by isthmi, then caudate; hyphae velvety, subsimple Alternaria 4:545; 57
- b. Conidia without isthmi, not caudate; hyphae crustose, typically branched Fumago 4:457
- 2. Conidia not catenate
- a. Conidia capitata Dactylosporium 4:545
- b. Conidia not capitata

- (1) Hyphae of two kinds, longer sterile,
shorter fertile **Septosporium 4:543**
- (2) Hyphae of one kind
- (a) Conidia subreniform, bearing globose
conidioles **Xenosporium 18:612**
- (b) Conidia without conidioles
- x. Conidia cruciate-divided, verrucose **Tetracoccusporis 18:617**
- y. Conidia not cruciate, muriform, smooth
- (x) Conidia reniform or semicircular
- m. Conidia inversely reniform, enclosed
in a clear semi-gelatinous vesicle **Coleodictys**
- n. Conidia semi-circular, half surround-
ing a globose cell **Xenosporella**
- (y) Conidia otherwise
- m. Conidiophores decumbent **Stemphylium 4:519**
- n. Conidiophores erect or ascending
- (m) Conidia globose, pleurogenous
- r. Conidia around the apex of the
hyphae **Coccusporium 4:542**
- s. Conidia conglobate around the
base of the hyphae **Trichaeum 4:542**
- (n) Conidia ovoid to oblong, typically
acrogenous **Macrosporium 4:523; 56**

Scolecosporae

4:431, 14:1099, 22:1432

Conidia long-filiform or vermicular

- A. Conidia hooked at apex; sphagnicole **Casaresia**
- B. Conidia not hooked; not sphagnicole **Cercospora 4:431; 56**

Staurosporae

4:552, 11:639, 14:1107, 16:1181, 18:625, 22:1411

Conidia forked or stellate, usually dark, septate or continuous

- A. Conidia of two forms, large lobate x-celled dark,
small fusoid hyaline **Desmidiospora 10:568**
- B. Conidia alike
1. Conidiophores present
- a. Conidia 2-4-radiate **Triposporium 4:554; 57**
- b. Conidia anchor-like, rostrate at apex **Teratosperma 22:1411**
2. Conidiophores lacking
- a. Conidia 3-x-forked or united at base; sterile
hyphae present; xylogenuous **Ceratosporium 4:552**
- b. Conidia horseshoe-shaped, aggregate; sterile
hyphae lacking; phyllogenuous **Hirundinaria 4:553**

Helicosporae

4:557, 10:680, 11:638, 14:1107, 16:1081, 18:625, 22:1435

Conidia spiral or convolute, cylindrical, dark or hyaline, typically septate

- A. Conidia relatively thick, not hygroscopic **Helicoma 11:638**
- B. Conidia relatively thin, hygroscopic **Helicosporium 4:557; 57**

Family 87. TUBERCULARIACEAE

Hyphae compacted into a globose, pulvinate, discoid or verruciform body or sporodochium; sporodochia typically sessile, erumpent or superficial, byssoid, waxy, fleshy or subgelatinous, hyaline, bright-colored, or dark to black; conidiophores typically long and ramose, sometimes short and simple or rarely obsolete, usually not arising from a cellular stroma-like base; conidia various, lacking in one anomalous group, as are the conidiophores also.

This family is more or less readily distinguished from the **Moniliaceae** and **Dematiaceae** by the presence of a sporodochium, and from the **Stilbaceae** by the practically universal sessile habit. On the other hand, there is no satisfactory distinction between it and the **Melanconiaceae**, as the two groups are at present constituted, and genera with short simple conidiophores must be sought in both. These are thought to belong properly in the **Melanconiaceae**, but this transfer has not been made, owing to the number of genera concerned and the inadequacy of many of the descriptions. Properly limited, the **Tuberculariaceae** comprise only those genera with long and typically branched conidiophores without a basal stroma. The distinction drawn by Hoehnel with respect to the insertion of the spore-body in the matrix, i. e., persistently innate in the one and erumpent-superficial in the other, may possess some validity, but it is not a practicable criterion.

An anomalous group without conidiophores and conidia is referred to this family by virtue of the possession of a sporodochium.

Mucedineae

Hyphae and conidia hyaline or bright-colored

Amerosporae

4:635, 10:700, 11:645, 14:1115, 16:1090, 18:658, 22:1458

Conidia 1-celled, hyaline or bright-colored, globose to fusoid

- A. Conidia and conidiophores present, or the latter rarely obsolete
1. Sporodochia hairy or setulose
 - a. Conidia catenate; conidiophores simple, short **Volutina 18:667**
 - b. Conidia not catenate
 - (1) Conidia ciliate **Neottiosporis H 445**
 - (2) Conidia not ciliate
 - (a) Sporodochia more or less uniformly setulose
 - x. Conidiophores dendroid-ramose
 - (x) Setae spirally twisted; conidia acropleurogenous **Perioloopsis H 446**
 - (y) Setae not spiral; conidia acrogenous **Trichofusarium 22:1473**
 - y. Conidiophores simple
 - (x) Sporodochia short-stalked **Thysanopyxis H 451**
 - (y) Sporodochia not stalked **Psilonia**
 - (b) Sporodochia ciliate at margin
 - x. Conidiophores obsolete; conidia coacervate **Volutellaria 4:682**
 - y. Conidiophores present, simple
 - (x) Conidiophores 6-ciliate above, united below **Guelichia 10:720**
 - (y) Conidiophores not ciliate or united **Volutella 4:682; 58**

2. Sporodochia glabrous, or rarely velvety
- a. Conidia catenate
- (1) Conidia ciliate
- (a) Conidia 1-ciliate at each end
- x. Conidia spinulose **Amphichaetella**
- y. Conidia smooth **Thozetia 4:679**
- (b) Conidia 7-8-ciliate at each end **Chaetospermum 10:706**
- (2) Conidia not ciliate
- (a) Conidia covered with mucus **Collodochium 18:661**
- (b) Conidia without mucus
- x. Spores globose **Sphaerocolla 11:648**
- y. Spores more or less cylindrical
- (x) Sporodochia gelatinous, verruciform, sessile **Cylindrocolla 4:673; 58**
- (y) Sporodochia not gelatinous
- m. Sporodochia globose, short-stalked **Sphaeridium 4:675**
- n. Sporodochia pulvinate to discoid, sessile
- (m) Sporodochia dark, without hypostroma **Blennoria 3:730; 52**
- (n) Sporodochia bright, with hypostroma **Sirodochiella**
- b. Conidia not catenate
- (1) Conidia endogenous
- (a) Conidia globoid; conidiophores 2-3-ramose **Endoconidium 10:708**
- (b) Conidia ovoid, minute; conidiophores obclavate, short **Hymenella 16:1105**
- (2) Conidia exogenous
- (a) Conidiophores ramose
- x. Conidiophores verticillate or dichotomous
- (x) Conidiophores verticillate or penicillate
- m. Conidiophores verticillate
- (m) Conidia in mucose capitules **Haplariella H 430**
- (n) Conidia not in mucose capitules **Verticillis H 431**
- n. Conidiophores penicillate; conidia in small lateral heads **Cephalodochium 4:678**
- (y) Conidiophores dichotomous
- m. Each fork with two sterigmata **Ranojevicia 22:1487**
- n. Forks without sterigmata **Dendrodochium 4:650; 58**
- y. Conidiophores dendroid or irregularly ramose
- (x) Conidiophores dendroid-ramose
- m. Conidia acrogenous **Fusicolla 4:664**
- n. Conidia acropleurogenous **Pleurocolla**
- (y) Conidiophores irregularly ramose, the branches few or short
- m. Conidia globose, pleurogenous **Dacrymycella 4:671**
- n. Conidia sigmoid, acrogenous **Sigmatomyces H 470**
- o. Conidia ovoid to oblong

- (m) Conidia acrogenous
 - r. Sporodochia globose; hyphae and conidiophores radiate **Granularia 4:649**
 - s. Sporodochia verruciform or tuberculate; not radiate **Tubercularia 4:638; 58**
 - (n) Conidia acropleurogenous **Tubercularis 22:1460**
 - (b) Conidiophores simple or nearly so
 - x. Conidia globose
 - (x) Conidia acrogenous
 - m. Sporodochia gelatinous; conidia capitate **Dacryodochium 14:1122**
 - n. Sporodochia hard; conidia not capitate; mostly uredicole **Tuberculina 4:653; 58**
 - (y) Conidia pleurogenous; conidiophores spirally twisted **Beniowskia 16:1091**
 - y. Conidia ovoid to oblong or lunate, rarely globoid
 - (x) Conidia very large
 - m. Sporodochia plane to pulvinate, superficial, yellow-brown **Coccospora 4:9, H 423**
 - n. Sporodochia discoid, erumpent, bright-colored **Tuberculis' H 424**
 - (y) Conidia medium to minute
 - m. Conidia capitate; sporodochium subglobose, gelatinous, white **Lachnodochium 14:1122**
 - n. Conidia not capitate
 - (m) Conidia lunulate; sporodochia pulvinate, fleshy **Menoidea 22:1463**
 - (n) Conidia not lunulate
 - r. Sporodochium disciform, bright-colored **Hymenula 4:667**
 - s. Sporodochium white to pale or brownish
 - (r) Sporodochium convex to pulvinate
 - h. Sporodochia with hard hypostroma; conidiophores not papillate; typically gramini-
cole **Sphacelia 4:666**
 - i. Sporodochia slimy-gelatinous; conidiophores 2-papillate; fungicole **Tremellidium**
 - (s) Sporodochia globoid, white or hyaline
 - h. Conidiophores papilliform **Microdochium**
 - i. Conidiophores filiform, radiate **Leucodochium**
- B. Conidia and conidiophores lacking, or imperfect
 - 1. Sporodochia innate, rounded, falling apart in polygonal cells, orange-red **Necator 16:1094**
 - 2. Sporodochia superficial
 - a. Sporodochia bright-colored **Illosporium 4:656**
 - b. Sporodochia white or pale **Aegerita 4:661**

Didymosporae

4:690, 10:721, 18:668, 22:1473

Conidia 2-celled, hyaline or bright-colored, ovoid to fusoid

- A. Sporodochia setulose; conidiophores obsolete
1. Conidia catenate, with an obtuse appendage at each end Endodesmia 4:691
 2. Conidia not catenate or appendaged Leptotrichum 4:690
- B. Sporodochia glabrous
1. Conidia catenate
 - a. Conidiophores dichotomous; conidia lunate-fusoid Fusisporella 22:1473
 - b. Conidiophores simple; conidia elliptic Gymnodochium 18:668
 2. Conidia not catenate
 - a. Conidia with a lateral seta at each end Dithozetia
 - b. Conidia not setulose
 - (1) Conidia verrucose, deeply constricted Cosmariospora 4:690; 58
 - (2) Conidia smooth, not constricted Patouillardella 10:721

Phragmosporae

4:691, 10:721, 11:649, 14:1123, 16:1097, 18:669, 22:1474

Conidia x-celled, hyaline or bright-colored, oblong to fusoid

- A. Sporodochia setulose, disciform; conidia cylindrical Volutelopsis 22:1488
- B. Sporodochia not setulose
1. Conidia somewhat catenate, cylindrical Discocolla 11:653
 2. Conidia not catenate or rarely so
 - a. Conidiophores ramose
 - (1) Conidiophores dichotomous; conidia large, key-like Heliscus 4:693
 - (2) Conidiophores mostly dendroid or verticillate; conidia usually fusoid-curved Fusarium 4:694; 58
 - b. Conidiophores simple; conidia large
 - (1) Sporodochia gelatinous; conidia bearing conidioles at tip and septa Xenogloea
 - (2) Sporodochia not gelatinous; conidioles lacking Bactridium 4:691; 58

Dictyosporae

18:676, 22:1487

Conidia muriform or cruciate, hyaline, subglobose to oblong

- A. Sporodochia globose, white; conidia single, large, muriform Sporocystis 18:676
- B. Sporodochia plane, yellow; conidia 3-5-congested, medium, cruciately 4-celled Sarcinodochium 18:677

Scolecosporae

16:1158, 22:1488

Conidia acicular to filiform, hyaline, continuous

- A. Conidiophores verticillate-ramose, short; conidia acro-pleurogenous Linodochium 22:1488
- B. Conidiophores simple, long; conidia acrogenous Kmetia 16:1158

Staurosporae

4:728, 16:1104, 18:677, 22:1489

Conidia variously united or forked, hyaline or bright-colored

- A.** Conidia or cells united in the middle
1. Conidia consisting of septate parallel parts united in the middle Amallospora 14:1131
 2. Conidia consisting of a cylindric 2-celled middle part and 2 half-moon 1-celled smaller ones fastened in the middle Araneomyces 22:1489
- B.** Conidia forked
1. Conidia consisting of a basal middle part, with a whorl of 2-7 cylindric septate branches Tetracium 18:560
 2. Conidia 2-forked, 5-celled Dicranidium 4:728
 3. Conidia 3-forked, 3-celled Triglyphium 4:728

Helicosporae

4:729, 10:732, 11:653, 18:678

Conidia spirally convolute or horseshoe-like

- A.** Conidia spirally convolute
1. Conidia septate; sporodochia yellow, mucose Hobsonia 11:653
 2. Conidia continuous; sporodochia white, mealy Troposporium 4:729
- B.** Conidia once coiled
1. Sporodochia gelatinous; conidial wall not very thick Delortia 6:795
 2. Sporodochia not gelatinous; conidia with thick hyaline wall Drepanoconis 17:519
- C.** Conidia horseshoe-like; sporodochia white, globoid Lituraria 4:728

Dematieae

Hyphae olive to brown or black; conidia concolorous, sometimes hyaline

Amerosporae

4:736, 10:732, 11:654, 14:1129, 16:1104, 18:678, 22:1489

Conidia 1-celled, dark or sometimes hyaline, globose to elongate

- A.** Conidia and conidiophores present, or the latter rarely obsolete
1. Sporodochia hairy or setulose
 - a. Conidia catenate, hyaline Chaetosira 22:1496
 - b. Conidia not catenate
 - (1) Sporodochia more or less uniformly setulose
 - (a) Conidia hyaline Periola 4:681; 58
 - (b) Conidia dark Chaetostroma 4:749; 58
 - (2) Sporodochia ciliate at margin
 - (a) Setae colored; sporodochia pale Amerosporis H 486
 - (b) Setae white; sporodochia dark, scutellate to discoid Myrothecium 4:750
 2. Sporodochia glabrous
 - a. Conidia catenate
 - (1) Conidia subhyaline; sporodochia scutellate, white-margined Myrotheciella 22:1493

- (2) Conidia dark; sporodochia otherwise
- (a) Conidiophores simple or ramose, radiate
- x. Conidiophores very short; conidia globose-angulate **Sphaeromyces 4:753**
- y. Conidiophores longer, often ramose; conidia oblong to cylindrical **Actinodochium**
- (b) Conidiophores obsolete or none
- x. Conidia asperulate **Spilodochium**
- y. Conidia smooth **Exosporina 18:684**
- b. Conidia not catenate
- (1) Conidia hyaline
- (a) Sporodochia with brown radiate subicle, discoid **Astrodochium 14:1117**
- (b) Sporodochia without subicle
- x. Conidia globose; sporodochia of 3 varicolored layers **Triplicaria 10:734**
- y. Conidia ovoid to cylindrical; sporodochia not layered
- (x) Sporodochia superficial, discoid, gelatinous; conidia long-bacillar **Hymenobactrum 4:747**
- (y) Sporodochia erumpent
- m. Conidiophores verticillate-ramose; conidia cylindrical, small, more or less capitate **Agyriella 3:731**
- n. Conidiophores simple, cylindrical
- (m) Conidia ovoid, not conglutinate **Melanobasis 22:1490**
- (n) Conidia oblong, conglutinate **Melanodiscus**
- (2) Conidia dark
- (a) Sporodochia lichenicole; conidiophores obsolete; conidia globoid **Spilomium 18:678**
- (b) Sporodochia not lichenicole
- x. Conidia globose or lentiform
- (x) Conidiophores with a slender apical appendage; conidia pleurogenous, smooth **Bonplandiella 10:732**
- (y) Conidiophores not appendaged; conidia acrogenous
- m. Conidia lentiform; sporodochia flat, small **Papularia H 499**
- n. Conidia globose
- (m) Conidiophores short, not penicillate
- r. Sporodochia globose to convex, fleshy; conidia usually asperate **Epicoccum 4:736; 58**
- s. Sporodochia thin, effuse, not fleshy; conidia not asperate **Hadrotrichum 4:301; 55**
- (n) Conidiophores penicillately fascicled above; conidia roundish, asperate **Mapea H 422**
- y. Conidia not globose or lentiform
- (x) Conidia verticillately acropleurogenous; conidiophores with prominent septa **Arthrimum 4:279; 55**

- (y) Conidia not verticillate or pleurogenous
 - m. Conidiophores none; sporodochia discoid, shining **Sclerodiscus 10:735**
 - n. Conidiophores ramose or simple
 - (m) Conidiophores ramose; conidia verrucose, ovate **Strumellopsis H 497**
 - (n) Conidiophores simple; conidia smooth **Xiphomyces**
- B. Conidia and conidiophores lacking, or imperfect
 - 1. Sporodochia verruciform, gray to black, of multiform hyphae; not lichenicole **Strumella 4:742; 58**
 - 2. Sporodochia globose, breaking into cells or groups; lichenicole **Sclerococcum 4:754**

Didymosporae

4:754, 10:737, 16:1105, 18:684, 22:1494

Conidia 2-celled, dark or sometimes hyaline, elliptic to fusoid

- A. Sporodochia setulose at margin; conidia catenate **Trichodochium**
- B. Sporodochia glabrous; conidia not catenate
 - 1. Conidia subhyaline; sporodochia globose, black, on a white radiate subicle **Erysiphopsis 22:1494**
 - 2. Conidia dark; subicle lacking
 - a. Sporodochia globose, superficial; conidia clavate, fuscous **Pucciniopsis 10:737**
 - b. Sporodochia pulvinate, erumpent; conidia clavate-cylindric, brown, with mucous sheath **Anomomyces 10:482**
 - c. Sporodochia scutellate, margined, erumpent; conidia oblong, black **Epicladium 4:754**

Phragmosporae

4:755, 10:738, 11:656, 14:1131, 16:1106, 18:685, 22:1495

Conidia x-celled, dark or rarely hyaline, oblong to cylindric

- A. Sporodochia setulose, scutellate **Excipularia 18:688, 3:689**
- B. Sporodochia not setulose
 - 1. Conidia catenate; sporodochia discoid to pulvinate **Trimmatostroma 4:757**
 - 2. Conidia not catenate
 - a. Conidia 1-ciliate at each end, hyaline, curved **Ciliofusa 11:656**
 - b. Conidia not ciliate, dark
 - (1) Sporodochia terete; conidia very large, ellipsoid, verruculose **Cylomyces 18:685**
 - (2) Sporodochia not terete; conidia otherwise
 - (a) Conidia acropleurogenous; sporodochia pulvinate, superficial; conidiophores very long **Acrotheciella 22:1496**
 - (b) Conidia acrogenous
 - x. Sporodochia subglobose to convex **Exosporium 4:755:58**
 - (x) Sporodochia erumpent **Cryptocoryneum 4:395**
 - (y) Sporodochia superficial **Marcosia H 513**
 - y. Sporodochia scutellate to discoid

Dictyosporae

4:758, 10:739, 11:656, 14:1131, 16:1107, 18:689, 22:1497

Conidia muriform, usually dark, ovoid to fusoid

- A. Sporodochia setulose**
1. Setae arising from the outside; conidia ellipsoid, large, smooth **Chaetostromella 11:656**
 2. Setae arising from the hymenium; conidia cruciately 4-celled, asperate **Tetrachia**
- B. Sporodochia glabrous**
1. Conidia catenate, globose-angled, irregularly cruciate **Bonordeniella 18:689**
 2. Conidia not catenate
 - a. Conidia with subhyaline radiate processes **Petrakia H 523**
 - b. Conidia without radiate processes
 - (1) Sporodochia convolute, soft; conidia irregular, roundish, 1- and x-celled **Cerebella 4:761, H 524**
 - (2) Sporodochia not convolute
 - (a) Sporodochia globose, superficial
 - x. Sporodochia subgelatinous; conidia large, of many spherical cells **Myriophysella 22:1497**
 - y. Sporodochia not gelatinous; conidia small, of few polygonal cells **Clathrococum H 521**
 - (b) Sporodochia not globose, erumpent
 - x. Sporodochia verruciform or pulvinate; conidiophores simple **Thyrostroma H 525**
 - y. Sporodochia columnar; conidiophores long, ramose **Thyrodochium**

Scolecosporae

18:688

Conidia filiform, hyaline

- A. Sporodochia setulose, globose; conidiophores minute or obsolete** **Schizotrichum 18:688**
- B. Sporodochia glabrous, verruciform; conidiophores short** **Exosporella H 527**

Staurosporae

4:753, 22:1498

Conidia forked, radiate or united, hyaline to dark

- A. Sporodochia setulose, with subicle; conidia hyaline, with 2-celled base and 3 cylindrical septate parts** **Fumagopsis 22:1498**
- B. Sporodochia without setae or subicle**
1. Sporodochia erumpent
 - a. Conidia 2-4-digitate, brownish **Chiromyces 4:554**
 - b. Conidia 5-7-celled, claw-like, brown **Chelisporium 22:1498**
 2. Sporodochia superficial
 - a. Conidia cruciately 4-celled **Spegazzinia 4:758**
 - b. Conidia mostly 5-celled, acutely bent together **Chiromycella H 529**

Helicosporae

4:729, 11:654

Conidia spirally convolute, hyaline or smoky

- A.** Conidiophores obsolete; conidia hyaline **Everhartia 4:729**
B. Conidiophores ramose, moniliform; conidia smoky **Troposporella 11:654**

Family 88. STILBACEAE

Sterile hyphae creeping, scanty; fertile hyphae aggregated into clavate or cylindrical fascicles or synnemata, typically bearing the conidia at the top, often in a head, more rarely along the sides, pale, bright-colored, or dark to black; conidia various.

Hyalostilbae

Hyphae and conidia pale or bright-colored, not dark or black

Amerosporae

4:461, 10:681, 11:640, 14:1107, 16:1082, 18:630, 22:1437

Conidia 1-celled, hyaline to bright-colored, globose to elliptic or oblong

- A.** Conidial part distinctly capitate or at least terminal
1. Conidia catenate
 - a.** Synnema with conidia above; conidia without mucus
 - (1) Conidiophores verticillate-ramose **Coremium 4:581; 57**
 - (2) Conidiophores not verticillate-ramose **Coremiella H 556**
 - b.** Synnema with conidia below; conidia with mucus **Microspatha 10:687**
 2. Conidia not catenate
 - a.** Head spiny with radiating spicules
 - (1) Spicules conic, granulate **Actiniceps 4:579**
 - (2) Spicules with many curved branches at middle **Heterocephalum 18:642**
 - b.** Head not spiny
 - (1) Conidiophores conidium-like, septate; synnema monocephalous **Atractiella 4:578**
 - (2) Conidiophores normal
 - (a)** Conidia covered with mucus
 - x.** Synnema monocephalous
 - (x)** Conidiophores dendroid-verticillate **Pirobasidium 18:638**
 - m.** Conidiophores with obpiriform sterigmata **Dendrostilbella 18:635**
 - n.** Conidiophores without distinct sterigmata **Stilbum 4:564**
 - (y)** Conidiophores not dendroid-verticillate **Corallo dendrum 4:576**
 - y.** Synnema polycephalous
 - (x)** Capitula on erect branches **Tilachlidium 4:576**
 - (y)** Capitula on spreading subulate branches

- (b) Conidia without mucus
- x. *Synnema monocephalus*
- (x) Conidiophores spirally twisted **Martindalia 4:578**
- (y) Conidiophores more or less straight
- m. Conidia rhombic or biconic **Rhombostilbella 18:636**
- n. Conidia globose to fusoid
- (m) Conidia acrogenous **Ciliciopus 4:577; 57**
- (n) Conidia pleurogenous **Clathrotrichum**
- y. *Synnema polycephalous*, terrestrial, large **Macrostilbum 16:1083**
- B. Conidial part cylindrical or long-clavate
1. Conidia more or less equally distributed on the synnema
- a. Conidia catenate **Alphitomyces 22:1445**
- b. Conidia not catenate
- (1) Conidiophores ovoid with an apical filiform sterigma **Trichosterigma**
- (2) Conidiophores not ovoid and sterigmate **Isaria 4:584; 57**
2. Conidia in lateral groups
- a. Conidiophores with sterigmata; conidia in capituli; typically entomophilous **Gibellula 11:643; 57**
- b. Conidiophores without sterigmata; conidia umbellate; not entomophilous **Articulis 22:1443**

Didymosporae

18:645, 22:1446

Conidia 2-celled, hyaline, oblong to fusoid

- A. *Synnema capitata*; conidia fusoid **Didymostilbe 18:645**
- B. *Synnema cylindricum*
1. *Synnema* with a paraphysate disk at tip **Actinostilbe**
2. *Synnema* merely fimbriate at tip **Didymobotrys 18:645**

Phragmosporae

4:598, 10:691, 14:1109, 18:646

Conidia x-celled, hyaline, oblong to bacillar or filiform

- A. Conidia catenate **Symphiosira 4:600**
- B. Conidia not catenate
1. Conidia aristate, separating at the joints **Stilbomyces 14:1109**
2. Conidia not aristate or separating **Atractium 4:599; 57**

Helicosporae

18:658

Conidia filiform, spirally twisted

- Synnema* setose; conidia acropleurogenous **Helicostilbe 18:657**

Phaeostilbae

Hyphae and conidia or the one or the other dark

Amerosporae

4:603, 10:692, 11:643, 14:1109, 16:1086, 18:648, 22:1446

Conidia 1-celled, dark or hyaline, globose to oblong

- A. Conidia endogenous in open hyphae, of two sorts, hyaline and dark **Stilbochalara 22:1449**
- B. Conidia not endogenous
1. Conidia catenate
- a. *Synnema setose* **Trichurus 14:1112**
- b. *Synnema not setose*
- (1) *Synnema ramose*
- (a) *Synnema scopulate-ramose* above; conidia hyaline **Stemmaria 10:696**
- (b) *Synnema ramose* with several heads or spikes; conidia dark
- x. Branches capitulate, without sterigmata **Stilbodendrum**
- y. Branches clavate, fertile throughout, with sterigmata **Sarophorum**
- (2) *Synnema simple* or nearly so
- (a) Capitule loose
- x. Base of synnema globoid; usually foli-
cole **Graphiothecium 4:624**
- y. Base of synnema not globoid; typically
cauli- or ligni-
cole
- (x) Conidia hyaline or subhyaline **Stysanus 4:620; 57**
- (y) Conidia dark **Pycnostysanus H 581**
- (b) Capitule compact
- x. Conidia globose; chains simple **Briosia 10:698**
- y. Conidia oblong; chains usually ramose **Antromycopsis 14:1113**
2. Conidia not catenate
- a. *Synnema setose* **Saccardaea 11:643**
- b. *Synnema not setose*
- (1) Conidia asperate; conidiophores clavate,
with minute sterigmata **Basidiella 10:698**
- (2) Conidia smooth
- (a) Conidial part capitate
- x. *Synnema monocephalous*
- (x) *Synnemata* grouped on a carbonous
basal stroma **Stromatographium H 583**
- (y) *Synnemata* without basal stroma
- m. Heads involved in mucus
- (m) Conidia hyaline
- r. Stalk pseudoparenchymic, hollow **Coelographium**
- s. Stalk not pseudoparenchymic and
hollow
- (r) *Synnema* with root-like base
in substratum **Crinula H 584**
- (s) *Synnema* without such base **Graphium 4:609**
- (n) Conidia dark **Sporocybe 4:604; 57**
- n. Heads without mucus
- (m) Conidia acropleurogenous, on
dentate conidiophores **Graphiopsis H 588**
- (n) Conidia pleurogenous, usually fal-
cate **Harpographium 4:619**

- y. *Synnema* polycephalous
 (x) Capitula with mucus **Cladographium**
 (y) Capitula without mucus
 m. Conidia hyaline **Tilachlidiopsis**
 n. Conidia dark **Stilbothamnium** 14:1110
- (b) Conidial part cylindrical or subulate
 x. *Synnema* dendroid-ramose; conidia hyaline, cohering in mucose glomerules **Synnematium**
 y. *Synnema* ramose-circinate and sterile above; below conidiophores with lageniform sterigmata **Ceratocladium** 18:649; 55
 z. *Synnema* not ramose; conidia dark
 (x) Conidia reniform, acropleurogenous **Melanographium**
 (y) Conidia not reniform
 m. *Synnema* with thin membrane from sterile external hyphae; conidia pleurogenous **Endocalyx**
 n. *Synnema* without membrane **Sporostachys**

Didymosporae

4:626, 10:699, 18:654

Conidia 1-celled, dark or hyaline, oblong to cylindrical

- A. Conidia catenate, in branched chains, long 1-celled **Antromyces** 3:626
 B. Conidia not catenate
 1. Conidia 1-ciliate at apex **Hoehneliella** 18:654
 2. Conidia muticate **Didymobotryum** 4:626

Phragmosporae

4:627, 10:699, 11:644, 14:1113, 16:1089, 18:655, 22:1455

Conidia x-celled, dark or hyaline, oblong to cylindrical

- A. Conidial part capitate or at least terminal
 1. Conidia involved in mucus; conidiophores paraphysate **Calostilbella**
 2. Conidia not in mucus
 a. *Synnema* black; conidia densely capitate **Arthrobotryum** 4:628
 b. *Synnema* fuscous or pale; conidia looser in a capitate or clavate group **Isariopsis** 4:630
- B. Conidial part cylindrical or long-clavate
 1. Conidia catenate **Dendrographium** 11:644
 2. Conidia not catenate
 a. Stalk of *synnema* fibrous; conidia acropleurogenous **Podosporium** 4:627; 57
 b. Stalk pseudoparenchymic; conidia acrogenous **Podosporiella** 11:644

Dictyosporae

4:632, 14:1114, 22:1457

Conidia muriform, dark or hyaline, globoid to fusoid

- A. *Synnema* of but 2-3 hyphae arising from a scanty subiculum; conidia globoid, sublentiform, cells concentric **Hermatomyces** 22:1457

B. Synnema composed of many hyphae

1. Synnema clavate-capitate

Sclerographium 4:632

2. Synnema filiform-subulate

Negeriella 14:1114

Staurosporae

Synnema clavate-capitate; conidia of 4-5-radiate cells,
hyaline

Riessia 4:627; 57

89. DERMOPHYTA

22:1334

Mycelium branched, septate, usually producing two or three forms of conidia in cultures; the so-called arthrospores are apparently nothing but hyphae with short terminal segments that sometimes separate; aleurisporae are simple conidia acrogenous or pleurogenous on the hyphae or very short lateral branches; spindles are a second type of conidia, usually hyaline and mostly elongate fusiform, continuous or septate.

These are probably hyphomycetous forms of **Gymnascaceae**, parasitic in the skin and hair of man and other animals. Nannizzi (1926:85) has shown that, under favorable cultural conditions, **Microsporium gypseum** (Bod.) Grigor. produces asci and spores typical of **Gymnascaceae**, to which most of the genera and species of this group probably belong. Since the diagnoses are not based upon the usual criteria, it is impossible to place the genera satisfactorily in any of the preceding families.

A. Conidia of one kind only in culture, simple,
globose to subglobose, rarely septate

1. Conidia simple, globose to subglobose

a. Conidia acrogenous

b. Conidia pleurogenous

c. Conidia in botryose clusters

Montoyella

Pinoyella

Malassezia

Epidermophytum 22:1336

2. Conidia fusiform and septate

B. Conidia of two kinds

1. Aleurisporae and x-septate spindles present

Microsporium 22:1335

2. Aleurisporae and arthrospores present

Trichophytum 22:1334

3. Aleurisporae, arthrospores and hyphae with
dichotomous subglobose or clavate apical
branches

Achorium 22:1336

90. STERILE MYCELIA

14:1138, 16:1108, 18:690, 22:1499

Conidia permanently lacking so far as known; hyphae various, sometimes parasitic on algae (sterile lichens). Somewhat similar forms, such as **Aegerita** and **Illosporium**, have been traditionally included in **Tuberculariaceae**.

A. Parasitic on algae

Lepraria, Pulveraria, etc. Z 239

B. Not parasitic on algae

1. Tubercle-like or sclerotia

a. Tubercles connected with fibrils

Rhizoctonia 14:1175

b. Tubercles without fibrils

(1) Cortex discrete

Acinula 14:1174

(2) Cortex not discrete

Sclerotium 14:1139

2. Maculiform
 a. Forming black stromata in leaves and stems Ectostroma 14:1177
 b. Not forming black stromata Cuticularia 22:1502
3. Root-like
 a. Filaments rigid, broad, terete or flattened, dark, white within Rhizomorpha 14:1180
 b. Filaments rigid, capilliform, dark, closely adhering Capillaria 14:1184
4. Clavariform
 a. Filaments fasciculate Anthina 14:1184
 b. Filaments single, not fasciculate Clavariopsis 22:1502
5. Cobwebby or byssoid
 a. Hyphae cespitose, interwoven
 (1) Primary hyphae joined in bundles Ozonium 14:1187
 (2) Hyphae not fasciculate Rhacodium 14:1189
 b. Hyphae cobwebby, soft, evanescent, white or pale
 (1) Hyphae with globose sporangium-like bodies Helicosporangium S 149
 Papulospora 4:58, S 149
 Hypha 14:1192
 (2) Hyphae without sporangium-like bodies
 c. Hyphae crustose, creeping, dendritic, white to brownish, not forming a continuous membrane Himantia 14:1194
6. Membrane-like, densely interwoven, forming a continuous suberose or corious membrane Xylostroma 14:1197
7. Deformed, discolored corky cells of plants Phloeoconis 14:1197

List of Types and Synonyms

PROTOCOCCALES

PLASMIDIOPHORACEAE

- Plasmidiophora* Woronin Jahrb. Wiss. Bot.
11:548, ill. 1878. *P. brassicae* Wor.
- Sorodiscus* Lagerh. & Winge Ark. Bot. 12:23,
ill. 1923. *S. callitrichis* L. & W.
- Sorosphaera* Schroet. Krypt. Fl. Schles. 1:135
1886. *S. veronicae* Schroet.
- Ligniera* Maire & Tison Comp. Rend.
152:206 1911; Syll. Fung. 22:816 1913;
Fitzpatrick 61. *L. radicalis* M. & T.
- Spongospora* Brunchorst Berg. Mus. Aarsber.
1886:219, ill. 1887. *S. subterranea* (Wallr.) Lag.
- Tetramyxa* Goebel Flora 67:517 1884. *T. parasitica* Goebel

Genera Incertae Sedis Vel Dubia

- Anisomyxa* Nemeč Bull. Int. Acad. Boheme
1913; Riv. Pat. Veg. 6:218 1913; Fitz-
patrick 63. *A. plantaginis* Nemeč
- Coelomycidium* Debaisieux Comp. Rend.
82:899 1919. *C. simulii* Debais.
- Cystospora* Elliott Del. Agr. Exp. Sta. Bull.
114:1, ill. 1916; Fitzpatrick 66. *C. latata* Elliott
- Endospora* Scherffel Arch. Protistenk. 52:89,
ill. 1925. *E. ovalis* Scherf.
- Molliardia* Maire & Tison Ann. Myc. 9:238,
ill. 1911; Fitzpatrick 60. *M. triglochis* (Moll.) M. & T.
- Ostenfeldiella* Ferd. & Winge Ann. Bot.
28:648, ill. 1914; Fitzpatrick 66. *O. diplantherae* F. & W.
- Rhizomyxa* Borzi *Rhizomyxa*, nuovo ficomi-
cete 6, ill. 1884; Fitzpatrick 62. *R. hypogaea* Borzi
- Sorolpidium* Nemeč Ber. Deut. Bot. Ges.
29:48 1911; Fitzpatrick 63. *S. betae* Nemeč
- Sporomyxa* Leger Arch. Protistenk. 12:109,
ill. 1908; Fitzpatrick 65. *S. scauri* Leger

OLPIDIACEAE

- Diplophysa* Schroet. Nat. Pflanzenf. 1:1:85
1892. *D. saprolegniae* (Cornu) Schroet.
- Olpidiopsis* (Cornu) Fisch. Rabh. Krypt.
Fl. 1:47 1892. *O. saprolegniae* Cornu
- Ectrogella* Zopf Nov. Act. Leop. 47:175 1884. *E. bacillaris* Zopf

- Olpidiopsis** Cornu Ann. Sci. Nat. 5:15:114, ill. 1872.
Pseudolpidium Fisch. Rabh. Krypt. Fl. 1:433 1892.
Olpidium Schroet. Krypt. Fl. Schles. 1:180 1886.
Olpidiaster Pascher Beih. Bot. Cent. 35:2:578 1917; for *Asterocystis* De Wild. Ann. Soc. Micr. Belg. 17:21 1893; not Gobi 1879 (Algae); Fitzpatrick 72.
Reessia Fisch. Beitr. Kennt. Chytr. 17 1884.
Plasmophagus De Wild. Ann. Soc. Micr. Belg. 19:219 1895.
Pleolpidium Fisch. Rabh. Krypt. Fl. 1:443 1892.
Pleotrachelus Zopf Nov. Act. Leop. 47:173 1884.
Pseudolpidiopsis Minden Krypt. Fl. Brandenb. 5:255 1911.
Rozella Cornu Ann. Sci. Nat. 5:15:114 1872.
Sphaerita Dangeard Ann. Sci. Nat. 7:4:277 1886.
Woronina Cornu Ann. Sci. Nat. 5:15:114 1872.
- O. fusiformis** Cornu
P. fusiforme (Cornu) Fisch.
O. endogenum (A. Br.) Schroet.
O. radialis (De Wild.) Pasch.
R. amoeboides Fisch.
P. oedogoniorum De Wild.
P. monoblepharidis (Cornu) Fisch.
P. fulgens Zopf
P. schenkiana (Zopf) Minden
R. septigena Cornu
S. endogena Dang.
W. polycystis Cornu

SYNCHYTRIACEAE

- Synchytrium** De Bary & Woronin Verh. Nat. Ges. Freiburg 3:22 1863.
Miyabella Ito & Homma Bot. Mag. Tokyo 40:110 1926.
Oedomycetes Sacc. Rev. Gen. Bot. 6:409 1894.
Pycnochytrium De Bary & Woronin Verh. Nat. Ges. Freiburg 3:22 1863.
Woroninella Rac. Zeits. Pflanzenkr. 8:195 1898.
- S. taraxaci** De B. & W.
M. puerariae (Henn.) I. & H.
O. leproides Trab.
P. succisae De B. & W.
W. psophocarpi Rac.

PROTOMYCETACEAE

- Protomyces** Unger Exanth. Pfl. 341 1833.
Protomycopsis Magnus Pilz. Tirol 322 1905.
Taphridium Lagerh. & Juel Bih. Sven. Vet. Handl. 27:16 1902.
Volkartia Maire Bull. Soc. Bot. Fr. 54:145 1907; Syll. Fung. 22:790 1913.
- P. macrosporus** Ung.
P. leucanthemi Magn.
T. umbelliferarum (Rost.) L. & J.
V. rhaetica (Volk.) Maire

CHYTRIDIACEAE

- Achlyella** Lagerh. Hedwigia 29:143 1890.
Amoebochytrium Zopf Nov. Act. Leop. 47:181 1884.
Asterophlyctis Petersen Jour. de Bot. 17:218 1903.
- A. flahaulti** Lagerh.
A. rhizidioides Zopf
A. sarcoptoides Pet.

- Catenaria** Sorokin Ann. Sci. Nat. 6:4:67
1876.
- Chytridium** A. Braun Erschein. Verj. 198
1850.
- Cladochytrium** Nowakowski Cohn Beitr. Biol.
Pfl. 2:92 1876.
- Dangardia** Schröder Ber. Deut. Bot. Ges.
16:314, ill. 1898.
- Diplophlyctis** Schroet. Nat. Pflanzenf. 1:1:78
1892.
- Entophlyctis** Fisch. Rabh. Krypt. Fl. 1:414
1892.
- Harpochytrium** Lagerh. Hedwigia 29:142
1890.
- Fulminaria** Gobi Script. Hort. Bot. Petr.
15:282 1889.
- Rhadium** Dangard Ann. Myc. 1:61, ill.
1903.
- Nowakowskia** Borzi Bot. Cent. 22:23, ill.
1885.
- Nowakowskiella** Schroet. Nat. Pflanzenf.
1:1:82 1892.
- Obelidium** Nowakowski Cohn Beitr. Biol. Pfl.
2:86, ill. 1876.
- Phlyctidium** A. Braun Mon. Berl. Akad.
Wiss. 1885:41, as subgen.
- Phlyctochytrium** Schroet. Nat. Pflanzenf.
1:1:78 1892.
- Physoderma** Wallr. Fl. Crypt. Germ. 2:192
1833.
- Urophlyctis** Schroet. Jahrbr. Schles. Ges.
60:198 1882; Fitzpatrick 106, 107.
- Podochytrium** Pfitzer Sitzb. Nied-rhein. Ges.
62 1870.
- Polyphagus** Nowakowski Cohn Beitr. Biol.
Pfl. 2:203, ill. 1876.
- Rhizidium** A. Braun Mon. Berl. Akad. Wiss.
591 1856.
- Rhizidiomyces** Zopf Nov. Act. Leop. 47:188
1884.
- Rhizoclosmatium** Petersen Jour. de Bot.
17:216 1903.
- Rhizophidium** Schenk Verh. Phys. Med. Ges.
Würzburg 8:245 1858.
- Rhizophlyctis** Fisch. Rabh. Krypt. Fl. 1:119
1892.
- Saccomyces** Serbinow Script. Hort. Bot. Petr.
24:162, ill. 1907.
- Siphonaria** Petersen Jour. de Bot. 17:220
1903.
- Sporophlyctis** Serbinow Script. Hort. Bot.
Petr. 24:116, 164, ill. 1907.
- Zygorhizidium** Löwenthal Arch. Protistenk.
5:228, ill. 1904.
- C. anguillulae** Sor.
- C. olla** A. Br.
- C. tenue** Now.
- D. mamillata** Schröd.
- D. intestina** Schroet.
- E. cienkowskiana** (Zopf) Fisch.
- H. hyalothecae** Lagerh.
- F. mucophila** Gobi
- R. acutum** Dang.
- N. hormothecae** Borzi
- N. elegans** (Now.) Schroet.
- O. mucronatum** Now.
- P. laterale** (A. Br.) Minden
- P. hydrodictyi** (A. Br.) Schroet.
- P. maculare** Wallr.
- U. pulposa** (Wallr.) Schroet.
- P. clavatum** Pfitzer
- P. euglenae** Now.
- R. mycophilum** A. Br.
- R. apophysatus** Zopf
- R. globosum** Pet.
- R. globosum** A. Br.
- R. rosea** (De B. & W.) Fisch.
- S. dangeardi** Serb.
- S. variabilis** Pet.
- S. rostrata** Serb.
- Z. willei** Löwen.

Genera Incertae Sedis Vel Dubia

- Eurychasma** Magnus Hedwigia 44:347, ill. 1905.
Hypochoytrium Zopf Nov. Act. Leop. 47:187 1884; Fitzpatrick 107.
Latrostium Zopf Beitr. Nied. Org. 4:43 1804; Fitzpatrick 91.
Macrochytrium Minden Cent. Bakt. 8:824 1902; Fitzpatrick 109.
Micromyces Dangeard Le Botaniste 1:55 1889; Fitzpatrick 87.
Micromycopsis Scherffel Arch. Protistenk. 54:202, ill. 1926.
Mitochytridium Dangeard Bull. Soc. Myc. Fr. 27:202 1911; Fitzpatrick 110.
Polyrhina Sorokin Ann. Sci. Nat. 6:4:65, ill. 1876; Fitzpatrick 110.
Pyrhosorus Juel Bih. Sven. Akad. Handl. 26:1, ill. 1901; Fitzpatrick 71.
Rhizidiocystis Sideris Phytopathology 19:376 1929; Fitzpatrick 110.
Rhodochytrium Lagerh. Bot. Zeit. 51:43 1893.
Sirolopidium Petersen Overs. Dan. Vid. Förh. 480, ill. 1905.
Tetrachytrium Sorokin Bot. Zeit. 32:307 1874.
Wolkia Ramsbottom Trans. Brit. Myc. Soc. 5:143 1914.
Protascus Van der Wolk Myc. Cent. 3:153, ill. 1913; not Dangeard 1903.
Zygochytrium Sorokin Bot. Zeit. 32:305 1874; Fitzpatrick 108.
- E. dicksoni** (Wright) Magn.
H. infestans Zopf
L. comprimens Zopf
M. botryoides Minden
M. zygoni Dang.
M. cristata Scherf.
M. ramosum Dang.
P. multiformis Sor.
P. marinus Juel
R. ananasi Sideris
R. spilanthidis Lagerh.
S. bryopsisidis (de Bruyne) Pet.
T. triceps Sor.
W. decolorans (Wolk) Rams.
P. decolorans Wolk
Z. aurantiacum Sor.

SPIROGYRALES

MUCORACEAE

- Absidia** van Tiegh. Ann. Sci. Nat. 6:4:313, ill. 1876.
Lichtheimia Vuill. Bull. Soc. Myc. Fr. 19:124 1903; cf. Lendner Mucor. Suisse 129 1908; Fitzpatrick 245.
Mycocladius Beauverie Ann. Univ. Lyon n. s. 1:163, ill. 1900; cf. Lendner Ib.; Fitzpatrick 245.
Proabsidia Vuill. Bull. Soc. Myc. Fr. 19:116 1903; cf. Lendner Ib.; Fitzpatrick 245.
Pseudoabsidia Bainier Bull. Soc. Myc. Fr. 19:153, ill. 1903; cf. Lendner Ib.; Fitzpatrick 245.
Tieghemella Berl. & De T. Syll. Fung. 7:215 1888; cf. Lendner Ib.; Fitzpatrick 245.
Blakeslea Thaxt. Bot. Gaz. 58:353, ill. 1914.
- A. septata** van Tiegh.
L. corymbifera Vuill.
M. verticillatus Beauv.
P. saccardoi (Oud.) Vuill.
P. vulgaris Bain.
T. repens B. & De T.
B. trispora Thaxt.

- Chaetocladium* Fres. Beitr. Myk. 97 1863.
- Choanophora* Currey Jour. Linn. Soc. Bot. 13:578, ill. 1873.
- Cunninghamia* Currey Ib. 334; Fitzpatrick 261.
- Circinella* van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:261, ill. 1873.
- Cunninghamella* Matr. Ann. Myc. 1:46 1903; Syll. Fung. 17:508 1905.
- Actinocephalum* Saito Bot. Mag. Tokyo 19:1 1904; Fitzpatrick 263.
- Dicranophora* Schroet. Jahrb. Schles. Ges. 64:184 1886.
- Dispira* van Tiegh. Ann. Sci. Nat. 6:1:160, ill. 1875.
- Dissophora* Thaxt. Bot. Gaz. 58:361, ill. 1914.
- Haplosporangium* Thaxter Ib. 362, ill. 1914.
- Herpocladium* Schroet. Krypt. Fl. Schles. 1:213 1886.
- Herpocladiella* Schroet. Nat. Pflanzenf. 1:1:130 1893; Syll. Fung. 7:225 1888.
- Mortierella* Coemans Bull. Acad. Bot. Belg. 2:15:536 1863.
- Mucor* Micheli Nov. Pl. Gen. 215, ill. 1729; cf. Link Sp. Pl. Fung. 6:80 1824.
- Chlamydomucor* Brefeld Unters. Myk. 8:223 1889; cf. Lendner Mucor. Suisse 69 1908; Fitzpatrick 251.
- Glomerula* Bainier Bull. Soc. Myc. Fr. 19:154, ill. 1903; cf. Lendner Ib.; Fitzpatrick 251.
- Hydrophora* Tode Fung. Meckl. 2:5 1791.
- Parasitella* Bainier Ib.; cf. Lendner Ib.; Fitzpatrick 251.
- Phycomyces* Kze. & Schm. Myc. Heft. 2:113 1823.
- Pilaira* van Tiegh. Ann. Sci. Nat. 6:1:5 1875.
- Pilobolus* Tode Schrift. Nat. Freunde Berlin 5:46 1784.
- Hydrogera* Wigg. Prim. Fl. Hols. 110 1780; Fitzpatrick 251.
- Piptocephalis* De Bary Abh. Senck. Nat. Ges. 5:356, ill. 1866.
- Pirella* Bainier Ann. Sci. Nat. 6:15:84, ill. 1883.
- Rhizopus* Ehrenb. Nov. Act. Leop. 10:198 1820.
- Spinellus* van Tiegh. Ann. Sci. Nat. 6:1:66 1875.
- Sporodinia* Link Sp. Pl. Fung. 6:94 1824.
- Syzygites* Ehrenb. Sylv. Myc. Berol. 25 1818; Fitzpatrick 247.
- Syncephalastrum* Schroet. Krypt. Fl. Schles. 1:217 1886.
- C. jonesi* Fres.
- C. infundibula* (Curr.) Sacc.
- C. infundibulifera* Curr.
- C. spinosa* v. T. & le M.
- C. echinulata* (Thaxt.) Matr.
- A. japonicum* Saito
- D. fulva* Schroet.
- D. cornuta* van Tiegh.
- D. decumbens* Thaxt.
- H. bisporale* Thaxt.
- H. circinans* Schroet.
- H. circinans* Schroet.
- M. polycephala* Coem.
- M. mucedo* (L.) Lk.
- C. racemosus* Bref.
- G. repens* Bain.
- H. minima* Tode
- P. simplex* Bain.
- P. nitens* (Ag.) K. & S.
- P. anomala* (Ces.) Schroet.
- P. crystallinus* (Wigg.) Tode
- H. crystallina* Wigg.
- P. freseniana* De Bary
- P. circinans* Bain.
- R. stolonifer* Ehrenb.
- S. fusiger* (Lk.) van Tiegh.
- S. grandis* Lk.
- S. megalocarpus* Ehrenb.
- S. racemosum* Cohn

- Syncephalis** van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:261, ill. 1873.
- Gliocephalis** Matr. Bull. Soc. Myc. Fr. 15:254, ill. 1899; cf. Hoehn. Frag. Myk. 50 1902.
- Thamnidium** Link Berl. Mag. Nat. Freunde 3:31 1809.
- Bulbothamnidium** Klein Verh. z-b. Ges. Wien 20:557, ill. 1870; p. p.
- Chaetostylum** van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:328 1873.
- Helicostylum** Corda Icon. Fung. 5:18, 55 1842; p. p.
- S. cordata** v. T. & le M.
- G. hyalina** Matr.
- T. elegans** Lk.
- B. elegans** Klein
- C. freseni** v. T. & le M.
- H. elegans** Corda

Genera Incertae Sedis Vel Dubia

- Actinomucor** Schostak. Ber. Deut. Bot. Ges. 16:155, ill. 1898; Fitzpatrick 257.
- Coemansia** van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:392 1873; Fitzpatrick 272.
- Coemansiella** Sacc. Syll. Fung. 2:815 1883; Fitzpatrick 272.
- Dimargaris** van Tiegh. Ann. Sci. Nat. 6:1:154, ill. 1875; Fitzpatrick 272.
- Kickxella** Coemans Bull. Soc. Bot. Belg. 1:155, ill. 1862.
- Martensella** Coemans Bull. Acad. Roy. Belg. 2:15:544, ill. 1863.
- Rhopalomyces** Corda Prachtflora 3, ill. 1839.
- Saitomyces** Ricker Jour. Myc. 12:61 1906; Boedijn Ann. Myc. 25:162 1927.
- Spinalia** Vuill. Bull. Soc. Myc. Fr. 20:32, ill. 1904.
- Thamnocephalis** Blakeslee Bot. Gaz. 40:161, ill. 1905.
- A. repens** Schostak.
- C. reversa** v. T. & le M.
- C. alabastrina** Sacc.
- D. crystalligena** van Tiegh.
- K. alabastrina** Coemans
- M. pectinata** Coemans
- R. elegans** Corda
- S. japonicus** (Saito) Ricker
- S. radians** Vuill.
- T. quadrupedata** Blak.

ENDOGENACEAE

- Endogone** Link Mag. Ges. Naturf. Freunde Berlin 3:33, ill. 1809; Syll. Fung. 8:905 1889; 14:829 1899; cf. Thaxt. Proc. Am. Acad. 57:291, ill. 1922; Fitzpatrick 265.
- Glomus** Tul. Giorn. Bot. Ital. 2:63 1845.
- Glaziellâ** Berk. Vid. Medd. For. Kjob. 31:31 1879.
- Endogonella** Hoehn. Sitzb. Akad. Wien 122:294, ill. 1913; Syll. Fung. 24:1320 1928.
- Sclerocystis** B. & Br. Jour. Linn. Soc. 14:137 1873.
- Ackermannia** Pat. Bull. Soc. Myc. Fr. 18:180, ill. 1902; cf. Hoehn. Frag. Myk. 264 1909; Thaxt. Proc. Am. Acad. 57:328 1922.
- E. pisiformis** Lk.
- G. macrocarpus** Tul.
- G. vesiculosa** Berk.
- E. borneensis** Hoehn.
- S. coremioides** B. & Br.
- A. dussi** Pat.

- Xenomyces* Cesati Att. Accad. Napoli 8:26, ill. 1879; Syll. Fung. 9:340 1891; cf. Hoehn. Frag. Myk. 474 1910.
- Sphaeroceas* Sacc. & Ell. *Michelia* 2:582 1880-82; cf. Hoehn. Frag. Myk. 264, 1909; Thaxt. Proc. Am. Acad. 57:326 1922.
- Stigmatella* Sacc. Syll. Fung. 4:679 1886; cf. Hoehn. Frag. Myk. 264 1909.
- X. ochraceus* Ces.
- S. pubescens* S. & E.
- S. pubescens* Sacc.

Genera Incertae Sedis Vel Dubia

- Menezesia* Torrend *Broteria* 11:172, ill. 1913; Syll. Fung. 24:1321 1928.
- Plenophysa* Syd. *Ann. Myc.* 17:142 1919; Syll. Fung. 24:1320 1928.
- M. setulosa* Torr.
- P. mirabilis* Syd.

EMPUSACEAE

- Basidiobolus* Eidam *Cohn Beitr. Biol. Pfl.* 4:181, ill. 1886; cf. Fitzpatrick 286.
- Completozia* Lohde *Ges. Deut. Naturf.* 47:203 1874.
- Conidiobolus* Brefeld *Unters. Myk.* 4:35, ill. 1884; cf. Fitzpatrick 288.
- Empusa* Cohn *Nov. Act. Leop.* 25:301, ill. 1855.
- Entomophthora* Fres. *Bot. Zeit.* 14:882 1856; Fitzpatrick 292.
- Lamia* Nowakowski *Pam. Akad. Krakau* 8:153, ill. 1884; p. p.
- Tarichium* Cohn *Beitr. Biol. Pfl.* 1:58 1875; p. p.
- Massospora* Peck *N. Y. Mus. Nat. Hist. Rep.* 31:44 1879.
- B. ranarum* Eidam
- C. complens* Lohde
- C. utriculosus* Bref.
- E. muscae* Cohn
- E. sphaerosperma* Fres.
- L. culicis* (A. Br.) Now.
- T. megaspermum* Cohn
- M. cicadina* Pk.

ASCOIDEACEAE

- Ascoidea* Brefeld *Unters. Myk.* 9:91, ill. 1891.
- Dipodascus* Lagerh. *Jahrb. Wiss. Bot.* 24:549 1892.
- A. rubescens* Bref.
- D. albidus* Lagerh.

Genera Incertae Sedis Vel Dubia

- Conidiascus* Holtermann *Myk. Unters. Trop.* 23 1898; Fitzpatrick 311.
- Oscarbrefeldia* Holtermann *Ib.*; Fitzpatrick 311.
- Pericystis* Betts *Ann. Bot.* 17:167, ill. 1903; Fitzpatrick 312.
- C. paradoxus* Holt.
- O. pellucida* Holt.
- P. alvei* Betts

VAUCHERIALES

SAPROLEGNIACEAE

- Achlya* Nees *Nov. Act. Leop.* 11:514, ill. 1823.
- Isoachlya* Kauffman *Am. Jour. Bot.* 8:231, ill. 1921; Fitzpatrick 167.
- A. prolifera* Nees
- I. toruloides* K. & C.

- Protoachlya* Coker *Saprolegniaceae* 90
1923.
- Aphanomyces* De Bary *Jahrb. Wiss. Bot.*
2:179 1860.
- Aplanes* De Bary *Bot. Zeit.* 46:650, ill. 1888.
- Apodachlya* Pringsheim *Ber. Deut. Bot. Ges.*
1:288, ill. 1883.
- Araeospora* Thaxt. *Bot. Gaz.* 21:317, ill. 1896.
- Dictyuchus* Leitgeb *Bot. Zeit.* 26:502 1868.
- Geolegnia* Coker *Jour. Elisha Mitchell Soc.*
41:153, ill. 1925.
- Leptolegnia* De Bary *Bot. Zeit.* 46:631 1888.
- Leptomitus* Agardh *Syst. Alg.* 47 1824.
- Apodya* Cornu *Bull. Soc. Bot. Fr.* 18:53
1871; Fitzpatrick 173.
- Mindeniella* Kanouse *Am. Jour. Bot.* 14:301
1927.
- Plectospira* Drechsler *Jour. Agr. Res.* 34:294
1927.
- Pythiopsis* De Bary *Bot. Zeit.* 46:632 1888.
- Rhipidium* Cornu *Bull. Soc. Bot. Fr.* 18:53
1871.
- Saprolegnia* Nees *Nov. Act. Leop.* 11:514
1823.
- Sapromyces* Fritsch *Oest. Bot. Zeits.* 42:333
1892; 43:420 1893.
- Naegelia* Reinsch *Jahrb. Wiss. Bot.* 11:289,
ill. 1878; not Regel et al.; cf. Thaxt. *Bot.*
Gaz. 19:49, ill. 1894.
- Naegeliella* Schroet. *Nat. Pflanzenf.* 1:1:104,
ill. 1893.
- Thraustotheca* Humphrey *Trans. Am. Phil.*
Soc. 17:63, ill. 1893.
- Brevilegnia* Coker & Couch *Jour. Elisha*
Mitchell Soc. 42:207, ill. 1927; Fitzpatrick
164.
- Calyptralegnia* Coker *Ib.* 219; Fitzpatrick
162.
- P. paradoxa* Coker
- A. levis* De Bary
- A. brauni* De Bary
- A. pirifera* (Zopf) Pring.
- A. pulchra* Thaxt.
- D. monosporus* Leitgeb
- G. inflata* C. & H.
- L. caudata* De Bary
- L. lacteus* Ag.
- A. lactea* Cornu
- M. spinospora* Kan.
- P. myriandra* Drech.
- P. cymosa* De Bary
- R. interruptum* Cornu
- S. ferax* (Gruith.) Nees
- S. reinschi* (Schroet.) Fritsch
- N. sp. I.* = *N. reinschi*?
- N. reinschi* Schroet.
- T. clavata* Humph.
- B. subclavata* Couch
- C. achlyoides* Coker

Genera Incertae Sedis Vel Dubia

- Aphanomycopsis* Scherffel *Arch. Protistenk.*
52:1, ill. 1925; Fitzpatrick 170.
- Jaraia* Nemeč *Bull. Acad. Sci. Boheme* 18:1,
ill. 1913; Fitzpatrick 171.
- Sommerstorffia* Arnaudow *Flora* 116:109 1923.
- A. bacillariacearum* Scherf.
- J. salicis* Nemeč
- S. spinosa* Arnaud.

ANCYLISTACEAE

- Achlyogeton* Schenk *Bot. Zeit.* 17:398 1859.
- Ancylistes* Pfitzer *Mon. Akad. Wiss. Berlin*
1872:379, ill.
- Lagenidium* Schenk *Verh. Phys. Med. Ges.*
Würzburg 9:27 1857.
- Myzocytium* Schenk *Ueb. Vork. Kontr. Zell.*
70 1858.
- A. entophytus* Schenk
- A. closterii* Pfitzer
- L. rabenhorsti* Zopf
- M. proliferum* Schenk

Genera Incertae Sedis Vel Dubia

- Lagena** Vanterpool & Ledingham *Can. Jour. Res.* 3:192, ill. 1930; Fitzpatrick 128. **L. radicolica** V. & L.
- Lagenidiopsis** De Wild. *Ann. Soc. Belg. Micr.* 20:109 1896; Fitzpatrick 126. **L. reducta** De Wild.
- Mitochytrium** Dangeard *Bull. Soc. Myc. Fr.* 27:200, ill. 1911; Fitzpatrick 127. **M. ramosum** Dang.
- Protascus** Dangeard. *Le Botaniste* 9:207, ill. 1906; Fitzpatrick 127. **P. subuliformis** Dang.
- Resticularia** Dangeard *Ib.* 2:96, ill. 1891; Fitzpatrick 126. **R. nodosa** Dang.

PERONOSPORACEAE

- Albugo** Gray *Nat. Arrang. Brit. Pl.* 1:540 1821. **A. candida** (Pers.) Gray
- Cystopus** Lev. *Ann. Sci. Nat.* 3:8:371 1847. **C. candidus** (Pers.) Lev.
- Basidiophora** Roze & Cornu *Ann. Sci. Nat.* 5:11:84 1869. **B. entospora** R. & C.
- Bremia** Regel *Bot. Zeit.* 1:665 1843. **B. lactucae** Regel
- Bremiella** Wilson *Mycologia* 6:195, ill. 1914; Fitzpatrick 220. **B. megasperma** (Berl.) Wilson
- Peronospora** Corda *Icon. Fung.* 1:20, ill. 1837. **P. parasitica** (Pers.) De B.
- Phytophthora** De Bary *Jour. Roy. Agr. Soc. England* 2:12:239, ill. 1876. **P. infestans** (Mont.) De B.
- Blepharospora** Petri *Ann. For. Ist. Naz.* 3:3, ill. 1918; *Riv. Path. Ent. Agr.* 11:259, ill. 1924; Fitzpatrick 208. **B. cambiovora** Petri
- Kawakamia** Miyabe *Bot. Mag. Tokyo* 17:306 1903. **K. cyperi** (M. & I.) Miy.
- Mycelophagus** Mangin *Comp. Rend.* 136:471 1903. **M. castaneae** Mang.
- Nozemia** Peth. *Proc. Dublin Sci. Soc. n. s.* 13:566 1913; Fitzpatrick 203. **N. cactorum** (Leb. & Cohn) Peth.
- Phloeophthora** Klebahn *Cent. Bakt.* 2:15:336 1905; *Jour. Myc.* 12:61 1906. **P. syringae** Kleb.
- Pythiocystis** Smith & Smith *Bot. Gaz.* 42:215, ill. 1906; Fitzpatrick 207. **P. citrophthora** S. & S.
- Pythiomorpha** Petersen *Ann. Myc.* 8:528, ill. 1910; Fitzpatrick 208. **P. gonapodyodes** Pet.
- Plasmopara** Schroet. *Krypt. Fl. Schles.* 1:236 1889. **P. nivea** (Ung.) Schroet.
- Peronoplasmopara** Berl. *Subgen.* 1901; *Clint. Rep. Conn. Exp. Sta.* 1904:329 1905; Fitzpatrick 218. **P. cubensis** (B. & C.) Clint.
- Pseudoperonospora** Rostowzew *Flora* 92:422, ill. 1903; Fitzpatrick 218. **P. cubensis** (B. & C.) Rost.
- Pseudoplasmopara** Sawada *Rep. Res. Inst. Formosa* 2:40, ill. 1922. **P. justiciae** Saw.
- Rhysotheca** Wilson *Bull. Torr. Club* 34:398 1907. **R. geranii** (Pk.) Wilson
- Pythiogeton** Minden *Falck Myc. Unters. Ber.* 2:228, ill. 1916. **P. utriforme** Minden

Pythium Pringsheim Jahrb. Wiss. Bot. 1:304
1858.

Nematosporangium (Fisch.) Schroet. Nat.
Pflanzenf. 1:1:104 1893; Fitzpatrick 196.

Zoophagus Sommerstorff Oest. Bot. Zeits.
61:361, ill. 1911; Fitzpatrick 199.

Sclerospora Schroet. Krypt. Fl. Schles. 1:236
1889.

Trachysphaera Tabor & Bunting Ann. Bot.
37:156, ill. 1923.

P. debaryanum Hesse

N. monospermum (Pring.) Schroet.

Z. insidians Som.

S. graminicola (Sacc.) Schroet.

T. fructigena T. & B.

Genus Incertae Sedis

Stigeosporium West Ann. Bot. 30:357 1916;
Fitzpatrick 209.

S. marattiacearum West

BLASTOCLADIACEAE

Blastocladia Reinsch Jahrb. Wiss. Bot. 11:298,
ill. 1878.

Allomyces Butler Ann. Bot. 25:1023, ill.
1911; Fitzpatrick 135.

Septocladia Coker & Grant Jour. Elisha
Mitchell Soc. 37:180, ill. 1922.

Gonapodya Fisch. Rabh. Krypt. Fl. 1:4:382,
ill. 1892.

B. pringsheimi Reinsch

A. arbuscula Butler

S. dichotoma C. & G.

G. prolifera (Cornu) Fisch.

MONOBLEPHARIDACEAE

Monoblepharis Cornu Bull. Soc. Bot. Fr. 18:58
1871.

Diblepharis Lagerh. Bih. Sven. Akad.
Handl. 25:1, ill. 1900; Fitzpatrick 140.

Monoblephariopsis Laibach Jahrb. Wiss.
Bot. 66:603, ill. 1927; Fitzpatrick 142.

M. sphaerica Cornu

D. insignis (Thaxt.) Lagerh.

M. regnens Laib.

Genus Incertae Sedis

Myrioblepharis Thaxter Bot. Gaz. 20:433, ill.
1895.

M. paradoxa Thaxt.

Genera Dubia

Coelomyces Keilin Parasitology 13:225, ill.
1921.

Synchaetophagus Apstein Wiss. Meeresun-
ters. 12:163, ill. 1911.

C. stegomyiae Keil.

S. balticus Apstein

LABOULBENIALES

PEYRITSCHIELLACEAE

- Acallomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 38:23 1902.
- Acompsomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 37:37 1901.
- Camptomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 29:100 1894.
- Cantharomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 24:9 1899.
- Chitonomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 27:30 1892.
- Clidiomyces** Thaxt. Mem. Am. Acad. Arts Sci.
13:n.6:280, ill. 1908; (Kleidiomyces).
- Dichomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:183 1893.
- Dimeromyces** Thaxt. Mem. Am. Acad. Arts
Sci. 12:n.3:267 1895.
- Dimorphomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:157 1893.
- Enarthromyces** Thaxt. Mem. Am. Acad. Arts
Sci. 12:n.3:276 1895.
- Eucantharomyces** Thaxt. Mem. Am. Acad.
Arts Sci. 12:n.3:273 1895.
- Euhaplomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 37:25 1901.
- Eumonoecomyces** Thaxt. Proc. Am. Acad.
Arts Sci. 37:21 1901.
- Haplomyces** Thaxt. Proc. Am. Acad. Arts Sci.
28:159 1893.
- Hydraeomyces** Thaxt. Mem. Am. Acad. Arts
Sci. 12:n.3:293 1895.
- Limnaeomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 35:428 1900.
- Monoecomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 35:412 1900.
- Peyritschiella** Thaxt. Proc. Am. Acad. Arts
Sci. 24:8 1890.
- Polyascomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 35:414 1900.
- Stichomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 37:37 1901.
- A. homalotae** Thaxt.
- A. corticariae** Thaxt.
- C. melanopus** Thaxt.
- C. bledii** Thaxt.
- C. melanorus** Peyr.
- C. furcillatus** Thaxt.
- D. furciferus** Thaxt.
- D. africanus** Thaxt.
- D. denticulatus** Thaxt.
- E. indicus** Thaxt.
- E. atrani** Thaxt.
- E. ancyrophori** Thaxt.
- E. papuanus** Thaxt.
- H. californicus** Thaxt.
- H. halipli** Thaxt.
- L. tropisterni** Thaxt.
- M. homalotae** Thaxt.
- P. curvata** Thaxt.
- P. trichophyae** Thaxt.
- S. conosomae** Thaxt.

LABOULBENIACEAE

- Amorphomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:158 1893.
- Arthrorhynchus** Kol. Wien. Ent. Monats. 1:66
1857.
- A. falagriae** Thaxt.
- A. nycteribiae** (Peyr.) Thaxt.

- Helminthophana** Peyr. Sitzb. Acad. Wien
68:250 1873.
- Ceraeomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 26:410 1901.
- Chaetomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:178 1893.
- Clematomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 35:439 1900.
- Compsomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 29:96 1894.
- Corethromyces** Thaxt. Proc. Am. Acad. Arts
Sci. 27:36 1892.
- Dioecomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 37:33 1901.
- Diplomyces** Thaxt. Proc. Am. Acad. Arts Sci.
30:468 1895.
- Distichomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 41:308 1905.
- Ectinomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 38:26 1902.
- Eucoethromyces** Thaxt. Proc. Am. Acad.
Arts Sci. 35:433 1900.
- Herpomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 38:11 1902.
- Idiomyces** Thaxt. Proc. Am. Acad. Arts Sci.
28:162 1893.
- Laboulbenia** Mont. & Rob. Hist. Nat. Veg.
Par. 622 1853.
- Moschomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 29:97 1894.
- Rhachomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 30:468 1895.
- Rhadinomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:179 1893.
- Rhizomyces** Thaxt. Mem. Am. Acad. Arts
Sci. 12:n.3:307 1895.
- Rickia** Cav. Malpighia 13:182 1899.
- Smeringomyces** Thaxt. Mem. Am. Acad. Arts
Sci. 13:n. 6:296 1908.
- Sphaleromyces** Thaxt. Proc. Am. Acad. Arts
Sci. 29:95 1894.
- Stigmatomyces** Karst. Chem. Pflanzenzelle
78 1869.
- Appendicularia** Pk. Rept. N. Y. State Bot.
38:95 1885.
- Symplectromyces** Thaxt. Mem. Am. Acad.
Arts Sci. 13:n.6:314 1908.
- Teratomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 28:182 1893.
- H. nycteribiae** Peyr.
- C. dahlii** Thaxt.
- C. pinophili** Thaxt.
- C. pinophili** Thaxt.
- C. verticillatus** Thaxt.
- C. cryptobii** Thaxt.
- D. anthici** Thaxt.
- D. actobianus** Thaxt.
- D. leptochiri** Thaxt.
- E. trichopterophilus** Thaxt.
- E. aptonii** Thaxt.
- H. chaetophilus** Thaxt.
- I. peyritschi** Thaxt.
- L. europeae** Thaxt.
- M. insignis** Thaxt.
- R. speluncalis** Thaxt.
- R. crustatus** Thaxt.
- R. tenophorus** Thaxt.
- R. wasmanni** Cav.
- S. anomalus** Thaxt.
- S. lathrobii** Thaxt.
- S. entomophilus (Pk.)** Thaxt.
- A. entomophila** Pk.
- S. vulgaris** Thaxt.
- T. mirificus** Thaxt.

CERATOMYCETACEAE

- Autoecomyces** Thaxt. Mem. Am. Acad. Arts
Sci. 13:n.6, 434 1908.
- A. acuminatus** Thaxt.

- Caenomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 37:44 1901.
- Ceratomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 27:34 1892.
- Coreomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 38:56 1902.
- Euzodiomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 35:449 1900.
- Hydrophilomyces** Thaxt. Mem. Am. Acad.
Arts. Sci. 13:n.6:431 1908.
- Rhyncophoromyces** Thaxt. Mem. Am. Acad.
Arts. Sci. 13:n. 6:432 1908.
- Zodiomyces** Thaxt. Proc. Am. Acad. Arts
Sci. 24:263 1889.
- C. isomali** Thaxt.
- C. mirabilis** Thaxt.
- C. corisae** Thaxt.
- E. lathrobii** Thaxt.
- H. rhyncophorus** Thaxt.
- R. elephantinus** Thaxt.
- Z. vorticellarius** Thaxt.

GYMNASCALES

ENDOMYCETACEAE

- Bargellinia** Borzi Malpighia 2:476 1888.
- Byssochlamys** Westling Sven. Bot. Tids. 2:134
1909.
- Endomyces** Reess Bot. Unters. 77 1870.
- Endyllum** Clem.; for *Magnusiomyces* Zander
Bull. Soc. Bot. Genev. 17:299 1925.
- Eremascus** Eidam Cohn Beitr. 3:385 1883.
- Eremothecium** Borzi Nuov. Giorn. Ital. 455,
ill. 1888.
- Oleina** van Tiegh. Jour. Bot. 1:289, ill. 1887.
- Oleinis** Clem.; *Oleina* ascis lateralibus et sporis
globosis.
- Podocapsa** van Tiegh. Jour. Bot. 1:292, ill.
1887.
- Podocapsium** Clem. Gen. Fung. 94, 176 1909.
- B. monospora** Borzi
- B. nivea** Westl.
- E. decipiens** (Tul.) Reess
- E. magnusi** (Ludw.) Clem.
- E. albus** Eidam
- E. cymbalariae** Borzi
- O. nodosa** van Tiegh.
- O. lateralis** (van Tiegh.) Clem.
- P. palmata** van Tiegh.
- P. diffusum** (van Tiegh.) Clem.

SACCHAROMYCETACEAE

- Coccidiascus** Chatton Comp. Rend. Soc. Biol.
75:117, ill. 1913.
- Hansenula** Syd. Ann. Myc. 17:44 1919; for
Willia Hansen 1904, not C. Muell. 1899.
- Isomyces** Clem.; for *Debaryomyces* Kloeck.
Comp. Rend. Lab. Carlsb. 7:273, ill. 1909;
Syll. Fung. 22:786 1913.
- Micranthomyces** Gruss Jahrb. Wiss. Bot.
66:177, ill. 1926.
- Monosporella** Keilin Parasitology 12:89, ill.
1920.
- Monospora** Metschnikoff Virchow Arch.
96:178, ill. 1884; not Hochstet. 1841; or
Solier 1845.
- Nadsonia** Syd. Ann. Myc. 10:347 1912.
- Guilliermondia** Nad. & Kon. Bull. Jard. Bot.
Petersb. 11:116, ill. 1911; not Boud. 1904.
- C. legeri** Chatton
- H. anomala** (Hans.) Syd.
- I. globosus** (Kloeck.) Clem.
- M. alpinus** Gruss.
- M. bicuspidata** (Metschn.) Keil.
- M. bicuspidata** Metschn.
- N. fulvescens** (Nad. & Kon.) Syd.
- G. fulvescens** Nad. & Kon.

- Nematospora** Peglion Att. Accad. Linc.
5:6:276 1897.
- Ashbia** Cif. & Frag. Bol. Soc. Espan. 28:379
1928.
- Pichia** Hansen Cent. Bakt. 2:12:538 1904.
- Saccharomyces** Meyen Wieg. Arch. 4:2:100
1838.
- Saccharomycodes** Hansen Cent. Bakt. 2:12:537
1904.
- Saccharomycopsis** Schionning Comp. Rend.
Lab. Carlsb. 6:124 1906.
- Schizosaccharis** Lindner Wochens. Brauer.
10:1298 1893; for *Schizosaccharomyces*.
- Thelis** Clem.; for
Hanseniospora Zikes Cent. Bakt. 2:30:148
1911; Syll. Fung. 24:1306 1928.
- Hansenia** Lindner Mikr. Betriebs. Gär. 434
1905; not Karst. 1879, or Zopf 1883
- Torulospora** Lindner Mikr. Betriebs. Gär.
421 1905.
- Williopsis** Zender Inst. Bot. Univ. Genev.
10:12:42 1925.
- Zonosporis** Clem.; for *Schwanniomyces* Kloeck.
Cent. Bakt. 2:25:294 1909.
- Zygosaccharis** Barker Proc. Roy. Soc. London
68:347 1901; for *Zygosaccharomyces*.
- N. coryli** Peglion
- A. gossypii** (Ash. & Now.) C. & F.
- P. membranifaciens** Hans.
- S. cerevisiae** Meyen
- S. ludwigi** Hans.
- S. capsularis** Schion.
- S. pombe** Lindner
- T. apiculata** (Reess) Clem.
- H. apiculata** (Lindn.) Zikes
- H. apiculata** Lindner
- T. delbruecki** Lindner
- W. saturnus** (Kloeck.) Zend.
- Z. occidentalis** (Kloeck.) Clem.
- Z. barkeri** S. & S.

MONASCACEAE

- Monascus** van Tiegh. Bull. Soc. Bot. Fr.
31:226 1884.
- M. ruber** van Tiegh.

GYMNASCACEAE

- Amaurascus** Schroet. Krypt. Flor. Schles.
3:211 1893.
- Arachniotus** Schroet. Krypt. Flor. Schles.
3:210 1893.
- Conidiascus** Holterm. Myk. Unters. Trop. 23
1898.
- Ctenomyces** Eidam Cohn Beitr. 3:274 1880.
- Diplostephanus** Langeron Comp. Rend. 87:344
1922.
- Eidamella** Matr. & Dass. Bull. Soc. Myc. Fr.
17:123 1901.
- Gymnascus** Baran. Bot. Zeit. 30:158 1872.
- Dichotonium** B. & C. Grevillea 3:146 1875.
- Hexagonella** Stev. & Guba Bishop Mus. Bull.
19:89, ill. 1925.
- Lilliputia** Boud. & Pat. Bull. Soc. Myc. Fr.
16:144 1900.
- Myrillium** Clem. *Gymnascus polysporus*.
- Myxotrichum** Kze. Myc. Heft. 2:108 1823.
- A. niger** Schroet.
- A. candidus** (Eidam) Schroet.
- C. paradoxus** Holterm.
- C. serratus** Eidam
- D. nidulans** (Eidam) Lang.
- E. spinosa** M. & D.
- G. reessi** Baran.
- D. melleum** B. & C.
- H. peleae** Stev. & Guba
- L. gaillardi** B. & P.
- M. myriosporus** (Rostr.) Clem.
- M. chartarum** Kze.

- Penicillioopsis* Solms-Laubach Ann. Jard.
Buitenz. 6:53 1887. *P. clavariaeformis* Solms.
Rollandina Pat. Bull. Soc. Myc. Fr. 21:83, ill.
1905. *R. capitata* Pat.

Genera Incertae Sedis Vel Dubia

- Ateleothylox* Ota & Lang. Ann. Paras. Hum.
1:333 1923. *A. curri* (C. & M.) O. & L.

PERISPORIALES

EUROTIACEAE

Hyalosporae

- Anixiopsis* Hansen Bot. Zeit. 7:131, ill. 1897. *A. stercoraria* Hans.
Aphanascus Zukal Ber. Deut. Bot. Ges. 8:295
ill. 1890. *A. cinnabarinus* Zukal
Carpenteles Langeron Comp. Rend. 87:343
1922. *C. glaucum* (Lk.) Lang.
Penicillium Fisch. Nat. Pflanzenf. 1:1:304
1897; not *Penicillium* Lk. 1809. *P. crustaceum* Fisch.
Chaetotheca Zukal Ber. Deut. Bot. Ges. 8:296
1890. *C. fragilis* Zukal
Dichlaena Dur. & Mont., em. Maire Bull. Soc.
Nat. Afr. 159 1917. *D. lentisci* Dur. & Mont.
Eurotium Link Spec. Plant. 6:1:79 1824. *E. herbariorum* (Wigg.) Link
Allescheria Sacc. & Syd. Syll. Fung. 14:464
1899. *A. gayoni* (Cost.) S. & S.
Aspergillus Link p.p. Obs. Myc. 16 1889. *A. glaucus* (L.) Link
Eurotiella Lindau Nat. Pflanzenf. 1:1:383
1900. *E. gayoni* (Cost.) Lind.
Eurotiopsis Costantin Ann. Inst. Pasteur
11:1 1897; not Karst. Syll. Fung. 14:464
1899. *E. gayoni* Cost.
Kickxella Coemans Bull. Soc. Bot. Belg.
1:155 ill. 1862. Syll. Fung. 9:372 1891. *K. alabastrina* Coem.
Sartorya Vuillemin Comp. Rend. 184:136
1927. *S. fumigata* (Fres.) Vuill.
Fragosphaeria Shear Mycologia 15:124 1923. *F. purpurea* Shear
Mycogala Rost. Sluz. Mon. 1875. *M. parietina* (Schrad.) Rost.
Anixia Hoffm. Icon. Fung. 70 ill. 1862; not
Fries 1819. *A. truncigena* Hoffm.
Samarospora Rostrup Beih. Bot. Cent. 53:3
1893. *S. potamogetonis* Rostr.

Phaeosporae

- Arachnomyces* Masee & Salmon Copr. Fung.
2:68 1902. *A. nitidus* Mass. & Salmon
Carothecis Clem. Cephalotheca glabra *C. palearum* (Richon) Clem.

- Cephalotheca* Fkl. *Symb. Myc.* 1:297 1869. **C. sulphurea** Fkl.
Aposphaeriopsis Died. *Ann. Myc.* 11:44
 1913. **A. fusco-atra** Died.
Fairmania Sacc. *Ann. Myc.* 4:276 1906;
Syll. Fung. 22:978 1913; cf. Hoehn. *Frag.*
Myk. 359. **F. singularis** Sacc.
Emericella Berk. *Crypt. Bot.* 340 1857. **E. variegata** B. & Br.
Guillermondia Boud. *Bull. Soc. Myc. Fr.*
 20:19 1904. **G. saccoboloides** Boud.
M. nitida Sacc.
Magnusia Sacc. *Michelia* 1:122 1878. **M. longirostris** Zukal
Micrascus Zukal *Neue Pilz.* 9, ill. 1885. **P. microscopicum** (Ruhl.) Clem.
Phaeidium Clem.; for
Laaseomyces Ruhl. *Verh. Bot. Brandenb.*
 41:83 1889. **L. microscopicum** Ruhl.
Pleurascus Masee & Salmon *Ann. Bot.*
 15:330 1901. **P. nicholsoni** Mass. & Salmon
Thielavia Zopf. *Verh. Bot. Brandenb.* 18:101
 1876. **T. basicola** Zopf

Phaeodidymae

- Richonia* Boud. *Rev. Myc.* 7:224 1885. **R. variospora** Boud.
Testudina Bizz. *Fung. Ven.* 1 1885. **T. terrestris** Bizz.
Marchaliella Bomm. & Roum. *Wint. Cont.*
Myc. Belg. 4:243; cf. Hoehn. *Frag. Myk.*
 1023; *Syll. Fung.* 11:257 1895. **M. zopfiioides** B. & R.
Zopfia Rabh. *Fung. Eur.* no. 1734 1874. **Z. rhizophila** Rabh.
Celtidea Janse *Ann. Jard. Buitenz.* 14:202,
 ill. 1896. **C. duplicispora** Janse
Zopfella Winter *Die Pilze* 1:2:56 1887, not
 Trev. 1885. (Bacter.) **Z. tabulata** (Zopf) Wint.

Hyalophragmiae

- Dexteria* Stev. *Trans. Ill. Acad. Sci.* 10:174,
 ill. 1917. **D. pulchella** Stev.

Phaeophragmiae

- Eosphaeria* Hoehn. *Ann. Myc.* 15:362 1917. **E. uliginosa** (Fr.) Hoehn.
Preussia Fkl. *Symb. Myc.* 91 1869. **P. funiculata** Fkl.
Fleischhakea Auersw. *Hedwigia* 8:2 1869;
 not Rabh. 1878 (Disc.) **F. levis** Auersw.

Phaeodictyae

- Ceratocarpia* Rolland *Bull. Soc. Myc. Fr.* 12:2,
 ill. 1896. **C. cactorum** Rolland
Phanerascus Baudys *Cent. Bakt.* 2:15:513
 1920. **P. quercinus** Baudys

Genera Dubia

- Myriococcum* Fr. *Syst. Myc.* 2:304 1823. **M. praecox** Fr.
Pisomyxa Corda *Icon. Fung.* 1:23, ill. 1837. **P. racodioides** Corda

ERYSIPHACEAE

Hyalosporae

- Erysiphe* Hedw. f. DC. Flor. Fr. 2:272 1805. *E. polygoni* DC.
Erysiphella Pk. Rep. N. Y. Mus. 28:63 *E. aggregata* Pk.
 1876; Syll. Fung. 1:23 1882. *E. parnassiae* Hal.
Erysiphopsis Halsted Bull. Torr. Club *L. taurica* (Lev.) Arn.
 26:594 1899; Syll. Fung. 16:399 1902. *T. japonica* I. & H.
Leveillula Arnaud Ann. Serv. Epiphyt. 7:92 *L. tajibodensis* Gäum.
 1919; Syll. Fung. 24:226 1926. *M. divaricata* Lev.
Typhulochaeta Ito & Hara Bot. Mag. *C. divaricata* Lev.
 Tokyo 29:20 1915; Syll. Fung. 24:226 *P. suffulta* (Reb.) Sacc.
 1926. *P. myrtilлина* Kze. & Schm.
Lanomyces Gäum. Ann. Jard. Buitenz. 32:46 *S. pannosa* (Wallr.) Lev.
 1922. *C. wrightii* B. & C.
Micosphaera Lev. Ann. Sci. Nat. 3:15:381 *U. bivonae* Lev.
 1851. *P. curtisi* Sacc. & Speg.

Hyalodidymae

- Chilomyces* Speg. Fung. Chil. 27, ill. 1910. *C. valparadisii* Speg.
Schistodes Theiss. Ann. Myc. 15:456 1917. *S. erysiphina* (Henn.) Theiss.
Dichothrix Theiss. Beih. Bot. Cent. 29:2:60 *D. erysiphina* (Henn.) Theiss.
 1912; not Zan. (Algae).

Hyalophragmiae

- Leucoconis* Theiss. & Syd. Ann. Myc. 15:456 *L. erysiphina* (Syd.) T. & S.
 1917.

PERISPORIACEAE

Hyalosporae

- Clistosphaera* Syd. Ann. Myc. 14:74 1916; *C. macrostegia* Syd.
 15:458, ill. 1917. *M. portoricense* Speg.

Phaeosporae

- Episoma* Syd. Ann. Myc. 23:329 1925. *E. parasiticum* Syd.
Guttularia Obermayer Myc. Cent. 3:9 1913. *G. geopora* Oberm.

- Teratonema* Syd. Ann. Myc. 15:180 1917; cf.
Werdermann Ann. Myc. 21:336 1923. *T. corniculare* (Henn.) Syd.

Hyalodidymae

- Chaetostigme* Syd. Ann. Myc. 15:199 1917. *C. horridula* Syd.
Chevalieropsis Arnaud Ann. Serv. Epiphyt.
9:2 1923. *C. ctenotricha* (Har. & Pat.) Arn.
Chevaliera Arnaud Comp. Rend. 170:203
1920; not Gaud. 1852. *C. ctenotricha* (Har. & Pat.) Arn.
Pseudoparodiella Stev. Ill. Biol. Mon. 11:14,
ill. 1927. *P. vernoniae* Stev.
Chrysomyces Theiss. & Syd. Ann. Myc. 15:139
1917. *C. brachystegiae* (Henn.) T. & S.
Dichaetis Clem.; for *D. javanica* (Koord.) Clem.
Wentiomyces Koord. Bot. Unters. 148
1907. *W. javanicus* Koord.
Dimeriella Speg. Rev. Mus. La Plata 15:12
1908. *D. cordiae* (Henn.) Theiss.
Dimerina Theiss. Beih. Bot. Cent. 29:2:46
1912. *D. strychni* (Henn.) Theiss.
Dimeriopsis Stev. Trans. Ill. Acad. Sci.
10:171 1917. *D. arthrostylis* Stev.
Pilula Masee Kew Bull. 1910:252. *P. straminea* Masee
Lasiostemma Theiss. & Syd. Ann. Myc. 15:218
1917; 16:8 1918. *L. melioloides* (B. & R.) T. & S.
Pampolysporium Magn. Verh. z-b. Ges. Wien
1900:444. *P. singulare* Magn.
Polysporidium Syd. Ann. Myc. 6:528 1908. *P. bornmülleri* Syd.
Rhizalia Syd. Ann. Myc. 12:546, ill. 1914. *R. fasciculata* Syd.
Stigme Syd. Ann. Myc. 15:199 1917. *S. lussoniensis* Syd.

Phaeodidymae

- Alina* Rac. Bull. Acad. Crac. 1909:374. *A. jasmini* Rac.
Jaffuela Speg. Bol. Acad. Cordoba 25:41, ill.
1921. *J. chilensis* Speg.
Apiosporina Hoehn. Frag. Myk. 506 1910; cf.
Theiss. & Syd. Ann. Myc. 16:12 1918. *A. collinsi* (Schw.) Hoehn.
Acantharia Theiss. & Syd. Ann. Myc. 16:15
1918. *A. echinata* (E. & E.) T. & S.
Hypoplegma Theiss. & Syd. Ann. Myc.
15:135 1917. *H. viridescens* (Rehm) T. & S.
Chaetostigmella Syd. Ann. Myc. 15:199 1917. *C. papillifera* Syd.
Meliolinopsis Stev. Ill. Biol. Mon. 8:193, ill.
1923. *M. palmicola* Stev.
Dimerium Sacc. & Syd. Syll. Fung. 17:537
1905; 16:410 1902. *D. pulveraceum* (Speg.) Theiss.
Lasiobotrys Kze. Myk. Heft. 2:88 1823. *L. loniceræ* (Schl.) Kze.
Parodiella (Speg.) Theiss. & Syd. Ann. Myc.
15:126 1917. *P. grammodes* (Kze.) Cke.
Parodiopsis Maubl. Bull. Soc. Myc. Fr. 31:22
1915. *P. melioloides* (B. & C.) Maubl.

- Phaeodimeris* Speg. Rev. Mus. La Plata 15:13
1908 (for *Phaeodimeriella* Speg.).
Phaeodimeriella Theiss. Beih. Bot. Cent.
29:2:46 1912.
Pseudodimerium Petr. Ann. Myc. 22:21
1924.
Phaeostigme Syd. Ann. Myc. 15:199 1917.
Piline Theiss. Ann. Myc. 14:409 1916; 15:458,
ill. 1917.
Stomatogene Theiss. Ann. Myc. 14:406, ill.
1916.
Wageria Stev. & Dalbey Mycologia 11:7, ill.
1919.
- P. occulta* (Rac.) Speg.
P. occulta (Rac.) Theiss.
P. meliolicolum Petr.
P. picea (B. & C.) Syd.
P. splendens (Pat.) Theiss.
S. agaves (E. & E.) Theiss.
W. portoricensis S. & D.

Hyalophragmiae

- Dimeriellopsis* Stev. Ill. Biol. Mon. 11:17, ill.
1927.
Mycophaga Stev. Ib. 8:197 1923.
Paropsis Speg. Physis 4:284 1918; Syll. Fung.
22:65 1913.
- D. costaricensis* Stev.
M. guianensis Stev.
P. roseospora Speg.

Phaeophragmiae

- Ceratasperma* Speg. Physis 4:284 1918.
Haraea Sacc. & Syd. Ann. Myc. 11:312 1913.
Irene Theiss. & Syd. Ann. Myc. 15:194 1917.
Appendiculella Hoehn. Frag. Myk. 1160
1919.
Irenopsis Stev. Ann. Myc. 25:411, ill. 1927.
Irenina Stev. Ann. Myc. 25:411, ill. 1927.
Leptomeliola Hoehn. Frag. Myk. 1160 1919.
Meliola Fr. Syst. Orb. Veg. 111 1825.
Asteridium Sacc. Syll. Fung. 1:49 1882;
9:435 1891.
Myxothecium Kze. Weig. Exsic. 1827; Fr.
Syst. Myc. 3:232 1829.
Meliolina Syd. Ann. Myc. 12:553 1914.
Hyalomeliolina Stev. Ill. Biol. Mon. 8:193,
ill. 1923.
Meliolinopsis Beeli Bull. Jard. Brux. 7:101
1920.
Stevensula Speg. Bol. Acad. Cordoba 26:339
1923.
Perisporiopsis Henn. Hedwigia 43:83 1904;
cf. Theiss. & Syd. Ann. Myc. 16:14 1918.
Perisporium Fr. Syst. Myc. 3:248 1821.
Euantennaria Speg. Bol. Acad. Cordoba
23:549, ill. 1919.
Perisporina Henn. Hedwigia 43:357 1904.
Perisporiopsis Stev. Trans. Ill. Acad. Sci.
10:170 1917; not Henn. 1904.
Stevensea Trotter Syll. Fung. 24:261 1926.
Toroa Syd. Jour. Dept. Agr. P. R. 10:19, ill.
1926.
- C. theobromae* (Fab.) Speg.
H. japonica S. & S.
I. inermis (K. & C.) T. & S.
A. calostroma (Desm.) Hoehn.
I. tortuosa (Wint.) Stev.
I. glabra (B. & C.) Stev.
L. hyalospora (Lev.) Hoehn.
M. nidulans (Schw.) Cke.
A. pleurostyliae (B. & Br.) Sacc.
M. musae Kze.
M. cladotricha (Lev.) Syd.
H. guianensis Stev.
M. megalospora (Rehm) Beeli
S. monensis Speg.
P. struthanthi Henn.
P. vulgare Fr.
E. tropicicola Speg.
P. manaosensis Henn.
P. wrighti (B. & C.) Stev.
S. wrighti (B. & C.) Trotter.
T. dimerosporis (Speg.) Syd.

Phaeodictyae

- Pleomerium* Speg. *Physis* 4:284 1918 *P. fusciviridescens* (Rehm) Speg.

Scolecosporae

- Leptascospora* Speg. *Physis* 4:284 1918 *L. uredinis* (Rac.) Speg.
Ophiomeliola Starb. *Bih. Sven. Handl.* 25:22
 1899. *O. lindmani* Starb.
Tonduzia Stev. *Ill. Biol. Mon.* 11:16, ill. 1927 *T. psychotriae* Stev.

ENGLERULACEAE

- Englerula* Henn. *Engler Bot. Jahrb.* 34:49
 1905; em. Hoehn. *Frag. Myk.* 6:221 1909;
 cf. *Ann. Myc.* 15:458, ill. 1917; *Petr. Ib.*
 26:387 1928. *E. macarangae* Henn.
Anatexis Syd. *Ann. Myc.* 26:90 1928; cf.
Petr. Ib. 26:409. *A. elmeri* Syd.
Hyalotexis Syd. *Ann. Myc.* 23:326 1925; cf.
Petr. Ib. 26:398. *H. pellucida* Syd.
Linotexis Syd. *Ann. Myc.* 15:197 1917; cf.
Petr. Ib. 26:407. *L. philippinensis* Syd.
Parenglerula Hoehn. *Frag. Myk.* 10:525 1910;
 cf. *Petr. Ann. Myc.* 26:404 1928. *P. macowaniana* (Thuem.) Hoehn.
Schiffnerula Hoehn. *Frag. Myk.* 7:330 1909;
 cf. *Petr. Ann. Myc.* 26:395 1928. *S. mirabilis* Hoehn.
Diathryptum Syd. *Phil. Jour. Sci.* 21:137
 1922; cf. *Petr. Ann. Myc.* 26:400 1928. *D. amboinense* Syd.
Phaeoschiffnerula Theiss. *Broteria* 12:21,
 ill. 1917; cf. *Petr. Ann. Myc.* 26:397 1928. *P. compositarum* Theiss.
Questiera Arnaud. *Les Asterin.* 1:186 1918;
 cf. *Petr. Ann. Myc.* 26:397 1928. *Q. pulchra* (Sacc.) Arn.
Rhytidenglerula Hoehn. *Frag. Myk.* 1088
 1918. *R. carnea* (E. & M.) Hoehn.
Thrauste Theiss. *Verh. z-b. Ges. Wien* 66:337
 1916; cf. *Ann. Myc.* 15:467, ill. 1917;
Petr. Ib. 26:408 1928. *T. medinillae* (Rac.) Theiss.

Genera Incertae Sedis Vel Dubia

- Hyaloderma* Speg. *Fung. Guar.* 1:171, ill.
 1883; cf. *Petr. Ann. Myc.* 26:394 1928. *H. imperspicuum* Speg.
Hyalodermella Speg. *Physis* 4:284 1918. *H. gardeniae* (Niessl) Speg.
Hyalosphaera Stev. *Trans. Ill. Acad. Sci.*
 10:172 1917; cf. *Petr. Ann. Myc.* 26:398
 1928. *H. miconiae* Stev.
Ophiotexis Theiss. *Verh. z-b. Ges. Wien*
 66:345 1916; cf. *Petr. Ann. Myc.* 26:402
 1928. *O. perpusilla* (Speg.) Theiss.
Rhizotexis Theiss. & Syd. *Ann. Myc.* 15:140
 1917; cf. *Petr. Ib.* 26:412. 1928. *R. bauhiniarum* (Henn.) T. & S.
Syntexis Theiss. *Verh. z-b. Ges. Wien* 66:340
 1916; cf. *Petr. Ann. Myc.* 26:399. 1928. *S. tibouchina* (Henn.) Theiss.
Theissenula Syd. *Ann. Myc.* 12:198. 1914;
 cf. *Petr. Ib.* 26:410 1928. *clavispora* Syd.

CAPNODIACEAE

Hyalosporae

Oplothecium Syd. Ann. Myc. 21:97, ill. 1923. *O. arecae* Syd.

Hyalodidymae

- Adelopus* Theiss. Ann. Myc. 15:482 1917. *A. balsamicola* (Pk.) Theiss.
Cryptopus Theiss. Ann. Myc. 12:72 1914; not Lindley 1824. *C. balsamicola* (Pk.) Theiss.
Antenellina Mendoza Bishop Mus. Bull. 19:55, ill. 1925. *A. hawaiiensis* Mendoza
Calytra Theiss. & Syd. Ann. Myc. 15:478 1917. *C. cordobensis* (Speg.) T. & S.
Capnodinula Speg. Physis 4:288 1918; Syll. 16:1141 1902. *C. trichodes* (Rehm) Speg.
Ceratochaetopsis Stev. & Weedon Ill. Biol. Mon. 11:20 1927. *C. costaricensis* S. & W.
Chaetothyrina Theiss. Ann. Myc. 11:495 1913. *C. musarum* (Speg.) Theiss.
Ceratochaete Syd. Ann. Myc. 15:179 1917. *C. philippinensis* Syd.
Microcallis Syd. Ann. Myc. 24:337, ill. 1926. *M. phoebes* Syd.
Dimerosporina Hoehn. Frag. Myk. 610. 1909. *D. amomi* (B. & Br.) Hoehn.
Dimerosporiella Hoehn. Sitzb. Akad. Wien 8:1178 1909, not Speg. 1908. *D. amomi* (B. & Br.) Hoehn.

Phaeodidymae

- Balladyna* Rac. Par. Alg. Pilz. Java 2:3 1900. *B. gardeniae* Rac.
Balladynella Theiss. & Syd. Ann. Myc. 15:478 1917. *B. amazonica* (Hoehn.) T. & S.
Balladynopsis Theiss. & Syd. Ann. Myc. 15:475, ill. 1917. *B. philippinensis* Syd.
Chaetobotrys Clem.; for *C. bambusae* (Henn.) Clem.
Kusanobotrys Henn. Hedwigia 1904:141; Syll. 17:881 1905.
Chaetyllis Clem.; for *K. bambusae* Henn.
Raciborskiomyces Siemaszko Act. Soc. Bot. Bol. 2:270 1925. *C. polonica* (Siem.) Clem.
Dysrhynchis Clem. Gen. Fung. 32 1909. *R. polonicus* Siem.
Henningsomyces Sacc. Syll. Fung. 17:689. 1905. *D. pulchella* (Sacc.) Clem.
Phaeocapnodinula Speg. Bol. Acad. Cordoba 26:369, ill. 1923. *H. pulchella* Sacc.
Neohoehnelia Theiss. & Syd. Ann. Myc. 15:476 1917. *P. paulistana* Speg.
N. oligotricha (Mont.) T. & S.

Hyalophragmiae

- Antenella* Theiss. & Syd. Ann. Myc. 15:473, ill. 1917. *A. usteri* (Rehm) T. & S.
Chaetothyrium Speg. Fung. Guar. 2:123. 1888. *C. guaranicum* Speg.
Aethaloderma Syd. Ann. Myc. 11:257, ill. 1913; 15:477 1917; Syll. Fung. 24:376 1926. *A. clavatispora* Syd.

- Chaetasterina** Bub. Ann. Nat. Mus. Wien 23:102 1909; Syll. Fung. 22:545 1913.
- Zukalia** Sacc. Syll. Fung. 9:931 1891; cf. Ann. Myc. 15:477 1917; Syll. Fung. 22:42 1913.
- Hypocapnodium** Speg. Physis 2:287 1918; Syll. Fung. 17:557 1905.
- Limacinia** Neger in Johow Estud. Flor. J. F. 190 1896.
- Asteridiella** McAlp. Proc. Linn. Soc. N. S. Wales 1:38 1897; Syll. Fung. 14:701 1899.
- Xystozukalia** Theiss. Verh. z-b. Ges. Wien 66:357 1916; Syll. Fung. 24:382 1926.
- Scorias** Fr. Syst. Orb. Veg. 1:171 1825.
- Trichomerium** Speg. Physis 4:284 1918; Syll. Fung. 17:557. 1905.
- Capnodina** Sacc. Syll. Fung. 22:60 1913.
- C. anomala** (C. & H.) Bub.
- Z. loganiensis** S. & Berl.
- H. setosum** (Zimm.) Speg.
- L. fernandesiana** Neger
- A. solani** McAlp.
- X. transiens** (Hoehn.) Theiss.
- S. spongiosa** (Schw.) Fr.
- T. coffeicola** (Putt.) Speg.
- C. capsulifera** (Rehm) Sacc.

Phaeophragmiae

- Aethalomyces** Woronich. Ann. Myc. 24:149 1926.
- Capnodaria** Theiss. & Syd. Ann. Myc. 15:474 1917.
- Capnophaeum** Speg. Physis 4:287 1918.
- Phragmocapnias** Theiss. & Syd. Ann. Myc. 15:480 1917.
- Limaciniopsis** Mendoza Bishop Mus. Bull. 19:58, ill. 1925.
- Metacapnodium** Speg. Physis 4:288 1918.
- Setella** Syd. Ann. Myc. 14:359 1916.
- A. arctica** Woronich.
- C. tiliae** (Fkl.) T. & S.
- C. indicum** (Brn.) Speg.
- P. betle** Syd. & Butler
- L. rollandiae** Mendoza
- M. juniperi** (Ph. & Plw.) Speg.
- S. disseminata** Syd.

Hyalodictyae

- Chaetomeris** Clem.; for
- Treubiomyces** Hoehn. Frag. Myk. 370 1909.
- Paracapnodium** Speg. An. Mus. Nac. 19:325 1909.
- Phaeopeltis** Clem. Gen. Fung. 52 1909.
- Capnites** Theiss. Verh. z-b. Ges. Wien 66:365 1916.
- Limacinia** Sacc. Syll. Fung. 17:556 1905; not Neger 1896.
- Phaeosaccardinula** Henn. Hedwigia 44:67 1905; Syll. Fung. 17:873 1905.
- Tephrosticta** Sacc. & Syd. Syll. Fung. 17:745 1905; 24:1023 1928.
- C. pulcherrima** (Hoehn.) Clem.
- T. pulcherrimus** Hoehn.
- P. pulchellum** Speg.
- P. diospyricola** (Henn.) Clem.
- C. costaricensis** (Speg.) Theiss.
- L. javanica** (Zimm.) S. & D. S.
- P. diospyricola** Henn.
- T. negeriana** S. & S.

Phaeodictyae

- Capnodium** Mont. Ann. Sci. Nat. 3:11:233 1849.
- Polychaetum** OK. Rev. Gen. Pl. 1:13 1891.
- Naetrocymbe** Koerb. Lich. Germ. 58 1858; Par. Lich. 441 1865.
- C. salicinum** (Pers.) Mont.
- P. quercinum** (Pers.) Lev.
- N. fuliginea** Koerb.

- Coccodinium** Mass. Att. Ist. Venet. 3:5:336
1860.
- Schizocapnodium** Fairman Proc. Rochester
Acad. 6:93 1921.
- Scolecosporae**
- Actinocymbe** Hoehn. Frag. Myk. 690 1911.
- Nematothecium** Syd. Leaf. Phil. Bot. 5:1534
1912.
- Ophiocapnis** Speg. Physis 4:286 1918;
Syll. Fung. 22:57 1913; for *Ophiocap-*
nodium.
- Genera Dubia**
- Antennulariella** Woronich. Bull. App. Bot.
8:771, ill. 1915; Syll. Fung. 24:248 1926.
Probably *Dimeriella*, but paraphyses un-
certain.
- Apiosporium** Kze. Myk. Heft. 1:8 1817; Syll.
Fung. 1:30 1882.
The type is a sclerotium; Hoehn. Frag. Myk.
355.
- Argynna** Morgan Jour. Cincin. Soc. Nat.
Hist. 18:41 1895; Syll. Fung. 14:470 1899.
Not to be regarded as an ascomycete; TS
Ann. Myc. 14:466 1916.
- Diblastospermella** Speg. Bol. Acad. Cordoba
23:579 1919.
Asci lacking.
- Dimerosporiella** Speg. Rev. Mus. La Plata
15:10 1908; Syll. Fung. 22:29 1913.
Perhaps a parenchymic genus of *Englerula-*
ceae; TS Ann. Myc. 15:470 1917.
- Eudimeriolum** Speg. An. Mus. Nac. 23:36, ill.
1912; Syll. Fung. 24:246 1926.
No definite criteria to determine its position;
TS Ann. Myc. 15:465 1917.
- Hyalotheles** Speg. Rev. Mus. La Plata 15:12
1908; Syll. Fung. 22:29 1913.
Probably an *Englerula* with separating
spore-cells; TS Ann. Myc. 15:470 1917.
- Melanomyces** Syd. Ann. Myc. 15:196 1917;
Syll. Fung. 24:918 1928.
Of uncertain affinity; Ann. Myc. 16:15 1918.
- Meliolopsis** Sacc. Syll. Fung. 9:375 1891.
Immature, hardly perisporiaceous; TS Ann.
Myc. 15:465 1917.
- Micromastia** Speg. An. Mus. Nac. 19:324
1909; Syll. Fung. 22:30 1913.
Of completely uncertain character; TS Ann.
Myc. 15:465 1917.
- Orbicula** Coöke Handb. Brit. Fung. 2:296
1871; Syll. Fung. 1:38 1882; 9:378 1891.
Nothing certain known of it; TS Ann. Myc.
15:465 1917.
- C. bartschi** Mass.
- S. sarcinellum** Fairman
- A. separatis** (Henn.) Hoehn.
- N. vinosum** Syd.
- O. usteri** (Speg.) Sacc.
- A. fuliginosa** Woronich.
- A. salicis** Kze. & Schm.
- A. polyhedron** (Schw.) Morgan
- D. aequatorialis** Speg.
- D. paulistana** Speg.
- E. elegans** Speg.
- H. dimerosperma** Speg.
- M. quercinus** Syd.
- M. microthecia** (Thuem.) Sacc.
- M. trigonospora** Speg.
- O. cyclospora** Cke.

- Perisporiella** Henn. Hedwigia 41:141 1902.
Sterile stroma of a Hypocrella; Hoehn. Frag. Myk. 678; TS Ann. Myc. 15:466 1917.
- Phaeocryptopus** Naumov Bull. Soc. Myc. Fr. 30:424 1914; Syll. Fung. 24:259 1926.
Requires further investigation; Sacc. Syll. Fung. 24:259 1926.
- Pleomeliola** Sacc. Syll. Fung. 17:554 1905.
Nothing known of type or second species; TS Ann. Myc. 15:406 1917.
- Pseudolizonia** Pir. Nuov. Giorn. Ital. 21:315 1889; Syll. Fung. 9:683 1891.
Lizonia with 16-spored asci; not definitely known; TS Ann. Myc. 15:482 1917.
- Rhizogene** Syd. Ann. Myc. 18:181 1920; Syll. Fung. 24:365 1926.
Asci and spores immature.
- Sclerotomyces** Woronich. Ann. Myc. 24:233 1926.
No generic diagnosis; apparently a sclerotium.
- Scyphostroma** Starb. Bih. Sven. Vet. Handl. 25:23 1899; Syll. Fung. 16:417 1902.
Perithecium uncertain; TS Ann. Myc. 15:466 1917.
- P. myristicae** Henn.
- P. abietis** Naumov
- P. fenestrata** (C. & E.) Sacc.
- P. baldwini** Pir.
- R. symphoricarpi** Syd.
- S. dissipabilis** Woronich.
- S. mirum** Starb.

TRICHOthyRIACEAE

- Actinopeltis** Hoehn. Denks. Akad. Wien 83:17 1907.
- Dasypyrena** Speg. Ann. Myc. 23:267 1925
- Loranthomyces** Hoehn. Ber. Deut. Bot. Ges. 35:414 1917.
Actinopeltella Doidge Bothalia 1:216, ill. 1924.
- Trichothyriella** Theiss. Beih. Bot. Cent. 32:4 1914.
- Trichothyriopsis** Theiss. Ib.
- Trichothyrium** Speg. Bol. Acad. Cordoba 11:555 1889.
Mycolangloisia Arnaud Ann. Agr. Montp. 16:157 1918.
Trichopeltopsis Hoehn. Frag. Myk. 325 1909.
- A. peristomalis** Hoehn.
- D. lauricola** Speg.
- L. sordidulus** (Lev.) Hoehn.
- A. nitida** Doidge
- T. quercigena** (Berk.) Theiss.
- T. densa** (Rac.) Theiss.
- T. sarciniferum** Speg.
- M. echinata** Arn.
- T. reptans** (B. & C.) Hoehn.

CORYNELIACEAE

- Caliciopsis** Peck Rep. N. Y. Mus. 33:32 1880.
- Corynelia** Fr. Syst. Myc. 2:535 1822.
- Sorica** Giesenhagen Ber. Deut. Bot. Ges. 22:191, ill. 1904.
Capnodiella Sacc. Syll. Fung. 1:74 1882; 17:621 1905.
- Tripospora** Sacc. Syll. Fung. Add. 194 1886.
- C. pinea** Pk.
- C. uberata** Fr.
- S. maxima** (B. & C.) Giesenh.
- C. maxima** (B. & C.) Sacc.
- T. tripos** (Cke.) Lind.

Genus Dubium

- Coryneliella* Hariot & Karsten Rev. Myc.
12:128 1890; Syll. Fung. 11:385 1895; cf.
Fitzpatrick Mycologia 12:263 1920. *C. consimilis* H. & K.

SPHAERIALES

SPHAERIACEAE

Allantosporae

- Acanthonitschkea* Speg. An. Mus. Nac.
3:10:116, ill. 1910. *A. argentinensis* Speg.
- Calosphaeria* Tul. Sel. Fung. Carp. 2:108
1861. *C. princeps* Tul.
- Longoa* Curzi Att. Ist. Pavia 3:3:204, ill.
1927. *L. paniculata* Curzi
- Sphaeronemopsis* Speg. Fung. Chil. 151
1910; Syll. Fung. 22:927 1913; cf. Petr. &
Syd. Ann. Myc. 23:220 1925. *S. chilensis* Speg.
- Coronophora* Fkl. Symb. Myc. 229 1869; cf.
Ann. Myc. 15:273. *C. gregaria* (Lib.) Fkl.
- Coronophorella* Hoehn. Sitzb. Akad. Wien
18:1507 1910. *C. chaetomoides* (P. & S.) Hoehn.
- Cryptosphaerella* Sacc. Syll. Fung. 1:186 1882;
cf. Hoehn. Frag. Myk. 162. *C. annexa* (Nke.) Hoehn.
- Cryptosphaeria* Greville Scot. Crypt. Flor. 201
1823. *C. millepunctata* Grev.
C. protracta (Pers.) DeN.
- Cryptovalsa* DeN. Sfer. Ital. 40 1863. *A. clematidis* (Br. & Har.) Berl.
- Allescherina* Berl. Malpighia 16:300 1902;
Syll. Fung. 24:733 1928. *D. disciformis* (Hoffm.) Fr.
- Diatrype* Fr. Sum. Veg. Scan. 385 1849. *E. costesi* Speg.
- Ectosphaeria* Speg. Bol. Acad. Cordoba
25:48, ill. 1921. *V. tristicha* (DeN.) Hoehn.
- Valseutypella* Hoehn. Ann. Myc. 16:224
1918; 18:72 1920. *D. verrucaeformis* (Ehrh.) Nke.
- Diatrypella* DeN. Sfer. Ital. 29 1863. *E. infernalis* (Kze. & Fr.) Fkl.
- Enchnoa* Fr. Sum. Veg. Scan. 410. 1849. *E. operculata* (A. & S.) Fr.
- Endoxyla* Fkl. Symb. Myc. App. 1:321 1871;
Hoehn. Frag. Myk. 866. *E. lata* (Pers.) Tul.
- Eutypa* Tul. Sel. Fung. Carp. 2:52 1861. *E. turnerae* Henn.
- Epheliopsis* Henn. Hedwigia 27:270 1908;
cf. Hoehn. Frag. Myk. 695. *L. bambusae* Plunk.
- Lageniformia* Plunk. Bishop Mus. Bull.
19:98, ill. 1925; cf. Petr. Ann. Myc. 25:237
1927. *P. cylindrica* (K. & C.) Berl.
- Peroneutypa* Berl. Icon. Fung. 3:80 1902;
Syll. Fung. 17:569 1905. *E. cerviculata* (Fr.) Sacc.
- Eutypella* (Nke.) Sacc. Consp. Gen. Pyr. 4
1875. *P. longirostrata* (Henn.) Berl.
- Peroneutypella* Berl. Icon. Fung. 3:82 1902;
Syll. Fung. 17:569 1905. *P. rehmiiana* Henn. & Nym.
- Pseudotrype* Henn. Monsumia 1:164 1899;
Syll. Fung. 16:561 1902; cf. Hoehn. Frag.
Myk. 621.

- Scoptria** Nke. Pyr. Germ. 83 1867; Syll. Fung. 1:146 1881; cf. Hoehn. Ann. Myc. 16:128.
- Euacanth**e Theiss. Ann. Myc. 15:272 1917.
- Fracchiaea** Sacc. Myc. Ven. Spec. 115 1873.
- Echusias** Haszlsinsky Verh. z-b. Ges. Wien 23:367 1873; cf. Hoehn. Ann. Myc. 17:31 1919.
- Massalongiella** Speg. Fung. Arg. 1:180 1880.
- Jattaea** Berl. Icon. Fung. 3:6 1902; Syll. Fung. 16:421 1902.
- Lyonella** Syd. Bishop Mus. Bull. 19:108 1925.
- Neozimmermannia** Koord. Verh. Akad. Amster. 3:68, ill. 1907.
- Neotrotteria** Sacc. Bull. Ort. Napoli 6:45 1921.
- Petelotia** Pat. Bull. Soc. Myc. Fr. 40:35 1924.
- Nitschkea** Otth Fkl. Symb. Myc. 165 1869.
- Coelosphaeria** Sacc. Myc. Ven. Spec. 115 1873.
- Phaeotrype** Sacc. Mycologia 12:200 1920.
- Pleurostoma** Tul. Sel. Fung. Carp. 2:247 ill. 1863.
- Neoarcangelia** Berl. Icon. Fung. 3:6 1902; Syll. Fung. 16:419 1902; cf. Hoehn. Ber. Deut. Bot. Ges. 35:129 1917.
- Quaternaria** Tul. Sel. Fung. Carp. 2:104 1863.
- Romellia** Berl. Icon. Fung. 3:5 1902.
- Rostronitschkea** Fitzpatrick Mycologia 11:163, ill. 1919.
- Sydowinula** Petr. Ann. Myc. 21:277 1923.
- Togninia** Berl. Icon. Fung. 3:9 1902.
- Erostella** (Sacc.) Trav. Fl. Ital. Crypt. 1:155 1906; Syll. Fung. 22:353 1913.
- Leucostoma** (Nke.) Hoehn. Ber. Deut. Bot. Ges. 35:631 1917.
- Valsa** Fr. Sum. Veg. Scan. 410 1849.
- Valsella** Fkl. Symb. Myc. 203 1869.
- Wegelinia** Berl. Icon. Fung. 3:8 1902; cf. Petr. & Syd. Ann. Myc. 23:221 1925.
- S. isariphora** (Nke.) Sacc.
- E. usambarensis** (Henn.) Theiss.
- F. heterogenea** Sacc.
- E. vitis** Haszl.
- M. bonariensis** Speg.
- J. algeriensis** Berl.
- L. neurophila** Syd.
- N. elastica** Koord.
- N. pulchella** Sacc.
- P. tonkinensis** Pat.
- N. fuckeli** Nke.
- C. cupularis** (Pers.) Karst.
- P. brencklei** Sacc.
- P. candollei** Tul.
- N. ootheca** (B. & C.) Berl.
- Q. persooni** Tul.
- R. vibratilis** (Fr.) Berl.
- R. nervincola** Fitzp.
- S. moravica** Petr.
- T. minima** (Tul.) Berl.
- E. minima** (Tul.) Trav.
- L. massarianum** (DeN.) Hoehn.
- V. ceratophora** Tul.
- V. salicis** Fkl.
- W. discreta** Berl.

Hyalosporae

- Amylis** Speg. An. Mus. Nac. 31:405 1922.
- Botryosphaeria** C. & DeN. Sfer. Ital. 37 1863; em., Shear Jour. Agr. Res. 28:596 1924.
- Melanops** (Tul.) Sacc. Syll. Fung. 2:231 1883.
- Camptosphaeria** Fkl. Symb. Myc. 140 1869.
- Causalis** Theiss. Ann. Myc. 16:184 1918.
- Anthostomellina** Kants. Bolez. Rast. 17:82, ill. 1928.
- A. memorabilis** Speg.
- B. ribis** Gross. & Dug.
- M. tulasnei** Nke.
- C. sulphurea** Fkl.
- C. myrtacearum** (Rick) Theiss.
- A. carpinea** Kants.

- Clypeotrabutia* Seaver & Chardon Sci. Surv.
P. R. 8:60 1926.
- Cerastomis* Clem.; *Cerato-stoma piliferum*
Cerastomella Sacc. *Michelia* 1:370 1878.
- Endoconidiophora* Münch. Nat. Zeits.
Landw. 5:564, ill. 1907.
- Linostoma* Hoehn. Ann. Myc. 16:91 1918.
- Linostomella* Petr. Ann. Myc. 23:41 1925.
- Ophiostoma* Syd. Ann. Myc. 17:43 1919;
new name for *Linostroma* Hoehn. 1918;
not Wallr. 1831.
- Cryptonectriopsis* Hoehn. Ann. Myc. 16:36
1918.
- Cryptosporella* Sacc. *Michelia* 1:30 1877.
- Cryptosporina* Hoehn. Oest. Bot. Zeit. 55:54
1905.
- Diaporthopsis* H. Fab. Spher. Vaucl. 2:35,
ill. 1883.
- Flageoletia* Sacc. Syll. Fung. 14:525 1899,
as subg.
- Dicarpella* Syd. Ann. Myc. 18:181 1920; new
name for *Disperma* Theiss. Verh. z-b. Ges.
Wien 66:390 1916; not Clarke 1899.
- Ditopella* DeNot. Sfer. Ital. 42 1863.
- Halonia* Fr. Sum. Veg. Scan. 2:397 1849.
- Epiphyma* Theiss. Verh. z-b. Ges. Wien 66:306
1916.
- Geminispora* Pat. Bull. Soc. Myc. Fr. 9:151
1893.
- Diplosporid* Clem. Gen. Fung. 27 1909.
- Glomerella* Schrenk & Spauld. Science 17:750
1903.
- Gnomoniella* Sacc. *Michelia* 2:312 1881.
- Hyperus* Stevens Ill. Biol. Mon. 11:27, ill.
1927.
- Inzengaea* Borzi Pringsh. Jarhb. 16:450 1885.
- Mamiana* C. & DeN. Sfer. Ital. 36 1863.
- Mamianella* Hoehn. Ann. Myc. 16:102 1918.
- Mazzantia* Mont. Syll. Gen. 215 1856.
- Gibellia* Sacc. Misc. Myc. 2:12 1885; Syll.
Fung. 9:608; cf. Theiss. & Syd. Ann. Myc.
13:185 1915; Hoehn. Frag. Myk. 768.
- Miyoshiella* Kawamura Jap. Jour. Bot. 4:295,
ill. 1907; new name for *Miyoshia* Kawa-
mura.
- Montagnellina* Hoehn. Sitzb. Akad. Wien
121:387 1912.
- Desmotascus* Stev. Bot. Gaz. 68:476 1919.
- Haplodothella* Werdermann Rep. Spec.
Nov. Fedde 19:54 1923.
- Haplothecium* Theiss. & Syd. Ann. Myc.
13:614 1915.
- Pyreniella* Theiss. Verh. z-b. Ges. Wien
66:371, ill. 1916.
- C. portoricensis* (Stev.) S. & C.
- C. vestita* (Sacc.) Clem.
- C. rostrata* (Fkl.) Sacc.
- E. coeruleus* Münch.
- L. piliferum* (Fr.) Hoehn.
- L. sphaerosperma* (Fkl.) Petr.
- O. piliferum* (Fr.) Syd.
- C. biparasitica* Hoehn.
- C. hypodermia* (Fr.) Sacc.
- C. hypodermia* (Fr.) Hoehn.
- D. nigrella* (Niessl) H. Fab.
- F. tenuis* (C. & P.) Sacc.
- D. bina* (Harkn.) Syd.
- D. ditopa* (Fr.) De N.
- H. cubicularis* Fr.
- E. anceps* (Hoehn.) Theiss.
- G. mimosae* Pat.
- D. mimosae* (Pat.) Clem.
- G. cingulata* (Atkin.) S. & S.
- G. tubaeformis* (Tode) Sacc.
- H. costaricensis* Stev.
- I. erythrospora* Borzi
- M. fimbriata* (Pers.) C. & DeN.
- M. coryli* (Batsch) Hoehn.
- M. galii* (Fr.) Mont.
- G. dothideoides* B. & S.
- M. fuispora* Kawamura
- M. pithecolobii* (Rac.) Hoehn.
- D. portoricensis* Stev.
- H. chaenostoma* (Sacc.) Werd.
- H. amenti* (Rostr.) T. & S.
- P. festucae* (Lib.) Theiss.

- Myelosperma* Syd. Ann. Myc. 13:38 1915.
Chiloella Syd. Ann. Myc. 26:112 1928.
Nephrospora Loubiere Comp. Rend. 177:211, ill. 1923.
Paidania Rac. Bull. Acad. Crac. 1909:390; Ann. Myc. 7:391 1909.
Paralaestadia Sacc. Syll. Fung. 17:576 1905.
Phomatospora Sacc. Fung. Ven. 2:306 1874.
Discosphaerina Hoehn. Frag. Myk. no. 1031 1917; Syll. Fung. 24:793 1905.
Gnomonina Hoehn. Ann. Myc. 16:48 1918.
Guignardia Viala & Rav. Bull. Soc. Myc. Fr. 63 1892; cf. Syd. Ann. Myc. 17:46 1919.
Heteropera Theiss. Ann. Myc. 14:423, ill. 1916.
Laestadia Auers. Hedwigia 1869:177; not Kunth 1832.
Laestadiella Hoehn. Ann. Myc. 16:50 1918.
Mesonella Petr. & Syd. Ann. Myc. 22:367 1924.
Paramazzantia Petr. Ann. Myc. 25:233 1927.
Pseudoguignardia Gutner Mat. Myk. Fitop. 6:311, ill. 1927.
Physalospora Niessl Verh. Nat. Ver. Brünn 14:10 1876; em., Shear Jour. Agr. Res. 28:596 1924.
Anisostomula Hoehn. Ann. Myc. 16:48 1918.
Coutinia Alm. & Cam. Riv. Agron. 293 1903; Syll. Fung. 17:589 1905.
Hypostegium Theiss. Verh. z-b. Ges. Wien 66:384 1916; Syll. Fung. 24:807 1928.
Hypostigme Syd. Ann. Myc. 23:337 1925.
Pemphidium Mont. Ann. Sci. Nat. 2:14:326 1840; cf. Theiss. Myc. Cent. 3:280 1913; Syll. Fung. 2:670 1883.
Physalosporina Woronich. Ann. Myc. 9:220 1911.
Physosporella Hoehn. Ann. Myc. 16:161 1918.
Physalosporella Speg. Rev. Agron. Vet. 6:35 1910.
Pseudophysalospora Hoehn. Ann. Myc. 16:57 1918.
Pilgeriella Henn. Hedwigia 39:137 1900.
Polytrichia Sacc. Syll. Fung. 1:451 1882.
Rinia Penzig & Sacc. Malpighia 15:224 1901; Syll. Fung. 17:591. 1905.
Rostrella Zimmermann Bull. Inst. Buitenz. 4:19 1900.
Rostrosphaeria Tehon & Daniels Mycologia 19:112, ill. 1927.
M. tumidum Syd.
C. guevinae Syd.
N. mangini Loub.
P. melastomis Rac.
P. verrucosa (Wedd.) Sacc.
P. berkeleyi Sacc.
D. discophora Hoehn.
G. alnea (Fr.) Hoehn.
G. alnea (Fr.) Syd.
H. borealis (Sacc.) Theiss.
L. alnea (Fr.) Auers.
L. niessli (Kze.) Hoehn.
M. melaleucae (Berk.) P. & S.
P. biennis (Dearn.) Petr.
P. scirpi Gutner
P. malorum (Pk.) Shear
A. cookeana (Auers.) Hoehn.
C. agaves Alm. & Cam.
H. phormii (Schröt.) Theiss.
H. polyadelpa Syd.
P. nitidum Mont.
P. megastoma (Pk.) Woron.
P. sanguinea (Rehm) Hoehn.
P. chilensis Speg.
P. adeana (Rehm) Hoehn.
P. perisporiodes Henn.
P. wallrothi Sacc.
R. spectabilis P. & S.
R. coffeae Zimm.
R. phlei T. & D.

- Samarospora* Rostrup Beih. Bot. Cent. 3:3
1893.
- Schizoparme* Shear Mycologia 15:120, ill. 1923
- Scirrhella* Speg. Fung. Guar. 1:110 1883;
Ann. Myc. 13:180 1915.
- Scortechinia* Sacc. Syll. Fung. 9:604 1891.
- Sphaerognomonina* Potebnia Ann. Myc. 8:53,
ill. 1910.
- Amerostege* Theiss. Verh. z-b. Ges. Wien
66:396, ill. 1916; Syll. Fung. 24:1132 1928.
- Clypeoporthella* Petr. Ann. Myc. 22:149
1924.
- Spolverinia* Mass. Flora 39:61 1856.
- Sporophysa* Sacc. Syll. Fung. 17:586 1905.
- Stevensiella* Trotter Syll. Fung. 24:808 1928.
- Trabutiella* Stev. Bot. Gaz. 70:401 1920;
not Theiss. & Syd. 1914.
- Trichosphaerella* B. R. & S. Syll. Fung.
9:604 1891.
- Trichosphaeria* Fkl. Symb. Myc. 144 1869.
- Bakeromyces* Syd. Ann. Myc. 15:202 1917;
cf. Hoehn. Ann. Myc. 16:77 1918; Syll.
Fung. 24:816 1928.
- Pseudorhynchia* Hoehn. Sitzb. Akad. Wien.
118:1206 1910.
- Urospora* H. Fab. Spher. Vaucl. 75 1878.
- Urosporella* Atkin. Bull. Cornell Univ.
3:99 1897; Syll. Fung. 14:523 1899.
- Vestergrenia* Rehm. Hedwigia 40:100, ill.
1901.
- Guignardiella* Sacc. & Syd. Syll. Fung.
16:465 1902.
- Wallrothiella* Sacc. Syll. Fung. 1:455 1882.
- S. potamogetonis* Rostr.
- S. straminea* Shear
- S. curvispora* Speg.
- S. acanthostroma* (Mont.) Sacc.
- S. carpinea* (Fr.) Poteb.
- A. pseudopustula* (B. & H.) Theiss.
- C. brencklei* Petr.
- S. punctum* Mass.
- S. insularis* (Mass.) Sacc.
- S. cordiae* (Stev.) Trott.
- T. cordiae* Stev.
- T. decipiens* (B. & S.)
- T. pilosa* (Pers.) Fkl.
- B. philippinensis* Syd.
- P. polyrhynga* (P. & S.) Hoehn.
- U. coccifera* H. Fab.
- U. americana* Atkin.
- V. nervisequia* Rehm
- G. nervisequia* (Rehm) S. & S.
- W. congregata* (Wallr.) Sacc.

Phaeosporae

- Acanthorhynchus* Shear Bull. Torr. Club
34:313 1907.
- Adelococcus* Theiss. & Syd. Ann. Myc. 16:31
1918.
- Anthostoma* Nke. Pyr. Germ. 110 1867.
- Lopadostoma* (Nke.) Traverso Flor. Ital.
Crypt. 2:169 1906; cf. Syll. Fung. 22:374
1913.
- Phaeobotryosphaeria* Speg. An. Mus. Nac.
17:120 1908; Syll. Fung. 22:120 1913.
- Phaeobotryum* Theiss. & Syd. Ann. Myc.
13:664 1915.
- Anthostomaria* Sacc. Syll. Fung. 17:595 1905,
as subg.; Theiss. & Syd. Ann. Myc. 16:27
1918.
- Anthostomella* Sacc. Syll. Fung. 1:278 1882.
- Phaeophomatospora* Speg. An. Mus. Nac.
12:339 1909; cf. Petr. & Syd. Ann. Myc.
23:212 1925.
- A. vaccinii* Shear
- A. alpestris* (Zopf) T. & S.
- A. decipiens* (DC.) Nke.
- L. gastrinum* (Fr.) Trav.
- P. yerbae* Speg.
- P. cercidis* (Cke.) T. & S.
- A. apogyra* (Nyl.) Sacc.
- A. phaeosticta* (Berk.) Sacc.
- P. argentinensis* Speg.

- Astrocystis* B. & Br. Fung. Ceylon 123, ill. 1870.
- Bolinia* Nke. Pyr. Germ. 26 1867.
- Camarops* Karst. Myc. Fenn. 2:6 1879; Syll. Fung. 1:753 1882.
- Solenoplea* Starb. Ascom. Reg. Exped. 2:13 1901; Syll. Fung. 17:619 1905.
- Bombardia* Fr. Sum. Veg. Scan. 389 1849
- Lasiosordaria* Chenantais Bull. Soc. Myc. Fr. 35:77, ill. 1919.
- Bommerella* Marchal Bull. Soc. Bot. Belg. 24:164 1885.
- Camillea* Fr. Sum. Veg. Scan. 382 1849.
- Cerastostoma* Fr. Sum. Veg. Scan. 392 1849.
- Ophiostomella* Petr. Hedwigia 65:235 1925.
- Cerillum* Clem.; for
- Colletomanginia* Har. & Pat. Comp. Rend. 142:224 1906.
- Chaetocercis* Turconi & Maffei Att. Ist. Pav. 2:15:144, ill. 1918; for *Chaetocercatostoma*.
- Chaetomium* Kze. Myk. Heft. 1:15 1817.
- Ascotricha* Berk. Ann. Nat. Hist. 1:1:257 1838; Syll. Fung. 1:37 1882.
- Bolacotricha* B. & Br. Ann. Nat. Hist. 1:1:257, ill. 1838; cf. Hoehn. Frag. Myk. 565.
- Chaetomidium* Zopf Entw. Chact. 280, ill. 1881; Syll. Fung. 1:39 1882.
- Peristomium* Lechmere Bull. Soc. Myc. Fr. 29:307, ill. 1913; Syll. Fung. 24:229 1928.
- Coniochaeta* Sacc. Syll. Fung. 1:269 1882.
- Cryptascus* Petri Att. Acad. Linc. 5:18:642, ill. 1909.
- Daldinia* DeN. & Ces. Sfer. Ital. 1:197 1861.
- Entosordaria* Sacc. Syll. Fung. 1:286 1882.
- Erikssonia* (Penz. & Sacc.) Syd. Ann. Myc. 13:315, 668 1915.
- Helminthosphaeria* Fkl. Symb. Myc. 166 1869.
- Henningsina* Moell. Phyc. Asc. Bras. 309 1901.
- Hypocopra* Fkl. Symb. Myc. 240 1869.
- Coprolepa* Fkl. Symb. Myc. 240 1869; Syll. Fung. 1:248 1882.
- Fimetaria* Griff. & Seav. N. A. Fl. 3:65 1910.
- Hypoxylum* Bull. Champ. France 1:168 1791.
- Alboffia* Speg. An. Mus. Nac. 1:295 1899; Syll. Fung. 24:539 1926.
- Entoleuca* Syd. Ann. Myc. 20:186 1922.
- Penzigia* Sacc. Myc. Malac. 20 1888; Syll. Fung. 9:567 1891.
- Pyrenopolyporus* Lloyd Myc. Notes 50:76, ill. 1917.
- A. *mirabilis* B. & Br.
- B. *tubulina* (A. & S.) Sacc.
- C. *hypoxyloides* Karst.
- S. *microspora* Starb.
- B. *fasciculata* Fr.
- L. *lignicola* (Fkl.) Chen.
- B. *trigonospora* March.
- C. *leprieuri* Mont.
- C. *avocetta* (C. & E.) Sacc.
- O. *melanosporis* (Wint.) Petr.
- C. *paradoxa* (Har. & Pat.) Clem.
- C. *paradoxa* Har. & Pat.
- C. *hispida* T. & M.
- C. *globosum* Kze.
- A. *chartarum* Berk.
- B. *grisea* B. & Br.
- C. *fimeti* (Fkl.) Zopf.
- P. *desmosporum* Lech.
- C. *ligniaria* (Grev.) Sacc.
- C. *oligosporus* Petri
- D. *concentrica* (Bolt.) C. & DeN.
- E. *perfidiosa* (DeN.) Hoehn.
- E. *spatholobi* Syd.
- H. *clavariarum* Fkl.
- H. *durissima* Moell.
- H. *fimicola* (Rob.) Sacc.
- C. *merdaria* (Fr.) Fkl.
- F. *fimicola* (Rob.) Griff. & Seav.
- H. *coccineum* Bull.
- A. *oreophila* Speg.
- E. *callimorpha* Syd.
- P. *cranioides* Sacc. & Paol.
- P. *hunteri* Lloyd

- Spirogramma* Ferd. & Wing. Vid. Med. For.
Kjob. 142, ill. 1909; Syll. Fung. 22:336
1913.
- Squamotubera* Henn. Syll. Fung. 17:620
1905.
- Theissenia* Maubl. Bull. Soc. Myc. Fr. 30:52,
ill. 1914.
- Kretschmaria* Fr. Sum. Veg. Scan. 409 1849.
- Leptomassaria* Petr. Ann. Myc. 12:274 1914.
- Mesniera* Sacc. & Syd. Syll. Fung. 16:440
1902.
- Micrascus* Zukal Pilz. Myx. Bakt. 9, ill. 1885.
- Muellerella* Hepp Müll.-Arg. Prin. Class.
Lich. 80 1862.
- Nummularia* Tul. Sel. Fung. Carp. 2:42 1861.
- Paranthostomella* Speg. Rev. Fac. Agron.
6:42, ill. 1910.
- Philocopra* Speg. An. Soc. Sci. Arg. 9:193
1880.
- Podospora* Cesati Rabh. Herb. Myc. 258 1856.
- Hansenia* Zopf Zeits. Naturw. 56:27 1883.
- Poronia* Willd. Flor. Ber. Prod. 400 1787.
- Podosordaria* Ell. & Holway Bot. Gaz.
24:37 1897; Syll. Fung. 14:494 1899.
- Pseudotthiella* Petr. Hedwigia 68:257 1928.
- Rosellinia* DeNot. Giorn. Bot. Ital. 2:334
1847.
- Pleosporopsis* Oersted Nat. For. Vid. Medd.
128 1865.
- Sordaria* Ces. & DeN. Sfer. Ital. 1:197 1861.
- Pleuraea* Fr. Sum. Veg. Scan. 418 1849.
- Tympanopsis* Starb. Bih. Sven. Akad. Handl.
19:24, ill. 1894.
- Cucurbitariella* Petr. Ann. Myc. 14:440
1916; Syll. Fung. 24:837 1928.
- Ustulina* Tul. Sel. Fung. Carp. 2:23 1861.
- Xylaria* (Hill) Schrank. Bayer. Fl. 2:566
1789.
- Moelleroclavus* Henn. Hedwigia 41:15
1902; Syll. Fung. 17:634 1905.
- Thamnomycetes* Ehrenb. Nees Hor. Phys.
Berol. 79, 27 ill. 1820; Syll. Fung. 1:344
1882.
- Xylariodiscus* Henn. Hedwigia 38:63 1899;
Syll. Fung. 16:449 1902; Ann. Myc. 6:335
1908; cf. Hoehn. Frag. Myk. 624.
- S. boergeseni F. & W.
- S. lerati Henn.
- T. pyrenocrata (Theiss.) Maubl.
- K. clavus Fr.
- L. simplex Petr.
- M rottlerae (Rac.) Sacc.
- M. longirostris Zukal
- M. polyspora Hepp
- N. bulliardi Tul.
- P. eryngicola Speg.
- P. pleiospora (Wint.) Sacc.
- P. fimicola Ces.
- H. lanuginosa Zopf.
- P. punctata (L.) Fr.
- P. mexicana E. & H.
- P. hirtellae (Henn.) Petr.
- R. aquila (Fr.) DeN.
- P. strobilorum Oerst.
- S. coprophila (Fr.) C. & DeN.
- P. fimicola (Cda.) Fr.
- T. euomphala (B. & C.) Starb.
- C. moravica Petr.
- U. vulgaris Tul.
- X. hypoxylum (L.) Grev.
- M. penicilliopsis Henn.
- T. hippotrichoides (Sow.) Sacc.
- X. dorstenioides Henn.

Hyalodidymae

- Apiosporina* Hoehn. Sitzb. Akad. Wien 119:439
1910.
- Microtyle* Speg. Bol. Acad. Cordoba 23:458,
ill. 1919.
- A. collinsi (Schw.) Hoehn.
- M. bergi Speg.

- Arcangelia* Sacc. Bull. Soc. Myc. Fr. 5:115, ill. 1890.
- Ascospora* Fr. Sum. Veg. Scan. 425 1849.
- Bertia* DeNot. Giorn. Bot. Ital. 1:335 1846.
- Cacosphaeria* Speg. Fung. Fueg. 218. 1887.
- Cantharosphaeria* Thaxt. Bot. Gaz. 69:3, ill. 1920.
- Caudospora* Starb. Vet.-Akad. Handl. 15:11 1889.
- Ceriosporella* Berl. Icon. Fung. 1:121, ill. 1902.
- Chaetolentomita* Maubl. Bol. Agr. 16:313, ill. 1915.
- Chorostate* (Sacc.) Traverso Flor. Ital. Crypt. 2:190 1906; Syll. Fung. 22:376 1913.
- Allantoportha* Petr. Hedwigia 62:289 1921.
- Apioporthella* Petr. Ann. Myc. 27:401 1929.
- Cryptodioportha* Petr. Ann. Myc. 19:118 1921.
- Discodioportha* Petr. Hedwigia 62:293 1921.
- Chorostella* Sacc. Syll. Fung. 1:623 1882.
- Coleroa* Rabh. Winter Krypt-Flor. 2:198 1887.
- Niesslia* Auers. Gonn. & Rabh. Myc. Eur. 5:6:30, ill. 1869.
- Valetoniella* Hoehn. Sitzb. Akad. Wien 118:1499 1909.
- Cyphospilea* Syd. Ann. Myc. 24:377 1926.
- Diaportha* Nke. Pyr. Germ. 240 1870.
- Anisogramma* Theiss. & Syd. Ann. Myc. 14:451 1916.
- Apioportha* Hoehn. Sitzb. Akad. Wien 126:381 1917; Syll. Fung. 24:705 1928.
- Diaporthella* Petr. Ann. Myc. 22:30 1924.
- Skottsbergiella* Petr. Nat. Hist. J. F. 2:481 1927.
- Stigmatopsis* Traverso Flor. Ital. Crypt. 2:213 1906; Syll. Fung. 22:389 1913.
- Didymella* Sacc. Michelia 1:377 1878; cf. Petr. Ann. Myc. 21:26 1923.
- Apiosporina* Petr. Ann. Myc. 23:18 1925.
- Apiosporella* Hoehn. Frag. Myk. 389; Ann. Myc. 15:275, ill. 1917; Syll. Fung. 24:914 1928.
- Apiosporopsis* Mariani Att. Soc. Ital. 50:165 1911; Syll. Fung. 22:78 1913.
- Botryostroma* Hoehn. Frag. Myk. 692 1911; cf. Theiss. & Syd. 13:665 1915.
- Didymopsamma* Petr. Ann. Myc. 23:80 1925.
- Haplotheciella* Hoehn. Ber. Deut. Bot. Ges. 36:314 1918; cf. Petr. Ann. Myc. 23:31; Syll. Fung. 24:634 1926.
- Leiosphaerella* Hoehn. Sitzb. Akad. Wien 128:579 1919.
- Paradidymella* Petr. Ann. Myc. 25:238 1927.
- A. *hepaticarum* Sacc.
- A. *himantia* (Pers.) Rehm
- B. *moriformis* (Tode) DeN.
- C. *antarctica* Speg.
- C. *chilensis* Thaxt.
- C. *taleola* (Fr.) Starb.
- C. *patouillardi* (Let.) Berl.
- C. *lignorum* Maubl.
- C. *oncostoma* (Duby) Fkl.
- A. *tessella* (Pers.) Petr.
- A. *bavarica* Petr.
- C. *aesculi* (Fkl.) Petr.
- D. *sulphurea* (Fkl.) Petr.
- C. *castanea* (Tul.) Sacc.
- C. *chaetomium* (Kze.) Rabh.
- N. *chaetomium* (Kze.) Auers.
- V. *crucipila* Hoehn.
- C. *polylopha* Syd.
- D. *eres* Nke.
- A. *virgultorum* (Fr.) T. & S.
- A. *anomala* (Pk.) Hoehn.
- D. *aristata* (Fr.) Petr.
- S. *diaporthoides* Petr.
- S. *beccarini* Trav.
- D. *applanata* (Niessl) Sacc.
- A. *corni* (Sow.) Petr.
- A. *sepincolaeformis* (Sacc.) Theiss.
- A. *saccardiana* (Trav.) Mar.
- B. *inaequalis* (Wint.) Hoehn.
- D. *moravica* Petr.
- H. *hellebori* (Chaill.) Hoehn.
- L. *praeclara* (Rehm) Hoehn.
- P. *tosta* (B. & Br.) Petr.

- Didymellopsis* Sacc. Syll. Fung. 17:657 1905,
 as subg.
Cercidospora Koerb. Parerg. Lich. 466 1865.
Dimerinopsis Syd. Ann. Myc. 15:202 1917.
Echinothecium Zopf Nov. Act. Leop. 70:250,
 ill. 1898.
Endothia Fr. Sum. Veg. Scan. 385 1849.
Cryphonectria Sacc. Syll. Fung. 17:784
 1905; cf. Hoehn. Frag. Myk. 421 1909.
Valsonectria Speg. Fung. Arg. 4:201; Syll.
 Fung. 2:519 1883.
Gibbera Fr. Sum. Veg. Scan. 402 1849.
Eriosphaeria Sacc. Att. Soc. Ven. Trent.
 4:10 1875; Syll. Fung. 1:507 1882.
Melanopsammella Hoehn. Ann. Myc. 17:121
 1919.
Neorehmia Hoehn. Sitzb. Akad. Wien
 111:988 1902; Syll. Fung. 17:536 1905.
Winteromyces Speg. An. Mus. Nac. 23:37
 1912; Syll. Fung. 24:237 1926.
Gnomonia Ces. & DeN. Sfer. Ital. 1:57 1861.
Apiognomonia Hoehn. Ann. Myc. 16:51
 1918; Syll. Fung. 24:705 1928.
Plagiostoma Fkl. Symb. Myc. 1:3 1869.
Plagiostomella Hoehn. Ann. Myc. 16:52
 1918; Syll. Fung. 24:705 1928.
Hypospilina Sacc. Syll. Fung. 2:190 1883, as
 subg.
Clypeoportha Hoehn. Sitzb. Akad. Wien
 128:584 1919.
Kirschsteinia Syd. Ann. Myc. 4:455 1906.
Bertiella Kirschstein Abh. Bot. Brandenb.
 48:51, ill. 1906; not *Bertiella* Sacc. 1882.
Lasiostemma Theiss. & Syd. Ann. Myc. 15:218
 1917.
Lentomia Niessl Not. Pyr. 44 1876.
Lentomitella Hoehn. Ann. Myc. 3:552 1905.
Loranthomyces Hoehn. Sitzb. Akad. Wien
 118:840 1909.
Massarinula Lamarl. Rev. Gen. Bot. 6:321
 1894.
Pteridiospora Penz. & Sacc. Malpighia
 11:399 1897; Syll. Fung. 14:539 1899.
Melanconis Tul. Sel. Fung. Carp. 2:115 1861.
Aplacodina Ruhl Hedwigia 39:38 1900;
 Syll. Fung. 16:485 1902.
Bioportha Petr. Ann. Myc. 27:24 1929.
Ceratoportha Petr. Ann. Myc. 23:14 1925.
Hercospora Tul. Sel. Fung. Carp. 2:154
 1861.
Macrodiaportha Petr. Ann. Myc. 17:94
 1919; Syll. Fung. 24:747 1928.
Parasphaeria Syd. Ann. Myc. 22:297 1924.
Phylloporthe Syd. Ann. Myc. 23:348 1925.
D. latitans (Nyl.) Sacc.
C. ulothi Koerb.
D. luzonensis Syd.
E. reticulatum Zopf
E. gyrosa (Schw.) Fr.
C. gyrosa (B. & Br.) Sacc.
V. pulchella Speg.
G. vaccini (Sow.) Fr.
E. vermicularia (Nees) Sacc.
M. inaequalis (Grove) Hoehn.
N. ceratophora Hoehn.
W. caespitosus (Wint.) Speg.
G. setacea (Pers.) DeN.
A. veneta (Sacc.) Hoehn.
P. euphorbiae Fkl.
P. petiolicola (Fkl.) Hoehn.
H. bifrons (DC.) Sacc.
C. monocarpa Hoehn.
K. polyspora (Kirsch.) Syd.
B. polyspora Kirsch.
L. merrilli Syd.
L. brevicollis Niessl
L. vestita (Sacc.) Hoehn.
L. sordidulus (Lev.) Hoehn.
M. quercina Lam.
P. javanica P. & S.
M. stilbostoma (Fr.) Tul.
A. chondrospora (Ces.) Ruhl
B. brenei Petr.
C. didymospora Petr.
H. tiliae (Fr.) Tul.
M. occulta (Fkl.) Petr.
P. contraria Syd.
P. vernoniae Syd.

- Melanidium* Sacc. Syll. Fung. 1:604 1882,
as subg.
- Melanopsamma* Niessl Not. Pyr. 40 1876.
- Episphaerella* Petr. Ann. Myc. 22:126 1924.
- Malacosphaeria* Syd. Ann. Myc. 22:290
1924.
- Melanopsamma* Hoehn. Sitzb. Akad.
Wien. 128:573 1919.
- Melchiora* Penz. & Sacc. Malpighia 11:399
1897.
- Monopus* Theiss. & Syd. Ann. Myc. 13:647
1915.
- Rosenscheldiella* Theiss. & Syd. Ann. Myc.
13:645 1915; Syll. Fung. 24:538 1926.
- Montagnina* Hoehn. Frag. Myk. 488 1910.
- Montemartinia* Curzi Att. Ist. Pavia 3:3:84,
ill. 1927.
- Melanopsammopsis* Stahel Med. Landb.
Suriname 1916; Syll. Fung. 24:919 1928.
- Mycosphaerella* Johans. Svamp. Island 163
1884; Syll. Fung. 1:476, as *Sphaerella*,
9:611, 659 1891.
- Boydia* Smith Trans. Brit. Myc. Soc. 6:151,
ill. 1919; Syll. Fung. 24:683 1926.
- Cercosphaerella* Klebahn Haupt. Neb.
Askom. 1:132 1918, as subg.; Syll. Fung.
24:849 1928.
- Didymellina* Hoehn. Ann. Myc. 16:66 1918;
Syll. Fung. 24:911 1928.
- Diplosphaerella* Grove Jour. Bot. 50:91 1912.
- Hypomyces* Henn. Hedwigia 43:86 1904;
cf. Hoehn. Frag. Myk. 612.
- Plectosphaerella* Klebahn Phyt. Zeits. 1:43,
ill. 1929.
- Ramularisphaerella* Klebahn Haupt. Neb.
Askom. 1:131 1918, as subg.
- Rehmiellopsis* Bub. & Kab. Naturw. Zeits.
8:320 1910; Syll. Fung. 22:147 1913.
- Septorisphaerella* Klebahn Ib; Syll. Fung.
24:849 1928, as subg.
- Sphaerella* C. & DeN. Sfer. Ital. 62 1863;
not *Sphaerella* Somm. 1824.
- Myrmaeciella* Lindau Nat. Pflanzenf. 1:1:478
1897.
- Neokeissleria* Petr. Ann. Myc. 17:87 1919;
Syll. Fung. 24:747 1928.
- Otthiella* Sacc. Syll. Fung. 17:662 1905.
- Keissleriella* Hoehn. Sitzb. Akad. Wien
128:592 1919; Frag. Myk. 1169.
- Periaster* Theiss. & Syd. Ann. Myc. 14:452
1916.
- Pharcidia* Koerber Parerg. Lich. 470 1865.
- Epicymatia* Fkl. Symb. Myc. 118 1869.
- M.alni* (Tul.) Sacc.
- M.pomiformis* (Pers.) Sacc.
- E.manihotis* (Henn.) Petr.
- M.scabrosa* Syd.
- M.carinthiaca* Hoehn.
- M.leucomelaena* P. & S.
- M.pulverulentus* (B. & C.) T. & S.
- R.styracis* (Henn.) T. & S.
- M.examinans* (B. & C.) Hoehn.
- M.myriadea* Curzi
- M.ulei* Stahel
- M.ribis* (Fkl.) Lind.
- B.remuliformis* Smith
- C.millegrana* (Cke.) Schroet.
- D.iris* (Desm.) Hoehn.
- D.polyspora* (Johans.) Grove
- H.linearis* (Rehm) Henn.
- P.cucumeris* Kleb.
- R.hieracii* (Sacc. & Br.) Jaap
- R.bohemica* B. & K.
- S.hippocastani* (Jaap) Kleb.
- S.depazeaeformis* (Auers.) C. &
DeN.
- M.endoleuca* (Sacc.) Lind.
- N.ribis* (H. & P.) Petr.
- O.seriate* (Pk.) Sacc.
- K.aesculi* Hoehn.
- P.strongyloodontis* T. & S.
- P.congesta* Koerber.
- E.vulgaris* Fkl.

- Plactogene** Theiss. Ann. Myc. 14:432 1916.
Plagiostigme Syd. Ann. Myc. 23:341, ill. 1925.
Polycarpella Theiss. & Syd. Ann. Myc. 16:26 1918.
Pseudodiaporthe Speg. An. Mus. Nac. 19:358 1909.
Sydowiella Petr. Ann. Myc. 21:30 1923.
Pseudosphaerella Hoehn. Frag. Myk. 14:769 1912; cf. Theiss. & Syd. Ann. Myc. 16:34 1918.
Haplodothis Hoehn. Frag. Myk. 692 1911; cf. Theiss. & Syd. Ann. Myc. 16:34 1918.
Melanomyces Syd. Ann. Myc. 15:196 1917; Syll. Fung. 24:918 1928.
Mycosphaerellopsis Hoehn. Ann. Myc. 16:157 1918.
Rehmiella Wint. Hedwigia 22:2 1883.
Rhagadostoma Koerber Parerg. Lich. 473 1865.
Stegophora Syd. Ann. Myc. 14:364 1916.
Amphididymella Petr. Engler Bot. Jahrb. 62:94 1928.
Spumatoria Masee & Salmon Ann. Bot. 15:350 1901.
Thaxteria Sacc. Syll. Fung. 9:687 1891.
Venturia DeNot. & Ces. Sfer. Ital. 1:225 1867.
Phomatosporopsis Petr. Ann. Myc. 23:39 1925.
Wettsteinina Hoehn. Sitzb. Akad. Wien 116:126 1907; cf. Petr. Ann. Myc. 25:204 1927.
Winterina Sacc. em. Syll. Fung. 14:589 1899; not Sacc. Syll. Fung. 9:909 1891.
Calyculosphaeria Fitzp. Mycologia 15:45 1923.
Winterella Berl. Icon. Fung. 1:94 1894; not Winterella Kze. 1891; not Winterella Sacc. 1883.
- P. lindigi** (Pat.) Theiss.
P. couraliae Syd.
P. cookei (Linds.) T. & S.
P. coffeae Speg.
S. fenestrans (Duby) Petr.
P. baccharidis (Rehm) Hoehn.
H. singularis (Henn.) Hoehn.
M. quercinus Syd.
M. myricariae (Fkl.) Hoehn.
R. alpina Winter
R. lichenicola (DeN.) T. & S.
S. ulmi (Schw.) Syd.
A. adeana Petr.
S. longicollis Mass. & Salm.
T. didyma (Speg.) Sacc.
V. chlorospora (Ces.) Karst.
P. angelicae (Fkl.) Petr.
W. gigaspora Hoehn.
W. tristis (Fkl.) Sacc.
C. tristis (Fkl.) Fitzp.
W. tuberculigera (E. & E.) Berl.

Phaeodidymae

- Acantharia** Theiss. & Syd. Ann. Myc. 16:15 1918.
Acanthostoma Theiss. Beih. Bot. Cent. 29:45 1912.
Aloysiella Mattir. & Sacc. Annal. Bot. 7:143 1908.
Amphisphaeria C. & DeN. Sfer. Ital. 49 1863.
Kirschsteiniella Petr. Ann. Myc. 21:331 1923.
Massariopsis Niessl Verh. Nat. Brünn 14:199 1875; cf. Petr. Ann. Myc. 21:329 1923.
Bolosphaera Syd. Ann. Myc. 15:201 1917.
A. echinata (E. & E.) T. & S.
A. watti (Syd.) Theiss.
A. ruwenzorensis M. & S.
A. umbrina (Fr.) DeN.
K. applanata (Fr.) Petr.
M. subtectata Niessl
B. degenerans Syd.

- Ceriospora* Niessl Not. Pyr. 9 1876.
Ceriophora Hoehn. Sitzb. Akad. Wien 128:585 1919.
Delitschia Auersw. Hedwigia 5:49 1866.
Delitschiella Sacc. Syll. Fung. 17:688 1905.
Didymosphaeria Fkl. Symb. Myc. 140 1869.
Apiotypa Petr. Ann. Myc. 23:105 1925.
Astrosphaeriella Syd. Ann. Myc. 11:260, ill. 1913; Syll. Fung. 24:937 1928.
Cryptodidymosphaeria (Rehm) Hoehn. Ann. Myc. 4:265 1906; cf. Hoehn. Frag. Myk. 1036 1917.
Didymascina Hoehn. Ann. Myc. 3:331 1905; Frag. Myk. 438 1909; Syll. Fung. 22:183 1913.
Endostigme Syd. Ann. Myc. 21:173 1923.
Massariellops Curzi Att. Ist. Pavia 3:3:162, ill. 1927.
Phaeapiospora Sacc. & Syd. Syll. Fung. 16:477 1902; cf. Petr. Ann. Myc. 23:106 1925.
Punctillum Petr. & Syd. Ann. Myc. 22:364 1924.
Roussouella Sacc. Att. Ist. Venet. 6:6:410, ill. 1888; Syll. Fung. 9:1044 1891; Theiss. & Syd. Ann. Myc. 13:185 1915.
Endococcus Nyl. 1854; em. Sacc. Syll. Fung. 17:681 1905.
Discothecium Zopf Nov. Act. Leop. 70:131 1897; Syll. Fung. 9:724 1891.
Polycoccum Koerb. Parerg. Lich. 470 1865.
Endoxylina Rom. Bot. Notis. 1892:173
Eutyopsis Karst. Medd. Soc. Fenn. 2:182 1878.
Epipolaeum Theiss. & Syd. Ann. Myc. 16:7 1918.
Pseudoparodia Theiss. & Syd. Ann. Myc. 15:138 1917.
Gaillardia Pat. Bull. Soc. Myc. Fr. 10:226 1895.
Gibellina Pass. Rev. Myc. 8:177 1886.
Haplovalsaria Hoehn. Sitzb. Akad. Wien 128:582 1919.
Hypocelis Petr. Ann. Myc. 27:27 1929.
Hypoplegma Theiss. & Syd. Ann. Myc. 15:135 1917; 16:11 1918.
Licopolia Sacc. & Syd. Bull. Herb. Boiss. 2:1:79 1901.
Lizonia C. & DeN. Sfer. Ital. 41 1867.
Lojkania Rehm Cont. Myc. Hung. 2 1905.
Massariovalsaria Sacc. Michelia 2:569 1882.
Melanconiella Sacc. Syll. Fung. 1:740. 1882
Metacoleroa Petr. Ann. Myc. 25:332 1927.
- C. *dubyi* Niessl
 C. *palustris* (B. & Br.) Hoehn.
 D. *auerswaldi* Fkl.
 D. *polyspora* Sacc.
 D. *epidermidis* (Fr.) Fkl.
 A. *philippinensis* Petr.
 A. *fusispora* Syd.
 C. *conoidea* (Niessl) Rehm
 D. *salicicola* (Allesch.) Hoehn.
 E. *ditricha* (Fr.) Syd.
 M. *aprutina* Curzi
 P. *paullinae* (Rehm) S. & S.
 P. *hepaticarum* (Cke) P. & S.
 R. *nitidula* Sacc. & Paol.
 E. *pellax* Nyl.
 D. *stigma* (Koerb.) Zopf
 P. *sauteri* Koerb.
 E. *stellulata* Rom.
 E. *parallela* (Fr.) Karst.
 E. *irradians* (Pat.) T. & S.
 P. *pseudopeziza* (Pat.) T. & S.
 G. *pezizoides* Pat.
 G. *cerealis* Pass.
 H. *simplex* Hoehn.
 H. *costaricensis* Petr.
 H. *viridescens* (Rehm) T. & S.
 L. *franciscana* S. & S.
 L. *emperigonia* (Auers.) C. & DeN.
 L. *hungarica* Rehm
 M. *sudans* (B. & C.) Sacc.
 M. *chrysostoma* (Fr.) Sacc.
 M. *dickiei* (B. & Br.) Petr.

- Neopeckia* Sacc. Bull. Torr. Club 10:127
1883.
Didymotricha Berl. Att. Cong. Genova 572,
ill. 1893.
Dimerosporiopsis Henn. Hedwigia 40:173
1901; Syll. Fung. 17:686 1905.
Otthia Nke. Fkl. Symb. Myc. 169 1869.
Dothidotthia Hoehn. Ber. Deut. Bot. Ges.
36:312 1918.
Pseudotthia Henn. Monsunia 1:167 1899.
Pachyspora Kirschst. Abh. Bot. Brandenb.
48:48, ill. 1906.
Parodiella Speg. Fung. Arg. 1:178 1880.
Maireella Syd. Ann. Myc. 6:146 1908; Syll.
Fung. 22:42.
Phaeosphaerella Karst. Medd. Soc. Fenn.
16:28 1880; cf. Hoehn. Ann. Myc. 16:155
1918; Syll. Fung. 9:723 1891.
Phorcys Niessl. Not. Pyr. 41 1876.
Massariella Speg. Fung. Arg. 1:2, ill. 1880.
Porostigme Syd. Ann. Myc. 15:202 1917.
Protoventuria Berl. & Sacc. Att. Soc. Ven.
10:174, ill. 1886.
Malacosphaeria Syd. Ann. Myc. 22:299
1924.
Pseudodimerium Petr. Ann. Myc. 22:21 1924.
Pseudothis Theiss. & Syd. Ann. Myc. 12:274
1914.
Pyrenobotrys Theiss. & Syd. Ann. Myc.
12:182 1914.
Spilosticta Syd. Ann. Myc. 21:171 1923.
Rhynchomeliola Speg. Fung. Guar. 1:283
1883.
Rhynchostoma Karst. Myc. Fenn. 2:7 1873.
Rhynchostomopsis Petr. & Syd. Ann. Myc.
21:370 1923.
Seynesia Sacc. Syll. Fung. 2:668 1883; cf.
Petr. Ann. Myc. 25:338 1927.
Steganopycnis Syd. Ann. Myc. 16:245 1918;
cf. Petr. Ann. Myc. 25:337 1927.
Sorothelia Koerb. Parerg. Lich. 471 1865.
Sphaerellothecium Zopf. Nov. Act. Leop.
70:178, ill. 1897; Syll. Fung. 17:676 1905.
Stegastroma Syd. Ann. Myc. 14:81 1916.
Stegasphaeria Syd. Ann. Myc. 14:362 1916;
Syll. Fung. 24:937 1928.
Sydowina Petr. Ann. Myc. 21:182 1923.
Teratosphaeria Syd. Ann. Myc. 10:39 1912.
Tichothecium Flotow Hedwigia 25:15 1886;
Syll. Fung. 9:723 1891.
Valsaria DeN. & Ces. Sfer. Ital. 31 1863.
Anisomyces Theiss. & Syd. Ann. Myc.
12:270 1914; Syll. Fung. 24:768 1928.
- N. coulteri* (Pk.) Sacc.
D. rhodosticta (B. & Br.) Berl.
D. engleriana Henn.
O. piri Fkl.
D. symphoricarpi (Rehm) Hoehn.
P. vaccinii H. & W.
P. gigantea Kirschst.
P. grammodes (Kze.) Cke.
M. maculans Syd.
P. macularis (Fr.) Karst.
P. betulae Niessl
M. bufonia (B. & Br.) Speg.
P. scheffleri (Henn.) Syd.
P. rosae (DeN.) Berl.
M. scabrosa Syd.
P. meliolicolum Petr.
P. machaerii (Rehm) T. & S.
P. conferta (Fr.) T. & S.
S. rumicis (Desm.) Syd.
R. pulchella Speg.
R. minutum Karst.
R. brasiliensis (Hoehn.) P. & S.
S. nobilis (W. & C.) Sacc.
S. oncospermatis Syd.
S. confluens Koerb.
S. araneosum (Rehm) Zopf
S. theissenii Syd.
S. pavonina Syd.
S. vestita (Rehm) Petr.
T. fibrillosa Syd.
T. pygmaeum Koerb.
V. insitiva (Fr.) C. & DeN.
A. papilloidis (Henn.) T. & S.

- Hypoxyloopsis* Henn. *Hedwigia* 43:256
1904; Syll. Fung. 17:854 1905.
- Myrmaecium* Nke. *Fkl. Symb. Myc.* 227
1869; Syll. Fung. 1:741 1882; not Sacc.
Mich. 2:138 1880.
- Phaeodiaportha* Petr. *Ann. Myc.* 17:99 1919.
- Phaeosperma* (Sacc.) *Trav. Flor. Ital.*
Crypt. 2:292 1906; Syll. Fung. 1:750 1882;
22:393 1913.
- Pseudothyridaria* Petr. *Ann. Myc.* 23:36
1925.
- Xylobotryum* Pat. *Bull. Herb. Boiss.* 3:69
1895.
- Melanobotrys* Rodway *Proc. Roy. Soc. Tas-*
mania 168 1926.
- Trachyxylaria* Moeller *Phyc. Ascom.* 308,
ill. 1901; Syll. Fung. 16:510 1902.
- Xyloceras* Smith *Jour. Linn. Soc.* 35:16, ill.
1901; Syll. Fung. 17:690 1905.
- H. hurae* Henn.
- M. insitivum* (Fr.) Fkl.
- P. keissleri* Petr.
- P. anserinum* (Sacc.) *Trav.*
- P. insitiva* Petr.
- X. andinum* Pat.
- M. tasmanicus* Rodway
- T. phaeodidyma* Moell.
- X. elliotti* Smith
- Hyalophragmiae**
- Acanthostigma* DeNot. *Sfer. Ital.* 85, ill. 1863.
- Acanthostigmella* Hoehn. *Ann. Myc.* 3:327
1905.
- Acanthostigmina* Hoehn. *Sitzb. Akad. Wien*
118:1499 1909.
- Aphanostigma* Syd. *Ann. Myc.* 24:368 1926.
- Baumiella* Henn. *Syll. Fung.* 17:708 1905.
- Bertiella* Sacc. *Syll. Fung.* 1:584 1882, as
subg.; 17:708 1905.
- Bombardiastrum* Pat. *Bull. Soc. Myc. Fr.*
9:153 1893.
- Broomella* Sacc. *Syll. Fung.* 2:557 1883.
- Calospora* Sacc. *Syll. Fung.* 2:231 1883.
- Calosporella* Schroet. *Krypt. Fl. Schles.*
3:2:442 1894.
- Darwiniella* Speg. *Fung. Fueg.* 105 1887;
Syll. Fung. 9:1048 1891; cf. *Theiss. & Syd.*
Ann. Myc. 13:181 1915.
- Oxydothis* Penz. & Sacc. *Malpighia* 11:505
1897; *Syll. Fung.* 14:674 1899.
- Phragmocalosphaeria* Petr. *Ann. Myc.* 21:109
1923.
- Phyllocelis* Syd. *Ann. Myc.* 23:353 1925.
- Rhopographella* Sacc. *Syll. Fung.* 22:440
1913.
- Ceratospaeria* Niessl *Not. Pyr.* 43 1876.
- Chaetopyrenis* Sacc. *Syll. Fung.* 24:961 1928;
for *Chaetopyrena* Sacc. 1882; not *Pass.*
1881.
- Clypeothecium* Petr. *Ann. Myc.* 20:182; 21:281
1923.
- Monographella* Petr. *Ann. Myc.* 22:144
1924.
- A. perpusillum* DeN.
- A. genuflexa* Hoehn.
- A. minuta* (Fkl.) Hoehn.
- A. solani* Syd.
- B. caespitosa* Henn.
- B. macrospora* Sacc.
- B. andinum* Pat.
- B. vitalbae* (B. & Br.) Sacc.
- C. platanoides* (Pers.) Niessl
- C. platanoides* (Pers.) Schroet.
- D. antarctica* Speg.
- O. grisea* P. & S.
- P. piskorzi* Petr.
- P. oyedaeae* Syd.
- R. gaduae* (Henn.) S. & T.
- C. lampadophora* (B. & Br.) Niessl
- C. poae* (Niessl) Sacc.
- C. weiri* Petr.
- M. divergens* (Rehm) Petr.

- Cryptoderis* Auers. Gonnerm. & Rabh. Myc. Eur. Pyr. 5-6:29 1870?
Gnomoniopsis Berl. Ic. Fung. 1:93 1892; not Stoneman 1898.
Pleuroceras Riess Hedwigia 1:25, ill. 1854.
Dichosporium Pat. Bull. Soc. Myc. Fr. 14:207 1899.
Enchnosphaeria Fkl. em. Clem.; Syll. Fung. 2:207 1883.
Eudarlucua Speg. Rev. Mus. La Plata 15:22, ill. 1908.
Hyospila Fr. Sum. Veg. Scan. 421 1849
Actinidothiopsis Stev. Bishop Mus. Bull. 19:19, ill. 1925.
Chalcosphaeria Hoehn. Ann. Myc. 16:97 1918.
Lasiosphaeria C. & DeN. Sfer. Ital. 55 1863.
Bizzozeria Berl. & Sacc. Misc. Myc. 2:26 1885; cf. Hoehn. Ann. Myc. 16:74 1918.
Enchnosphaeria Fkl. Symb. Myc. 147 1869; not lichenicole.
Herpotrichia Fkl. Symb. Myc. 146 1869.
Heteronectria Penz. & Sacc. Malpighia 11:509 1897.
Hormosperma Penz. & Sacc. Malpighia 11:402 1897.
Lasiella Quelet Mem. Soc. Montbel. 2:5:516 1875.
Leptospora Fkl. Symb. Myc. 143 1869.
Stuartella H. Fab. Spher. Vaubl. 95, ill.; Syll. Fung. 2:123 1883; cf. Hoehn. Frag. Myk. 802.
Lulworthia Sutherland Trans. Brit. Myc. Soc. 5:259, ill. 1915.
Massarina Sacc. Syll. Fung. 2:153 1883.
Holstiella Henn. Pilz. Ostafr. 33 1895; Syll. Fung. 14:593 1899; cf. Hoehn. Frag. Myk. 616.
Melomastia Nke. & Fkl. Symb. Myc. 1:306 1869.
Oraniella Speg. An. Mus. Nac. 19:378 1909.
Metasphaeria Sacc. Syll. Fung. 2:156 1883.
Charrinia Viala & Rav. Comp. Rend. 119:443 1894.
Griphosphaerella Petr. Ann. Myc. 25:209 1927.
Merrilliopeltis Henn. Hedwigia 47:261 1908; Syll. Fung. 22:565 1913; cf. Hoehn. Frag. Myk. 694 1911.
Parasphaeria Syd. Ann. Myc. 22:297 1924.
Sclerodothis Hoehn. Ann. Myc. 16:69 1918.
Nematostigma Syd. Ann. Myc. 11:262 1913.
Petrakiella Syd. Ann. Myc. 22:230, ill. 1924.
- C. lamprotheca* (Desm.) Auers.
G. chamaemori (Fr.) Berl.
P. cryptoderis (Lev.) Hoehn.
D. glomeratum Pat.
E. peltigerae (Fkl.) Sacc.
E. australis Speg.
H. pustula (Pers.) Karst.
A. coprosmae Stev.
C. pustula (Pers.) Hoehn.
L. hirsuta (Fr.) C. & DeN.
B. veneta S. & B.
E. pinetorum Fkl.
H. rubi Fkl.
H. spirillospora P. & S.
H. pusillum P. & S.
L. ovina (Pers.) Quel.
L. spermoides (Hoffm.) Fkl.
S. formosa H. Fab.
L. fucicola Suther.
M. eburnea (Tul.) Sacc.
H. usambarensis Henn.
M. friesi Nke.
O. coffeicola Speg.
M. sepincola (Fr.) Sacc.
C. diplodiella (Speg.) V. & R.
G. stevensoni Petr.
M. calami Henn.
P. contraria Syd.
S. aggregata (Lasch) Hoehn.
N. obducens Syd.
P. insignis Syd.

- Phaneroascus* Theiss. & Syd. Ann. Myc. 16:9 1918.
- Pharcidiopsis* Sacc. Syll. Fung. 17:646 1905.
- Epicymatia* Fkl. Symb. Myc. 118 1869; Syll. Fung. 1:570 1882.
- Pharcidiella* Sacc. Syll. Fung. 17:695 1905, as subg.
- Sagediopsis* Sacc. Syll. Fung. 17:705 1905, as subg.
- Phragmosperma* Theiss. & Syd. Ann. Myc. 14:450 1916.
- Pseudoperis* Toro. Sci. Surv. P. R. 8:41 1926 (for *Pseudoperisporium erigeronicola*).
- Pseudosphaeria* Hoehn. Sitzb. Akad. Wien 116:129, 365 1907; Syll. Fung. 22:407 1913.
- Saccardoella* Speg. Michelia 1:461 1879.
- Sphaerulina* Sacc. Michelia 1:399 1878.
- Pseudoplea* Petr. Ann. Myc. 19:29 1921; not Hoehn. 1918.
- Sporoctomorpha* Alm. & Cam. Rev. Agron. 1:90, ill. 1903.
- Sydowia* Bres. Hedwigia 34:66 1895; cf. Hoehn. Ann. Myc. 16:166 1918.
- Thaxteriella* Petr. Ann. Myc. 22:63 1924.
- Zignoella* Sacc. Syll. Fung. 2:214 1883.
- Aposphaeriella* Died. Ann. Myc. 10:140 1912; cf. Hoehn. Frag. Myk. 358.
- Koordersiella* Hoehn. Sitzb. Akad. Wien 118:833 1909.
- Trichocollonema* Hoehn. Frag. Myk. no. 23 1902; cf. ib. 1029 1917.
- P. feijoae* (Rehm) T. & S.
- P. endococcea* (Nyl.) Sacc.
- E. vulgaris* Fkl.
- P. endococcea* (Nyl.) Sacc.
- S. koerberi* (Stein) Sacc.
- P. rickianum* (Rehm) Theiss.
- P. erigerontis* (Stev.) Toro
- P. callista* (Rehm) Hoehn.
- S. montellica* Speg.
- S. intermixta* (B. & Br.) Sacc.
- P. trifolii* (Rostr.) Petr.
- S. magnoliae* A. & C.
- S. gregaria* Bres.
- T. corticola* Petr.
- Z. pulviuscula* (Curr.) Sacc.
- A. gregaria* Died.
- K. javanica* Hoehn.
- T. acrothecum* Hoehn.

Phaeophragmiae

- Aglaospora* DeNot. Giorn. Bot. Ital. 1:43 1844.
- Apiorhynchostoma* Petr. Ann. Myc. 21:185 1923.
- Koenia* Hara Bot. Mag. Tokyo 27:250 1913.
- Lepteutypa* Petr. Ann. Myc. 21:276 1923.
- Plagiostromella* Hoehn. Sitzb. Akad. Wien 126:372 1917.
- Prosthecium* Fresenius Beitr. Myk. 2:62, ill. 1852.
- Pseudovalsa* C. & DeN. Sfer. Ital. 32 1863; Syll. Fung. 2:135 1883.
- Thyridaria* Sacc. Grevillea 4:21 1875; Syll. Fung. 2:140 1883.
- Trematovalsa* Jacobesco Comp. Rend. 142:289 1906; Syll. Fung. 22:397 1913.
- Caryospora* DeNot. Micr. Ital. Dec. 9:7 1856.
- A. profusa* (Fr.) DeN.
- A. apiculatum* (Curr.) Petr.
- K. bambusae* Hara
- L. fuckeli* (Nke.) Petr.
- P. pleurostoma* Hoehn.
- P. ellipsosporum* Fres.
- P. lanciformis* (Fr.) C. & DeN.
- T. incrustans* Sacc.
- T. matrucoti* Jacob.
- C. putaminum* (Schw.) DeN.

- Chaetosphaeria* Tul. Sel. Fung. Carp. 2:252
1863.
- Clypeosphaeria* Fkl. Symb. Myc. 117 1869.
- Starbaeckiiella* Syd. Ann. Myc. 17:37 1919;
Syll. Fung. 16:519 1902; 24:1018 1928.
- Coccidophthora* Syd. Ann. Myc. 11:263 1913.
- Gibberidea* Fkl. Symb. Myc. 168 1869.
- Gillotia* Sacc. & Trotter Syll. Fung. 22:253
1913.
- Hapalocystis* Fkl. Symb. Myc. 188, ill. 1869.
- Herpotrichiella* Petr. Ann. Myc. 12:472 1914.
- Kalmusia* Niessl Beitr. Kennt. Pilz. 54 1872.
- Cryptosphaerina* Lamb. & Fautr. Rev. Myc.
20:58 1898.
- Keissleria* Hoehn. Ann. Myc. 16:93 1918.
- Lasiosphaeris* Clem. Gen. Fung. 35, 173 1909.
- Chaetomastia* Sacc. as subg. Syll. Fung.
2:113 1883.
- Herpothrix* Clem. Gen. Fung. 35, 173 1909.
- Nematostoma* Syd. Ann. Myc. 12:161, ill.
1914; Syll. Fung. 24:972 1928.
- Neoveurentia* Syd. Ann. Myc. 17:44 1919;
for
- Venturiella* Speg. An. Mus. Nac. 19:379
1909; not *Venturiella* C. Muell. 1875;
Syll. Fung. 22:236, 24:1005 1928.
- Trichohleria* Sacc. Ann. Myc. 6:559, ill.
1908; Syll. Fung. 22:248 1913.
- Leptosphaeria* C. & DeN. Sfer. Ital. 60 1863.
- Chitonospora* B. R. S. Syll. Fung. 9:797
1891.
- Cladosphaeria* Nke. Mitt. Nat. Ges. Berl.
1871:110; Jacz. Bull. Herb. Boiss. 2:685
1894; Syll. Fung. 11:320 1895.
- Heptameria* Rehm & Thuem. Myc. Lusit.
292 1878; Syll. Fung. 2:88 1883.
- Leptosphaeropsis* Berl. Icon. Fung. 1:88
1902; Syll. Fung. 11:321 1895.
- Macrobasis* Starb. Stud. 97 1894; Petr. &
Syd. Ann. Myc. 21:349 1923.
- Mycopyrenula* Wain. Act. Soc. Fenn. 49:139
1921.
- Nodulisphaeria* Rabh. Herb. Myc. Exs. n.
725 1858.
- Passeriniella* Berl. Icon. Fung. 1:51 1902;
Syll. Fung. 11:326 1895.
- Syncarpella* Theiss. & Syd. Ann. Myc.
13:631 1915; Syll. Fung. 24:639 1926.
- Litschaueria* Petr. Ann. Myc. 21:275 1923.
- Massaria* DeNot. Giorn. Bot. Ital. 1:333 1846.
- Asteromassaria* Hoehn. Sitzb. Akad. Wien
126:368 1917.
- Sacothecium* Fr. Sum. Veg. Scan. 398
1849.
- C. phaeostroma* (D. & M.) Fkl.
- C. notarisi* Fkl.
- S. massariospora* (Starb.) Syd.
- C. variabilis* Syd.
- G. visci* Fkl.
- G. orbicularis* (Syd.) S. & T.
- H. berkeleyi* (Tul.) Fkl.
- H. moravica* Petr.
- K. ebula* Niessl
- C. fraxini* Lamb. & Fautr.
- K. xantha* (Sacc.) Hoehn.
- L. hispida* (Tode) Clem.
- C. hirtula* (Karst.) Sacc.
- H. calospora* (Wint.) Clem.
- N. artemisiae* Syd.
- N. argentinensis* (Speg.) Syd.
- V. argentinensis* Speg.
- T. quadrigellensis* Flag. & S.
- L. doliolum* (Pers.) C. & DeN.
- C. ammophila* B. R. S.
- C. eunomioides* (Othth) Nke.
- H. elegans* Rehm & Thuem.
- L. ophioboloides* (Sacc.) Berl.
- M. platypus* (Schw.) Starb.
- M. coryli* (Mass.) Wain.
- N. hirta* Rabh.
- P. dichroa* (Pass.) Berl.
- S. tumefaciens* (E. & H.) T. & S.
- L. corticiorum* (Hoehn.) Petr.
- M. inquinans* (Tode) Fr.
- A. macrospora* (Desm.) Sacc.
- S. corni* (Mont.) Fr.

- Melanomma** Nke. & Fkl. Symb. Myc. 159 1869.
- Melogramma** Tul. Sel. Fung. Carp. 2:81 1863.
- Ohleria** Fkl. Symb. Myc. 163 1869.
- Ohleriella** Earle Jour. N. Y. Bot. Gard. 3:349 1902.
- Phaeosphaeria** Miyake Jour. Agr. Tokyo 2:245 1910.
- Leptosphaerella** Sacc. as subg., Syll. Fung. 2:47 1883; 24:994 1928.
- Trematosphaerella** Kirschst. Verh. Bot. Brandenb. 48:54 1906; Syll. Fung. 22:248 1913.
- Phaeospora** Hepp em. Zopf Nov. Act. Leop. 70:280 1898.
- Philonectria** Hara Bot. Mag. Tokyo 28:350, ill. 1914.
- Pocosphaeria** Sacc. Syll. Fung. 2:32 1883; 11:325 1895.
- Bysotheciella** Petr. Ann. Myc. 21:281 1923.
- Rebentischia** Karst. Myc. Fenn. 2:14, 97 1873.
- Rhynchosphaeria** Sacc. Syll. Fung. 2:112 1883; 16:524 1902.
- Scleroplella** Hoehn. Ann. Myc. 16:158 1918.
- Sporormia** DeNot. Micr. Ital. Dec. 5:6 1849.
- Sporormiella** Ell. & Ev. N. A. Pyr. 136 1892.
- Titania** Berl. Icon. Fung. 1:49 1901.
- Trematosphaeria** Fkl. Symb. Myc. 161 1869.
- Trematosphaeris** Elenkin Bull. Jard. St. Peters. 146 1901, for Trematosphaeriopsis.
- Xenosphaeria** Trev. Consp. Verruc. 18 1860; Syll. Fung. 17:730 1905.
- M. pulvis-pyrius** (Pers.) Fkl.
- M. vagans** DeN.
- O. modesta** Fkl.
- O. mexicana** Earle
- P. oryzae** Miyake
- L. uliginosa** (Ph. & Pl.) Sacc.
- T. fuscispora** Kirschst.
- P. catolechiaae** Zopf
- P. variabilis** Hara
- P. eriophora** (Cke.) Sacc.
- B. tiliae** Petr.
- R. pomiformis** Karst.
- R. duseni** Henn.
- S. personata** (Niessl) Hoehn.
- S. minima** Auers.
- S. nigropurpurea** E. & E.
- T. berkeleyi** Berl.
- T. pertusa** (Pers.) Fkl.
- T. parmeliiana** Jacz. & Ell.
- X. hookeri** (Schaer.) Trev.

Hyalodictyae

- Berlesiella** Sacc. Rev. Myc. 10:7, ill. 1888.
- Boerlagella** Penz. & Sacc. Malpighia 11:404 1897.
- Capronia** Sacc. Syll. Fung. 2:288 1883.
- Clathridium** Sacc. Syll. Fung. 11:350 1895; 2:332 1883.
- Julella** H. Fab. Sphaer. Vaubl. 113 1880; Syll. Fung. 2:289 1883.
- Catharinia** Sacc. Syll. Fung. 2:275 1883, as subg.; 11:350 1895.
- Norrlinia** Theiss. & Syd. Ann. Myc. 16:29 1918.
- Pleosphaeropsis** Wainio Act. Soc. Fenn. 49:110 1921.
- Ophiodictyum** Sacc. & Syd. Syll. Fung. 16:555 1902.
- B. nigerrima** (Blox.) Sacc.
- B. velutina** P. & S.
- C. sexdecemspora** (Cke.) Sacc.
- C. burchelli** (Cke.) Sacc.
- J. buxi** H. Fab.
- C. hyalospora** (Speg.) Sacc.
- N. peltigericola** (Nyl.) T.
- P. peltigericola** (Nyl.) Wain.
- O. plumbeum** (Starb.) Sacc.

- Dasysphaeria* Speg. An. Mus. Nac. 23:60
1912; Syll. Fung. 24:1022 1928.
- Peltosphaeria* Berl. Rev. Myc. 10:17, ill. 1888.
- Placodthis* Syd. Ann. Myc. 26:133 1928.
- Phaeopeltis* Clements Gen. Fung. 52 1909.
- Capnites* Theiss. Verh. z-b. Ges. Wien
66:365 1916; Syll. Fung. 22:385 1913.
- Limacinia* Sacc. Syll. Fung. 17:566 1905.
- Phaeosaccardinula* Henn. Hedwigia 44:67
1905; Syll. Fung. 17:873 1905.
- Tephrosticta* Sacc. & Syd. Syll. Fung.
17:745 1905; 24:1023 1928.
- Pleomelogramma* Speg. An. Mus. Nac. 19:389
1909.
- Pringsheimia* Schulzer Verh. z-b. Ges. Wien
16:57 1866.
- Pleosphaerulina* Pass. Rend. Accad. Linc.
2:7:46 1891; cf. Hoehn. Ann. Myc. 18:97
1920.
- Schizostege* Theiss. Ann. Myc. 14:415, ill.
1916.
- Pseudoplea* Hoehn. Ann. Myc. 16:162 1918;
cf. Petr. Ann. Myc. 25:216 1927.
- Hyalocurreya* Theiss. & Syd. Ann. Myc.
13:640 1915; Syll. Fung. 24:637 1926.
- Rhamphoria* Niessl Not. Pyr. 44 1876.
- Thyridella* Sacc. Syll. Fung. 9:321 1891;
11:351 1895.
- Curreyella* (Sacc.) Lindau Lind. Nat.
Pflanzf. 1:1:379 1897; Syll. Fung. 24:1024
1928; cf. Theiss. & Syd. Ann. Myc. 13:181
1915.
- Discostroma* Clements Gen. Fung. 50 1909.
- Griphosphaeria* Hoehn. Ann. Myc. 16:87
1918; cf. Petr. Ann. Myc. 19:32 1921;
Syll. Fung. 24:1024 1928.
- Griphosphaerioma* Hoehn. Ber. Deut. Bot.
Ges. 36:312 1918; cf. Petr. Ann. Myc.
19:193 1921; Syll. Fung. 24:924 1928.
- Leucothyridium* Speg. An. Mus. Nac.
19:388 1909; Syll. Fung. 22:460 1913.
- Tichosporella* Sacc. Syll. Fung. 2:303 1883;
11:351 1895.
- D. andicola* Speg.
- P. vitriospora* (C. & H.) Berl.
- P. petraki* Syd.
- P. diospyricola* (Henn.) Clem.
- C. costaricensis* (Speg.) Theiss.
- L. javanica* (Zimm.) S. & D. S.
- P. diospyricola* Henn.
- T. negeriana* S. & S.
- P. argentinense* Speg.
- P. rosarum* Schulz.
- P. sepincola* (Fr.) Pass.
- S. rosaecola* (Fkl.) Theiss.
- P. briosiana* (Poll.) Hoehn.
- H. sandicensis* (E. & E.) T. & S.
- R. delicatula* Niessl
- T. colliculus* (Cke.) Sacc.
- C. rehmi* (Schnabl) Sacc.
- D. rehmi* (Schnabl) Clem.
- G. corticola* (Fkl.) Hoehn.
- G. symphoricarpi* (Rehm) Hoehn.
- L. crustosum* Speg.
- T. dura* (Fkl.) Sacc.

Phaeodictyae

- Chaetoplea* (Sacc.) Clem.; as subg. Syll.
Fung. 2:279 1883; Pyrenophora mem-
branacea, aparaphysata.
- Clathrospora* Rabh. Hedwigia 1:116, ill.
1857.
- Macrospora* Fkl. Symb. Myc. 139 1869;
cf. Hoehn. Ann. Myc. 18:77 1920.
- Comoclathris* Clem. Gen. Fung. 37 1909;
Minn. Bot. Studies 4:186 1911.
- C. calvescens* (Fr.) Sacc.
- C. elyinae* Rabh.
- M. scirpicola* (DC.) Fkl.
- C. lanata* Clem.

- Crotonocarpia* Fkl. Symb. Myc. 163 1869.
Cucurbitaria Gray Nat. Arr. Brit. Pl. 1:519
 1821.
Cucurbitodithis Petr. Ann. Myc. 19:201 1921.
Megalospora Naumov Mat. Myk. Fitop. 610,
 ill. 1927.
Curreya Sacc. Syll. Fung. 2:651 1883;
 Theiss. & Syd. Ann. Myc. 13:642 1915.
Epibotrys Theiss. & Syd. Ann. Myc. 13:644
 1915; Syll. Fung. 24:637 1926.
Delacourea H. Fab. Spher. Vaucl. 1:114 1878.
Fenestella Tul. Sel. Fung. Carp. 2:208 1863.
Karstenula Speg. Fung. Arg. 1: in. tab. 1880.
Leptosphaerulina McAlpine Fung. Dis. 103
 1902.
Merismatium Zopf Nov. Act. Leop. 70:259,
 ill. 1898; cf. Theiss. & Syd. Ann. Myc.
 16:29 1918.
Heterophracta Nyl. Sacc. Syll. Fung. 17:746
 1905, as subg.
Montagnula Berl. Icon. Fung. 2:68, ill. 1896.
Naetrocymbe Koerber Lich. Germ. 58 1858;
 Parerg. Lich. 441 1865.
Coccodinium Mass. Att. Ist. Ven. 3:5:336
 1860.
Phaeopeltium Berl. Nuov. Giorn. Ital. 24:139
 1892; for *Phaeopeltosphaeria*.
Pleomassaria Speg. An. Soc. Arg. 9:192 1880.
Pleosphaeria Speg. An. Soc. Arg. 12:181
 1881.
Pleospora Rabh. Herb. Myc. ed. 2:347 1857;
 cf. Petr. Ann. Myc. 25:204, 216 1927.
Clistotheca Zukal Myk. Mitt. 4, ill. 1893;
 cf. Hoehn. Ann. Myc. 15:466 1917; Syll.
 Fung. 11:270 1895.
Clistothecopsis Stev. & True Ill. Exp. Sta.
 Bull. 220:530, ill. 1919; Syll. Fung. 24:1333
 1928.
Pleophragma Fkl. Symb. Myc. 243 1869.
Titarella Syd. Ann. Myc. 17:36 1919; Syll.
 Fung. 24:1046 1928.
Pyrenophora Fr. Sum. Veg. Scan. 397 1849.
Scleroplea (Sacc.) Oud. Kon. Akad. Amster.
 9:152 1900.
Thyridium (Nke.) Sacc. Michelia 1:50 1879.
Tichospora Fkl. Symb. Myc. 100 1869.
Strickeria Koerber Parerg. Lich. 400 1865;
 Syll. Fung. 2:300 1883.
- C. moriformis* Fkl.
C. berberidis (Pers.) Gray
C. pithyophila (Fr.) Petr.
M. gemmicida Naumov
C. conorum (Fkl.) Sacc.
E. bambusicola (Speg.) T. & S.
D. insignis H. Fab.
F. princeps Tul.
K. rhodostoma (A. & S.) Speg.
L. australis McAlp.
M. lopadii (Arn.) Zopf
H. pezizoides Nyl.
M. infernalis (Niessl) Berl.
N. fuliginosa Koerb.
C. bartschi Mass.
P. caudatum Berl.
P. siparia (B. & Br.) Tul.
P. australis Speg.
P. herbarum (Pers.) Rabh.
C. papyrophila Zukal
C. circinans S. & T.
P. leporum Fkl.
T. luzonensis (Henn.) Syd.
P. phaecomeres (Reb.) Sacc.
S. cliviae Oud.
T. lividum (Pers.) Sacc.
T. obducens (Fr.) Fkl.
S. kochi Koerb.

Scolecosporae

- Acanthotheca* Hoehn. Sitzb. Akad. Wien
 120:451 1911; Frag. Myk. 706 1911; for
Acanthotheciella Hoehn.
A. barbata (Pat.) Hoehn.

- Acerbiella** Sacc. Syll. Fung. 17:768 1905.
Meringosphaeria Peyron. Nuov. Giorn. Ital. 25:415, ill. 1918; Syll. Fung. 24:1068 1928.
Bactrosphaeria Penz. & Sacc. Malpighia 11:407 1897.
Bombardiella Hoehn. Sitzb. Akad. Wien 118:1192 1909.
Bovilla Sacc. Syll. Fung. 2:360 1883.
Ceuthocarpum Karst. Bid. Kann. Fin. 22 1873.
Criserosphaeria Speg. An. Mus. Nac. 23:72, ill. 1912.
Cryptospora Tul. Sel. Fung. Carp. 2:144 1863.
Winterella Sacc. Syll. Fung. 2:364 1883; 14:620 1899.
Cylindrina Pat. Bull. Soc. Bot. Fr. 33:155 1886.
Dilophia Sacc. Syll. Fung. 2:357 1883.
Exilispora Tehon & Daniels Mycologia 19:112, ill. 1927.
Leptosorella Penz. & Sacc. Malpighia 11:406 1897.
Linospora Fkl. Symb. Myc. 123 1869.
Linocarpum Syd. Ann. Myc. 15:210 1917; Syll. Fung. 24:1078 1928.
Ophiognomonina Sacc. Syll. Fung. 1:419 1882; 14:613 1899.
Lulworthia Sutherland Trans. Brit. Myc. Soc. 5:259, ill. 1915.
Maurya Pat. Bull. Soc. Myc. Fr. 13:56, ill. 1898.
Naumovia Lobozrakova Bolez. Rast. 197, ill. 1927.
Neolamyia Theiss. & Syd. Ann. Myc. 16:29 1918.
Lamyella Berl. Icon. Fung. 2:139 1900, not Fries 1849.
Ophiobolus Riess Hedwigia 1:27, ill. 1854.
Acerbia Sacc. Syll. Fung. 11:353 1895; 14:619 1899.
Entodesmium Riess Hedwigia 1:58 1854.
Leptosporopsis Hoehn. Frag. Myk. 1211. 1920.
Leptospora Rabh. Hedwigia 1:116, ill. 1857.
Ophiocarpella Theiss. & Syd. Ann. Myc. 13:644 1915.
Ophioceras Sacc. Syll. Fung. 2:358 1883.
SchizacrospERMUM Henn. & Nym. Mon- sunia 1:72 1899; cf. Hoehn. Frag. Myc. 693; Syll. Fung. 16:672 1902.
Ophiochaeta Sacc. Syll. Fung. 2:352 1883; 11:352 1895.
- A. macrospora** (Rick) Sacc.
M. patellula Peyron.
B. asterostoma P. & S.
B. caespitosa Hoehn.
B. caproni Sacc.
C. populinum (Pers.) Karst.
C. phyllostictis Speg.
C. suffusa (Fr.) Tul.
W. anthostomoides (Rehm) Sacc.
C. delavayi Pat.
D. graminis (Fkl.) Sacc.
E. plurisepta T. & D.
L. gregaria P. & S.
L. capreae (DC.) Fkl.
L. pandani Syd.
O. melanostyla (DC.) Sacc.
L. fucicola Suther.
M. hypoxyloides Pat.
N. abundans Lobr.
N. peltigerae (Mont.) T. & S.
L. peltigerae (Mont.) Berl.
O. porphyrogenus (Tode) Sacc.
A. culmigena P. & S.
E. rude Riess
L. rostrupi (F. & W.) Hoehn.
L. porphyrogena (Tode) Rabh.
O. tarda (Harkn.) T. & S.
O. macrocarpum Sacc.
S. filiforme H. & N.
O. herpotricha (Fr.) Sacc.

- Acanthophiobolus* Berl. Att. Cong. Genova 571, ill. 1893.
- Ophiosphaeria* Kirschst. Abh. Bot. Brandenb. 48:47, ill. 1906; Syll. Fung. 22:289 1913; cf. Hoehn. Frag. Myk. 168 1906.
- Ophiomassarina* Jacz. Bull. Herb. Boiss. 2:685 1894.
- Ophiosphaerella* Speg. An. Mus. Nac. 19:401 1909.
- Rhaphidophora* C. & DeN. Sfer. Ital. 59 1863.
- Rhaphidospora* Fr. 1849, not Nees 1832.
- Robergea* Desm. Not. Pl. Crypt. 177 1847.
- Cyanospora* Heald & Wolf Mycologia 2:209 1910.
- Sillia* Karst. Myc. Fenn. 1:20 1873.
- Trichospermella* Speg. An. Mus. Nac. 23:38, ill. 1912.
- Vialaea* Sacc. Bull. Soc. Myc. Fr. 12:66 1896.
- Diatractium* Syd. Ann. Myc. 18:183 1920; 24:364 1926; for *Trabutiella* Stev. 1920, not Theiss. & Syd. 1914.
- A. helminthospora* (Rehm) Berl.
- O. tenella* Kirschst.
- O. selenospora* (Othth) Jacz.
- O. graminicola* Speg.
- R. thallicola* C. & DeN.
- R. unica* Desm.
- C. albicedrae* H. & W.
- S. ferruginea* (Pers.) Karst.
- T. pulchella* Speg.
- V. insculpta* (Fr.) Sacc.
- D. cordiae* (Stev.) Syd.

Genera Incertae Sedis Vel Dubia

- Biotyle* Syd. Ann. Myc. 27:16 1929.
- Brenesiella* Syd. Ann. Myc. 27:16 1929.
- Carlia* Rabh. Flora 40:382 1857.
- Creosphaeria* Theiss. Beih. Bot. Cent. 27:2:396 1910; Syll. Fung. 22:451 1913.
- Cryptoleptosphaeria* Petr. Ann. Myc. 21:196 1923.
- Delpinoella* Sacc. Bull. Soc. Bot. Belg. 38:162 1899; Syll. Fung. 16:658 1902; Hoehn. Ann. Myc. 16:151 1918.
- Endoconidiophora* Münch Nat. Zeits. J. and. Forstw. 5:531 1907; Syll. Fung. 22:297 1913.
- Eumela* Syd. Ann. Myc. 23:335 1925.
- Haplosporium* Mont. Ann. Sci. Nat. 2:20:372 1843; Syll. Fung. 9:495 1891.
- Haplostroma* Syd. Ann. Myc. 14:80 1916; Syll. Fung. 24:745 1928.
- Isothea* Fr. Sum. Veg. Scan. 421 1849; Syll. Fung. 2:290 1883; cf. Lind. Nat. Pflanzenf. 1:1:454 1897.
- Leptosacca* Syd. Ann. Myc. 26:109 1928.
- Leptosillia* Hoehn. Ber. Deut. Bot. Ges. 35:355 1817; cf. Sacc. Syll. Fung. 24:815 1928.
- Limaciniella* Mendoza Bishop Mus. Bull. 19:58, ill. 1925.
- Linobolus* Syd. Ann. Myc. 15:204 1917; Syll. Fung. 24:1060 1928.
- B. ditissima* Syd.
- B. erythroxyli* Syd.
- C. oxalidis* Rabh.
- C. riograndensis* Theiss.
- C. moravica* Petr.
- D. insignis* S. & Trott.
- E. caerulescens* Münch
- E. chiococcae* Syd.
- H. bulborum* Dur. & Mont.
- H. depressum* Syd.
- I. nyssae* B. & C.
- L. lumae* Syd.
- L. notha* Hoehn.
- L. psidii* Mend.
- L. ramosii* Syd.

- Paracesatiella** Petr. Ann. Myc. 27:344 1929. **P. pulchella** Petr.
- Parodiellina** Henn. Hedwigia 43:358 1904; em. Arnaud Les Asterin. 2:45 1921; Syll. Fung. 24:389 1926. **P. manaosensis** (Henn.) Arn.
- Penzigia** Sacc. Myc. Malac. 20 1888; cf. Lind. Nat. Pflanzenf. 1:1:491 1897. **P. cranioides** Sacc. & Paol.
- Phthora** D'Herelle Bull. Soc. Myc. Fr. 25:184 1909; Syll. Fung. 22:71 1913. **P. vastatrix** D'Her.
- Pseudomassaria** Jacz. Bull. Herb. Boiss. 2:663 1896; cf. Sacc. Syll. Fung. 17:777 1905; Hoehn. Sitzb. Akad. Wien 118:59 1909. **P. chondrospora** (Ces.) Jacz.
- Pseudomeliola** Speg. Fung. Puigg. 282 1890; Syll. Fung. 9:938 1891. **P. brasiliensis** Speg.
- Pseudophyllachora** Speg. Bol. Acad. Cordoba 23:194 1919. **P. tonduzi** Speg.
- Pseudopleospora** Petr. Ann. Myc. 17:84 1919; Syll. Fung. 24:1132 1928. **P. ruthenica** Petr.
- Puiggarina** Speg. Bol. Acad. Cordoba 23:485, ill. 1919. **P. microtheles** Speg.
- Puttemansiella** Henn. Hedwigia 48:10 1908; Syll. Fung. 24:838 1928; cf. Hoehn. Frag. Myk. 697. **P. desmodii** Henn.
- Pyrenodiscus** Petr. Ann. Myc. 25:202 1927. **P. caricis** Petr.
- Pyrenomyxia** Morgan Jour. Cincin. Soc. Nat. Hist. 18:42, ill. 1895; cf. Lind. Nat. Pflanzenf. 1:1:491 1897. **P. invocans** Morgan
- Rhabdostroma** Syd. Ann. Myc. 14:362 1916. **R. rottboelliae** (Rehm) Syd.
- Saccardomyces** Henn. Hedwigia 43:353 1904; Syll. Fung. 17:530 1905; Hoehn. Frag. Myk. 603. **S. bactridicola** Henn.
- Septomazzantia** Theiss. & Syd. Ann. Myc. 13:193 1915; Syll. Fung. 24:665 1926. **S. epitypha** (Cke.) T. & S.
- Stilbohypoxyton** Henn. Hedwigia 41:16 1902; Syll. Fung. 17:633 1905; cf. Hoehn. Frag. Myk. 626. **S. moelleri** Henn.
- Thalassoascus** Ollivier Comp. Rend. 182:1348 1926. **T. tregoubovi** Olliv.
- Xenothecium** Hoehn. Sitzb. Akad. Wien 128:589 1919. **X. iodophilum** Hoehn.

HYPOCREACEAE

Allantosporae

- Allantonectria** Earle Plant. Baker. 2:12 1901. **A. miltina** (Mont.) Weese

Hyalosporae

- Balzania** Speg. Fung. Arg. Nov. 286 1899. **B. platensis** Speg.
- Battarina** Sacc. Syll. Fung. 2:533 1883, as subg. **B. inclusa** (B. & Br.) Sacc.
- Byssonectria** Karst. Symb. Myc. 7:6 1879. **B. obducens** Karst.
- Chilonectria** Sacc. Michelia 1:279 1878. **C. cucurbitula** (Curr.) Sacc.
- Clistosoma** Harkn. Jour. Myc. 1:30 1885. **C. purpureum** Harkn.
- Hyponectria** Sacc. Michelia 1:250, 281 1878. **H. buxi** (DC.) Sacc.

- Lisiella* Cooke Grevillea 16:5, 1887, as subg. *L. passiflorae* Cke. & Masee
Moelleriella Bres. Hedwigia 35:298 1896. *M. sulphurea* Bres.
Mycaureola Maire & Chemin Comp. Rend. 175:321 ill. 1922. *M. dilseae* M. & C.
Nectriella Sacc. Michelia 1:51 1877; not Nke. 1869. *N. aurea* Sacc. & Speng.
Notariisiella Sacc. Syll. Fung. 2:452 1883, as subg. *N. rousselfiana* (Mont.) Sacc.
Pseudonectria Seaver Mycologia 1:48 1909. *P. rousselfiana* (Mont.) Seaver
Peckiella Sacc. Syll. Fung. 2:472 1883, as subg.; 9:944 1891. *P. xylophila* (Pk.) Sacc.
Podostroma Karst. Hedwigia 31:294 1892. *P. leucopus* Karst.
Polystigma DC. Fl. France 5:164 1815. *P. rubrum* (Pers.) DC.
Clypeostigma Hoehn. Sitzb. Akad. Wien 128:565 1919. *C. canarii* (Henn.) Hoehn.
Leptocrea Syd. Ann. Myc. 14:87, ill. 1916; Syll. Fung. 24:645 1926. *L. orbiculata* Syd.
Physalosporina Woronich. Ann. Myc. 9:220 1911; cf. Hoehn. Ann. Myc. 15:374 1917. *P. megastoma* (Pk.) Woron.
Selinia Karst. Symb. Myc. 3:57 1876. *S. pulchra* (Wint.) Karst.
Hypocreopsis Winter Hedwigia 14:26 1875, not Karst. 1873. *H. pulchra* Wint.
Sphaerostilbella Henn. Engler Bot. Jahrb. 30:40 1902. *S. lutea* Henn.
Succinaria Syd. Ann. Myc. 23:363, ill. 1925. *S. minuta* Syd.
Thelocarpum Nyl. Class. Lich. 1:15 1854. *T. laureri* (Fw.) Nyl.
Uropolystigma Maubl. Bull. Soc. Myc. Fr. 36:36, ill. 1920. *U. atrotestaceum* Maubl.

Phaeosporae

- Baculospora* Zukal Neue Ascom. 3 1890. *B. pellucida* Zukal
Cerillum Clem.; for *C. paradoxa* (Har. & Pat.) C.
Colletomanginia Hariot & Pat. Comp. Rend. 142:224 1906. *C. paradoxa* Har. & Pat.
Erythrocarpum Zukal Ueb. Pilz. Bakt. 7 1885. *E. microstomum* Zukal
Melanospora Corda. Icon. Fung. 1:24 1837. *M. chionea* (Fr.) Corda
Gibsonia Masee Ann. Bot. 23:336 1909; Syll. Fung. 22:452 1913. *G. phaeospora* Masee
Melanosporopsis Naumov Mat. Mic. Fit. 6:6, ill. 1927. *M. subulata* Naumov
Neocosmospora E. F. Smith Bull. U. S. Dep. Agr. 17:45 1899. *N. vasinfecta* Smith
Peridoxylum Shear Mycologia 15:126 1923. *P. petersi* (B. & C.) Shear
Rhynchomelas Clem. Gen. Fung. 44:173 1909. *R. arenariae* (Mont.) Clem.
Sarcoxyllum Cooke Grevillea 12:50 1883. *S. compunctum* (Jungh.) Cke.
Chromocrepopsis Steven. Jour. Dep. Agr. P. R. 1:213 1917; Syll. Fung. 24:1339 1928. *C. striispora* Steven.
Engleromyces Henn. Engler Bot. Jahrb. 28:327 1900. *E. goetzi* Henn.
Entonaema Moell. Phyc. Ascom. Bras. 309 1901; Syll. Fung. 16:450 1902. *E. lignescens* Moell.
Hypoxylina Starb. Ark. Bot. 5:29 1905; Syll. Fung. 22:453 1913. *H. umbilicata* Starb.

- Stromne* Clem. Gen. Fung. 44:173 1909.
Thuemenella Penz. & Sacc. Malpighia
 11:518 1897; Syll. Fung. 14:628 1899.
Scopinella Lev. Dict. Univ. 8:493 1849.
Sphaeroderma Fkl. Symb. Myc. App. 3:23
 1869.
Guttularia Obermayer Myc. Cent. 3:9 1913;
 Syll. Fung. 24:240 1926.
Sphaerodermella Hoehn. Sitzb. Akad. Wien
 116:105 1907.
Vittadinula Sacc. Syll. Fung. 2:460 1883, as
 subg.; 24:650 1926.
Erostrotheca Martin & Charles Phytopath.
 18:843, ill. 1928.
Nigrosphaeria Gardner Univ. Cal. Pub. Bot.
 2:179, ill. 1905; Syll. Fung. 22:452 1913.
Sphaerodes Clem. Gen. Fung. 44:173 1909.
Wawelia Namysłowski Bull. Acad. Cracov.
 602, ill. 1908.
Xylocrea Moell. Phyc. Ascom. Bras. 307
 1901.
- S. goetzi* (Henn.) Clem.
T. javanica P. & S.
S. pleiospora (Schroet.) Sacc.
S. theleboides Fkl.
G. geopora Oberm.
S. niessli (Auers.) Hoehn.
V. episphaeria (P. & P.) Sacc.
E. multiformis M. & C.
N. setchelli (Harkn.) Gard.
S. episphaerium (P. & P.) Clem.
W. regia Nam.
X. piriformis Moell.

Hyalodidymae

- Apiosphaeria* Hoehn. Sitzb. Akad. Wien
 118:1218 1909.
Aponectria Sacc. Michelia 1:286 1877.
Charonectria Sacc. Michelia 2:72 1880.
Hydronectria Kirschst. Verh. Bot. Brandenb.
 67:87, ill. 1925.
Nectriella Nke. Fkl. Symb. Myc. 175 1869;
 not Sacc. 1877.
Cyanocephalum Zukal Myc. Mitt. 14 1893.
Hypocrea Fr. Sum. Veg. Scan. 383 1849.
Clintoniella Sacc. Syll. Fung. 2:532 1883,
 as subg.
Dialhypocrea Speg. Bol. Acad. Cordoba
 23:475, ill. 1919; Syll. Fung. 24:673 1926.
Hypocreopsis Karst. Symb. Myc. 251 1873.
Mycocitrus Moell. Phyc. Ascom. Bras. 397
 1901; Syll. Fung. 16:589 1902.
Oswaldia Rangel Arch. Esc. Sup. Mexico
 5:37, ill. 1921.
Phyllocrea Hoehn. Ann. Myc. 16:38 1918.
Porphyrosoma Pat. Mem. Acad. Malgache
 6:40 1928.
Hypomyces Tul. Sel. Fung. Carp. 3:38 1865.
Apiocrea Syd. Ann. Myc. 18:186 1920;
 Syll. Fung. 24:675 1926.
Bresadolella Hoehn. Ann. Myc. 1:522
 1903; Syll. Fung. 17:797 1905.
Nectriopsis Maire Ann. Myc. 9:323, ill.
 1911; Syll. Fung. 24:676 1926.
Lambro Rac. Par. Alg. Pilz. Java 2:13 1900.
- A. guaranítica* (Speg.) Hoehn.
A. inaurata (B. & Br.) Sacc.
C. consolationis Sacc.
H. kriegeriana Kirschst.
N. fuckeli Nke.
C. murorum Zukal
H. rufa (Pers.) Fr.
C. apiculata (C. & P.) Sacc.
D. puiggariana Speg.
H. riccioides (Bolt.) Karst.
M. aurantium Moell.
O. icarahyensis Rangel
P. quitensis (Pat.) Hoehn.
P. episphaerium Pat.
H. lactifluorum (Schw.) Fr.
A. chrysoesperma (Tul.) Syd.
B. aurea Hoehn.
N. violacea (Fr.) Maire
L. insignis Rac.

- Lasionectria* Sacc. Syll. Fung. 2:505 1883,
 as subg. *L. mantuana* Sacc.
Dasyphthora Clem. Gen. Fung. 44:173
 1909. *D. lasioderma* (Ell.) Clem.
Epinectria Syd. Ann. Myc. 15:215 1917;
 Syll. Fung. 24:637 1926. *E. meliolae* Syd.
Neohenningsia Koorders Verh. Akad. Am-
 sterdam 2:13:164, ill. 1907. *N. stellulata* Koord.
Lisea Sacc. *Michelia* 1:43,300 1877. *L. buxi* (Fkl.) Sacc.
Loramycetes Weston Mycologia 21:72, ill. 1929. *L. junicola* Weston
Metanectria Sacc. *Michelia* 1:300 1878. *M. citrum* (Wallr.) Sacc.
Nectria Fr. Sum. Veg. Scan. 387 1849. *N. cinnabarina* (Tode) Fr.
Bionectria Speg. Bol. Acad. Cordoba 23:563,
 ill. 1919. *B. tonduzi* Speg.
Corallomycetella Henn. *Hedwigia* 43:245
 1904; cf. Hoehn. *Frag. Myk.* 1195. *C. heinsensi* Henn.
Creonectria Seaver Mycologia 1:183 1909. *C. cinnabarina* (Tode) Seav.
Cryptopeltosphaeria Petr. Ann. Myc. 21:196
 1923. *C. moravica* Petr.
Dialonectria Sacc. Syll. Fung. 2:490 1883,
 as subg. *D. episphaeria* (Fr.) Sacc.
Neonectria Wr. Ann. Myc. 15:52 1917;
 Syll. Fung. 24:665 1926. *N. ramulariae* Wr.
Pxydiophora Bref. & Tav. Unters. Myk.
 10:2:189 1891. *P. asterophora* (Tul.) Lind.
Podocrea Sacc. Syll. Fung. 2:530 1883, as
 subg. *P. alutacea* (Pers.) Lind.
Podostroma Karst. *Hedwigia* 31:294 1892;
 Syll. Fung. 11:255 1895. *P. leucopus* Karst.
Prolisea Clem.; *Lisea lichenicola*. *P. exiguella* (Nyl.) Clem.
Pronectria Clem.; *Nectria lichenicola*. *P. lichenicola* (Ces.) Clem.
Rhynchonectria Hoehn. Sitzb. Akad. Wien
 111:1023 1902. *R. longispora* (P. & P.) Hoehn.
Eleutherosphaera Grov. Jour. Bot. 45:171,
 ill. 1907. *E. longispora* (P. & P.) Grove
Sphaerostilbe Tul. Sel. Fung. Carp. 3:103
 1865. *S. flammea* Tul.
Stilbocrea Pat. Bull. Soc. Myc. Fr. 16:186
 1900. *S. dussi* Pat.
Treleasia Speg. Rev. Agr. La Plata 235
 1896. *T. sacchari* Speg.

Phaeodidymae

- Calostilbe* Sacc. & Syd. Syll. Fung. 16:591
 1902. *C. longiasca* (Moell.) S. & S.
Erispora Pat. Bull. Soc. Myc. Fr. 38:84 1922. *E. parasitica* Pat.
Letendreaa Sacc. *Michelia* 2:73 1880. *L. eurotioides* Sacc.
Corallomyces B. & C. Exot. Fung. Schwein.
 289 1854; Syll. Fung. 2:519 1883. *C. elegans* B. & C.
Neoskofitzia Schulzer Oest. Bot. Zeits.
 30:250 1880; Syll. Fung. 9:981 1891. *N. pallida* Schulz.
Macbridella Seaver Mycologia 1:195 1909. *M. chaetostroma* (E. & M.) Seav.
Metadothella Henn. *Hedwigia* 43:384, ill.
 1904. *M. stellata* Henn.

- Passerinula* Sacc. *Grevillea* 4:21 1875.
Phaeocreopsis Sacc. & Syd. *Nat. Pflanzenf.*
 1:1:541 1897.
Chromocrea Seaver *Mycologia* 2:58, ill.
 1910.
Chromocreopsis Seaver *Mycologia* 2:63, ill.
 1910.
Spegazzinula Sacc. *Syll. Fung.* 2:537 1883.
Xenonectria Hoehn. *Sitzb. Akad. Wien*
 129:149 1920.
- P. candida* Sacc.
P. hypoxylodes (Speg.) S & S.
C. gelatinosa (Tode) Seav.
C. cubispora (E. & H.) Seav.
S. dubitationum (Speg.) Sacc.
X. calidariorum (Henn.) Hoehn.

Hyalophragmiae

- Actiniopsis* Starb. *Bih. Sven. Akad. Handl.*
 25:54, ill. 1899.
Berkelella Sacc. *Syll. Fung.* 2:475 1883, as
 subg.; 9:989 1891.
Amphinectria Speg. *Bol. Acad. Cordoba*
 24:346 1923.
Podonectria Petch *Trans. Brit. Myc. Soc.*
 7:146, ill. 1921.
Byssoacallis Syd. *Ann. Myc.* 25:14 1927.
Calonectria DeNot. *Comm. Critt.* 2:477 1867.
Cryptothecium Penz. & Sacc. *Malpighia*
 11:388 1897; *Syll. Fung.* 14:466 1899.
Malmeomyces Starb. *Bih. Sven. Akad.*
Handl. 25:32, ill. 1899; *Syll. Fung.* 16:592
 1902.
Meliophilpha Speg. *Bol. Acad. Cordoba*
 26:344, ill. 1923.
Miyakeamyces Hara *Bot. Mag. Tokyo*
 27:248 1913; *Syll. Fung.* 24:681 1926.
Cesatiella Sacc. *Michelia* 2:250 1881.
Chaetocrea Syd. *Ann. Myc.* 25:18 1927.
Debaryella Hoehn. *Ann. Myc.* 2:274 1904.
Gibberella Sacc. *Michelia* 1:43,317 1877.
Hyalocrea Syd. *Ann. Myc.* 15:214 1917.
Lecithium Zukal *Myk. Mitt.* 9 1893.
Micronectriella Hoehn. *Sitzb. Akad. Wien*
 115:1194 1906.
Orcadia Sutherland *Trans. Brit. Myc. Soc.*
 5:151, ill. 1915.
Paranectria Sacc. *Michelia* 1:317 1878.
Pericoccis Clem.; *Broomella lichenicola*.
Phyllocelis Syd. *Ann. Myc.* 23:353, ill. 1925.
Puttemansia Henn. *Hedwigia* 41:112, ill.
 1902.
Stereocrea Syd. *Ann. Myc.* 15:216 1917.
Stilbonectria Karst. *Hedw.* 28:194 1889.
Subulicola Speg. *Bol. Acad. Cordoba* 25:347
 1923.
Trailia Sutherland *Trans. Brit. Myc. Soc.*
 5:149, ill. 1915.
Trichonectria Kirschst. *Verh. Bot. Brandenb.*
 38:60 1905.
- A. bambusae* Starb.
B. caledonica (Pat.) Sacc.
A. portoricensis Speg.
P. coccophila (E. & E.) Petch
B. phoebes Syd.
C. daldiniana DeN.
C. javanicum P. & S.
M. pulchella Starb.
M. graminicola (Stev.) Speg.
M. bambusae Hara
C. australis S. & Speg.
C. parasitica Syd.
D. hyalina Hoehn.
G. pulicaris (Fr.) Sacc.
H. epimyces Syd.
L. aeruginosum Zukal
M. pterocarpi (Rac.) Hoehn.
O. ascophylli Suther.
P. affinis (Grev.) Sacc.
P. leptogicola (C. & M.) Clem.
P. oyedaeae Syd.
P. lanosa Henn.
S. schizostachyi Syd.
S. lateritia (Berk.) Karst.
S. ambigua Speg.
T. ascophylli Suther.
T. aculeata Kirschst.

Phaeopragmiae

- Chiajaea* (Sacc.) Hoehn. Hedwigia Rep. 35:33
1896; Sitzb. Akad. Wien 129:151 1920. C. *rhodomela* (Fr.) Hoehn.
Hyalosphaera Stevens Trans. Ill. Acad. Sci.
10:172 1917; Syll. Fung. 24:702 1926. H. *miconiae* Stev.
Loculistroma Patterson, Charles & Veihmeyer
Bur. Pl. Ind. Bull. 171:11 1910. L. *bambusae* P. C. & V.
Peloronectria Moell. Phyc. Ascom. Bras. 297
1901. P. *vinosa* Moell.
Weesea Hoehn. Sitzb. Akad. Wien 129:150
1920. W. *balansiae* (Moell.) Hoehn.

Hyalodictyae

- Calyptronectria* Speg. An. Mus. Nac. 19:412
1909. C. *platensis* Speg.
Chaetomeris Clem.; for C. *pulcherrima* (Hoehn.) Clem.
Treubiomyces Hoehn. Sitzb. Akad. Wien
118:180 1909; Syll. Fung. 22:495 1913. T. *pulcherrimus* Hoehn.
Ciliomyces Hoehn. Sitzb. Akad. Wien 115:674,
ill. 1906. C. *oropensis* (Ces.) Hoehn.
Megalonectria Speg. Fung. Arg. 4:211 1882. M. *pseudotrichia* (Schw.) Speg.
Ophiodictyum Sacc. & Syd. Syll. 16:555 1902. O. *plumbeum* (Starb.) S. & S.
Patellonectria Speg. Bol. Acad. Cordoba
23:115, ill. 1919. P. *puiggarii* Speg.
Pleogibberella Sacc. Syll. Fung. Add. 2:217
1886. P. *calamia* (Cke.) Berl & Vogl.
Pleonectria Sacc. Fung. Venet. 5:178 1876. P. *lameyi* Sacc.
Thyronectria Sacc. Grevillea 4:21 1875; cf.
Petr. Ann. Myc. 23:132 1925. T. *patavina* Sacc.

Phaeodictyae

- Bivonella* Sacc. Syll. Fung. 2:464 1883, as
subg.; 9:989 1891. B. *lycopersici* (Pass.) Sacc.
Feracia Rolland Bull. Soc. Myc. Fr. 21:28
1905. F. *balearica* Rolland
Leucocrea Sacc. & Syd. Nat. Pflanzenf.
1:1:540 1897. L. *nivea* (Speg.) S. & S.
Mattirolia Berl. & Bres. Micr. Trid. 55 1889. M. *roseovirens* B. & B.
Thyronectroidea Seaver Mycologia 1:206
1909. T. *chrysogramma* (E. & E.) Seav.
Shiraia Henn. Engler Bot. Jahrb. 28:274
1900. S. *bambusicola* Henn.
Trotterula Speg. Bol. Acad. Cordoba 25:45,
ill. 1921. T. *chilensis* Speg.

Scolecosporae

- Acrospermum* Tode Fung. Meck. 1:8, ill. 1790. A. *compressum* Tode
Ascopolyporus Moell. Phyc. & Ascom. Bras.
300 1901. A. *polychrous* Moell.

- Balansia* Speg. Fung. Guar. 1:n.253 1883.
Balansiopsis Hoehn. Sitzb. Akad. Wien 119:936 1910.
Hyalodothis Pat. & Har. Bull. Soc. Myc. Fr. 210 1893; Syll. Fung. 11:374 1895.
Ophiodothis Sacc. Syll. Fung. 2:652 1883; cf. Theiss. & Syd. Ann. Myc. 13:187, 180 1915.
Barya Fkl. Symb. Myc. 93 1869; cf. Hoehn. Frag. Myk. 1162.
Globulina Speg. Fung. Puigg. 300; Syll. Fung. 9:993 1891.
Borenquenina Stev. Trans. Ill. Acad. Sci. 10:173, ill. 1917.
Claviceps Tul. Ann. Sci. Nat. 3:20:43 1853.
Balansiella Henn. Hedwigia 43:85 1904.
Poroniopsis Speg. Rev. Mus. La. Plata 26:171, ill. 1922.
Copranophilus Speg. An. Mus. Nac. 12:410 1909.
Cordyceps Fr. Syst. Myc. 2:324 1822.
Coscinarina Ell. & Ev. Jour. Myc. 2:88 1886.
Cyanoderma Hoehn. Sitzb. Akad. Wien 129:561 1920.
Dothichloe Atkinson Bull. Torr. Club. 21:223 1894.
Linearistroma Hoehn. Sitzb. Akad. Wien 119:938 1910.
Dussiella Pat. Bull. Soc. Myc. Fr. 4:106 1890.
Echinodothis Atkinson Bull. Torr. Club 21:224 1894.
Epichloe Fr. Sum. Veg. Scan. 381 1849.
Hypocrella Sacc. Michelia 1:322 1878.
Fleischeria Penz. & Sacc. Syll. Fung. 17:819 1905; Malpighia 15:230 1901; cf. Hoehn. Frag. Myk. 369.
Hypocreopsis Speg. Bol. Acad. Cordoba 23:480, ill. 1919; Syll. Fung. 24:695 1926.
Konradia Rac. Par. Alg. Pilz. Java 2:15 1900.
Micronectria Speg. Fung. Guar. 1:252 1883.
Micronectriopsis Hoehn. Ann. Myc. 16:59 1918.
Microstelium Pat. Bull. Soc. Myc. Fr. 15:208, ill. 1899.
Mitosporium Miyake Bot. Mag. Tokyo 259 1908; for *Aciculosporium*.
Mycomalus Moell. Phyc. Ascom. Bras. 300 1891.
Oomyces B. & Br. Brit. Fung. 590 1851.
Ophionectria Sacc. Michelia 1:323 1878.
Scoleconectria Seaver Mycologia 1:197 1909.
Torrubiella Boudier Rev. Myc. 7:227, ill. 1885.
Tubeufia Penz. & Sacc. Malpighia 11:517 1897.
- B. claviceps* Speg.
B. gaduae (Rehm) Hoehn.
H. clavus P. & H.
O. vorax (B. & C.) Sacc.
B. parasitica Fkl.
G. erysiphoides Speg.
B. miconiae Stev.
C. purpurea (Fr.) Tul.
B. orthocladae Henn.
P. bruchi Speg.
C. spinuliformis Speg.
C. militaris (L.) Link
C. langloisi E. & E.
C. viridulum (B. & C.) Hoehn.
D. atramentosa (B. & C.) Atkin.
L. lineare (Rehm) Hoehn.
D. tuberiformis Pat.
E. tuberiformis (B. & Br.) Atkin.
E. typhina (Pers.) Tul.
H. discoidea (B. & Br.) Sacc.
F. sclerotioides (Henn.) P. & S.
H. guaranítica Speg.
K. bambusina Rac.
M. guaranítica Speg.
M. freycinetiae (Rehm) Hoehn.
M. hyalinum Pat.
M. take Miyake
M. bambusinus Moell.
O. carneo-albus (Lib.) B. & Br.
O. trichospora (B. & Br.) Sacc.
S. scoleospora (Bref.) Seav.
T. aranicola Boud.
T. javanica P. & S.

Genera Incertae Sedis Vel Dubia

- Creomelanops* Hoehn. Sitzb. Akad. Wien 129:145 1920.
C. xanthocephala (Butl. & Syd.) Hoehn.
Hypocreodendrum Henn. Hedwigia 36:223, ill. 1897; cf. Hoehn. Frag. Myk. 605.
H. sanguineum Henn.
Ijuhya Starb. Bih. Sven. Akad. Handl. 25:30, ill. 1899.
I. vitrea Starb.
Mastigocladium Matruchot Comp. Rend. 152:326 1911.
M. blochi Mat.
Microthecium Corda Icon. Fung. 5:30, 74, ill. 1842; cf. Hoehn. Frag. Myk. 841.
M. zobeli Corda
Puiggariella Speg. Fung. Arg. 4:113, ill. 1882; cf. Hoehn. Frag. Myk. 244.
P. apiahyna Speg.

LOPHIOSTOMACEAE

- Brigantiella* Sacc. Syll. Fung. 2:707 1883, as subg.; 17:889 1905.
B. caudata (H. Fab.) Sacc.
Byssolophis Clem. cf. Syll. Fung. 24:1106; *Schizostoma byssisedum*.
B. byssiseda (Flag. & Chen.) Clem.
Khekia Petr. Hedwigia 52:284 1921.
K. ambigua (Pass.) Petr.
Lambottiella Sacc. as subg., Syll. Fung. 2:677 1883; 22:547 1913.
L. anaxaea Sacc.
Lophidiopsis Berl. Icon. Fung. 1:19 1902.
L. nuculoides (Sacc.) Berl.
Lophiella Sacc. Michelia 1:337 1878.
L. cristata (Pers.) Sacc.
Lophionema Sacc. Syll. Fung. 2:717 1883.
L. vermisporum (Ell.) Sacc.
Lophiosphaera Trevisan Bull. Soc. Belg. 16:19 1877.
L. subcorticalis (Fkl.) Trev.
Lophiostoma C. & DeN. Sfer. Ital. 45 1863.
L. caulium (Fr.) DeN.
Lophiotrema Sacc. Michelia 1:338 1878.
L. nucula (Fr.) Sacc.
Lophiotricha Richon Bull. Soc. Bot. Fr. 32:11 1885.
L. viburni Rich.
Platystomum Trev. Bull. Soc. Belg. 16:16 1877.
P. compressum (Pers.) Trev.
Lophidium Sacc. Michelia 1:340 1878, not Karst. 1879; Syll. Fung. 2:710 1883; 17:889 1905.
L. compressum (Pers.) Sacc.
Sampaioa G. Frag. Bol. Soc. Broter. 2:2:32, ill. 1924.
S. pinastri Frag.
Schizostoma (C. & DeN.) Sacc. Sfer. Ital. 46 1863, as subg.; Syll. Fung. 2:673 1883.
S. montelicum Sacc.
Xenolophium Syd. Bishop Mus. Bull. 19:96, ill. 1925.
X. leve Syd.
Vivianella Sacc. Syll. Fung. 2:687 1883, as subg.; 22:550 1913.
V. sedi (Fkl.) Sacc.

CYTTARIACEAE

- Acroscyphus* Lev. Ann. Sci. Nat. 3:5:262 1846.
A. sphaerophoroides Lev.
Cordierites Mont. Ann. Sci. Nat. 2:14:330 1840.
C. guyanensis Mont.
Cyttaria Berk. Trans. Linn. Soc. 19:37 1841.
C. darwini Berk.

Genus Incertae Sedis

- Rickiella* Syd. Ann. Myc. 2:244 1904; apparently to be referred to Pezizaceae.
R. transiens Syd.

VERRUCARIACEAE

Pyrenidiae

- Calothricopsis* Wain. *Etud. Lich. Bres.* 1:243 1890.
Cocciscia Norm. *Zahlbr. Nat. Pflanzenf.* 8:90 1926.
Eolichen Zukai. *Denks. Akad. Wien* 48:278 1884.
Hassea Zahlbr. *Beih. Bot. Cent.* 13:150 1902.
Homopsella Nyl. *Flora* 70:129 1887.
Lichina Agardh *Sp. Algar.* 1:104 1824.
Lichinella Nyl. *Bull. Soc. Linn. Norm.* 2:6:301 1872.
Lichenyllum Clem. *Lichenella octospora.*
Placothelium Muell. Arg. *Verh. z-b. Ges. Wien* 43:299 1893.
Pyrenidium Nyl. *Flora* 48:210 1865.
Pyrenocollema Reinke *Jahrb. Wiss. Bot.* 28:463. 1895.
Rhabdopsora (Muell. Arg.) Zahlbr. *Hedwigia* 59:301, ill. 1917.
- C. insignis* Wain.
C. hammeri Norm.
E. heppi Zuk.
H. bacillosa (Nyl.) Zahlbr.
H. aggregatula Nyl.
L. pygmaea (Lightf.) Ag.
L. stipatula Nyl.
L. lojkanum (Hue) Clem.
P. staurothelis M. A.
P. actinellum Nyl.
P. tremelloides Reinke
R. polymorpha M. A.

Epigloecae

- Epigloea* Zukai. *Verh. z-b. Ges. Wien* 39:78 1889.
- E. bactrospora* Zuk.

Moriolae

- Dimerisma* Clem. *Gen. Fung.* 39, 173 1909.
Moriola Norm. *Bot. Notis.* 1872:113.
Phaeomeris Clem. *Gen. Fung.* 39, 173 1909.
Pleophalis Clem. *Gen. Fung.* 39, 173 1909.
Speconisca Norm. *Bot. Notis.* 1876:170.
- D. tenebrosum* (Norm.) Clem.
M. descensa Norm.
P. confusa (Norm.) Clem.
P. nova (Norm.) Clem.
S. hypocrita Norm.

Verrucariae

- Aspidopyrenis* Wain. *Etud. Lich. Bres.* 2:190 1890; for *Aspidopyrenium.*
Aspidothelium Wain. *Etud. Lich. Bres.* 2:188 1890.
Geisleria Nke. *Rabh. Flecht. Eur.* 21:n.574 1861.
Gongylia (Koerb.) Zahlbr. *Nat. Pflanzenf.* 1:1:57 1903.
Lithoecea (Ach.) Koerb. *Syst. Lich. Germ.* 340 1855.
Microglaena Koerb. *Syst. Lich. Germ.* 388 1855.
Phaeosporis Clem. *Gen. Fung.* 39, 173 1909.
Phaeothrombis Clem. *Gen. Fung.* 40, 173 1909.
Polyblastia Lönnr. *Flora* 41:630 1858.
Phragmathele Clem. *Gen. Fung.* 39, 173 1909.
Sarcopyrenia Nyl. *Exp. Syn. Pyren.* 69 1858.
- A. insignis* Wain.
A. cinerascens Wain.
G. sychnogonoides Nke.
G. sabuletorum (Fr.) Stein
L. nigrescens (Pers.)
M. muscicola (Ach.) Lönnr.
P. melasperma (Nyl.) Clem.
P. melaspermica (Stnr.) Clem.
P. intercedens (Nyl.) Lönnr.
P. papularis (Fr.) Clem.
S. gibba Nyl.

- Sporodictyum* Mass. Ric. Aut. Lich. 181 1852.
Staurothele (Norm.) Th. Fr. Gen. Heterolich. 107 1861.
Thelenidia Nyl. Flora 69:463 1886.
Thelidiopsis Wain. Ann. Acad. Fenn. A:15:347 1921.
Thelidium Mass. Framm. Lich. 15 1855.
Thrombium (Wallr.) Mass. Ric. Aut. Lich. 156 1852.
Trimmatothele Norm. Blomb. & Forss. Enum. Pl. Scan. 160 1880.
Verrucaria (Wigg.) Th. Fr. Gen. Heterolich. 109 1861.
Willeya Müll. Arg. Flora 66:345 1883.
Phalostauris Clem. Gen. Fung. 39, 173. 1909.
- S. *henschelianum* (Koerb.) Lönrr.
 S. *clöpima* (Wahlb.) Th. Fr.
 T. *monosporella* Nyl.
 T. *robinsoni* Wain.
 T. *amylaceum* Mass.
 T. *epigaeum* (Pers.) Schaer.
 T. *perquisita* (Norm.) B. & F.
 V. *sphinctrina* (Duf.) Nyl.
 W. *diffractella* (Tuck.) M. A.
 P. *diffractella* (Tuck.) Clem.

Pyrenulæ

- Anthracotheicum* Hampe Mass. Att. Ist. Venet. 3:5:330 1860.
Arthropyrenia (Mass.) Müll. Arg. Mem. Soc. Nat. Geneve 16:428 1862.
Arthropyreniella Stur. Ann. Nat. Hofm. 24:284 1911; Zahlbr. Nat. Pflanzenf. 8:77 1926.
Pseudopyrenula Müll. Arg. Flora 66:247 1883; Zahlbr. Nat. Pflanzenf. 8:78 1926.
Asteroporum Müll. Arg. Bull. Herb. Boiss. 3:324 1895.
Belonia Koerb. Th. Fr. Gen. Heterolich. 105 1861.
Clathroporina Müll. Arg. Flora 65:517 1882.
Coccotrema Müll. Arg. Miss. Cap. Horn 5:171 1889.
Diporina Clem. Gen. Fung. 40,173 1909.
Dichoporis Clem. Gen. Fung. 40,173 1909.
Dipyrenis Clem. Gen. Fung. 40, 173 1909.
Dithelopsis Clem. Gen. Fung. 40, 173 1909.
Holothelis Clem. Gen. Fung. 40, 173 1909.
Leptorhaphis Koerb. Syst. Lich. Germ. 371 1855.
Microrthelia Koerb. Syst. Lich. Germ. 372 1855
Monoblastia Riddle Mycologia 15:70 1923.
Polyblastiopsis Zahlbr. Nat. Pflanzenf. 1:1:67 1903.
Polythelis Clem. Gen. Fung. 41, 173 1909.
Porina (Ach.) Müll. Arg. Flora 66:320 1883.
Porinopsis Malme. Ark. Bot. 22:3 1928.
Pyrenothrix Riddle. Bot. Gaz. 64:513 1917.
Pyrenula (Ach.) Mass. Ric. Aut. Lich. 162 1852.
Blastodesmia Mass. Ric. Aut. Lich. 180 1852.
Pyrenyllum Clem. Gen. Fung. 41, 173 1909.
- A. *variolosum* (Pers.) M. A.
 A. *pyrenuloides* (Fee) M. A.
 A. *cinerascens* (Mass.) Stur.
 P. *diluta* (Fee) M. A.
 A. *punctuliforme* M. A.
 B. *russula* Koerb.
 C. *endochrysea* (Bab.) M. A.
 C. *cucurbitula* (Mont.) M. A.
 D. *subsimplicans* (Nyl.) Clem.
 D. *schizospora* (Wain.) Clem.
 D. *trachysperma* (Müll. Arg.) Clem.
 D. *subporinella* (Nyl.) Clem.
 H. *flaveola* (Arn.) Clem.
 L. *epidermidis* (Ach.) Th. Fr.
 M. *micula* (Fw.) Koerb.
 M. *palmicola* Riddle
 P. *naegeli* (Hepp) Zahlbr.
 P. *sexlocularis* (Müll. Arg.) Clem.
 P. *tetracerae* (Ach.) M. A.
 P. *gemmaipara* Malme
 P. *nigra* Riddle
 P. *nitida* (Schrad.) Ach.
 B. *nitida* Mass.
 P. *analeptum* (Ach.) Clem.

- Rhaphidopyris* Müll. Arg. Hedwigia 31:288
1892, as subg.
Rhaphidyllis Wain. Ann. Acad. Fenn. A:15:355
1921, as subg.; for *Rhaphidisgestria*.
Rhodothrix Wain. Ann. Acad. Fenn. A:15:30
1921.
Stereochlamys Müll. Arg. Flora 68:334 1885.
Thelopsis Nyl. Mem. Soc. Cherbourg 3:194
1855.
Xanthopyrenia Bachm. Nov. Act. Leop. Akad.
55:65 1919.
- R. rhapsidophora* (Nyl.) M. A.
R. aciculosa Wain.
R. phyllogena Wain.
S. horridula Müll. Arg.
T. rubella Nyl.
X. tichothecis (Arn.) Bachm.

Paratheliae

- Campylothelium* Müll. Arg. Flora 66:245 1883.
Ditremsis Clem. Gen. Fung. 41, 173 1909.
Parathelium (Nyl.) Müll. Arg. Engler Bot.
Jahrb. 6:388 1885.
Pleurotheliopsis Zahlbr. Cat. Lich. Univ. 1:512
1922.
Pleurotrema Müll. Arg. Engler Bot. Jahrb.
6:388 1885.
Plagiotrema Müll. Arg. Engler Bot. Jahrb.
6:387 1885.
Trichotrema Clem. Gen. Fung. 41, 173 1909.
- C. superbum* (Fr.) M. A.
D. dispersa (Müll. Arg.) Clem.
P. superans Müll. Arg.
P. salvatum (Müll. Arg.) Zahlbr.
P. polysemum (Nyl.) M. A.
P. lageniferum (Ach.) M. A.
T. trichosporum (Müll. Arg.)
Clem.

Strigulae

- Haplopyrenula* Müll. Arg. Flora 73:195 1890.
Micropyrenula Wain. Ann. Acad. Fenn.
A:15:324 1921.
Microtheliopsis Müll. Arg. Flora 73:195 1890.
Phyllobathelium Müll. Arg. Flora 73:195 1890.
Phylloblastia Wain. Ann. Acad. Fenn.
A:15:323 1921.
Phylloporina Müll. Arg. Lich. Epi. Nov. 20
1890.
Phylloporis Clem. Gen. Fung. 41, 173 1909.
Heterodothis Syd. Phil. Jour. Sci. 9:270, ill.
1894; Ann. Myc. 13:190 1915.
Raciborskiella Hoehn. Sitzb. Akad. Wien
118:1485 1909.
Strigula Fr. Vet. Akad. Handl. 323 1821.
Trichothelium Müll. Arg. Engler Bot. Jahrb.
6:418 1885.
Asteropeltis Henn. Hedwigia 43:380 1904.
- H. minor* Müll. Arg.
M. olivacea Wain.
M. uleana Müll. Arg.
P. epiphyllum Müll. Arg.
P. dolichospora Wain.
P. begoniae Müll. Arg.
P. phyllogena (Müll. Arg.) Clem.
H. leptotheca Syd.
R. orbicularis Hoehn.
S. elegans (Fee) M. A.
T. epiphyllum Müll. Arg.
A. ulei Henn.

Dermatocarpae

- Agonimia* Zahlbr. Oest. Bot. Zeits. 59:351
1909.
Anapyrenium Müll. Arg. Rev. Myc. 2:81 1880.
Dermatocarpum (Eschw.) Th. Fr. Gen. Hete-
rolich. 105 1861.
- A. tristicula* Zahlbr.
A. aegyptiacum Müll. Arg.
D. miniatum (L.) Mann

- Endocarpum* (Hedw.) Zahlbr. Nat. Pflanzenf. 1:1:61 1903.
Heterocarpum Müll. Arg. Flora 68:515 1885.
Lepolichen Trev. Spig. Pagl. 5 1855.
Mastodia Hook & Harv. Ant. Voy. Erebus & Terror 2:449 1847.
Normandina (Nyl.) Wain. Etud. Lich. Bres. 2:188 1890.
Nylanderella Hue Ann. Myc. 12:509 1914.
Placidiopsis Beltr. Lich. Bassan. 212 1858.
Psoroglaena Müll. Arg. Flora 74:381 1891.
Pyrenothamnia Tuck. Bull. Torr. Club 10:22 1883.
- E. pusillum* Hedw.
H. ochroleucum (Tuck.) M. A.
L. granulatus (Hook.) M. A.
M. tessellata H. & H.
N. pulchella (Borr.) Leight.
N. medioxima (Nyl.) Hue
P. custnani (Mass.) Zahlbr.
P. cubensis Müll. Arg.
P. spraguei Tuck.

Trypetheliae

- Bottaria* Mass. Misc. Lich. 42 1856.
Laurera Reichb. Deut. Bot. 15 1841.
Melanotheca (Fee) Müll. Arg. Engler Bot. Jahrb. 6:395 1885.
Tomasiella Mass. Flora 39:283 1856.
Trypethelium Spreng. Anleit. Kcmt. 3:309 1805.
- B. cruentata* Müll. Arg.
L. varia (Fee) Zahlbr.
M. aggregata (Fee) M. A.
T. arthonioides Mass.
T. eluteriae Spreng.

Astrotheliae

- Astrothelium* (Eschw.) Trev. Flora 44:23 1861.
Lithothelium Müll. Arg. Engler Bot. Jahrb. 6:386 1885.
Cryptothelium Mass. Att. Ist. Venet. 3:5:335 1860.
Parmentaria Fee Essai Crypt. 39, 70 1824
Pyrenastrum Eschw. Syst. Lich. 16 1824.
- A. conicum* Eschw.
L. cubanum Müll. Arg.
C. sepultum (Montg.) Zahlbr.
P. astroidea Fee
P. lageniferum (Fee) M. A.

Genera Incertae Sedis Vel Dubia

(cf. Zahlbruckner Nat. Pflanzenf. 8:84, 91 1926.)

DOTHIDEALES

DOTHIDEACEAE

Dothideae

- Achorella* Theiss. & Syd. Ann. Myc. 13:340 1915.
Amerodothis Theiss. & Syd. Ann. Myc. 13:295 1915.
Amylirosa Speg. An. Soc. Cien. Arg. 90:178, ill. 1920.
Auerswaldia Sacc. Syll Fung. 2:626 1883.
Auerswaldiella Theiss. & Syd. Ann. Myc. 12:278 1914.
Bagnisiopsis Theiss. & Syd. Ann. Myc. 13:291, ill. 1915.
- A. ametableta* (Rehm) T. & S.
A. ilicis (Cke.) T. & S.
A. aurantiorum Speg.
A. examinans (M. & B.) Sacc.
A. puccinoides (Speg.) T. & S.
B. tijucensis T. & S.

- Dothidina* Theiss. & Syd. 13:302 1915; cf. Petr. Hedwigia 68:251 1928; Ann. Myc. 25:328 1927; Syll. Fung. 24:541 1926.
- Botryochora* Torrend Broteria 12:65 1914.
- Botryosphaeria* C. & DeN. Sfer. Ital. 211 1863.
- Castagnella* Arnaud Bull. Soc. Myc. Fr. 32:357, ill. 1914.
- Catabotrys* Theiss. & Syd. Ann. Myc. 13:297, ill. 1915.
- Coccoidella* Hoehn. Sitzb. Akad. Wien 118:847 1909.
- Coccodiella* Hara Bot. Mag. Tokyo 25:224, ill. 1910.
- Elmerococcum* Theiss. & Syd. Ann. Myc. 13:281 1915; Syll. Fung. 24:550 1926.
- Coccodiscus* Henn. Hedwigia 43:144 1904.
- Coccodothis* Theiss. & Syd. Ann. Myc. 13:279 1915; Syll. Fung. 24:549 1926.
- Coccodothella* Theiss. & Syd. Ann. Myc. 13:280 1915.
- Coccostroma* Theiss. & Syd. Ann. Myc. 12:269 1914.
- Coccostromopsis* Plunkett Ill. Biol. Mon. 8:176, ill. 1923.
- Pyrenostigme* Syd. Ann. Myc. 24:370 1926.
- Crotone* Theiss. & Syd. Ann. Myc. 13:629 1915.
- Dangeardiella* Sacc. & Syd. Syll. Fung. 14:683 1899; cf. Theiss. & Syd. Ann. Myc. 13:665 1915.
- Dictyodothis* Theiss. & Syd. Ann. Myc. 13:346 1915.
- Didothis* Clem.; for
- Uleodothis* Theiss. & Syd. Ann. Myc. 13:305 1915; Syll. Fung. 24:544 1926.
- Uleodothella* Syd. Ann. Myc. 18:184 1920; Syll. Fung. 24:545 1926.
- Diplochorella* Syd. Ann. Myc. 11:408, ill. 1913.
- Diplochora* Syd. Ann. Myc. 11:60 1913; not Hoehn. 1906.
- Cyclodothis* Syd. Ann. Myc. 11:266 1913; Syll. Fung. 24:633 1926.
- Scirrhiachora* Theiss. & Syd. Ann. Myc. 13:626 1915; Syll. Fung. 24:634 1926.
- Discodothis* Hoehn. Sitzb. Akad. Wien 118:853 1909.
- Dothidea* Fr. Syst. Myc. 2:558 1822.
- Systemma* Theiss. & Syd. Ann. Myc. 13:330 1915; Syll. Fung. 24:548 1926.
- Dothideopsella* Hoehn. Sitzb. Akad. Wien 124:22 1915.
- Dothidiovalsa* Speg. Myc. Arg. 4:14 1909.
- Dothophaeis* Clem.; for
- D. leandrae* (Syd.) T. & S.
- B. nigra* Torrend
- B. ribis* Gross. & Dug.
- C. coccifera* Arn.
- C. palmarum* (Pat.) T. & S.
- C. scutula* (B. & C.) Hoehn.
- C. arundinariae* Hara
- E. orbicula* Syd.
- C. quercicola* Henn.
- C. sphæroidea* (Cke.) T. & S.
- C. placida* Syd.
- C. machaerii* (Henn.) T. & S.
- C. palmigena* Plunkett
- P. siparunae* Syd.
- C. drymidis* (Lev.) T. & S.
- D. macrospora* (Schröt.) S. & S.
- D. berberidis* (Rehm) T. & S.
- D. balanseana* (S. R. B.) Clem.
- U. balanseana* (S. R. B.) T. & S.
- U. aphanes* (Rehm) Syd.
- D. fertilissima* Syd.
- D. fertilissima* Syd.
- C. pulchella* Syd.
- S. groveana* (Sacc.) T. & S.
- D. filicum* Hoehn.
- D. sambuci* (Pers.) Fr.
- S. natans* (Tode) T. & S.
- D. agminalis* (S. & M.) Hoehn.
- D. tucumanensis* Speg.
- D. kilimandscharica* (Henn.) Clem.

- Englerodopsis* Theiss. & Syd. Ann. Myc. 13:285 1915; Syll. Fung. 24:549 1926.
- Leveillella* Theiss. & Syd. Ann. Myc. 13:284 1915.
- Leveillina* Theiss. & Syd. Ann. Myc. 13:286 1915.
- Symphaeophyma* Speg. An. Mus. Nac. 23:97 1912; Syll. Fung. 24:616 1926.
- Leveillinopsis* Stev. Ill. Biol. Mon. 8:179, ill. 1923.
- Metameris* Theiss. & Syd. Ann. Myc. 13:342, ill. 1915.
- Phragmodothidea* Dearn. & Barth. Mycologia 18:250 1926.
- Sclerodopsis* Hoehn. Ann. Myc. 16:69 1918; cf. Petr. Ib. 19:41 1921.
- Microcyclella* Theiss. Ann. Myc. 12:69 1914.
- Microcyclus* Sacc. Syll. Fung. 17:844; Ann. Myc. 2:165 1904.
- Nowellia* Stev. Ill. Biol. Mon. 8:177, ill. 1923.
- Parabotryum* Syd. Ann. Myc. 24:374 1926.
- Pauahia* Stev. Bishop Mus. Bull. 19:17, ill. 1925.
- Perischizum* Syd. Ann. Myc. 12:265 1914.
- Phragmodothella* Theiss. & Syd. Ann. Myc. 13:343 1915.
- Phragmodopsis* Theiss. & Syd. Ann. Myc. 12:179 1914.
- Plowrightia* Sacc. Syll. Fung. 2:635 1883; cf. Petr. Ann. Myc. 17:162 1919.
- Anisogramma* Theiss. & Syd. Ann. Myc. 15:451 1917.
- Dothidella* Speg. Fung. Arg. 1 1880; Syll. Fung. 2:627 1883.
- Melanopsammopsis* Stahel Bull. Dept. Landb. Suriname 34:34, ill. 1917; Syll. Fung. 24:919 1928.
- Rosenscheldia* Speg. Fung. Guar. 1:288 1883.
- Schweinitziella* Speg. Fung. Guar. 2:119 1888.
- Scolecoccoidea* Stev. Ill. Biol. Mon. 11:26, ill. 1927.
- Stalagmites* Theiss. & Syd. Ann. Myc. 13:650 1915.
- Trichochora* Theiss. & Syd. Ann. Myc. 13:289 1915.
- Trichodopsis* Theiss. & Syd. Ann. Myc. 12:176 1914.
- Yoshinagella* Hoehn. Frag. Myk. 804 1913.
- Zimmermanniella* Henn. Hedwigia 41:142 1902.
- E. kilimandscharica* (Henn.) T. & S.
- L. drymidis* (Lev.) T. & S.
- L. arduinae* (K. & C.) T. & S.
- S. subtropicale* Speg.
- L. palmicola* Stev.
- M. japonica* Syd.
- P. eucalypti* D. & B.
- S. aggregata* (Hoehn.) Petr.
- M. nervisequia* (Hoehn.) T. & S.
- M. angolensis* S. & S.
- N. guianensis* Stev.
- P. connatum* Syd.
- P. sideroxyli* Stev.
- P. oleifolium* (K. & C.) Syd.
- P. kelseyi* (E. & E.) T. & S.
- P. conspicua* (Griff.) T. & S.
- P. ribesia* (Pers.) Sacc.
- A. virgultorum* (Fr.) T. & S.
- D. achalensis* Speg.
- M. ulei* (Henn.) Stahel
- R. paraguayana* Speg.
- S. styracum* Speg.
- S. costaricensis* Stev.
- S. tumefaciens* (Syd.) T. & S.
- T. marginata* Theiss.
- T. comata* (B. & R.) T. & S.
- Y. japonica* Hoehn.
- Z. trisporea* Henn.

Phyllachoreae

- Clypeostroma* Theiss. & Syd. Ann. Myc. 12:272 1914.
- C. hemisphaericum* (Berk.) T. & S.

- Dermatodothis* Rac. Ann. Myc. 12:280 1914.
- Dictyochorella* Theiss. & Syd. Ann. Myc. 13:610 1915.
- Epiphora* Nyl. Flora 59:238 1876.
- Euryachora* Fkl. Symb. Myc. 220 1869.
- Discomycopsis* J. Muell. Dan. Bot. Ark. 5:5 1928.
- Oligostroma* Syd. Ann. Myc. 12:265 1914; Syll. Fung. 24:615 1926.
- Omphalospora* Theiss. & Syd. Ann. Myc. 13:361 1915; Syll. Fung. 24:609 1926.
- Exarmidium* Karst. Myc. Fenn. 2:222 1873.
- Scirrhophragma* Theiss. & Syd. Ann. Myc. 13:423 1915; Syll. Fung. 24:621 1926.
- Geminispora* Pat. Bull. Soc. Myc. Fr. 9:151 1893.
- Diplosporid* Clem. Gen. Fung. 27 1909.
- Homostegia* Fkl. Symb. Myc. 223 1869.
- Myriogenis* Atkinson Bull. Torr. Club 21:225 1894; for *Myriogenospora*.
- Ophiodothis* Hoehn. Frag. Myk. 630 1910; Henn. as subg. *Hedwigia* 43:258 1904.
- Scolecodothopsis* Stev. Ill. Biol. Mon. 8:183, ill. 1923.
- Phaeochora* Hoehn. Frag. Myk. 444 1909.
- Phaeotrabiella* Theiss. & Syd. Ann. Myc. 13:360 1915; Syll. Fung. 24:609 1926.
- Phaeodothis* Syd. Ann. Myc. 2:166 1904.
- Atopospora* Petr. Ann. Myc. 23:100 1925.
- Coccochora* Hoehn. Frag. Myk. 444, 500 1909; Syll. Fung. 24:616 1926.
- Coccochorella* Hoehn. Frag. Myk. 500 1910; Syll. Fung. 24:613 1926.
- Phaeodothisopsis* Theiss. & Syd. Ann. Myc. 12:192 1914; Syll. Fung. 24:536 1926.
- Robledia* Chardon Jour. Dep. Agr. P. R. 13:10 1929.
- Phragmocarpella* Theiss. & Syd. Ann. Myc. 13:601 1915.
- Phyllachora* Nke. Fkl. Symb. Myc. 216 1869; cf. Petr. Ann. Myc. 22:1 1924; 25:328 1927.
- Catacauma* Theiss. & Syd. Ann. Myc. 12:280 1914; Syll. Fung. 24:559 1926.
- Diachora* J. Muell. Bot. Cent. 57:346 1894; Syll. Fung. 11:374; cf. Petr. Ann. Myc. 22:130 1924.
- Diplochora* Hoehn. Sitzb. Akad. Wien 115:1201 1906; Syll. Fung. 22:432 1913.
- Discochora* Hoehn. Ber. Deut. Bot. Ges. 36:315 1918; Syll. Fung. 24:638 1926.
- Discomycopsella* Henn. *Hedwigia* 41:146 1902; cf. Hoehn. Frag. Myk. 681.
- D. javanica* Rac.
- D. abscondita* T. & S.
- E. encaustica* Nyl.
- E. thoracella* Fkl.
- D. rhytismatoides* J. Muell.
- O. proteae* (Syd.) T. & S.
- O. stellariae* (Lib.) T. & S.
- E. hysteriforme* Karst.
- S. regalis* T. & S.
- G. mimosae* Pat.
- D. mimosae* (Pat.) Clem.
- H. piggotti* (B. & Br.) Karst.
- M. paspali* Atkin.
- O. atromaculans* (Henn.) Hoehn.
- S. ingae* Stev.
- P. chamaerops* (Cke.) Hoehn.
- P. perisporioides* (Sacc.) T. & S.
- P. tricuspidis* Syd.
- A. betulina* (Fr.) Petr.
- C. kusanoi* (Henn.) Hoehn.
- C. quercicola* (Henn.) Hoehn.
- P. zollingeri* (Mont. & Berk.) T. & S.
- R. tetraspora* Chardon
- P. ichnanthi* (Henn.) T. & S.
- P. graminis* (Pers.) Nke.
- C. exanthematicum* (Lev.) T. & S.
- D. onobrychidis* (DC.) J. Muell.
- D. dissospora* (Feltg.) Hoehn.
- D. ilicis* (Schl.) Hoehn.
- D. bambusae* Henn.

- Endophyllachora* Rehm Phil. Jour. Sci. 7:397 1913.
Metachora Syd. & Butler Ann. Myc. 9:400 1911.
Plectosphaera Theiss. Ann. Myc. 14:413, ill. 1916; cf. Hoehn. Ann. Myc. 15:377 1917.
Pseudomelasmia Henn. Hedwigia 41:115 1902; cf. Hoehn. Frag. Myk. 627.
Schizochorella Hoehn. Mitt. Bot. Inst. Wien 3:112 1926.
Phyllachorella Syd. Ann. Myc. 12:489 1914.
Catacaumella Theiss. & Syd. Ann. Myc. 13:400 1915; Syll. Fung. 24:564 1926.
Trabutiella Theiss. & Syd. Ann. Myc. 12:180 1914; Syll. Fung. 24:559 1926.
Placostroma Theiss. & Syd. Ann. Myc. 12:269 1914.
Achorodopsis Syd. Ann. Myc. 24:380 1926.
Anisochora Theiss. & Syd. Ann. Myc. 13:406 1915; Syll. Fung. 24:610 1926.
Apiotrabutia Petr. Ann. Myc. 27:334 1929.
Endodothella Theiss. & Syd. Ann. Myc. 13:582, ill. 1915; Syll. Fung. 24:613 1926.
Munkiodopsis Theiss. & Syd. Ann. Myc. 13:360 1915; Syll. Fung. 24:609 1926.
Platychora Petr. Ann. Myc. 23:103 1925.
Rehmiodopsis Theiss. & Syd. Ann. Myc. 12:192 1914; Syll. Fung. 24:610 1926.
Scirrhopodopsis Theiss. & Syd. Ann. Myc. 13:415 1915; Syll. Fung. 24:611 1926.
Stigmochora Theiss. & Syd. Ann. Myc. 12:272 1914; Syll. Fung. 24:612 1926.
Rhopographina Theiss. & Syd. Ann. Myc. 13:429 1915.
Rhopographus Nke. Fkl. Symb. Myc. 219 1869.
Schizachora Syd. Ann. Myc. 11:265, ill. 1913.
Scirrhia Nke. Fkl. Symb. Myc. 220 1869.
Apiospora Sacc. Consp. Gen. Pyr. 9 1875; Syll. Fung. 1:539 1882; Theiss. & Syd. Ann. Myc. 13:419 1915.
Rhabdostroma Theiss. & Syd. Ann. Myc. 14:362 1916.
Scolecodothopsis Theiss. & Syd. Ann. Myc. 12:277 1914.
Sphaerodopsis Shear Mycologia 1:162 1909.
Phaeochorella Theiss. & Syd. Ann. Myc. 13:405 1915; Syll. Fung. 24:609 1926.
Telimena Rac. Par. Alg. Pilz. Java 1:18 1900.
Camarotella Theiss. & Syd. Ann. Myc. 13:370, ill. 1915; Syll. Fung. 24:620 1926.
Phragmocauma Theiss. & Syd. Ann. Myc. 13:411 1915; Syll. Fung. 24:620 1926.
- E. pseudus* Rehm
M. bambusae S. & B.
P. bersamae (Ling.) Theiss.
P. lauracearum Henn.
S. aceris (H. & L.) Hoehn.
P. micheliae Syd.
C. miconiae (Henn.) T. & S.
T. microthyrioides (Henn.) T. & S.
P. pterocarpi (Mass.) T. & S.
A. poasensis Syd.
A. topographica (Speg.) T. & S.
A. arrabidaeae (Henn.) Petr.
E. helvetica (Fkl.) T. & S.
M. melastomata (Hoehn.) T. & S.
P. ulmi (Schleich.) Petr.
R. ostbeckiae (B. & Br.) T. & S.
S. confluens (Starb.) T. & S.
S. controversa (Starb.) T. & S.
R. chamaemori (Rostr.) T. & S.
R. filicinus (Fr.) Nke.
S. elmeri Syd.
S. rimosa (A. & S.) Fkl.
A. montagnei Sacc.
R. rottboelliae (Rehm) T. & S.
S. hypophylla (Theiss.) T. & S.
S. arengae (Rac.) Shear
P. parinari (Henn.) T. & S.
T. erythrinae Rac.
C. astrocaryae (Rehm) T. & S.
P. viventis (Cke.) T. & S.

Genera Incertae Sedis Vel Dubia

- Agostaea** Theiss. & Syd. Ann. Myc. 13:359 1915; Syll. Fung. 24:1321 1928.
- Coccoidea** Henn. Engler Bot. Jahrb. 28:275 1900; Syll. Fung. 16:624 1902.
- Coleophoma** Hoehn. Sitzb. Akad. Wien 116:637 1907.
- Cyphospilea** Syd. Ann. Myc. 24:377 1926.
- Dictyochoa** Theiss. & Syd. Ann. Myc. 12:275 1914; 13:610 1915; cf. Petr. & Syd. Ann. Myc. 21:383 1923; a mixture of two genera.
- Griggsia** Stev. & Dalbey. Bot. Gaz. 68:224 1919; Syll. Fung. 24:639 1926.
- Halstedia** Stev. Bot. Gaz. 69:253, ill. 1920; Syll. Fung. 24:554 1926.
- Hyalodothis** Pat. & Har. Bull. Soc. Myc. Fr. 9:210 1893; cf. Theiss. & Syd. Ann. Myc. 13:180 1915; Syll. Fung. 11:374 1895; unripe *Ophiodothis* with parasitic *Hyponectria*.
- Kullhemia** Karst. Symb. Myc. 4:182 1878; Syll. Fung. 2:591 1883; Theiss. & Syd. Ann. Myc. 13:183, 330 1915.
- Lizoniella** Sacc. & D. Sacc. Syll. Fung. 17:661 1905; Henn. Hedwigia 40:96 1901, as subg.; cf. Theiss. & Syd. Ann. Myc. 13:340 1915.
- Microphiodothis** Speg. Bol. Acad. Cordoba 23:495 1919.
- Monographus** Fkl. Symb. Myc. Append. 3:24 1875; Syll. Fung. 2:457 1883.
- Peltistroma** Henn. Hedwigia 43:391, ill. 1904; cf. Hoehn. Frag. Myk. 636; immature.
- Phoenicostroma** Syd. Ann. Myc. 23:345, ill. 1925.
- Placodothis** Syd. Ann. Myc. 26:133 1928.
- Roumegueria** (Sacc.) Henn. Hedwigia 47:256 1908; Syll. Fung. 2:650 1883; Ann. Myc. 10:316 1912.
- Scirrhiopsis** Henn. Verh. Bot. Brandenb. 47:12 1905; Syll. Fung. 22:1074 1913; cf. Hoehn. Frag. Myk. 680; mixed material.
- Septochora** Hoehn. Ber. Deut. Bot. Ges. 35:254 1917; Syll. Fung. 24:1638 1926.
- Sirentyloma** Henn. Hedwigia 34:319 1895; cf. Hoehn. Frag. Myk. 628; Theiss. & Syd. Ann. Myc. 13:575 1915.
- Thyriopsis** Theiss. & Syd. Ann. Myc. 13:369 1915; Syll. Fung. 24:617 1926; cf. Petr. Ann. Myc. 23:66 1925.
- Dothielypeolum** Hoehn. Oest. Bot. Zeits. 67:55 1916; Ann. Myc. 14:36 1916.
- A. lantanae** (Henn.) T. & S.
- C. quercicola** Henn.
- C. crateriformis** (Dur. & Mont.) Hoehn.
- C. polylopha** Syd.
- D. rumicis** (Karst.) T. & S.
- G. cyathea** S. & D.
- H. portoricensis** Stev.
- H. clavus** P. & H.
- K. moriformis** (Ach.) Karst.
- L. gastrolobii** (Henn.) S. & D. S.
- M. paraguayensis** Speg.
- M. aspidiorum** (Lib.) Fkl.
- P. juruanum** Henn.
- P. chamaedorae** Syd.
- P. petraki** Syd.
- R. goudoti** (Lev.) Sacc.
- S. hendersonioides** Henn.
- S. samaricola** (Died.) Hoehn.
- S. salaciae** Henn.
- T. halepensis** (Cke.) T. & S.
- D. pinastri** Hoehn.

- Uleopeltis* Henn. Hedwigia 43:267 1904; Syll.
Fung. 17:872 1905; Hoehn. Frag. Myk.
638; Theiss. & Syd. 13:217 1915.
Xenomeris Syd. Ann. Myc. 22:185 1924

- U. *manaosensis* Henn.
X. *pruni* Syd.

MYCOPORACEAE

- Chlorodothis* Clem. Gen. Fung. 50, 173 1909.
Mycoporellum Müll. Arg. Rev. Myc. 6:14
1884.
Mycoporis Clem. Gen. Fung. 50, 173 1909.
Mycoporum Fw. Koerb. Grundr. Kräuterkr.
199 1848.
Dermatina Almq. Sven. Akad. Handl. 17:8
1880.
Nothostroma Clem. Gen. Fung. 50, 173 1909.
Sciodothis Clem. Gen. Fung. 50, 173 1909.

- C. *lahmi* (Müll. Arg.) Clem.
M. *trichosporellum* (Nyl.) Zahlbr.
M. *perexigua* (Müll. Arg.) Clem.
M. *elabens* Fw.
D. *elabens* (Fw.) Almq.
N. *roseolum* (Müll. Arg.) Clem.
S. *leucoplaca* (Müll. Arg.) Clem.

MYRIANGIACEAE

- Allosoma* Syd. Ann. Myc. 24:353 1926.
Angatia Syd. Ann. Myc. 12:566 1914.
Kusanooopsis Stev. & Weedon Mycologia
15:199, ill. 1923.
Anhelliia Rac. Par. Alg. Fung. Java 2:10 1900.
Ascomycetella Sacc. Syll. Fung. 8:846 1889;
not Pk. 1881.
Myriangiopsis Henn. Hedwigia 41:23 1902.
Ascostratum Syd. Ann. Myc. 10:41 1912.
Bagnisiella Speg. Fung. Arg. 3:22 1880; em.
Theiss. & Syd. Ann. Myc. 13:651 1915.
Robertomyces Starb. Arkiv Bot. 5:7 1905;
Syll. Fung. 22:754 1913.
Butleria Sacc. Ann. Myc. 12:302 1914.
Calolepis Syd. Ann. Myc. 23:399, ill. 1925.
Calopeziza Syd. Phil. Jour. Sci. 8:499 1913.
Cookella Sacc. Michelia 1:407 1878.
Ascomycetella Pk. Bull. Torr. Club 8:49, ill.
1881.
Dictyonella Hoehn. Frag. Myk. n. 244, ill.
1909.
Dothiora Fr. Sum. Veg. Scan. 418 1849.
Protoscypha Syd. Ann. Myc. 23:403 1925.
Elsinoe Rac. Par. Alg. Fung. Java 1:14 1900.
Endodothiora Petr. Ann. Myc. 27:345 1929.
Eurytheca deSeynes Bull. Soc. Bot. Fr. 25:87
1878.
Micromyriangium Petr. Ann. Myc. 27:43
1929.
Hariotia Karst. Jour. Bot. 206 1889; cf.
Hoehn. Ann. Myc. 16:151, 165 1918.
Delphinella Sacc. Syll. Fung. 9:1103 1891.
Pleodothis Clem. Gen. Fung. 49, 173 1909.
Pleoglonis Clem. Gen. Fung. 56, 173 1909.

- A. *cestri* Syd.
A. *eugeniae* Syd.
K. *guianensis* S. & W.
A. *tristis* Rac.
A. *sulphurea* (Wint.) Sacc.
M. *sulphurea* (Wint.) Henn.
A. *insigne* Syd.
B. *australis* Speg.
R. *mirabilis* Starb.
B. *inaghatahani* Sacc.
C. *congesta* Syd.
C. *mirabilis* Syd.
C. *microscopica* Sacc.
A. *quercina* Pk.
D. *erysiphoides* (Rehm) Hoehn.
D. *sorbi* (Wahl.) Fr.
P. *pulla* Syd.
E. *canavaliae* Rac.
E. *sydowiana* Petr.
E. *monspeliensis* de S.
M. *brenesi* Petr.
H. *strobiligena* (Desm.) Karst.
D. *strobiligena* (Desm.) Sacc.
P. *polyspora* (Bref.) Clem.
P. *strobiligena* (Desm.) Clem.

- Plowrightiella* Sacc. Syll. Fung. 11:376 1895;
24:543 1926.
- Keisslerina* Petr. Ann. Myc. 17:74 1919
- Kusanoa* Henn. Engler Bot. Jahrb. 28:275
1900.
- Leptodothiora* Hoehn. Ann. Myc. 18:78 1920.
- Leptophyma* Sacc. Syll. Fung. 8:844 1889.
- Monascostroma* Hoehn. Ann. Myc. 16:160
1918.
- Myriangina* (Henn.) Hoehn. Hedwigia 41:55
1902; Sitzb. Akad. Wien 118:372 1909.
- Myrianginella* Stev. & Weedon Mycologia
15:197 1923; cf. Petr. Ann. Myc. 25:302
1927.
- Uleomyces* Henn. Hedwigia 34:107 1895;
Syll. Fung. 11:364 1895.
- Myriangium* Mont. & Berk. Lond. Jour. Bot.
4:72 1845.
- Diplothea* Starb. Bot. Not. 30 1893; Syll.
Fung. 16:555 1902.
- Phymatodiscus* Speg. Bol. Acad. Cordoba
23:484, ill. 1919; Syll. Fung. 24:1139 1928.
- Phymatosphaeria* Pass. Nuov. Giorn. Bot.
Ital. 7:138 1886; Syll. Fung. 8:847 1889.
- Pyrenotheca* Pat. Bull. Soc. Bot. Fr. 33:155
1886; Syll. Fung. 8:847 1889.
- Myxomyriangis* Theiss. Ann. Myc. 11:507
1913.
- Zukaliopsis* Henn. Hedwigia 43:351 1904;
Syll. Fung. 17:554 1905.
- Plectodiscella* Woronich. Myc. Cent. 4:232
1914.
- Pseudosphaeria* Hoehn. Sitzb. Akad. Wien
116:129 1907.
- Saccardia* Cooke Grevillea 7:49 1878.
- Byssogene* Syd. Phil. Jour. Sci. 21:144 1922.
- Sydowia* Bres. Hedwigia 34:66 1895; Ann.
Myc. 18:64 1920; cf. Hoehn. Ann. Myc.
16:166 1918.
- Wettsteinina* Hoehn. Sitzb. Akad. Wien
116:126 1907.
- Yoshinagaia* Henn. Hedwigia 43:143 1904;
Syll. Fung. 17:860 1905; cf. Hoehn. Frag.
Myk. 335, 677; Theiss. & Syd. Ann. Myc.
13:265, 653 1915.
- P. polyspora* (Bref.) Sacc.
- K. moravica* Petr.
- K. japonica* Henn.
- L. elliptica* (Fkl.) Hoehn.
- L. aurantiacum* (E. & M.) Sacc.
- M. innumerosum* (Desm.) Hoehn.
- M. mirabilis* (Henn.) Hoehn.
- M. tapirae* S. & W.
- U. parasiticus* Henn.
- M. duriae* M. & B.
- D. tunae* (Spreng.) Starb.
- P. guaraniticus* Speg.
- P. abyssinica* Pass.
- P. yunnanensis* Pat.
- M. ricki* (Rehm) Theiss.
- Z. amazonica* Henn.
- P. piri* Woronich.
- P. callista* (Rehm) Hoehn.
- S. quercina* Cke.
- B. amboinensis* Syd.
- S. gregaria* Bres.
- W. gigaspora* Hoehn.
- Y. quercus* Henn.

Genera Incertae Sedis Vel Dubia

- Capnodiopsis* Henn. Hedwigia 41:298 1902;
Syll. Fung. 17:555 1905.
- Myriangella* Zimm. Cent. Bakt. 8:183 1902;
Syll. Fung. 22:580 1913.
- Myxotheca* Ferd. & Wing. Bot. Tids. 30:212
1910; Syll. Fung. 22:582 1913.
- C. mirabilis* Henn.
- M. orbicularis* Zimm.
- M. hypocreoides* F. & W.

MICROTHYRIALES

POLYSTOMELLACEAE

- Actinodothis* Syd. Phil. Jour. Sci. 9:174 1914;
 cf. Stev. Ann. Myc. 25:411 1927.
- Armatella* Theiss. & Syd. Ann. Myc. 13:235
 1915.
- Asterodothis* Theiss. Ann. Myc. 10:179 1912.
- Aulacostroma* Syd. Phil. Jour. Sci. 9:175 1914.
- Blasdalea* Sacc. & Syd. Syll. Fung. 16:634
 1902.
- Stichodothis* Petr. Ann. Myc. 25:198 1927.
- Chaetaspis* Syd. Ann. Myc. 15:219 1917.
- Cocconia* Sacc. Syll. Fung. 8:738 1889.
- Coscinopeltis* Speg. Myc. Arg. 19:425 1909.
- Cycloschizella* Hoehn. Sitzb. Akad. Wien
 128:63 1919.
- Cycloschizum* Henn. Engler Bot. Jahrb. 33:39
 1902.
- Cyclostomella* Pat. Bull. Herb. Boiss. 4:655
 1896; cf. Syd. Ann. Myc. 25:26 1927.
- Cyclothea* Theiss. Ann. Myc. 12:70 1914.
- Aspidothea* Syd. Ann. Myc. 25:23 1927.
- Dielsiella* Henn. Hedwigia 42:84 1903.
- Maurodothis* Sacc. & Syd. Ann. Myc. 2:166
 1904.
- Diplocarpum* Wolf Bot. Gaz. 54:231 1912.
- Dothidasteris* Hoehn. Frag. Myk. 491; T. & S.
 Ann. Myc. 13:229 1915; for *Dothidastero-*
mella.
- Pluriporus* Stev. & Ryan Bishop Mus. Bull.
 19:65, ill. 1925.
- Dothidasteroma* Hoehn. Frag. Myk. 443; T. &
 S. Ann. Myc. 13:231 1915.
- Entopeltis* Hoehn. Frag. Myk. 489 1910;
 Ann. Myc. 15:296 1917.
- Stigmatopeltis* Doidge Bothalia 2:232 1927.
- Gilletiella* Sacc. & Syd. Syll. Fung. 14:691
 1899.
- Dothithyriella* Hoehn. Ann. Myc. 16:171
 1918.
- Heterochlamys* Pat. Bull. Soc. Myc. Fr.
 11:231 1895; not Turcz. 1843.
- Hysterostoma* Theiss. Ann. Myc. 12:509 1914;
 T. & S. Ib. 13:237 1915.
- Isipinga* Doidge Bothalia 1:15, ill. 1921.
- Hysterostomella* Speg. Fung. Guar. 1:133
 1883; T. & S. Ann. Myc. 13:222 1915.
- Hysterostomina* Theiss. & Syd. Ann. Myc.
 13:228 1915.
- Inocylus* Theiss. & Syd. Ann. Myc. 13:211,
 ill. 1915.
- A. *piperis* Syd.
- A. *litseae* (Henn.) T. & S.
- A. *solaris* (K. & C.) Theiss.
- A. *palawanense* Syd.
- B. *disciformis* (Rehm) S. & S.
- S. *disciformis* (Wint.) Petr.
- C. *stenochlaenae* Syd.
- C. *placenta* (B. & Br.) Sacc.
- C. *argentinensis* Speg.
- C. *araucariae* (Rehm) Hoehn.
- C. *brachylaenae* Henn.
- C. *disciformis* Pat.
- C. *miconiae* (Syd.) Theiss.
- A. *blechni* Syd.
- D. *pritzeli* Henn.
- M. *alyxiae* S. & S.
- D. *rosae* Wolf
- D. *sepulta* (B. & C.) Hoehn.
- P. *gouldiae* Stev. & Ryan
- D. *maculosum* (B. & Br.) Hoehn.
- E. *interrupta* (Wint.) Hoehn.
- S. *royenae* Doidge
- G. *chusqueae* (Pat.) S. & S.
- D. *litigiosa* (Desm.) Hoehn.
- H. *chusqueae* Pat.
- H. *evanescens* (Rehm) T. & S.
- I. *areolata* Doidge
- H. *guaranitica* Speg.
- H. *tenella* (Syd.) T. & S.
- I. *psychotriae* (Syd.) T. & S.

- Lauterbachiella** Henn. Engler Bot. Jahrb. 25:508 1898; T. & S. Ann. Myc. 13:220 1915.
- Lembosiodothis** Hoehn. Ann. Myc. 15:369 1917.
- Leptodothis** Theiss. & Syd. Ann. Myc. 12:268 1914; 13:248 1915.
- Leptopeltis** Hoehn. Ber. Deut. Bot. Ges. 35:358 1917.
- Leptopeltella** Hoehn. Ber. Deut. Bot. Ges. 35:418 1917; Syll. Fung. 24:1115 1928.
- Lichenopeltella** Hoehn. Sitzb. Akad. Wien 128:553 1919.
- Macowaniella** Doidge Bothalia 1:9, ill. 1921.
- Marchalia** Sacc. Syll. Fung. 8:737 1889; T. & S. Ann. Myc. 13:251 1915.
- Melanochlamys** Syd. Mem. Soc. Neuch. 5:438 1912; Ann. Myc. 13:264 1915.
- Melanoplaca** Syd. Ann. Myc. 15:222 1917.
- Mendogia** Rac. Par. Alg. Pilz. Java 3:31 1900.
- Uleopeltis** Henn. Hedwigia 43:267 1904; Hoehn. Frag. Myk. 638; T. & S. Ann. Myc. 13:217 1915.
- Microdothella** Syd. Phil. Jour. Sci. 9:169 1914.
- Ellisiodothis** Theiss. Ann. Myc. 12:73 1914; T. & S. 13:246 1915.
- Monorhiza** Theiss. & Syd. Ann. Myc. 13:218 1915.
- Monorhizina** Theiss. & Syd. Ann. Myc. 13:220 1915.
- Munkiella** Speg. Fung. Guar. 1:283 1883; T. & S. Ann. Myc. 13:262 1915.
- Isomunkia** Theiss. & Syd. Ann. Myc. 13:261 1915.
- Placosoma** Syd. Ann. Myc. 22:303, ill. 1924.
- Synostomella** Syd. Ann. Myc. 25:43 1927.
- Palawania** Syd. Phil. Jour. Sci. 9:171, ill. 1914.
- Palawaniella** Doidge Bothalia 1:16, ill. 1921.
- Parastigmatea** Doidge Ib. 1:22 1921.
- Parmulariella** Henn. Hedwigia 43:266 1904; Hoehn. Frag. Myk. 639; T. & S. Ann. Myc. 13:205 1915.
- Parmulina** Theiss. & Syd. Ann. Myc. 12:194 1914; 13:195 1915.
- Placasterella** Sacc. Ann. Myc. 8:338 1910; T. & S. 13:236 1915.
- Pleostomella** Syd. Ann. Myc. 15:221 1917.
- Polycyclina** Theiss. & Syd. Ann. Myc. 13:212 1915.
- Polycyclus** Hoehn. Frag. Myc. 465; T. & S. Ann. Myc. 13:210 1915.
- Cocconiopsis** Arnaud Ann. Agr. Montp. 16:113, ill. 1918.
- L. pteridis** Henn.
- L. dickiae** Hoehn.
- L. atramentaria** (B. & C.) T. & S.
- L. filicina** (Lib.) Hoehn.
- L. perexigua** (Speg.) Hoehn.
- L. maculans** (Zopf) Hoehn.
- M. congesta** (Wint.) Doidge
- M. constellata** (B. & Br.) Sacc.
- M. leucoptera** Syd.
- M. dipteridis** Syd.
- M. bambusina** Rac.
- U. manaosensis** Henn.
- M. culmicola** Syd.
- E. inquinans** (E. & E.) Theiss.
- M. longissima** Rac.
- M. filicina** (B. & Br.) T. & S.
- M. caaguazu** Speg.
- I. pulvinula** (Pat.) T. & S.
- P. nothopanacis** Syd.
- S. costaricensis** Syd.
- P. grandis** (Niessl.) Syd.
- P. eucleae** Doidge
- P. nervisita** Doidge
- P. vernoniae** Henn.
- P. exculpta** (Berk.) T. & S.
- P. schweinfurthi** (Henn.) T. & S.
- P. philippinensis** Syd.
- P. rhytismoides** (Speg.) T. & S.
- P. andinus** (Pat.)
- C. theissenii** (Rick.) Arn.

- Polyrhizum* Theiss. & Syd. Ann. Myc. 12:281 1914.
- Polystomella* Speg. Fung. Guar. 2:137 1886; T. & S. Ann. Myc. 12:63 1914; 13:242 1915; Hoehn. Frag. Myk. 316, 533, 664; 1913.
- Protothyrium* Arnaud Comp. Rend. 164:574 1917.
- Pseudolembosia* Theiss. Ann. Myc. 11:257 1913; T. & S. Ib. 13:257 1915.
- Rhagadolobium* Henn. & Lind. Engler Bot. Jahrb. 23:287, ill. 1897; Hoehn. Frag. Myk. 633, 1061.
- Myriostigma* Arnaud Ann. Sci. Nat. 10:7:721, ill. 1925.
- Rhipidocarpum* Theiss. & Syd. Ann. Myc. 13:197, ill. 1915.
- Schneepia* Speg. Fung. Guar. 1:133 1883; T. & S. Ann. Myc. 13:199 1915.
- Parmularia* Lev. Ann. Sci. Nat. 3:5:236 1846.
- Scolionema* Theiss & Syd. Ann. Myc. 15:410 1917.
- Stigmatea* Fr. Sum. Veg. Scan. 421 1849; cf. Hoehn. Ann. Myc. 16:172 1918.
- Stigmatodothis* Syd. Phil. Jour. Sci. 9:173, ill. 1914; Ann. Myc. 13:263 1915.
- Sympeltis* Syd. Ann. Myc. 15:221 1917.
- Vizella* Sacc. Syll. Fung. 2:662 1883; Theiss. Broteria 12:13 1914.
- P. terminaliae* (Syd.) T. & S.
- P. pulcherrima* Speg.
- P. salvadorae* (Cke.) Arn.
- P. geographica* (Mass.) Theiss.
- R. hermiteliae* Henn. & Lind.
- M. guatteriae* Arn.
- R. javanicum* (Pat.) T. & S.
- S. guaranitica* Speg.
- P. styracis* Lev.
- S. palmarum* (Kze.) T. & S.
- S. robertiani* Fr.
- S. palawanensis* Syd.
- S. loranthi* Syd.
- V. conferta* (Cke.) Sacc.

MICROTHYRIACEAE

- Actinomyxa* Syd. Ann. Myc. 15:146 1917.
- Amazonia* Theiss. Ann. Myc. 11:499, ill. 1913.
- Asterina* Lev. Ann. Sci. Nat. 3:3:59 1845.
- Anariste* Syd. Ann. Myc. 25:76 1927.
- Asterella* Sacc. Syll. Fung. 9:393 1891; Theiss. Myc. Cent. 3:274 1913.
- Asterolibertia* Arnaud Ann. Agr. Montp. 16:165, ill. 1918.
- Clypeolella* Hoehn. Frag. Myk. 478 1910; Theiss. Cent. Bakt. 2:229 1912.
- Dimerosporium* Fkl. Symb. Myc. 89 1869; Hoehn. Frag. Myk. 477.
- Halbanina* Arnaud Ann. Agr. Montp. 16:63 1918.
- Myxasterina* Hoehn. Sitzb. Akad. Wien 118:870 1909.
- Opeasterina* Speg. Bol. Acad. Cordoba 23:498 1919.
- Prillieuxina* Arnaud Ann. Agr. Montp. 16:161, ill. 1918.
- Trichasterina* Arnaud Ib. 16:172, ill. 1918.
- Wardina* Arnaud Ib. 16:165 1918.
- A. australiensis* Syd.
- A. psychotriae* (Henn.) Theiss.
- A. azarae* Lev.
- A. poliothea* Syd.
- A. megalospora* (B. & C.) Theiss.
- A. couepiae* (Henn.) Arn.
- C. inversa* Hoehn.
- D. veronicae* (Lib.) Fkl.
- H. irregularis* (Syd.) Arn.
- M. strychni* Hoehn.
- O. aspidii* (Henn.) Theiss.
- P. winteriana* (Pass.) Arn.
- T. styracis* (Theiss.) Arn.
- W. mycocoproides* (S. & B.) Arn.

- Asterinella* Theiss. Ann. Myc. 10:160 1912.
Hariotula Arnaud Les Asterin. 201 1918.
Maublancia Arnaud Ann. Agr. Montp. 16:158 1918.
Asteromyxa Theiss. Ann. Myc. 15:419 1917.
Aulographella Hoehn. Ann. Myc. 15:367 1917.
Aulographis Hoehn. Ann. Myc. 15:364 1917; 16:150 1918.
Beelia Stev. & Ryan Bishop Mus. Bull. 19:71, ill. 1925.
Brefeldiella Speg. Bol. Acad. Cordoba 11:558 1888.
Caenothyrium Theiss. & Syd. Ann. Myc. 15:417 1917.
Calothyriella Hoehn. Ann. Myc. 15:371 1917; cf. Petr. Ann. Myc. 25:326 1927.
Calothyriolum Speg. Bol. Acad. Cordoba 23:498 1919.
Calothyris Stev. & Ryan Bishop Mus. Bull. 19:71, ill. 1925; for *Calothyriopeltis*.
Calothyrium Theiss. Ann. Myc. 10:160 1912; cf. Petr. Ann. Myc. 25:326 1927.
Leptopeltina Speg. Bol. Acad. Cordoba 27:397 1923.
Ptychopeltis Syd. Ann. Myc. 25:78, ill. 1927.
Campoa Speg. Bol. Acad. Cordoba 25:90 ill. 1921.
Caudella Syd. Ann. Myc. 14:90, ill. 1916; Hoehn. Frag. Myk. 1085.
Chaetothyriopsis Stev. & Dorman Mycologia 19:237, ill. 1927.
Clypeolina Theiss. Ann. Myc. 15:419 1917.
Opeasterinella Speg. Bol. Acad. Cordoba 23:498 1919.
Polythyrium Syd. Ann. Myc. 27:64 1929.
Coscinopeltis Speg. An. Mus. Nac. 19:425, ill. 1909; Theiss. Myc. Cent. 3:276, ill. 1913.
Echinodella Theiss. & Syd. Ann. Myc. 15:422 1917.
Echinodes Theiss. & Syd. 1b.
Englerulaster Hoehn. Frag. Myk. 520 1910; Theiss. Broteria, 78 1914.
Hadotia Maire Bull. Soc. Sci. Nancy 1906:11.
Halbania Rac. Crypt. Par. Java 89 1889; Theiss. Myc. Cent. 3:277 1913; Hoehn. Sitzb. Akad. Wien 118:1168 1909.
Scutellum Speg. Fung. Arg. 4:161 1881.
Halbaniella Theiss. Ann. Myc. 14:430 1916.
Asteridium Speg. Bol. Acad. Cordoba 26:349 1923.
Asteridiellina Scaver & Toro Sci. Surv. P.R. 8:25 1926.
Platypeltella Petr. Ann. Myc. 27:62 1929.
A. puiggari (Speg.) Theiss.
H. loranthi (K. & H.) Arn.
M. myrtacearum Arn.
A. hirtula (Speg.) Theiss.
A. epilobii (Lib.) Hoehn.
A. hederæ (Lib.) Hoehn.
B. suttoniae S. & R.
B. brasiliensis Speg.
C. alang-alang (Rac.) T. & S.
C. pinophylla Hoehn.
C. caaguazuense Speg.
C. scaevola S. & R.
C. nebulosum (Speg.) Theiss.
L. antarctica Speg.
P. roupalæ Syd.
C. pulcherrima Speg.
C. oligotricha Syd.
C. panamensis S. & D.
C. apus Theiss.
O. brasiliensis Speg.
P. costaricensis Syd.
C. argentinensis Speg.
E. linearis Syd.
E. lituræ (Cke.) T. & S.
E. orbicularis (B. & C.) Hoehn.
H. nivalis Maire
H. cyathearum Rac.
S. paradoxum Speg.
H. javanica (Rac.) Theiss.
A. portoricense Speg.
A. portoricensis (Speg.) S. & T.
P. smilacis Petr.

- Kriegeriella* Hoehn. Ann. Myc. 16:39 1918. K. *mirabilis* Hoehn.
Lembosia Lev. Ann. Sci. Nat. 3:3:58 1845. L. *tenella* Lev.
Balansina Arnaud Ann. Agr. Montp. 16:123, ill. 1918.
Cirsosia Arnaud Ib. 127. B. *stellata* Arn.
Maurodothella Arnaud Ib. 124. C. *manasensis* Arn.
Lembosiella Sacc. Syll. Fung. 9:1101 1891; M. *psychotriae* Arn.
Theiss. Myc. Cent. 3:278 1913. L. *polyspora* (Pat.) Sacc.
Lembosina Theiss. Ann. Myc. 11:437 1913. L. *aulographoides* (B. R. S.) Theiss.
Lembosiopsis Theiss. Ann. Myc. 11:435 1913. L. *andromedae* (Tracy & Earle) Theiss.
Uleothyrium Petr. Ann. Myc. 27:388 1929. U. *amazonicum* Petr.
Meliolaster Doidge Trans Roy. Soc. S. Afr. 8:123 1920. M. *mackenzi* Doidge
Micropeltopsis Wain. Act. Soc. Fenn. 49:118 1921. M. *cetraricola* Wain.
Microthyris Clem.; *Microthyrium* lichenicolum. M. *maculans* (Zopf) Clem.
Microthyrium Desm. Ann. Sci. Nat. 2:15:138 1841. M. *microscopicum* Desm.
Aphanopeltis Syd. Ann. Myc. 25:82 1927. A. *phoebes* Syd.
Calopeltis Syd. Ann. Myc. 23:392, ill. 1925. C. *acnisti* Syd.
Microthyriolum Speg. Bol. Acad. Cordoba 23:136 1919. M. *apiahynum* Speg.
Niessella Hoehn. Ber. Deut. Bot. Ges. 36:468 1918. N. *scirpicola* (Fkl.) Hoehn.
Morenella Speg. Fung. Guar. 1:258 1883. M. *ampulluligera* Speg.
Cirsosiella Arnaud Ann. Agr. Montp. 16:127, ill. 1918. C. *transversalis* (Syd.) Arn.
Morenina Theiss. Ann. Myc. 11:432 1913. M. *antarctica* (Speg.) Theiss.
Myiocoprella Sacc. Nuov. Giorn. Ital. 23:199 1916. M. *bakeri* Sacc.
Myiocoprum Speg. Fung. Arg. 2:142 1880; Theiss. Myc. Cent. 3:279 1913. M. *corrientinum* Speg.
Parasterina Theiss. & Syd. Ann. Myc. 15:246 1917. P. *melastomatis* (Lev.) Theiss.
Peltella Syd. Ann. Myc. 15:237 1917. P. *conjuncta* Syd.
Phragmoscutella Woron. & Abram. Ann. Myc. 24:231 1926. P. *abchastica* W. & A.
Phragmothyrium Hoehn. Sitzb. Akad. Wien 121:347 1912. P. *hymenophylli* (Pat.) Hoehn.
Pycnocarpum Theiss. Abh. z-b. Ges. Wien 7:31, ill. 1913. P. *magnificum* (Syd. & Butl.) Theiss.
Eupelte Syd. Ann. Myc. 22:426, ill. 1924. E. *amicta* Syd.
Pycnoderma Syd. Ann. Myc. 12:563 1914. P. *bambusinum* Syd.
Pycnopeltis Syd. Ann. Myc. 14:365 1916. P. *bakeri* Syd.
Rhaphidocyrtes Wain. Act. Soc. Fenn. 49:217 1921. R. *trichosporella* (Nyl.) Wain.
Seynesia Sacc. Syll. Fung. 2:668 1883. S. *nobilis* (W. & C.) Sacc.
Arnaudiella Petr. Ann. Myc. 25:339 1927. A. *caronae* (Pass.) Petr.
Ferrarisia Sacc. Att. Acad. Ven. 3:10:61 1919. F. *philippina* Sacc.
Seynesiola Speg. Bol. Acad. Cordoba 23:498 1919. S. *chilensis* Speg.

- Stegothyrium* Hoehn. Sitzb. Akad. Wien 127:382 1918.
Stephanotheca Syd. Phil. Jour. Sci. 9:178, ill. 1914.
Symphaster Theiss. & Syd. Ann. Myc. 13:217, 668 1915.
Thallochaete Theiss. Ann. Myc. 11:501, ill. 1913.
Anariste Syd. Ann. Myc. 25:76 1927.
Thyrosoma Syd. Ann. Myc. 19:307 1921.
Trichopeltella Hoehn. Frag. Myk. 521 1910.
Trichopeltina Theiss. Cent. Bakt. 39:630, ill. 1914.
Trichopeltopsis Hoehn. Sitzb. Akad. Wien 118:861 1909.
Trichopeltis Speg. Bol. Acad. Cordoba 11:571 1889.
Trichopeltula Theiss. Cent. Bakt. 39:636, ill. 1914.
Yatesula Syd. Ann. Myc. 15:237 1917.
- S. denudans* (Rehm) Hoehn.
S. micromera Syd.
S. gesneraceae (Henn.) T. & S.
T. ingae Theiss.
A. poliothea Syd.
T. pulchellum Syd.
T. montana (Rac.) Hoehn.
T. labecula (Mont.) Theiss.
T. reptans (B. & C.) Hoehn.
T. pulchella Speg.
T. hedycaryae Theiss.
Y. calami Syd.

MICROPELTACEAE

- Aphysa* Theiss. & Syd. Ann. Myc. 15:134 1917.
Chaetopeltopsis Theiss. Ann. Myc. 11:496 1913.
Plochmopeltidella Mendoza Bot. Gaz. 79:291, ill. 1925.
Chaetoplaca Syd. Ann. Myc. 15:232,432 1917.
Clypeolum Speg. Fung. Arg. 4:143 1882.
Calothyriopsis Hoehn. Sitz. Akad. Wien 128:552 1919.
Clypeolina Speg. Bol. Acad. Cordoba 26:393, ill. 1924.
Clypeolopsis Stev. & Manter Bot. Gaz. 79:287 1925.
Dictyopeltis Theiss. Ann. Myc. 11:468 1913.
Dictyothyrina Theiss. Ib.
Dictyothyrium Theiss. Oest. Bot. Zeits. 62:277 1912.
Eremotheca Theiss. & Syd. Ann. Myc. 15:235,431 1917.
Endocycla Syd. Ann. Myc. 25:90 1927.
Gymnopeltis Stev. Ill. Biol. Mon. 8:191, ill. 1923.
Eremothecella Syd. Ann. Myc. 15:236 1917; cf. Hoehn. Frag. Myk. 1145.
Griggia Stev. & Dalbey Bot. Gaz. 68:224, ill. 1919.
Haplopeltis Theiss. Broteria 12:88 1914.
Metathyriella Syd. Ann. Myc. 25:96 1927.
Micropeltella Syd. Ann. Myc. 11:404 1913.
Parapeltella Speg. Bol. Acad. Cordoba 23:143 1919.
- A. rhynchosiae* (K. & C.) T. & S.
C. tenuissima (Petch) Theiss.
P. smilacina Mendoza
C. memecyli Syd.
C. atrareolatum Speg.
C. conferta (Theiss.) Hoehn.
C. cubensis Speg.
C. cubensis (Speg.) S. & M.
D. vulgaris (Rac.) Theiss.
D. fecunda (Sacc.) Theiss.
D. chalybeum (Rehm) Theiss.
E. rufula (B. & C.) T. & S.
E. phoebes Syd.
G. trinidadensis Stev.
E. calamicola Syd.
G. cyathea S. & D.
H. bakeriana (Rehm) Theiss.
M. roupalae Syd.
M. clavisporea Syd.
P. macrosperma Speg.

- Phragmothyriella* Speg. Bol. Acad. Cordoba 23:506 1919; Syd. Ann. Myc. 18:186 1920.
- Micropeltis* Mont. Plant. Cell. Cuba 325 1842; Theiss. Myc. Cent. 3:278 1913.
- Dictyothyriella* Rehm Broteria 12:92 1914.
- Hormopeltis* Speg. Myc. Arg. 6:84 1912.
- Scolecopeltidella* Mendoza Bot. Gaz. 79:293, ill. 1925.
- Theciopeltis* Stev. & Manter Bot. Gaz. 79:285 1925.
- Microthyriella* Hoehn. Sitzb. Akad. Wien 118:370, ill. 1909.
- Mitopeltis* Speg. Bol. Acad. Cordoba 25:93, ill. 1923.
- Moesziella* Petr. Ann. Myc. 25:323 1927.
- Phaeaspis* Petch Ann. Bot. Gard. Peradeniya 7:33 1919; for *Phaeopeltis* Petch, not Clements 1909.
- Phragmothyriella* Hoehn. Frag. Myk. 725 1912.
- Plochmopeltis* Theiss. Broteria 12:87 1914.
- Polyclypeolum* Theiss. Ann. Myc. 12:67 1914.
- Protopeltis* Syd. Ann. Myc. 25:87 1927.
- Saccardinula* Speg. Fung. Guar. 1:257 1883; Syll. Fung. 9:1071 1891.
- Schizothyrium* Desm. Ann. Sci. Nat. 3:11:360 1849.
- Epipeltis* Theiss. Abh. z-b. Ges. Wien 7:26 1913.
- Scolecopeltis* Speg. Bol. Acad. Cordoba 574 1889; Theiss. Myc. Cent. 3:280 1913.
- Ophiopeltis* Alm. & Cam. Rev. Agron. 1:175, ill. 1903; Syll. Fung. 17:873 1905.
- Scolecopeltopsis* Hoehn. Frag. Myk. 218 1909.
- Scolecopeltium* Stev. & Manter Bot. Gaz. 79:282, ill. 1925; for *Scolecopeltidium*.
- Stigmatophragma* Tehon & Stout Mycologia 21:180, ill. 1929.
- Stomiopeltella* Theiss. Broteria 12:86 1914.
- Stomiopeltis* Theiss. Ib. 85
- P. albomarginata* Speg.
- M. applanata* Mont.
- D. bauhiniiae* Rehm
- H. bonplandi* Speg.
- S. palmarum* Mendoza
- T. guianensis* S. & M.
- M. ricki* (Rehm) Hoehn.
- M. chilensis* Speg.
- M. pulchella* Petr.
- P. gomphispora* (B. & Br.) Petch
- P. molleriana* (Sacc.) Hoehn.
- P. intricata* (E. & M.) Theiss.
- P. abietis* (Hoehn.) Theiss.
- P. roupalae* Syd.
- S. guaranitica* Speg.
- S. ptarmicae* Desm.
- E. gaultheriae* (Curt.) Theiss.
- S. tropicalis* Speg.
- O. oleae* A. & C.
- S. aeruginea* (Zimm.) Hoehn.
- S. salacense* (Rac.) S. & M.
- S. sassafrasicola* T. & S.
- S. nubecula* (B. & C.) Theiss.
- S. aspersa* (Berk.) Theiss.

Genera Incertae Sedis Vel Dubia

- Anomothallus* Stev. Bishop Mus. Bull. 19:91, ill. 1925. Asci and spores uncertain, sec. author.
- Cryptopeltis* Rehm. Ann. Myc. 4:409 1906; cf. Hoehn. Frag. Myk. 324 1909.
- Hyalasterina* Speg. Bol. Acad. Cordoba 23:498 1919.
- Microthyrites* Pampaloni Att. Acad. Linc. 5:11:251 1902; Jour. Myc. 12:64 1906.
- Murashkinskija* Petr. Hedwigia 68:203 1928.
- A. erraticus* Stev.
- C. obtecta* Rehm
- (no species given)
- M. disodilis* Pamp.
- M. juniperina* Petr.

- Neostomella* Syd. Ann. Myc. 25:38 1927.
Opethyrium Speg. Bol. Acad. Cordoba 23:498
 1919.
Patouillardina Arnaud Comp. Rend. 159:890
 1917.
Phaeoscutella Henn. Hedwigia 43:382, ill.
 1904. Not a fungus, sec. Hoehn. Frag.
 Myk. 685.
Piptostoma B. & Br. Fung. Ceylon 1135
 1870; Syll. Fung. 9:1054 1891.
Rheumatopeltis Stev. Ill. Biol. Mon. 11:24, ill.
 1927.
Synesiella Arnaud Ann. Agr. Montp. 16:202,
 ill. 1918.
Synsiopeltis Stev. & Ryan Bishop Mus.
 Bull. 16:69, ill. 1925.
Thyriascus Schulzer Flora 60:51 1877;
 Theiss. & Syd. Ann. Myc. 15:433 1917.
Trichothallus Stev. Bishop Mus. Bull. 19:85,
 ill. 1925. Sterile thallus without peri-
 thecia or pycnidia, sec. author.
- N. tabernaemontanae* Syd.
 (no species given)
P. clavispora (Pat.) Arn.
P. gynerii Henn.
P. spilota B. & Br.
R. querci Stev.
S. juniperi (Desm.) Arn.
S. tetraplasandrae S. & R.
T. quercinus Schulz.
T. hawaiiensis Stev.

PHACIDIALES

HYSTERIACEAE

- Aldona* Rac. Par. Alg. Pilz. Java 1:19 1900.
Aulographum Lib. Crypt. Ard. n. 272 1834.
Bifusella Hoehn. Ann. Myc. 15:318 1917.
Bulliardella Sacc. Syll. Fung. 2:764, as subg.;
 17:902 1905.
Ostreionella Seaver Sci. Surv. P. R. 8:77
 1926.
Dichaena Fr. Sum. Veg. Scan. 403 1849.
Farlowiella Sacc. Syll. Fung. 9:1100 1891;
 for *Farlowia* Sacc. Ib. 2:727 1883, not
 Agardh 1876.
Gloniella Sacc. Syll. Fung. 2:765 1883.
Gloniopsis DeNot. Pir. Ister. 23 1847.
Glonium Mühlenberg Cat. Am. 101 1813; cf.
 Fr. Syst. Myc. 2:594 1821.
Psiloglonium Hoehn. Ann. Myc. 16:147
 1918 as subg.; Petrak Ann. Myc. 21:227
 1923.
Graphyllum Clem. Rep. Bot. Surv. Nebr. 5:6
 1901; cf. Hoehn. Ann. Myc. 16:212 1918.
Hadotia Maire Bull. Soc. Nancy 3:7:174
 1906.
Hypoderma DC. Flor. Fr. 2:304 1805.
Hysteropeltella Petrak Ann. Myc. 21:9
 1923.
Hypodermella Tubeuf Bot. Cent. 1:48 1895.
Hypodermellina Hoehn. Ann. Myc. 15:303
 1917.
- A. stella-nigra* Rac.
A. vagum Desm.
B. linearis (Pk.) Hoehn.
B. beccarini Paoli
O. fusispora Seav.
D. quercina (Pers.) Fr.
F. repanda (Blox.) Sacc.
G. lapponica (Karst.) Sacc.
G. decipiens DeN.
G. stellatum Mühl.
P. lineare (Fr.) Petrak
G. chloes Clem.
H. nivalis Maire
H. virgultorum DC.
H. moravica Petrak
H. larcis Tubeuf
H. ruborum Hoehn.

- Lophodermella* Hoehn. Sitz. Akad. Wien
126:294 1917.
- Hypodermopsis* Earle Jour. N. Y. Bot. Gard.
3:345 1902.
- Hysterium* Tode Fung. Meckl. 2:4 1790.
- Hysteroglonium* Rehm Rabh. Krypt. Flor.
3:35 1896; Lindau Nat. Pflanzenf. 1:1:274
1897.
- Xyloschizum* Syd. Ann. Myc. 20:192 1922.
- Hysterographium* Corda Icon. 5:34 1842.
- Fragosoa* Cif. Bol. Espan. Hist. Nat.
26:194, ill. 1926.
- Hysteropsis* Speg. Rev. Fac. La Plata 2:308,
ill. 1906.
- Polhysterium* Speg. An. Mus. Nac. 23:37
1912; Syll. Fung. 24:1122 1928.
- Hysteropsis* Rehm Rabh. Krypt. Flor. 3:36
1896.
- Lophium* Fr. Syst. Myc. 2:533 1821.
- Lophodermium* Chevallier Fl. Gen. Paris 1:436
1826.
- Lophodermellina* Hoehn. Ann. Myc. 15:311
1917.
- Lophodermina* Hoehn. Ann. Myc. 15:312
1917.
- Mytilidium* Duby Mem. Hyster. 62 1881.
- Ostreium* Duby Mem. Hyster. 21, ill. 1881;
Syll. Fung. 2:765 1883.
- L. sulcigena* (Link) Hoehn.
- H. sequoiae* Earle
- H. pulicare* Pers.
- H. ovatum* (Cke.) Lind.
- X. weirianum* Syd.
- H. fraxini* (Pers.) DeN.
- F. aterrima* Cif.
- H. brasiliensis* Speg.
- P. cuyanum* Speg.
- H. culmigena* Rehm
- L. mytilinum* (Pers.) Fr.
- L. arundinaceum* (Schrad.) Chev.
- L. hysteroioides* (Pers.) Hoehn.
- L. melaleucum* (Fr.) Hoehn.
- M. aggregatum* Duby
- O. americanum* Duby

GRAPHIDACEAE

Arthoniae

- Allarthonia* Nyl. Flora 61:246 1878.
- Allarthonium* (Wain.) Zahlbr. Nat.
Pflanzenf. 1:1:91 1903.
- Arthonia* (Ach.) Zahlbr. Nat. Pflanzenf. 1:1:89
1903.
- Arthoniopsis* Müll. Arg. Lich. Epi. Nov. 17
1890.
- Arthonium* Mass. Ric. Aut. Lich. 54 1852.
- Celidium* Tul. Ann. Sci. Nat. 3:17:120 1852.
- Conida* Mass. Flora 40:488 1856
- Coniocarpum* DC. Flor. Fr. ed. 3 2:323 1805.
- Diarthonis* Clem. Gen. Fung. 58,174 1909.
- Gymnographa* Müll. Arg. Flora 70:62 1887.
- Lecidiopsis* Rehm. Rabh. Krypt. Fl. 3:432
1896.
- Merarthonis* Clem. Gen. Fung. 40,174 1909.
- Phacopsis* Tul. Ann. Sci. Nat. 3:17:124 1852.
- Plearthonis* Clem. Gen. Fung. 40,174 1909.
- Synarthonia* Müll. Arg. Bull. Soc. Bot. Belg.
30:85 1891.
- Trichophyma* Rehm Hedwigia 44:7 1905.
- A. patellulata* (Nyl.) Zahlbr.
- A. albovirescens* (Wain.) Zahlbr.
- A. radiata* (Pers.) Th. Fr.
- A. obesa* Müll. Arg.
- A. spectabile* (Fw.) Mass.
- C. stictarum* (DeN.) Tul.
- C. clemens* Tul.
- C. gregarium* (Weig.) Koerb.
- D. lurida* (Ach.) Clem.
- G. medusulina* Müll. Arg.
- L. galactites* (DC.) Rehm
- M. leptosperma* (Müll. Arg.) Clem.
- P. vulpina* Tul.
- P. caesia* (Fw.) Clem.
- S. bicolor* Müll. Arg.
- T. buchsoiae* Rehm

Graphidaceae

- Acanthothecis* Wain. Clem. Gen. Fung. 59
1909, for
Acanthothecium Wain. Etud. Lich. Bres.
2:93 1890; not Speg. 1889.
Acanthotheciopsis Zahlbr. Nat. Pflanzenf.
8:117 1926.
Anomorpha Nyl. Lich. Ins. Guin. 50 1889.
Digraphis Clem. Gen. Fung. 59:174 1909.
Aulaxina Fee Essai Crypt. 60 1824.
Diplogramma Müll. Arg. Nuov. Giorn. Ital.
23:399 1891.
Encephalographa Mass. Gen. Lich. 13 1854.
Fouragea Trev. Ren. Ist. Lomb. 13:67 1880.
Graphina Müll. Arg. Flora 63:22 1880.
Graphinella Zahlbr. Cat. Lich. Univ. 285
1923.
Graphis (Adans.) Müll. Arg. Mem. Soc.
Geneve 29:28 1887.
Helminthocarpum Fee Essai Crypt. 156 1824.
Dictyographa Müll. Arg. Bull. Herb. Boiss.
1:131 1893.
Lithographa Nyl. Act. Soc. Linn. Bord.
21:393 1856.
Melaspilea Nyl. Act. Soc. Linn. Bord. 21:416
1856.
Micrographa Müll. Arg. Flora 73:194 1890.
Opegrapha Humb. Fl. Frib. Spec. 57 1793.
Phaeographina Müll. Arg. Flora 65:398 1882.
Phaeographis Müll. Arg. Flora 65:336 1882.
Psorographis Clem. Gen. Fung. 59:174 1909.
Ptychographa Nyl. Jour. Bot. 12:257 1874.
Sclerographis Zahlbr. Nat. Pflanzenf. 8:111
1926.
Spirographa Zahlbr. Nat. Pflanzenf. 1:1:96
1903.
Xylographa Fr. Fl. Scan. 334 1835.
Xyloschistes Wain. Medd. Soc. Fenn. 10:149
1883.
- A. pachygraphoides* Wain.
A. pachygraphoides (Wain.) Zahlbr.
A. turbulenta Nyl.
D. turbulenta (Nyl.) Clem.
A. opegraphina Fee
D. australiense Müll. Arg.
E. cerebrina (Ram.) Mass.
F. filicina (Mont.) Trev.
G. globosa (Fee) M. A.
G. fusisporrella (Nyl.) Zahlbr.
G. scripta (L.) Ach.
H. leprevosti Fee
D. arabica Müll. Arg.
L. tesserata (DC.) Nyl.
M. arthonioides (Fee) Nyl.
M. anisomera Müll. Arg.
O. varia Pers.
P. prosiliens (M. & B.) M. A.
P. sordida (Fee) M. A.
P. clavuliger (Wain.) Clem.
P. xylographoides Nyl.
S. quinqueseptata (Wain.) Zahlbr.
S. fusisporrella (Nyl.) Zahlbr.
X. parallela (Ach.) Fr.
X. platytropa (Nyl.) Wain.

Dirinae

- Cyclographa* Wain. Ann. Acad. Fenn.
A:15:295 1921.
Dirina Fr. Syst. Orb. Veg. 1:244 1825.
Dirinastrum Müll. Arg. Bull. Herb. Boiss.
1:55 1893.
C. interposita Wain.
D. repanda (Fr.) Nyl.
D. australiense Müll. Arg.

Roccellae

- Combea* DeN. Giorn. Bot. Ital. 1:1:225 1846.
Darbishirella Zahlbr. Ber. Deut. Bot. Ges.
16:13 1898.
Dendrographa Darbishire Ber. Deut. Bot.
Ges. 13:313 1895.
C. mollusca (Ach.) DeN.
D. gracillima (Darb.) Zahlbr.
D. leucophaea (Tuck.) Darb.

- Ingaderia* Darbshire Ber. Deut. Bot. Ges.
16:14 1898. I. *pulcherrima* Darb.
- Pentagenella* Darbshire Ber. Deut. Bot. Ges.
15:5 1897. P. *fragillima* Darb.
- Reinkella* Darbshire Bull. Herb. Boiss. 5:764
1897. R. *lirellina* Darb.
- Roccella* DC. Flor. Fr. ed. 3 2:334 1805. R. *fuciformis* DC.
- Roccellaria* Darbshire Ber. Deut. Bot. Ges.
15:6 1897. R. *intricata* (Mont.) Darb.
- Roccellina* Darbshire Ber. Deut. Bot. Ges.
16:11 1898. R. *condensata* Darb.
- Roccellographa* Stnr. Denks. Akad. Wien
71:98 1902. R. *cretacea* Stnr.
- Schizopelte* Th. Fr. Flora 58:143 1875. S. *californica* Th. Fr.
- Simonyella* Stnr. Denks. Akad. Wien 71:96.
1902. S. *variegata* Stnr.

Chiodectae

- Chiodectum* (Ach.) Müll. Arg. Mem. Soc.
Geneve 29:65 1887. C. *sphaerale* Ach.
- Enterodictyum* Müll. Arg. Jour. Linn. Soc.
29:230 1892. E. *indicum* Müll. Arg.
- Medusulina* Müll. Arg. Bull. Herb. Boiss.
2:93 1894. M. *nitida* (Eschw.) M. A.
- Enterostigma* Müll. Arg. Flora 68:254 1885. E. *compunctum* (Ach.) M. A.
- Glyphis* (Ach.) Fee Essai Crypt. 38,61 1824. G. *cicatrosa* (Ach.) Zahlbr.
- Mazosia* Mass. Neag. Lich. 9 1854. M. *rotula* (Mont.) M. A.
- Minksia* Müll. Arg. Proc. Roy. Soc. Edin.
11:469 1882. M. *caesiella* Müll. Arg.
- Pycnographa* Müll. Arg. Flora 73:194 1890. P. *radians* Müll. Arg.
- Rotularia* Zahlbr. Nat. Pflanzenf. 8:122 1926. R. *bambusae* (Wain.) Zahlbr.
- Sarcographa* Fee Essai Crypt. 35,58 1824. S. *labyrinthica* (Ach.) M. A.
- Sarcographina* Müll. Arg. Flora 70:425 1887. S. *cyclospora* Müll. Arg.
- Sclerophyllum* Eschw. Syst. Lich. 14 1824. S. *elegans* Eschw.

Genera Incertae Sedis Vel Dubia

- Cf. *Zahlbruckner* Nat. Pflanzenf. 8:107,127
1926.

PHACIDIACEAE

- Bifusella* Hoehn. Ann. Myc. 15:318 1917. B. *linearis* (Pk.) Hoehn.
- Bonanseia* Sacc. Jour. Myc. 12:50 1906; Ann.
Myc. 4:362 1906. B. *mexicana* Sacc.
- Clithriss* Fr. Syst. Myc. 2:189 1822. C. *quercina* (Pers.) Fr.
- Colpoma* Wallr. Fl. Crypt. Germ. 2:422
1833. C. *quercinum* (Pers.) Wallr.
- Sporomega* Corda Icon. Fung. 5:34 1840. S. *degenerans* (Fr.) Corda
- Coccomyces* DeNot. Giorn. Bot. Ital. 2:38
1847. C. *coronatus* (Schum.) DeN.
- Coccomycella* Hoehn. Ann. Myc. 15:323
1917. C. *quercina* (Desm.) Hoehn.
- Coccomycetella* Hoehn. Ann. Myc. 15:309
1917. C. *belonospora* (Nyl.) Hoehn.

- Coccophacidium* Rehm. Rabh. Krypt. Fl. 3:97 1896.
- Therrya* Sacc. *Michelia* 2:604 1882; cf. Hoehn. *Frag. Myk.* 778.
- Criella* Sacc. *Syll. Fung.* 8:756 1889; 16:786 1902.
- Nymanomyces* Henn. *Monsunia* 1:28 1900; cf. Hoehn. *Ann. Myc.* 16:154 1918.
- Phaeorhytisma* Henn. *Monsunia* 1:29 1900.
- Synglonium* Penz. & Sacc. *Malpighia* 11:526 1897; cf. Hoehn. *Ann. Myc.* 16:154 1918.
- Cryptomyces* Grev. *Scot. Crypt. Fl.* 4:206 1826.
- Cryptomycina* Hoehn. *Ann. Myc.* 15:321 1917.
- Dothiora* Fr. *Sum. Veg. Scan.* 419 1849.
- Keisslerina* Petr. *Ann. Myc.* 17:75 1919.
- Keithia* Sacc. *Syll. Fung.* 10:49 1892.
- Didymascella* Maire & Sacc. *Syll. Fung.* 18:162 1906; 22:748 1913.
- Phacidium* Fr. *Syst. Myc.* 2:371 1822.
- Phacidiella* Poteb. *Zeits. Pflanzenk.* 22:147, ill. 1912; *Syll. Fung.* 24:1261 1928.
- Phacidina* Hoehn. *Ann. Myc.* 15:324 1917.
- Phacidiostroma* Hoehn. *Ann. Myc.* 15:324 1917.
- Rhabdocline* Syd. *Ann. Myc.* 20:194 1922.
- Phaeophacidium* Henn. & Lind. *Hedwigia* 36:234 1897.
- Hymenobolus* Dur. & Mont. *Ann. Sci. Nat.* 3:4:359 1845; Hoehn. *Frag. Myk.* 647,1139.
- Pseudotrochila* Hoehn. *Ber. Deut. Bot. Ges.* 35:416 1917.
- Pseudographis* Nyl. *Herb. Fenn.* 96. 1855.
- Pseudophacidium* Karst. *Act. Soc. Fenn.* 2:157.
- Leptophacidium* Hoehn. *Sitzb. Akad. Wien* 127:331 1918.
- Myxophacidiella* Hoehn. *Sitzb. Akad. Wien* 126:301 1917.
- Myxophacidium* Hoehn. *Sitzb. Akad. Wien* 126:301 1917.
- Rhytisma* Fr. *Syst. Myc.* 2:569 1822.
- Duplicaria* Fkl. *Symb. Myc.* 265, ill. 1869.
- Pachyrhytisma* Hoehn. *Ann. Myc.* 15:317 1917.
- Placuntium* Ehrenb. *Sylv. Myc. Berol.* 17 1818.
- Xyloma* Pers. *Tent. Disp. Fung.* 5, ill. 1797.
- Schizothyrium* Desm. *Ann. Sci. Nat.* 3:11:360 1852.
- Epipeltis* Theiss. *Abh. z-b. Ges. Wien* 7:3:30 1913; cf. Hoehn. *Ann. Myc.* 15:296 1917.
- C. pini* (A. & S.) Rehm
- T. gallica* Sacc. & Penz.
- C. austrocaledona* (Crie) Sacc.
- N. aceris-laurini* (Pat.) Rac.
- P. lonicerae* Henn.
- S. insigne* P. & S.
- C. maximus* (Fr.) Rehm.
- C. pteridis* (Rebent.) Hoehn.
- D. sphaeroides* (Pers.) Fr.
- K. moravica* Petr.
- K. tetraspora* (Phill.) Sacc.
- D. oxycedri* Maire & Sacc.
- P. lacerum* Fr.
- P. discolor* (M. & S.) Poteb.
- P. gracile* (Niessl) Hoehn.
- P. multivalve* (DC.) Hoehn.
- R. pseudotsugae* Syd.
- P. escalloniae* H. & L.
- H. agaves* D. & M.
- P. rhododendri* (Rac.) Hoehn.
- P. pinicola* (Nyl.) Rehm
- P. ledi* (A. & S.) Karst.
- L. umbelliferarum* (Rabh.) Hoehn.
- M. microsperma* (Fkl.) Hoehn.
- M. degenerans* (Karst.) Hoehn.
- R. acerinum* (Pers.) Fr.
- D. empetri* (Fr.) Fkl.
- P. symmetricum* (J. Mull.) Hoehn.
- P. andromedae* (Pers.) Ehrenb.
- X. salicinum* Pers.
- S. ptarmicae* Desm.
- E. gaultheriae* (Curt.) Theiss.

- Schizothyrioma* Hoehn. Ann. Myc. 15:297
1917; Syll. Fung. 24:1112 1928.
- Sphaeropeziza* Sacc. Consp. Gen. Disc. 14
1884.
- Tridens* Massee Jour. Myc. 10:221 1904.
- Haplophyse* Theiss. Ann. Myc. 14:267, ill.
1916.
- S. *ptarmicae* (Desm.) Hoehn.
- S. *vaccinii* (Rehm.) Sacc.
- T. *elegantissimum* (B. & C.)
Massee
- H. *oahuensis* Theiss.

Genera Incertae Sedis Vel Dubia

- Aporhytisma* Hoehn. Ann. Myc. 15:318 1917.
- Macroderma* Hoehn. Ber. Deut. Bot. Ges.
35:419 1917.
- Microsticta* Desm. Pl. Crypt. Fr. 1000 1839.
- Nothodiscus* Sacc. Nuov. Giorn. Ital. 24:38
1917; Syll. Fung. 24:1264 1928.
- A. *urticae* (Wallr.) Hoehn.
- M. *curtisi* (B. & R.) Hoehn.
- M. *pomi* Desm.
- N. *antoniae* Sacc.

STICTIDACEAE

- Briardia* Sacc. Rev. Myc. 7:159 1885.
- Carestiella* Bres. Malpighia 11:274 1897.
- Coccopeziza* Har. & Karst. Rev. Myc. 12:128
1890.
- Cryptodiscus* Corda Icon. Fung. 2:37 1838.
- Propoliopsis* Rehm. Leaf. Phil. Bot. 6:2279
1914.
- Diplocryptis* Clem. Gen. Fung. 63:174 1909.
- Diploneavia* Sacc. Syll. Fung. 8:666 1889.
- Ploettnera* Henn. Verh. Bot. Brandenb.
41:94 1899.
- Eupropolella* Hoehn. Ann. Myc. 15:311 1917.
- Eupropolis* DeN. Comm. Critt. 1:364 1864.
- Janseella* Henn. Monsumia 1:30,171 1889;
cf. Hoehn. Frag. Myk. 646.
- Flaminia* Sacc. & Syd. Syll. Fung. 16:777
1902.
- Habrosticktis* Fkl. Symb. Myc. 249 1869.
- Iridionia* Rac. Par. Alg. Pilz. Java 3:20 1900.
- Laquearia* Fr. Sum. Veg. Scan. 366 1849.
- Lasiostictis* Sacc. Misc. Myc. 2:24, ill. 1884.
- Lindauella* Rehm. Hedwigia 82 1900.
- Melittosporium* Corda Icon. Fung. 2:38 1838.
- Delpontia* Penz. & Sacc. Syll. Fung. 18:151
1906.
- Platysticta* Cooke & Massee Grevillea 17:95
1889.
- Merostictis* Clem. Gen. Fung. 64:174 1909.
- Melittosporiella* Hoehn. Ann. Myc. 16:211
1918; Syll. Fung. 24:1251 1928.
- Moutoniella* Penz. & Sacc. Syll. Fung. 18:163
1906; Hoehn. Frag. Myk. 777.
- Naemacyclus* Fkl. Symb. Myc. App. 2:49
1869.
- Naevia* Fr. Sum. Veg. Scan. 373 1849.
- Asteronaevia* Petr. Ann. Myc. 27:408 1929.
- B. *compta* Sacc.
- C. *socia* Bres.
- C. *ootheca* Har. & Karst.
- C. *pallidus* (Pers.) Cda.
- P. *arengae* Rehm
- D. *foveolaris* (Rehm) Clem.
- D. *caricum* (Auers.) Sacc.
- P. *coeruleoviridis* (Rehm.) Henn.
- E. *vaccinii* (Rehm) Hoehn.
- E. *guthnickiana* DeN.
- J. *asteriscus* Henn. & Nym.
- F. *amylospora* (Rehm) S. & S.
- H. *pallida* (Fkl.) Clem.
- I. *filicis* Rac.
- L. *sphaeralis* Fr.
- L. *conigena* Sacc. & Berl.
- L. *pyrenocarpis* Rehm
- M. *aeruginosum* (Pers.) Rehm.
- D. *pulchella* Penz.
- P. *simulans* C. & M.
- M. *emergens* (Karst.) Clem.
- M. *pulchella* Hoehn.
- M. *polita* P. & S.
- N. *niveus* (Pers.) Sacc.
- N. *minutula* (S. & M.) Rehm
- A. *trichophori* Petr.

- Stictostroma* Hoehn. Ann. Myc. 15:322 1917.
- Naeviella* Clem. Gen. Fung. 63,174 1909.
- Ocellaria* Tul. Sel. Fung. Carp. 3:129 1865.
- Ostropa* Fr. Sum. Veg. Scan. 401 1849.
- Phragmonaevia* Rehm Rabh. Krypt. Fl. 3:160 1896.
- Pleostictis* Rehm Ascom. Lojk. 70 1882.
- Propolidium* Sacc. Consp. Gen. Disc. 11 1884.
- Propolina* Sacc. Consp. Gen. Disc. 11 1884.
- Propolis* Fr. Sum. Veg. Scan. 372 1849.
- Schizoxylum* Pers. Ann. Wett. 1:11 1810.
- Stegia* Fr. Obs. Myc. 2:352 1818.
- Hysterostegiella* Hoehn. Sitzb. Akad. Wien 126:313, ill. 1929.
- Stegopeziza* Hoehn. Frag. Myk. 1010 1917.
- Stegopezizella* Syd. Ann. Myc. 22:392 1924.
- Stictophacidium* Rehm Ascom. 916 1888.
- Stictis* Pers. Observ. 2:73 1796.
- Cerion* Massee Bull. Misc. Inf. Kew 159 1901; Syll. Fung. 18:154 1906.
- Karstenia* Fr. Karst. Rev. 166 1885.
- Trochila* Fr. Sum. Veg. Scan. 387 1849.
- Pyrenotrochila* Hoehn. Ann. Myc. 15:332 1917.
- Sarcotrochila* Hoehn. Sitzb. Akad. Wien 126:309, ill. 1917.
- Xyloglyphis* Clem. Gen. Fung. 64,174 1909.
- Xylogramma* Wallr. Fl. Crypt. Germ. 509 1833.
- Xylographa* Fr. Syst. Myc. 2:197 1822.
- S. leopoldinum* (Rehm.) Hoehn.
- N. fuckeli* (Rehm) Clem.
- O. aurea* Tul.
- O. cinerea* (Pers.) Fr.
- P. libertiana* (S. & R.) Rehm
- P. propolidis* Rehm.
- P. glaucum* (Ell.) Sacc.
- P. cervina* Sacc.
- P. faginea* (Schrad.) Karst.
- S. berkeleyanum* (D. & L.) Fkl.
- S. lauri* (Cald.) Sacc.
- H. fenestrata* (Rob.) Hoehn.
- S. lauri* (Cald.) Hoehn.
- S. balsameae* (Davis) Syd.
- S. carniolicum* Rehm
- S. radiata* (L.) Pers.
- C. coccineum* M. & Rodway
- K. sorbina* (Karst.) Fr.
- T. craterium* (DC.) Fr.
- P. laurocerasi* (Desm.) Hoehn.
- S. alpina* (Fkl.) Hoehn.
- X. striola* (Fr.) Clem.
- X. sticticum* (Fr.) Wallr.
- X. parallela* (Ach.) Fr.

Genera Incertae Sedis Vel Dubia

- Didymascina* Hoehn. Ann. Myc. 3:331 1905.
- Leptocrea* Syd. Ann. Myc. 14:87 1916; cf. Hoehn. Frag. Myk. 1164.
- Phaneroomyces* Speg. & Har. Rev. Myc. 11:93 1889; Syll. Fung. 8:677 1889; cf. Lind. Nat. Pflanzenf. 1:1:349 1897.
- D. salicicola* (All.) Hoehn.
- L. orbiculata* Syd.
- P. macrosporus* (Boud.) Speg.

TRYBLIDIACEAE

- Asterocalyx* Hoehn. Sitzb. Akad. Wien 121:402 1912.
- Caldesia* (Trev.) Rehm em. Lich. Ven. n. 152 1869.
- Henriquesia* Pass. & Thuem. Cont. Myc. Lus. 228 1879.
- Heterosphaeria* Grev. Scot. Crypt. Flor. 2:103 1824.
- Hysteropeziza* Rabh. Hedwigia 13:174 1874.
- Odontotrema* Nyl. Lich. Scan. 249 1861.
- Odontura* Clem. Gen. Fung. 65,174 1909.
- Odontotremella* Rehm. Ber. Bot. Ges. München 13:166 1912.
- A. mirabilis* Hoehn.
- C. sabina* (DeN.) Rehm
- H. lusitanica* P. & T.
- H. patella* (Tode) Grev.
- H. petiolaris* (A. & S.) Rabh.
- O. minus* Nyl.
- O. raphidospora* (Rehm) Clem.
- O. raphidospora* Rehm

Phaeoderris Hoehn. Sitzb. Akad. Wien 120:462
1911; Sacc. Syll. Fung. 8:599 1889, as sub-
genus.
Scleroderris Fr. Syst. Myc. 2:178 1822.
Trybliidiopsis Karst. Myc. Fenn. 24 1871.
Tryblidis Clem. Gen. Fung. 65:174 1909.
Tryblidium Rebert. Prod. Flo. Neomarch. 388
1804.
Blytridium DeNot. Prop. Disc. 20 1863.
Tryblis Clem.; *Trybliidiopsis* phragmospora.

P. caespitosa (Niessl) Hoehn.
S. ribesia (Pers.) Karst.
T. pinastri (Pers.) Karst.
T. pinastri (Pers.) Clem.
T. calyciforme (Fr.) Rebert.
B. calyciforme (Fr.) DeN.
T. arnoldi (Rehm) Clem.

Genera Incertae Sedis

Actinomyxa Syd. Ann. Myc. 15:146 1917.
Hysteropezizella Hoehn. Sitzb. Akad. Wien
126:310, ill. 1917.

A. australiensis Syd.
H. subvelata (Rehm) Hoehn.

PEZIZALES

DERMATEACEAE

Cenangella Sacc. Consp. Gen. Disc. 9 1884.
Dermatella Karst. Myc. Fenn. 1:209 1871
Cenangioopsis Rehm Ber. Ges. München 13:189
1912.
Cenangium Fr. Syst. Myc. 2:177 1822.
Ameghiniella Speg. Fung. Fueg. n. 347 1888.
Cenangina Hoehn. Sitzb. Akad. Wien
118:882 1909.
Encoelia (Fr.) Karst. Myc. Fenn. 1:218
1871.
Ephelia Sacc. Syll. Fung. 8:585 1889.
Pezomela Syd. Ann. Myc. 26:121 1923.
Choriactis Kupfer Bull. Torrey Club 29:142
1902; cf. Seaver N. A. Cup-fungi 198 1928.
Crumenula DeNot. Prop. Disc. 9 1864.
Dermatea Fr. Sum. Veg. Scan. 362 1849.
Durandia Rehm Ascom. no. 2027; Ann. Myc.
11:166 1913; cf. Hoehn. Ber. Deut. Bot.
Ges. 36:310 1918.
Encoeliella Hoehn. Sitzb. Akad. Wien 119:619
1910.
Godronia Moug. Consid. Gen. Veg. 355 1845.
Godroniopsis Diehl & Cash Mycologia 21:243,
ill. 1929.
Midotiopsis Henn. Hedwigia 41:17 1902.
Midotis Fr. Syst. Orb. Veg. 363 1825.
Wynnea Berk. & Curt. Jour. Linn. Soc.
Lond. 9:424 1867.
Wynnella Boudier Bull. Soc. Myc. Fr. 1:102
1885.
Pezolepis Syd. Ann. Myc. 23:408, ill. 1925.
Phaeangella Sacc. Syll. Fung. 18:128 1906.
Phaeangium Sacc. Syll. Fung. 16:764 1902.
Perizomatium Syd. Ann. Myc. 25:98 1927.
Scytopezis Clem. Bull. Torr. Club. 30:87 1903

C. pinastri (Tul.) Sacc.
D. frangulae (Fr.) Karst.
C. quercicola (Romell) Rehm
C. furfuraceum (Roth) DeN.
A. australis Speg.
C. inocarpi (Henn.) Hoehn.
E. furfuracea (Fr.) Karst.
E. rhinanthi (Phill.) Sacc.
P. saxegothaeae Syd.
C. geaster (Pk.) Kupfer
C. pinicola (Rebert.) Karst.
D. cerasi (Pers.) DeN.
D. fraxini (Schw.) Rehm
E. raveneli Hoehn.
G. urceolus (A. & S.) Karst.
G. querneae (Schw.) D. & C.
M. bambusicola Henn.
M. gigantea (B. & C.) Sacc.
W. gigantea B. & C.
W. leporina (Batsch) Boud.
P. denigrata Syd.
P. aceris (Hazsl.) Sacc.
P. rubi (Bäumli.) Sacc. & Syd.
P. lachnoides (Rehm) Syd.
S. stellata Clem.

- Stilbopeziza** Speg. An. Mus. Nac. 3:10:131 1909.
- Tryblidiella** Sacc. Syll. Fung. 2:757 1883.
- Hysteropatella** Rehm. Rabh. Krypt. Fl. 3:367 1896.
- Rhytidhysterium** Speg. Fung. Arg. 4:191 1892; Syll. Fung. 2:759 1883.
- Rhytidopeziza** Speg. Fung. Guar. 1:138 1886; Syll. Fung. 10:65 1891.
- Tympanis** Tode Fung. Meck. 1:23 1790.
- Biatorrellina** Henn. Hedwigia Beibl. 42:(307), ill. 1903.
- Urnulla** Fr. Sum. Veg. Scan. 364 1849.
- Podophaacidium** Niessl Verh. Nat. Ver. Brünn 10:63, ill. 1872; Rehm. Rabh. Krypt. Flor. 3:999 1896; Syll. Fung. 8:550 1889.
- S. yerbae** Speg.
- T. rufula** (Spreng.) Sacc.
- H. prosti** (Duby) Rehm
- R. brasiliense** Speg.
- R. balansae** Speg.
- T. conspersa** Fr.
- B. buchsi** Henn.
- U. craterium** (Schw.) Fr.
- P. terrestre** Niessl
- ### BULGARIACEAE
- Agyrina** Keissl. Ann. Nat. Mus. Wien 39:199 1925; Rabh. Krypt. Fl. 8:57 1930.
- Agyrina** Clem. Gen. Fung. 67, 173 1909; Sacc. Syll. Fung. 8:636 1889, as subg.
- Agyriopsis** Sacc. & Syd. Syll. Fung. 14:805 1899.
- Agyrium** Fr. Syst. Myc. 2:231 1822.
- Ahlesia** Fkl. Symb. Myc. 281 1869; Syll. Fung. 9:946 1891.
- Bulgaria** Fr. Syst. Myc. 2:166 1822.
- Bulgariella** Karst. Rev. Mon. 139 1885; Syll. Fung. 8:638 1889.
- Voeltzknowiella** Henn. Voeltz. Reise Ostafri. 3:31, ill. 1908.
- Bulgariastrum** Syd. Phil. Jour. Sci. 8:497, ill. 1913.
- Calloria** Fr. Sum. Veg. Scan. 359 1849.
- Calloriella** Hoehn. Sitzb. Akad. Wien 127:345 1918.
- Didymocoryne** Sacc. & Trotter Syll. Fung. 22:730 1913.
- Coryne** Tul. Sel. Fung. Carp. 3:190 1865.
- Calloriopsis** Syd. Ann. Myc. 15:254 1917.
- Harknessiella** Sacc. Syll. Fung. 8:845 1889.
- Dictyonia** Syd. Ann. Myc. 2:549 1904.
- Rehmiomyces** Henn. Hedwigia 43:270, ill. 1904; not Sacc. & Syd. 1902.
- Gloeopeziza** Zukal Flora 74:100, ill. 1891.
- Haematomyces** B. & Br. Fung. Ceylon 963 1870.
- Haematomyxa** Sacc. Consp. Gen. Disc. 11 1884.
- Holwaya** Sacc. Syll. Fung. 8:646 1889.
- Claussenomyces** Kirschst. Verh. Bot. Brandenb. 65:122 1923.
- Crinula** (Fr.) Sacc. Syll. Fung. 8:606 1889.
- A. crozalsi** Keissl.
- A. sexdecimspora** (Fkl.) Clem.
- A. betheli** (E. & E.) S. & S.
- A. rufum** (Pers.) Fr.
- A. lichenicola** Fkl.
- B. inquinans** (Pers.) Fr.
- B. pulla** (Fr.) Karst.
- V. madagascarensis** Henn.
- B. caespitosum** Syd.
- C. fusarioides** (Berk.) Fr.
- C. umbrinella** (Desm.) Hoehn.
- D. striata** (E. & E.) S. & S.
- C. sarcoides** (Jacq.) Tul.
- C. gelatinosa** (E. & M.) Syd.
- H. purpurea** (P. & H.) Sacc.
- D. pouroumae** (Henn.) Syd.
- R. pouroumae** Henn.
- G. rehmi** Zukal
- H. spadiceus** B. & Br.
- H. vinosa** (C. & E.) Sacc.
- H. ophiobolus** (Ell.) Sacc.
- C. jahnianus** Kirschst.
- C. mucida** (Schulz.) Sacc.

- Myridium** Clem. Gen. Fung. 67, 174 1909.
Ombrophila Fr. Sum. Veg. Scan. 357 1849.
Bulgariopsis Henn. Syll. Fung. 18:135 1906.
Neobulgaria Petr. Ann. Myc. 19:44 1921.
Stamnaria Fkl. Symb. Myc. 309 1869; Syll. Fung. 8:620.
Ophiogloea Clem. Bull. Torr. Club 30:86 1903.
Orbilina Fr. Sum. Veg. Scan. 357 1849.
Hyalinia Boud. Bull. Soc. Myc. Fr. 1:114 1885.
Orbiliopsis Syd. Ann. Myc. 22:308, ill. 1924; Sacc. Syll. Fung. 18:139 as subgenus.
Pteromyces B. R. S. Ann. Myc. 3:507 1905; Syll. Fung. 22:725 1913.
Orthoscypha Syd. Ann. Myc. 25:100 1927.
Paryphedria Zukal Flora 74:92, ill. 1891.
Physmatomyces Rehm. Hedwigia 39:216 1900; cf. Hoehn. Frag. Myk. 455 1909.
Pulparia Karst. Myc. Fenn. 1:9 1871.
Sarcomyces Masee Jour. Myc. 6:178, ill. 1891.
Sarcosoma Caspary in litt. Rabh. Krypt. Flor. 1:3:497, ill. 1891.
Burkardia Schmidel Anal. Plant. 3:261, ill. 1797.
Gloeocalyx Masee Bull. Misc. Inf. Kew 1901:155.
Sorokinia Sacc. Syll. Fung. 10:42 1892.
- M. myriosporum** (P. & H.) Clem.
O. violacea (Hedw.) Fr.
B. moellerianus Henn.
N. pura Petr.
S. equiseti (Hoffm.) Sacc.
O. linospora Clem.
O. leucostigma Fr.
H. crystallina (Quel.) Boud.
O. coleosporodes (Sacc.) Syd.
P. ambiguus B. R. S.
O. concinna Syd.
P. heimerli Zukal
P. melioloides Rehm
P. arctica Karst.
S. vinosus Masee
S. globosum (Schmid.) Casp.
B. globosa Schmid.
G. bakeri Masee
S. microspora (Berk.) Sacc.

PATELLARIACEAE

- Abrothallus** DeNot. Giorn. Bot. Ital. 2:192 1846.
Actinoscypha Karst. Symb. Myc. 23:5 1887.
Bactrospora Mass. Ric. Aut. Lich. 133, ill. 1852.
Baggea Auersw. Hedwigia 5:1 1866.
Biatorella DeNot. Giorn. Bot. Ital. 1:192 1846.
Tromera Mass. Flora 41:507 1858.
Durella Tul. Sel. Fung. Carp. 3:177 1865.
Leptopeziza Rostrup Medd. Groenl. 5:542 1888; Syll. Fung. 22:758 1913; 8:794.
Epilichen Clem. Gen. Fung. 69, 174 1909.
Johansonia Sacc. Syll. Fung. 8:785 1889.
Karschia Koerb. Parerg. Lich. 459 1865.
Catinella Boud. Hist. Disc. Eur. 150 1907.
Lagerheimia Sacc. Syll. Fung. 10:55 1892.
Lahmia Koerb. Parerg. Lich. 281 1865.
Leciographa Mass. Genera 14 1854.
Lecioglyphis Clem. Gen. Fung. 70, 174 1909.
Melaspilea Nyl. Prod. Lich. 170 1857.
Mycobacidia Rehm. Rabh. Krypt. Flor. 3:337 1896.
- A. parmeliarum** (Somm.) Nyl.
A. graminis Karst.
B. dryina (Ach.) Mass.
B. pachyasca Auersw.
B. pinicola (Mass.) Th. Fr.
T. xanthostigma Mass.
D. compressa (Pers.) Tul.
L. groenlandica Rostr.
E. scabrosus (Ach.) Clem.
J. setosa (Wint.) Sacc.
K. lignyota (Fr.) Sacc.
C. olivacea (Batsch) Boud.
L. sphaerospora (B. & C.) Sacc.
L. kunzei (Fw.) Koerb.
L. zwackhi Mass.
L. centrifuga (Mass.) Clem.
M. arthonioides (Fee) Nyl.
M. flavovirescens (Dicks.) Rehm

- Mycobilimbia* Rehm. Rabh. Krypt. Flor. 3:327 1896.
- Mycolecidea* Karst. Sacc. Syll. Fung. 24:1290 1928.
- Mycolecis* Clem. Gen. Fung. 70, 174 1909.
- Nesolechia* Mass. Misc. Lich. 13 1856.
- Discocera* Smith & Rams. Trans. Brit. Myc. Soc. 6:48 1917.
- Pachypatella* Theiss. & Syd. Ann. Myc. 13:228 1915.
- Parathalle* Clem. Gen. Fung. 70, 174 1909.
- Patellaria* Fr. Sum. Veg. Scan. 366 1849.
- Lecanidion* Rabh. Krypt. Flor. 3:342 1896.
- Patellea* Fr. Syst. Myc. 2:149 1823.
- Patinella* Sacc. Grevillea 4:22 1875.
- Odontoschizum* Syd. Ann. Myc. 12:568 1914.
- Placographa* Th. Fr. Lich. Arct. 339 1861; Rehm Ascom. 313, 1896, as subg.
- Pleopatella* Rehm. Ann. Myc. 6:314 1908.
- Pleoscutula* Vouaux Bull. Soc. Myc. Fr. 29:434 1913.
- Pleosporis* Clem. Gen. Fung. 69, 174 1909.
- Pragmopara* (Mass.) Rehm Rabh. Krypt. Flor. 3:340 1896.
- Scutularia* Karst. Rev. 153 1885.
- Pseudotryblidium* Rehm. Rabh. Krypt. Flor. 3:370 1896.
- Psilothecium* Clem. Bull. Torr. Club 30:85 1903.
- Ravenelula* Speg. Fung. Arg. 4:229 1882.
- Rhyncocarpus* Zopf. Nov. Act. 70:128, ill. 1897.
- Scutula* Tul. Ann. Sci. Nat. 3:17:118, ill. 1852.
- Starbaeckia* Rehm Bih. Sven. Vet. Handl. 16:11, ill. 1890.
- Tryblidaria* Sacc. Syll. Fung. 8:805 1889, as subg.; 14:33 1899; Rehm Ann. Myc. 2:525 1904.
- Woodiella* Sacc. & Syd. Hedwigia Beibl. 38:(133) 1899.
- M. obscurata* (Somm.) Rehm
- M. lecideina* Rehm
- M. lecideina* (Rehm) Clem.
- N. oxyspora* (Tul.) Mass.
- D. lichenicola* S. & R.
- P. alsophilae* (Rac.) T. & S.
- P. fuistingi* (Koerb.) Clem.
- P. atrata* (Hedw.) Fr.
- L. atratum* (Hedw.) Rabh.
- P. sanguinea* (Pers.) Rehm
- P. sanguineo-atra* (Rehm) Sacc.
- O. parvulum* Syd.
- P. flexella* (Ach.) Th. Fr.
- P. harperi* Rehm
- P. arsenii* Vouaux
- P. vermifera* (Leight.) Clem.
- P. bacillifera* (Karst.) Rehm
- S. reducta* Karst.
- P. neesi* (Fw.) Rehm
- P. incurvum* Clem.
- R. gainesvillensis* Speg.
- R. punctiformis* Zopf
- S. wallrothi* Tul.
- S. pseudotryblis* Rehm
- T. fenestrata* (C. & E.) Rehm
- W. natalensis* S. & S.

Genera Incertae Sedis Vel Dubia

- Benguetia* Syd. Ann. Myc. 15:152, ill. 1917.
- Robertomyces* Starb. Ark. Bot. 5:5, ill. 1905.
- B. omphalodes* Syd.
- R. mirabilis* Starb.

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- Acolium* Ach. Lich. Univ. 232 1810; cf. DeN. Giorn. Bot. Ital. 2:10 1846.
- Acrosyphus* Lev. Ann. Sci. Nat. 3:5:262 1846.
- Calicium* (Pers.) DeN. Giorn. Bot. Ital. 2:309 1846.
- A. sessile* (Pers.) Ach.
- A. sphaerophoroides* Lev.
- C. hyperellum* (Ach.) Pers.

- Protocalicium* Woronich. Trudy Bot. Akad. 21:103 1927.
Calycidium Stirt. Proc. Phil. Soc. Glasgow 10:292 1877.
Carlosia Samp. Not. Cong. Salam. 1 1923.
Chaenotheca Th. Fr. Nov. Act. Soc. Sci. 3:3:350 1861.
Coniocybe Ach. Vet. Akad. Handl. 286 1816.
Cyphelium (Ach.) Th. Fr. Oefv. Vet. Akad. Handl. 263 1815.
Ditylis Clem. Gen. Fung. 71, 174 1909.
Eucyphelis Clem. Gen. Fung. 71, 174 1909.
Farriola Norm. Oefv. Vet. Akad. Handl. 41:34 1884.
Holocyphis Clem. Gen. Fung. 71, 174 1909.
Mycocalicium Wain. Act. Soc. Fenn. 7:181 1890.
Pleurocybe Müll. Arg. Flora 67:613 1884.
Pseudocolium Stzbgr. Ber. St. Gall. Ges. 1861:177 1862.
Pyrgidium Nyl. Flora 50:3 1867.
Pyrgillus Nyl. Syn. Lich. 1:68 1860.
Roesleria Thuem. & Pass. Sacc. Syll. Fung. 8:826 1889.
Schistophorum Stirt. Trans. Glasgow Soc. Nat. 4:165 1876.
Sphaerophorus Pers. Neue Ann. Bot. 23 1794.
Sphinctrina Fr. Syst. Orb. Veg. 120 1825.
Sphinctrinopsis Woronich. Trudy Bot. Akad. 21:103 1927.
Stenocybe Nyl. Bot. Notis. 84 1854.
Tholurna Norm. Flora 44:409 1861.
Tylophorella Wain. Etud. Lich. Bres. 2:174 1890.
Tylophorum Nyl. Bot. Zeit. 20:279 1862.
- P. jacevski* Woron.
C. cuneatum Stirt.
C. lusitanica Samp.
C. trichialis (Ach.) Th. Fr.
C. furfuracea Ach.
C. tigillare (Pers.) Fr.
D. moderata (Nyl.) Clem.
E. acicularis (Smith) Clem.
F. distans Norm.
H. bolanderi (Tuck.) Clem.
M. parietinum (Ach.) Wain.
P. madagascarea (Nyl.) Zahlbr.
P. notarisi (Tul.) Stzbgr.
P. bengalense (Krh.) Nyl.
P. americanus Nyl.
R. hyalinella (Nyl.) Sacc.
S. tenue Stirt.
S. coralloides Pers.
S. turbinata (Pers.) Fr.
S. pertusariae Woron.
S. major Nyl.
T. dissimilis Norm.
T. polyspora Wain.
T. protrudens Nyl.

CHRYSOTRICHACEAE

- Chrysothrix* Mont. Ann. Sci. Nat. 3:18:312 1852.
Coenogonium Ehrb. Nees Fl. Phys. Berol. 120 1820.
Crocynia Mass. Att. Ist. Venet. 3:5:251 1860.
Holocoenis Clem. Gen. Fung. 72, 174. 1909.
Racodium Pers. Tent. Disp. 76 1797.
- C. nolitangere* Mont.
C. linki Ehrb.
C. gossypina (Sw.) Nyl.
H. leprieuri (Mont.) Clem.
R. rupestre Pers.

COLLEMACEAE

- Anema* Nyl. Flora 62:353 1879.
Arctomia Th. Fr. Nov. Act. Sci. Upsal. 3:3:387 1861.
Collema (Wigg.) Zahlbr. Nat. Pflanzenf. 1:1:171 1906.
Collemis Clem.; *Collema phragmosporum*.
Collemodes Fink Mycologia 10:236 1918.
Collemopsidium Nyl. Flora 66:6 1881.
- A. decipiens* (Mass.) Forss.
A. delicatula Th. Fr.
C. pulposum (Bernh.) Ach.
C. rupestris (L.) Clem.
C. bachmannianum Fink
C. iocarpum Nyl.

- Cryptothele* Th. Fr. Bot. Notis. 59 1866.
Dicollema Clem. Gen. Fung. 74, 174 1909.
Ephebe Fr. Syst. Orb. Veg. 1:256 1825.
Ephebeia Nyl. Flora 58:6 1875.
Forssellia Zahlbr. Nat. Pflanzenf. 1:1:161 1906.
Gonohymenia Stnr. Verh. z-b. Ges Wien 52:484 1902.
Gyrocollema Wain. Mycologia 21:36 1929.
Homopsella Nyl. Flora 70:129 1887.
Hormothecium Mass. Alc. Gen. Lich. 7 1855.
Jenmania Wächt. Flora 74:349 1897.
Koerberia Mass. Gen. Lich. 51 1854.
Leciophysma Th. Fr. Bot. Notis. 102 1865.
Lecopyrenopsis Wain. Hedwigia 46:172 1907; for *Lecidopyrenopsis*.
Lemmopsis Zahlbr. Nat. Pflanzenf. 1:1:171 1906.
Lempholemma (Koerb.) Zahlbr. Cat. Lich. Univ. 3:12 1924.
Leprocollema Wain. Etud. Lich. Bres. 1:232 1890.
Leptogidium Nyl. Flora 56:195 1873.
Leptogiopsis Müll. Arg. Flora 65:291 1882.
Leptogium Gray Nat. Arrang. Brit. Pl. 1:400 1821.
Lichinodium Nyl. Flora 58:297 1875.
Paulia Fee Linnaea 10:471 1846.
Peccania (Mass.) Forss. Nov. Act. Sci. Upsal. 3:13:40 1885.
Petractis Fr. Sum. Veg. Scan. 1:120 1846.
Phloeopeccania Stnr. Denks. Akad. Wien 71:93 1902.
Phylliscidium Forss. Nov. Act. Sci. Upsal. 3:13:38 1885.
Phylliscium Nyl. Mass. Gen. Lich. 7 1854.
Physma Mass. Gen. Lich. 6 1854.
Pleconis Clem. Gen. Fung. 73, 174 1909.
Pleopyrenis Clem. Gen. Fung. 72, 174 1909.
Polychidium (Mass.) Zahlbr. Nat. Pflanzenf. 1:1:150 1906.
Porocyphus Koerb. Syst. Lich. Germ. 425 1855.
Psorotichia (Mass.) Forss. Nov. Act. Sci. Upsal. 3:13:39 1885.
Pterygiopsis Wain. Etud. Lich. Bres. 1:288 1890.
Pterygium Nyl. Bull. Soc. Bot. Fr. 1:328 1854.
Pyrenopsidium Forss. Nov. Act. Sci. Upsal. 3:13:39 1885.
Pyrenopsis Nyl. Syn. Lich. 1:67 1858.
Ramalodium Nyl. Jour. Linn. Soc. 17:392 1880.
C. promiscens (Nyl.) Th. Fr.
D. pycnocarpum (Nyl.) Clem.
E. lanata (L.) Wain.
E. hispidula (Ach.) Nyl.
F. affinis (Mass.) Zahlbr.
G. algerica Stnr.
G. scyphuliferum Wain.
H. aggregatula Nyl.
H. opulentum Mont.
J. goebeli Wächt.
K. bififormis Mass.
L. finmarkicum Th. Fr.
L. corticola Wain.
L. arnoldiana (Hepp) Zahlbr.
L. chalazanum (Ach.) Arn.
L. americanum Wain.
L. byssoides (Carr.) Zahlbr.
L. reticulata (Mont.) M. A.
L. lacerum (Sw.) Gray
L. sirosiphodes Nyl.
P. pullata Fee
P. corallinoides Mass.
P. clausa (Hoffm.) Arn.
P. pulvinula Stnr.
P. monophyllum (Krp.) Forss.
P. demangeoni (M. & M.) Nyl.
P. byrsinum (Ach.) M. A.
P. kansana (Tuck.) Clem.
P. picina (Nyl.) Clem.
P. muscicolum (Sm.) Gray
P. coccodes (Fr.) Koerb.
P. montini (Mass.) Forss.
P. atra Wain.
P. subradiatum (Nyl.) Forss.
P. granuliforme (Nyl.) Forss.
P. foederata Nyl.
R. succulentum (R. Br.) Nyl.

- Spilonema* Born. Mem. Soc. Cherbourg 4:226
1856.
- Steinera* Zahlbr. Deut. Südpol-Exped. 7:41
1906.
- Synalissa* Fr. Syst. Orb. Veg. 1:297 1825.
- Thermutis* Fr. Syst. Orb. Veg. 1:392 1825.
- Thyrea* Mass. Flora 39:210 1856.
- Trichobacidia* Wain. Ann. Akad. Fenn.
A:15:32 1921.
- Zahlbrucknerella* Herre. Jour. Wash. Acad.
Sci. 2:384 1912.
- S. paradoxum* Born.
- S. molybdoplaca* (Nyl.) Zahlbr.
- S. ramulosa* (Hoffm.) Fr.
- T. velutina* (Ach.) Th. Fr.
- T. plectospora* Mass.
- T. robinsoni* Wain.
- Z. calcarea* Herre

PELTIGERACEAE

- Actinoplaca* Müll. Arg. Bull. Soc. Belg. 30:56
1891.
- Arthotheliopsis* Wain. Jour. Bot. 34:206 1896.
- Asterothyrium* Müll. Arg. Lich. Epi. Nov. 12
1890.
- Byssolecania* Wain. Ann. Akad. Fenn.
A:15:167 1921.
- Calenia* Müll. Arg. Lich. Epi. Nov. 3 1890.
- Gonolecania* Zahlbr. Cat. Lich. Univ. 2:681
1923.
- Gonothecis* Clem. Gen. Fung. 75,174 1909.
- Heppia* Naeg. Hepp. Flecht. Eur. n. 49 1853.
- Neoheppia* Zahlbr. Denks. Akad. Wien
83:144 1909.
- Latzelia* Zahlbr. Nat. Pflanzenf. 8:175 1926.
- Lopadiopsis* Wain. Jour. Bot. 34:205 1896.
- Nephroma* Ach. Lich. Univ. 101 1810.
- Nephromium* Nyl. Syn. Lich. 1:318 1860.
- Peltidea* Nyl. Act. Soc. Fenn. 7:594 1863.
- Chloropeltis* Clem. Gen. Fung. 75,174 1909.
- Peltigera* Pers. Neue Ann. Bot. 1:21 1794.
- Phlegmophiale* Zahlbr. Nat. Pflanzenf. 8:142
1926.
- Pseudoheppia* Zahlbr. Ann. Myc. 1:356 1903.
- Solorina* Ach. Vet. Akad. Handl. 228 1808.
- Solorinella* Anzi Cat. Lich. Sondr. 37 1860.
- Sporopodium* Mont. Ann. Sci. Nat. 3:16:54
1851.
- Tapellaria* Müll. Arg. Lich. Epi. Nov. 11
1890.
- Tricharia* (Fee) Wain. Ann. Acad. Fenn.
A:15:159 1921.
- A. strigulacea* Müll. Arg.
- A. hymenocarpis* Wain.
- A. monosporum* Müll. Arg.
- B. fuscolivida* Wain.
- C. pulchella* Müll. Arg.
- G. hymenocarpa* (Wain.) Zahlbr.
- G. phyllocharis* (Mont.) Clem.
- H. virescens* (Despr.) Nyl.
- N. brasiliensis* Zahlbr.
- L. terreneae* (Nyl.) Zahlbr.
- L. coffeae* (Müll. Arg.) Wain.
- N. arcticum* (L.) Fr.
- N. resupinatum* (L.) Fw.
- P. aphthosa* (L.) Nyl.
- C. aphthosa* (L.) Clem.
- P. canina* (L.) Hoffm.
- P. epidendri* (Rehm) Zahlbr.
- P. schuleri* Zahlbr.
- S. saccata* (L.) Ach.
- S. asteriscus* Anzi
- S. filicinum* (Müll. Arg.) Zahlbr.
- T. heterospora* Müll. Arg.
- T. melanothrix* Fee

LECIDEACEAE

- Agyrophora* Nyl. Flora 61:247 1878.
- Merophora* Clem. Gen. Fung. 77, 174 1909.
- Amphischizonia* Mont. Syll. Gen. Crypt. 331
1856.
- A. haplocarpa* Nyl.
- M. haplocarpa* (Nyl.) Clem.
- A. holleana* (M. & B.) Zahlbr.

- Arthoniactis** Wain. Cat. Welw. Afr. Pl. 2:430
1901.
Asteristium Leight. Trans. Linn. Soc. 27:163
1869.
Bacidia Zahlbr. Nat. Pflanzenf. 1:1:135 1905.
Biatora (Fr.) Koerb. Syst. Lich. Germ. 192
1855.
Biatorella Th. Fr. Nov. Act. Sci. Upsal.
3:3:299 1861.
Biatorina Mass. Ric. Aut. Lich. 134 1852.
Byssoloma Trev. Spig. Pagl. 6 1853.
Catilaria (Mass.) Th. Fr. Lich. Scan. 1:563
1874.
Catinaria Wain. Act. Soc. Fenn. 53:143 1922.
Catocarpus Arn. Flora 55:147 1871.
Diphæis Clem. Gen. Fung. 77, 174 1909.
Charcotia Hue Bull. Soc. Bot. Fr. 62:16
1915.
Dermaticum Nyl. Bot. Zeit. 25:133 1867.
Diphanis Clem. Gen. Fung. 77, 174 1909.
Gyrophora Ach. Meth. Lich. 100 1803.
Lecanactis Eschw. Syst. Lich. 14 1824.
Lecidea (Ach.) Zahlbr. Nat. Pflanzenf. 1:1:130
1905.
Lopadium Koerb. Syst. Lich. Germ. 210
1855.
Megalospora Mey. & Fw. Nov. Act. Acad.
Leop. 19:228 1840.
Melampyridium Stirt. Jour. Linn. Soc. 14:471
1875.
Mycoblastus Norm. Nyt. Mag. Nat. 7:24
1853.
Orphniospora Koerb. Zahlbr. Nat. Pflanzenf.
8:195 1926.
Phalodictyum Clem. Gen. Fung. 77,174 1909.
Phyllopsora Müll. Arg. Bull. Herb. Boiss.
2:11 1894.
Pleolecis Clem. Gen. Fung. 76,174 1909.
Pseudolecanactis Zahlbr. Denks. Akad. Wien
81:242 1907.
Psora Hall. Hist. Stirp. Helv. 93 1798.
Psorella Müll. Arg. Bull. Herb. Boiss. 2:11
1894.
Psoromaria Nyl. Lich. Nov. Zel. 54 1888.
Rhizocarpum (Ram.) Th. Fr. Lich. Scan.
1:611 1874.
Schismatomma Mass. Ric. Aut. Lich. 55 1852.
Scolecactis Clem. Gen. Fung. 76,174 1909.
Scoliosporum Mass. Ric. Aut. Lich. 104
1852.
Sphaerophoropsis Wain. Etud. Lich. Bres. 2:7
1890.
Thalloedema Mass. Ric. Aut. Lich. 95 1852.
Diphloëis Clem. Gen. Fung. 76,174 1909.
- A. ostrearum** Wain.
A. erumpens Leight.
B. rosella (Pers.) DeN.
B. vernalis (L.) Ach.
B. fossarum (Duf.) Th. Fr.
B. ehrhartiana (Ach.) Th. Fr.
B. tricholomum (Mont.) Zahlbr.
C. grossa (Pers.) Blomb.
C. leucophaea (DC.) Zahlbr.
C. badiater (Flk.) Th. Fr.
D. badiatra (Flk.) Clem.
C. rufidula Hue
D. thunbergi (Ach.) Nyl.
D. polycarpa (Hepp) Clem.
G. vellea (L.) Ach.
L. abietina (Ach.) Koerb.
L. enteroleuca Ach.
L. pezizoideum (Ach.) Koerb.
M. sulphurata M. & F.
M. metabolum (Nyl.) Müll. Arg.
M. sanguinarius (L.) Th. Fr.
O. groenlandica Koerb.
P. obscuratum (Ach.) Clem.
P. breviuscula (Nyl.) M. A.
P. geophana (Nyl.) Clem.
P. filicicola Zahlbr.
P. decipiens (Ehrh.) Ach.
P. pannarioides (Kn.) M. A.
P. subdescendens Nyl.
R. geographicum (L.) DC.
S. abietinum (Ehrh.) Koerb.
S. myriadea (Fee) Clem.
S. umbrinum (Ach.) Mass.
S. stereocaulis Wain.
T. candidum (Web.) Th. Fr.
D. candida (Web.) Clem.

- Toninia* (Mass.) Th. Fr. Lich. Scan. 1:320
1874.
Umbilicaria Ach. Vet. Akad. Handl. 15:255
1794.
- T. *squarrosa* (Ach.) Th. Fr.
U. *pustulata* (L.) Hoffm.

CLADONIACEAE

- Argopsis* Th. Fr. Nov. Act. Sci. Upsal.
3:2:325 1858.
Baeomyces Pers. Neue Ann. Bot. 19 1794.
Chlorocaulum Clem. Gen. Fung. 78,175 1909.
Cladonia (Hill) Wain. Mon. Cladon. 5 1887.
Cyanobaeis Clem. Gen. Fung. 78,175 1909.
Dibaëis Clem. Gen. Fung. 78,175 1909.
Glossodium Nyl. Mem. Soc. Cherbourg 3:169
1855.
Gomphillus Nyl. Mem. Soc. Cherbourg 3:186
1855.
Gymnoderma Nyl. Syn. Lich. 2:27 1863.
Heteromyces Müll. Arg. Flora 72:505 1889.
Lachnocaulum Wain. Etud. Lich. Bres. 1:67
1890.
Pilophorum Th. Fr. Ster. Philoph. Comm. 40
1857.
Stereocaulum Schreb. Gen. Pl. 2:768 1796.
Thysanothecium Berk. & Mont. Lond. Jour.
Bot. 5:257 1846.
- A. *megalospora* Th. Fr.
B. *byssoides* (L.) Schwer.
C. *salazinum* (Bory) Clem.
C. *rangiferina* (L.) Web.
C. *paeminosa* (Krhph.) Clem.
D. *rosea* (Pers.) Clem.
G. *aversum* Nyl.
G. *calicioides* (Del.) Nyl.
G. *coccocarpum* Nyl.
H. *rubescens* Müll. Arg.
L. *colensoi* (Bab.) Wain.
P. *robustum* Th. Fr.
S. *paschale* (L.) Ach.
T. *hookeri* B. & M.

PARMELIACEAE

Lecanorae

- Adermatis* Clem. Gen. Fung. 79,175 1909.
Calenia Müll. Arg. Lich. Epi. Nov. 3 1890.
Candelariella Müll. Arg. Bull. Herb. Boiss.
2:11 1894.
Conotrema Tuck. Proc. Am. Acad. Art. Sci.
1:199 1848.
Diploschistes Norm. Nyt. Mag. Nat. 7:232
1853.
Dyslecanis Clem. Gen. Fung. 79,175 1909.
Haematomma Mass. Ric. Aut. Lich. 32 1852.
Harpidium Koerb. Syst. Lich. Germ. 157
1855.
Icmadophila Trev. Riv. Accad. Padova 267
1851.
Lecania (Mass.) Zahlbr. Nat. Pflanzenf.
1:1:204 1907.
Lecanora (Ach.) Th. Fr. Nov. Act. Sci. Upsal.
3:3:199 1861.
Myriolecis Clem. Gen. Fung. 79,175 1909.
Myxodictyum Mass. Att. Ist. Venet. 3:5:254
1860.
Ochrolechia Mass. Ric. Aut. Lich. 30 1852.
Phlyctella Krph. Verh. z-b. Ges. Wien 26:462
1876.
- A. *nylanderiana* (Mass.) Clem.
C. *pulchella* Müll. Arg.
C. *cerinella* (Flk.) Zahlbr.
C. *urceolatum* (Ach.) Tuck.
D. *scruposus* (L.) Norm.
D. *syringea* (Ach.) Clem.
H. *ventosum* (L.) Mass.
H. *rutilans* (Fw.) Koerb.
I. *ericetorum* (L.) Zahlbr.
L. *cyrtella* (Ach.) Oliv.
L. *subfusca* (L.) Ach.
M. *sambuci* (Pers.) Clem.
M. *chrysostictum* (Tayl.) Mass.
O. *tartarea* (L.) Mass.
P. *brasiliana* (Nyl.) Zahlbr.

- Phlyctidia Müll. Arg. Hedwigia 34:141 1895. P. ludoviciensis Müll. Arg.
 Phlyctis Fw. Bot. Zeit. 8:571 1850. P. agelaea (Ach.) Koerb.
 Psoroma Nyl. Mem. Soc. Cherbourg. 3:175 1855. P. hypnorum (Dicks.) Hoffm.
 Solenopsora Mass. Framm. Lich. 20 1855. S. candicans (Fr.) Zahlbr.

Pertusariae

- Perforaria Müll. Arg. Nuov. Giorn. Ital. 23:126 1891. P. cucurbitula (Mont.) M. A.
 Pertusaria DC. Flor. Fr. ed. 3 2:319 1805. P. bryontha (Ach.) Nyl.
 Varicellaria Nyl. Lich. Scan. 162 1861. V. rhodocarpa (Koerb.) Th. Fr.

Acarosporae

- Acarospora Mass. Ric. Aut. Lich. 27 1852. A. glaucocarpa (Wahlb.) Koerb.
 Glypholecia Nyl. Ann. Sci. Nat. 2:20:317 1863. G. scabra (Pers.) Th. Fr.
 Maronea Mass. Flora 39:291 1856. M. constans (Nyl.) Th. Fr.
 Pleochroma Clem. Gen. Fung. 80,175 1909. P. vitellinum (Ehrh.) Clem.

Gyalectae

- Bryophagus Nke. Flora 45:58 1862. B. leucaspis (Krph.) Nke.
 Diplopeltopsis Hoehn. Bub. & Kab. Fung. Imp. Exs. n. 76 1904; for Diplopeltis Henn. 41:146 1902. D. zimmermanniana Henn.
 Gyalecta (Ach.) Zahlbr. Nat. Pflanzenf. 1:1:125 1905. G. cupularis (Ehrh.) Fr.
 Gyrostomum Fr. Syst. Orb. Veg. 1:268 1825. G. scyphuliferum (Ach.) Fr.
 Jonaspis Th. Fr. Lich. Scan. 1:273 1871. J. chrysohana (Kbr.) Stein
 Lecaniopsis Zahlbr. Nat. Pflanzenf. 8:147 1926. L. perminuta (Wain.) Zahlbr.
 Leptotrema Mont. & Bosch. Plant. Jungh. 4:483 1855. L. leiospodium (Nyl.) Zahlbr.
 Microphiale Zahlbr. Nat. Pflanzenf. 1:1:25 1905. M. lutea (Dicks.) Stnr.
 Ocellularia (Mey.) Müll. Arg. Mem. Soc. Geneve 29:5 1887. O. berkleyana (Mont.) Zahlbr.
 Pachyphiale Lönnr. Flora 41:611 1858. P. fagicola (Hepp.) Zwackh
 Phaeotrema Müll. Arg. Mem. Soc. Geneve 29:10 1887. P. subfarinosum (Fee) M. A.
 Phanotylum Clem. Gen. Fung. 81,175 1909. P. australiense (Müll. Arg.) Clem.
 Phyllobrassia Wain. Ann. Acad. Fenn. A:15:173 1921. P. mirifica (Krph.) Wain.
 Phyllophtharmaria Zahlbr. Nat. Pflanzenf. 1:1:120 1905. P. zamiae (Müll. Arg.) Zahlbr.
 Polystroma Clemente. Ensay. 299 1807. P. ferdinandezii Clemente
 Ramonia Stzbrgr. Ber. St. Gall. Ges. 168 1862. R. valenzuelana (Mont.) Stzbrgr.
 Sagirolechia Mass. Gen. Lich. 11 1854. S. protuberans (Ach.) Mass.
 Semigyalecta Wain. Ann. Acad. Fenn. A:15:153 1921. S. paradoxa Wain.
 Thelotrema (Ach.) Müll. Arg. Mem. Soc. Geneve 29:10 1887. T. lepadinum Ach.
 Tremotylum Nyl. Bull. Soc. Linn. Norm. 2:2:513 1868. T. occultum Stirt.

Stictae

- Cystolobis* Clem. Gen. Fung. 81,175 1909. *C. leucocarpa* (Müll. Arg.) Clem.
Diphaeosticta Clem. Gen. Fung. 81,175 1909. *D. physciospora* (Nyl.) Clem.
Diphanocticta Clem. Gen. Fung. 81,175 1909. *D. cellulifera* (H. & T.) Clem.
Dysticta Clem. Gen. Fung. 81,175 1909. *D. sinuosa* (Pers.) Clem.
Lobaria (Schreb.) Zahlbr. Nat. Pflanzenf. 1:1:185 1906. *L. pulmonaria* (L.) Hoffm.
Phanocticta Clem. Gen. Fung. 81,175 1909. *P. freycineti* (Del.) Clem.
Sticta Schreb. Gen. Pl. 768 1791. *S. aurata* Ach.

Parmeliae

- Anzia* Stzbgr. Flora 44:390 1861. *A. colpodes* (Michx.)
Candelaria Mass. Flora 35:567 1852. *C. concolor* (Dicks.) Wain.
Cetraria Ach. Meth. Lich. 292 1803. *C. islandica* (L.) Ach.
Heterodea Nyl. Bull. Soc. Linn. Norm. 2:2:47 1868. *H. muelleri* (Hpe.) Nyl.
Megalopsora Wain. Ann. Acad. Fenn. A:15:27 1921. *M. cylindrophora* (Tayl.) Wain.
Nephromopsis Müll. Arg. Flora 74:374 1891. *N. ciliaris* (Ach.) Hue
Parmelia (Ach.) DeN. Giorn. Bot. Ital. 2:189 1847. *P. conspersa* (Ehrh.) Ach.
Parmeliopsis Nyl. Syn. Lich. 2:53 1863. *P. ambigua* (Ach.) Nyl.
Pseudoparmelia Lyngbe Ark. Bot. 13:15 1913. *P. cyphellata* Lyngbe
Physcidia Tuck. Proc. Am. Acad. Art. Sci. 5:399 1862. *P. wrighti* (Tuck.) Nyl.

Usneae

- Alectoria* Ach. Lich. Univ. 120 1810. *A. sarmentosa* Ach.
Bryopogon Link Grund. Kräuterkr. 3:164 1833. *B. jubata* (L.) Nyl.
Dactylina Nyl. Syn. Lich. 1:286 1860. *D. arctica* (Hook.) Nyl.
Dufourea Ach. Lich. Univ. 103 1810. *D. madreporiformis* (Wulf.) Ach.
Endocena Cromb. Jour. Linn. Soc. 15:226 1876. *E. informis* Cromb.
Evernia Ach. Lich. Univ. 84 1810. *E. prunastri* (L.) Ach.
Everniopsis Nyl. Syn. Lich. 1:374 1860. *E. trulla* (Ach.) Nyl.
Letharia Zahlbr. Hedwigia 31:34 1892. *L. vulpina* (L.) Wain.
Oropogon Th. Fr. Gen. Heterolich. 49 1861. *O. loxensis* (Fee) Th. Fr.
Ramalina Ach. Lich. Univ. 122 1810. *R. calicaris* (L.) Fr.
Siphula Fr. Syst. Orb. Veg. 1:238 1825. *S. ceratites* (Wahlb.) Fr.
Thamnolia Ach. Schaer. Enum. Crit. Lich. Eur. 243 1850. *T. vermicularis* (Sw.) Ach.
Usnea Wigg. Prim. Flor. Holsat. 90 1780. *U. florida* (L.) Hoffm.

Stictinae

- Dystictina* Clem. Gen. Fung. 81,175 1909. *D. tomentosa* (Sw.) Clem.
Lobarina Nyl. Flora 60:233 1877. *L. scrobiculata* (Scop.) DC.
Merostictina Clem. Gen. Fung. 81,175 1909. *M. mougeotiana* (Del.) Clem.
Phycodiscis Clem. Gen. Fung. 83,175 1909. *P. retigera* (Bory) Clem.
Podostictina Clem. Gen. Fung. 82,175 1909. *P. endochrysoides* (Müll. Arg.) Clem.
Stictina Nyl. Syn. Lich. 1:333 1860. *S. crocata* (Ach.) Nyl.

Pannariae

- Coccocarpia** Pers. Goudich. Voy. Uran. Bot. 206 1824.
Erioderma Fee Essai Crypt. 146 1824.
Hueella Zahlbr. Nat. Pflanzenf. 8:180 1926.
Hydrothyria Russ. Proc. Essex Inst. 1:188 1853.
Lepidocollema Wain. Etud. Lich. Bres. 1:231 1890.
Lepidogium A. L. Smith Jour. Linn. Soc. 46:79 1922; for *Lepidoleptogium*.
Massalongia Koerb. Syst. Lich. Germ. 109 1855.
Pannaria Del. Bory Dict. Hist. Nat. 13:20 1828.
Parmeliella Müll. Arg. Mem. Soc. Geneve 16:376 1862.
Placynthium Gray Nat. Arrang. Brit. Pl. 1:395 1821.
- C. pellita** (Ach.) M. A.
E. polycarpum Fee
H. fauri (Hue) Zahlbr.
H. venosa Russ.
L. carassense Wain.
L. montagnei Smith
M. carnosa (Dicks.) Koerb.
P. pezizoides (Web.) Lightf.
P. triptophylla (Ach.) M. A.
P. nigrum (Huds.) Gray

PHYSICIACEAE

- Anaptychia** Koerb. Mass. Mem. Lich. 33 1853.
Blastenia Mass. Att. Ist. Venet. 2:3:101 1852.
Bombyliospora DeN. Mass. Ric. Aut. Lich. 114 1852.
Buellia DeN. Giorn. Bot. Ital. 1:195 1846.
Caloplaca Th. Fr. Lich. Scan. 1:167 1871.
Dictyorinis Clem. Gen. Fung. 84,175 1909.
Diplotomma Th. Fr. Lich. Scan. 1:607 1874.
Dirinaria Tuck. Proc. Am. Acad. Art. Sci. 12:166 1877.
Hyperphyscia Müll. Arg. Bull. Herb. Boiss. 2:10 1894.
Lethariopsis Zahlbr. Nat. Pflanzenf. 8:253 1926.
Meroplacis Clem. Gen. Fung. 84,175 1909.
Merorinis Clem. Gen. Fung. 84,175 1909.
Niorma Mass. Mem. Ist. Ven. 10:83 1861.
Phragmopyxine Clem. Gen. Fung. 84,175 1909.
Physcia (Ach.) Wain. Etud. Lich. Bres. 1:138 1890.
Pleorinis Clem. Gen. Fung. 84, 175 1909.
Protoblastenia Stnr. Verh. z-b. Ges. Wien 61:47 1911.
Pyxine Fr. Syst. Orb. Veg. 1:267 1825.
Rinodina (Gray) Mass. Ric. Aut. Lich. 14 1852.
Theloschistes Norm. Nyt. Mag. Nat. 7:228 1853.
Xanthocarpia Mass. & DeN. Alc. Gen. Lich. 11 1853.
Xanthoria Th. Fr. Nov. Act. Sei. Upsal. 3:3:166 1861.
- A. ciliaris** (L.) Mass.
B. ferruginea (Huds.) Arn.
B. domingensis (Pers.) Zahlbr.
B. parasema (Ach.) Th. Fr.
C. aurantiaca (Lightf.) Th. Fr.
D. diplinthia (Nyl.) Clem.
D. atralba (Hoffm.) Th. Fr.
D. picta (Sw.)
H. synthalea (Kn.)
L. wandelensis (Hue) Zahlbr.
M. brebissoni (Fee) Clem.
M. conradi (Koerb.) Clem.
N. hypoglaucia (Nyl.)
P. eschweileri (Tuck.) Clem.
P. stellaris (L.) Nyl.
P. polyspora (Th. Fr.) Clem.
P. rupestris (Scop.) Zahlbr.
P. cocoes (Sw.) Nyl.
R. sophodes (Ach.) Th. Fr.
T. chrysophthalmus (L.) Th. Fr.
X. ochracea (Schaer.) M. & DeN.
X. parietina (L.) Th. Fr.

Genera Incertae Sedis Vel Dubia

Cf. Zahlbruckner Nat. Pflanzenf. 8:136, 153,
160, 163, 172, 182, 201, 209, 220, 229, 238,
246, 261. 1926.

MOLLISIIACEAE

- Beloniella** (Sacc.) Rehm Rabh. Krypt. Flor.
3:638 1896.
- Belonopeziza** Hoehn. Ann. Myc. 15:310,
343 1917.
- Belioscyphella** Hoehn. Sitzb. Akad. Wien
127:589 1918.
- Belonidium** Mont. & Dur. Flor. Alg., ill.
1846; Rehm Ascom. 561 1880.
- Manilaea** Syd. Ann. Myc. 12:569 1914.
- Belonopsis** Sacc. Syll. Fung. 8:351 1889;
16:752 1902.
- Bioscypha** Syd. Ann. Myc. 25:102 1927.
- Ciliella** Sacc. & Syd. Syll. Fung. 16:748
1902.
- Dibelonis** Clem. Gen. Fung. 86, 175 1909.
- Dictyomollis** Rehm. Ann. Myc. 7:540 1909;
for Dictyomollisia.
- Calopeziza** Syd. Phil. Jour. Sci. 8:499, ill.
1913; Syll. Fung. 24:1216 1928.
- Fabraea** Sacc. Michelia 2:331 1881.
- Gonothecium** Wainio Act. Soc. Fenn. 7:29
1890 as subgenus of Lecidea.
- Hyphodiscus** Kirschst. Abh. Bot. Brandenb.
43:44, ill. 1906.
- Linhartia** Sacc. & Syd. Syll. Fung. 16:744
1902; Jour. Myc. 10:213 1904.
- Mollisia** Fr. Syst. Myc. 2:137 1822.
- Lemalis** Fr. Sum. Veg. Scan. 360 1849;
Syll. Fung. 3:672 1884; cf. Hoehn. Syst.
Fung. Imp. 360 1923.
- Mollisiella** Sacc. Syll. Fung. 18:64 1906;
cf. Hoehn. Frag. Myk. 528.
- Unguiculariopsis** Rehm Ann. Myc. 7:400
1909.
- Mollisiopsis** Rehm Ann. Myc. 6:315 1908.
- Neofabraea** Jackson Rep. Oreg. Exp. Sta.
1911-12:187 1913.
- Niptera** Fr. Sum. Veg. Scan. 359 1849.
- Angelinia** Fr. Sum. Veg. Scan. 358 1849;
cf. Durand Jour. Myc. 8:108 1902; Hoehn.
Ann. Myc. 16:150 1918.
- Calycellina** Hoehn. Sitzb. Akad. Wien
127:601 1918.
- Perrotiella** Naumov Trav. Bur. Myc. 26,
ill. 1915.
- Pazschkea** Rehm Rabh.-Pazsch. Fung. Eur.
4172. 1898.
- B. graminis** (Desm.) Rehm
- B. graminis** (Desm.) Hoehn.
- B. hypnorum** (Syd.) Hoehn.
- B. lacustre** (Fr.) Phill.
- M. bambusina** Syd.
- B. excelsior** (Karst.) Rehm
- B. cyatheae** Syd.
- C. epidendri** (Rehm) S. & S.
- D. vossi** (Rehm) Clem.
- D. albigranulata** Rehm
- C. mirabilis** Syd.
- F. ranunculi** (Fr.) Karst.
- L. glaucovirescens** Wainio
- H. gregarius** Kirschst.
- L. tropicalis** (Rehm) S. & S.
- M. cinerea** (Batsch) Karst.
- L. alismatis** (Pers.) Fr.
- M. ilicincola** (B. & Br.) Sacc.
- U. ilicincola** (B. & Br.) Rehm
- M. subcinerea** Rehm
- N. malicorticis** (Cordley) Jack.
- N. ramealis** Karst.
- A. rufescens** (Schw.) Duby
- C. punctiformis** (Grev.) Hoehn.
- P. uralensis** Naumov
- P. lichenoides** Rehm

- Psorotheciella* Sacc. & Syd. Syll. Fung. 16:746 1902.
- Phaeofabraea* Rehm Ann. Myc. 7:541 1909.
- Pirottaea* Sacc. Michelia 1:424 1878.
- Pirotoscypha* Syd. Ann. Myc. 23:402, ill. 1925.
- Pseudopeziza* Fkl. Symb. Myc. 290 1869.
- Drepanopeziza* (Klebahn) Hoehn. Ann. Myc. 15:323 1917.
- Phaeorhytisma* Henn. & Nym. Monsunia 1:29 1899; cf. Hoehn. Ann. Myc. 15:315 1917.
- Pseudorhytisma* Juel Vet. Akad. Förh. 498, ill. 1894; cf. Rehm Rabh. Krypt. Flor. 3:1264 1896.
- Psorotheciopsis* Rehm Hedwigia 39:217 1900.
- Pyrenopezis* Hoehn. Ber. Deut. Bot. Ges. 35:251 1917; for *Pyrenopezizopsis*.
- Pyrenopeziza* Fkl. Symb. Myc. 293 1869.
- Excipula* Fr. Syst. Myc. 2:190 1822; Syll. Fung. 3:664 1884; cf. Hoehn. Frag. Myk. 913 1915; not Sacc. et al. l. c.
- Placopeziza* Hoehn. Frag. Myk. 961 1916; cf. Hoehn. Ann. Myc. 15:334 1917.
- Spilopodia* Boud. Bull. Soc. Myc. Fr. 1:120 1885.
- Spilopezis* Clem. Gen. Fung. 85, 175 1909.
- Stictoclypeolum* Rehm Hedwigia 44:9 1904.
- Strossmayera* Schulz. Oest. Bot. Zeits. 31:314 1881.
- Tapesia* Pers. Myc. Eur. 1:220 1822.
- Trichobelonium* Sacc. Syll. Fung. 8:495 1889, as subg.; 16:747 1902.
- Velutaria* Fkl. Symb. Myc. 400 1869.
- P. biseptata* (Rehm) S. & S.
- P. miconiae* Rehm
- P. veneta* Sacc. & Speg.
- P. pulla* Syd.
- P. trifolii* (Biv.) Fkl.
- D. populorum* (Desm.) Hoehn.
- P. loniceræ* H. & N.
- P. bistortæ* (Lib.) Juel
- P. decipiens* Rehm
- P. noppenezana* (Feltg.) Hoehn.
- P. rubi* (Fr.) Rehm
- E. rubi* Fr.
- P. phyteumatis* (Fkl.) Hoehn.
- S. nervisequia* (Pers.) Boud.
- S. radians* (Rob.) Clem.
- S. decipiens* Rehm
- S. racki* Schulz.
- T. fusca* (Pers.) Fkl.
- T. retincolum* (Rabh.) Sacc.
- V. rufolivacea* (A. & S.) Fkl.

Genus Incertae Sedis

- Melittosporiopsis* Rehm Hedwigia 39:90 1900; Hoehn. Ann. Myc. 15:359 1917.
- M. violacea* Rehm

HELOTIACEAE

- Archnopeziza* Fkl. Symb. Myc. 303 1869.
- Arenaea* Penz. & Sacc. Syll. Fung. 18:75 1906.
- Belonioscypha* Rehm Rabh. Krypt. Flor. 3:743 1896.
- Belonioscyphella* Hoehn. Sitzb. Akad. Wien 127:589 1918.
- Belonium* Sacc. Consp. Gen. Disc. 7 1884.
- Leptobelonium* Hoehn. Sitzb. Akad. Wien 132:112 1924.
- Manilaea* Syd. Ann. Myc. 12:569, ill. 1914; Syll. Fung. 24:1213 1928.
- Pseudohelotium* Fkl. Symb. Myc. 298 1869.
- A. aurelia* (Pers.) Fkl.
- A. javanica* P. & S.
- B. vexata* (DeN.) Rehm
- B. hypnorum* (Syd.) Hoehn.
- B. pineti* (Batsch) Rehm
- L. basitrichum* (Sacc.) Hoehn.
- M. bambusina* Syd.
- P. pineti* (Batsch) Fkl.

- Belospora* Clem. Gen. Fung. 87, 175 1909.
Chlorosplenium Fr. Sum. Veg. Scan. 356 1849.
Comesia Sacc. Consp. Gen. Disc. 6 1884.
Cryptopezia Hoehn. Sitzb. Akad. Wien 128:571 1919.
Cyathicula DeNot. Comm. Critt. 1:381 1864.
Dasyscypha Fr. Syst. Myc. 2:89 1822; Fkl. Symb. Myc. 304 1869.
Microscypha Syd. Ann. Myc. 17:38 1919.
Torrendiella Boud. & Torr. Bull. Soc. Myc. Fr. 27:133 1911.
Dasyscyphella Transch. Hedwigia Beibl. 38:11 1899.
Dasypezis Clem. Gen. Fung. 88, 175 1909.
Chaetoscypha Syd. Ann. Myc. 22:305, ill. 1924.
Davincia Penz. & Sacc. Syll. Fung. 18:101 1906.
Diplocarpa Massee Brit. Fung. Fl. 4:307 1895.
Dyslachnum Clem. Gen. Fung. 87, 175 1909.
Endoscypha Syd. Ann. Myc. 22:306, ill. 1924.
Erinella Sacc. Syll. Fung. 8:507 1889.
Eriopeziza Sacc. Syll. Fung. 8:381 1889, as subg.; Rehm Ascom. 695 1896.
Eubelonis Clem. Gen. Fung. 87, 175 1909.
Gorgoniceps Karst. Myc. Fenn. 1:15 1871.
Apostemidium Karst. Myc. Fenn. 1:15, 186 1871; cf. Rehm Rabh. Krypt. Flor. 3:1232 1896.
Helolachnum Torrend Broteria Bot. 9:53 1910.
Helotiopsis Hoehn. Sitzb. Akad. Wien 119:623 1910.
Tangella Hoehn. Sitzb. Acad. Wien 127:606 1918.
Helotium Fr. Sum. Veg. Scan. 354 1849.
Bisporella Sacc. Consp. Gen. Disc. 6 1884.
Calycella Sacc. Syll. Fung. 8:248 1889, as subg.; 14:31 1899.
Calycellina Hoehn. Frag. Myk. 1129 1918.
Chlorospleniella Sacc. Syll. Fung. 8:645 1889, as subg.; 16:774 1902.
Ciboria Fkl. Symb. Myc. 311 1869.
Micropodia Boud. Bull. Soc. Myc. Fr. 1:118 1885; cf. Hoehn. Frag. Myk. 1127.
Moellerodiscus Henn. Hedwigia 41:33 1902; Syll. Fung. 18:8 1906.
Rhizocalyx Petr. Hedwigia 68:233 1928.
Hymenoscypha (Fr.) Phill. Man. Brit. Disc. 111 1887.
Hypohoscypha Bres. Jour. Myc. 10:212 1904.
- B. ciliatospora* (Fkl.) Clem.
C. aeruginosum (Oeder) Fr.
C. felicitatis (Crouan) Sacc.
C. mirabilis Hoehn.
C. coronata (Bull.) DeN.
D. cerina (Pers.) Fkl.
M. grisella (Rehm) Syd.
T. ciliata B. & T.
D. albolutea (Pers.) Clem.
D. cassandrae Transch.
C. nidulans Syd.
D. helios P. & S.
D. curreyana Massee
D. mollissimum (Lasch) Clem.
E. perforans Syd.
E. juncicola (Fkl.) Sacc.
E. caesia (Pers.) Rehm.
E. drosodes (Rehm) Clem.
G. aridula Karst.
A. fiscella Karst.
H. aurantiacum Torr.
H. apicalis (B. & Br.) Hoehn.
T. austriaca Hoehn.
H. citrinum (Hedw.) Fr.
B. monilifera (Fkl.) Sacc.
C. alutacea (B. & Br.) Sacc.
C. punctiformis (Grev.) Hoehn
C. fennica (Karst.) Sacc.
C. amentacea (Balb.) Fkl.
M. pteridina (Nyl.) Boud.
M. brockesia Henn.
R. abietis Petr.
H. virgultorum (Wahl.) Phill.
H. virginea Bres.

- Lachnaster* Hoehn. Ber. Deut. Bot. Ges. 35:250 1917.
- Lachnella* Fr. Sum. Veg. Scan. 365 1849.
- Perrotia* Boud. Bull. Soc. Myc. Fr. 17:23 1901.
- Lachnellula* Karst. Medd. Soc. Fenn. 11:138 1884.
- Lachnum* Retz. Prod. 329 1779.
- Hyalopeziza* Fkl. Symb. Myc. 297 1869.
- Lambertella* Hoehn. Sitzb. Akad. Wien 127:375 1918.
- Lanzia* Sacc. Consp. Gen. Disc. 6 1884.
- Lasiobelonis* Sacc. Syll. Fung. 8:502 1889, as subg.; 14:789 1899; for *Lasiobelonium*.
- Massea* Sacc. Syll. Fung. 18:99 1906.
- Merodontis* Clem. Gen. Fung. 87, 175 1909.
- Davinciella* Sacc. Syll. Fung. 18:101 1906, as subg.; 24:1214 1928.
- Pezizella* Fkl. Symb. Myc. 299 1869; Rehm Rabh. Krypt. Flor. 3:653 1896.
- Hyaloscypha* Boud. Bull. Soc. Myc. Fr. 1:118 1885.
- Pezizellaster* Hoehn. Ann. Myc. 15:349 1917.
- Pezoloma* Clem. Gen. Fung. 86, 175 1909.
- Phaeociboria* Hoehn. Sitzb. Akad. Wien 127:593 1918.
- Phalothrix* Clem. Gen. Fung. 88, 175 1909.
- Unguicularia* Hoehn. Ann. Myc. 3:404, ill. 1905; Syll. Fung. 24:1202 1928.
- Phialea* Fr. Obs. Myc. 2:305 1818.
- Pocillum* DeNot. Prof. Disc. 361 1864.
- Rutstroemia* Karst. Myc. Fenn. 1:12 1871.
- Kriegeria* Winter Hedwigia 17:32 1878.
- Scelobelonium* (Sacc.) Hoehn. Ann. Hofmus. Wien 20:3 1905; Sitzb. Akad. Wien 127:40 1918.
- Sclerotinia* Fkl. Symb. Myc. 330 1869.
- Stromatinia* Boud. Bull. Soc. Myc. Fr. 1:115 1885.
- L. gracilis* Hoehn.
- L. flammea* (A. & S.) Fr.
- P. flammea* (A. & S.) Boud.
- L. chrysophthalma* (Pers.) Karst.
- L. bicolor* (Bull.) Karst.
- H. patula* (Pers.) Fkl.
- L. corni-maris* Hoehn.
- L. flavorufa* Sacc.
- L. amoenum* (Speg.) Sacc.
- M. quisquiliarum* (B. & C.) Sacc.
- M. tenella* (P. & S.) Clem.
- D. tenella* (P. & S.) Trott.
- P. granulosella* (Karst.) Rehm
- H. dentata* (Pers.) Boud.
- P. radiostriatus* (Feltg.) Hoehn.
- P. griseum* Clem.
- P. sejournei* (Boud.) Hoehn.
- P. hyalotricha* (Rehm) Clem.
- U. unguiculata* Hoehn.
- P. vulgaris* (Fr.) Rehm
- P. cesati* (Mont.) DeN.
- R. firma* (Pers.) Karst.
- K. elatina* (A. & S.) Hoehn.
- S. melanosporum* (Rehm) Hoehn.
- S. sclerotiorum* (Lib.) Mass.
- S. pseudotuberosa* (Rehm) Boud.

PEZIZACEAE

- Acetabula* Fr. Syst. Myc. 2:43 1822.
- Paxina* Kuntze Rev. Gen. Pl. 2:864 1891.
- Phleboscypus* Clem. Bull. Torr. Club 30:93 1903.
- Aleuria* Fkl. Symb. Myc. 325 1869.
- Aleurina* Sacc. Syll. Fung. 8:472 1889, as subg.; 18:88 1906; cf. Seaver Mycologia 6:277, ill. 1914.
- Catinella* Boud. Hist. Class. Disc. 190 1907; cf. Hoehn. Frag. Myc. 457.
- Desmazierella* Lib. Ann. Sci. Nat. 17:82 1829.
- Discina* Fr. Sum. Veg. Scan. 348 1849.
- A. vulgaris* Fkl.
- P. acetabulum* (L.) Kuntze
- P. vulgaris* (Fkl.) Clem.
- A. aurantia* (Muell.) Fkl.
- A. retiderma* (Cke.) S. & S.
- A. olivacea* (Batsch) Boud.
- D. acicola* Lib.
- D. venosa* (Pers.) Sacc.

- Galactinia* Cooke Mycographia 253 1879.
Heteroplegma Clem. Bull. Torr. Club 30:92 1903.
Geopyxis Pers. Myc. Eur. 1:42 1822.
Humaria Fr. Syst. Myc. 2:42 1822.
Humarina Seaver Mycologia 19:87 1927.
Pseudombrophila Boud. Hist. Disc. Eur. 65 1907.
Iotidea Clem. Gen. Fung. 89, 175 1909.
Lamprospora DeNot. Comm. Critt. Ital. 1:388 1864.
Barlaea Sacc. Syll. Fung. 8:111 1889; not Reich. 1877.
Barlaeina Sacc. & Syd. Syll. Fung. 14:30 1899.
Detonia Sacc. Syll. Fung. 8:105 1889.
Otidella Sacc. Syll. Fung. 8:99 1889.
Leucopezis Clem. Gen. Fung. 90 1909; Minn. Bot. Studies 4:187 1911.
Macropodia Fkl. Symb. Myc. 331 1869.
Melachroia Boud. Bull. Soc. Myc. Fr. 1:112 1885.
Neottiella Cooke Mycographia 261 1879.
Neottiopezis Clem. Gen. Fung. 90 1909.
Otidea Pers. Myc. Eur. 1:220 1822; cf. Seaver N.A. Cup-fungi 184 1928.
Scodellina S. F. Gray Nat. Arr. Brit. Pl. 1:668 1821.
Pelodiscus Clem. Rep. Bot. Surv. Nebr. 5:8 1901.
Peziza (Dill.) L. Sp. Pl. 2:1180 1753.
Plicaria Fkl. Symb. Myc. 325 1869.
Pustularia Fkl. Symb. Myc. 328 1869.
Phaeomacropus Henn. Monsunia 1:172 1899.
Phaeopezia Sacc. Michelia 1:71 1877.
Pitya Fkl. Symb. Myc. 317 1869.
Pityella Boud. Hist. Disc. Eur. 125 1907.
Plectania Fkl. Symb. Myc. 324 1869.
Plicariella Sacc. Consp. Gen. Disc. 6 1884.
Podaleuris Clem. Gen. Fung. 89, 175 1909.
Pseudoplectania Fkl. Symb. Myc. 324 1869.
Pyronema Carus Nov. Act. Leop. 17:370 1835.
Phycascus Moell. Phyc. Ascom. Bras. 309 1901.
Pyrenomella Sacc. Michelia 1:564 1879.
Sarcoscypha Fr. Syst. Myc. 2:78 1822.
Cookeina Kuntze Rev. Gen. Pl. 2:849 1891.
Pilocratera Henn. Engler Bot. Jahrb. 14:363 1892.
Pseudopityella Seaver Mycologia 19:87 1927.
Trichoscypha Cooke Mycographia 252 1879.
Sarcosphaera Auers. Hedwigia 8:82 1869.
- G. saniosa* (Schrad.) Cke.
H. caeruleum Clem.
G. cupularis (L.) Sacc.
H. leucoloma (Hedw.) Boud.
H. leucoloma (Hedw.) Seaver
P. deerrata (Karst.) Seaver
I. pleurota (Phill.) Clem.
L. miniata (Crouan) DeN.
B. miniata (Crouan) Sacc.
B. miniata (Crouan) S. & S.
D. leiocarpa (Curr.) Sacc.
O. fulgens (Pers.) Sacc.
L. excipulata Clem.
M. macropus (Pers.) Fkl.
M. xanthomela (Pers.) Boud.
N. callichroa (Boud.) Sacc.
N. callichroa (Boud.) Clem.
O. cochleata (L.) Fkl.
S. leporina (Batsch) Gray
P. piliseta Clem.
P. vesiculosa Bull.
P. badia (Pers.) Fkl.
P. vesiculosa (Bull.) Fkl.
P. fleischerianus Henn.
P. murina (Fkl.) Sacc.
P. vulgaris Fkl.
P. hypnina (Quel.) Boud.
P. melastoma (Sow.) Fkl.
P. leiocarpa (Curr.) Rehm
P. reperta (Boud.) Clem.
P. nigrella (Pers.) Fkl.
P. omphalodes (Bull.) Fkl.
P. tremellosus Moell.
P. araneosa Sacc.
S. coccinea (Jacq.) Cke.
C. tricholoma (Mont.) Kuntze
P. tricholoma (Mont.) Henn.
P. minuscula (B. & T.) Seaver
T. tricholoma (Mont.) Cke.
S. coronaria (Jacq.) Schroet.

- Scutellinia Cooke Mycographia 260 1879.
 Cheilymenia Boud. Bull. Soc. Myc. Fr. 1:105
 1885.
 Ciliaria Quelet Bull. Soc. Myc. Fr. 1:105
 1885; not Stackh. 1809, or Haworth 1821.
 Humariella Schroet. Schles. Krypt. 3:2:87.
 Lachnea Fr. Syst. Myc. 2:77 1822; not
 Lachnaea L. 1753.
 Melastiza Boud. Bull. Soc. Myc. Fr. 1:106
 1885.
 Stereolachnea Hoehn. Ann. Myc. 15:353
 1917.
 Tricharia Boud. Bull. Soc. Myc. Fr. 1:104
 1885.
 Sepultaria Cooke Mycographia 259 1879.
 Sphaerospora Sacc. Michelia 1:594 1879.
 Tarzetta Cooke Mycographia 252 1879.
 Trichaleuris Clem. Gen. Fung. 89, 175 1909.
 Trichaleurina Rehm Leaf. Phil. Bot. 6:2234
 1914; Syll. Fung. 24:1207 1928.
 Urnula Fr. Sum. Veg. Scan. 364 1849.
- S. scutellata (L.) Lamb.
 C. stercorea (Pers.) Boud.
 C. scutellata (L.) Boud.
 H. scutellata (L.) Schroet.
 L. scutellata (L.) Gill.
 M. charteri (Smith) Boud.
 S. echinus Hoehn.
 T. gilva (Boud. & Cke.) Boud.
 S. sepulta (Fr.) Cke.
 S. trechispora (B. & Br.) Sacc.
 T. rapulum (Bull.) Cke.
 T. crinita (Bull.) Clem.
 T. polytricha Rehm.
 U. craterium (Schw.) Fr.

Genera Incertae Sedis

- Phillipsia Berk. Austral. Fung. 2:388 1881;
 cf. Sacc. Syll. Fung. 8:151 1889; Lind.
 Nat. Pflanzenf. 1:1:178 1897; Seaver N. A.
 Cup-Fungi 182 1928.
 Peltigeromyces Moell. Phyc. Ascom. Bras.
 276, 310 1901.
- P. domingensis Berk.
 P. microsporus Moell.

HELVELLACEAE

- Cudonia Fr. Sum. Veg. Scan. 348 1849.
 Leotiella Ploettner Hedwigia 39:197 1900.
 Cudoniella Sacc. Syll. Fung. 8:41 1889.
 Geoglossum Pers. Obs. Myc. 1:11 1795.
 Gioeglossum Durand Ann. Myc. 6:418 1908.
 Gyromitra Fr. Sum. Veg. Scan. 346 1849.
 Helvella L. Sp. Pl. 1648 1763.
 Hemiglossum Pat. Rev. Myc. 12:135 1890.
 Leotia Hill Hist. Plant. 43 1751.
 Microglossum Gill. Disc. Fr. 25 1879.
 Corynetes Hazsl. Akad. Term. Kor. 11:8
 1881.
 Leptoglossum Cooke. Mycographia 250
 1879.
 Mitrula Fr. Syst. Myc. 1:491 1822.
 Spragueola Masee Jour. Bot. 34:149, ill.
 1896.
 Morchella Dill. Nov. Gen. 74 1719.
 Neolecta Speg. Fung. Arg. 4:83 1882.
 Phaeoglossum Petch Ann. Bot. Gard. Ceylon
 7:309 1922.
- C. circinans (Pers.) Fr.
 L. caricicola Ploett.
 C. acicularis (Bull.) Schroet.
 G. glabrum Pers.
 G. glutinosum (Pers.) Dur.
 G. esculenta (Pers.) Fr.
 H. lacunosa Afz.
 H. yunnanense Pat.
 L. gelatinosa Hill.
 M. viride (Pers.) Gill.
 C. purpurascens (Pers.) Dur.
 L. tremellosum (Cke.) Sacc.
 M. phalloides (Bull.) Chev.
 S. americana Masee
 M. esculenta (L.) Pers.
 N. flavovirescens Speg.
 P. zeylanicum Petch

- Psilopezia* Berk. Dec. Fung. 138 1847.
Fleischhakea Rabh. Just Bot. Jahresb. 2:305
 1878.
Peltidium Kalchbr. Rabh. Fung. Europ. 521
 1857; not Zoll. 1820.
Rhizina Fr. Obs. Myc. 1:161 1815.
Spathularia Pers. Tent. Disp. 36 1797.
Mitrulioopsis Peck Bull. Torr. Club 30:100
 1903.
Sphaerosoma Klotzsch Dietr. Fl. Boruss. 467
 1840.
Ruhlandiella Henn. Hedwigia 42:24 1903;
 cf. Hoehn. Frag. Myk. 655.
Trichoglossum Boud. Bull. Soc. Myc. Fr.
 1:110 1885.
Underwoodia Peck Rep. N. Y. Mus. 43:32
 1890.
Verpa Swartz Vet. Akad. Handl. 129 1815.
Vibrissea Fr. Syst. Myc. 2:31 1822.
- P. nummularia* Berk.
F. rhizinoides Rabh.
P. oocardii Kalchbr.
R. inflata (Schaeff.) Quel.
S. clavata (Schaeff.) Sacc.
M. flavida Pk.
S. fuscescens Klotzsch
R. berolinensis Henn.
T. hirsutum (Pers.) Boud.
U. columnaris Pk.
V. conica (Muell.) Swartz
V. truncorum (A. & S.) Fr.

Genera Incertae Sedis

- Cidaris* Fr. Sum. Veg. Scan. 347 1849.
Durandiomyces Seaver N. A. Cup-Fungus 242,
 ill. 1928.
Paracudonia Petrak Ann. Myc. 25:246 1927.
- C. caroliniana* (Schw.) Fr.
D. phillipsi (Mass.) Seav.
P. sphaerospora Petrak

ASCOBOLACEAE

- Ascobolus* Pers. Tent. Disp. 35 1791.
Ascophanus Boud. Mem. Ascob. 51 1869.
Boudiera Cooke Grevillea 6:76 1877.
Boudierella Sacc. Bull. Soc. Bot. Belg. 34:130
 1895.
Cubonia Sacc. Syll. Fung. 8:527 1889.
Dasybolus Sacc. Syll. Fung. 11:421 1895.
Lasiobolus Sacc. Consp. Gen. Disc. 8 1884.
Ramsbottomia Buckley Trans. Brit. Myc.
 Soc. 9:44 1923.
Rhyarobius Boud. Mem. Ascob. 47 1869.
Thecotheus Boud. Mem. Ascob. 45, ill.
 1869.
Saccobolus Boud. Mem. Ascob. 38 1869.
Streptotheca Vuill. Jour. de Bot. 33, ill. 1887.
Thelebolus Tode Fung. Meckl. 1:41, ill. 1790.
- A. stercorarius* (Bull.) Schroet.
A. carneus (Pers.) Boud.
B. areolata Cke. & Phill.
B. cana (March.) Sacc.
C. brachyasca (March.) Sacc.
D. immersus (Pers.) Sacc.
L. equinus (Muell.) Karst.
R. lamprosporoides Buck.
R. crustaceus (Fkl.) Rehm
T. pelletieri (Crouan) Boud.
S. kerverni (Crouan) Boud.
S. boudieri Vuill.
T. stercorarius Tode

AGYRIALES

AGYRIACEAE

- Agyrina* Keissl. Ann. Nat. Mus. Wien 39:199
 1925; Rabh. Krypt. Fl. 8:57 1930.
Agyrina Clem. Gen. Fung. 67, 174 1909;
 Sacc. Syll. Fung. 8:636 1889, as subg.
Agyriopsis Sacc. & Syd. Syll. Fung. 14:805
 1899.
- A. crozalsi* Keissl.
A. sexdecimspora (Fkl.) Clem.
A. betheli (E. & E.) S. & S.

- Agyriella* Ell. & Ev. Bull. Torr. Club 24:470 1897; not Sacc. 1884.
- Agyrium* Fr. Syst. Myc. 2:231 1822.
- Xogone* Henn. Verh. Bot. Brandenb. 50:130 1908.
- Agyronella* Hoehn. Sitzb. Akad. Wien 118:1229 1909.
- Ascocalathium* Eidam Cohn Krypt. Schles. 3:32 1893.
- Ascodesmis* van Tiegh. Bull. Soc. Bot. Fr. 23:271 1876.
- Atichia* Flotow Linnaea 23:149 1850.
- Actinomma* Sacc. Misc. Myc. 1:28 1884; Syll. Fung. 4:753 1886.
- Euthryptum* Theiss. Verh. z-b. Ges. Wien 66:325 1916; cf. Petr. Ann. Myc. 26:392 1928.
- Heterobotrys* Sacc. Michelia 2:21 1880.
- Phycopsis* Mangin & Pat. Comp. Rend. 154:1480, ill. 1912.
- Seuratia* Pat. Bull. Soc. Myc. Fr. 20:136 1904.
- Didymascella* Maire & Sacc. Bull. Soc. Myc. Fr. 17:205 1901.
- Didymascus* Sacc. Malpighia 10:278, ill. 1896.
- Discomycella* Hoehn. Sitzb. Akad. Wien 121:400 1912.
- Gloeopeziza* Zukal Flora 74:100, ill. 1891.
- Haematomyces* B. & Br. Fung. Ceylon 963 1870.
- Haematomyxa* Sacc. Consp. Gen. Disc. 11 1884.
- Henningsiella* Rehm. Hedwigia 34:160 1895.
- Lecideopsella* Hoehn. Sitzb. Akad. Wien 118:1229 1909.
- Medeolaria* Thaxter Proc. Am. Acad. Arts Sci. 57:432 1922.
- Microdiscus* Sacc. Nuov. Giorn. Ital. 23:190 1916; Syll. Fung. 24:1143 1928.
- Brachyascus* Syd. Ann. Myc. 15:285 1917.
- Mollerella* Wint. Bol. Soc. Brot. 4:199 1886.
- Nostotheca* Starb. Bih. Sven. Handl. 25:20 1899; cf. Petr. Ann. Myc. 26:401 1928.
- Nesolechia* Mass. Misc. Lich. 13 1856.
- Phillipsiella* Cooke Grevillea 7:48 1878; Syll. Fung. 22:584 1913; cf. Hoehn. Frag. Myk. 244 1909.
- Pyronema* Carus Nov. Act. Leop. 17:370 1835.
- Pyronemella* Sacc. Michelia 1:564 1879.
- Ramosiella* Syd. Ann. Myc. 15:254 1917.
- Solanella* Vanha Monatsch. Landw. 3:268, ill. 1910.
- Zukalina* O. Kuntze Rev. Gen. Pl. 2:875 1891.
- Zukaliopsis* Henn. Fung. Amaz. 3:367. 1904.
- A. *betheli* Ell. & Ev.
- A. *rufum* (Pers.) Fr.
- E. *kaiseriana* Henn.
- A. *lagunculariae* (Wint.) Hoehn.
- A. *stipitatum* Eidam
- A. *nigricans* van Tiegh.
- A. *glomerulosa* (Ach.) Fw.
- A. *gastonis* Sacc.
- E. *globiferum* (E. & E.) Theiss.
- H. *paradoxa* Sacc.
- P. *vanillae* (Pat.) M. & P.
- S. *coffeicola* Pat.
- D. *oxycedri* M. & S.
- D. *kitmanoffi* Sacc.
- D. *tjibodensis* Hoehn.
- G. *rehmi* Zukal.
- H. *spadiceus* B. & Br.
- H. *vinosa* (C. & E.) Sacc.
- H. *quitensis* (Pat.) Rehm
- L. *gelatinosa* Hoehn.
- M. *farlowi* Thaxter
- M. *americanus* Sacc.
- B. *americanus* (Sacc.) Syd.
- M. *mirabilis* Wint.
- N. *ambigua* Starb.
- N. *oxyspora* (Tul.) Mass.
- P. *graminicola* Hoehn.
- P. *omphalodes* (Bull.) Fkl.
- P. *araneosa* Sacc.
- R. *calami* (Rac.) Syd.
- S. *rosea* Vanha
- Z. *neglecta* (Zukal) O. K.
- Z. *amazonica* Henn.

Genera Incertae Sedis

- Capnodiopsis* Henn. Hedwigia 41:298 1902;
Hoehn. Frag. Myk. 651 1911. C. *mirabilis* Henn.
- Schenckia* Henn. Engler Bot. Jahrb. 17:523
1893; Hoehn. Frag. Myk. 598; Theiss. &
Syd. Ann. Myc. 15:457 1917. S. *marcgraviae* Henn.
- Protasia* Rac. Par Alg. Pilz. Java 3:42 1900;
Syll. Fung. 22:584 1913; nomen nudum. (no species given)

EXASCACEAE

- Ascocorticium* Brefeld Unters. Myk. 9:145, ill.
1891. A. *albidum* Brefeld
- Ascosorus* Henn. & Ruhl. Engler Bot. Jahrb.
28:276 1900. A. *floridianus* (Ell.) H. & R.
- Exascus* Fkl. Enum. Fung. Nass. 29 1860. E. *deformans* (Berk.) Fkl.
- Taphridium* Lag. & Juel Bih. Sven. Vet.
Handl. 27:16 1902. T. *umbelliferarum* (Rostr.) L. & J.
- Volkartia* Maire Bull. Soc. Bot. Fr. 54:145
1907. V. *rhaetica* (Volk.) Maire
- Taphrina* Fr. Obs. Myc. 1:217 1815. T. *aurea* (Pers.) Fr.
- Magnusiella* Sadebeck Par. Exoasc. 2:86
1893. M. *potentillae* (Farlow) Sade.

TUBERALES

ONYGENACEAE

- Dendrosphaera* Pat. Bull. Soc. Myc. Fr. 23:69
1907. D. *eberhardti* Pat.
- Onygena* Pers. Syn. Fung. 203 1801. O. *equina* Pers.
- Trichocoma* Junghuhn Praem. Jav. 9, ill. 1839. T. *paradoxa* Jungh.

ELAPHOMYCETACEAE

- Elaphomyces* Nees Syn. Myc. 68 1820. E. *granulatus* Fr.
- Mesophellia* Berk. Trans. Linn. Soc. 22:131
1857. M. *arenaria* Berk.

Genus Dubium

- Cenococcum* Fr. Syst. Orb. Veg. 364 1825. C. *geophilum* Fr.

TUBERACEAE

- Balsamia* Vittad. Mon. Tuber. 30, ill. 1831. B. *vulgaris* Vitt.
- Barssia* Gilkey Mycologia 17:253, ill. 1925. B. *oregonensis* Gilkey
- Choeromyces* Vittad. Mon. Tuber. 50 1831. C. *meandriiformis* Vitt.
- Delastria* Tul. Ann. Sci. Nat. 2:19:379 1843. D. *rosea* Tul.
- Delastriopsis* Mattirola Bol. Soc. Brot. 21:10
1905; Syll. Fung. 22:594 1913. D. *oligosperma* (Tul.) Matt.
- Eoterezia* Atkin. Bot. Gaz. 34:40 1902. E. *parasitica* Atkin.
- Genabea* Tul. Giorn. Bot. Ital. 2:60 1844. G. *fragilis* Tul.
- Genea* Vittad. Mon. Tuber. 27 1831. G. *verrucosa* Vitt.
- Myrmecocystis* Harkness Proc. Cal. Acad.
Sci. 3:1:269, ill. 1899; cf. Gilkey Univ. Cal.
Pub. Bot. 6:296 1916. M. *cerebriformis* Hark.

- Geopora** Harkness Pac. Coast Fung. 168
1885.
- Hydnobolites** Tul. Ann. Sci. Nat. 2:19:278
1843.
- Hydnocystis** Tul. Giorn. Bot. Ital. 2:59 1844;
cf. Rehm Rabh. Krypt. Fl. 1:3:1076 1896.
- Hydnotrya** Berk. & Br. Ann. Nat. Hist. 18:28
1846.
- Gyrocratera** Henn. Verh. Bot. Brandenb.
41:8 1899.
- Hydnotryopsis** Gilkey Univ. Cal. Pub. Bot.
6:336, ill. 1916.
- Napomyces** Setchell Mycologia 16:240, ill.
1924; for Daleomyces.
- Pachyphloeus** Tul. Giorn. Bot. Ital. 2:69 1844.
- Cryptica** Hesse Jahrb. Wiss. Bot. 13:198, ill.
1885.
- Phaeangium** Pat. Jour. de Bot. 155 1894.
- Picoa** Vittad. Mon. Tuber. 54 1831.
- Leucangium** Quélet Assoc. Fr. 18, ill. 1882.
- Piersonia** Harkness Proc. Cal. Acad. Sci.
3:1:275 1899.
- Pseudobalsamea** Fisch. Ber. Deut. Bot. Ges.
25:374 1907.
- Pseudogenea** Bucholtz Mattiolo Malpighia
14:250 1900.
- Pseudohydnotrya** Fisch. Nat. Pflanzenf.
1:1:282 1897.
- Stephensia** Tul. Comp. Rend. 21:1433 1845.
- Terfezia** Tul. Ann. Sci. Nat. 3:3:350 1845.
- Terfeziopsis** Harkness Proc. Cal. Acad. Sci.
3:1:278 1899.
- Tirmania** Chat. La Truffe 80, ill. 1892.
- Tuber** Mich. Nov. Pl. Gen. 221, ill. 1729.
- Fischerula** Mattiolo Giorn. Bot. Ital.
34:1348 1928.
- G. cooperi** Hark.
- H. cerebriformis** Tul.
- H. piligera** Tul.
- H. tulasnei** B. & Br.
- G. ploettneriana** Henn.
- H. setchelli** Gilkey
- N. gardneri** Setch.
- P. melanoxanthus** Tul.
- C. lutea** Hesse
- P. lefeburei** Pat.
- P. juniperi** Vitt.
- L. ophthalmosporum** Quel.
- P. alveolata** Hark.
- P. setchelli** Fisch.
- P. vallumbrosae** Buch.
- P. harknessi** Fisch.
- P. bombycina** (Vitt.) Tul.
- T. leonis** Tul.
- T. lignaria** Hark.
- T. ovalispora** Pat.
- T. aestivum** Vitt.
- F. macrospora** Fisch.

PUCCINIALES

PUCCINIACEAE

Amerosporae

- Aecidium** Pers. Gmelin Syst. Nat. 2:1472 1791.
Monosporidium Barclay Jour. Soc. Bengal 56:367 1887.
Alveolaria Lagerh. Ber. Deut. Bot. Ges. 9:346 1891.
Ameris Arth. Res. Cong. Vienne 342 1905.
Aplopsora Mains Am. Jour. Bot. 8:442, ill. 1921.
Argomycetella Syd. Ann. Myc. 20:124 1922.
Poliotelium Syd. Ib.
Baeodromus Arth. Ann. Myc. 3:19 1905.
Blastospora Diet. Ann. Myc. 6:222, ill. 1908.
Botryorhiza Whetzel & Olive Am. Jour. Bot. 4:47, ill. 1917.
Caeoma Link. Mag. Ges. Naturf. Berlin 3:5 1809.
Calidium Syd. Ann. Myc. 16:242 1918.
Cerotelium Arth. Bull. Torr. Club 33:30 1906.
Phragmidiella Henn. Engler Bot. Jahrb. 38:104 1907; Dietel 57.
Physopella Arth. Res. Cong. Vienne 338 1906.
Chaconia Juel Bih. Sven. Akad. Handl. 23:12 1897.
Chrysella Syd. Ann. Myc. 24:292 1926.
Chrysocelis Lagerh. & Diet. Mem. Soc. Neuchat. 5:542 1913.
Cionothrix Arth. N. A. Fl. 7:124 1907.
Ctenoderma Syd. Ann. Myc. 17:102 1919.
Cystospora Butler Ann. Myc. 8:448, ill. 1910.
Diabole Arth. Bull. Torr. Club 49:194 1922.
Dichirinia Arth. N. A. Fl. 7:147 1907.
Dichlamys Syd. Ann. Myc. 17:105 1919.
Dietelia Henn. Hedwigia 30:215 1897.
Endophylloides Whetzel & Olive Am. Jour. Bot. 4:50, ill. 1917.
Endophyllum Lev. Mem. Soc. Linn. Paris 4:208 1825.
Gerwasia Rac. Bull. Acad. Cracovie 1909:270.
Goplana Rac. Par. Alg. Pilz. Java 2:24 1900.
Haplopyxis Syd. Ann. Myc. 17:105 1919.
Hemileia B. & Br. Gard. Chron. 1869:1157.
Hemileiopsis Rac. Par. Alg. Pilz. Java 1:25 1900.
- A.** berberidis Pers.
M. euphorbiae Barclay
A. cordiae Lagerh.
A. rosicola (E. & E.) Arth.
A. nyssae (E. & T.) Mains
A. pressa (Arth. & Holw.) Syd.
P. iresines (Lagerh.) Syd.
B. holwayi Arth.
B. smilacis Diet.
B. hippocrateae W. & O.
C. saxifragarum (DC.) Lk.
C. lindsaeae (Henn.) Syd.
C. canavaliae Arth.
P. markhamiae Henn.
P. vitis (Thuem.) Arth.
C. alutacea Juel
C. mikaniae Syd.
C. lupini L. & D.
C. praelonga (Wint.) Arth.
C. cristatum (Speg.) Syd.
C. oleae Butler
D. cubensis Arth.
D. binata (Berk.) Arth.
D. trollipi (K. & MacO.) Syd.
D. verruciformis Henn.
E. portoricensis W. & O.
E. sempervivi (A. & S.) De B.
G. rubi Rac.
G. mirabilis Rac.
H. crotalariae (Arth.) Syd.
H. vastatrix B. & Br.
H. wrightii Rac.

- Kuehneola** Magn. Bot. Cent. 74:169 1898.
Kunkelia Arth. Bot. Gaz. 63:504 1917.
Maravalia Arth. Bot. Gaz. 73:60 1922.
Masseella Diet. Ber. Deut. Bot. Ges. 13:332 1895.
Ochropsora Diet. Ber. Deut. Bot. Ges. 13:401 1895.
Olvea Arth. Mycologia 9:60 1917.
Peridermium Link Obs. Myc. 2:29 1816.
Pileolaria Cast. Obs. Ured. 1:22 1842.
Skierkia Rac. Par. Alg. Pilz. Java 2:30 1900.
Spirechina Arth. Jour. Myc. 13:30 1907.
Trachyspora Fkl. Bot. Zeit. 19:250 1861.
Trachysporella Syd. Ann. Myc. 19:168 1921.
Trichopsora Lagerh. Ber. Deut. Bot. Ges. 9:346 1891.
Trochodium Syd. Ann. Myc. 17:106 1919.
Uredo Pers. N. Mag. Bot 1:93 1794.
Uromyces Link Mag. Ges. Naturf. Berlin 7:28 1816.
Groveola Syd. Ann. Myc. 19:173 1921.
Haplotelium Syd. Ann. Myc. 20:124 1922
Klebahnna Arth. Res. Cong. Vienne 345 1906.
Nielsenia Syd. Ann. Myc. 19:171 1921.
Ontoteliium Syd. Ann. Myc. 19:174 1921.
Teleutospora Arth. & Bisby Bull. Torr. Club 48:38 1921.
Telospora Arth. Res. Cong. Vienne 346 1906.
Uromycopsis Arth. Res. Cong. Vienne 345 1906.
Uromycladium McAlp. Ann. Myc. 3:321 1905.
Macalpinia Arth. Res. Cong. Vienne 340 1906.
Zaghouania Pat. Bull. Soc. Myc. Fr. 17:185 1901.
- K.** *albida* (Kuehn) Magn.
K. *nitens* (Schw.) Arth.
M. *pallida* Arth. & Thaxt.
M. *capparidis* (Hobson) Diet.
O. *sorbi* (Oud.) Diet.
O. *capituliformis* (Henn.) Arth.
P. *pini* (Willd.) Kleb.
P. *terebinthi* (DC.) Cast.
S. *agallocha* Rac.
S. *rubi* (D. & H.) Arth.
T. *alchimillae* (Pers.) Fkl.
T. *melospora* (Therry) Syd.
T. *tournefortiae* Lagerh.
T. *ipomoeae* (Thuem.) Syd.
U. *helioscopiae* Pers.
U. *appendiculatus* (Pers.) Lév.
G. *indurata* (S. & H.) Syd.
H. *amoenum* Syd.
K. *glycyrrhizae* (Rabh.) Arth.
N. *dactylidis* (Otth) Syd.
O. *digitatum* (Halst.) Syd.
T. *rudbeckiae* (A. & H.) A. & B.
T. *hyalina* (Pk.) Arth.
U. *excavata* (DC.) Arth.
U. *simplex* McAlp.
M. *tepperiana* (Sacc.) Arth.
Z. *phillyreae* Pat.

Didymosporae

- Chrysocyclus** Syd. Ann. Myc. 23:322, ill. 1925.
Holwayella Jackson Mycologia 18:48 1926; cf. Syd. Ann. Myc. 23:322 1925.
Chrysopsora Lagerh. Ber. Deut. Bot. Ges. 9:345 1891.
Cleptomycetes Arth. Bot. Gaz. 65:464 1918.
Coleopuccinia Pat. Rev. Myc. 11:35 1889.
Desmella Syd. Ann. Myc. 16:241 1918.
Didymopsora Diet. Hedwigia 38:254 1899.
Diorchidium Kalchbr. Grevillea 9:26 1882.
Gambleola Masee Bull. Mis. Kew 115 1898.
- C.** *cestri* (D. & H.) Syd.
H. *mikaniae* (Arth.) Jack.
C. *gynoxidis* Lagerh.
C. *lagerheimianus* (Diet.) Arth.
C. *sinensis* Pat.
D. *aneimiae* (Henn.) Syd.
D. *solani* (Henn.) Diet.
D. *woodi* K. & C.
G. *cornuta* Masee

- Gymnoconia* Lagerh. Trom. Mus. Aarsh. 16:140 1894.
- Gymnosporangium* Hedwig f. DC. Fl. Fr. 2:216 1805.
- Gymnotelium* Syd. Ann. Myc. 19:170 1921.
- Hamaspora* Koern. Hedwigia 16:22 1877.
- Hamasporella* Hoehn. Zeits. Gär. 1:226 1912.
- Roestelia* Reb. Prod. Fl. Neom. 350 1804.
- Miyagia* Miyabe Ann. Myc. 11:107 1913.
- Prosopodium* Arth. Jour. Myc. 13:31 1907.
- Nephlyctis* Arth. Jour. Myc. 13:31 1907.
- Puccinia* Pers. Tent. Disp. 38 1797.
- Allodus* Arth. Res. Cong. Vienne 345 1906.
- Bullaria* DC. Fl. Fr. 2:226 1805.
- Coronotelium* Syd. Ann. Myc. 19:174 1921.
- Cutomycetes* Thuem. Jour. Sci. Lisboa 6:239 1878.
- Dasyspora* B. & C. Jour. Acad. Phil. 2:2:281 1853.
- Dicaeoma* Gray Nat. Arr. Brit. Pl. 1:541 1821.
- Eriosporangium* Bertero Ann. Sci. Nat. 3:5:269 1846.
- Jackya* Bub. Oest. Bot. Zeit. 52:42 1902.
- Leptinia* Juel Bih. Sven. Akad. Handl. 23:15 1897.
- Leptopuccinia* Rostrup Plant. Haandb. 268 1902.
- Lindrothia* Syd. Ann. Myc. 20:119 1922.
- Linkiella* Syd. Ann. Myc. 19:173 1921.
- Lysospora* Arth. Res. Cong. Vienne 340 1906.
- Micropuccinia* Rostr. Plant. Haandb. 266 1902.
- Peristemma* Syd. Ann. Myc. 19:175 1921.
- Persooniella* Syd. Ann. Myc. 20:118 1922.
- Pleomeris* Syd. Ann. Myc. 19:171 1921.
- Polioma* Arth. Jour. Myc. 13:29 1907.
- Poliomella* Syd. Ann. Myc. 20:122 1922.
- Pseudopuccinia* Hoehn. Mitt. Bot. Hochs. Wien 2:41 1925.
- Rostrupia* Lagerh. Jour. de Bot. 3:188 1889.
- Schroeterella* Syd. Ann. Myc. 20:119 1922.
- Sclerotelium* Syd. Ann. Myc. 19:172 1921.
- Solenodonta* Cast. Cat. Pl. Mars. 202 1845.
- Trailia* Syd. Ann. Myc. 20:121 1922.
- Puccinosira* Lagerh. Ber. Deut. Bot. Ges. 9:344 1891.
- Aecidiella* Ell. & Kels. Bull. Torr. Club 24:208 1897.
- Schizospora* Diet. Ber. Deut. Bot. Ges. 13:334, ill. 1895.
- G. interstitialis* (Schl.) Lagerh.
- G. clavariaeforme* (Jacq.) DC.
- G. nootkatense* (Trel.) Syd.
- H. longissima* (Thuem.) Koern.
- H. longissima* (Thuem.) Hoehn.
- R. cancellata* Reb.
- M. anaphalidis* Miy.
- P. appendiculatum* (Wint.) Arth.
- N. elegans* (Schroet.) Arth.
- P. graminis* Pers.
- A. podophylli* (Schw.) Arth.
- B. umbelliferarum* DC.
- C. mesnierianum* (Thuem.) Syd.
- C. asphodeli* Thuem.
- D. foveolata* B. & C.
- D. persicariae* Gray
- E. baccharidis* (Lev.) Bert.
- J. cirsi lanceolati* (Schr.) Bub.
- L. brasiliensis* Juel
- L. malvacearum* (Mont.) Rostr.
- L. ambigua* (A. & S.) Syd.
- L. tenuis* (Burr.) Syd.
- L. singularis* (Magn.) Arth.
- M. ribis* (DC.) Rostr.
- P. sonchi* (Rob.) Syd.
- P. punctata* (Lk.) Syd.
- P. dispersa* (Eriks.) Syd.
- P. nivea* (Holw.) Arth.
- P. ancizari* (Mayor) Syd.
- P. thermopsisidis* (Harkn.) Hoehn.
- R. elymi* (West.) Lagerh.
- S. stachydis* (DC.) Syd.
- S. compactum* (De B.) Syd.
- S. graminis* Cast.
- T. buxi* (DC.) Syd.
- P. pallidula* (Speg.) Lagerh.
- A. triumfettae* E. & K.
- S. mitragynes* Diet.

- Pucciniostele* Tranz. & Komar. Arb. Petersb. Nat. Ges. 30:138 1899.
Klastospora Diet. Ann. Myc. 2:24 1904.
Sphenospora Diet. Nat. Pflanzenf. 1:1:70 1897.
Stereostratum Magn. Ber. Deut. Bot. Ges. 17:181 1899.
Tranzschelia Arth. Res. Cong. Vienne 340 1906.
Lipospora Arth. Bull. Torr. Club 48:36 1921.
Polythelis Arth. Res. Cong. Vienne 341 1906.
Uropyxis Schroet. Hedwigia 14:165 1875.
Calliospora Arth. Bot. Gaz. 39:390 1905.
Xenostele Syd. Ann. Myc. 18:178 1920.
- P. clarkiana* (Barcl.) T. & K.
K. komarovi Diet.
S. pallida (Wint.) Diet.
S. corticioides (B. & Br.) Magn.
T. punctata (Pers.) Arth.
L. tucsonensis Arth.
P. fusca (Pers.) Arth.
U. amorphae (Curt.) Schroet.
C. holwayi Arth.
X. echinacea (Berk.) Syd.

Phragmosporae

- Frommea* Arth. Bull. Torr. Club. 44:503 1917.
Phragmidium Link Sp. Pl. 2:84 1824.
Earlea Arth. Res. Cong. Vienne 341 1906.
Phragmotelium Syd. Ann. Myc. 19:167 1921.
Teloconia Syd. Ann. Myc. 19:168 1921.
Phragmopyxis Diet. Nat. Pflanzenf. 1:1:70 1897.
Tricella Long Mycologia 4:282 1912.
Xenodochus Schl. Linnaea 1:237 1826.
- F. obtusa* (Str.) Arth.
P. mucronatum (Pers.) Schl.
E. speciosa (Fr.) Arth.
P. barnardi (P. & W.) Syd.
T. rosae (Barcl.) Syd.
P. deglubens (B. & C.) Diet.
T. acuminata Long
X. carbonarius Schl.

Dictyosporae

- Anthomyces* Diet. Hedwigia 38:253 1899.
Anthomycetella Syd. Ann. Myc. 14:353 1916.
Reyesiella Sacc. Att. Accad. Ven. 3:10:58 1919.
Cystomyces Syd. Ann. Myc. 24:290, ill. 1926.
Nothoravenelia Diet. Ann. Myc. 8:310 1910.
Nyssospora Arth. Res. Cong. Vienne 342 1906.
Ravenelia Berk. Gard. Chron. 10:132 1853.
Cephalotelium Syd. Ann. Myc. 19:165 1921.
Cystingophora Arth. N. A. Fl. 7:131 1907.
Cystotelium Syd. Ann. Myc. 19:165 1921.
Dendroecia Arth. Res. Cong. Vienne 340 1906.
Haploravenelia Syd. Ann. Myc. 19:165 1921.
Longia Syd. Ann. Myc. 19:165 1921.
Neoravenelia Long. Bot. Gaz. 35:131, ill. 1903.
Pleoravenelia Long. Bot. Gaz. 35:127, ill. 1902.
Sphaerophragmium Magn. Ber. Deut. Bot. Ges. 9:121 1891.
- A. brasiliensis* Diet.
A. canarii Syd.
R. anthomycoides Sacc.
C. costaricensis Syd.
N. japonica Diet.
N. echinata (Lev.) Arth.
R. epiphylla (Schw.) Diet.
C. macowanianum (Pazschke) Syd.
C. hieronymi (Speg.) Arth.
C. inornatum (Diet.) Syd.
D. farlowiana (Diet.) Arth.
H. indica (Berk.) Syd.
L. naralensis (Syd. & Ev.) Syd.
N. holwayi (Diet.) Long
P. levis (Diet. & Holw.) Long
S. acaciae (Cke.) Magn.

- Triphragmiopsis* Naumov Bull. Soc. Myc. Fr.
30:15 1914. T. *jeffersoniae* Naum.
Nyssopsorella Syd. Ann. Myc. 19:169 1921. N. *isopyri* (M. & N.) Syd.
Triphragmium Link Sp. Pl. 2:84 1824. T. *ulmariae* (Schum.) Lk.
Hapalophragmium Syd. Hedwigia 40:64,
ill. 1901. H. *derridis* Syd.
Triactella Syd. Ann. Myc. 19:169 1921. T. *pulchra* (Rac.) Syd.

Genera Incertae Sedis vel Dubia

- Achrotelium* Syd. Ann. Myc. 26:425 1928. A. *ichnocarpi* Syd.
Aecidiolum Unger Exanth. Pfl. 300 1833;
Syll. Fung. 7:773 1888. A. *exanthematum* Ung.
Pericladium Pass. Nuov. Giorn. Ital. 7:185,
ill. 1875; Syll. Fung. 7:838 1888. P. *greviae* Pass.

MELAMPSORACEAE

Amerosporae

- Chnoopsora* Diet. Ann. Myc. 4:423 1906. C. *butleri* Diet. & Syd.
Chrysomyxa Unger Beitr. Vergl. Path. 24
1840. C. *abietis* (Wallr.) Unger
B. *deformans* Diet.
Barclayella Diet. Hedwigia 29:266 1890.
Melampsoropsis Arth. Res. Cong. Vienne
338 1906. M. *ledi* (A. & S.) Arth.
Coleosporium Lev. Ann. Sci. Nat. 3:8:373
1847. C. *senecionis* (Pers.) Lev.
Stichopsora Diet. Engl. Bot. Jahrb. 27:565,
ill. 1899. S. *asterum* Diet.
Synomyces Arth. N. A. Fl. 7:661. 1924. S. *reichei* (Diet.) Arth.
Cronartium Fr. Obs. Myc. 1:220 1815. C. *flaccidum* (A. & S.) Wint.
Crossopsora Syd. Ann. Myc. 16:243 1918. C. *zizyphi* (Syd. & Butl.) Syd.
Gallowaya Arth. Res. Cong. Vienne 336 1906. G. *pinicola* Arth.
Melampsora Cast. Obs. Myc. 2:18 1848. M. *euphorbiae* (Schub.) Cast.
Necium Arth. N. A. Fl. 7:114 1907. N. *farlowi* Arth.
Melampsorella Schroet. Hedwigia 13:85 1874. M. *cerastii* (Pers.) Schroet.
Melampsoridium Kleb. Zeits. Pflanzenkr. 9:21
1899. M. *betulinum* (Pers.) Kleb.
Mesopsora Diet. Ann. Myc. 20:30 1922. M. *hypericorum* (DC.) Diet.
Micronegeria Diet. Engler Bot. Jahrb. 27:16
1899. M. *fagi* Diet.
Phacopsora Diet. Ber. Deut. Bot. Ges. 13:333
1895. P. *punctiformis* (Barc. & D.) Diet.
Bubakia Arth. Res. Cong. Vienne 338
1906. B. *crotonis* (Cke.) Arth.
Schroeteriaster Magn. Ber. Deut. Bot. Ges.
14:130 1896. S. *alpinus* (Schroet.) Magn.

Phragmosporae

- Calyptospora* Kuehn Hedwigia 8:81 1869. C. *goeppertiana* Kuehn
Hyalopsora Magn. Ber. Deut. Bot. Ges. 19:582
1901. H. *aspidiotus* (Pk.) Magn.
Milesia White Scot. Nat. 4:162 1877. M. *polypodii* White
Milesina Magn. Ber. Deut. Ges. 27:325
1909. M. *kriegeriana* Magn.

- Pucciniastrum** Otth Mitt. Nat. Ges. Bern
1861:71.
Thecopsora Magn. Hedwigia 14:123 1875.
Uredinopsis Magn. Att. Cong. Genova 167
1893.
- P. pustulatum** (Pers.) Diet.
T. areolata (Fr.) Magn.
U. filicina (Niessl) Magn.

USTILAGINALES

USTILAGINACEAE

- Cintractia** Cornu Ann. Sci. Nat. 6:15:279
1883.
Anthracoidea Bref. Unter. Ges. Myk. 12:144
1895; Syll. Fung. 14:420 1899.
Farysia Rac. Bull. Acad. Cracovie 1909:354,
ill.
Elateromyces Bub. Houb. Cesk. Dil 2:32
1912.
Melanopsichium Beck Ann. Nat. Hofmus.
Wien 9:122 1894.
Mycosyrinx Beck Ann. Nat. Hofmus. Wien
9:123 1894.
Schizonella Schroet. Beitr. Biol. 2:362 1877.
Sorosporium Rud. Linnaea 4:116 1829.
Sphacelotheca De Bary Vergl. Morph. Pilze
187 1884.
Testicularia Klotzsch Linnaea 7:202 1832.
Thecaphora Fingerh. Linnaea 10:230 1835.
Poecilosporium Diet. Flora 83:87, ill. 1897;
Syll. Fung. 16:380 1902.
Tolyposporella Atkin. Bull. Cornell Univ.
3:16 1897.
Tolyposporium Woron. Abh. Senck. Nat.
Ges. 12:577 1882.
Ustilago (Pers.) Roussel Fl. Calvados ed.
2:47 1806.
- C. axicola** (Berk.) Cornu
A. caricis (Pers.) Bref.
F. merrilli (Henn.) Syd.
E. olivaceus (DC.) Bub.
M. austramericanum (Speg.) Beck
M. cissi (DC.) Beck
S. melanogramma (DC.) Schroet.
S. saponariae Rud.
S. hydropiperis (Thuem.) De B.
T. cyperi Klotzsch
T. hyalina Fingerh.
P. davidsohni (D. & H.) Diet.
T. chrysopogonis Atkin.
T. junci (Schroet.) Woron.
U. segetum Pers.

TILLETIACEAE

- Burrillia** Setch. Proc. Am. Acad. 26:18 1891.
Doassansia Cornu Ann. Sci. Nat. 6:15:285
1883.
Setchellia Magn. Ber. Deut. Bot. Ges.
13:468, ill. 1895.
Doassansiosis (Setch.) Diet. Nat. Pflanzenf.
1:1:21 1897.
Entorhiza Web. Bot. Zeit. 42:369 1884.
Schinzia Naeg. Linnaea 16:281 1842; not
Dennst. 1818.
Entyloma De Bary Bot. Zeit. 32:101 1874.
Rhamphospora Cunningham Sci. Mem.
India 3:32 1888; Syll. Fung. 9:287 1891.
Melanotaenium De Bary Bot. Zeit. 32:105
1874.
- B. pustulata** Setch.
D. alismatis (Nees) Cornu
S. punctiformis (Niessl) Magn.
D. deformans (Setch.) Diet.
E. cypericola Web.
S. cellulicola Naeg.
E. microsporium (Ung.) Schroet.
R. nymphaeae Cunningham
M. endogenum (Ung.) De B.

- Neovossia* Koern. Oest. Bot. Zeit. 29:217
 1879.
- Perichlamys* Henn. Sacc. Syll. Fung. 14:430
 1899; for
- Didymochlamys* Henn. Hedwigia 36:246
 1897.
- Kuntzeomyces* Henn. Syll. Fung. 14:430
 1899.
- Polysaccopsis* Henn. Hedwigia 37:206 1898.
- Tilletia* Tul. Ann. Sci. Nat. 3:7:112 1847.
- Tracya* Syd. Hedwigia Beibl. 40:3 1901.
- Cornuella* Setch. Proc. Am. Acad. 26:19
 1891; Syll. Fung. 11:236 1895.
- Tuburcinia* (Fr.) Woron. Abh. Senck. Nat.
 Ges. 12:561 1882.
- Urocystis* Rabh. Klotzsch Herb. Myc. ed.
 2:393 1856.
- N. molinia* (Thuem.) Koern.
- P. ustilaginodes* Henn.
- D. ustilaginoidea* Henn.
- K. ustilaginoideus* Henn.
- P. hieronymi* (Schroet.) Henn.
- T. tritici* (Bjerk.) Wint.
- T. lemnae* (Setch.) Syd.
- C. lemnae* Setch.
- T. trientalis* (B. & Br.) Woron.
- U. occulta* (Wallr.) Rabh.

Genera Incertae Sedis vel Dubia

- Schroeteria* Wint. Rabh. Krypt. Fl. 1:1:117
 1884; Syll. Fung. 7:500 1888.
- Ustilagopsis* Speg. Fung. Arg. 2:11 1880;
 Syll. Fung. 7:498 1888.
- S. delastrina* (Tul.) Wint.
- U. deliquescens* Speg.

GRAPHIOLACEAE

- Graphiola* Poit. Ann. Sci. Nat. 1824:473, ill.
- Stylina* Syd. Ann. Myc. 18:192 1920.
- G. phoenicis* (Moug.) Poit.
- S. disticha* (Ehrenb.) Syd.

TREMELLALES

AURICULARIACEAE

- Auricularia* Bull. Champ. 277 1795.
Helicobasis Pat. Bull. Soc. Bot. Fr. 32:171
1885; for *Helicobasidium*.
Herpobasidium Lind Ark. Bot. 7:5 1908
Stypinella Schroet. Pilz. Schles. 1:383 1887;
Syll. Fung. 14:244 1899.
Hirneola Fr. Syst. Orb. Veg. 256 1825.
Auriculariella Sacc. Syll. Fung. 6:407 1888.
Jola Moell. Protobas. 162 1895.
Patouillardina Bres. Ann. Myc. 18:52 1920.
Pilacre Fr. Syst. Myc. 3:204 1829; cf. Shear
& Dodge Jour. Agr. Res. 30:407 1925;
Killermann 109.
Ecchyna Fr. Nov. Fl. Suec. 5:80 1819.
Phleogena Link Handb. Erk. Gew. 3:396
1833; Killermann 109.
Pilacrella Schroet. Pilz. Schles. 1:384 1889.
Platygløea Schroet. Pilz. Schles. 1:384 1889.
Achroomyces Bon. Handb. Myk. 135, ill.
1851; cf. Hoehn. Ann. Myc. 2:271 1904.
Helicogloea Pat. Bull. Soc. Myc. Fr. 8:121
1892.
Kriegeria Bres. Rev. Myc. 13:14, ill. 1891;
cf. Hoehn. Frag. Myk. 354.
Saccoblastia Moell. Protobas. 162 1895.
Septobasidium Pat. Jour. de Bot. 6:61 1892.
Hoehnelomyces Weese Ber. Deut. Bot. Ges.
37:514 1919.
- A. mesenterica* (Dicks.) Fr.
H. purpureus (Tul.) Pat.
H. filicinum (Rostr.) Lind
S. purpurea (Tul.) Schroet.
H. auricula-judae (L.) Berk.
A. tremellosa (Fr.) Sacc.
J. hookeriana Moell.
P. cinerea Bres.
P. faginea Fr.
E. faginea Fr.
P. faginea (Fr.) Lk.
P. solani Cohn & Schroet.
P. nigricans Schroet.
A. tumidus Bon.
H. lagerheimi Pat.
K. eriophori Bres.
S. ovispora Moell.
S. pedicellatum Pat.
H. delectans (Moell.) Weese

Genera Incertae Sedis Vel Dubia

- Delortia* Pat. & Gaill. Bull. Soc. Myc. Fr. 4:43
1888; Syll. Fung. 6:795 1888; Killermann
108.
Eocronartium Atkin. Jour. Myc. 8:107 1902;
Syll. Fung. 17:211 1906; cf. Pat. Bull. Soc.
Myc. Fr. 36:176 1920.
Mohortia Rac. Bull. Acad. Crac. 1909:361;
Syll. Fung. 21:447 1912; Killermann 108.
Mylittopsis Pat. Jour. de Bot. 9:245 1895.
Tjibodasia Holterm. Myk. Unters. 44 1898;
Syll. Fung. 16:216 1902.
- D. palmicola* Pat.
E. typhuloides (Pk.) Atkin.
M. tropica Rac.
M. langloisi Pat.
T. pezizoides Holterm.

TREMELLACEAE

- Craterocola* Bref. Unters. 7:98 1888.
Exidia Fr. Syst. Myc. 2:220 1822.
- C. cerasi* (Schum.) Bref.
E. glandulosa (Bull.) Fr.

- Ulocolla* Bref. Unters. 7:95 1888; Syll. Fung. 6:777 1888; Killermann 115.
Exidiopsis Olsen Bref. Unters. 7:94 1888.
Gloeosoma Bres. Ann. Myc. 18:51 1920.
Gyrocephalus Pers. Mem. Soc. Linn. Paris 3:77 1824.
Heterochaete Pat. Bull. Soc. Myc. Fr. 8:120 1892.
Heterochaetella Bourd. Trans. Brit. Myc. Soc. 7:53 1920.
Hirneolina Pat. Ess. Tax. 25 1900, as subg.; Sacc. Syll. Fung. 17:208 1906.
Eichleriella Bres. Ann. Myc. 1:115 1903; Syll. Fung. 17:208 1906.
Hyaloria Moell. Protobas. 173 1895.
Clavariopsis Holterm. Myc. Unters. Trop. 85, ill. 1898.
Phaeotremella Rea Trans. Brit. Myc. Soc. 3:377, ill. 1912.
Protohydnum Moell. Protobas. 173 1895.
Protodontia Hoehn. Sitzb. Akad. Wien 116:83 1907.
Protomerulius Moell. Bras. Pilzbl. 60 1895.
Sebacina Tul. Ann. Sci. Nat. 5:15:223 1872.
Bourdotia Bres. Ann. Myc. 6:46 1908; Syll. Fung. 23:450 1915.
Tremellodendrum Atkin. Jour. Myc. 7:106 1902; Syll. Fung. 17:208 1906.
Seismosarca Cke. Grevillea 18:25 1889.
Sirobasidium Lagerh. & Pat. Jour. de Bot. 6:465 1892.
Stypella Moell. Protobas. 166 1895.
Tremella (Dill.) Fr. Syst. Myc. 2:210 1823.
Naematelia Fr. Syst. Myc. 2:227 1823.
Tremellodon Pers. Myc. Eur. 2:172 1825.
Tulasnella Schroet. Pilz. Schles. 1:397 1889.
- U. saccharina Fr.
 E. effusa Olsen
 G. vitellinum (Lev.) Bres.
 G. rufus (Jacq.) Bref.
 H. andina Pat.
 H. crystallina Bourd.
 H. incarnata (Bres.) Sacc.
 E. incarnata Bres.
 H. pilacre Moell.
 C. pinguis Holterm.
 P. pseudofolia Rea
 P. cartilagineum Moell.
 P. uda Hoehn.
 P. brasiliensis Moell.
 S. laciniata (Bull.) Bres.
 B. galzini Bres.
 T. candidum (Schw.) Atkin.
 S. hydrophora Cke.
 S. sanguineum Lagerh. & Pat.
 S. papillata Moell.
 T. frondosa Fr.
 N. encephala (Willd.) Fr.
 T. gelatinosum (Scop.) Pers.
 T. anceps Bres. & Syd.

DACRYOMYCETACEAE

- Arrhytidia* Berk. Jour. Bot. & Kew Misc. 1:235 1849.
Ceracea Cragin Jour. Myc. 1:58 1885; Syll. Fung. 6:805 1888.
Calocera Fr. Syst. Myc. 1:485 1822.
Dacryomitra Tul. Ann. Sci. Nat. 5:15:217 1872.
Dacryopsis Masee Grevillea 20:23 1891; Syll. Fung. 11:149 1895.
Dacryopsella Hoehn. Sitzb. Akad. Wien 124:50 1915; Syll. Fung. 23:583 1925.
Dacryomyces Nees Syst. Pilz. 89 1817.
Ditiola Fr. Syst. Myc. 2:160 1822.
Femsjonnia Fr. Sum. Veg. Scan. 341 1849.
Guepinia Fr. Syst. Orb. Veg. 92 1825.
- A. flava B. & C.
 C. vernicosa Cragin
 C. viscosa (Pers.) Fr.
 D. pusilla Tul.
 D. gyrocephala (B. & C.) Mass.
 D. typhae Hoehn.
 D. stillatus Nees
 D. radicata (A. & S.) Fr.
 F. luteo-alba Fr.
 G. spathularia (Schw.) Fr.

Genera Incertae Sedis Vel Dubia

- Apyrenium** Fr. Sum. Veg. Scan. 470 1849;
Syll. Fung. 6:814 1888.
- Cladosterigma** Pat. Bull. Soc. Myc. Fr. 8:138
1892; Syll. Fung. 11:640 1891.
- Collyria** Fr. Sum. Veg. Scan. 340 1849; Syll.
Fung. 6:811 1888.
- Ductifera** Lloyd. Myc. Notes 50:711, ill. 1917;
Syll. Fung. 23:581 1915.
- Heterotextus** Lloyd Myc. Notes 67:1151, ill.
1922.
- Hormomyces** Bon. Handb. Myk. 150 1851;
Syll. Fung. 6:812 1888.
- Myxomycidium** Masee Kew Bull. 179 1899;
Syll. Fung. 16:220 1902.
- Phyllotremella** Lloyd Myc. Notes 64:1007, ill.
1920.
- Tremellopsis** Pat. Duss Enum. Champ. Guad.
1903:13; Syll. Fung. 17:193 1906.
- A. lignatile** Fr.
- C. fusisporum** Pat.
- C. helvelloides** (Schw.) Fr.
- D. millei** Lloyd
- H. flavus** Lloyd
- H. aurantiacus** Bon.
- M. pendulum** Mass.
- P. africanus** Lloyd
- T. antillarum** Pat.

AGARICALES

HYPOCHNACEAE

- Aureobasis** Viala & Boyer Rev. Gen. Bot.
3:369, ill. 1891; for *Aureobasidium*.
- Botryoconis** Syd. Ann. Myc. 4:344 1906.
- Cryptobasidium** Lendner Bull. Soc. Geneve
2:12, ill. 1920.
- Exobasidium** Woronin Verh. Nat. Ges. Frei-
burg 4:397 1867.
- Clinoconidium** Pat. Bull. Soc. Myc. Fr.
14:156 1898; Syd. Ann. Myc. 24:283 1926.
- Hypochnus** Fr. Obs. Myc. 2:278 1818; em.
Bres. Ann. Myc. 1:105 1903.
- Kordyana** Rac. Par. Alg. Pilz. Java 2:35
1900.
- Microstroma** Niessl Oest. Bot. Zeits. 11:252
1861.
- Tomentellina** H o e h n. Sitzb. Akad. Wien
115:1604 1906.
- Urobasidium** Giesenh. Flora 76:139 1892.
- A. vitis** V. & B.
- B. saccardoii** Syd.
- C. ocoteae** Lend.
- E. vaccinii** (Fkl.) Wor.
- C. farinosum** (Henn.) Pat.
- H. ferrugineus** (Pers.) Fr.
- K. pinangae** Rac.
- M. album** (Desm.) Sacc.
- T. ferruginosa** H. & L.
- U. rostratum** Giesenh.

Genera Incertae Sedis Vel Dubia

- Aldridgea** Masee Fungus Flora 1:103 1892;
Syll. Fung. 11:129 1895; Killermann 135.
- Endobasidium** Speschnew Fung. Transcasp.
Turk. 12 1901; Syll. Fung. 17:190 1906;
Killermann 133.
- Lelum** Rac. Par. Alg. Pilz. Java 3:16 1900;
Syll. Fung. 16:199 1902; Killermann 133.
- Ordonia** Rac. Bull. Acad. Crac. 1909:360;
Sacc. 21:447 1912; Killermann 135.
- A. gelatinosa** Masee
- E. clandestinum** Spesch.
- L. ustilaginosodes** Rac.
- O. orthobasidium** Rac.

Protocoronis Atkin. & Edgert. Jour. Myc.
13:186 1907; Syll. Fung. 21:421 1912;
Killermann 133; for *Protocoronospora*.

P. nigricans A. & E.

THELEPHORACEAE

Aleurodiscus Rabh. Hedwigia 13:184 1874.
Asterostroma Masee Jour. Linn. Soc. 25:154
1889.

Asterostromella Hoehn. & Litsch. Sitzb.
Akad. Wien 116:773 1907.

Dichostereum Pilat Ann. Myc. 24:223, ill.
1926.

Bonia Pat. Bull. Soc. Myc. Fr. 8:48 1892.

Dendrothele Hoehn. & Litsch. Sitzb. Akad.
Wien 116:819 1907; Syll. Fung. 21:404
1912, as subg.; Killermann 143.

Cladoderris (Pers.) Fr. Fung. Natal. 20 1848.

Beccariella Ces. Myc. Born. 9 1879; Syll.
Fung. 6:550 1888.

Coniophora DC. Fl. Gall. 6:34 1815.

Jaapia Bres. Ann. Myc. 9:428 1911; Syll.
Fung. 23:541 1925; Killermann 142.

Prillieuxia Sacc. & Syd. Syll. Fung. 14:225
1899; Killermann 140.

Coniophorella Karst. Finl. Basidsv. 438 1889.

Cora Fr. Syst. Orb. Veg. 1:100 1825.

Corella Wain. Etud. Lich. Bres. 2:242 1890.

Corticium Pers. Myc. Eur. 1:128 1822.

Cerocorticium Henn. Monsunia 1:138
1899; Syll. Fung. 16:196 1902; Killermann
137.

Galzinia Bourd. Assoc. Fr. Av. Sci. 45:577
1921; Killermann 138.

Craterellus Pers. Myc. Eur. 2:4 1825.

Cyphella Fr. Syst. Myc. 2:201 1822.

Catilla Pat. Bull. Soc. Myc. Fr. 31:32, ill.
1915.

Dendrocypella Petch Ann. Bot. Gard. Cey-
lon 7:289 1922.

Phaeocypella Speg. An. Mus. Nac. 3:12:278
1909; Killermann 150.

Cytidia Quel. Fl. Myc. 25 1888.

Dictyonema (Ag.) Zahlbr. Nat. Pflanzenf.
1:1:237 1907.

Epithele Pat. Bull. Soc. Myc. Fr. 15:202 1899.

Hymenochaete Lev. Ann. Sci. Nat. 3:5:150
1846.

Duportella Pat. Phil. Jour. Sci. 10:87 1915.

Lloydiella Bres. Lloyd Myc. Notes 6:51
1901; Syll. Fung. 16:116 1902.

Hypolyssus Berk. Lond. Jour. Bot. 1:139
1842.

A. amorphus (Pers.) Rabh.

A. corticolum Mass.

A. investiens H. & L.

D. induratum (Berk.) Pilat

B. papyrina Pat.

D. griseo-cana (Bres.) B. & G.

C. dendritica (Pers.) Fr.

B. insignis Ces.

C. cerebella (Pers.) Schroet.

J. argillacea Bres.

P. favinea (Britz.) S. & S.

C. olivacea (Fr.) Karst.

C. pavonia Fr.

C. brasiliensis Wain.

C. roseum Pers.

C. bogoriense Henn.

G. pedicellata Bourd.

C. cornucopiodes (L.) Pers.

C. digitalis (A. & S.) Fr.

C. pandani Pat.

D. setosa Petch

P. sphaerospora Speg.

C. flocculenta (Fr.) H. & L.

D. membranaceum Ag.

E. typhae (Pers.) Pat.

H. tabacina (Sow.) Lev.

D. velutina Pat.

L. cinerascens (Schw.) Bres.

H. montagnei Berk.

- Peniophora* Cke. *Grevillea* 7:20 1879.
Gloeocystidium Karst. *Bot. Cent.* 43:385
 1890; *Syll. Fung.* 16:193 1902, as subg.;
 Killermann 140.
Geoopeniophora Hoehn. & Litsch. *Sitzb.*
Akad. Wien 111:815 1907; Killermann 139.
Kneiffia Fr. *Epicr.* 529 1838.
Peniophorina Hoehn. *Sitzb. Akad. Wien.*
 126:283 1917; Killermann 138.
Wiesnerina Hoehn. *Denks. Akad. Wien*
 83:7 1907; *Syll. Fung.* 21:385 1912; Kil-
 lermann 139.
Skepperia Berk. *Trans. Linn. Soc. Lond.*
 22:130 1859.
Friesula Spig. *Fung. Arg.* 2:9 1881.
Skepperiella Pilat *Bull. Soc. Myc. Fr.* 43:56
 1927.
Solenia Hoffm. *Deut. Fl. t. 8* 1795.
Stereum Pers. *Obs. Myc.* 1:35 1797; em. Fr.
Epicr. 545 1838.
Thelephora Ehrhart *Crypt. Exs. n.* 178 1785;
 em. Fr. *Syst. Myc.* 1:428 1821.
Bresadolina Brinkm. *Ann. Myc.* 7:289
 1909; Killermann 146.
- P. quercina* (Fr.) Cke.
G. lactescens (Berk.) H. & L.
G. incarnata (Fr.) H. & L.
K. setigera Fr.
P. pedicellata (Pr.) Hoehn.
W. horrida Hoehn.
S. convoluta Berk.
F. platensis Spig.
S. spathularia (B. & C.) Pilat
S. candida Pers.
S. hirsutum (Willd.) Pers.
T. terrestris Ehrh.
B. pallida (Pers.) Br.

Genera Incertae Sedis Vel Dubia

- Dendrocladium* Pat. *Jour. de Bot.* 3:33 1889;
 Killermann 150.
D. peckolti (Lloyd) Pat.

CLAVARIACEAE

- Clavaria* (Vaill.) L. *Sp. Pl.* 2:1132 1753.
Phaeoclavulina Brinkm. *Jahresb. Westf.*
Ver. Bot. 25:197 1897.
Lachnocladium Lev. *Orbigny Dict.* 8:487
 1849.
Phaeopterula Henn. *Hedwigia* 43:175 1904;
 cf. Hoehn. *Frag. Myk.* 687 1911; *Syll.*
Fung. 17:201 1906.
Physalacria Pk. *Bull. Torr. Club* 9:2 1882.
Baumannia Henn. *Engler Bot. Jahrb.*
 23:543 1897; *Syll. Fung.* 14:244 1899; cf.
 Hoehn. *Ann. Myc.* 9:174 1911.
Pistillaria Fr. *Syst. Myc.* 1:496 1821
Pterula Fr. *Syst. Orb. Pl. Hom.* 90 1825.
Sparassis Fr. *Syst. Myc.* 1:464 1821.
Typhula Pers. *Syn. Fung.* 28 1801; *Fr. Obs.*
Myc. 2:296 1818.
- C. botrytis* Pers.
P. macrospora Brinkm.
L. furcellatum (Fr.) Lev.
P. hirsuta Henn.
P. inflata Pk.
B. togoensis Henn.
P. micrans Fr.
P. multifida Fr.
S. crispa (Wulf.) Fr.
T. sclerotoides Fr.

Genera Incertae Sedis Vel Dubia

- Acurtis* Fr. *Sum. Veg. Scan.* 337 1849; *Syll.*
Fung. 6:691 1888; Killermann 150.
A. gigantea (Schw.) Fr.

- Hirsutella* Pat. Rev. Myc. 14:67 1892; Syll. Fung. 11:140 1895; cf. Speare Trans. Brit. Myc. Soc. 9:93 1923; Killermann 156. H. entomophila Pat.
Matruchotia Boul. Rev. Gen. Bot 5:401 1893; Syll. Fung. 11:118 1895. M. varians Boul.

HYDNACEAE

- Asterodon* Pat. Bull. Soc. Myc. Fr. 10:130 1894. A. ferruginosus Pat.
Hydnochaete Pk. Rep. N. Y. Mus. 50:113 1897; not Bres. 1896. H. setigera Pk.
Echinodontium Ell. & Ev. Bull. Torr. Club 37:49 1900. E. tinctorum E. & E.
Hydnofomes Henn. Engler Bot. Jahrb. 28:267 1900; Syll. Fung. 16:177 1902. H. tsugicola Henn.
Gloeothele Bres. Ann. Myc. 18:44 1920. G. lamellosa (Henn.) Bres.
Grammothele B. & C. Cub. Fung. 327 1867. G. lineata B. & C.
Grandinia Fr. Epicr. 527 1838. G. granulosa Fr.
Hydnochaete Bres. Hedwigia 35:287 1896. H. badia Bres.
Hydnum L. Sp. Pl. 2:1178 1753. H. imbricatum L.
Hericum Pers. Comm. Clav. 28 1797. H. echinus (Scop.) Pers.
Hydnodon Banker Mycologia 5:297 1913. H. telephorum (Lev.) Bank.
Irpex Fr. Elench. Fung. 1:142 1828. I. lacteus Fr.
Lopharia Kalchb. & MacOw. Grevillea 10:58 1882. L. lirellosa K. & M.
Thwaitesiella Massee Grevillea 21:2 1892; Syll. Fung. 11:112 1895. T. mirabilis (B. & Br.) Mass.
Mucronella Fr. Hym. Eur. 629 1874. M. calva (A. & S.) Fr.
Odontia Pers. Obs. Myc. 1:88 1796. O. fimbriata Pers.
Caldesiella Sacc. Michelia 1:97 1877; Syll. Fung. 6:477 1888. C. italica Sacc.
Dacryobolus Fr. Sum. Veg. Scan. 404 1849. D. uda Fr.
Grandiniella Karst. Hedwigia 34:8 1895. G. livescens Karst.
Phlebia Fr. Syst. Myc. 1:426 1821. P. radiata Fr.
Radulum Fr. Elench. Fung. 1:148 1828. R. orbiculare Fr.
Phaeoradulum Pat. Bull. Soc. Myc. Fr. 16:178 1900; Syll. Fung. 16:179 1902. P. guadalupense Pat.
Sistotrema Pers. Tent. Disp. 28 1797. S. confluens Pers.

Genus Incertae Sedis

- Kordyanella* Hoehn. Ann. Myc. 2:273 1904. K. austriaca Hoehn.

POLYPORACEAE

- Boletinus* Kalchbr. Bot. Zeit. 25:181 1867. B. cavipes Opat.
Boletus (Dill.) L. Sp. Pl. 2:1176 1753. B. subtomentosus L.
Boletopsis Henn. Nat. Pflanzenf. 1:1:194 1900; Syll. Fung. 14:164 1899. B. rufus (Schaeff.) Henn.
Fistulinella Henn. Engl. Bot. Jahrb. 30:43 1901; Syll. Fung. 17:101 1906; cf. Hoehn. Frag. Myk. 583. F. staudti Henn.
Leucobolites Beck Zeits. Pilzk. 2:142 1923. L. castaneus (Poir.) Beck
Leucoconius (Reichenb.) Beck Zeits. Pilzk. 2:146 1923. L. cyanescens (Bull.) Beck

- Rhodobolites** Beck Zeits. Pilzk. 2:147 1923.
Rostkovites Karst. Rev. Myc. 3:9:16 1881.
Suillus (Michel.) Karst. Bidr. Finl. Nat. Folk. 37:5 1882; Syll. Fung. 16:142 1899.
Tylophilus Karst. Hattsv. 2:2 1882; Syll. Fung. 16:142 1899.
Cryptoporus Shear Bull. Torr. Club. 29:450 1902; Killermann 177.
Cyclomyces Kze. Linnaea 5:512, ill. 1830.
Daedalea Pers. Syn. Meth. 499 1801.
Elmerina Bres. Ann. Myc. 10:507 1912; for *Elmeria* Bres. Hedwigia 51:318 1912.
Favolus Fr. Elench. Fung. 44 1828.
Filoboletus Henn. Monsunia 1:146 1900; cf. Hoehn. Frag. Myk. 173, 582 1908, 1910.
Fistulina Bull. Champ. 1:314 1791.
Fomes Fr. Nov. Symb. 59 1851.
Ganoderma Karst. Rev. Myc. 3:17 1881; Syll. Fung. 9:176 1891; Killermann 192.
Heterobasidium Bref. Unters. 8:154 1889.
Gloeoporus Mont. Ramon Hist. Phys. Cuba 385 1842.
Gyrodon Opat. Wieg. Arch. Naturg. 1:5 1856.
Hexagonia Fr. Epicr. 496 1838.
Hymenogramme Berk. & Mont. Lond. Jour. Bot. 3:329 1844; cf. Henn. Nat. Pflanzenf. 1:1:197 1900.
Laschia Mont. Fl. Chil. 7:395 1845; not Fr. 1830.
Lenzites Fr. Gen. Hymen. 10 1836.
Merulius (Haller) Fr. Syst. Myc. 1:326 1821.
Phylloporus Quel. Fl. Myc. Fr. 49 1888.
Polyporus (Michel.) Fr. Epicr. 427 1838.
Laccocephalum MacAlp. & Tepper Proc. Soc. Victoria 7:166 1894; Syll. Fung. 11:87 1895.
Polystictus Fr. Nov. Symb. 70 1851.
Mucronoporus Ell. & Ev. Jour. Myc. 5:28 1889; Syll. Fung. 9:188 1891; Killermann 184.
Poria Pers. Syn. Meth. 542 1801.
Porothelium Fr. Obs. Myc. 2:272 1818.
Strobilomyces Berk. Outl. 236 1860.
Trametes Fr. Gen. Hymen. 11 1836.
Sclerodepsis Cke. Grevillea 19:49 1890.
R. roseus (Wint.) Beck
R. granulatus (L.) Karst.
S. castaneus (Bull.) Karst.
T. felleus (Bull.) Karst.
C. volvatus (Pk.) Shear
C. fuscus Kze.
D. unicolor (Bull.) Fr.
E. cladophora (Berk.) Bres.
F. europaeus Fr.
F. mycenoides Henn.
F. hepatica (Schaeff.) Fr.
F. officinalis (Vill.) Fr.
G. lucidum (Leys.) Karst.
H. annosum Bref.
G. amorphus Fr.
G. lividus (Bull.) Opat.
H. crinigera Fr.
H. javensis B. & M.
L. papulata Mont.
L. betulina (L.) Fr.
M. tremellosus (Schrad.) Fr.
P. rhodoxanthus (Schw.) Bres.
P. brumalis (Pers.) Fr.
L. basilapidodes M. & T.
P. versicolor (L.) Fr.
M. circinatus (Fr.) E. & E.
P. vaporaria Pers.
P. fimbriatum (Pers.) Fr.
S. strobilaceus (Scop.) Berk.
T. pini (Brot.) Fr.
S. berkeleyi Cke.

Genera Incertae Sedis Vel Dubia

- Bresadolia** Speg. Fung. Guar. 1:15 1887; Syll. Fung. 6:388 1888; Killermann 210.
Campbellia Cke. & Mass. Grevillea 18:87 1890; Syll. Fung. 9:205 1891; Killermann 210.
B. paradoxa Speg.
C. africana C. & M.

- Rodwaya* Syd. *Hedwigia* 40:bl.2 1901; Syll. Fung. 16:172 1902; Killermann 210.
- Ceratomyces* Corda *Sturm Deut. Crypt. Fl.* 3:3:133, ill. 1837; Syll. Fung. 6:385 1888; Killermann 203.
- Henningsia* Moell. *Protobas.* 44 1895; Syll. Fung. 14:188 1899; Killermann 210.
- Muciporus* Juel *Bih. Sven. Akad. Handl.* 23:3:23, ill. 1897; Killermann 210.
- Mycodendrum* Masee *Jour. Bot.* 29:1, ill. 1891; Syll. Fung. 9:206 1891; Killermann 210.
- Myriadoporus* Pk. *Bull. Torr. Club* 11:27 1884; Syll. Fung. 6:384 1888; Killermann 203.
- Poroptycha* Beck *Verh. z-b. Ges. Wien* 38:657 1888; Syll. Fung. 9:206 1891; Killermann 210.
- Theloporus* Fr. *Fung. Natal.* 18 1848; Syll. Fung. 6:421 1888; Killermann 204.
- Volvoboletus* Henn. *Nat. Pflanzenf.* 1:1:196 1900; Syll. Fung. 14:164 1899; Killermann 210.
- R. *africana* (C. & M.) Syd.
- C. *albus* (Corda) Sacc.
- H. *geminella* Moell.
- M. *corticola* (Fr.) Juel
- M. *paradoxum* Mass.
- M. *adustus* Pk.
- P. *candida* Beck
- T. *cretaceus* Fr.
- V. *volvatus* Henn.

AGARICACEAE

Leucosporae

- Amanita* Pers. *Syn. Meth.* 246 1801.
- Amanitopsis* Roze *Karsten Hattsv.* 1:6 1879.
- Armillaria* Fr. *Syst. Myc.* 1:26 1821.
- Arrhenia* Fr. *Sum. Veg. Scan.* 312 1849
- Campanella* Henn. *Nat. Pflanzenf.* 1:1:199 1900; Syll. Fung. 14:100 1899; Killermann 248.
- Dictyolus* Quel. *Enchir.* 139 1886; Syll. Fung. 5:482 1887; Killermann 248.
- Rimbachia* Pat. *Bull. Soc. Myc. Fr.* 8:159 1891; Syll. Fung. 11:32 1895; Killermann 248.
- Cantharellus* Adanson *Juss. Gen. Pl.* 6 1789.
- Clitocybe* Fr. *Syst. Myc.* 1:78 1821.
- Aeruginospora* Hoehn. *Sitzb. Akad. Wien* 117:1012 1908; Syll. Fung. 21:46 1912; Killermann 246.
- Leucopaxillus* Boursier *Bull. Soc. Myc. Fr.* 41:393 1925.
- Collybia* Fr. *Syst. Myc.* 1:129 1821.
- Heliomyces* Lev. *Ann. Sci. Nat.* 3:2:177 1844.
- Hiatula* Fr. *Nov. Symb.* 27 1851.
- Hygrophorus* Fr. *Epicr.* 320 1838.
- Godfrinia* Maire *Rev. Myc.* 28:66, ill. 1906.
- Lactarius* Fr. *Epicr.* 333 1838.
- Lactaria* Pers. *Tent. Disp.* 63 1797.
- A. *muscaria* (L.) Pers.
- A. *vaginata* (Bull.) Roze
- A. *mellea* (Vahl) Fr.
- A. *cupularis* (Wahl.) Fr.
- C. *büttneri* Henn.
- D. *lobatus* (Pers.) Quel.
- R. *paradoxa* Pat.
- C. *cibarius* Fr.
- C. *infundibulis* (Schaeff.) Fr.
- A. *singularis* Hoehn.
- L. *paradoxus* (C. & D.) Bour.
- C. *dryophila* (Bull.) Fr.
- H. *elegans* Lev.
- H. *benzoni* Fr.
- H. *miniatus* Fr.
- H. *conicus* (Scop.) Maire
- L. *piperatus* (L.) Fr.
- L. *piperata* (L.) Pers.

- Lactariopsis* Henn. Engl. Bot. Jahrb. 30:51
1901; Syll. Fung. 17:30 1906; cf. Hoehn.
Frag. Myk. 587 1910.
- Lentinus* Fr. Elench. Fung. 45 1828.
- Lentodiopsis* Bub. Hedwigia 43:106 1904.
- Lentodium* Morg. Jour. Cinc. Soc. Nat.
Hist. 18:36 1895; Killermann 283.
- Lepiota* Fr. Syst. Myc. 1:19 1821.
- Chlorophyllum* Masee Kew Bull. 1898:135;
Syll. Fung. 21:46 1912; Killermann 247.
- Amanitella* Maire Ann. Myc. 11:337 1913;
Killermann 276.
- Lepidella* Gilbert Bull. Soc. Myc. Fr.
41:303 1925.
- Marasmius* Fr. Epicr. 372 1838.
- Mycena* Fr. Syst. Myc. 1:140 1821.
- Eomycenella* Atkin. Bot. Gaz. 34:36 1902;
Syll. Fung. 17:21 1906.
- Gloecephala* Masee Grevillea 21:33 1892;
Syll. Fung. 11:142 1895; Killermann 151.
- Nyctalis* Fr. Syst. Orb. Veg. 203 1825.
- Omphalia* Pers. Syn. Meth. 448 1801.
- Panola* Fr. Epicr. 396 1838.
- Pleurotus* Fr. Syst. Myc. 1:178 1821.
- Russula* Pers. Obs. Myc. 1:100 1796.
- Schizophyllum* Fr. Obs. Myc. 1:103 1815.
- Schulzeria* Bres. Schulzeria Nov. Gen. 7, ill.
1886.
- Chlorospora* Masee Kew Bull. 1898:136;
Syll. Fung. 21:46 1912; Killermann 247.
- Tilotus* Kalchbr. Grevillea 9:137 1881.
- Tricholoma* Fr. Syst. Myc. 1:36 1821.
- Trogia* Fr. Epicr. 402 1838.
- Xerotus* Fr. Syst. Orb. Veg. 1:78 1825.
- L. zenkeri* Henn.
L. tigrinus (Bull.) Fr.
L. albida Bub.
- L. squamulosum* Morg.
L. procera (Scop.) Fr.
- C. esculentum* Mass.
- A. lenticularis* Maire
- L. vittadini* Gilbert
M. rotula (Scop.) Fr.
M. galericulata (Scop.) Fr.
- E. echinocephala* Atkin.
- G. epiphylla* Mass.
N. asterophora Fr.
O. campanella (Batsch) Pers.
P. stipticus (Bull.) Fr.
P. ostreatus (Jacq.) Fr.
R. alutacea Pers.
S. commune Fr.
- S. rimulosa* S. & B.
- C. eyrei* Mass.
T. lenzitiformis K.
T. personatum Fr.
T. crispa (Pers.) Fr.
X. romanus Fr.

Rhodosporae

- Annularia* Schulz. Verh. z-b. Ges. Wien 16:809
1866.
- Claudopus* W. G. Smith Seemann's Jour. 8:215
1870.
- Clitopilus* Fr. Epicr. 148 1836.
- Eccilia* Fr. Syst. Myc. 1:207 1821.
- Entoloma* Fr. Epicr. 143 1836.
- Leptonia* Fr. Syst. Myc. 1:201 1821.
- Metraria* Cke. & Mass. Sacc. Syll. 9:82 1891.
- Nolanea* Fr. Syst. Myc. 1:204 1821.
- Pluteus* Fr. Epicr. 140 1836.
- Schinzinia* Fayod Verh. Bot. Brandenb.
31:227 1890.
- Volvaria* Fr. Syst. Myc. 1:277 1821.
- Volvariella* Speg. Fung. Arg. Nov. 118
1899; Syll. Fung. 16:70 1902; Henn. Nat.
Pflanzenf. 1:1:555 1900.
- A. fenzi* Schulz.
- C. variabilis* (Pers.) Smith
C. primulus (Scop.) Fr.
E. parkensis Fr.
E. sinuatum Fr.
L. euchroa (Pers.) Fr.
M. insignis C. & M.
N. pascua (Pers.) Fr.
P. cervinus (Schaeff.) Fr.
- S. pustulosa* Fayod
V. speciosa Fr.
- V. argentina* Speg.

Ochrosporae

- Bolbitius* Fr. *Epicr.* 253 1838.
Cortinarius Fr. *Epicr.* 255 1838.
Crepidotus Fr. *Syst. Myc.* 1:272 1821.
Flammula Fr. *Syst. Myc.* 1:250 1821.
Galera Fr. *Syst. Myc.* 1:264 1821.
Epicorticium Velenovsky *Mykologia* 3:72 1926.
Hebeloma Fr. *Syst. Myc.* 1:249 1821.
Inocybe Fr. *Syst. Myc.* 1:254 1821.
Locellina Gill. *Champ. Fr.* 428 1874.
Naucoria Fr. *Syst. Myc.* 1:260 1821.
Phaeomarasmius Scherf. *Hedwigia* 36:287 1897; cf. *Henn. Nat. Pflanzenf.* 1:1:241 1900; *Ann. Myc.* 13:58 1915.
Paxillus Fr. *Gen. Hymen.* 8 1836.
Pholiota Fr. *Syst. Myc.* 1:240 1821.
Pholiotella Speg. *Bol. Acad. Cordoba* 11:412 1889; Killermann 227.
Rozites (Karst.) Singer *Ann. Myc.* 20:299, ill. 1922; Killermann 229.
Pluteolus Fr. *Hymen. Eur.* 966 1874.
Tubaria W. G. Smith *Seemann's Jour.* 8:219 1870.
- B. titubans* (Bull.) Fr.
C. violaceus (L.) Fr.
C. mollis (Schaeff.) Fr.
F. flavida (Schaeff.) Fr.
G. tenera (Schaeff.) Fr.
E. sulcatum Velen.
H. fastibile (Pers.) Fr.
I. hystrix Fr.
L. acetabulosa (Sow.) Sacc.
N. semorbicularis (Bull.) Fr.
P. rimulicola (Lasch) Scherf.
P. involutus (Batsch) Fr.
P. praecox (Pers.) Fr.
P. blattariopsis Speg.
R. caperata (Pers.) Karst.
P. reticulatus (Pers.) Fr.
T. furfuracea (Pers.) Smith

Melanosporae

- Agaricus* L. *Sp. Pl.* 2:1171 1753.
Micropsalliota Hoehn. *Sitzb. Akad. Wien* 123:79 1914; Killermann 240.
Psalliota Fr. *Syst. Myc.* 1:280 1821.
Anellaria Karst. *Hattsv.* 1:518 1879.
Anthrachyphyllum Ces. *Grevillea* 9:137 1880; cf. Killermann 256.
Chitonia Fr. *Hymen. Eur.* 277 1874.
Clarkeinda O.K. *Rev. Gen. Pl.* 1:848 1891; *Syll. Fung.* 16:112 1902.
Chitoniella Henn. *Nat. Pflanzenf.* 1:1:240 1900.
Coprinus Pers. *Tent. Disp.* 62 1797.
Deconica W. G. Smith *Seemann's Jour.* 8:221 1870.
Gomphidius Fr. *Epicr.* 319 1838.
Hypholoma Fr. *Syst. Myc.* 1:287 1821.
Montagnites Fr. *Epicr.* 240 1838.
Panaeolus Fr. *Epicr.* 234 1836.
Copelandia Bres. *Hedwigia* 53:51 1912; Killermann 235.
Pilosace Fr. *Nov. Symb. Myc.* 9 1851.
Psathyra Fr. *Syst. Myc.* 1:295 1821.
Psathyrella Fr. *Epicr.* 237 1836.
Psilocybe Fr. *Syst. Myc.* 1:289 1821.
Stropharia Fr. *Mon. Hymen.* 1:408 1863.
- A. campestris* L.
M. minima (Rick.) Hoehn.
P. campestris (L.) Fr.
A. separata (L.) Karst.
A. nigrita (Lev.) Kalchbr.
C. rubriceps C. & M.
C. rubriceps (C. & M.) Rea
C. poderes (B. & Br.) Henn.
C. comatus Fr.
D. bullacea (Bull.) Smith
G. viscidus (L.) Fr.
H. appendiculatum (Bull.) Fr.
M. candollei Fr.
P. campanulatus (L.) Fr.
C. papilionacea (Bull.) Bres.
P. tricholepis Fr.
P. corrugis (Pers.) Fr.
P. disseminata (Pers.) Fr.
P. merdaria Fr.
S. aeruginosa (Curt.) Fr.

Genera Incertae Sedis Vel Dubia

- Catathelasma** Lovejoy Bot. Gaz. 50:383 1910.
Clavulinopsis Overeem Bull. Jard. Buitenz. 3:5:278, ill. 1923.
Coprinopsis Beeli Bull. Soc. Bot. Belg. 61:98, ill. 1928.
Cymatella Pat. Bull. Soc. Myc. Fr. 15:193 1899; Syll. Fung. 16:49 1902; cf. Hoehn. Sitzb. Akad. Wien 119:887 1910; Killermann 259, 283.
Discocyphella Henn. Monunia 1:141 1899; Syll. Fung. 16:202 1902; cf. Pat. Essai Tax. 147 1900; Hoehn. Sitzb. Akad. Wien 119:887 1910; Killermann 283.
Hemigaster Juel Sver. Vet. Akad. Handl. 21:111 1895; Syll. Fung. 11:173 1895; Killermann 283.
Marasmiopsis Henn. Nat. Pflanzenf. 1:1:230 1900.
Oudemansiella Speg. Fung. Arg. 4:11 1882; Syll. Fung. 5:653 1887; 21:127 1912; cf. Hoehn. Frag. Myk. 170, 585 1910; Killermann 283.
Phaeolimacium Henn. Monunia 1:14 1899; Syll. Fung. 16:110 1902; cf. Hoehn. Frag. Myk. 584 1910; Killermann 283.
Phaeohygrocybe Henn. Engl. Bot. Jahrb. 30:50 1901; Syll. Fung. 17:81 1906.
Phlebophora Lev. Ann. Sci. Nat. 2:16:238 1841; Syll. Fung. 16:215 1902; Killermann 283.
Pterophyllus Lev. Ann. Sci. Nat. 3:2:178 1844; Syll. Fung. 5:654 1887; Killermann 283.
Rhacophyllus Berk. Jour. Linn. Soc. 11:559 1871; Syll. Fung. 5:654 1887; Killermann 283.
Rhodocybe Maire Bull. Soc. Myc. Fr. 40:299, ill. 1926.
Rhodopaxillus Maire Ann. Myc. 11:338 1913.
Rhodotus Maire Bull. Soc. Myc. Fr. 40:308 1926.
Stylobates Fr. Afz. Fung. Guin. 5 1837; Syll. Fung. 5:502 1887; Killermann 252.
- C. evanescens** Lovejoy
C. sulcata Overeem
C. calaensis Beeli
C. minima Pat.
D. marasmoides Henn.
H. candidus Juel
M. subannulatus (Trog) Henn.
O. platensis Speg.
P. bulbosum Henn.
P. zenkeri Henn.
P. rugilosa Lev.
P. bovei Lev.
R. lilacinus B. & Br.
R. caelata (Fr.) Maire
R. panaeolus Maire
R. palmatus (Fr. & Bull.) Maire
S. paradoxus Fr.

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- Anthurus** Kalchbr. Grevillea 9:2 1880.
Aporophallus Moell. Bras. Pilzblum. 68, 147 1895.
Aseroe LaBill. Rel. Voy. Rech. 1799:145.
Blumenavia Moell. Bras. Pilzblum. 57, 146 1895.
- A. muellerianus** Kalchbr.
A. subtilis Moell.
A. rubra LaBill.
B. rhacodes Moell.

- Calathiscus* Mont. Ann. Sci. Nat. 2:16:278
1841.
- Clathrella* Fisch. Nat. Pflanzenf. 1:1:284 1900.
- Clathrus* Michel. L. Sp. Pl. 2:1179 1753.
- Colus* Cav. & Sech. Ann. Sci. Nat. 2:3:251
1835.
- Cryptophallus* Pk. Bull. Torr. Club 34:147
1897.
- Dictyobole* Atkin. Bot. Gaz. 34:43, ill. 1902.
- Dictyophora* Desv. Jour. de Bot. 2:92 1809.
- Echinophallus* Henn. Engler Bot. Jahrb.
25:505 1898.
- Ileodictyum* Tul. Ann. Sci. Nat. 3:2:114 1844.
- Kalchbrennera* Berk. Gard. Chron. 5:785, ill.
1876; Hedwigia 15:115 1876.
- Lysurus* Fr. Syst. Myc. 2:285 1823.
Mycopharus Petch Trans. Brit. Myc. Soc.
10:281 1925.
- Mutinus* Fr. Sum. Veg. Scan. 2:434 1849.
Floccomutinus Henn. Engler Jahrb. 22:109
1895; Syll. Fung. 14:254 1899; Fischer 555.
- Jansia* Penz. Ann. Jard. Buitenz. 16:139
1899; Syll. Fung. 16:226 1902.
- Staheliomyces* Fisch. Mitt. Ges. Bern
1920:142, ill. 1921.
- Phallus* Michel. L. Sp. Pl. 2:1178 1753.
Ithyphallus Fr. Syst. Myc. 2:283 1823.
Albofiella Speg. Fung. Arg. Nov. 183 1899;
Syll. Fung. 16:227 1902.
- Itajahya* Moell. Bras. Pilzblum. 79, 148 1895.
- Simblum* Klotzsch Hooker Bot. Misc. 2:164,
ill. 1831.
- C. sepia* Mont.
- C. pusilla* (Berk.) Fisch.
- C. cancellatus* Tourn.
- C. hirudinosus* C. & S.
- C. albipes* Pk.
- D. texensis* Atkin. & Long
- D. phalloidea* Desv.
- E. lauterbachii* Henn.
- I. cibarium* Tul.
- K. corallocephala* (W. & C.) Fisch.
- L. mokusin* (Cib.) Fr.
- M. gardneri* (Berk.) Petch
- M. caninus* (Huds.) Fr.
- F. zenkeri* Henn.
- J. elegans* Penz.
- S. cinctus* Fisch.
- P. impudicus* L.
- I. impudicus* (L.) Fr.
- A. argentina* Speg.
- I. galericulata* Moell.
- S. periphragmoides* Klotzsch

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- Claustula* Curtis Ann. Bot. 40:476, ill. 1926. *C. fischeri* Curtis

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- Astraeus* Morg. Jour. Cinc. Soc. Nat. Hist.
12:19, ill. 1889.
- Battarrea* Pers. Syn. Fung. 129 1801.
- Battarreopsis* Henn. Hedwigia 41:212, ill.
1902.
- Bovista* Pers. Tent. Disp. 6 1797.
Arachniopsis Long Mycologia 9:272 1917.
- Bovistella* Morg. Jour. Cinc. Soc. Nat. Hist.
14:141, ill. 1892.
- Broomeia* Berk. Lond. Jour. Bot. 3:193 1844;
Syll. Fung. 7:92 1888; cf. Fischer 324.
- Calvatia* Fr. Sum. Veg. Scan. 442 1849.
- Catastoma* Morg. Jour. Cinc. Soc. Nat. Hist.
14:142, ill. 1892.
- A. stellatus* (Scop.) Morg.
- B. phalloides* (Dicks.) Pers.
- B. artini* Henn.
- B. plumbea* Pers.
- A. albicans* Long.
- B. ohiensis* Ell. & Morg.
- B. congregata* Berk.
- C. craniiformis* (Schw.) Fr.
- C. circumscissum* (B. & C.) Morg.

- Cauloglossum* Grev. Fr. Syst. Myc. 3:60 1829.
Chaenoderma Masee Grevillea 19:46 1890.
Corditubera Henn. Engler Bot. Jahrb. 23:557, ill. 1897.
Hoehnelogaster Lohwag Beih. Bot. Cent. 42:2:325 1926.
Dictyocephalus Underwood Bull. Torr. Club 28:441, ill. 1901.
Geaster (Michel.) Fr. Syst. Myc. 3.8 1829.
Geasteroides Long Mycologia 9:271 1917.
Geasteropsis Hollos Kul. Nov. Kozl. 2:2 1903; Syll. Fung. 17:229 1906.
Globaria Quel. Champ. Jura & Vosges 2:370 1873.
Gyrophragmium Mont. Ann. Sci. Nat. 2:20:77 1843.
Lycogalopsis Fisch. Ber. Deut. Bot. Ges. 4:193, ill. 1886; Nat. Pflanzenf. 1:1:312 1900; cf. Syll. Fung. 7:153 1888.
Lycoperdum (Tourrn.) L. Sp. Pl. 2:1183 1753.
Macowanites Kalchbr. Gard. Chron. 5:785 1876; Hedwigia 15:115, ill. 1876.
Mitromyces Nees Syst. Pilz. 136 1817.
Calostoma Desv. Jour. de Bot. 2:94 1809.
Husseyia Berk. Lond. Jour. Bot. 6:508 1847; Syll. Fung. 7:67 1888.
Mycenastrum Desv. Ann. Sci. Nat. 2:17:143 1842.
Pila Speg. Rev. Chil. Hist. Nat. 25:77 1923.
Phellorina Berk. Lond. Jour. Bot. 2:521, ill. 1843.
Xylopodium Mont. Ann. Sci. Nat. 3:4:364 1843; Syll. Fung. 7:143 1888; cf. Fischer 334.
Pisolithus A. & S. Consp. Fung. 82, ill. 1805.
Polysaccum DC. Fl. Fr. 5:103 1815; Syll. Fung. 7:146 1888.
Podax Fr. Syst. Myc. 3:62 1829.
Polyplodium Berk. Hook. Lond. Jour. Bot. 2:202 1843.
Queletia Fr. Ofver. Sv. Akad. Förh. 1871:171, ill. 1872.
Sclerangium Lev. Ann. Sci. Nat. 3:9:130 1848.
Stella Masee Jour. Myc. 5:185, ill. 1889; Syll. Fung. 9:272 1891.
Scleroderma Pers. Syn. Fung. 150, ill. 1801.
Areolaria Forq. Champ. Super. 155, ill. 1886; Syll. Fung. 7:144 1888.
Caloderma Petri Malpighia 14:136 1900.
Pompholyx Corda Sturm Deut. Crypt. Fl. 3:3:47, ill. 1841; Syll. Fung. 7:180 1888.
Secotium Kze. Flora 23:321 1840.
Elasmomyces Cav. Malpighia 11:426, ill. 1897; Syll. Fung. 14:258 1899.
- C. transversarium* (Bosc) Fr.
C. drummondii Mass.
C. staudtii Henn.
H. microspora (Hoehn.) Lohwag
D. curvatus Underw.
G. pectinatus Pers.
G. texensis Long
G. conrathi Hollos
G. furfuracea (Schaeff.) Quel.
G. delilei Mont.
L. solmsii Fisch.
L. gemmatum Batsch
M. agaricinus Kalchbr.
M. lutescens Schw.
C. cinnabarinum Desv.
H. insignis Berk.
M. corium Desv.
P. fragilis (Lev.) Speg.
P. inquinans Berk.
X. delestrei D. & M.
P. arenarius A. & S.
P. crassipes DC.
P. carcinomalis (L.) Fr.
P. inquinans Berk.
Q. mirabilis Fr.
S. polyrhizum (Gmel.) Lev.
S. americana Mass.
S. verrucosum (Bull.) Pers.
A. tabellata (Kalch.) Forq.
C. echinatum Petri
P. sapida Corda
S. erythrocephalum Tul.
E. mattiroleanus Cav.

- Sphaericeps** Welw. & Curr. Trans. Linn. Soc.
26:290 1867. **S. lignipes** W. & C.
Tylostoma Pers. Syn. Fung. 139 1801. **T. mammosum** (Mich.) Pers.
Chlamydopus Speg. An. Mus. Nac. 6:189
1898; Syll. Fung. 16:234 1902. **C. clavatus** Speg.

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- Abstoma** Cunningham Trans. Proc. N. Z.
Inst. 57, 206, ill. 1927. **A. purpureum** (Lloyd) Cunn.
Anixia Fr. Nov. Fl. Suec. 80 1819. **A. difformis** Fr.
Arachnium Schw. Syn. Fung. Carol. n. 14, ill.
1822; Syll. Fung. 7:150 1888; cf. Fischer
339. **A. album** Schw.
Boletogaster Lohwag Beih. Bot. Cent.
42:2:274 1926. (no species given)
Bovistoides Lloyd Myc. Notes 61:883 1919. **B. simplex** Lloyd
Castoreum Cke. & Mass. Grevillea 15:100
1887; Syll. Fung. 7:142 1888; cf. Fischer
338. **C. radicum** C. & M.
Ciliciocarpus Corda Sturm Deut. Crypt. Fl.
3:3:5, ill. 1831; Syll. Fung. 7:152 1888;
cf. Fischer 339. **C. hypogaeus** Corda
Clavogaster Henn. Hedwigia 35:303 1896;
Syll. Fung. 14:266 1899; cf. Fischer 299;
Hoehn. Frag. Myk. 594 1910. **C. novozelandicus** Henn.
Coelomyces B. & C. Jour. Acad. Nat. Hist.
Phil. 2:2:279 1853; Syll. Fung. 7:94 1888;
cf. Fischer 321. **C. schweinitzi** B. & C.
Cycloderma Klotzsch Linnaea 7:203 1832;
Syll. Fung. 7:56 1888; cf. Fischer 341. **C. indicum** Klotzsch
Cyphellomyces Speg. An. Mus. Nac. 3:9:25,
ill. 1908. **C. argentinensis** Speg.
Diplocystis B. & C. Jour. Linn. Soc. 10:344
1869; Syll. Fung. 7:92 1888; cf. Fischer
324. **D. wrighti** B. & C.
Diploderma Link Diss. 2:44 1816; Syll. Fung.
7:92 1888; cf. Fischer 342. **D. tuberosum** Lk.
Disciseda Czern. Bull. Soc. Nat. Moscou
18:2:153 1845; Syll. Fung. 7:92 1888; cf.
Fischer 323. **D. collabescens** Czern.
Favillea Fr. Fung. Natal. 32 1848; Syll.
Fung. 7:146 1888; cf. Fischer 339. **F. argillacea** Fr.
Gastroboletus Lohwag Beih. Bot. Cent.
42:2:273 1926. (no species given)
Hippoperdum Mont. Ann. Sci. Nat. 2:17:121
1842. **H. crucibulum** Mont.
Lanopila Fr. Fung. Natal. 31 1848; Syll.
Fung. 7:95 1888; cf. Fischer 323. **L. wahlbergi** Fr.
Lasiosphaera Reich. Reise Freg. Novara Bot.
1:135 1870. **L. fenzli** Reich.
Eriosphaera Reich. Sacc. Syll. 7:96 1888;
not DC. 1828. **E. fenzli** Reich.

- Lycoperdellon** Torrend *Broteria* 11:92 1913. **L. torrendi** (Bres.) Torr.
Lycoperdopsis Henn. *Monsunia* 1:158 1899;
 Syll. Fung. 16:242 1902; cf. Fischer 557. **L. arcyrioides** Henn. & Nym.
Nepotatus Lloyd *Myc. Notes* 75:1355, ill.
 1925. **N. stellatus** Lloyd
Paurocotylis Berk. *Hook. Fl. N. Zeal.* 2:188,
 ill. 1855; Syll. Fung. 7:152 1888; cf.
 Fischer 313. **P. pila** Berk.
Pirogaster Henn. *Hedwigia* 40:b27, ill. 1901;
 Syll. Fung. 16:256 1902; Hoehn. *Frag.*
 Myk. 593 1910. **P. fleischerianus** Henn.
Polygaster Fr. *Syst. Myc.* 2:295 1823; Syll.
 Fung. 7:146 1888; cf. Fischer 339. **P. sampadarius** (Rumph.) Fr.
Scolecioarpus Berk. *Lond. Jour. Bot.* 2:520
 1843; Syll. Fung. 7:151 1888; cf. Fischer
 338. **S. tener** Berk.
Tremellogaster Fisch. *Mitt. Nat. Ges. Bern*
 1923:55, ill. 1924. **T. surinamensis** Fisch.
Trichaster Czern. *Bull. Soc. Nat. Moscou*
 18:2:149 1845; Syll. Fung. 7:93 1888; cf.
 Fischer 322. **T. melanocephalus** Czern.

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- Arcangeliella** Cav. *Nuov. Giorn. Ital.* 7:126
 1900. **A. borziana** Cav.
Chamonixia Roll. *Bull. Soc. Myc. Fr.* 15:76
 1899. **C. caespitosa** Roll.
Clathrogaster Petri *Malpighia* 14:125 1900. **C. vulvarius** Petri
Dendrogaster Bucholtz *Beitr. Hypog.* 148, ill.
 1902. **D. connectens** Buch.
Gautieria Vittad. *Mon. Tuber.* 25 1831. **G. morchelliformis** Vittad.
Gymnoglossum Masee *Grevillea* 19:97 1891. **G. stipitatum** Mass.
Hydnangium Wallr. *Dietr. Fl. Boruss.* 7:465,
 ill. 1839. **H. carneum** Wallr.
Hymenogaster Vittad. *Mon. Tuber.* 20 1831. **H. citrinus** Vittad.
Hysterangium Vittad. *Mon. Tuber.* 13 1831. **H. clathroides** Vittad.
Leucogaster Hesse *Pringsh. Jahrb.* 13:191,
 ill. 1882. **L. floccosus** Hesse
Martellia Mattir. *Malpighia* 14:78 1900. **M. mistiformis** Mattir.
Melanogaster Corda *Sturm Deut. Crypt. Fl.*
 3:3:1, ill. 1831. **M. variegatus** (Vittad.) Tul.
Octaviana Vittad. *Mon. Tuber.* 15 1831. **O. asterosperma** Vittad.
Phallogaster Morg. *Jour. Cinc. Soc. Nat.*
Hist. 15:171, ill. 1893. **P. saccatus** Morg.
Protoglossum Masee *Grevillea* 19:97 1891. **P. luteum** Mass.
Protuberia Moell. *Bras. Pilzblum.* 10, 145, ill.
 1895. **P. maracuja** Moell.
Rhizopogon Fr. *Symb. Gaster.* 5 1818. **R. luteolus** Fr.
Sclerogaster Hesse *Hypog. Deut.* 1:84 1891. **S. lanatus** Hesse
Torrendia Bres. *Att. Accad. Rover.* 3:8:132,
 ill. 1902. **T. pulchella** Bres.

NIDULARIACEAE

- Crucibulum* Tul. Ann. Sci. Nat. 3:1:89 1844. *C. vulgare* Tul.
Cyathus Hall. Hist. Stirp. Helv. 3:127 1768. *C. striatus* (Huds.) Hoffm.
Nidula White Bull. Torr. Club 29:271, ill. 1902. *N. candida* (Pk.) White
Nidularia Bull. Herb. Fr. Pl. 488 1780. *N. farcta* (Roth) Fr.
Sphaerobolus Tode Fung. Meckl. 1:43 1790. *S. stellatus* Tode

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- Chondrogaster* Maire Bull. Soc. Myc. Fr. 40:312, ill. 1926. *C. pachysporus* Maire
Glischroderma Fkl. Symb. Myc. 34 1869; Syll. Fung. 7:153 1888; cf. Fischer 313. *G. cinctum* Fkl.
Gymnomycetes Mass. & Rodw. Kew Bull. 1898:125; Syll. Fung. 16:249 1902. *G. pallidus* M. & R.
Jaczewskia Mattir. Mem. Accad. Torino 2:63:214, ill. 1913. *J. phalloides* Mattir.
Kupsura Lloyd Myc. Notes 7:1303 1924. *K. sphaerocephala* Lloyd
Leucophleps Harkn. Proc. Calif. Acad. 1889:257; Syll. Fung. 16:251 1902. *L. magnata* Harkn.
Neosaccardia Mattir. Att. Accad. Torino 56:32, ill. 1921. *N. echinata* (Sacc. & Paol.) Mattir.
Nigropogon Coker & Couch Gasteromycetes 37 1928. *N. asterosporus* C. & C.
Phallobata Cunningham Trans. Proc. N. Z. Inst. 56:73, ill. 1926. *P. alba* Cunn.
Stephanospora Pat. Bull. Soc. Myc. Fr. 30:349 1914. *S. carotaecolor* (B. & Br.) Pat.

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- Anthracoderma* Speg. Bol. Acad. Cordoba 11:286 1887.
- Aposphaeria* Berk. Outl. Brit. Fung. 315 1860; Sacc. *Michelia* 2:4 1880.
- Asbolisia* Speg. *Physis* 4:293 1918.
- Exophoma* Weedon *Mycologia* 18:221, ill. 1926.
- Ascochytopsis* Henn. Engler Bot. Jahrb. 38:117 1905.
- Asteroma* DC. *Flor. Fr.* 6:162 1815.
- Haplosporidium* Speg. *An. Mus. Nac.* 23:106 1912.
- Asteromella* Pass. & Thuem. *Myc. Univ. n.* 1689 1880.
- Stictochorella* Hoehn. *Verh. z-b. Ges. Wien* 68:117 1918.
- Bothrodiscus* Shear *Bull. Torr. Club* 34:312 1907.
- Botryophoma* Karst. *Hedwigia* 23:62 1884.
- Sclerodothiorella* Died. *Kryptfl. Mark Brand.* 9:299 1912; Hoehn. *Frag. Myk.* 969.
- Ceratophoma* Hoehn. *Hedwigia* 59:276 1917.
- Ceuthospora* Fr., em. Greville *Scot. Crypt. Flor.* 5:253, ill. 1827.
- Siroplaconema* Petr. *Ann. Myc.* 20:331 1922; *Ib.* 22:108 1924.
- Chaetasbolisia* Speg. *Physis* 4:293 1918.
- Chaetocytostroma* Petr. *Ann. Myc.* 17:91 1919.
- Chaetophoma* Cke. *Grevillea* 3:25 1874.
- Chaetophomella* Speg. *Physis* 4:291 1918.
- Chaetosphaeronema* Moesz *Bot. Koezlem.* 14:152 1915.
- Chondropodiella* Hoehn. *Hedwigia* 59:281 1917.
- Cicinnobolus* Ehrenb. *Bot. Zeit.* 11:16 1853.
- Byssocystis* Riess *Hedwigia* 1:23, ill. 1853.
- Ciliochora* Hoehn. *Ber. Deut. Bot. Ges.* 37:159 1919.
- Ciliophora* Petr. *Ann. Myc.* 27:71 1929.
- Clypeochorella* Petr. *Ann. Myc.* 21:236 1923.
- Coleophoma* Hoehn. *Mitt. Bot. Techn. Hochsch. Wien* 2:76 1925.
- Concstroma* Moesz. *Bot. Koezlem.* 19:44, ill. 1920-21.
- A. hookeri* Speg.
- A. complanata* (Fr.) Berk.
- A. ampullula* (Speg.) Sacc.
- E. magnoliae* Weedon
- A. vignae* Henn.
- A. phyteumae* DC.
- H. helietae* Speg.
- A. ovata* Thuem.
- S. heraclei* Hoehn.
- B. pinicola* Shear
- B. populicola* Karst.
- C. rostrata* (Fkl.) Hoehn.
- C. phacidioides* Grev.
- S. moravica* Petr.
- C. erysiphoides* (G. & M.) Speg.
- C. arundinacea* Petr.
- C. quercifolia* Cke.
- C. asterinarum* (Speg.) Sacc.
- C. hispidulum* (Corda) Moesz.
- C. clethrincola* (Ell.) Hoehn.
- C. cesati* De Bary
- B. textilis* Riess
- C. longiseta* (Rac.) Hoehn.
- C. cryptica* Petr.
- C. orientalis* Petr.
- C. crateriformis* (D. & M.) Hoehn.
- C. didymium* (F. & R.) Moesz.

- Cornucopiella** Hoehn. Sitzb. Akad. Wien 124:118 1915.
- Cyclodomus** Hoehn. Sitzb. Akad. Wien 118:1527 1909.
- Cytospora** Ehrenb. Syl. Berol. 28 1818.
Lamyella Fr. Sum. Veg. Scan. 410 1849.
Leucocytospora Hoehn. Ann. Myc. 16:130 1918; cf. Petr. Ib. 19:128 1921.
- Cytosporella** Sacc. Michelia 2:100 1880.
- Dasysticta** Speg. An. Mus. Nac. 23:108 1912.
- Dasystictella** Hoehn. Ber. Deut. Bot. Ges. 37:114 1919.
- Dendrodomus** Bubak Bot. Koezlem. 14:63, ill. 1915.
- Dendrophoma** Sacc. Michelia 2:4 1880.
- Diachorella** Hoehn. Syst. Fung. Impf. n. 247 1923.
- Dothichiza** Lib. em. Sacc. & Roum. Rel. Lib. 1:627 1880.
Parasclerophoma Petr. Ann. Myc. 22:53 1924.
Sclerophoma Hoehn. Sitzb. Akad. Wien. 118:1234 1909; cf. Petr. Ann. Myc. 22:99 1924.
- Dothiorella** Sacc. Michelia 2:5 1880.
- Dothiorellina** Bubak Ber. Deut. Bot. Ges. 29:72 1911.
- Endothiella** Sacc. Ann. Myc. 4:273 1906.
- Epheliopsis** Henn. Hedwigia 47:270 1908.
Calopactis Syd. Ann. Myc. 10:82, ill. 1912.
- Fusicoccum** Corda Sturm Crypt. Flor. f. 52 1829; em. Sacc. Michelia 2:99 1880.
- Gamosporella** Speg. Fung. Guar. 2 n. 165. 1888.
- Glutinium** Fr. Sum. Veg. Scan. 46 1849; em. Starb. Stud. 58 1894.
Malacodermis Bub. & Kab. Hedwigia 62:344 1912; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Hapalosphaeria** Syd. Ann. Myc. 6:305, ill. 1908.
- Hypodermina** Hoehn. Frag. Myc. 962 1916.
Mazzantiella Hoehn. Mitt. Bot. Techn. Hochsch. Wien 2:61 1925; Syst. Fung. Imp. n. 275 1923.
- Lasiophoma** Speg. Physis 4:290 1918.
- Lasiostroma** Griff. & Maubl. Ann. Inst. Agron. 2:10:99 1911.
- Leptoxyphium** Speg. Physis 4:294 1918.
- Lichenophoma** Keissler Hedwigia 50:296 1911.
- Lichenosticta** Zopf. Nov. Act. Leop. 70:263, ill. 1898.
- C. mirabilis** Hoehn.
- C. umbellulariae** Hoehn.
- C. leucostoma** (Pers.) Sacc.
- L. sphaerocephala** (Schw.) Fr.
 (no species given)
- C. sycina** Sacc.
- D. sapindophila** Speg.
- D. sphaerospora** (S. & T.) Hoehn.
- D. annulatus** Bubak
- D. pleurospora** Sacc.
 (no species given)
- D. populæ** Sacc. & Br.
- P. quercus** (Lamb.) Petr.
- S. endogenospora** (Sacc.) Hoehn.
- D. gregaria** Sacc.
- D. tankoffi** Bubak
- E. gyrosa** Sacc.
- E. turnerae** Henn.
- C. singularis** Syd.
- F. aesculi** Corda
- G. hysterioides** Speg.
- G. levatum** (Fr.) Starb.
- M. aspera** (Lev.) B. & K.
- H. deformans** Syd.
- H. nervisequia** (Lk.) Hoehn.
- M. sepium** (Brunaud) Hoehn.
- L. allicola** (Tassi) Sacc.
- L. pirorum** G. & M.
- L. graminum** (Pat.) Sacc.
- L. haematommatis** Keissler
- L. podeticola** Zopf

- Ligniella* Naumov Mat. Mik. Fitop. 5:5, ill. 1926.
Mycosticta Hoehn. Ann. Myc. 16:36 1918.
Myrioconium Syd. Ann. Myc. 10:449 1912.
Neophoma Petr. & Syd. Beih. Rep. Fedde 42:265 1927.
Pilidiella Petr. & Syd. Beih. Rep. Fedde 42:462 1927.
Neottiospora Desm. Not. Crypt. 10:12 1843.
Peckia Clinton Rep. N. Y. Mus. 29:47, ill. 1878.
Phellostroma Syd. Phil. Jour. Sci. 9:185, ill. 1914.
Phoma Fr., em Desm. Not. Crypt. 13:6 1846; Sacc. *Michelia* 2:4 1880.
Allantophomopsis Petr. Ann. Myc. 23:103 1925.
Bakerophoma Died. Ann. Myc. 14:62 1916.
Leptophoma Hoehn. Sitzb. Akad. Wien 124:73 1915.
Macrophomella Died. Ann. Myc. 14:63 1916.
Macrophomina Petr. Ann. Myc. 21:314 1923.
Macroplodiella Speg. An. Mus. Nac. 10:134 1909.
Phomopsina Petr. Ann. Myc. 20:142 1922.
Trematophoma Petr. Ann. Myc. 22:152 1924.
Phomachora Petr. & Syd. Ann. Myc. 23:236 1925.
Phomopsis Sacc. Syll. Fung. 18:264 1906.
Cleistophoma Petr. & Syd. Beih. Rep. Fedde 42:294 1927.
Haplolepis Syd. Ann. Myc. 23:411 1925.
Leucophomopsis Hoehn. Ber. Deut. Bot. Ges. 35:255 1917.
Macrophomopsis Petr. Ann. Myc. 22:108 1924.
Myxolibertella Hoehn. Ann. Myc. 1:526 1903.
Phaeophomopsis Hoehn. Mitt. Bot. Techn. Hochsch. Wien 2:80 1925.
Pseudophomopsis Hoehn. Mitt. Bot. Techn. Hochsch. Wien 3:28 1926.
Phomyces Clem.; *Chaetophoma fungicola*.
Phyllosticta Pers. Fr. Syst. Myc. 2:257 1821-22.
Phyllostictina Syd. Ann. Myc. 14:185 1916.
Stictochorellina Petr. Ann. Myc. 20:337 1922.
Placonema (Sacc.) Petr. Ann. Myc. 19:60 1921.
Placophomopsis Grove. Jour. Bot. 59:315 1921.
- L. atrata* Naumov
M. ovalis (Pass.) Hoehn.
M. scirpi Syd.

N. graminella (Sacc.) P. & S.

P. quercicola (Oud.) Petr.
N. caricum Desm.

P. sarraceniae Pk. & C.

P. hypoxyloides Syd.

P. herbarum West.

A. cytisporae (Fr.) Petr.
B. sacchari Died.

L. acuta Hoehn.
M. pandani Died.

M. philippinensis Petr.

M. maticola Speg.
P. lamii Petr.

T. lignicola Petr.

P. lucida (B. & C.) P. & S.
P. oncostoma (Theiss.) Hoehn.

C. suberis (P. & D.) P. & S.
H. polyadelpha Syd.

L. inclusa Hoehn.

M. coronillae (Desm.) Petr.

M. aceris Hoehn.

P. hederiae (Desm.) Hoehn.

P. betulina (S. & R.) Hoehn.
P. meliolicola (Speg.) Clem.

P. convallariae Pers.
P. murrayae Syd.

S. carpatica Petr.

P. bambusacearum (S. & S.) Petr.

P. heveae Grove.

- Placosphaeria* Sacc. *Michelia* 2:115 1880.
Plectonaemella Hoehn. *Sitzb. Akad. Wien* 124:81 1915.
Plectophoma Hoehn. *Sitzb. Akad. Wien* 116:639 1907.
Plectophomopsis Petr. *Ann. Myc.* 20:326 1922.
Ludwigiella Petr. *Ann. Myc.* 20:319 1922.
Plectosira Petr. *Ann. Myc.* 27:398 1929.
Plenodomus Preuss *Sturm Deut. Flor.* 3:6:143 1862; cf. Petr. *Ann. Myc.* 22:100 1924.
Rhizosphaerella Hoehn. *Hedwigia* 59:254 1917.
Sclerophomella Hoehn. *Hedwigia* 59:237 1917.
Pleuronaema Hoehn. *Hedwigia* 59:257 1917.
Pleurophoma Hoehn. *Sitzb. Akad. Wien* 123:117 1914.
Pleurophomella Hoehn. *Sitzb. Akad. Wien* 123:123 1914.
Pleurophomopsis Petr. *Ann. Myc.* 22:156 1924.
Pleuroplaconema Petr. *Ann. Myc.* 21:300 1923.
Pleurostromella Petr. *Ann. Myc.* 20:336 1922.
Podoplaconema Petr. *Ann. Myc.* 19:83 1921.
Podoxyphium Speg. *Physis* 4:294 1918.
Pseudophoma Hoehn. *Sitzb. Akad. Wien* 125:74 1916; cf. Petr. *Ann. Myc.* 22:99 1924.
Pycnis Brefeld *Bot. Unters.* 4:122, ill. 1881.
Pyrenochaeta DeN. *Micr. Ital.* 5:15, ill. 1845.
Herpotrichiopsis Hoehn. *Sitzb. Akad. Wien* 123:115 1914.
Pyrenochaetella Karst. *Hedwigia* 24:74 1885.
Pyrenochaetina Syd. *Ann. Myc.* 14:94 1916; cf. Hoehn. *Hedwigia* 60:132 1918; Petr. *Ann. Myc.* 22:100 1924.
Rabenhorstia Fr. *Sum. Veg. Scan.* 410 1849.
Rhizophoma Petr. & Syd. *Beih. Rep. Fedde* 42:472 1927.
Rhizosphaera Mang. & Har. *Bull. Soc. Myc. Fr.* 23:56, ill. 1907.
Ectosticta Speg. *An. Mus. Nac.* 23:107 1912.
Sclerochaeta Hoehn. *Hedwigia* 59:239 1917; cf. Petr. *Ann. Myc.* 22:101 1924.
Scleromeris Syd. *Ann. Myc.* 24:419 1926.
Sclerotiopsis Speg. *Fung. Arg.* 4:282 1880.
Sclerophomina Hoehn. *Hedwigia* 59:240 1917.
Selenophoma Maire *Bull. Soc. Bot. Fr.* 53:87 1906.
Sirococcus Preuss *Fung. Hoyers. n.* 306, 716 1854.
- P. sedi* Sacc.
P. fuckeliana (Sacc.) Hoehn.
P. umbelliferarum Hoehn.
P. rivularis Petr.
L. asterina (B. & Br.) Petr.
P. adeana Petr.
P. rabenhorsti Preuss
R. lentisci (D. & M.) Hoehn.
S. complanata (Desm.) Hoehn.
P. procumbens (Fkl.) Hoehn.
P. pleurospora (Sacc.) Hoehn.
P. eumorpha (P. & S.) Hoehn.
P. salicicola Petr.
P. sambuci Petr.
P. ulmicola Petr.
P. melaenum (Fr.) Petr.
P. trichothecium Speg.
P. dictamni (Fkl.) Hoehn.
P. sclerotivora Bref.
P. nobilis DeN.
H. callimorpha Hoehn.
P. complanata Karst.
P. obtegens Syd.
R. tiliae Fr.
R. pini (Desm.) P. & S.
R. abietis M. & H.
E. bignonicola Speg.
S. penicillata (Fkl.) Hoehn.
S. guazumae Syd.
S. australasica Speg.
S. elymi (Died.) Hoehn.
S. catananches Maire
S. strobilinus Preuss

- Sirodothis* Clem. Gen. Fung. 123, 176 1909;
Minn. Bot. Studies 4:185, ill. 1911.
- Sirolegniella* Naumov Mat. Mik. Fitop. 5:7, ill.
1926.
- Sirophoma* Hoehn. Hedwigia 59:257 1917.
- Sirosperma* Syd. Engler Bot. Jahrb. 54:258,
ill. 1916.
- Sirosphaera* Syd. Phil. Jour. Sci. 8:502, ill.
1913.
- Sirostromella* Hoehn. Sitzb. Akad. Wien
125:78 1916.
- Sphaeronema* (Fr.) Jacz. Obs. Myc. 1:187
1815; em. Mem. Soc. Nat. Mosc. 15:280
1898.
- Eleutheromyces* Fkl. Symb. Myc. 183 1869.
- Sphaerophoma* Petr. Ann. Myc. 22:76 1924.
- Staurochaeta* Sacc. Fung. Venet. 4:40 1875.
- Staurophoma* Hoehn. Denk. Akad. Wien
83:34, ill. 1907.
- Strasseria* Bres. & Sacc. Verh. z-b. Ges. Wien
436 1902; cf. Hoehn. Frag. Myk. 944
1916.
- Plagiorhabdus* Shear Bull. Torr. Club. 34:310
1907.
- Tiarosporella* Hoehn. Mitt. Bot. Techn.
Hochsch. Wien 1:83 1924.
- Trichocicinnus* (Sacc.) Hoehn. Ib. 3:115 1926.
- Trichophila* Oud. Hedwigia 28:361 1889.
- Trigonosporium* Tassi Bull. Lab. Ort. Bot.
Siena 90 1900.
- S. populi* Clem.
- S. salicicola* Naumov
- S. singularis* Hoehn.
- S. hypocrellae* Syd.
- S. botryosa* Syd.
- S. populi* (Jaap) Hoehn.
- S. aquaticum* Jacq.
- E. subulatus* (Tode) Fkl.
- S. brencklei* Petr.
- S. minima* Sacc.
- S. panici* Hoehn.
- S. carpophila* B. & S.
- P. crataegi* Shear
- T. paludosa* (S. & F.) Hoehn.
- T. erylphoides* (Sacc.) Hoehn.
- T. myrmecophagae* Oud.
- T. australiense* Tassi

Phaeosporae

- Asteropsis* Frag. Trab. Madrid Mus. Cienc.
12:50 1917.
- Botryosphaeria* Petr. Hedwigia 62:302 1921;
for *Botryosphaerostroma*.
- Coniothyriopsis* Petr. Ann. Myc. 21:5 1923;
not Speg. 1911.
- Capnodiastrum* Speg. Fung. Guar. 1:145
1883.
- Chaetomella* Fkl. Symb. Myc. 402 1869.
- Cicinobella* Henn. Fung. Amaz. 3:386 1904.
- Cladochaete* Sacc. Ann. Myc. 10:318 1912.
- Coniella* Hoehn. Mitt. Bot. Techn. Hochsch.
Wien 2:1 1925.
- Baeumleria* Petr. & Syd. Beih. Rep. Fedde
42:268 1927.
- Phaeohomopsis* Hoehn. Mitt. Bot. Techn.
Hochsch. Wien 2:81 1925.
- Coniothyria* Syd. Ann. Myc. 10:233 1912;
for
- Coniothyrella* Speg. An. Mus. Nac. 3:13:360
1911; not 1889; cf. Petr. Ann. Myc. 23:3
1925.
- A. epidendri* Frag.
- B. quercina* Petr.
- C. insitiva* (Sacc.) Petr.
- C. guaraniticum* Speg.
- C. atra* Fkl.
- C. parodiellae* Henn.
- C. setosa* (Wint.) Sacc.
- C. pulchella* Hoehn.
- B. nothofagi* (Henn.) P. & S.
- P. hederiae* (Desm.) Hoehn.
- C. agavicola* (Speg.) Syd.
- C. agavicola* Speg.



- Conithyriopsis* Speg. An. Mus. Nac. 13:361
1911.
Chaetosphaeropsis Czi. & Bni. Att. Ist.
Pavia 3:3:180, ill. 1927.
Coniothyrium Corda, em. Sacc. Syll. Fung.
3:305 1884.
Coniothyrinula Petr. Ann. Myc. 21:2 1923.
Cyclothyrium Petr. Ann. Myc. 21:5 1923.
Dothisphaeropsis Hoehn. Ber. Deut. Bot.
Ges. 36:214 1918; cf. Petr. Ann. Myc.
21:6 1923.
Microsphaeropsis Hoehn. Hedwigia 59:267
1917; cf. Petr. Ann. Myc. 21:6 1923.
Sclerosphaeropsis Bub. Ann. Nat. Hofm.
Wien 28:209 1914.
Sclerothyrium Hoehn. Hedwigia 60:181
1918.
Cryptophaella Hoehn. Sitz. Akad. Wien
126:360 1917.
Cytoplea Bizz. & Sacc. Flor. Venet. Critt.
401 1885.
Cytosphaera Died. Ann. Myc. 14:205 1916.
Endocalyx B. & Br. Jour. Linn. Soc. 15:84
1876.
Epistigme Syd. Ann. Myc. 22:431 1924.
Haplosporella Speg. Fung. Arg. 3:34 1880.
Epicyta Syd. Ann. Myc. 24:413 1926.
Microsporella Hoehn. Hedwigia 60:146
1918; cf. Petr. Ann. Myc. 21:5 1923.
Lasmeniella Petr. & Syd. Beih. Rep. Fedde
42:301 1927.
Lichenonium Petr. & Syd. Beih. Rep.
Fedde 42:432 1927.
Melanconiopsis Ell. & Ev. Bull. Torr. Club
27:575 1900.
Cyclothyrium Petr. Ann. Myc. 21:5 1923.
Microthecium Corda Icon. Fung. 5:30, 74, ill.
1842.
Naemosphaera Sacc. Syll. Fung. 3:198 1884,
as subg.; Karst. Sphaer. Fenn. 68 1890.
Naemosphaerella Hoehn. Petr. & Syd. Gatt.
Pyren. 3:478 1927.
Polyopeus Horne Jour. Bot. 58:239 1920.
Oothecium Speg. Bol. Acad. Cordoba 23:519
1919.
Phaeocytostroma Petr. Ann. Myc. 19:45
1921.
Phaeodomus Hoehn. Sitzb. Akad. Wien
118:1529 1909; cf. Petr. Ann. Myc. 23:5
1925.
Placodiplodia Bub. Ber. Deut. Bot. Ges.
34:305 1916.
Pleosphaeropsis Died. Ann. Myc. 14:203, ill.
1916.
- C. hualaniae* Speg.
C. truncata C. & B.
C. fuckeli Sacc.
C. carpatica Petr.
C. ulmigenum (Berk.) Petr.
D. hellebori Hoehn.
M. olivaceus (Bon.) Hoehn.
S. heldreichiae Bub.
S. tamarisci (Mont.) Hoehn.
C. heteropatellae Hoehn.
C. arundinicola B. & S.
C. mangiferae Died.
E. thwaitesi B. & Br.
E. nidulans Syd.
H. chlorostroma Speg.
E. ampliata Syd.
M. pityophila Hoehn.
L. guaranitica (Speg.) P. & S.
L. lichenicolum (Karst.) P. & S.
M. inquinans Ell. & Ev.
C. ulmigenum (Berk.) Petr.
M. zobeli Corda
N. magnoliae (Pk.) Sacc.
N. ceratophora (Speg.) P. & S.
P. purpureus Horne
O. megalosporum Speg.
P. isticum Petr.
P. lauracearum Hoehn.
P. copelandi Bub.
P. dalbergiae Died.

- Pseudohaplis* Speg. An. Sci. Arg. 90:182, ill. 1920; for *Pseudohaplosporella*.
Pseudothiopsella Petr. Hedwigia 68:259 1928.
Pycnodothis Stev. Ill. Biol. Mon. 8:198, ill. 1923.
Metabotryum Syd. Ann. Myc. 24:412 1926.
Readeriella Syd. Ann. Myc. 6:484 1908.
Sirothecium Karst. Medd. Soc. Fenn. 14:105 1887.
Sphaeropsis Lev. Demid. Voy. 112 1842; em. Sacc. Syll. Fung. 3:291 1884.
Macrophoma Berl. & Vogl. Att. Soc. Venet. 10:172 1886.
Melanosphaeria Sawada Rep. Res. Inst. Formosa 2:119, ill. 1922.
Neosphaeropsis Petr. Ann. Myc. 19:67 1921.
Piptostomum Lev. Ann. Sci. Nat. 3:3:65 1845.
Spilomyces Petr. & Syd. Beih. Rep. Fedde 42:293 1927.
- P. aurantiorum* Speg.
P. hirtella Petr.
P. tetracerae Stev.
M. connatum Syd.
R. mirabilis Syd.
S. lagenarium Karst.
S. malorum Pk.
M. pinea (Desm.) P. & S.
M. circumdata Saw.
N. polonica Petr.
P. domingense Lev.
S. atramentarius (Schroet.) P. & S.

Hyalodidymae

- Ascochyta* Lib. Sacc. Michelia 1:16; 1878.
Apiocarpella Syd. Ann. Myc. 17:43 1919.
Apiosporella Speg. An. Mus. Nac. 20:364 1910; cf. Petr. Ann. Myc. 23:5 1925.
Ascochyta (Poteb.) Died. Ann. Myc. 10:141 1912; cf. Petr. Ann. Myc. 23:5 1925.
Ascochyta (Tassi) Died. Ann. Myc. 10:141 1912.
Stagonosporopsis Died. Ann. Myc. 10:42 1912; cf. Petr. Ann. Myc. 23:5 1925.
Ascochyulina Petr. Ann. Myc. 20:342 1922.
Clypeodiplodina Stev. Mycologia 21:235, ill. 1927.
Botryella Syd. Ann. Myc. 14:95 1916.
Ceratopycnium Maubl. Bull. Soc. Myc. Fr. 23:148 1907; for *Ceratopycnidium*.
Chaetodiplodina Speg. An. Mus. Nac. 20:368 1910.
Corollospora Werderm. Notizb. Mus. Berlin-Dahlem 8:248, ill. 1922.
Cryptorhynchella Hoehn. Sitzb. Akad. Wien 124:88 1915.
Cytodiplospora Oud. Ned. Kruid. Arch. 2:6:292 1894.
Ceuthodiplospora Died. Ann. Myc. 10:149 1912.
Cytotriplospora Elliott & Chance Trans. Brit. Myc. Soc. 7:47 1920.
Darluca Cast. Cat. Pl. Marseill. Suppl. 53 1845.
- A. pisi* Lib.
A. macrospora (Speg.) Syd.
A. macrospora Speg.
A. obionis (Jaap) Died.
A. deformis (Karst.) Died.
S. boltshauseri Died.
A. deflectens (Karst.) Petr.
C. baccharidis Stev.
B. nitidula Syd.
C. citricola Maubl.
C. graminicola Speg.
C. maritima Werderm.
C. lantanae (Died.) Hoehn.
C. castaneae Oud.
C. robineae (Bub.) Died.
C. pini E. & C.
D. filum (Biv.) Cast.

- Diplodothiorella* Bub. Mitt. Bot. Techn. Hochsch. Wien 4:53 1927.
- Darlucis* Clem.; *Darlucina non uredinicola*.
- Daviella* Petr. Ann. Myc. 22:134 1924.
- Didymochaete* Sacc. & Ell. Bull. Torr. Club 25:510 1898.
- Sclerochaetella* Hoehn. Hedwigia 59:251 1917.
- Vermiculariella* Oud. Cont. Fl. Myc. 16:67 1898.
- Diplodina* West. Not. 5:19 1857.
- Diploplenodomopsis* Petr. Ann. Myc. 21:208 1923.
- Diplosclerophoma* Petr. Ann. Myc. 21:293 1923; 22:103 1924.
- Diplodinis* Clem.; *Diplodina basidiis ramosis*.
- Diploplacis* Petr. Hedwigia 62:308 1921; for *Diploplacosphaeria*.
- Diploplenodomus* Died. Ann. Myc. 10:140 1912; Krypt. Mark Brandenb. 9:415 1912; cf. Hoehn. Hedwigia 59:245 1917; Petr. Ann. Myc. 22:102 1924.
- Hoehneliella* Bres. & Sacc. Verh. z-b. Ges. Wien 52:437 1902.
- Kellermannia* Ell. & Ev. Jour. Myc. 1:153 1885.
- Amphorula* Grove Jour. Bot. 60:82 1922.
- Brencklea* Petr. Ann. Myc. 21:326 1923.
- Chaetoconis* Clem. Gen. Fung. 125, 176 1909.
- Lonchospermella* Speg. Rev. Mus. La Plata 15:37 1908.
- Microxyphiella* Speg. Physis 4:294 1918.
- Pazschkella* Syd. Bull. Herb. Boiss. 83 1901.
- Placosphaerella* Pat. Cat. Pl. Tunis. 121 1897.
- Puccinospora* Speg. Fung. Guar. 1:147 1886.
- Rhynchophoma* Karst. Hedwigia 23:19 1884.
- Robillardia* Sacc. Michelia 2:8 1880.
- Sirodiplospora* Naumov Mat. Mik. Fitop. 1:22, ill. 1915.
- Sirexipulina* Petr. Ann. Myc. 21:278 1923; 25:233 1927.
- Thoracella* Oud. Cont. Fl. Myc. 17:267 1901.
- Tiarospora* Sacc. & March. Rev. Myc. 7:148 1885.
- D. laburni* Bub.
- D. longiseta* (Henn.) Clem.
- D. elymina* (Davis) Petr.
- D. americana* Ell. & Sacc.
- S. rivini* (Allesch.) Hoehn.
- V. elymi* Oud.
- D. salicis* West.
- D. mirabilis* Petr.
- D. salicis* (Sacc.) Petr.
- D. rostrupi* (Vestg.) Clem.
- D. ruthenica* Petr.
- D. malvae* Died.
- H. perplexa* Bres. & Sacc.
- K. yuccigena* E. & E.
- A. sachalinensis* Grove
- B. sisyrinchii* (E. & E.) Petr.
- C. polygoni* (E. & E.) Clem.
- L. tetraspora* Speg.
- M. fuligo* (B. & D.) Speg.
- P. brasiliensis* Syd.
- P. tragacanthae* Pat.
- P. chusqueae* Speg.
- R. crypta* Karst.
- R. sessilis* Sacc.
- S. spiraeae* Lebedj.
- S. moravica* Petr.
- T. ledi* Oud.
- T. westendorpi* S. & M.

Phaeodidymae

- Botrydiplis* Sacc. Michelia 2:7 1880; for *Botryodiplodia*.
- Chaetodiplis* Clem.; *Chaetodiplodia erumpens*.
- Chaetodiplodia* Karst. Hedwigia 23:62 1884.
- B. juglandicola* (Schw.) Sacc.
- C. hirta* (Sacc.) Clem.
- C. caulina* Karst.

- Diblastospermella** Speg. Bol. Acad. Cordoba 23:579, ill. 1919; Physis 4:291 1918.
- Didymosporis** Trav. & Migl. Flor. Mic. Venez. 4 1911; for *Didymosporiella*.
- Diplodia** Fr. Sum. Veg. Scan. 416 1849.
- Holcomyces** Lind. Verh. Bot. Brandenb. 155 1903; Syll. Fung. 18:431 1906; Hoehn. Syst. Fung. Imp. 359 1923.
- Microdiplodia** Allesch. Rabh. Krypt. Flor. ed. 2 7:78 1901.
- Stenocarpella** Syd. Ann. Myc. 15:258 1917.
- Diplodiella** Karst. Hedwigia 22:62 1884.
- Macrodiplodia** Sacc. Syll. Fung. 3:374 1884.
- Paradiplodia** Speg. An. Cien. Arg. 90:183, ill. 1920.
- Dothideodiplodia** Murasch. Mat. Myk. Fitop. 6:67, ill. 1927.
- Pellionella** Sacc. Syll. 14:941 1899.
- Rhynchodiplodia** Briosi & Farnetti Att. Ist. Pavia 2:10 1906.
- D. aequatorialis** Speg.
- D. aeluropodis** T. & M.
- D. mutica** F. & M.
- H. exiguus** Lind.
- M. conigena** Allesch.
- S. zeae** Syd.
- D. crustacea** Karst.
- M. curreyi** S. & R.
- P. aurantiorum** Speg.
- D. agropyri** Murasch.
- P. cardonia** (Flag. & Sacc.) Sacc.
- R. citri** B. & F.

Hyalophragmiae

- Asteromidium** Speg. Fung. Guar. 2: n. 174 1888.
- Dearnessia** Bub. Hedwigia 58:25 1916.
- Bartalinia** Tassi Bull. Lab. Bot. Siena 3:3 1900.
- Botryogene** Syd. Ann. Myc. 15:259, ill. 1917.
- Chiroconium** Hoehn. Frag. Myk. n. 562 1910.
- Cryptostictella** Grove Jour. Bot. 50:52 1912.
- Amphiciliella** Hoehn. Hedwigia 62:58 1920.
- Dasypyrena** Speg. An. Mus. Nac. 23:109 1912.
- Chaetosticta** Petr. & Syd. Ann. Myc. 23:270 1925.
- Trotteria** Sacc. Att. Accad. Ven-Trent. 3:10:79 1919.
- Mastomyces** Mont. Ann. Sci. Nat. 3:10:134, ill. 1848.
- Topospora** Fr. Fung. Natal. 33 1848.
- Microperella** Hoehn. Sitzb. Acad. Wien 118:879 1909.
- Polychaetum** Speg. Physis 4:294 1918.
- Septoriella** Oud. Cont. Myc. 13:52 1889.
- Linochorella** Syd. Ann. Myc. 10:43, ill. 1912.
- Staganospora** Sacc. Syll. Fung. 3:445 1884.
- Diedickella** Petr. Ann. Myc. 22:305 1924.
- Rhabdostromina** Died. Ann. Myc. 19:297 1921.
- Sclerostagonospora** Hoehn. Hedwigia 59:252 1917; cf. Petr. Ann. Myc. 23:4 1925.
- Stagonostromella** Petr. & Syd. Beih. Rep. Fedde 42:163 1927.
- A. imperspicuum** Speg.
- D. apocyni** Bub.
- B. robillardoides** Tassi
- B. visci** Syd.
- C. beaumonti** (B. & C.) Hoehn.
- C. bractearum** Grove
- A. eriobotryae** Hoehn.
- D. lauricola** Speg.
- C. perforata** (E. & E.) P. & C.
- T. setulosa** Sacc.
- M. friesi** Mont.
- T. uberiformis** Fr.
- M. quercus** Hoehn.
- P. carolinense** (B. & D.) Speg.
- S. phragmitis** Oud.
- L. striiformis** Syd.
- S. populi** (Cda.) Sacc.
- D. moravica** Petr.
- R. empetri** (Rostr.) Died.
- S. heraclei** (Sacc.) Hoehn.
- S. citri** P. & S.

Phaeophragmiae

- Alysisporium* Peyron. Bull. Soc. Myc. Fr. 28:140, ill. 1922.
- Angiopoma* Lev. Ann. Sci. Nat. 2:16:235 1841.
- Ceratopycnis* Hoehn. Sitzb. Akad. Wien 124:86 1915.
- Hendersoniopsis* Hoehn. Ann. Myc. 16:123 1918.
- Rhynchophorus* Hollos Math. Term. Kozlem. 35:54, ill. 1926.
- Couturea* Cast. Cat. Pl. Marseill. 192 1845.
- Eriosporina* Togn. Sec. Cont. Tosc. 13 1895.
- Hendersonia* West. Bull. Brux. 18: n. 60, ill. 1851.
- Hendersoninula* Tassi Bull. Lab. Bot. Siena 5:56, ill. 1902.
- Neohendersonia* Petr. Ann. Myc. 19:190 1921.
- Santiella* Tassi Bull. Lab. Bot. Siena 3:90 1900; Syll. Fung. 16:947 1902.
- Scolecosporeiella* Petr. Ann. Myc. 19:30 1921, not Hoehn. 1923.
- Hendersoniella* Sacc. Syll. Fung. 18:386 1906.
- Hendersonula* Speg. Fung. Arg. 2:127 1880.
- Macrodiplis* Petr. Ann. Myc. 20:343 1922; for *Macrodiplodiopsis*.
- Prosthemium* Kze. Myk. Heft. 1:17, ill. 1817.
- Uroconis* Clem. Gen. Fung. 126 1909; for *Urohendersonia* Speg. Myc. Arg. 2:84 1902.
- Wojnowicia* Sacc. Syll. Fung. 18:960 1906.
- Angiopomopsis* Hoehn. Sitzb. Akad. Wien 121:406 1912.
- A. *rivoclarinum* Peyron.
- A. *campanulatum* Lev.
- C. *clematidis* Hoehn.
- H. *thelebola* (Sacc.) Hoehn.
- R. *clematidis* Hollos
- C. *castagnei* Desm.
- E. *tritici* Togn.
- H. *sarmentorum* West.
- H. *raphiolepidis* Tassi
- N. *piriformis* (Oth) Petr.
- S. *putaminum* Tassi
- S. *typhae* (Oud.) Petr.
- H. *spinosae* (Roll.) Sacc.
- H. *australis* Speg.
- M. *desmazieri* (Mont.) Petr.
- P. *betulinum* Kze.
- U. *platensis* (Speg.) Clem.
- W. *hirta* (Schroet.) Sacc.
- A. *lophostoma* Hoehn.

Hyalodictyae

- Camarographium* Bub. Ber. Deut. Bot. Ges. 34:306 1916.
- Hyalothyris* Tassi Bull. Lab. Bot. Siena 3:91 1900; for *Hyalothyridium*; cf. Clem. Gen. Fung. 127 1909.
- Polychaetella* Speg. Physis 4:295 1918.
- C. *stephensi* (B. & Br.) Bub.
- H. *viburnicola* Tassi
- P. *schweinitzi* (B. & D.) Speg.

Phaeodictyae

- Camarosporium* Schulz. Myk. Beitr. 649 1870.
- Camarosporellum* Tassi Bull. Lab. Bot. Siena 5:62, ill. 1902.
- C. *quaternatum* Schulz.
- C. *nervisequium* Tassi

- Camarosporulum* Tassi Bull. Lab. Bot. Siena 5:63, ill. 1902.
- Thyrococcum* Sacc. Syll. Fung. 10:672 1892; cf. Hoehn. Syst. Fung. Imp. 362 1923.
- Cytosporium* Pk. Bot. Gaz. 4:171 1879.
- Dichomera* Cke. Praec. Hend. 24 1878.
- Fumagospora* Arnaud Ann. Agr. Montp. 10:326 1911.
- Myxocyclus* Riess Fres. Beitr. Myk. 1:62, ill. 1852.
- Piringa* Speg. An. Mus. Nac. 3:13:378 1911.
- Pleocouturea* Arnaud Ann. Agr. Montp. 10:326 1910.
- Pseudodichomera* Hoehn. Hedwigia 60:186 1918.
- Sclerotheca* Bub. & Vleug. Sven. Bot. Tids. 2:314 1917.
- Shearia* Petr. Ann. Myc. 22:180 1924.
- C. ampelopsidis* Tassi
- T. punctiforme* Sacc.
- C. sphaerosporum* Pk.
- D. saubineti* (Mont.) Cke.
- F. elongata* (B. & D.) Arn.
- M. confluens* Riess
- P. andina* Speg.
- P. castagnei* Arn.
- P. varia* (Pers.) Hoehn.
- S. strobilina* (BRS) B. & V.
- S. magnoliae* (Shear) Petr.

Scolecosporae

- Chaetophiophoma* Speg. An. Mus. Nac. 3:13:388 1911.
- Ciferria* Frag. Bol. Soc. Esp. Hist. Nat. 25:363, ill. 1925.
- Cornularia* Karst. Hedwigia 23:57 1884; for *Cornicularia* and *Corniculariella* Karst.
- Collonaema* Grove Jour. Bot. 24:136 1886.
- Collonaemella* Hoehn. Sitzb. Akad. Wien 124:82 1915.
- Pseudographium* Jacz., em. Hoehn. Sitzb. Akad. Wien 124:117 1915.
- Subulariella* Hoehn. Sitzb. Akad. Wien 124:118 1915.
- Cytosporina* Sacc. Michelia 2:263 1881.
- Cytostaganis* Bub. Ann. Myc. 14:150, ill. 1916; for *Cytostaganospora*.
- Clypeoseptoria* Stev. & Young Bishop Mus. Bull. 19:141, ill. 1925.
- Dilophospora* Desm. Ann. Sci. Nat. 2:14:67 1840.
- Eriospora* B. & Br. Ann. Nat. Hist. 2:5 n. 438 1850.
- Gamospora* Sacc. Syll. Fung. 10:402 1892.
- Gamonaemella* Fairman Proc. Roch. Acad. Sci. 6:123 1922.
- Gelatinosporis* Pk. Rep. N. Y. Mus. 25:48 1873; for *Gelatinosporium*.
- Hemidothis* Syd. Ann. Myc. 14:95 1916.
- Oswaldina* Rangel Arch. Agr. Med. Vet. Mexico 5:37, ill. 1921.
- Septocyta* Petr. Ann. Myc. 25:330 1927.
- C. tremae* Speg.
- C. coccothrinacis* Frag.
- C. abietis* Karst.
- C. papillatum* Grove
- C. microscopica* (Fkl.) Hoehn.
- P. persicae* (Schw.) Jacz.
- S. macrospora* (B. & C.) Hoehn.
- C. ludibunda* Sacc.
- C. photinicola* Bub.
- C. rocki* Stev. & Young
- D. graminis* Desm.
- E. leucostoma* B. & Br.
- G. eriosporis* Sacc.
- G. divergens* Fairman
- G. betulinum* Pk.
- H. miconiae* Syd.
- O. icarahyensis* Rangel
- S. ramealis* (Rob.) Petr.

- Leptochlamys* Died. Ann. Myc. 19:299 1921.
Megaloseptoria Naumov Bolezn. Rast. 14:144, ill. 1926.
- Linochora* Hoehn. Sitzb. Akad. Wien 119:638 1910.
- Micropera* Lev. Ann. Sci. Nat. 3:5:283 1846.
Micula Duby Hedwigia 2:8, ill. 1858.
- Phaeoseptoria* Speg. Rev. Mus. La Plata 15:39 1908.
- Phaeophleospora* Rangel Arch. Mus. Rio Jan. 18:162, ill. 1916.
- Phleospora* Wallr. Fl. Crypt. 2:176 1833; cf. Hoehn. Syst. Fung. Imp. 341 1923; Petr. Ann. Myc. 23:6 1925.
- Pseudoseptoria* Speg. An. Mus. Nac. 3:13:388 1911.
- Rhabdospora* Mont. Fl. Alg. Bot. 592 1846-49; em. Sacc. *Michelia* 2:6 1880.
Jahnella Petr. Ann. Myc. 18:123 1920.
- Septoriopsis* Hoehn. Bull. Jard. Bot. Buitenz. 3:6:6 1924; not Frag. & Paul. 1915.
- Scopophoma* Dearn. & House Bull. N. Y. Mus. 266:83 1925.
- Septoria* Fr. Syst. Myc. 3:480 1832; em. Sacc. *Michelia* 2:6 1880.
Nemastroma Hoehn. Mitt. Lab. Techn. Hochs. Wien 2:83 1925.
- Rhabdostromina* Died. Ann. Myc. 19:297 1921.
- Septoriopsis* Frag. & Paul Bol. Soc. Hist. Nat. 15:127, ill. 1915.
- Sphaerographium* Sacc. Syll. Fung. 3:597 1884.
Coleonaema Hoehn. Mitt. Lab. Techn. Hochs. Wien 1:95 1924.
Cryptorhynchella Hoehn. Sitzb. Akad. Wien 124:88 1915.
- Trichoseptoria* Cav. Malatt. Limon. 4 1892.
Macroseptoria Petr. Ann. Myc. 21:250 1923.
- L. scapicola* (Karst.) Died.
M. mirabilis Naumov
L. leptospermi (Cke.) Hoehn.
M. drupacearum Lev.
M. mougeoti Duby
P. papayae Speg.
P. eugeniae Rang.
P. ulmi (Fr.) Wallr.
P. donacicola Speg.
R. herbarum (Preuss) Sacc.
J. bohémica Petr.
S. pandani Hoehn.
S. corioli D. & H.
S. urticae Rob.
N. junci (Desm.) Hoehn.
R. empetri (Rostr.) Died.
S. citri F. & P.
S. squarrosus (Riess) Sacc.
C. oleae (DC.) Hoehn.
C. lantanae (Died.) Hoehn.
T. alpei Cav.
M. moravica Petr.

Genera Incertae Sedis Vel Dubia

A large number of the following are segregates of *Cytospora* and other stromate genera, but the characters are so inconstant in many at least, as to render it impossible to place them definitely. (cf. Petrak Ann. Myc. 23:83 1925.) For the others, the disposition is chiefly that of Hoehn. (Myk. Unters. Ber. 1:358-362 1923) and Petrak (l. c. 23:1 1925).

- Actinopelte* Sacc. Ann. Myc. 11:315 1913;
 cf. Petr. lb. 22:54 1924.
Amphicytostroma Petr. Ann. Myc. 19:63 1921.
A. japonica Sacc.
A. tiliae (Sacc.) Petr.

- Apocytospora* Hoehn. Mitt. Bot. Techn. Hochs. Wien 1:43 1924.
- Aposphaeriopsis* Died. Ann. Myc. 11:44 1913; cf. Petr. & Syd. Ib. 22:341 1924; Petr. Ib. 23:3 1925.
- Avettaea* Petr. & Syd. Beih. Rep. Fedde 42:299 1927.
- Basilocula* Bub. Ann. Myc. 12:210 1914.
- Ceuthosira* Petr. Ann. Myc. 22:265 1924.
- Ceuthosporella* Petr. & Syd. Ann. Myc. 21:371 1923.
- Chaetodiplodia* Karst. Hedwigia 23:62 1884; Syll. Fung. 3:374 1884.
- Chaetopyrena* Pass. Erb. Critt. Ital. 2:1088 1881; cf. Petr. Ann. Myc. 22:101 1924; 23:139 1925.
- Chaetosclerophoma* Petr. Ann. Myc. 22:178 1924.
- Chondropodium* Hoehn. Sitzb. Akad. Wien 125:45 1916.
- Cliostomum* Fr. Syst. Orb. Veg. 1:116 1825.
- Rhytismella* Karst. Hedwigia 23:60 1884.
- Colpomella* Hoehn. Mitt. Lab. Techn. Hochs. Wien 3:16 1926.
- Cryptoceuthospora* Petr. Ann. Myc. 19:57 1921.
- Cryptomycella* Hoehn. Mitt. Lab. Techn. Hochs. Wien 2:48 1926.
- Cryptosporiopsis* Bub. & Kab. Hedwigia 53:360 1912.
- Cyphellopycnis* Tehon & Stout Mycologia 21:189, ill. 1929.
- Cytonaema* Hoehn. Sitzb. Akad. Wien 123:131 1914.
- Cytophoma* Hoehn. Sitzb. Akad. Wien 123:133 1914.
- Cytoplacosphaeria* Petr. Ann. Myc. 17:79 1919.
- Diplodiopsis* Henn. Hedwigia 43:386 1904; Syll. Fung. 3:335 1884.
- Discomycopsis* Muell. Bot. Cent. 57:347 1894; Syll. Fung. 11:517 1895.
- Dothiopsis* Karst. Hedwigia 23:20 1884; Syll. Fung. 10:228 1892.
- Endogloea* Hoehn. Zeit. Gär. 5:207 1915; cf. Petr. Ann. Myc. 22:99 1924.
- Enthallopycnidium* Stev. Bishop Mus. Bull. 19:85, ill. 1925.
- Hendersonina* Butler Mem. Dept. Agr. India Bot. 6:198, ill. 1913.
- Hormococcus* Preuss. Linnaea 25:738 1852.
- Hypocenia* B. & C. N. A. Fung. n. 423 1874; Syll. Fung. 3:320 1884.
- A. visci* Hoehn.
- A. domesticum* (Henn.) Died.
- A. philippinensis* P. & S.
- B. lauricola* Bub.
- C. aesculicarpa* Petr.
- C. acerina* P. & S.
- C. caulina* Karst.
- C. hesperidum* Pass.
- C. coluteae* Petr.
- C. spina* (B. & Rav.) Hoehn.
- C. corrugatum* (Ach.) Fr.
- R. corrugata* (Ach.) Karst.
- C. pini* Hoehn.
- C. moravica* Petr.
- C. pteridis* (Kalchb.) Hoehn.
- C. nigra* Bub. & Kab.
- C. pastinaceae* T. & S.
- C. spinella* (Kalchb.) Hoehn.
- C. pruinosa* (Fr.) Hoehn.
- C. rimosa* (Oud.) Petr.
- D. tarapotensis* Henn.
- D. rhytismoides* Muell.
- D. spiraeae* Karst.
- E. taleola* (Sacc.) Hoehn.
- E. gouldiae* Stev.
- H. sacchari* Butl.
- H. populi* Preuss.
- H. obtusa* B. & C.

- Janospora** Starb. Bih. Sven. Akad. Handl. 19:86 1894, as subg.; cf. Hoehn. Syst. Fung. Imp. 319 1923; Petr. & Syd. Ann. Myc. 21:350 1923.
- Lasiodiplodia** Ell. & Ev. Bot. Gaz. 21:92 1896; Syll. Fung. 14:939 1899.
- Leeina** Petr. Ann. Myc. 25:315 1927.
- Levieuxia** Fr. Fung. Natal. 32; Sum. Veg. Scan. 415 1849; Syll. Fung. 3:321 1884.
- Manginia** Vial. & Pacot. Comp. Rend. 139:88 1904; Syll. Fung. 18:266 1906.
- Microxyphium** Sacc., em. Speg. Physis 4:293 1918.
- Monopycnis** Naumov Bull. Soc. Oural. 35:36 1915.
- Mypiopyxis** Ces. Flora 34:73 1851.
- Myxofusicocum** Died. Ann. Myc. 10:71 1912; cf. Petr. 18:25 1920.
- Paracytospora** Petr. Ann. Myc. 23:82 1925.
- Perizomella** Syd. Ann. Myc. 25:106 1927.
- Phylloedia** Fr. Syst. Orb. Veg. 1:195 1825.
- Phyllonochaeta** Frag. & Cif. Bol. Soc. Hist. Nat. 27:171, ill. 1927.
- Placnemina** Petr. Ann. Myc. 19:197 1921.
- Plectophomella** Moesz Mag. Bot. Lap. 21:13 1922.
- Plenophysa** Syd. Ann. Myc. 17:142 1919.
- Pleocyta** Petr. & Syd. Beih. Rep. Fedde 42:454 1927.
- Pleurocytospora** Petr. Ann. Myc. 21:256 1923.
- Pleurodiscula** Hoehn. Mitt. Lab. Techn. Hochs. Wien 3:25 1926.
- Pleuroplacosphaeria** Syd. Ann. Myc. 26:115 1928.
- Pseudocytozpora** Petr. Ann. Myc. 21:295 1923.
- Pseudodiscula** Laubert Gartenfl. 60:76 1911.
- Pseudosclerophoma** Petr. Ann. Myc. 21:283 1923; Ib. 22:102 1924.
- Pycnidiostroma** Stev. Ill. Biol. Mon. 11:45, ill. 1927.
- Pycnomma** Syd. Ann. Myc. 22:187 1924.
- Pycnosporium** Siegel Cent. Bakt. 51:515, ill. 1909.
- Rhabdostromella** Hoehn. Sitzb. Akad. Wien 124:145 1915.
- Rhabdostromellina** Hoehn. Ann. Myc. 15:303 1917.
- Scirrhiopsis** Henn. Verh. Bot. Brandenb. 47:12 1905; Syll. Fung. 22:1074 1913.
- Septocytella** Syd. Ann. Myc. 27:428 1929.
- Septodothideopsis** Henn. Hedwigia 43:388 1904; Syll. Fung. 18:405 1906.
- J. lineolans** (Schw.) Starb.
- L. tubericola** E. & E.
- L. philippinensis** Petr.
- L. natalensis** Fr.
- M. ampelina** V. & P.
- M. footi** (B. & D.) Harv.
- M. crataegi** Naumov
- M. caricicola** Ces.
- M. obtusulum** (S. & B.) Died.
- P. salicis** Petr.
- P. inquinans** Syd.
- P. epiphylla** Fr.
- P. solani** F. & C.
- P. dothideoides** (Mont.) Petr.
- P. visci** Moesz.
- P. mirabilis** Syd.
- P. sacchari** (Masse) P. & S.
- P. vestita** Petr.
- P. neglecta** (Desm.) Hoehn.
- P. negeriana** Syd.
- P. allantospora** Petr.
- P. endogenospora** Laub.
- P. negundinis** Petr.
- P. eugeniae** Stev.
- P. canariense** Syd.
- P. lommeni** Sieg.
- R. rubi** (Lib.) Hoehn.
- R. ruborum** Hoehn.
- S. hendersoniodes** Henn.
- S. bambusina** Syd.
- S. manaosensis** Henn.

- Septorella** Allesch. Hedwigia 36:241 1897;
Syll. Fung. 18:981 1906.
- Shropshiria** Stev. Mycologia 19:231, ill. 1927.
- Sphaerothyrium** Bub. Ber. Deut. Bot. Ges.
34:298 1916.
- Neoplasosphaeria** Petr. Ann. Myc. 19:74
1921; 22:102 1924.
- Stichospora** Petr. Ann. Myc. 25:195 1927.
- Systemmopsis** Petr. Ann. Myc. 21:191 1923.
- Thyriostroma** Died. Ann. Myc. 11:176 1913.
- Torsellia** Fr. Sum. Veg. Scan. 412 1849;
Syll. Fung. 11:510 1895.
- Weinmannodora** Fr. Sum. Veg. Scan. 409
1849; Syll. Fung. 3:325 1884.
- Circinastrum** Clem. Gen. Fung. 124 1909.
- Xenodonus** Petr. Ann. Myc. 20:206 1922.
- Xylocladium** Syd. Nat. Pflanzenf. 1:1:494
1900.
- S. salaciae** Allesch.
- S. chusqueae** Stev.
- S. filicinum** Bub.
- N. polonica** Petr.
- S. disciformis** Petr.
- S. ribesia** Petr.
- T. spiraeae** (Fr.) Died.
- T. sacculus** (Schw.) Fr.
- W. ruthenica** Fr.
- C. ruthenica** (Fr.) Clem.
- X. taxi** Petr.
- X. clautriavi** (Pat.) Syd.

ZYTHIACEAE

Hyalosporae

- Allantozythia** Hoehn. Ann. Myc. 22:203
1924.
- Blennoriopsis** Petr. Ann. Myc. 17:92 1919.
- Cicinnobella** Henn. Fung. Amaz. 3:386 1904.
- Ciliospora** Zimm. Cent. Bakt. 2:8:217 1902
- Collacystis** Kze. Güntz Das Leich. Neug.
1:212 1827.
- Cyanophomella** Hoehn. Hedwigia 60:156
1918.
- Diplozythia** Bub. Ann. Myc. 2:399 1904;
Syll. Fung. 18:417 1906; cf. Hoehn. Syst.
Fung. Imp. 359 1923.
- Dothiorina** Hoehn. Sitzb. Akad. Wien 120:464
1911.
- Eleutheris** Hoehn. Sitzb. Akad. Wien 17:1023
1908; for Eleutheromycella.
- Lagynodella** Petr. Ann. Myc. 20:207 1922.
- Mastigosporella** Hoehn. Sitzb. Akad. Wien
123:135 1914.
- Matula** Mass. Jour. Roy. Mic. Soc. 4:173, ill.
1888.
- Microdiscula** Hoehn. Frag. Myk. n. 938
1915.
- Plenozythia** Syd. Ann. Myc. 14:215 1916.
- Pseudosclerophoma** Petr. Ann. Myc. 21:283
1923.
- Rhodosticta** Woronich. Bull. Jard. Bot.
Petersb. 11:13 1911.
- Sarcophoma** Hoehn. Sitzb. Akad. Wien
125:75 1916.
- A. alutacea** (Sacc.) Hoehn.
- B. moravica** Petr.
- C. parodiellis** Henn.
- C. gelatinosa** Zimm.
- C. putredinis** Kze.
- C. acervalis** (Sacc.) Hoehn.
- D. scolecospora** Bub.
- D. tulasnei** (Sacc.) Hoehn.
- E. mycophila** Hoehn.
- L. pruinosa** (Pk.) Petr.
- M. hyalina** (E. & E.) Hoehn.
- M. poroniaeformis** (B. & Br.)
Mass.
- M. rubicola** (Bres.) Hoehn.
- P. euphorbiae** Syd.
- P. negundinis** Petr.
- R. caraganae** Woronich.
- S. pachybasium** (Sacc.) Hoehn.

- Sphaeronemina* Hoehn. Hedwigia 59:274 1917.
Mycorhynchella Hoehn. Hedwigia 60:155 1918.
Sirogloea Petr. Ann. Myc. 21:247 1923.
Siroplaconema Petr. Ann. Myc. 20:331 1922.
Sirozythia Hoehn. Ann. Myc. 2:48 1904.
Trelesiella Speg. Rev. Agr. Vet. La Plata 241 1896.
Tremellidium Petr. Ann. Myc. 25:387 1927.
Verrucaster Tobler Abh. Nat. Ver. Bremen 21:384, ill. 1913.
Xenostroma Hoehn. Sitzb. Akad. Wien 124:149 1915.
Zythia Fr. Sum. Veg. Scan. 407 1849.
Pycnidiella Hoehn. Sitzb. Akad. Wien 124:91 1915.
- S. cylindrica* (Tode) Hoehn.
M. exilis Hoehn.
S. euonymi Petr.
S. moravicum Petr.
S. rosea Hoehn.
T. sacchari Speg.
T. piskorzi Petr.
V. lichenicola Tobler
X. caespitosum (Fkl.) Hoehn.
Z. resinæ (Ehrb.) Fr.
P. resinæ (Ehrb.) Hoehn.

Phaeosporae

- Caudosporella* Hoehn. Sitzb. Akad. Wien 123:135 1914.
Harknessia Cke. Grevillea 9:85 1880.
Martinella (Cke. & Masee) Sacc. Syll. Fung. 10:409 1892.
Mastigonetrum Klebahn Myc. Cent. 4:17, ill. 1914.
- C. antarctica* (Speg.) Hoehn.
H. eucalypti Cke.
M. eucalypti (C. & M.) Sacc.
M. fuscum Klebahn

Hyalodidymae

- Clypeopycnis* Petr. Ann. Myc. 23:76 1925.
Cyanochyta Hoehn. Sitzb. Akad. Wien 124:92 1915.
Fuckelia Bon. Abh. Geb. Myk. 135 1870.
Stylonectria Hoehn. Sitzb. Akad. Wien 124:152 1915.
- C. aeruginascens* Petr.
C. cyanogena (Speg.) Hoehn.
F. ribis Bon.
S. applanata Hoehn.

Phaeodidymae

- Pseudodiplodia* Karst. Symb. Myc. 15:156 1886.
- P. ligniaria* (Karst.) Sacc.

Hyalophragmiae

- Aschersonia* Mont. Syll. Crypt. 260 n. 929 1856.
Chiaospora Riess Fres. Beitr. Myk. 43 1850.
Ciliosporella Petr. Ann. Myc. 25:217 1927.
Sirozythiella Hoehn. Sitzb. Akad. Wien 118:1532 1909.
Stagonopsis Sacc. Syll. Fung. 3:621 1884.
Stagonostroma Died. Fl. Mark. Brandb. 9:561 1914.
- A. taitensis* Mont.
C. parasitica Riess
C. selenospora Petr.
S. sydowiana (Sacc.) Hoehn.
S. pallida (B. & C.) Sacc.
S. dulcamarae (Pass.) Died.

Scolecosporae

- Chromocytospora* Speg. An. Mus. Nac. 3:13:392 1911.
Nemozythiella Hoehn. Mitt. Lab. Techn. Hochsch. Wien 2:70 1925.
Mycorhynchus Sacc. Syll. Fung. 18:418 1906; for *Rhynchomyces* Sacc. & March. Syll. Fung. 10:411 1892, not Willk. 1866.
Phlyctaeniella Petr. Ann. Myc. 20:323 1922.
Polystigmia Sacc. Syll. Fung. 3:622 1892.
Polylagenochromatia Camara Rev. Agron. 17:23, ill. 1929.
Rhodoseptoria Naumov Bull. Soc. Myc. Fr. 29:278 1913.
Scolecozythia Curzi Att. Ist. Pavia 3:3:185, ill. 1927.
- C. *ricinella* Speg.
N. *loniceriae* (Died.) Hoehn.
M. *betae* (Holl.) Sacc.
P. *polonica* Petr.
P. *rubra* (Desm.) Sacc.
P. *theobromae* Camara
R. *ussuriensis* Naumov
S. *valsivora* Curzi

Genera Incertae Sedis Vel Dubia

- Ampullaria* A. L. Smith Jour. Bot. 41:258 1903; Syll. Fung. 18:416 1906; cf. Hoehn. Syst. Fung. Imp. 358 1923.
Chaetozythia Karst. Symb. Myc. 28:41 1888; Syll. Fung. 10:406 1892; cf. Hoehn. Syst. Fung. Imp. 358 1923.
Hypocreodendrum Henn. Hedwigia 36:223 1897; Syll. Fung. 14:992 1899.
Leptodermella Hoehn. Zeit. Gär. 5:212 1914.
Pachydiscula Hoehn. Zeit. Gär. 5:210 1914; Syst. Fung. Imp. 335 1923; cf. Petr. Ann. Myc. 21:272 1923.
Roumegueriella Speg. Rev. Myc. 2:18 1880; Syll. Fung. 3:616 1884; Hoehn. Syst. Fung. Imp. 361 1923.
Sphaerocista Preuss Linnaea 25:734 1852; em. Hoehn. Frag. Myk. 948 1916; Syst. Fung. Imp. 336 1923.
Sphaeronemella Karst. Hedwigia 33:17 1884; Syll. Fung. 3:617 1884; cf. Hoehn. Syst. Fung. Imp. 362 1923.
Xanthopsora Speg. An. Mus. Nac. 31:430 1922.
- A. *aurea* Smith
C. *pulchella* Karst.
H. *sanguineum* Henn.
L. *incarnata* (Bres.) Hoehn.
P. *diplodioides* (Allesch.) Hoehn.
R. *muricospora* Speg.
S. *schizothecioides* Preuss
S. *hevellae* Karst.
X. *melanostoma* Speg.

LEPTOSTROMACEAE

Hyalosporae

- Acarella* Syd. Ann. Myc. 25:123 1927.
Actinothecium Ces. Rabh. Herb. Myc. 1854.
Brunchorstia Eriks. Bot. Cent. 47:298 1891.
Columnothyrium Bub. Ber. Deut. Bot. Ges. 34:308 1916.
Crandallia Ell. & Sacc. Bull. Torr. Club 34:466 1897.
Creothyrium Petr. Ann. Myc. 23:79 1925.
- A. *costaricensis* Syd.
A. *caricicolum* Ces.
B. *destruens* Eriks.
C. *myriospermum* (Mass.) Bub.
C. *juncicola* E. & S.
C. *pulchellum* Petr.

- Helicia* Dearness & House Bull. N. Y. Mus.
266:91 1925.
- Diedickeia* Syd. Ann. Myc. 11:266, ill. 1913.
- Elachopeltis* Syd. Ann. Myc. 25:121, ill. 1927.
- Eriothyrium* Speg. Fung. Fueg. n. 426 1887.
- Gloeodes* Colby Trans. Ill. Acad. Sci. 13:157,
ill. 1920.
- Labrella* (Fr.) Sacc. Syll. Fung. 3:648 1884;
cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Thyriostoma* Died. Ann. Myc. 11:176 1913.
- Leptostroma* Fr. Obs. Myc. 2:361 1818.
- Leptothyrium* Kze. & Schm. Myk. Heft. 2:79
1823.
- Leptothyria* Hoehn. Sitzb. Akad. Wien
124:123 1915.
- Myxodiscus* Hoehn. Sitzb. Akad. Wien
115:671 1906.
- Platycarpium* Karst. Act. Soc. Fenn. 27:10
1905.
- Porterula* Speg. Rev. Chil. Hist. Nat. 24:13,
ill. 1920.
- Rhabdothyrella* Hoehn. Sitzb. Akad. Wien
126:290 1917.
- Rhabdothyrium* Hoehn. Sitzb. Akad. Wien
124:125 1915.
- Massalongina* Bub. Ber. Deut. Bot. Ges.
34:319 1916.
- Melasmia* Lev. Ann. Sci. Nat. 3:5:276 1846.
- Merismella* Syd. Ann. Myc. 25:114 1927.
- Myxothyrium* Bub. & Kab. Sven. Bot. Tids.
9:379 1915.
- Peltaster* Syd. Ann. Myc. 15:261 1917.
- Piggotia* B. & Br. Ann. Nat. Hist. 2:7:95, ill.
1851.
- Plectopeltis* Syd. Ann. Myc. 25:125, ill. 1927.
- Plenotrichum* Syd. Ann. Myc. 25:131, ill. 1927.
- Pleurothyriella* Petr. & Syd. Ann. Myc. 23:210
1925.
- Sirothyriella* Hoehn. Sitzb. Acad. Wien
119:451 1910.
- Sirothyrium* Syd. Ann. Myc. 14:218 1916.
- Tracyella* Sacc. Syll. Fung. 18:424 1906.
- Trichopeltulum* Speg. Fung. Puigg. n. 342
1889.
- Trichopeltium* Clem. Gen. Fung. 131 1909.
- H. *buccina* D. & H.
D. *singularis* Syd.
E. *phoebes* Syd.
E. *dubiosum* Speg.
- G. *pomigena* (Schw.) Colby
- L. *heraclei* (Lib.) Sacc.
T. *pteridis* (Ehrb.) Died.
L. *scirpinum* Fr.
- L. *lunariae* Kze.
- L. *rubi* (Duby) Hoehn.
- M. *confluens* (Schw.) Hoehn.
- P. *fructigenum* Karst.
- P. *alstroemeriae* Speg.
- R. *microscopica* Hoehn.
- R. *convalliarum* (Oud.) Hoehn.
- M. *aquilina* (Mass.) Bub.
M. *acerina* Lev.
M. *concinna* Syd.
- M. *leptideum* (Fr.) B. & K.
P. *hedyotidis* Syd.
- P. *astroidea* B. & Br.
P. *egenula* Syd.
E. *mirabile* Syd.
- P. *pinastri* (Oud.) P. & S.
- S. *pinastri* (Fkl.) Hoehn.
S. *taxi* Syd.
T. *spartinae* (Pk.) Tassi
- T. *pulchellum* Speg.
T. *pulchellum* (Speg.) Clem.

Phaeosporae

- Asterostomella* Speg. An. Soc. Cien. Arg.
22:198 1886.
- Asteronia* Sacc. Syll. Fung. 1:47 1882, as
subg.; cf. Theiss. Myc. Cent. 3:275 1913.
- Hypphaster* Henn. Baum Kun. Sambes Exp.
169 1903.
- A. *paraguayensis* Speg.
- A. *erysiphoides* (K. & C.) Sacc.
- H. *kutuensis* Henn.

- Ootheccium** Speg. Bol. Acad. Cordoba 23:519 1919; cf. Petr. Ann. Myc. 26:390 1928.
Asterostomula Theiss. Ann. Myc. 14:270 1916.
Lasmenia Speg. Fung. Guar. 1:152 1886.
Manginula Arnaud Ann. Agr. Montp. 16:218, ill. 1918.
Peltostroma Henn. Hedwigia 43:391, ill. 1904.
Achoropeltis Syd. Ann. Myc. 27:79 1929.
Phaeolabrella Speg. An. Mus. Nac. 23:117 1912.
Piggotia B. & Br. Ann. Nat. Hist. 2:7:95, ill. 1851.
Basiascella Bub. Ann. Hofm. Wien 28:216 1914; cf. Hoehn. Syst. Fung. Imp. 358 1923.
Pirostoma (Fr.) Sacc. Bull. Soc. Myc. Fr. 12:70, ill. 1896.
Pirostomella Sacc. Ann. Myc. 12:308 1914.
Poropeltis Henn. Hedwigia 43:390, ill. 1904.
Pycnostemma Syd. Ann. Myc. 25:113 1927.
- O. megalosporum** Speg.
A. loranthi Theiss.
L. balansae Speg.
M. perseae Arn.
P. juruanum Henn.
A. modesta Syd.
P. eryngicola Speg.
P. astroidea B. & Br.
B. gallarum Bub.
P. coniothyris Sacc.
P. raimundi Sacc.
P. davillae Henn.
P. disciforme Syd.

Hyalodidymae

- Chaetalysis** Peyron. Bull. Soc. Myc. Fr. 38:141, ill. 1922.
Discosiella Syd. Leaf. Phil. Bot. 5:1546 1912.
Discotheciella Syd. Ann. Myc. 15:260 1917; for *Discothecium* Syd. Ib. 14:371 1916, not Zopf.
Kabatia Bub. Oest. Bot. Zeits. 54:28, ill. 1904.
Leptothyrella Sacc. Syll. Fung. 10:426 1892; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- C. myrioblephara** Peyron.
D. cylindrospora Syd.
D. bakeri Syd.
K. latemarensis Bub.
L. mougeotiana S. & R.

Phaeodidymae

- Didymochora** Hoehn. Hedwigia 60:172 1918.
Diplopeltis Pass. Diag. Fung. Nov. 4:13 1890.
Pycnothyrium Died. Ann. Myc. 11:175 1913; cf. Hoehn. Syst. Fung. Imp. 361 1923.
Leprieurina Arnaud Ann. Agr. Montp. 16:210, ill. 1918.
Peltostromella Hoehn. Denk. Akad. Wien 83:35 1907.
Seynesiopsis Henn. Hedwigia 43:392, ill. 1904.
- D. betulina** Hoehn.
D. spartii Pass.
P. litigiosum (Desm.) Died.
L. winteriana Arn.
P. brasiliensis Hoehn.
S. rionegrensis Henn.

Hyalophragmiae

- Cystothyrium** Speg. Fung. Fueg. n. 430 1887.
Discosia Lib. Exsic. n. 345, Fl. Crypt. Ard. 1839; Fr. Sum. Veg. Scan. 423 1849.
Rhizothyrium Naumov. Bull. Soc. Myc. Fr. 30:429, ill. 1914.
Septothyrella Hoehn. Sitzb. Akad. Wien. 120:393 1911; for *Asterothyrium* Henn. Engler Bot. Jahrb. 54 1903, not Muell. Arg. 1890.
- C. magellanicum** Speg.
D. artocreas (Tode) Fr.
R. abietis Naumov
S. microthyris (Henn.) Hoehn.

Phaeophragmiae

- Labridium* Vesterg. Oefv. Vet.-Akad. Förh. 1:43 1897.
Peltosoma Syd. Leaf. Phil. Bot. 9:3129 1925.
Phragmopeltis Henn. Hedwigia 43:392, ill. 1904.
Methysterostomella Speg. An. Mus. Nac. 3:13:396 1911.
Pseudodictya Tehon & Stout Mycologia 21:192, ill. 1929.
- L. *hians* Vesterg.
P. *freycinetiae* Syd.
P. *siparunae* Henn.
M. *argentinensis* Speg.
P. *sassafrasicola* T. & S.

Scolecosporae

- Actinothyrium* Kze. Myk. Heft. 2:81 1823.
Cylindrothyrium Maire Bull. Soc. Bot. Fr. 53:189 1906.
Giulia Tassi Bull. Lab. Bot. Siena 6:92 1904.
Ischnostroma Syd. Phil. Jour. Sci. 9:186, ill. 1914.
Leptostromella Sacc. Michelia 2:632 1882, as subg.
Discostromella Petr. Ann. Myc. 22:34 1924.
Sphaerostromella Bub. Ber. Deut. Bot. Ges. 34:297 1916.
Melophia Sacc. Syll. Fung. 3:658 1884.
Petasodes Clem. Gen. Fung. 133, 176 1909.
Placothyrium Bub. Ber. Deut. Bot. Ges. 34:302 1916.
Pleurothyrium Bub. Ber. Deut. Bot. Ges. 34:322 1916.
Stigmopeltis Syd. Ann. Myc. 25:127, ill. 1927.
Stigmopeltella Syd. Ann. Myc. 25:130 1927.
Tassia Syd. Ann. Myc. 17:44 1919; for
Chaetopeltis Sacc. Bull. Lab. Bot. Siena 14 1898; not Berth.
Chaetothyriolum Speg. Bol. Acad. Cordoba 23:522 1919.
Thyrinula Petr. & Syd. Ann. Myc. 22:373 1924.
Trachythyriolum Speg. Bol. Acad. Cordoba 23:523 1919.
- A. *graminis* Kze.
C. *subiculum* Maire
G. *tenuis* (Sacc.) Tassi
I. *merrilli* Syd.
L. *septorioides* S. & R.
D. *hysterioides* (Fr.) Petr.
S. *pteridina* (S. & R.) Bub.
M. *ophiospora* (Lev.) Sacc.
P. *umbellatum* (Vestg.) Clem.
P. *athyrinum* Bub.
P. *longissimum* (Lib.) Bub.
S. *roupalae* Syd.
S. *costaricana* Syd.
T. *laurina* (Tassi) Syd.
C. *laurina* (Tassi) Sacc.
C. *puiggarii* Speg.
T. *eucalyptina* P. & S.
T. *brasilianum* Speg.

Genera Incertae Sedis Vel Dubia

- Chaetopeltiopsis* Hara Bot. Mag. Tokyo 27:253 1913.
Cheilaria Lib. Ann. Sci. Nat. 2:7:125 1837; cf. Hoehn. Syst. Fung. Imp. 329 1923.
Anaphysmene Bub. Ann. Myc. 4:122 1906.
Cytoplacosphaeria Petr. Ann. Myc. 17:79 1919; 22:102 1924.
Discomycopsella Henn. Hedwigia 41:146 1902; Syll. Fung. 18:429 1906; cf. Hoehn. Syst. Fung. Imp. 359 1923.
- C. *sasae* Hara
C. *agrostidis* Lib.
A. *heraclei* Bub.
C. *rimosa* Petr.
D. *bambusae* Henn.

- Hysteridium** Karst. Act. Soc. Fenn. 27:10
1905; Syll. Fung. 22:1163 1913; cf. Hoehn.
Syst. Fung. Imp. 360 1923. **H.** *phragmitis* Karst.
- Lasiothyrium** Syd. Phil. Jour. Sci. 8:503, ill.
1913. **L.** *cycloschizum* Syd.
- Sacidium** Nees. Kze. & Schm. Myc. Heft.
2:64 1823; Syll. Fung. 3:649 1884. **S.** *chenopodii* Nees
- Sphaerothyrium** Bub. Ber. Deut. Bot. Ges.
34:298 1916. **S.** *filicinum* Bub.
- Termitaria** Thaxt. Bot. Gaz. 69:3, ill. 1920. **T.** *snyderi* Thaxt.
- Titaeosporina** van Luyk Ann. Myc. 17:112
1919; cf. Petr. Ann. Myc. 25:199 1927. **T.** *tremulae* (Lib.) v. L.

DISCELLACEAE

Discellae

Hyalosporae

- Agyriellopsis** Hoehn. Ann. Myc. 1:404 1903. **A.** *caeruleo-atra* Hoehn.
- Amerosporium** Speg. Fung. Arg. 4:306 1882. **A.** *polynemate* Speg.
- Acleista** Elliott Trans. Brit. Myc. Soc. 5:420,
ill. 1914. **A.** *alniella* Elliott
- Chaetostroma** (Corda) Sacc. em. *Michelia*
2:174; Syll. Fung. 4:749 1886; cf. Hoehn.
Syst. Fung. Imp. 358 1923. **C.** *atrum* Sacc.
- Euchaetomella** Sacc. Syll. Fung. 3:321
1884, as subg. of *Chaetomella*; cf. Hoehn.
Ib. 359. **E.** *atra* (Fkl.) Hoehn.
- Catinula** Lev. Ann. Sci. Nat. 3:9:247 1848. **C.** *aurea* Lev.
- Desmopatella** Hoehn. Mitt. Lab. Techn.
Hochsch. Wien 1:76 1924. **D.** *salicis* Hoehn.
- Dinemasporium** Lev. Ann. Sci. Nat. 3:5:274
1846. **D.** *graminum* Lev.
- Dinemasporiopsis** Bub. & Kab. Krypt. Fl.
Brand. 9:750 1914, for *Dinemasporiella*
B. & K. *Hedwigia* 52:358 1912; not Speg.
1910. **D.** *hispidula* Bub. & Kab.
- Heteropatella** Fkl. Symb. Myc. App. 2:54
1869. **H.** *lacera* Fkl.
- Lophodermopsis** Speg. Rev. Fac. Agron. 6:175
1910. **L.** *hysterioides* Speg.
- Neopatella** Sacc. Ann. Myc. 6:530 1908. **N.** *straussiana* Sacc.
- Falcispora** Bub. & Scr. *Hedwigia* 52:269
1912. **F.** *androssoni* B. & S.
- Polynema** Lev. Ann. Sci. Nat. 3:5:274 1846. **P.** *ornatum* (DeN.) Lev.
- Psilospora** Rabh. *Hedwigia* 1:107 1856. **P.** *faginea* (Pers.) Rabh.
- Sirexipula** Bub. *Hedwigia* 46:295 1907. **S.** *kabatiana* Bub.
- Sporonema** Desm. Not. 14:182 1847. **S.** *phacidioides* Desm.
- Clinterium** Fr. Sum. Veg. Scan. 418 1849. **C.** *obturatum* Fr.
- Stauronema** Syd. Ann. Myc. 14:217 1916. **S.** *cruciferum* S. & B.
- Stictopatella** Hoehn. *Hedwigia* 60:166 1918. **S.** *euonymi* (Desm.) Hoehn.
- Traversoa** Sacc. & Syd. Ann. Myc. 11:317
1913. **T.** *excipuloides* S. & S.
- Xenopeltis** Syd. Ann. Myc. 17:38, ill. 1919. **X.** *philippinensis* Syd.

Phaeosporae

- Coniothyris* Speg. Fung. Puigg. n. 439 1889;
for *Coniothyriella* Speg., cf. Clem. Gen.
Fung. 133 1909; Hoehn. Syst. Fung. Imp.
358 1923; Petr. Ann. Myc. 23:3 1925.
- Phaeopolynema* Speg. An. Mus. Nac. 23:117,
ill. 1912; Syll. Fung. 22:977 1913.
- Schoenbornia* Bub. Bull. Herb. Boiss.
2:6:483 1906.
- Myxormia* B. & Br. Ann. Nat. Hist. 2:5:457 n.
447, ill. 1850.
- Chaetodiscula* Bub. & Kab. Hedwigia 50:44
1910; cf. Hoehn. Hedwigia 60:159 1918;
Petr. Ann. Myc. 19:97 1921.
- Godroniella* Karst. Symb. Myc. 15:158 1884.
- Hymenopsis* Sacc. Michelia 2:367 1881.
- Phaediscula* Cuboni Nuov. Giorn. Ital. 33:577
1891.
- Vouauxiella* Petr. & Syd. Beih. Rep. Fedde
42:482 1927.
- C. *phyllostictoides* Speg.
P. *argentinense* Speg.
S. *basidio-annulata* Bub.
M. *atro-viridis* B. & Br.
C. *hysteriformis* B. & K.
G. *juncigena* Karst.
H. *trochiloides* Sacc.
P. *celotti* Cub.
V. *verrucosa* (Vouaux) P. & S.

Hyalodidymae

- Acarosporium* Bub. & Vleug. Ber. Deut. Bot.
Ges. 19:385, ill. 1911.
- Dinemasporis* Speg. An. Mus. Nac. 20:366, ill.
1910; for *Dinemasporiella* Speg.
Dinemasporiella Bub. & Kab. Hedwigia
52:358 1912.
- Discella* B. & Br. Ann. Nat. Hist. 2:5:376, ill.
1850.
- Pseudolachnea* Ranoj. Ann. Myc. 8:393, ill.
1910.
- Scaphidium* Clem. Rep. Bot. Surv. Nebr. 5:5
1905; Gen. Fung. 134 1909
- Siropatella* Hoehn. Ann. Myc. 1:401 1903.
- Ramulariospora* Bub. Ann. Hofm. Wien.
28:216 1914.
- A. *sympodiale* B. & V.
D. *poiophila* Speg.
D. *hispidula* (Schrad.) B. & K.
D. *carbonacea* (Fr.) B. & Br.
P. *bubaki* Ranoj.
S. *boutelouae* Clem.
S. *rhodophaea* Hoehn.
R. *asperulina* Bub.

Hyalophragmiae

- Excipularia* Sacc. Syll. Fung. 3:689 1884.
- Excipulina* Sacc. Syll. Fung. 3:688 1884; cf.
Hoehn. Syst. Fung. Imp. 359 1923.
- Excipulella* Hoehn. Sitzb. Akad. Wien
124:109 1915.
- Harposporella* Hoehn. Verh. Bot. Brandenb.
58:28 1916.
- Bactrexipula* Hoehn. Hedwigia 60:161
1918.
- Japonia* Hoehn. Sitzb. Akad. Wien 118:879
1909.
- Yoshinagamycetes* Hara Bot. Mag. Tokyo
26:143 1912.
- E. *fusispora* B. & Br.
E. *recurvispora* (B. & C.) Sacc.
E. *patella* Hoehn.
H. *eumorpha* Hoehn.
B. *strasseri* Hoehn.
J. *quercus* Hoehn.
Y. *quercus* (Henn.) Hara

- Oncospora* Kalchbr. *Grevillea* 9:19 1880
Stagonopatella Petr. *Ann. Myc.* 25:219 1927.
Ypsilonia Lev. *Ann. Sci. Nat.* 3:5:284 1846.
Acanthothecium Speg. *Fung. Puigg.* n. 440
 1889.
Psalidosperma Syd. *Ann. Myc.* 12:571, ill.
 1914.

- O. *bullata* K. & C.
 S. *aeruginosa* Petr.
 Y. *cuspidata* Lev.
 A. *mirabile* Speg.
 P. *mirabile* Syd.

Phaeophragmiae

- Dichaenopsis* Paoli *Nuov. Giorn. Ital.* 1:97
 1905.
Psilosporina Died. *Krypt. Brandenb.* 9:754,
 ill. 1924.
Excipularia Sacc. *Syll. Fung.* 3:689 1884.
Sirothecium Karst. *Symb. Myc.* 20:105 1887;
 cf. Petr. & Syd. *Ann. Myc.* 23:214 1925.

- D. *notarisi* Paoli
 P. *quercus* (Rabh.) Died.
 E. *fusispora* (B. & Br.) Sacc.
 S. *sepiarium* Karst.

Phaeodictyae

- Taeniophora* Karst. *Symb. Myc.* 17:163 1885. T. *acerina* Karst.

Scolecosporae

- Ephelidium* Speg. *An. Cient. Arg.* 90:184, ill.
 1920.
Ephelis Fr. *Sum. Veg. Scan.* 370 1849.
Phlyctaena Mont. & Desm. *Ann. Sci. Nat.*
 3:6:16 1847.
Pilidium Kze. *Myk. Heft* 2:292 1823.
Protostegia Cke. *Grevillea* 9:19 1880.
Pseudocenangium Karst. *Symb. Myc.* 17:163
 1885.
Septopatella Petr. *Ann. Myc.* 23:128 1925.

- E. *aurantiorum* Speg.
 E. *mexicana* Fr.
 P. *vagabunda* Desm.
 P. *euclae* (K. & C.) Sacc.
 P. *magnoliae* (Rav.) Sacc.
 P. *pinastri* Karst.
 S. *septata* (Jaap.) Petr.

Patellinae

Hyalosporae

- Crocicreas* Fr. *Sum. Veg. Scan.* 418 1849.
Cyphina Sacc. *Syll. Fung.* 3:623 1884.
Discozythia Petr. *Ann. Myc.* 20:313 1922.
Entomopatella Petr. *Ann. Myc.* 25:215 1927.
Hainesia Ell. & Sacc. *Syll.* 3:699 1884.
Hyphostereum Pat. *Bull. Soc. Myc. Fr.* 8:139
 1892.
Gyrostroma Naumov *Bull. Soc. Myc. Fr.*
 33:383, ill. 1914.
Libertiella Speg. & Roum. *Rev. Myc.* 2:21
 1880.
Microdiscula Hoehn. *Sitzb. Akad. Wien*
 124:142 1915.
Munkia Speg. *Fung. Guar.* 1:155 1886.
Aschersoniopsis Henn. *Hedwigia* 41:7
 1902; cf. Hoehn. *Syst. Fung. Imp.* 358, 361
 1923.
Pycnostroma Clem. *Gen. Fung.* 130 1909.

- C. *gramineum* Fr.
 C. *lanuginosa* (Pk.) Sacc.
 D. *sydowiana* Petr.
 E. *mirabilis* Petr.
 H. *rhoina* (Sacc.) Ell. & Sacc.
 H. *pendulum* Pat.
 G. *sinuosum* Naumov
 L. *malmedyensis* Speg.
 M. *rubicola* (Bres.) Hoehn.
 M. *martyris* Speg.
 A. *globosa* Henn.
 P. *globosum* (Henn.) Clem.

- Ollula* Lev. Ann. Sci. Nat. 4:20:299 1863. **O.** *pezizoides* Lev.
Siroscyphellina Petr. Ann. Myc. 21:255
 1923. **S.** *arundinaceae* Petr.
P. *italichroma* Speg.
Patellina Speg. Fung. Arg. 3:164 1880.
Pseudopatellina Hoehn. Sitzb. Akad. Wien
 17:1025 1908. **P.** *conigena* (Niessl) Hoehn.
P. *pusilla* Hoehn.
Pseudozythia Hoehn. Frag. Myk. 33 1903.
Schizothyrella Thuem. Myc. Univ. n. 1684
 1880. **S.** *quercina* (Lib.) Thuem.
Scleropycnium Heald & Lewis Trans. Am.
 Mic. Soc. 31:5, ill. 1912. **S.** *aureum* H. & L.
Fragosoella Petr. & Syd. Beih. Rep. Fedde
 42:183 1927. **F.** *nevadensis* (Frag.) P. & S.
Selenophomopsis Petr. Ann. Myc. 22:182
 1924. **S.** *juncea* (Mont.) Petr.
Sirexipulina Petr. Ann. Myc. 21:278 1923;
 cf. Petr. Ann. Myc. 25:233 1927. **S.** *moravica* Petr.
Sirocyphis Clem. Gen. Fung. 130 1909; Minn.
 Bot. Studies 4:188, ill. 1911. **S.** *nivea* Clem.
Siroscyphella Hoehn. Sitzb. Akad. Wien
 119:650 1910. **S.** *fumosellina* (Starb.) Hoehn.

Phaeosporae

- Michenera* B. & C. Jour. Linn. Soc. 10:333
 1869. **M.** *artocreas* B. & C.
Trullula Ces. Bot. Zeit. 10:287 1852. **T.** *olivascens* Sacc.

Hyalodidymae

- Cystotricha* B. & Br. Ann. Nat. Hist. 2:5:457,
 ill. 1850. **C.** *striola* B. & Br.
Pseudopatella Sacc. Syll. Fung. 3:688 1884;
 cf. Hoehn. Syst. Fung. Imp. 361 1923. **P.** *tulasnei* Sacc.
Diplozythiella Died. Ann. Myc. 14:215, ill.
 1916. **D.** *bambusina* Died.
Fioriella Sacc. & D. Sacc. Syll. Fung. 18:432
 1906. **F.** *vallumbrosana* S. & D. S.
Myriellina Hoehn. Sitzb. Akad. Wien 124:100
 1915. **M.** *cydoniae* Hoehn.

Hyalophragmiae

- Stagonopatella* Petr. Ann. Myc. 25:219 1927. **S.** *aeruginosa* Petr.

Phaeophragmiae

- Lecanosticta* Syd. Ann. Myc. 20:211 1922. **L.** *pini* Syd.

Scolecosporae

- Pyrenotrichum* Mont. Syll. Gen. 267 1856. **P.** *splitgerberi* Mont.
Trichocrea March. Bull. Soc. Belg. 30:2:145
 1891. **T.** *stenospora* March.
Trichosperma Speg. An. Soc. Cien. Arg.
 26:67 1888. **T.** *pulchellum* Speg.

Genera Incertae Sedis Vel Dubia

- Ceuthosira** Petr. Ann. Myc. 22:265 1924.
Disculina Hoehn. Frag. Myk. n. 988 1916; cf. Petr. Ann. Myc. 23:6 1925.
Exotrichum Syd. Ann. Myc. 12:571 1914; cf. Hoehn. Syst. Fung. Imp. 359 1923.
Hysteromyxa Sacc. & Ell. *Michelia* 2:574 1882; cf. Hoehn. Syst. Fung. Imp. 360 1923; Syll. Fung. 3:622 1884.
Pleococcum Desm. & Mont. Ann. Sci. Nat. 3:11:53 1849; Syll. Fung. 3:679 1884; cf. Hoehn. Syst. Fung. Imp. 361 1923.
Pseudodiscula Laub. Gartenfl. 60:78 1911.
Pseudostictis Fautr. Rev. Myc. 12:119 1890; Syll. Fung. 11:553 1895; cf. Hoehn. Syst. Fung. Imp. 361 1923.
Stichospora Petr. Ann. Myc. 25:195 1927.
Tryblidiopycnis Hoehn. Sitzb. Akad. Wien 127:562 1918.
- C. aesculicarpa** Petr.
D. neesi (Cda.) Hoehn.
E. leucomelas Syd.
H. effugiens S. & E.
P. robergei D. & M.
P. endogenospora Laub.
P. silvestris Fautr.
S. disciformis Petr.
T. pinastri Hoehn.

MELANCONIALES

MELANCONIACEAE

Hyalosporae

- Aureobasis** Viala & Boyer Rev. Gen. Bot. 3:369, ill. 1891; for *Aureobasidium*.
Exobasidiopsis Karak. Not Syst. Inst. Crypt. Petr. 1:83 1922.
Kabatiella Bub. *Hedwigia* 46:297 1907; Syll. Fung. 22:1297 1913.
Pachybasidiella Bub. & Syd. Ann. Myc. 13:9, ill. 1915.
Polyspora Lafferty Sci. Proc. Dublin Soc. 21:258, ill. 1921.
Bloxamia B. & Br. Ann. Nat. Hist. 2:13:468, ill. 1854.
Gloeosporiopsis Speg. An. Mus. Nac. 3:13:404 1911; Syll. Fung. 22:1193 1913.
Thecostroma Clem. Gen. Fung. 135, 176 1909.
Colletotrichum Corda Sturm Deut. Crypt. Fl. 3:3:41, ill. 1831.
Colletotrichella Hoehn. Sitzb. Akad. Wien 125:99 1916.
Colletotrichopsis Bub. Oest. Bot. Zeit. 54:184 1904.
Conoplea Pers. Tent. Disp. 55 1797.
Cryptosporiopsis Bub. & Kab. *Hedwigia* 52:360 1912.
Discosporiopsis Petr. Ann. Myc. 19:217 1921.
Tuberculariella Hoehn. Syst. Fung. Imp. 1:343 1923.
- A. vitis** V. & B.
E. viciae Karak.
K. microsticta Bub.
P. polyspora B. & S.
P. lini Laff.
B. truncata B. & B.
G. vinal Speg.
T. nitidulum (Sacc.) Clem.
C. gloeosporodes Penz.
C. periclymeni (Desm.) Hoehn.
C. pyri (Noack) Bub.
C. sphaerica Pers.
C. nigra B. & K.
D. piri (Fkl.) Petr.
 (no species given)

- Cytogloeum* Petr. Ann. Myc. 23:77 1925.
Discosporella Hoehn. Mitt. Bot. Hochs. Wien 4:80 1927.
Eriosporella Hoehn. Sitzb. Akad. Wien 125:109 1916.
Gloeosporium Desm. & Mont. Ann. Sci. Nat. 3:12:295 1849.
Calogloeum Syd. Ann. Myc. 22:401 1924.
Cryptocline Petr. Ann. Myc. 22:402 1924.
Cylindrosporella Hoehn. Sitzb. Akad. Wien 125:96 1916.
Discosporiella Petr. Ann. Myc. 21:14 1923.
Discula Sacc. Syll. Fung. 3:674 1884.
Gloeosporidiella Petr. Hedwigia 62:318 1921.
Gloeosporidina Petr. Ann. Myc. 19:214 1921.
Gloeosporidium Hoehn. Sitzb. Akad. Wien 125:95 1916.
Gloeosporina Hoehn. Sitzb. Akad. Wien 125:94 1916.
Microgloeum Petr. Ann. Myc. 20:215 1922.
Monostichella Hoehn. Sitzb. Akad. Wien 125:95 1916.
Myxosporina Hoehn. Mitt. Bot. Hochs. Wien 4:73 1927.
Hyperomyxa Corda Icon. Fung. 3:34, ill. 1839.
Hypodermium Link Spec. Pl. Fung. 2:88 1825.
Hypodermina Hoehn. Sitzb. Akad. Wien 125:55 1916.
Hypogloeum Petr. Ann. Myc. 21:263 1923.
Mastigonema Speg. Bol. Acad. Cordoba 29:177 1926.
Myxosporella Sacc. Michelia 2:381 1881.
Myxosporium Link Spec. Pl. Fung. 2:99 1825.
Discogloeum Petr. Ann. Myc. 21:14 1923.
Discosporium Hoehn. Zeit. Gär. 5:196 1914.
Phaeomonostichella Keissl. Anz. Akad. Wien 60:75 1924.
Naemospora Pers. Syn. Fung. 110 1801; em. Sacc. Michelia 2:12 1880.
Pestalozziella Sacc. & Ell. Michelia 2:575 1882.
Protocoronis Atkin. & Edgert. Jour. Myc. 13:186 1907; em. Wolf Jour. Elish. Mitch. Soc. 36:82 1920; for *Protocoronospora*.
Rhabdogloeopsis Petr. Ann. Myc. 23:52 1925.
Rhabdogloeum Syd. Ann. Myc. 20:215 1922.
Thyrsideiella Hoehn. Oest. Bot. Zeit. 55:100 1905.
Vermicularia Fr. Sum. Veg. Scan. 419 1849.
- C. tiliae* Petr.
D. didyma (F. & R.) Hoehn.
E. calami (Niessl) Hoehn.
G. cingulatum Atkin.
C. weirianum (Sacc.) Syd.
C. effusa Petr.
C. carpini (Lib.) Hoehn.
D. phaeosora (Sacc.) Petr.
D. platani (Pk.) Sacc.
G. ribis (Lib.) Petr.
G. moravica Petr.
G. acericolum (All.) Hoehn.
G. inconspicua (Cav.) Hoehn.
M. pruni Petr.
M. robergei (Desm.) Hoehn.
M. subtecta (Rob.) Hoehn.
H. stilbosporoides Cda.
H. nervisequium Link.
H. nervisequia (Lk.) Hoehn.
H. euonymi Petr.
M. bruchianum Speg.
M. miniata Sacc.
M. croceum (Pers.) Link
D. phaeosora (Sacc.) Petr.
D. hyalinum (Ell.) Hoehn.
P. symploci Keissl.
N. croceola Sacc.
P. subsessilis S. & E.
P. nigricans A. & E.
R. balsameae (Dav.) Petr.
R. pseudotsugae Syd.
T. lignicola Hoehn.
V. dematium Fr.

Phaeosporae

- Botryoconis* Syd. Ann. Myc. 4:344 1906. **B. saccardoi** Syd.
Chaetobasis Hoehn. Mitt. Bot. Hochs. Wien 2:36 1925; for *Chaetobasidiella vermicularioidea*.
Cryptomela Sacc. Syll. Fung. 3:760 1884. **C. vermicularis** Hoehn.
C. caricis (Corda) Sacc.
Melanconium Link. Spec. Pl. Fung. 2:91 1825. **M. juglandinum** Kze.
Fairmaniella Petr. & Syd. Beih. Rep. Fedde 42:481 1927. **F. leprosa** (Fairm.) P. & S.
Haplomela Syd. Leaf. Phil. Bot. 9:3131 1925. **H. celtidis** Syd.
Leptomelanconium Petr. Ann. Myc. 21:179 1923. **L. asperulum** (Moesz) Petr.
Scyphospora Kantshaveli. Bol. Rast. 17:87, ill. 1928. **S. phyllostachydis** Kant.
Thyrsidium Mont. Ann. Sci. Nat. 2:6:388 1836. **T. botryosporum** Mont.
Trullula Ces. Bot. Zeit. 10:397 1852. **T. olivascens** Sacc.
Vanderystiella Henn. Ann. Mus. Congo 5:2:229, ill. 1908. **V. leopoldia** Henn.

Hyalodidymae

- Fominia* Girzitska. Bull. Jard. Bot. Kieff 5 & 6:168, ill. 1927. **F. rubi-idaei** Girz.
Gloeosporiella Cav. Fung. Long. Exs. n. 41 1891. **G. rosicola** Cav.
Marsonia Fisch. Rabh. Fung. Eur. n. 1857 1874. **M. potentillae** (Desm.) Fisch.
Marsoniella Hoehn. Sitzb. Akad. Wien 125:108 1916. **M. juglandis** (Lib.) Hoehn.
Monotrichum Gäum. Ann. Myc. 20:261, ill. 1922. **M. commelinae** Gäum.
Septomyxa Sacc. Syll. Fung. 3:766 1884. **S. aesculi** Sacc.
Marsonina Magn. Hedwigia 45:89 1906. **M. potentillae** (Desm.) Magn.

Phaeodidymae

- Didymosporium* Nees. Syst. Pilz. 33 1817; em. Sacc. *Michelia* 2:11 1880. **D. striola** Sacc.
Didymosporina Hoehn. Sitzb. Akad. Wien 125:83 1916. **D. aceris** (Lib.) Hoehn.
Phaeomarsonia Bub. Bot. Kozlemen. 14:(75) 1915; cf. Hoehn. Syst. Fung. Imp. 360 1923. **P. truncatula** (Sacc.) Bub.
Neobarclaya Sacc. Syll. Fung. 14:46 1899; for **N. primaria** (E. & E.) Sacc.
Barclayella Sacc. Syll. Fung. 10:475 1892, not Diet. 1890. **B. primaria** (E. & E.) Sacc.
Phaeomarsonia Speg. An. Mus. Nac. 17:138 1908. **P. yerbae** Speg.

Hyalophragmiae

- Diploceras* Sacc. Syll. Fung. 10:484 1892, as subg.; Hoehn. Syst. Fung. Imp. 342 1923.
Endocladis Petr. Ann. Myc. 21:290 1923.
Entomosporium Lev. Bull. Soc. Bot. Fr. 3:31 1856.
Pestalozzina Sacc. Syll. Fung. 3:800 1884, as subg.; 11:580 1895.
Prosthemella Sacc. Michelia 2:356 1881.
Pseudodiscosia Hoest. & Laub. Gartenwelt 25:66 1921.
Septogloeum Sacc. Mich. 2:11 1880.
Titaeospora Bub. Ann. Myc. 14:345, ill. 1916.
Ramulispora Miura S. Manch. Agr. Bull. 11:43, ill. 1920.
- D. *dilophosporum* (Cke.) Sacc.
E. *ulmi* Petr.
E. *maculatum* Lev.
P. *unicolor* (B. & C.) Sacc.
P. *formosa* Sacc. & Malbr.
P. *dianthi* H. & L.
S. *acerinum* (Pass.) Sacc.
T. *ditospora* (Sacc.) Bub.
R. *andropogonis* Miura

Phaeophragmiae

- Amphichaeta* McAlp. Proc. Linn. Soc. N. S. Wales 1904:118 1904.
Disaeta Bonar Mycologia 20:299, ill. 1928.
Asterosporium Kze. Flora 2:225 1819.
Coryneum Nees Syst. Pilz. 34 1817.
Endocoryneum Petr. Ann. Myc. 20:334 1922.
Leptocoryneum Petr. Hedwigia 65:278 1925.
Phanerocoryneum Hoehn. Syst. Fung. Imp. 351 1923.
Thyrostromella Syd. Ann. Myc. 22:406 1924.
Cryptostictis Fkl. Fung. Rhen. n. 1838 1869.
Heteroceras Sacc. Ann. Myc. 13:136 1915.
Monochaetia Sacc. Syll. Fung. 3:797 1884, as subg.; 18:485 1906.
Pestalozzia DeNot. Micr. Ital. Dec. 2:9 1839.
Scolecosporium Lib. Sacc. Michelia 2:355 1881.
Scolecosporiella Hoehn. Syst. Fung. Imp. 341 1923.
Siridiella Karst. Symb. Myc. 30:67 1891.
Siridina Hoehn. Syst. Fung. Imp. 334 1923.
Siridium Nees Syst. Pilz. 22 1816.
Hyaloceras Dur. & Mont. Fl. Alg. 587 1846.
Septotrullula Hoehn. Frag. Myk. 1902:39; Syll. Fung. 18:487 1906.
Stilbospora Pers. Syn. Fung. 96 1801; em. Sacc. Michelia 2:11 1880.
Toxosporium Vuill. Bull. Soc. Myc. Fr. 12:34 1896.
- A. *daviesiae* McAlp.
D. *arbuti* Bonar
A. *hoffmanni* Kze.
C. *umbonatum* Nees
E. *loculosum* (Sacc.) Petr.
L. *corni-albae* (Roum.) Petr.
(no species given)
T. *trimeria* (Sacc.) Syd.
C. *hysterioides* Fkl.
H. *flageoleti* Sacc.
M. *monochaeta* (Desm.) Sacc.
P. *funerea* Desm.
S. *fagi* Lib.
(no species given)
S. *ramealis* Karst.
(no species given)
S. *marginatum* Nees
H. *notarisi* M. & D.
S. *bacilligera* Hoehn.
S. *macrosperma* Pers.
T. *abietinum* Vuill.

Hyalodictyae

- Hyalodictyum* Woronich. Bull. Mus. Tiflis 10:31, ill. 1916.
Thyrsidina Hoehn. Ann. Myc. 3:337 1905.
- H. *colchicum* Woron.
T. *carneominis* Hoehn.

Phaeodictyae

- Endobotrya* B. & C. *Grevillea* 2:98 1874. E. *elegans* B. & C.
Endobotryella Hoehn. *Sitzb. Akad. Wien* 118:1536 1909. E. *oblonga* (Fkl.) Hoehn.
Morinia Berl. & Bres. *Micr. Trid.* 82 1889. M. *pestalozzis* B. & B.
Phragmotrichum Kze. & Schm. *Myk. Heft.* 2:84, ill. 1823. P. *chailleti* Kze.
Steganosporium Corda *Icon. Fung.* 3:22 1839. S. *piriforme* (Hoffm.) Corda
Stigmopsis Bub. *Ann. Myc.* 12:218 1914. S. *celtidis* (Pass.) Bub.
Viricauda Bub. *Ann. Myc.* 12:218 1914. P. *uleana* (S. & S.) Bub.

Scolecosporae

- Cylindrosporium* Unger *Exanth.* 166 1833; em. *Sacc. Michelia* 2:12 1883. C. *padi* Karst.
Cryptosporium Sacc. *Syll. Fung.* 3:740 1884. C. *neesi* Corda
Disculina Hoehn. *Sitzb. Akad. Wien* 125:104 1916. D. *neesi* (Corda) Hoehn.
Phloeosporella Hoehn. *Ann. Myc.* 22:201 1924. P. *ceanothi* (E. & E.) Hoehn.
Phloeosporina Hoehn. *Ann. Myc.* 22:202 1924. P. *minor* (E. & E.) Hoehn.
Sphaceliopsis Speg. *An. Mus. Nac.* 20:45 1910; *Syll. Fung.* 22:1468 1913. S. *cypericola* Speg.
Libertella Desm. *Ann. Sci. Nat.* 1:19:277 1830. L. *betulina* Desm.
Libertina Hoehn. *Ann. Myc.* 22:197 1924. L. *stipata* (Lib.) Hoehn.
Pseuderospora Keissl. *Anz. Akad. Wien* 60:76 1924. P. *castanopsidis* Keissl.
Pseudostegia Bub. *Jour. Myc.* 12:56 1906; cf. P. *nubilosa* Bub.
Trichodytes Klebahn *Ber. Deut. Bot. Ges.* 15:527 1897. T. *anemones* Kleb.

Staurosporae

- Asteroconium* Syd. *Ann. Myc.* 1:36 1903. A. *saccardoi* Syd.

Genera Incertae Sedis Vel Dubia

- Basilocula* Bub. *Ann. Myc.* 12:210 1914; cf. -
 Hoehn. *Syst. Fung. Imp.* 358 1923. B. *lauricola* Bub.
Elaeodema Syd. *Ann. Myc.* 20:64 1922. E. *cinnamomi* Syd.
Hormococcus Preuss *Linnaea* 25:73 1852; H. *populi* Preuss
 cf. Hoehn. *Syst. Fung. Imp.* 359 1923.
Hormylius Clem. *Gen. Fung.* 135, 176 1909; cf. Hoehn. *Syst. Fung. Imp.* 360 1923. H. *populi* (Preuss) Clem.
Melanostroma Corda *Icon. Fung.* 1:5 1837; cf. Hoehn. *Syst. Fung. Imp.* 360 1923; M. *fusarioides* Corda
Syll. Fung. 3:728 1884.
Psamma Rouss. & Sacc. *Bull. Soc. Bot. Belg.* 29:295 1891; cf. Hoehn. *Syst. Fung. Imp.* 361 1923; *Syll. Fung.* 10:498 1892. P. *bommeriae* R. & S.
Thyriostroma Died. *Ann. Myc.* 11:176 1913; cf. Hoehn. *Syst. Fung. Imp.* 362 1923. T. *pteridis* (Ehrenb.) Died.

MONILIALES

MONILIACEAE

Hyalosporae

- Acladium** Link. Obs. Myc. 1:9, ill. 1809.
Acontium Morgan Jour. Myc. 8:4 1902.
Acremonium Link. Obs. Myc. 1:13 1809; em.
 Sacc. *Michelia* 2:17 1880.
Thermomyces Tsil. Ann. Inst. Pasteur
 13:500, ill. 1899.
Acrocylindrium Bon. Handb. Myk. 97 1851.
Acrostalagmus Corda Icon. Fung. 2:15 1838.
Harziella Cost. & Matr. Bull. Soc. Myc. Fr.
 15:104, ill. 1899.
Amblyosporium Fres. Beitr. Myk. 99, ill.
 1863.
Articularia Hoehn. Sitzb. Akad. Wien
 118:407 1909.
Aspergillus (Michel.) Lk. Sp. Pl. 1:65 1824.
Alliospora Pim Jour. Bot. 21:234 1883.
Briarea Corda Sturm Deut. Crypt. Fl.
 3:3:11, ill. 1831.
Sterigmatocystis Cram. Viert. Nat. Ges.
 Zürich 4:323 1859.
Asterophora Ditm. Schrad. Jour. Bot. 3:56,
 ill. 1809.
Basidiobotrys Hoehn. Sitzb. Akad. Wien
 118:420, ill. 1909.
Xylocladium Syd. Nat. Pflanzenf. 1:1:494
 1900; Syll. Fung. 16:1089 1902, 22:1262
 1913; cf. Hoehn. Syst. Fung. Imp. 362
 1923.
Blastomyces Cost. & Roll. Bull. Soc. Myc.
 Fr. 4:153 1888.
Botryosporium Corda Sturm Deut. Crypt. Fl.
 3:11 1833.
Radaisella Bainier Bull. Soc. Myc. Fr.
 26:382, ill. 1910; Syll. Fung. 22:1253 1913.
Botrytis Michel., em. Link. Sp. Pl. Fung. 1:53
 1824.
Acmosporium Corda Icon. Fung. 3:11, ill.
 1839.
Calcarisporium Preuss. Linnaea 24:124 1851.
Cephalosporium Corda Anleit. 61 1842.
Chaetoconidium Zukal Verh. Ges. Wien
 37:45 1887.
Chantransiopsis Thaxt. Bot. Gaz. 58:246, ill.
 1914.
Chromosporium Corda Sturm Deut. Crypt.
 Fl. 3:2:119, ill. 1829.
Cladobotryum Sacc. *Michelia* 1:272 1878.
Clonostachys Corda Prachtfl. 15 1839.
Clonostachyopsis Hoehn. Sitzb. Akad. Wien
 116:149 1907.
- A. conspersum** Lk.
A. album Morg.
A. alternatum Lk.
T. lanuginosus Tsil.
A. elegans Bon.
A. cinnabarinus Corda
H. capitata C. & M.
A. botrytis Fres.
A. quercina (Pk.) Hoehn.
A. glaucus (L.) Lk.
A. sapucaya Pim
B. elegans Sturm
S. nigra van Tiegh.
A. agaricicola Corda
B. clautriavi (Pat.) Hoehn.
X. clautriavi (Pat.) Syd.
B. luteus C. & R.
B. pulchrum Corda
R. elegans Bain.
B. cinerea Pers.
A. botryoideum Corda
C. arbuscula Preuss
C. acremonium Corda
C. arachnoideum Zuk.
C. decumbens Thaxt.
C. viride Corda
C. thuemeri Sacc
C. araucaria Corda
C. populi (Harz) Hoehn.

- Coccosporella* Karst. Symb. Myc. 32:9 1893.
Coemansia van Tiegh. Ann. Sci. Nat. 5:17:392
 1873.
Coemansiella Sacc. Syll. Fung. 2:815 1883;
 4:55 1886.
Corethrospis Corda Prachtfl. 1, ill. 1839.
Coronella Crouan Fl. Fin. 12, ill. 1867.
Corymbomyces Appel & Strunk Cent. Bakt.
 2:11:632 1904.
Cristulariella Hoehn. Sitzb. Akad. Wien
 125:124 1916; cf. Bowen Conn. Exp. Sta.
 Bull. 316 1930.
Cylindrium Bon. Handb. Myk. 34, 1851; em.
 Sacc. Michelia 2:14 1880.
Cylindrocephalum Bon. Handb. Myk. 103
 1851.
Cylindrodendrum Bon. Handb. Myk. 97, ill.
 1851.
Cylindrophora Bon. Handb. Myk. 92, ill.
 1851.
Cylindrotrichum Bon. Handb. Myk. 88 1851.
Dimargaris van Tiegh. Ann. Sci. Nat. 6:1:154,
 ill. 1875.
Dispira van Tiegh. Ann. Sci. Nat. 6:1:160, ill.
 1875.
Doratomyces Corda Icon. Fung. 1:19, ill.
 1837.
Fusidium Sacc. Michelia 2:14 1880.
Geotrichum Link Obs. Myc. 1:53 1809.
Oosporidea Sumstine Mycologia 5:53 1913.
Gliobotrys Hoehn. Sitzb. Akad. Wien 111:1048
 1902.
Sporodiniopsis Hoehn. Ann. Myc. 1:528
 1903.
Gliocladium Corda Icon. Fung. 4:30 1840.
Gloeosphaera Hoehn. Sitzb. Akad. Wien
 111:1038 1902.
Glomerularia Pk. Rep. N. Y. Mus. 32:43, ill.
 1879.
Glycophila Mont. Comp. Rend. 33:395 1851.
Gonatobotrys Corda Prachtfl. 5 1839.
Gonatorhodus Thaxt. Bot. Gaz. 45:202 1891.
Graphidium Lind. Rabh. Krypt. Fl. 9:748
 1909.
Haplaria Link Obs. Myc. 1:9, ill. 1809.
Haplotrichum Link Sp. Pl. Fung. 1:52 1824.
Hyalopus Corda Anleit. 58 1842.
Hyphoderma Fr. Sum. Veg. Scan. 447 1849.
Langloisula Ell. & Ev. Jour. Myc. 5:68 1889;
 cf. Hoehn. Frag. Myk. 1155 1917.
Malbranchea Sacc. Michelia 2:639 1882.
Thermoidium Miede Ber. Deut. Bot. Ges.
 35:510, ill. 1910; Syll. Fung. 22:1240 1913.
- C. calospora* Karst.
C. reversa van Tiegh.
C. alabastrina Sacc.
C. paradoxa Corda
C. nivea Crouan
C. albus A. & S.
C. depraedans (Cke.) Hoehn.
C. elongatum Bon.
C. aureum (Corda) Bon.
C. album Bon.
C. tenera Bon.
C. album Bon.
D. crystalligena van Tiegh.
D. cornuta van Tiegh.
D. tenuis Corda
F. carneolum Sacc.
G. candidum Lk.
O. lactis (Fres.) Sumst
G. alboviridis Hoehn.
S. dichotomus Hoehn.
G. penicillis Corda
G. globuligera Hoehn.
G. corni Pk.
G. versicolor Mont.
G. simplex Corda
G. parasitica Thaxt.
G. corrensi Lind.
H. grisea Lk.
H. capitatum Lk.
H. mycophilus Corda
H. roseum (Pers.) Fr.
L. spinosa E. & E.
M. pulchella S. & P.
T. sulphureum Miede

- Martensella** Coem. Bull. Acad. Belg. 2:15:292, ill. 1863.
- Meria** Vuill. Bull. Soc. Nancy 2:14:13, ill. 1896.
- Hartigiella** Syd. Nat. Pflanzenf. 1:1:558 1900; Syll. Fung. 16:1031 1902.
- Monilia** Pers., em. Sacc. Michelia 2:17 1880.
- Halobysus** Zukal Oest. Bot. Zeit. 43:279 1893.
- Moniliopsis** Ruhland Arb. Anst. Landw-Forstw. 6:71, ill. 1908; Syll. Fung. 22:1247 1913.
- Monopodium** Delacr. Bull. Soc. Myc. Fr. 6:99 1890.
- Monosporium** Bon. Handb. Myk. 95 1851.
- Monosporiella** Speg. Physis 4:293 1918.
- Myceliophthora** Cost. Rev. Gen. Bot. 6:289 1894.
- Nematogonium** Desm. Ann. Sci. Nat. 2:2:69 1834.
- Nomuraea** Maubl. Bull. Soc. Myc. Fr. 19:295 1903.
- Oedocephalum** Preuss Linnaea 24:131 1851.
- Amblyosporiopsis** Fairman Proc. Roch. Acad. Sci. 6:132, ill. 1922.
- Oidiopsis** Scalia Agricolt. Calabro-Siculo 27:396 1902.
- Oidium** Link, em. Sacc. Michelia 2:15 1880.
- Acrosporium** Nees Syst. Pilz. 53, ill. 1817.
- Olpitrichum** Atkin. Bot. Gaz. 48:244 1894.
- Oospora** Wallr. Fl. Crypt. 2:182 1833; em. Sacc. Michelia 2:14 1880.
- Toruloidea** Sumstine Mycologia 5:53, ill. 1913.
- Ophiocladium** Cav. Zeits. Pflanzenkr. 3:26 1893.
- Ovularia** Sacc. Michelia 2:17 1880.
- Pseudovularia** Speg. An. Mus. Nac. 3:13:418 1911.
- Pachybasium** Sacc. Rev. Myc. 7:160, ill. 1885.
- Paepalopsis** Kuehn Hedwigia 22:11, 28 1883.
- Pellicularia** Cke. Grevillea 4:116, ill. 1876.
- Penicillium** Link Sp. Pl. Fung. 1:69 1824.
- Citromyces** Wehmer Ber. Deut. Bot. Ges. 11:333 1893.
- Paecilomyces** Bainier Bull. Soc. Myc. Fr. 23:26 1907.
- Scopulariopsis** Bainier Bull. Soc. Myc. Fr. 23:98 1907.
- Phymatotrichum** Bon. Handb. Myk. 116, ill. 1851; Syll. Fung. 16:1033 1902.
- Beauveria** Vuill. Bull. Soc. Bot. Fr. 59:40, ill. 1912.
- M. pectinata** Coem.
- M. laricis** Vuill.
- H. laricis** (Hart.) Syd.
- M. fructigena** Pers.
- H. moniliformis** Zuk.
- M. aderholdi** Ruhl.
- M. uredopsis** Delacr.
- M. spinosum** Bon.
- M. meliolicola** Speg.
- M. lutea** Cost.
- N. aurantiacum** Desm.
- N. prasina** Maubl.
- O. glomerulosum** (Bull.) Sacc.
- A. parasphenoides** Fairman
- O. sricula** Scalia
- O. erysiphoides** Fr.
- A. monilioides** Nees
- O. carpophilum** Atkin.
- O. virescens** (Lk.) Wallr.
- T. effusa** Sums.
- O. hordei** Cav.
- O. obovata** Sacc.
- P. trifolii** Speg.
- P. hamatum** (Bon.) Sacc.
- P. irmischiae** Kuehn
- P. koleroga** Cke.
- P. expansum** Lk.
- C. glaber** Wehmer
- P. varioti** Bain.
- S. brevicaulis** (Sacc.) Bain.
- P. gemellum** Bon.
- B. bassiana** (Bals.) Vuill.

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Plectothrix Shear Bull. Torr. Club. 29:457
 1902.
Polyscytalum Riess Bot. Zeit. 11:138 1853.
Ramulaspera Lindr. Act. Soc. Fenn. 22:5
 1902.
Rhinotrichum Corda Icon. Fung. 1:17 1837.
Jidymotrichum Hoehn. Sitzb. Akad. Wien
 123:140 1914.
Mastigocladium Matr. Comp. Rend. 152:325
 1911.
Rhopalomyces Corda Prachtfl. 3, ill. 1839.
Sceptromyces Corda Sturm. Deut. Crypt. Fl.
 3:3:7, ill. 1831.
Selenotila Lagerh. Ber. Deut. Bot. Ges. 10:531
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Sepedonium Link Obs. Myc. 1:16 1809.
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Spermatoloncha Speg. An. Mus. Nac. 3:10:139
 1909.
Spicaria Harz Hyphom. 51 1871.
Spicularia Pers. Myc. Eur. 1:39 1822; em.
 Fkl. Symb. Myc. 359 1869.
Sporotrichella Karst. Symb. Myc. 20:96 1887.
Sporotrichum Link Sp. Pl. Fung. 1:1 1824;
 em. Sacc. Michelia 2:16 1880.
Leiosepium Sacc. Bull. Soc. Myc. Fr. 16:24
 1900; Syll. Fung. 16:1036 1902.
Tolypomyria Preuss Linnaea 26:707 1853.
Trichoderma Pers. Tent. Disp. 12 1797; em.
 Harz Hyphom. 29 1871.
Sporoderma Mont. Syll. Crypt. n. 1069
 1856; Syll. Fung. 4:676 1886; cf. Hoehn.
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Uncigera Sacc. Misc. Myc. 2:135 1884.
Verticillioopsis Cost. Compt. Rend. 114:850
 1892.
Verticillium Nees. Syst. Pilz. 57 1817.
Volutellis Torrend Bull. Jard. Bot. Brux. 4:12
 1914; for *Volutellopsis* Torr., not Speg.
 1910.
Xenopus Penz. & Sacc. Malpighia 15:240
 1901.
- P. rubiginosa* Fr.
P. globosa Shear
P. fecundissimum Riess
R. salicina (Vest.) Lindr.
R. repens Preuss
D. chrysospermum (Sacc.) Hoehn.
M. blochi Matr.
R. elegans Corda
S. opizi Corda
S. nivalis Lagerh.
S. chrysospermum (Bull.) Lk.
S. dispiroides Thaxt.
S. maticola Speg.
S. elegans (Corda) Harz
S. icterus Fkl.
S. rosea Karst.
S. roseum Lk.
L. aureum S. & F.
T. microspora (Corda) Sacc.
T. lignorum (Tode) Harz
S. chlorogenum Mont.
U. cordae S. & B.
V. infestans Cost.
V. agaricinum (Lk.) Corda
V. sulphurea Torr.
X. farinosus P. & S.

Hyalodidymae

- Arthrobotrys* Corda Prachtfl. 21 1839.
Bostrichonema Ces. Erb. Critt. Ital. n. 149
 1859.
Cephalothecium Corda Anleit. 57 1842.
Cylindrocladium Morgan Bot. Gaz. 46:191
 1892.
Didymaria Corda Icon. Fung. 6:8 1854.
- A. superba* Corda
B. alpestre Ces.
C. roseum Corda
C. scoparium Morg.
D. ungeri Corda

- Didymocladium* Sacc. Syll. Fung. 4:186 1886.
Didymopsis Sacc. & March. Bull. Soc. Bot. Belg. 24:61 1885.
Diplocladium Bon. Handb. Myk. 98 1851.
Diploospora Grove Jour. Bot. 54:220 1916.
Diplorhinotrichum Hoehn. Sitzb. Akad. Wien 111:1040 1902.
Diplosporium Bon. Handb. Myk. 98 1851.
Haplariopsis Oud. Ned. Arch. 3:2:902 1903.
Hormiactina Bub. Hedwigia 57:336, ill. 1916.
Hormiactis Preuss. Fung. Hoyersw. 128 1851.
Landaopsis Zahlbr. Cent. Bakt. 2:20:187 1907.
Mycogone Link. Sp. Pl. Fung. 1:29 1824.
Chlamydomyces Bainier Bull. Soc. Myc. Fr. 23:240, ill. 1907; Syll. Fung. 22:130 1913.
Ramulariopsis Speg. An. Mus. Nac. 20:421 1910.
Rhynchosporium Heinsen Jahrb. Hamburg Wiss. 18:43 1901.
Trichothecium Link. Sp. Pl. Fung. 1:28 1824.
- D. ternatum* (Bon.) Sacc.
D. perexigua S. & M.
D. minus Bon.
D. rosea Grove
D. candidulum Hoehn.
D. album Bon.
H. fagicola Oud.
H. wroblewski Bub.
H. alba Preuss
L. caloplacae Zahlbr.
M. rosea Lk.
C. diffusus Bain.
R. cnidoscoli Speg.
R. graminicola Hein.
T. roseum Lk.

Hyalopragmiae

- Allantospora* Wakk. Meddeel. Proefst. Oost-Java 2:28:4 1895.
Amastigis Bond. Mont. Mat. Mik. Ross. 5:2 1921; for *Amastigosporium*.
Blastotrichum Corda Icon. Fung. 2:10, ill. 1838.
Candelospora Rea & Hawley Proc. Roy. Irish Acad. 13:11 1912.
Cephalophora Thaxt. Bot. Gaz. 37:157 1903.
Dactylaria Sacc. Michelia 2:20 1880.
Dactylella Grove Jour. Bot. 22:199, ill. 1884.
Dactylium Nees Syst. Pilz. 58 1817.
Fusoma Corda Icon. Fung. 1:7 1837.
Gueguenia Bainier Bull. Soc. Myc. Fr. 23:107, ill. 1907.
Mastigosporium Riess Fres. Beitr. Myk. 56 1852.
Milowia Masee Jour. Roy. Micr. Soc. 2:4:841 1884.
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Monacrosporium Oud. Neder. Kruidk. Arch. 2:4:250 1884.
Mucrosporium Preuss. Linnaea 24:128 1851.
Paraspora Grove Jour. Bot. 22:196, ill. 1884.
Piricularia Sacc. Michelia 2:20 1880.
Pithomyces B. & Br. Jour. Linn. Soc. 14:100 1875.
Neomichelia P. & S. Malpighia 15:246 1901; Syll. Fung. 10:393 1902.
- A. radicolica* Wakk.
A. graminicola B. M.
B. confervoides Corda
C. ilicicola Hawley
C. tropica Thaxt.
D. purpurella Sacc.
D. minuta Grove
D. dendroides (Bull.) Fr.
F. glandarium Corda
G. caespitosa Bain.
M. album Riess
M. nivea Mass.
M. cylindroides Bub.
M. elegans Oud.
M. tenellum (Fr.) Sacc.
P. septata Grove
P. grisea (Cke.) Sacc.
P. flavus B. & Br.
N. melaxantha P. & S.

- Psammia** Rouss. & Sacc. Bull. Soc. Bot. Belg. 29:295 1891.
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- Septocylindrium** Bon. Handb. Myk. 35 1851; cf. Hoehn. Mitt. Bot. Hochs. Wien 4:102 1927.
- Trichoconis** Clem. Gen. Fung. 145, 176. 1909.
- Triposporina** Hoehn. Sitzb. Akad. Wien 121:410 1912.
- Varicosporium** Kegel Ber. Deut. Bot. Ges. 24:213 1906.
- P. bommeriae** R. & S.
- R. urticae** Ces.
- E. bonplandi** Speg.
- R. flava** Ces.
- S. septatum** Bon.
- T. caudata** (Ap. & Str.) Clem.
- T. uredinicola** Hoehn.
- V. elodeae** Keg.

Hyalodictyae

- Coniodictyum** Har. & Pat. Bull. Soc. Myc. Fr. 25:13 1909.
- Hyalodema** Magnus Ber. Deut. Bot. Ges. 28:379 1910; Syll. Fung. 22:1330 1913.
- Stemphyliopsis** A. L. Smith Jour. Roy. Micr. Soc. 1901:617, ill.
- C. chevalieri** H. & P.
- H. evansi** Magn.
- S. heterospora** Smith

Scolecosporae

- Cercospora** Sacc. *Michelia* 2:20 1880.
- C. persica** Sacc.

Staurospora

- Aorate** Syd. Ann. Myc. 27:84, ill. 1929.
- Lemonniera** De Wild. Ann. Soc. Belg. Micr. 18:143 1894.
- Monogrammia** Stev. Trans. Ill. Acad. Sci. 10:202, ill. 1917.
- Pedilospora** Hoehn. Sitzb. Akad. Wien 111:1047 1902.
- Prismaria** Preuss Fung. Hoyersw. n. 86 1851.
- Stephanoma** Wallr. Fl. Crypt. 2:269 1833.
- Synthetospora** Morgan Bot. Gaz. 46:192 1892; Syll. Fung. 11:608 1895.
- Titaea** Sacc. Nuov. Giorn. Ital. 8:193 1876.
- Maxillospora** Hoehn. Sitzb. Akad. Wien 123:138 1914.
- Tetracladium** De Wild. Ann. Soc. Belg. Micr. 17:35, ill. 1893.
- Trinacrium** Riess Fres. Beitr. Myk. 42 1852.
- A. costaricana** Syd.
- L. aquatica** De Wild.
- M. iniconiae** Stev.
- P. parasitans** Hoehn.
- P. alba** Preuss
- S. strigosum** Wallr.
- S. electa** Morg.
- T. callispora** Sacc.
- M. maxilliformis** (Rostr.) Hoehn.
- T. marchalianum** De Wild.
- T. subtile** Riess

Helicosporae

- Helicodendrum** Peyron. Nuov. Giorn. Ital. n. s. 25:460, ill. 1918.
- Helicodesmus** Linder Am. Jour. Bot. 12:267 1925.
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- Helicoum** Morgan. Jour. Cinc. Soc. Nat. Hist. 15:49 1892.
- H. paradoxum** Peyron.
- H. albus** Linder
- H. roseus** Lk.
- H. sessile** Morg.

Genera Incertae Sedis Vel Dubia

- Acaulium** Sopp Videns. Skrift. 1:42 1912. **A. nigrum** Sopp
Acrospira Mont. Ann. Sci. Nat. 4:8:299 1857;
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Andreaea Palm & Jochems Dept. Proef.
 Medan-Sumatra Bull. 19:19, ill. 1923;
 name later changed to *Andreaeana* because
 of *Andreaea* Ehrh. 1778. **A. deliensis** P. & J.
Aposporella Thaxt. Bot. Gaz. 69:11, ill. 1920. **A. elegans** Thaxt.
Corollium Sopp Videns. Skrift. 1:33, 98, ill.
 1912. **C. dermatophagum** Sopp
Dactylomyces Sopp Videns. Skrift. 1:35 1912. **D. thermophilus** Sopp
Diploidium Arnaud Ann. Epiphyt. 9:33 1923. **D. sweetiae** Arn.
Elaeodema Syd. Ann. Myc. 20:64 1922. **E. cinnamomi** Syd.
Gemmophora Schkorbatov Ber. Deut. Bot.
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Grallomyces Stev. Bot. Gaz. 65:245, ill. 1918. **G. portoricensis** Stev.
Helostroma Pat. Bull. Soc. Myc. Fr. 18:52,
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Heptasporium Brefeld Unters. Myk. 15:111
 1912. **H. gracile** Bref.
Hormisciopsis Sumstine Mycologia 6:32, ill.
 1914. **H. gelatinosa** Sumst.
Mauginiella Cav. Rend. Accad. Linc. 6:1:67
 1925. **M. scaettae** Cav.
Pericystis Betts Ann. Bot. 26:798, ill. 1912;
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Phacellula Syd. Ann. Myc. 25:139 1927. **P. gouaniae** Syd.
Phyllocarbon Lloyd Myc. Notes 65:1066
 1921. **P. yasudai** Lloyd
Polymorphomyces Coupin Rev. Gen. Bot.
 26:248, ill. 1914. **P. bonnieri** Coupin
Sachsia C. Bay. Ber. Deut. Bot. Ges. 12:90,
 ill. 1894. **S. albicans** Bay
Sarcinomyces Lindner Mikr. Betriebs. Ed.
 3:300 1901. **S. crustaceus** Lindn.
Sporoclema Tiesenh. Arch. Hydr. Plankt.
 7:302, ill. 1912. **S. piriforme** Tiesenh.
Vasculomyces Ashby. Bull. Dept. Agr.
 Jamaica 2:151 1913. **V. xanthosomae** Ashby

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Amerosporae

- Acremoniella** Sacc. Syll. Fung. 4:302 1886. **A. atra** (Corda) Sacc.
Acrodesmia Syd. Ann. Myc. 24:424 1926. **A. cestri** Syd.
Acrospira B. & Br. Ann. Nat. Hist. 3:7:449
 1861. **A. mirabilis** B. & Br.
Acrotheca Fkl. Symb. Myc. 380 1869. **A. caulium** Sacc.
Actinochaete Ferro Nuov. Giorn. Ital. 14:232
 1907. **A. arachnoidea** Ferro
Arthrinium Kze. Myk. Heft. 1:9 1817. **A. caricicolum** Kze. & Schm.
Camptoum Link Sp. Pl. Fung. 1:44 1824;
 Syll. Fung. 4:276 1886. **C. curvatum** (K. & S.) Lk.

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Aspergillopsis Speg. An. Mus. Nac. 3:13:434 1911.
Basisporium Molliard Bull. Soc. Myc. Fr. 18:168 1902.
Nigrospora Zimm. Cent. Bakt. 2:8:220 1902; Syll. Fung. 18:571 1906.
Phaeoconis Clem. Gen. Fung. 148 1909.
Botryotrichum Sacc. & March. Bull. Soc. Bot. Belg. 24:66 1885.
Cadophora Lagerb. & Melin Sven. Skogs. Tids. 25:263, ill. 1927.
Campotrichum Ehrenb. Silv. Myc. Berol. 11 1818.
Catenularia Grove Syll. Fung. 4:303 1886.
Cephalotrichum Berk. Outl. 344 1860.
Haplographium B. & Br. Ann. Nat. Hist. 3:3:360 1859; Syll. Fung. 4:304 1886.
Chaetopsis Grev. Scot. Crypt. Fl. 4 t. 236 1826; em. Sacc. Michelia 2:26 1881.
Monilochaetes (E. & Hals.) Harter Jour. Agr. Res. 5:791, ill. 1916.
Chalara Corda Icon. Fung. 2:9 1838.
Chalaropsis Peyron. Staz. Sper. Agr. Ital. 49:595, ill. 1916.
Chloridium Link. Obs. Myc. 1:11 1809.
Circinotrichum Nees Syst. Pilz. 19 1817.
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Constantinella Matr. Rech. Dev. Muced. 1892:92, ill.
Cordella Speg. An. Soc. Arg. 22:210 1886.
Cystodendrum Bub. Ann. Myc. 12:212, ill. 1914.
Cystophora Rabh. Krypt. Fl. Dent. 75 1844.
Dematium Pers. Tent. Disp. 41 1797.
Dictyochaeta Speg. Physis 7:18, ill. 1923.
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Echinobotryum Corda Anleit. 10 1842.
Ellisiella Sacc. Michelia 2:26 1881.
Eriomene Sacc. Syll. Fung. 4:326 1886, as subg.
Fuckelina Sacc. Nuov. Giorn. Bot. Ital. 7:326 1875.
Fusella Sacc. Syll. Fung. 4:246 1886.
Glenspora B. & C. Grevillea 4:161 1876.
P. citri F. & C.
A. nigra (van Tiegh.) Speg.
B. gallarum Moll.
N. panici Zimm.
P. panici (Zimm.) Clem.
B. piluliferum S. & M.
C. fastigiata L. & M.
C. unicolor Ehrenb.
C. simplex Grove
C. curtum Berk.
H. delicatum B. & Br.
C. grisea (Ehrenb.) Sacc.
M. infuscans (E. & H.) Hart.
C. fusidioides Corda
C. thielavioides Peyron.
C. viride Lk.
C. maculiforme Nees
C. caudigerus Hoehn.
C. fecundissimum S. & M.
C. rhytmatis Bub.
C. lignicola Hoehn.
C. apiosporis Sacc.
C. cristata Matr.
C. spinulosa Speg.
C. dryophilum (Pass.) Bub.
C. craterioides Rabh.
C. hiepidulum (Pers.) Fr.
D. fuegiana Speg.
D. ampullifera Boul.
E. atrum Corda
E. caudatum (Pk.) Sacc.
E. ciliata (Corda) Sacc.
F. microspora Sacc.
F. patellata (Bon.) Sacc.
G. curtisi B. & C.

- Gliomastix* Gueguen Bull. Soc. Myc. Fr. 21:240, ill. 1905.
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- Gonatorhodum* Corda Anleit. 48 1842.
- Gongromeriza* Preuss Linnaea 24:106 1851.
- Goniosporium* Link Sp. Pl. Fung. 1:45 1824;
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- Gonytrichum* Nees Act. Acad. Leop. 9:244, ill. 1818.
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- Heterobotrys* Sacc. Michelia 2:21 1881.
- Hormiactella* Sacc. Syll. Fung. 4:311 1886.
- Hormiscium* Kze. Myk. Heft. 1:12 1817.
- Hormodendrum* Bon. Bot. Zeit. 11:286 1853;
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- Myxotrichella* Sacc. Syll. Fung. 10:593 1892;
14:57 1899.
- Oedemium* Link Sp. Pl. Fung. 1:42 1824.
- Pachytrichum* Syd. Ann. Myc. 23:420, ill. 1925.
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- Periconiella* Sacc. Misc. Myc. 2:17 1884.
- Peziotrichum* (Sacc.) Lind. Syll. Fung. 11:614 1895, as subg.; Lind. Nat. Pflanzenf. 1:1:467 1900.
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- Pirostomella* Sacc. Ann. Myc. 12:308 1914;
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- G. fuscum* Sacc.
- G. speciosum* Corda
- G. claviformis* Preuss
- G. puccinoides* (K. & S.) Lk.
- G. caesium* Nees
- G. ammonis* Corda
- H. thalictri* Eriks.
- H. sarcophilum* Thaxt.
- H. obscurum* (Corda) Sacc.
- H. stellata* Vuill.
- H. paradoxa* Sacc.
- H. fusca* (Fr.) Sacc.
- H. altum* Ehrenb.
- H. olivaceum* (Corda) Bon.
- M. aterrима* Hoehn.
- L. libyca* S. & T.
- L. lundbergi* L. & M.
- M. glauca* (Lk.) Pers.
- M. fusca* (Corda) Sacc.
- M. miconiae* Stev.
- M. saccharicola* Speg.
- M. sphaerocephala* B. & Br.
- M. spelaea* Sacc.
- O. atrum* Lk.
- P. guazumae* Syd.
- P. pycnospora* Fres.
- P. velutina* (Wint.) Sacc.
- P. lachnella* (Sacc.) Lind.
- P. verrucosa* Medlar
- P. parasitica* Grove
- P. raimundi* Sacc.
- P. tubularis* Sorok.
- R. castaneae* (Bain.) Peyron.
- R. coprogenum* S. & M.

- Rhopalocystis* Grove Jour. Econ. Biol. 6:40
1911.
- Sarcopodium* Ehrenb. Silv. Myc. Berol. 12, 23
1818.
- Scopularia* Preuss Linnaea 24:133 1851.
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- Stachylidium* Link. Obs. Myc. 1:13 1809; em.
Sacc. *Michelia* 2:27 1881.
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1853.
- Streptothrix* Corda Anleit. 43 1842.
- Synsporium* Preuss Linnaea 24:121 1851; cf.
Hoehn. Frag. Myk. 789. 1912.
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- Torula* Pers. Syn. Fung. 693 1801; em. Sacc.
Michelia 2:21 1881.
- Torulina* Sacc. & D. Sacc. Syll. Fung. 18:566
1906.
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3:12 1903; not Berl. 1894.
- Trichobotrys* Penz. & Sacc. *Malpighia* 15:245
1901.
- Trichosporium* Fr. Sum. Veg. Scan. 492 1849.
- Urophiala* Vuill. Bull. Soc. Nancy 3:11:169,
ill. 1910.
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- Virgaria* Nees Syst. Pilz. 54 1817.
- Dichotomella* Sacc. Ann. Myc. 12:312 1914.
- Zygodsmella* Fragoso Bol. Espan. Hist. Nat.
17:260, ill. 1917.
- Zygodemus* Corda Icon. Fung. 1:11 1837.
- Zygosporium* Mont. Ann. Sci. Nat. 2:17:120
1842.
- R. nigra* (van Tiegh.) Grove
- S. fuscum* (Corda) Sacc.
- S. venusta* Preuss
- S. terrestre* Oud.
- S. repens* E. & B.
- S. atra* Corda
- S. bicolor* Lk.
- S. malvarum* Br. & Casp.
- S. fusca* Corda
- S. biguttatum* Preuss
- T. ethacetica* Went.
- T. herbarum* Lk.
- T. serotinae* (Oud.) S. & D. S.
- T. serotinae* Oud.
- T. pannosa* P. & S.
- T. fuscum* (Lk.) Sacc.
- U. mycophila* Vuill.
- U. oryzae* Bref.
- V. trifidum* Preuss
- V. nigra* Nees
- D. areolata* Sacc.
- Z. casaresi* Frag.
- Z. fuscus* Corda
- Z. oescheoides* Mont.

Didymosporae

- Arthrobotryella* Sibil. Bol. Staz. Pat. Rome
8:448, ill. 1928.
- Asperisporium* Maubl. Lavoura; Bol. Soc.
Agr. Rio Jan. 16:212 1913.
- Beltrania* Penz. Nuov. Giorn. Ital. 14:72 1882.
- Bispora* Corda. Icon. Fung. 1:9 1837.
- Cephalomyces* Bain. Bull. Soc. Myc. Fr.
23:109 1907.
- Cladosporium* Link Sp. Pl. Fung. 1:39 1824.
- Cladotrichum* Corda Sturm Deut. Crypt. Fl.
3:3:39, ill. 1831.
- Cordana* Preuss Linnaea 24:129 1851.
- Cycloconium* Cast. Cat. Pl. Marseilles 220, ill.
1845.
- A. hernica* Sibil.
- A. caricae* (Speg.) Maubl.
- B. rhombica* Penz.
- B. monilioides* Corda
- C. nigricans* Bain.
- C. herbarum* (Pers.) Lk.
- C. polysporum* Corda
- C. pauciseptata* Preuss
- C. claeaginum* Cast.

- Dicoccum* Corda Sturm Deut. Crypt. Fl. 3:2:117, ill. 1829.
- Diplococcium* Grove Jour. Bot. 23:167 1885.
- Epochnium* Link Obs. Myc. 1:16 1809.
- Fusicladium* Bon. Handb. Myk. 80 1851; em. Sacc. *Michelia* 2:27 1881.
- Basiascum* Cav. Att. Ist. Pavia 2:1:433 1888; Syll. Fung. 10:474 1892.
- Didymariopsis* Speg. An. Mus. Nac. 3:13:424 1911; Syll. Fung. 22:1373 1913.
- Fusicladiella* Hoehn. Ber. Deut. Bot. Ges. 37:155 1919.
- Napicladium* Thuem. Hedwigia 14:3 1875; Syll. Fung. 4:481 1886.
- Passalora* Fr. & Mont. Ann. Sci. Nat. 2:6:31 1836; Syll. Fung. 4:344 1886.
- Gonyella* Syd. Ann. Myc. 17:44 1919.
- Arthrobotryum* Rostrup Dan. Bot. Arch. 2:46 1916; not Cesati 1854.
- Hadronema* Syd. Ann. Myc. 7:172 1909.
- Muchmorina* Sacc. Ann. Myc. 4:277 1906.
- Polythrincium* Kze. & Schm. Myk. Heft. 1:13 1817.
- Pseudobeltrania* Henn. Hedwigia 41:310 1902.
- Scolecobasis* Abbott Mycologia 19:30, ill. 1927; for *Scolecobasidium*.
- Scolecotrichum* Kze. & Schm. Myk. Heft. 1:10 1817.
- Trichocladium* Harz Hyphom. 38 1871.
- D. minutissimum* Corda
- D. spicatum* Grove
- E. monilioides* Lk.
- F. dendriticum* (Wallr.) Fkl.
- B. eriobotryae* Cav.
- D. cuphaeicola* Speg.
- F. aronici* (Sacc.) Hoehn.
- N. soraueri* Thuem.
- P. bacilligera* F. & M.
- G. typica* (Rostr.) Syd.
- A. typicum* Rostr.
- H. orbiculare* Syd.
- M. portoricensis* Sacc.
- P. trifolii* Kze.
- P. cedrelae* Henn.
- S. terrea* Abbott
- S. virescens* Kze.
- H. asperum* Harz

Phragmosporae

- Acrothecium* Sacc. Syll. Fung. 4:483 1886.
- Pleurothecium* Hoehn. Ber. Deut. Bot. Ges. 37:154 1919.
- Sirospora* Mang. & Vinc. Bull. Soc. Myc. Fr. 36:96, ill. 1920; cf. Peyron. Ib.
- Atractina* Hoehn. Hedwigia 43:298 1904.
- Blodgettia* Wright Trans. Irish Acad. 28:25 1881.
- Brachysporium* Sacc. *Michelia* 2:28 1881.
- Camarosporium* Harkn. Bull. Calif. Acad. Sci. 1:37 1884.
- Ceratophorum* Sacc. *Michelia* 2:22 1881.
- Cercosporidium* Earle *Muhlenbergia* 1:16 1901.
- Camptomeris* Syd. Ann. Myc. 25:141 1927.
- Chaetotrichum* Syd. Ann. Myc. 25:150, ill. 1927.
- Chiropodium* Syd. Ann. Myc. 13:42 1915.
- Clasterosporium* Schw. Trans. Am. Phil. Soc. n. s. 4:300 1834; em. Sacc. *Michelia* 2:22 1881.
- A. bulbosum* Sacc.
- P. recurvatum* (Morg.) Hoehn.
- S. castaneae* M. & V.
- A. biseptata* Hoehn.
- B. borneti* Wright
- B. obovatum* (Berk.) Sacc.
- C. antennatum* Harkn.
- C. helicosporum* Sacc.
- C. helleri* Earle
- C. calliandrae* Syd.
- C. solani* Syd.
- C. flagellatum* Syd.
- C. caricinum* Schw.

- Napicladium* Sacc. Syll. Fung. 4:482 1886.
Phaneroconyelia Hoehn. Ber. Deut. Bot. Ges. 37:157 1919.
Septoideum Arnaud Ann. Epiphyt. 7:106 1921.
Dendryphiella Bub. & Ran. Ann. Myc. 12:417 1914.
Dendryphium Wallr. Fl. Crypt. 2:300 1833.
Ormathoidium Syd. Ann. Myc. 26:138 1928.
Drepanospora B. & C. Grevillea 3:105 1875; cf. Hoehn. Frag. Myk. 566. 1910.
Endophragma Duvern. & Maire Bull. Soc. Myc. Fr. 36:88, ill. 1920.
Eriomenella Peyron. Bull. Soc. Myc. Fr. 35:180, ill. 1919.
Excioconis Plunk. Bishop Mus. Bull. 19:156, ill. 1925; for *Excioconidium*.
Fusariella Sacc. Misc. Myc. 1:29 1884.
Helminthosporium Link Berl. Mag. 3:10 1809; em. Sacc. Michelia 2:641 1881.
Heterosporium Klotzsch Herb. Myc. 1:67 1832.
Hyphosoma Syd. Ann. Myc. 22:315 1924.
Jainesia Frag. & Cif. Bol. Espan. Hist. Nat. 25:514 1925.
Ophiotrichum Fr. Sum. Veg. Scan. 503 1849.
Peyronelia Cif. & Frag. Bol. Espan. Hist. Nat. 27:334, ill. 1927.
Polydesmus Mont. Ann. Sci. Nat. 3:4:365 1845.
Rhynchomyces Willk. Mikr. Feind. Wald. 87, ill. 1866; not Sacc. 1885.
Septonema Corda Icon. Fung. 1:9 1837.
Pseudocercospora Speg. An. Mus. Nac. 3:13:437 1911.
Spondylocladium Mart. Fl. Crypt. Erlang. 355 1817.
Sporoschisma B. & Br. Gard. Chron. 1847:540.
Stemphyliomma Sacc. & Trav. Syll. Fung. 20:886 1911; 22:1394 1913.
Stemphyliopsis Speg. Rev. Fac. Agron. 6:193 1910; not A. L. Smith 1901; Syll. Fung. 22:1394 1913.
Stigma Sacc. Michelia 2:22 1881.
Urosporium Fingerh. Linnaea 10:231 1836.
- N. *brunaudi* Sacc.
 P. *fungorum* (Fr.) Hoehn.
 S. *clusiaceae* Arn.
 D. *interseminata* (B. & R.) Bub. & Ran.
 D. *comosum* Wallr.
 O. *styracis* Syd.
 D. *pannosa* B. & C.
 E. *mirabilis* D. & M.
 E. *tortuosa* (Corda) Peyron.
 E. *cibotti* Plunk.
 F. *viridi-atra* Sacc.
 H. *curvatum* Corda
 H. *ornithogali* Klotzsch
 H. *hypoxyloides* Syd.
 J. *meliocola* F. & C.
 O. *phlomidis* Fr.
 P. *sirodesmis* C. & F.
 P. *elegans* D. & M.
 R. *violaceus* Willk.
 S. *secedens* Corda
 P. *spora-vitis* (Lev.) Speg.
 S. *fumosum* Mart.
 S. *mirabile* B. & Br.
 S. *valparadis* (Speg.) S. & T.
 S. *valparadis* Speg.
 S. *platani* (Fkl.) Sacc.
 U. *curvatum* Fingerh.

Dictyosporae

- Alternaria* Nees Syst. Pilz. 2:72 1817.
Rhopalidium Mont. & Fr. Ann. Sci. Nat. 2:6:30 1836; cf. Hoehn. Syst. Fung. Imp. 361 1923.
Coccosporium Corda Sturm Deut. Crypt. Fl. 3:3:49, ill. 1831.
- A. *tenuis* Nees
 R. *brassicae* M. & Fr.
 C. *maculiforme* Corda

- Coleodictys** Charles Phytopath. 19:1051, ill. 1929; for *Coleodictyospora*.
- Coniothecium** Corda Icon. Fung. 1:2 1837.
- Conotheciella** Speg. Physis 4:295 1919.
- Dactylosporium** Harz. Hyphom. 44 1871.
- Dictyosporium** Corda Weitw. Beitr. Nat. 1:87 1836; Icon. Fung. 2:6 1838.
- Fumago** Pers. Myc. Eur. 1:9 1822; cf. Speg. Physis 4:292 1918.
- Caldariomyces** Woronich. Ann. Myc. 24:264 1926.
- Macrosporium** Fr. Syst. Myc. 3:373 1832.
- Fusicladiopsis** Maire Bull. Soc. Bot. Fr. 53:187 1906.
- Mystrosporium** Corda Icon. Fung. 1:12 1837; Syll. Fung. 4:539 1886.
- Sirosporium** Bub. & Sereb. Hedwigia 52:273, ill. 1912.
- Thyospora** Teh. & Dan. Phytopath. 15:718, ill. 1925.
- Oncopodium** Sacc. Ann. Myc. 2:19 1904.
- Sarcinella** Sacc. Fung. Ital. t. 126 1877; Michelia 2:31 1881.
- Septosporium** Corda Sturm Deut. Crypt. Fl. 3:3:33, ill. 1831.
- Sirodesmium** DeN. Mem. Accad. Sci. Torino 10:347 1849.
- Spira** Corda Icon. Fung. 1:9 1837.
- Sporodesmium** Link Sp. Pl. 2:120 1825.
- Stemphylium** Wallr. Fl. Crypt. 2:300 1833.
- Stigmella** Lev. Demid. Voy. 2:111, ill. 1842.
- Tetracoccosporis** Szabo Hedwigia 44:77, ill. 1905; for *Tetracoccosporium*.
- Tetraploa** B. & Br. Ann. Nat. Hist. 2:5:459 1850.
- Trichaegum** Corda Icon. Fung. 1:15 1837.
- Xenosporella** Hoehn. Cent. Bakt. 2:60:17 1923.
- Xenosporium** Penz. & Sacc. Malpighia 15:248 1901.
- C. cubensis** Charles
- C. effusum** Corda
- C. phyllogena** (Desm.) Speg.
- D. macropus** (Corda) Harz
- D. elegans** Corda
- F. vagans** Pers.
- C. fumago** Woronich.
- F. sarcinula** Berk.
- F. conviva** Maire
- M. stemphylium** Corda
- S. antennaeforme** B. & S.
- T. sarciniforme** T. & D.
- O. antoniae** S. & D. S.
- S. heterospora** Sacc.
- S. atrum** Corda
- S. granulosum** DeN.
- S. toruloides** Corda
- S. cellulolum** Sacc.
- S. botryosum** Wallr.
- S. dryina** (Corda) Lev.
- T. paxiana** Szabo
- T. aristata** B. & Br.
- T. cladosporis** Corda
- X. pleurococca** Hoehn.
- X. mirabile** P. & S.

Scolecosporae

- Casaresia** Frag. Bol. Espan. Hist. Nat. 20:112, ill. 1920.
- Cercospora** Fres. Beitr. Myk. 90 1863.
- Cercosporia** Petr. Ann. Myc. 23:69 1925; for
- Cercosporina** Speg. An. Mus. Nac. 3:13:424 1911; Syll. Fung. 22:1432 1913.
- Cercosporiopsis** Miura Fl. Manchur. 3:527 1928.
- Corynespora** Guessow Zeits. Pflanzenk. 16:10, ill. 1906; Syll. Fung. 22:1435 1913.
- C. sphagnum** Frag.
- C. apii** Fres.
- C. chamaesycae** (S. & D.) Petr.
- C. asparagicola** Speg.
- C. menispermi** (E. & H.) Miura
- C. mazei** Guessow

- Septoriopsis* Stev. & Dalb. *Mycologia* 11:4, ill. 1919. *S. chamaesyceae* S. & D.
Sporhelminthium Speg. *Physis* 4:292 1918. *S. anomalum* Speg.

Staurosporae

- Ceratosporium* Schw. *Trans. Am. Phil. Soc.* n. s. 4:300, ill. 1834. *C. fuscescens* Schw.
Desmidiospora Thaxt. *Bot. Gaz.* 16:203 1891. *D. myrmecophila* Thaxt.
Hirundinaria Ces. *Hedwigia* 1:104, ill. 1856. *H. mespili* Ces.
Teratosperma Syd. *Ann. Myc.* 7:172 1909. *T. singulare* Syd.
Triporsporium Corda *Icon. Fung.* 1:16 1837. *T. elegans* Corda
Ceratosporella Hoehn. *Ber. Deut. Bot. Ges.* 37:155 1919. *C. elegans* (Morg.) Hoehn.
Tripospermum Speg. *Physis* 4:295 1918. *T. acerinum* (Syd.) Speg.

Helicosporae

- Helicoma* Corda *Icon. Fung.* 1:15, ill. 1837. *H. muelleri* Corda
Helicopsis Karst. *Rev. Myc.* 11:96 1889. *H. olivaceus* Karst.
Helicosporium Nees *Syst. Pilz.* 63 1817. *H. vegetum* Nees

Genera Incertae Sedis Vel Dubia

- Harpagomyces* Wilcz. *Kosmos* 36:314, ill. 1911. *H. lomnicki* Wilcz.
Hormonema Lagerb. & Melin *Sven. Skogs. Tids.* 25:233, ill. 1927. *H. dematioides* L. & M.
Isthmospora Stev. *Bot. Gaz.* 65:244, ill. 1918. *I. spinosa* Stev.
Leandria Rangel *Bol. Agr. S. P.* 16:324, ill. 1915. *L. momordicae* Rang.
Muiaria Thaxt. *Bot. Gaz.* 58:241, ill. 1914. *M. gracilis* Thaxt.
Muiogone Thaxt. *Bot. Gaz.* 58:239, ill. 1914. *M. chromopteri* Thaxt.
Myceloderma Ducomet *Rech. Dev. Champ.* 199, ill. 1907; *Syll. Fung.* 22:1372 1913. *M. cuticulare* Ducom.
Mycobacillaria Naumov *Mat. Mik. Fit.* 1:26, ill. 1915. *M. simplex* Naumov
Penomyces Giard *Comp. Rend.* 112:1519 1891; *Syll. Fung.* 22:1372 1913. *P. telarius* Giard
Phaeharziella Loubière *Rech. Muced. Cas.* 52, ill. 1924. *P. heterospora* Loub.
Pseudofumago Br. & Far. *Att. Inst. Pavia* 2:10:31, ill. 1906; *Syll. Fung.* 22:1379 1913. *P. citri* B. & F.
Spirospora Mang. & Vinc. *Bull. Soc. Myc. Fr.* 36:96, ill. 1920. *S. castaneae* M. & V.
Wardomyces Brooks & Hansford *Trans. Brit. Myc. Soc.* 8:137 1923. *W. anomala* B. & H.

TUBERCULARIACEAE

Mucedineae

Amerosporae

- Aegerita* Pers. *Tent. Disp.* 684 1797. *A. candida* Pers.
Aegeritopsis Hoehn. *Ann. Myc.* 1:532 1903. *A. nulliporoides* Hoehn.
Amphichaetella Hoehn. *Sitzb. Akad. Wien* 125:92 1916. *A. echinata* (Kleb.) Hoehn.

- Amphichaete* Klebahn Myc. Cent. 4:17, ill. 1914; not McAlpine 1904.
- Beniowskia* Rac. Par. Alg. Pilz. Java 2:37 1900.
- Blennoria* Fr. Syst. Myc. 3:480 1832.
- Cephalodochium* Bon. Handb. Myk. 135 1851.
- Chaetospermum* Sacc. Syll. Fung. 10:706 1892.
- Coccospora* Wallr. Fl. Crypt. 2:176 1833.
- Allescheriella* Henn. Hedwigia 36:244 1897; Syll. Fung. 14:1075 1899.
- Bactridiopsis* Henn. Hedwigia 43:397 1904; Syll. Fung. 18:662 1906.
- Sphaerosporium* Schw. Syn. Am. Fung. 303; 1834; Syll. Fung. 4:664 1886.
- Collodochium* Hoehn. Sitzb. Akad. Wien 111:1029 1902.
- Cylindrocolla* Bon. Handb. Myk. 149 1851.
- Dacrymycella* Bizz. Att. Ist. Venet. 6:3:308 1885.
- Dacryodochium* Karst. Hedwigia 35:47 1896.
- Dendrodochium* Bon. Handb. Myk. 135 1851.
- Patouillardia* Roum. Rev. Myc. 7:177 1885; Syll. Fung. 4:677 1886; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Endoconidium* Prill. & Delacr. Bull. Soc. Myc. Fr. 7:116 1891.
- Fusicolla* Bon. Handb. Myk. 150 1851.
- Leptosporium* Sacc. Syll. Fung. 4:721 1886, as subg.; Hoehn. Syst. Fung. Imp. n. 436 1923.
- Granularia* Sacc. Michelia 2:648 1882.
- Guelichia* Speg. An. Soc. Arg. 22:220 1886.
- Haplariella* Syd. Ann. Myc. 6:497 1908.
- Haplariopsis* Henn. Hedwigia 48:114 1908; not Oud. 1903; cf. Hoehn. Syst. Fung. Imp. 359 1923.
- Hymenella* Fr. Syst. Myc. 2:234 1822.
- Hymenula* Fr. Syst. Myc. 2:233 1822.
- Illosporium* Mart. Fl. Crypt. Erl. 325 1817.
- Myxonema* Corda Icon. Fung. 1:10 1837; Syll. Fung. 10:714 1892; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Lachnodochium* March. Bull. Soc. Bot. Belg. 34:144 1895.
- Leucodochium* Syd. Ann. Myc. 15:266 1917.
- Menoidea* Mang. & Har. Bull. Soc. Myc. Fr. 23:67, ill. 1907.
- Microdochium* Syd. Ann. Myc. 22:267, ill. 1924.
- Necator* Masee Kew Bull. 1898:119.
- Neottiosporis* Hoehn. Syst. Fung. Imp. 345 1923; for *Neottiosporella*.
- A. *echinata* Kleb.
- B. *graminis* Rac.
- B. *buxi* Fr.
- C. *album* Bon.
- C. *tubercularis* Sacc.
- C. *aurantiaca* Wallr.
- A. *uredinoides* Henn.
- B. *ulei* Henn.
- S. *lignatile* Schw.
- C. *atroviole* Hoehn.
- C. *urticae* (Pers.) Bon.
- D. *fertilissima* Bizz.
- D. *fluxile* Karst.
- D. *aurantiacum* Bon.
- P. *lichenoides* Roum.
- E. *temulentum* P. & D.
- F. *betae* Bon.
- L. *salmonicolor* B. & C.
- G. *euotioides* S. & E.
- G. *paradoxa* Speg.
- H. *cordiae* (Henn.) Syd.
- H. *cordiae* Henn.
- H. *arundinis* Fr.
- H. *ciliata* Fr.
- I. *roseum* Mart.
- M. *assimile* Corda
- L. *candidum* March.
- L. *pipturi* Syd.
- M. *abietis* M. & F.
- M. *phragmitis* Syd.
- N. *decretus* Mass.

(no species given)

- Periopsis* Maire Ann. Myc. 11:357, ill. 1913.
Pleurocolla Petr. Ann. Myc. 22:15 1924.
Psilonia Fr. Syst. Orb. Veg. 1:187 1825;
 Syst. Myc. 3:450 1831; Syll. Fung. 4:685
 1886.
Ranojevicia Bub. Ann. Myc. 8:400 1910.
Sigmatomyces Sacc. & Syd. Ann. Myc. 11:319
 1913.
Sirodochiella Hoehn. Mitt. Bot. Hochs. Wien
 2:67 1925.
Sphacelia Lev. Mem. Soc. Linn. 5:578 1827.
Myrioconium Syd. Ann. Myc. 10:449, ill.
 1912; cf. Ferd. & Wing. Ann. Myc. 11:21
 1913.
Sphaeridium Fres. Beitr. Myk. 46 1852.
Sphaerocolla Karst. Hedwigia 31:294 1892.
Thozetia Berk. & Muell. Jour. Linn. Soc.
 18:388 1881.
Thysanopyxis Rabh. Abh. Nat. Ges. Halle
 8:136 1864.
Trichofusarium Bub. Bull. Herb. Boiss.
 2:6:488 1906.
Tubercularia Tode Fung. Meckl. 1:18 1790.
Tubercularis Hoehn. Sitzb. Akad. Wien
 118:421 1909; for *Tuberculariopsis*.
Tuberculina Sacc. Michelia 2:34 1880.
Tuberculis Hoehn. Zeit. Gär. 5:209 1914; for
Tuberculariella.
Verticillis Bub. Ann. Myc. 12:220, ill. 1914;
 for *Verticillidochium tubercularioides*.
Volutella Tode Fung. Meckl. 1:28 1790; em.
 Sacc. Michelia 2:35 1880.
Volutellaria Sacc. Michelia 2:580 1882, as
 subg.; Syll. Fung. 4:682 1886.
Volutina Penz. & Sacc. Malpighia 15:257
 1901.
- P. helicochaeta* Maire
P. tiliae Petr.

P. gilva Fr.
R. vagans Ran. & Bub.

S. bakeri S. & S.

S. rhodella Hoehn.
S. segetum Lev.

M. scirpi Syd.
S. vitellinum Fres.
S. aurantiaca Karst.

T. nivea Berk.

T. pulchella Ces.

T. rusci (Sacc.) Bub.
T. vulgaris Tode

T. anomala Hoehn.
T. persicina (Ditm.) Sacc.

T. sanguinea (Fkl.) Hoehn.

V. tuberculis (Speg.) Bub.

V. ciliata (A. & S.) Fr.

V. acaroides Sacc.

V. concentrica P. & S.

Didymosporae

- Cosmariospora* Sacc. Michelia 2:44 1880.
Dithozetia Rangel Bol. Agr. S. P. 16:325, ill.
 1915; for *Didymothozetia*.
Endodesmia B. & Br. Ann. Nat. Hist. 4:7:432
 1874.
Fusisporella Speg. An. Mus. Nac. 3:13:454
 1911.
Gymnodochium Mass. & Salm. Ann. Bot.
 16:89 1902.
Leptotrichum Corda Icon. Fung. 5:51 1842.
Patouillardella Speg. Bol. Acad. Cordoba
 11:381 1889.
Auerswaldiopsis Henn. Hedwigia 43:143
 1904.
- C. bizzozzeriana* Sacc.

D. mimosensis Rangel

E. glauca B. & Br.

F. bufonis Speg.

G. fimicolum M. & S.
L. glaucum Corda

P. guaranítica Speg.

A. quercicola Henn.

Phragmosporae

- Bactridium* Kze. Myk. Heft. 1:5 1817.
Bactridiopsis Frag. & Cif. Bol. Soc. Nat. Hist. Madrid 27:330, ill. 1927; not Henn. 1904.
Discocolla Prill. & Delacr. Bull. Soc. Myc. Fr. 10:86 1894.
Fusarium Link Berl. Mag. 3:10 1809.
Discofusarium Petch Trans. Brit. Myc. Soc. 7:164 1921.
Microcera Desm. Ann. Sci. Nat. 3:10:359 1848.
Phragmodochium Hoehn. Bull. Bot. Buitenz. 3:6:6 1924.
Pionnotes Fr. Sum. Veg. Scan. 481 1849.
Pseudomicrocera Petch Trans. Brit. Myc. Soc. 7:164 1921.
Rachisia Lindner Deut. Essigind. 17:467, ill. 1913.
Septorella Allesch. Hedwigia 36:241 1897.
Heliscus Sacc. Michelia 2:35 1880.
Volutellopsis Speg. Rev. Fac. Agron. 6:197 1910.
Xenogloea Syd. Ann. Myc. 17:44 1919.
Kriegeria Bres. Rev. Myc. 13:14 1891; not Winter 1878.
- B. flavum* Kze. & Schm.
B. crescentiae F. & C.
D. pirina P. & D.
F. roseum Lk.
D. tasmaniense (McAlp.) Petch
M. coccophila Desm.
P. modestum Hoehn.
P. capitata (Schw.) Fr.
P. henningsi Petch
R. spiralis Lindner
S. salaciae Allesch.
H. lugdunensis S. & T.
V. chilensis Speg.
X. eriophori (Bres.) Syd.
K. eriophori Bres.

Dictyosporae

- Sarcinodochium* Hoehn. Oest. Bot. Zeits. 55:15 1905.
Sporocystis Morgan Jour. Myc. 8:169 1902.
- S. heterosporium* Hoehn.
S. condita Morg.

Scolecosporae

- Kmetia* Bres. & Sacc. Syll. Fung. 16:1158 1902.
Linodochium Hoehn. Sitzb. Akad. Wien 118:1239 1909.
- K. exigua* B. & S.
L. hyalinum (Lib.) Hoehn.

Staurosporae

- Amallospora* Penz. Malpighia 11:461 1897.
Araneomyces Hoehn. Sitzb. Akad. Wien 118:894 1909.
Dicranidium Harkn. Bull. Calif. Acad. Sci. 1:163 1885.
Tetracium Henn. Hedwigia 41:116 1902.
Triglyphium Fres. Beitr. Myk. 44 1852.
- A. dacrydia* P.
A. acariferus Hoehn.
D. fragile Harkn.
T. aurantii Henn.
T. album Fres.

Helicosporae

- Delortia* Pat. & Gaill. Bull. Soc. Myc. Fr. 4:43:1888; cf. Killermann 108.
Drepanoconis Schroet. & Henn. Hedwigia 35:211 1896.
Hobsonia Berk. Ann. Bot. 5:509, ill. 1891.
- D. palmicola* Pat.
D. larvaeformis Speg.
H. gigaspora Berk.

- Lituarina* Riess Bot. Zeit. 11:136 1853. *L. stigmatea* Riess
Troposporium Harkn. Bull. Calif. Acad. Sci. 1:39 1884. *T. album* Harkn.

Dematiaceae

Amerosporae

- Actinodochium* Syd. Ann. Myc. 25:146, ill. 1927. *A. concinnum* Syd.
Agyriella Sacc. Misc. Myc. 1:20 1884. *A. nitida* (Lib.) Sacc.
Amerosporis Hoehn. Syst. Fung. Imp. 348 (no species given)
 1923; for *Amerosporiella*.
Arthrinium Kze. Myk. Heft. 1:9 1817; cf. *A. caricolum* Kze. & Schm.
 Hoehn. Syst. Fung. Imp. pp. 358-62 1923. for the following synonyms. *C. curvatum* (K. & S.) Lk.
Camptoum Link Sp. Pl. Fung. 1:44 1824.
Goniosporium Link Sp. Pl. Fung. 1:45 1824. *G. puccinioides* (K. & S.) Lk.
Astrodochium Ell. & Ev. Am. Nat. 31:430 1897. *A. coloradense* E. & E.
Bonplandiella Speg. An. Soc. Arg. 22:222 1886. *B. guaranitica* Speg.
Chaetosira Clem.; for *C. javanica* (Koord.) Clem.
Wiesneriomyces Koord. Verh. Akad. Amsterdam 2:13:246, ill. 1907.
Chaetostroma Corda Sturm Deut. Crypt. Fl. 2:122 1829. *W. javanicus* Koord.
Epicoccum Link Obs. Myc. 2:32 1816. *C. atrum* Sacc.
Exosporina Oud. Kon. Akad. Amsterdam 6:498 1904. *E. nigrum* Lk.
Hadrotrichum Fkl. Symb. Myc. 221 1869; *E. laricis* Oud.
 Hoehn. Syst. Fung. Imp. 349 1923. *H. phragmitis* Fkl.
Microbasidium Bub. & Ran. Ann. Myc. 12:415, ill. 1914; cf. Hoehn. Syst. Fung. Imp. 360 1923.
Hymenobactrum Sacc. Syll. Fung. 4:747 1886, as subg.; Hoehn. Syst. Fung. Imp. 342 1923. *M. sorghi* (Passer.) Bub. & Ran.
Mapea Pat. Bull. Soc. Myc. Fr. 22:46 1906. *H. desmazieri* (Cast.) Sacc.
Melanobasis Maubl. Bull. Soc. Myc. Fr. 22:69 1906; for *Melanobasidium*. *M. radiata* Pat.
Melanodiscus Hoehn. Ber. Deut. Bot. Ges. 36:309 1918. *M. mali* Maubl.
Myrotheciella Speg. An. Mus. Nac. 3:13:460 1911. *M. nervisequius* Hoehn.
Myrothecium Tode Fung. Meckl. 1:25 1790. *M. catenuligera* Speg.
Exotrichum Syd. Ann. Myc. 12:571 1914; cf. Hoehn. Mitt. Bot. Hochs. Wien 2:95 1925. *M. roridum* Tode
Papularia Fr. Syst. Orb. Veg. 1:195 1825. *E. leucomelas* Syd.
Periola Fr. Syst. Myc. 2:266 1822; cf. Hoehn. Mitt. Bot. Hochs. Wien 3:1 1926. *P. fagi* Fr.
Gliocladochium Hoehn. Mitt. Bot. Hochs. Wien 3:4 1926. *P. tomentosa* Fr.
G. tomentosum (Fr.) Hoehn.

- Sclerococcum* Fr. Syst. Orb. Veg. 1:172 1825. *S. sphaerale* Fr.
Sclerodiscus Pat. Jour. de Bot. 4:66 1890. *S. nitens* Pat.
Sphaeromyces Mont. Ann. Sci. Nat. 3:4:365
 1845. *S. algeriensis* D. & M.
Spilodochium Syd. Ann. Myc. 25:158 1927. *S. vernoniae* Syd.
Spilomium Nyl. Prod. Lich. Gall. 91 1856. *S. siliceum* (Fee) Nyl.
Strumella Sacc. Michelia 2:36 1880. *S. olivatra* Sacc.
Strumellopsis Hoehn. Sitzb. Akad. Wien
 118:896 1909. *S. annularis* (Rac.) Hoehn.
Triplicaria Karst. Hedwigia 28:195 1889. *T. hypoxyloides* Karst.
Xiphomyces Syd. Ann. Myc. 14:374 1916. *X. sacchari* Syd.

Didymosporae

- Anomomyces* Hoehn. Ber. Bot. Deut. Ges.
 37:153 1919; Mitt. Bot. Hochs. Wien 5:90
 1928. *A. arbuticolus* (Sow.) Hoehn.
Epiclinium Fr. Sum. Veg. Scan. 475 1849. *E. pezizoideum* (Schw.) Fr.
Erysiphopsis Speg. An Mus. Nac. 20:462
 1910. *E. myrothecis* Speg.
Pucciniopsis Speg. An. Soc. Arg. 26:2:74
 1888. *P. guaranitica* Speg.
Trichodochium Syd. Ann. Myc. 25:159 1927. *T. disseminatum* Syd.

Phragmosporae

- Acrotheciella* Koord. Verh. Akad. Amsterdam
 2:13:250, ill. 1907. *A. javanica* Koord.
Ciliofusa Rostr. Bot. Tidskr. 18:77 1892; for
 Ciliofusarium. *C. umbrosa* Rostr.
Cryptocoryneum Fkl. Symb. Myc. 372 1869. *C. fasciculatum* Fkl.
Cylomyces Clem.; for *C. insignis* (P. & S.) Clem.
Listeromyces Penz. & Sacc. Malpighia
 15:258 1901. *L. insignis* P. & S.
Excipularia Sacc. Syll. Fung. 3:689 1884; cf.
 Hoehn. Ann. Myc. 2:52 1904. *E. fuispora* (B. & Br.) Sacc.
Exosporium Link. Berl. Mag. 3:9 1809. *E. tiliae* Lk.
Exosporina Arnaud. Ann. Epiphyt. 7:46, 105
 1921; not *Exosporina* Oud. 1904. *E. manaosensis* Arn.
Marcosia Syd. Ann. Myc. 14:96 1916. *M. ulei* Syd.
Thyrostromella Syd. Ann. Myc. 22:406
 1924. *T. trimera* (Sacc.) Syd.
Trimmatostroma Corda. Icon. Fung. 1:9 1837. *T. salicis* Corda

Dictyosporae

- Bonordeniella* Penz. & Sacc. Malpighia 15:259
 1901. *B. memoranda* P. & S.
Cerebella Ces. Bot. Zeit. 9:669 1851. *C. andropogonis* Ces.
Chaetostromella Karst. Hedwigia 34:8 1895. *C. tiliae* Karst.
Clathrococcum Hoehn. Sitzb. Akad. Wien
 120:473 1911. *C. compactum* (B. & C.) Hoehn.
Myriophysella Speg. Rev. Fac. Agron. 6:198
 1910. *M. chilensis* Speg.
Petrakia Syd. Ann. Myc. 11:406, ill. 1913. *P. echinata* (Pegl.) Syd.

Tetrachia Sacc. Bull. Ort. Bot. Napoli 6:65
1921.

T. singularis Sacc.

Thyrodochium Werd. Ann. Myc. 22:168, ill.
1924.

T. dracaenae Werd.

Thyrostroma Hoehn. Sitzb. Akad. Wien
120:472 1911.

T. compactum (Sacc.) Hoehn.

Scolecosporae

Exosporella Hoehn. Sitzb. Akad. Wien
121:414 1912.

E. symploci Hoehn.

Schizotrichum McAlpine Proc. Linn. Soc. N.
S. Wales 28:562 1903.

S. lobeliae McAlp.

Staurosporae

Chelisporium Speg. An. Mus. Nac. 3:13:463
1911.

C. hysterioides Speg.

Chiromycella Hoehn. Sitzb. Akad. Wien
119:664 1910.

C. spiroidea Hoehn.

Chiromyces B. & C. Intr. Bot. Crypt. 313, ill.
1857.

C. stellatus B. & C.

Fumagopsis Speg. An. Mus. Nac. 3:13:464
1911.

F. triglifoides Speg.

Spegazzinia Sacc. Michelia 2:37 1880; em.
Overeem Bull. Bot. Buitenz. 3:5:287, ill.
1923.

S. ornata Sacc.

Helicosporae

Everhartia Sacc. & Ell. Michelia 2:580 1882.

E. hymenuloides S. & E.

Tropospora Karst. Hedwigia 31:299 1892.

T. fumosa Karst.

Genera Incertae Sedis Vel Dubia

Bizzozziella Speg. An. Soc. Arg. 26:2:73
1888; Syll. Fung. 4:716 1886; cf. Hoehn.
Syst. Fung. Imp. 358 1923.

B. phyllogena Speg.

Cylindrocarpum Wollenw. Phytopathology
3:225, ill. 1913.

C. cylindroides Wollenw.

Diaphanium Fr. Fl. Scan. 307 1835; Syll.
Fung. 4:672 1886; cf. Hoehn. l. c. 359
1923.

D. maximum Fr.

Epidochiopsis Karst. Hedwigia 31:294 1892;
Syll. Fung. 11:648 1895; cf. Hoehn. l. c.
359 1923.

E. atrovirens Karst.

Epidochium Fr. Sum. Veg. Scan. 471 1849;
Syll. Fung. 4:747 1886; cf. Hoehn. l. c. 351
1923.

E. atrovirens Fr.

Jaczewskiella Murash. Mat. Mik. Fit. 5:3, ill.
1926.

J. altajensis Mur.

Myriophysa Fr. Sum. Veg. Scan. 481 1849;
Syll. Fung. 4:742 1886; cf. Hoehn. l. c. 360
1923.

M. atra Fr.

Pactilia Fr. Fl. Scan. 363 1835; Syll. Fung.
4:672 1886; cf. Hoehn. l. c. 360 1923

P. mycophila M. & Fr.

- Pseudopolystigma* Murash. Trans. Siber. Inst. 9:235, ill. 1928.
- Scoriomyces* Ell. & Sacc. Misc. Myc. 2:18 1884; Syll. Fung. 4:680 1886; cf. Hoehn. l. c. 361 1923.
- Spermodermia* Tode Fung. Meckl. 1:1 1790; Syll. Fung. 4:742 1886; cf. Hoehn. l. c. 362 1923.
- Stigmatella* B. & C. Intr. Bot. Crypt. 313, ill. 1857; Syll. Fung. 4:679 1886; cf. Hoehn. l. c. 362 1923.
- Thelospora* Harkn. Bull. Calif. Acad. Sci. 1:41 1884; Syll. Fung. 4:679 1886; cf. Hoehn. l. c. 362 1923.
- Trichostroma* Corda Sturm Deut. Crypt. Fl. 3:2:131, ill. 1829; Syll. Fung. 4:752 1886; cf. Hoehn. l. c. 362 1923.
- Trichotheca* Karst. Symb. Myc. 20:101 1887; Syll. Fung. 4:4:714 1886; cf. Hoehn. l. c. 362 1923.
- P. spiraeicola* Mur.
- S. cragini* Ell.
- S. clandestina* Tode
- S. aurantiaca* B. & C
- T. bifida* Harkn.
- T. purpurascens* Corda
- T. alba* Karst.

STILBACEAE

Hyalostilbeae

Amerosporae

- Actiniceps* B. & Br. Jour. Linn. Soc. 15:85 1877.
- Alphitomyces* Riessek Sitzb. Akad. Wien 21:326, ill. 1856.
- Articulis* Hoehn. Sitzb. Akad. Wien 118:410 1909; for *Articulariella*.
- Atractiella* Sacc. Fung. Gall. 5:8. Att. Ist. Venet. 6:1:1280 1883.
- Ciliciopus* Corda Sturm Deut. Crypt. Fl. 3:3:57 1831; em. Sacc. *Michelia* 2:562 1882; for *Ciliciopodium*.
- Clavularia* Karst. Symb. Myc. 9:67 1883; Syll. Fung. 10:686 1892.
- Clathrotrichum* Pat. Bull. Soc. Myc. Fr. 37:35, ill. 1921.
- Corallo dendrum* Jungh. Praem. Fl. Bot. 7 1838.
- Coremiella* Bub. & Krieg. Ann. Myc. 10:52 1912.
- Heydeniopsis* Naumov Mat. Mik. Fit. 1:25 1915.
- Coremium* Link Sp. Pl. Fung. 71 1824.
- Pritzeliella* Henn. Hedwigia 42:88 1903; Syll. Fung. 18:644 1906.
- Dendrostilbella* Hoehn. Oest. Bot. Zeits. 55:22 1905.
- Gibellula* Cavara Att. Ist. Pavia 2:3:347 1894.
- A. thwaitesi* B. & Br.
- A. schrötteri* Ries.
- A. aurantiaca* (E. & M.) Hoehn.
- A. brunaudiana* Sacc.
- C. sanguineus* Corda
- C. fuispora* Karst.
- C. subcarneum* Pat.
- C. leucocephalum* Jungh.
- C. cystopoides* B. & K.
- H. ingrlica* Naumov
- C. glaucum* Fr.
- P. caerulea* Henn.
- D. prasinula* Hoehn.
- G. pulchra* (Sacc.) Cav.

- Heterocephalum* Thaxt. Bot. Gaz. 35:157 1903.
Isaria Pers. Tent. Disp. 41 1797.
Macrostilbum Pat. Bull. Soc. Myc. Fr. 14:197 1898.
Martindalia Sacc. & Ell. Misc. Myc. 2:16 1884.
Microspatha Karst. Rev. Myc. 11:207 1889.
Pirobasidium Hoehn. Sitzb. Akad. Wien 111:1001 1902.
Rhombostilbella Zimm. Cent. Bakt. 2:8:221 1909.
Stilbum Tode Fung. Meckl. 1:10 1790; cm. Sacc. Michelia 2:32. 1880.
Stilbella Lindau Nat. Pflanzenf. 1:1:489 1900.
Stilbella Syd. Bull. Herb. Boiss. 2:1:85 1901; Syll. Fung. 16:1083 1902.
Tilachlidium Preuss Linnaea 24:126 1851.
Trichosterigma Petch Trans. Brit. Myc. Soc. 8:215 1923.
- H. aurantiacum* Thaxt.
I. farinosa (Dicks.) Fr.
M. radicosum Pat.
M. spironema S. & E.
M. glauca Karst.
P. sarcoides (Jacq.) Hoehn.
R. rosea Zimm.
S. cinnabarinum Mont.
S. erythrocephala (Ditm.) Lind.
S. rubescens Syd.
T. pinnatum Preuss
T. clavisorum Petch

Didymosporae

- Actinostilbe* Petch Ann. Bot. Gard. Peradeniya 9:327 1925.
Didymobotrys Henn. Hedwigia 41:149 1902; for *Didymobotryopsis*.
Didymostilbe Henn. Hedwigia 41:148 1902.
Hartiella Masee Bull. Misc. Inform. Kew 1910:5; Syll. Fung. 22:1446 1913.
- A. vanillae* Petch
D. parasitica Henn.
D. coffeae Henn.
H. coccinea Mass.

Phragmosporae

- Atractium* Link Berl. Mag. 3:10 1809.
Arthrosporium Sacc. Michelia 2:32 1880; Syll. Fung. 4:598 1886.
Stilbomyces Ell. & Ev. Proc. Acad. Phil. 1895:441. 1896.
Symphysira Preuss Linnaea 25:742 1852.
Atractilina Dearn. & Barth. Mycologia 16:175 1924.
- A. micropus* (Pers.) Sacc.
A. albicans Sacc.
S. berenice E. & E.
S. lutea Preuss
A. callicarpae D. & B.

Helicosporae

- Helicostilbe* Hoehn. Sitzb. Akad. Wien 111:1028 1902.
- H. simplex* Petch

Phaeostilbeae

Amerosporae

- Antromycopsis* Pat. & Trab. Bull. Soc. Myc. Fr. 13:215, ill. 1897.
Basidiella Cke. Grevillea 6:118 1878.
Briosia Cavara Att. Ist. Pavia 2:1:321 1888.
Ceratocladium Corda Prachtfl. 41 1839.
- A. broussonetiae* P. & T.
B. sphaerocarpa Cke.
B. ampelophaga Cav.
C. microspermum Corda

- Cladographium** Peyron. Nuov. Giorn. Ital. 25:439, ill. 1918.
- Coelographium** (Sacc.) Gäumann Bull. Jard. Buitenz. 3:2:13, ill. 1920.
- Crinula** Fr. Syst. Myc. 1:493 1821.
- Graphiopsis** Bainier Bull. Soc. Myc. Fr. 23:19, ill. 1907.
- Phaeisaria** Hoehn. Sitzb. Akad. Wien 18:330 1909.
- Graphiothecium** Fkl. Symb. Myc. 366 1869.
- Stromatostysanus** Hoehn. Ber. Deut. Bot. Ges. 37:153 1919.
- Graphium** Corda Icon. Fung. 1:18, ill. 1837.
- Phaeostilbella** Hoehn. Mitt. Bot. Hochs. Wien 2:71 1925.
- Harpographium** Sacc. Michelia 2:33 1880.
- Melanographium** Sacc. Ann. Myc. 11:557 1913.
- Pycnostysanus** Lindau Abh. Bot. Brandenb. 45:160, ill. 1903.
- Stysanopsis** Ferraris Ann. Myc. 7:281 1909; Syll. Fung. 22:1454 1913.
- Saccardaea** Cavara Att. Ist. Bot. Pavia 2:3:346 1894.
- Sarophorum** Syd. Engler Bot. Jahrb. 54:360, ill. 1916.
- Sporocybe** Fr. Syst. Orb. Veg. 1:170 1825; em. Bon. Handb. Myk. 138 1851.
- Sporostachys** Sacc. Att. Accad. Ven-Trent. 3:10:92 1919.
- Stemmaria** Preuss Linnæa 24:137 1851.
- Stilbochalara** Ferd. & Wing. Bot. Tids. 30:220 1910.
- Stilbodendrum** Syd. Ann. Myc. 14:260, ill. 1916.
- Stilbothamnium** Henn. Engler Bot. Jahrb. 23:542 1897.
- Stromatographium** Hoehn. Denk. Akad. Wien 83:37 1907.
- Stysanus** Corda Icon. Fung. 1:21 1837.
- Capnostysanus** Speg. Physis 4:295 1918.
- Synnematium** Speare Mycologia 12:74, ill. 1920.
- Tilachlidiopsis** Keissler Ann. Nat. Mus. Wien 37:215, ill. 1924.
- Trichurus** Clem. & Shear Bot. Surv. Neb. 4:7 1896.
- C. rivulorum** Peyron.
- C. caviceps** (Oud.) Sacc.
- C. caliciformis** Fr.
- G. cornui** Bain.
- P. sacchari** (Speg.) Hoehn.
- G. freseni** Fkl.
- S. caprifoliorum** (Desm.) Hoehn.
- G. penicillis** Corda
- P. atra** (Desm.) Hoehn.
- H. fasciculatum** Sacc.
- M. pleniosporum** Sacc.
- P. resinae** (Fr.) Lind.
- S. media** (Sacc.) Ferr.
- S. echinocephala** Cav.
- S. ledermanni** Syd.
- S. byssoides** (Pers.) Bon.
- S. maxima** Sacc.
- S. globosa** Preuss
- S. dimorpha** F. & W.
- S. camerunense** Syd.
- S. togoense** Henn.
- S. stromaticum** (Berk.) Hoehn.
- S. stemonites** (Pers.) Corda
- C. stysanophorus** (P. & S.) Speg
- S. jonesi** Speare
- T. racemosa** Keissl.
- T. cylindricus** Clem. & Shear

Didymosporae

- Antromyces** Fres. Beitr. Myk. 37 1850.
- Didymobotryum** Sacc. Syll. Fung. 4:626 1886.
- Hoehneliella** Bres. & Sacc. Verh. z-b. Ges. Wien 52:437. 1902.
- A. copridis** Fres.
- D. pubescens** (C. & E.) Sacc.
- H. perplexa** B. & S.

Phragmosporae

- Arthrobotryum* Ces. Hedwigia 1: pl. 4, fig. 1
1854.
- Lindauomyces* Koord. Verh. Akad. Amster.
13:240, ill. 1907.
- Calostilbella* Hoehn. Ber. Deut. Bot. Ges.
37:160 1919.
- Dendrographium* Masee Grevillea 21:5 1892.
- Isariopsis* Fr. Sacc. Michelia 2:33 1880.
- Phaeisariopsis* Ferraris Ann. Myc. 7:280
1909; Syll. Fung. 22:1456 1913.
- Podosporiella* Ell. & Ev. Proc. Acad. Sci.
Phil. 1894:385 1895.
- Podosporium* Schw. Syn. Fung. Am. Bor. n.
2609 1834.
- A. *stilboideum* Ces.
- L. *javanicus* Koord.
- C. *calostilbe* Hoehn.
- D. *atrum* Mass.
- I. *griseola* Sacc.
- P. *griseola* (Sacc.) Ferr.
- P. *humilis* E. & E.
- P. *rigidum* Schw.

Dictyosporae

- Hermatomyces* Speg. An. Mus. Nac. 3:13:446
1911.
- Negeriella* Henn. Hedwigia 36:244 1897.
- Sclerographium* Berk. Hook Lond. Jour. Bot.
6:209 1854.
- H. *tucumanensis* Speg.
- N. *chilensis* Henn.
- S. *aterrimum* Berk.

Staurosporae

- Riessia* Fres. Beitr. Myk. 74 1852.
- R. *semiophora* Fres.

Genera Incertae Sedis Vel Dubia

- Cladosterigma* Pat. Bull. Soc. Myc. Fr. 8:138
1892; Syll. Fung. 11:640 1895.
- Harpocephalum* Atkin. Bull. Cornell Univ.
3:41 1897; Syll. Fung. 14:1111 1899.
- Heydenia* Fres. Beitr. Myk. 47 1852; cf.
Hoehn. Syst. Fung. Imp. 359, 320 1923.
- Riccoa* Cav. Ann. Myc. 1:44, ill. 1903; cf.
Hoehn. Syst. Fung. Imp. 361 1923.
- Isariella* Henn. Hedwigia 48:19 1909.
- Mycovellosiella* Rangel Arch. Jard. Bot. Rio
Jan. 2:71 1917.
- Vellosiella* Rangel Bol. Agr. S. P. 16:151,
ill. 1915; not Velloziella Baill. 1886.
- Peribotryum* Fr. Syst. Myc. 3:287 1832; Syll.
Fung. 4:596 1886.
- Pseudogaster* Hoehn. Denk. Akad. Wien
83:38 1907; Syll. Fung. 22:1457 1913.
- Xylocladium* Syd. Lindau Nat. Pflanzenf.
1:1:494 1900; Syll. Fung. 16:1089 1902.
- C. *fusisporum* Pat.
- H. *dematioides* Atkin.
- H. *alpina* Fres.
- R. *aetensis* Cav.
- I. *auerswaldiae* Henn.
- M. *cajani* (Henn.) Rang.
- V. *cajani* (Henn.) Rang.
- P. *pavoni* Fr.
- P. *singularis* Hoehn.
- X. *clautriavi* (Pat.) Syd.

Dermophyta

- Achorium* Remak Diag. Path. Unters. 193
1845.
- Bodinia* Ota & Lang. Ann. Paras. Hum.
Comp. 1:330 1923.
- A. *schoenleini* Remak
- B. *violacea* (Bodin) O. & L.

- Grubyella* Ota & Lang. Ann. Paras. Hum. Comp. 1:330 1923.
- Epidermophyllum* Lang. Viertj. Derm. Syph. 6:255 1879; for *Epidermidophyton*.
- Malassezia* Baill. Trait. Bot. Med. Crypt. 234 1889.
- Microsporum* Gruby Comp. Rend. 17:301 1843.
- Closteraleurosporia* Grigor. Comp. Rend. 179:1424 1924.
- Closterosporia* Grigor. Comp. Rend. 179:1424 1924.
- Lophophyllum* Matr. & Dass. Rev. Gen. Bot. 11:432 1899.
- Sabouraudites* Ota & Lang. Ann. Paras. Hum. Comp. 1:326 1923.
- Spirailia* Grigor. Comp. Rend. 179:1424 1924.
- Montoyella* Castellani Man. Trop. Med. ed. 3:1023 1919.
- Pinoyella* Castell. & Chalm. Man. Trop. Med. ed. 3:1023 1919.
- Trichophyllum* Malm. Arch. Anat. Phys. 1 1848.
- Aleurosporia* Grigor. Comp. Rend. 179:1425 1924.
- Atrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1008 1919.
- Chlamydaleurosporia* Grigor. Comp. Rend. 179:1425 1924.
- Ectotrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1002 1919.
- Neotrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1001 1919.
- G. schoenleini* (Rem.) O. & L.
- E. cruris* Castell.
- M. furfur* (Robin) Baill.
- M. audouini* Gruby
- C. audouini* (Gruby) Grigor.
- C. lanosa* (Sab.) Grigor.
- L. gallinae* (Megn.) M. & D.
- S. asteroides* (Sab.) O. & L.
- S. asteroides* (Sab.) Grigor.
- M. nigra* Castell.
- P. simii* (Pinoy) C. & C.
- T. tonsurans* Malm.
- A. acuminata* (Bodin) Grigor.
- A. albiscans* (Nieuwh.) C. & C.
- C. granulosa* (Sab.) Grigor.
- E. mentagrophytes* (Robin) C. & C.
- N. flavum* (Bodin) C. & C.

Genera Dubia

- Ateleothylax* Ota & Lang. Ann. Paras. Hum. Comp. 1:333 1923.
- Blastomycoides* Castell. Fungi & Fung. Dis. 24 1928.
- Coccidioides* Rixford & Gilchr. Johns Hopkins Hosp. Rep. 1:243 1896.
- Endodermophyllum* Castell. Man. Trop. Med. ed. 3:1016 1919.
- Indiella* Brumpt. Arch. Paras. 10:547 1906.
- Madurella* Brumpt. Comp. Rend. 158:997 1905.
- Proteomyces* Moses & Vianna Mem. Inst. Oswaldo Cruz 5:192, ill. 1913.
- A. curri* (C. & M.) O. & L.
- B. immitis* Castell.
- C. immitis* R. & G.
- E. tropicale* Castell.
- I. mansonii* Brumpt.
- M. mycetomi* (Lav.) Brumpt.
- P. infestans* M. & V.

Sterile Mycelia

- Acinula* Fr. Syst. Myc. 2:267 1822.
- Anthina* Fr. Syst. Myc. 2:281 1823.
- A. candidans* Fr.
- A. flammea* Fr.

- Capillaria** Pers. Myc. Eur. 1:50 1822.
Clavariopsis de Wilde. Ann. Soc. Belg. Micr. 19:200, ill. 1895.
Cuticularia Ducomet Ann. Agr. Rennes 1:235, ill. 1907.
Ectostroma Fr. Syst. Myc. 2:601 1823.
Helicosporangium H. Karst. Bot. Unters. Lab. Landw. 1:76 1865.
Himantia Pers. Myc. Eur. 1:88 1822.
Hypha Pers. Myc. Eur. 1:63 1822.
Multipatina Sawada Rep. Agr. Res. Inst. Formosa 35:121, ill. 1928.
Ozonium Link Berl. Mag. 3:21 1809.
Papulospora Preuss Linnaea 24:112 1851.
Phloeconis Fr. Sum. Veg. Scan. 2:520 1849.
Rhacodium Pers. Syn. Fung. 701 1801.
Rhizoctonia DC. Flor. Fr. 6:111 1815.
Coccobotrys Boud. & Pat. Bull. Soc. Myc. Fr. 16:141 1900.
Rhizohypha Chod. & Sigr. Bull. Soc. Bot. Geneve 2:3:350 1911.
Rhizomorpha Roth Cat. 1:231 1797.
Scenomyces Stev. Ill. Biol. Mon. 11:60, ill. 1927.
Sclerotium Tode Fung. Meckl. 1:2 1790.
Xylostroma Tode Fung. Meckl. 1:36 1790.
- C. arundinis** Pers.
C. aquatica de W.
C. ilicis Ducomet
E. liriiodendri (Kze.) Fr.
H. parasiticum Karst.
H. candida Pers.
H. bombycina Pers.
M. citricola Saw.
O. auricomum Lk.
P. sepedonioides Pr.
P. violacea (Ces.) Fr.
R. cellare Pers.
R. violacea Tul.
C. xylophilus (Fr.) B. & P.
R. radicis C. & S.
R. subcorticalis Pers.
S. perplexans Stev.
S. complanatum Tode
X. giganteum Tode

Pseudosaccharomycetes

(Non-ascogenous forms of Saccharomycetaceae or fermentation forms of Hyphomycetes, many of them very doubtful)

- Aleurodomyces** Buchner Arch. Protistenk. 26:100, ill. 1912; Syll. Fung. 22:788 1913.
Amphiernia Gruess Jahrb. Wiss. Bot. 66:146, ill. 1926.
Asporomyces Chaborski Bull. Soc. Geneve 2:11:91, ill. 1919.
Blastoderma Fisch. & Breb. Morph. Biol. Kahmp. 47, ill. 1894.
Bullera Derx Ann. Myc. 28:11 1930.
Endoblastoderma F. & B. Morph. Biol. Kahmp. 52, ill. 1894; Syll. Fung. 22:788 1913.
Sporobolomyces Kluv. & van Niel Cent. Bakt. 2:63; 19, ill. 1924.
Cicadomyces Sulc. Sitzb. Boehm. Ges. Wiss. 1910:11, ill. 1911; Syll. Fung. 22:783 1913.
Coccidomyces Buchner Arch. Protistenk. 26:102 1912; Syll. Fung. 22:788 1913.
Histoplasma Darling Jour. Am. Med. Assoc. 46:1285, ill. 1906.
Kerminicola Sulc. Sitzb. Boehm. Ges. Wiss. 1906:1 1907.
- A. signoreti** Buch.
A. rubra Gruess
A. asporus Chab.
B. salmonicolor F. & B.
B. grandispora Derx
E. amycoides F. & B.
S. salmonicolor K. & vN.
C. ptyeli Sulc.
C. pierantoni Buch.
H. capsulata Darl.
K. kermesina Sulc.

- Lecaniascus* Moniez Bull. Soc. Zool. Fr. 12:150 1887.
- Medusomyces* Lind. Ber. Deut. Bot. Ges. 31:243 1913; Syll. Fung. 24:1314 1928.
- Pseudomycoderma* Will. Cent. Bakt. 2:46:226 1916.
- Mycoderma* Pers. Myc. Eur. 1:96 1822.
- Nectaromyces* Syd. Ann. Myc. 16:244 1918; Syll. Fung. 24:1311 1928.
- Anthomyces* Gruess Ber. Deut. Bot. Ges. 35:746 1917; not Dietel 1899.
- Parendomyces* Queyrat & Laroche Bull. & Mem. Soc. Med. Paris 3:28:111 1909.
- Pseudomonilia* Geiger Cent. Bakt. 2:27:134 1910.
- Blastodendrum* Ota Derm. Wochens. 78:224 1924, as subg.; Ciferri & Redaelli Att. Ist. Pavia 3:2:189 1925.
- Candida* Berkhout Schimm. Monilia, etc. 72 1923.
- Enanthothamnus* Pinoy Ann. Derm. Syph. 5:2:599 1911.
- Mycotorula* Will. Cent. Bakt. 2:46:263 1916.
- Rhodomyses* Wettst. Sitzb. Akad. Wien 1:91:39, ill. 1885.
- Sachsia* Bay Ber. Deut. Bot. Ges. 12:90 1894.
- Pseudosaccharomyces* Kloecker Comp. Rend. Lab. Carlsb. 10:323, ill. 1913, not Briosi & Farn. (Syll. Fung. 22:780), Syll. Fung. 24:1307 1928.
- Psyllidomyces* Buchner Arch. Protistenk. 26:97, ill. 1912; Syll. Fung. 22:788 1913.
- Pullularia* Berkhout Schimm. Monilia, etc. Univ. Utrecht 1923.
- Torulopsis* Berl. Giorn. Vit. Enol. 54 1894; Syll. Fung. 18:495 1906; not Oud. 1903.
- Chromotorula* Harrison Trans. Roy. Soc. Canada 3:21:350, ill. 1927.
- Cryptococcus* Kuetz., em. Vuill. Rev. Gen. Sci. 12:741, ill. 1901.
- Eutorula* Will. Cent. Bakt. 2:46:241 1916.
- Eutorulopsis* Cif. Att. Ist. Pavia 3:2:141 1925.
- Rhodotorula* Harrison Trans. Roy. Soc. Canada 3:21:349, ill. 1927.
- Torula* Turpin Comp. Rend. 7:379 1838; Pasteur Etudes Biere 73 1876; Hansen Comp. Rend. Carlsberg 2:50 1883; not Pers. 1801.
- Tyridiomyces* Wheeler Bull. Am. Mus. Nat. Hist. 23:669 1907; Syll. Fung. 24:1034 1928.
- L. polymorphus* Mon.
- M. gisevi* Lind.
- P. vini* Will.
- M. cerevisiae* Desm.
- N. reukaufi* (Gruess) Syd.
- A. reukaufi* Gruess
- P. albus* Q. & L.
- P. albomarginata* Geig.
- B. krausi* Ota
- C. vulgaris* Berkh.
- E. braulti* Pinoy
- M. craterica* Will.
- R. kochi* Wettst.
- S. albicans* Bay
- P. apiculatus* (Reess) Kloeck.
- P. tenuis* Buch.
- P. hispidula* (Pers.) Berkh.
- T. rosea* Berl.
- C. kitae* Harr.
- C. fermentum* Kuetz.
- E. vulgaris* Will.
- E. ellipsoidea* (Will.) Cif.
- E. glutinis* Harr.
- T. cerevisiae* Turpin
- T. formicarum* Wheel.

Genera Omnino Dubia

- Agostaea** (Sacc.) Theiss. & Syd. Ann. Myc. 13:359, 668 1915; Sacc. Syll. Fung. 9:293 1891; 24:1321 1928.
- Chlamydosporium** Peyron. Inaug. Diss. Padua 18 1913.
- Dioranotropis** Rev. Agr. Reunion 6:5 1900; Syll. Fung. 24:1321 1928.
- Dubiomyces** Lloyd Myc. Notes 65:1034 1921.
- Nothospora** Peyron. Inaug. Diss. Padua 20 1913.
- Phyllomyces** Lloyd Myc. Notes 65:1057 1921.
- Spermophthora** Ashby & Howell Ann. Bot. 42:72 1926.
- Thalassomyces** Niezabitowski Kosmos 38:1563 1913; Myc. Cent. 5:141 1914.
- Trichodiscula** Vouaux Recl. Lich. Dunq. 73 1910.
- Valdensia** Peyron. Staz. Sper. Ital. 56:521, ill. 1923.
- A. lantanae** (Henn.) T. & S.
(publication not seen)
- D. vastatrix**
- D. viridis** Lloyd
(publication not seen)
- P. multiplex** Lloyd
- S. gossypii** A. & H.
- T. spiczakovi** Niez.
(publication not seen)
- V. heterodoxa** Peyron.

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Glossary of Latin and English Terms

A

a, an, without (in comp.)

ab, from

abbreviatus, shortened

abeuns, deviating, going into

abhorreo, abhor, differ from

abiegnus, fir

abietinus, fir

abnormis, abnormal

abortivus, abortive, poor, abnormal

abortus, aborted, undeveloped

abrupte, abruptly

absconditus, concealed, hidden

absque, apart from, but for

abundans, abundant

abunde, abundantly

ac, and

acaudatus, without a tail

accedo, to approach

accessory, additional

accipio, to accept

acerinus, maple

acervulatus, heaped, massed

acervulus, i. m., a little heap

acervus, i. m., a heap

achromaticus, without color

achrous, colorless

acicularis, acicular, needle-shaped

acidulus, slightly acid

acies, ei, f., edge

acotyledon, nis, m., cryptogam

acquirō, to acquire

acris, sharp

acrogenus, acrogenous, borne at tip

acropleurogenus, borne at the tip and on the sides

aculeatus, aculeate, spiny, pointed

aculeolatus, somewhat spiny or pointed

acuminatus, acuminate, long-pointed

acus, us, f., needle

acutatus, acute

acutiusculus, somewhat acute

acutus, acute

ad, to

adesse, to be present

adhibitus, used, applied

adhuc, as yet, hitherto

adinterim, meanwhile

adlatus, allatus, brought, carried

admiro, to look, wonder at

admodum, at least, fully, very

adnatus, adnate, touching broadly

adparenter, apparently

adproximatus, drawn near

adscendens, ascending

adsociatus, clustered

adspectus, us, m., sight, appearance

adultus, fully grown

adustus, burned, blackened

accidiiformis, accidium-shaped

aeciospore, aecidiospore, the conidium of the rust cluster-cup

aecium, aecidium, the cluster-cup of rusts

aegre, poorly, with difficulty

aegrotans, languishing, diseased

aemulans, rivalling

aemulor, to emulate, excel

aemulus, similar

aeneus, brazen, coppery

aequalis, equal

aequans, equalling

aequidistans, equally distant

aequiparo, to compare, equal

aer, is, m., air, atmosphere

aerius, aerial

aerobius, growing in the air

aerophilus, aerial

aeruginosus, copper-colored

aestas, atis, f., summer

aetas, atis, f., age, lifetime

aeternus, eternal

affectus, affected

affero, to bring, carry

affixus, attached

afflatus, swollen

agamicus, asexual

agamus, asexual

agaricole, living on mushrooms

ager, ri, m., field

agglomeratus, heaped together

aggregatus, grouped together

agnosco, to recognize, identify

alatus, winged

- albens**, whitened, white
albicans, whitening
albidus, white
albofarctus, white-stuffed
albolutescens, whitish-yellow
albus, white
alcoholicus, containing or producing alcohol
aleurispore, simple lateral conidium of the dermatophytes
algicole, living on algae
alicui, some, any
alienus, foreign, strange
aliquando, at sometime, once
aliquantisper, for a while
aliquantulus, somewhat, a little
alius, another, other
alius—alius, some—others
allantoideus, **allantoid**, sausage-shaped, short and curved
alliaceus, onion-like
alliciens, attracting
alpis, f., mountain
alte, deeply
alternus, alternate, other
altitudo, inis, f., height
altus, high, tall
alutaceus, leather-colored, grayish-yellow
alveolatus, **alveolate**, honey-combed, with hollows
alveolus, i, m., a little hollow
amaricans, making bitter, irritating
amarus, bitter, pungent
ambiens, surrounding
ambitus, us, m., periphery, circle, edge
amentum, i, n., catkin
amerosporus, with one-celled spores
amethysteus, amethyst-colored
amictus, us, m., garment, cover
amissus, lost, dismissed
ammoniacalis, ammonia-like
amnis, is, m., brook
amoeboides, amoeboid, amoeba-like
amoebiformis, amoeba-form
amoene, beautifully
amoenus, beautiful, pleasant
amoveo, to withdraw
amphibius, **amphibious**, living on land and in water, or in mud
amphigenus, borne on both sides
amplectens, clasping
amplecto, to wind or clasp
amplus, broad, ample
ampulliformis, **ampulliform**, cushion-like
amyelicus, without mycelium
amygdalinus, almond-like, pink
an, or, whether—or
analogus, similar
anastomosans, **anastomosing**, running together
anceps, cipitis, two-headed, double
androgynus, with male and female
anfractuusus, tortuous, prolix
angularis, **angular**, angled
angulosus, **angulose**, angled
angustatus, narrowed
angustus, narrow
anhistus, without cellular structure
animalcula, ae, f., little animal
annularis, ring-like
annulatum, in a ring
annulatus, **annulate**, with a ring, ringed
annuliform, ring-like
annulus, i, m., a ring
annuosus, aged, old
anormaliter, abnormally
anserinus, of or pertaining to geese
ante, before
antecedens, preceding
antennarioideus, with dark mycelium or subiculum
antheridiiformis, antheridium-like
antheridium, ii, m., **antherid**, male sex-organ
antherozidium, ii, n., **antherozoid**, motile male cell
antice, in front
aparaphysatus, without paraphyses
aperio, to open, uncover
apertus, open
apex, icis, m., tip
apiculatus, **apiculate**, with a point
apiculiformis, like a little point
apophysatus, with a supporting cell
apophysis, is, f., swelling, swollen filament, often paraphysis-like
apothecium, ii, n., cup or disk containing asci
appendicula, ae, f., little appendage
appendiculatus, **appendiculate**, appendaged
appendix, icis, f., appendage
applanatus, **applanate**, flattened
approximatus, close, near
apricus, wild
apud, at
apus, odis, without a stalk
aquaeductus, us, m., aqueduct

- aquaticus**, aquatic, living in water
aquosus, watery
arachnoideus, cobwebby
araneosus, cobwebby
arbor, is, f., tree
arbusculiformis, shrub-like
arcte, closely
arcticus, arctic
arcuatim, bow-like, curved
arcuatus, arcuate, bow-like
area, ae, f., space, spot
areola, ae, f., little space
areolatus, areolate, marked by areas or spaces
arescens, drying
aresco, to become dry
argenteus, silvery
argentinus, silvery
argillaceus, clay-color
aridus, dry
arista, ae, f., awn
aristatus, aristate, awned
arrectus, upright, stiff
arrhizus, without roots or rhizoids
arthrospore, a seriate spore or joint
articulatus, jointed
articulus, i, m., joint
asciger, ascus-bearing
ascogenic, producing asci
ascogenous, producing asci
ascoma, atis, n., a sporocarp containing asci
ascophorus, ascus-bearing
ascus, i, m., sack
asiaticus, Asiatic
asper, rough
asperatus, **asperate**, roughened
aspergo, to scatter, sprinkle
asperulus, slightly roughened
asser, eris, m., branch, bean, post
assurgens, ascending
asterigmaticus, without stalks
asterineus, star-like, radiate
asteroid, star-like, radiate
asteroma-like, with radiate subicle
astomous, mouthless
astromatoideus, without a stroma
asymmetricus, irregular
ater, dark, black
atomatus, with small particles
atomisticus, tiny
atque, also
atrans, blackening
atratus, dark
atrofuscus, dark
atroinquinans, blackening
atronitidus, black and shining
atropiceus, black as pitch
atropurpureus, dark purple
attenuatus, tapering
atingens, touching
attolens, raising
atypicus, abnormal
auctio, onis, i., growth
auctor, is, comm., author
auctus, enlarged
audeo, to dare
augmentum, i, n., increase, growth
aurantiacus, orange, golden
aurantinus, orange
auratus, golden
aureus, golden
auriformis, ear-shaped
australis, southern
aut, or
autem, moreover
authenticus, **authentic**, valid
autonomus, complete, independent
autumnus, i, m., autumn
avellaneus, hazel, gray-brown
avulsus, torn-off, separated
axicola, growing on the axis
axiformis, axis-like
axillaris, **axillary**, growing in an axis
azonus, without zones
azygospore, a zygospore formed without conjugation

B

- bacca**, ae, f., berry
baccatus, berry-like
bacillaris, **bacillar**, rod-shaped
bacteriformis, bacterium-like
bactrosporus, with rod-shaped spores
baculum, i, n., rod
badius, brown
basidiosporus, with spores borne on stalks
basidium, ii, n., **basidium**, rod
basilaris, basal
basis, is, f., base
bene, plainly, well
benevole, kindly
betulicola, growing on birch
betulinus, birchen
bi-, two, twice

- biatorine**, like *Biatora*, with a proper but not carbonous exciple
bibulus, absorbing
biclavuligerus, bearing two club-shaped branches
biconic, conic at each end
biconvexus, **biconvex**, convex on both sides
bicornus, with two horns, two-branched
biformis, or -us, of two forms
bifrons, on both sides of the leaf
bifurcatus, two-forked
biguttulatus, with two globules or vacuoles
bilabellulatus, two-lipped
bilabiatus, two-lipped
bilobus, two-lobed
bilocularis, two-celled
binatim, by twos
binucleolatus, with two oil-drops
binus, two-fold
biogenus, **biogenous**, growing on living organisms, parasitic
biophilus, **biophilous**, parasitic
bipartitus, two-parted or-divided
bipunctatus, with two vacuoles
bis, twice
biscoctiformis, biscuit-shaped
biserialis, in two rows
biseriatus, in two rows
bisporus, two-spored
bitunicatus, with two walls
biuncinatus, two-hooked
bombardus, cannon-like
borealis, northern
botryosus, **botryose**, clustered like grapes
botuliformis, **botuliform**, sausage-shaped
brachiatus, with arms
bractea, ae, f., bract
brevicollis, short-necked
brevis, short
breviter, shortly
breviusculus, somewhat short
brunneolus, brownish
brunneus, brown
bulla, ae, f., bubble
bullatus, bubble-like, swollen
bullula, ae, f., a little swelling
bursiformis, bag- or pouch-like
byssinus, cottony
byssisedus, **byssisede**, seated on cotton
byssoides, **byssoid**, cottony
byssus, i, f., cotton
- C**
- cacuminalis**, pointed
cadavericole, living on dead bodies
caducus, fallen, deciduous
caecitas, atis, f., blindness
caerulescens, turning blue
caesius, bluish-gray
caespes, itis, m., tuft
caespitosus, **caespitose**, in dense groups or tufts
caesus, fallen
calamus, i, m., stem
calcaratus, with a spur
calcareus, **calcareous**, of lime, limy
calcariferus, bearing lime
calcifer, bearing lime
calidarium, ii, n., hot-house
callosus, roughened
calvescens, becoming bare
calvitium, ii, n., bald spot
calvus, bare, bald, not pubescent
calx, **calcis**, f., lime
calycicola, living on the calyx
calyciformis, cup-shaped
calycularis, cup-shaped
calyptra, ae, f., cap
calyx, ycis, m., **calyx**, cup
campaniformis, bell-shaped
campanulatus, bell-shaped
campylotropus, curved
canaliculatus, **canaliculate**, channeled
candicans, becoming white
cannabinus, of hemp, hempen
canus, hoary
capillaris, hair-like
capillatura, ae, f., mass of hair
capilliform, hair-like, filiform
capillitium, ii, n., mass of threads
capillus, i, m., hair
capitatus, **capitate**, in heads
capitulatus, borne in little heads
capitulum, i, n., a little head
capreolus, i, m., goat
caprinus, of or pertaining to goats
capsula, ae, f., capsule
caput, itis, n., head
carbo, onis, m., carbon, charcoal
carbonaceus, like coal
carbonicola, on burned-over ground or on charcoal
carens, lacking
caries, ei, f., decay
carinatus, keeled

- cariosus*, decaying
carneus, flesh-colored
carnosulus, *carnosule*, somewhat fleshy
carnosus, *carnose*, fleshy
caro, *carnis*, f., flesh
carpogenus, living on fruit
carpogonium, ii, n., *carpogone*, female sex-organ, developing a fruit-body
cartilagineus, *cartilaginous*, tough but pliable
caryopsis, *idis*, f., grain
castaneus, chestnut-brown
catenate, in chains
catenifer, chain-bearing
catenigerus, bearing chains
catenulatus, *catenulate*, in chains
catenuliformis, chain-like
catenulus, m., -a, f., a small chain
caterva, ae, f., heap, crowd
catervatim, in heaps, in groups
cauda, ae, f., tail
caudatus, *caudate*, tailed
caudex, *icis*, m., stalk
caudicula, ae, f., a little stalk
caulicola, growing on stems
caulis, is, m., stem
caulogenus, on stems
caverna, ae, f., a cavern, hollow
cavernosus, with hollows
cavernula, ae, f., a little cavity
cavitas, *atis*, f., cavity
cavitatus, hollow
cavus, i, m., hollow
celans, hiding
cella, ae, f., a cell
celluliformis, cell-shaped
cellulosus, cellular, consisting of cells
censeo, to think, estimate
centrifugus, *centrifugal*, around the margin
centrum, i, n., the center
cephalodium, ii, n., a globose to club-shaped projection on a lichen thallus, containing alien algae
ceraceus, waxy
cerebriformis, brain-like
cerebro-convolute, with brain-like folds
cerebroid, with convolutions or folds
cereus, waxy
cerno, to perceive, separate
cernuus, nodding, inclined
cerumen, *inis*, n., wax
cervinus, tawny
cervus, i, m., deer
cespitose, clustered, crowded
ceteroquin, otherwise, for the rest
ceterum, remaining
chalybeus, of steel, steel-blue
character, *eris*, m., *character*, style
charta, ae, f., paper
chartaceus, papery
chlamydospore, a spore with a thick membrane
chlamydosporicus, with chlamydospores
chlorinus, greenish
chlorophyllous, with chlorophyll, green
chorda, ae, f., twine, cord
cibaria, ae, f., food
cicatrix, *icis*, f., a scar
cidaris, is, f., diadem
ciliatulus, slightly ciliate
ciliatus, *ciliate*, with long hairs on the margin
ciliolatus, *ciliolate*, with cilia
cincinnatus, curled
cinctus, surrounded
cinerescens, becoming ashen
cinresco, to become ashen or gray
cinereus, ash-colored
cingens, surrounding
cingulatus, surrounded, bordered
cingulus, i, m., a little belt
cinnabarinus, orange-red
cinnamomeus, cinnamon-colored
circa, near
circinatus, *circinate*, coiled
circino, to circle
circiter, about
circuitus, us, m., a circuit
circulus, i, m., a circle
circumambiens, encircling
circumdatus, surrounded
circumscissile, splitting circularly
circumscribitus, circumscribed
circumtextus, surrounded
circumvallatus, surrounded
cirrhatus, curled
cirrhosus, *cirrhose*, curly
cirrhus, i, m., curl
citatus, cited
cito, to name, mention
cito, soon, rather
citriformis, *citriform*, lemon-shaped
citrinus, lemon-yellow
cladodium, ii, n., a flattened branch
cladogenus, borne on branches
clathratus, *clathrate*, latticed
clausus, closed

- clava**, ae, f., a club
clavaria-like, club-shaped, or coral-like
clavatus, club-shaped
clavis, is, f., a key
clavoid, club-like
clavula, ae, f., a little club
clavulatus, **clavulate**, somewhat club-shaped
clivosus, hilly
clypeatus, shield-like
clypeus, i, m., a shield
coacervatus, **coacervate**, heaped together
coactus, collected, crowded
coadunatio, onis, f., a summing up
coadunatus, united, collected
coalescens, **coalesced**, running together
coalitus, joined, running together
coarctatus, crowded
coccineus, bright-red
coccus, i, m., round cell, berry
cochleariformis, spoon-shaped
cochleatus, shell-like, ear-like
coctus, cooked
coenobium, ii, n., a colony
coerulescens, turning blue
coffeatus, coffee-like
coffeicolor, coffee-colored
coffeiformis, coffee-shaped
cognatus, related
cogo, to act, collect
cohabitans, living together
cohaerens, cohering
-cola, inhabiting, growing on
collabasco, to fall in
collabens, **collabent**, collapsing, falling in
collapsus, **collapsed**, sunken
collariatus, collared, attached to a collar
collectivus, collected
colliculosus, with tiny elevations
collum, i, n., a neck
colonia, ae, f., a colony
color, is, m., color
coloratio, onis, f., coloration, color
coloratus, colored
coloreus, colored
columella, ae, f., columella, a small pillar
columnaris, **columnar**, cylindroid
comatus, shaggy
comestibilis, eatable
commissura, ae, f., **commissure**, path, cleft
commixtus, mingled
communico, to share, communicate
communis, common
comosus, hairy
compactus, dense
compaginatus, packed closely
complectens, comprising, clasping
complecto (r), to clasp
complures, several, many
compositus, composed, compound
compressus, compressed
concatenatus, in chains
concavus, **concave**, hollowed
concentricus, **concentric**, having a common center
conceptaculum, i. n., **conceptacle**, hollow, chamber
conchiformis, **conchiform**, shell-shaped
concolor, **concolorous**, of like color
concrescens, growing together
concretus, united
condensus, condensed
conditio, onis, f., condition
confero, to collect
confertus, crowded
confirmatio, onis, f., confirmation
conflatus, swollen
confluens, **confluent**, running together
confluo, to merge
conformis, all alike, similar
confundo, to mingle, confuse
congestus, crowded
conglobatus, **conglobate**, heaped together
conglomeratus, heaped
conglutinatus, **conglutinate**, glued together
congregatus, aggregated, grouped
congruo, to agree
conicus, conical
conidium, ii, n., an asexual spore
conidial, producing or pertaining to conidia
conidicus, conidial
conidiferus, conidia-bearing
conidiole, small conidium usually borne on another
conidiome, conidial-bearing body
conidiophorum, i, n., **conidiophore**, a hypha bearing conidia
conjugatio, onis, f., **conjugation**, fusion of two more or less equal sex-cells
connatus, **connate**, joined
connexus, connected, united
connivens, **connivent**, approaching
conoideus, **conoid**, cone-shaped
consitus, sown, strewn
consociatus, joined, associated

- consortium**, ii, n., company
conspersus, sprinkling
conspersus, scattered, sprinkled
conspiciens, observing
conspicuus, **conspicuous**, marked, prominent
conspurcatus, polluted
constanter, firmly, consistently
constipatio, onis, f., a crowding
constituens, constituting
consuetudo, inis, f., a habit
consumptus, destroyed
contemno, to condemn, disparage
contextum, i, n., texture, context
contiguus, close
continens, containing
continuus, **continuous**, one-celled
contortus, twisted
contra, against
contractus, narrowed
contusus, bruised
conus, i, m., a cone
convergens, coming together
convolutus, **convolute**, coiled, folded
convolutio, onis, f., a fold
coopertus, covered, buried
copiosus, abundant
coprophilus, growing on dung
copulans, copulating
coralloideus, **coralloid**, like much-branched coral
coriacellular, somewhat leathery
coriaceus, **coriaceous**, **corious**, leathery
corneus, **corneous**, horny
corniculatus, **corniculate**, horned
corniformus, **corniform**, horn-shaped
cornu, us, n., horn
cornutus, horned
coronatus, crowned
corpusculum, i, n., a little body
corrugatus, **corrugate**, ridged
corruptus, **corrupted**, spoiled
cortex, icis, m., the bark
corticalis, **cortical**, of bark, on bark
corticatus, **corticate**, with a bark or epiderm
corticola, **corticole**, growing on bark
cortina, ae, f., veil
cortinate, with a curtain-like veil
corvinus, pertaining to the raven, black
costa, ae, f., ridge
costatus, **costate**, ridged
crassities, ei, f., thickness
crassitudo, inis, f., thickness, width
crassiusculus, somewhat broad
crassus, broad
crateriformis, **crateriform**, hollowed out
creber, crowded
cremeus, cream-colored
cremicolor, cream-colored
crescens, growing, arising
cribrosus, sieve-like
crinitus, hairy, crested
crispatus, curled, curly
crispulus, somewhat crisp
crispus, crisp
crista, ae, f., crest
cristatus, crested
crocatus, yellow
croceus, yellow
cruciate, cross-like
cruciatim, **cruciately**, cross-like
cruentatus, bloody
crusta, ae, f., crust
crustaceus, **crustaceous**, crust-like
crustiformis, crust-like
crustose, forming a crust, more or less interrupted
crustula, ae, f., a little crust
cubile, is, n., a bed
cuboideus, **cuboid**, cubical
cucullatus, hooded
cucumeriformis, cucumber-shaped
culmicola, **culmicole**, growing on grass-stems
culmus, i, m., culm, a stalk, stem
cultellus, i, m., a small knife
culter, tri, m., a knife
cultriformis, knife-like
cultus, cultivated
cum, with
cumulatus, heaped up
cuneatus, wedge-shaped
cuneiformis, wedge-shaped
cuniculus, i, m., a rabbit
cupreus, coppery
cuprinus, coppery
cupula, ae, f., a little cup
cupularis, **cupulatus**, **cupuliformis**, cup-shaped
cupuloid, more or less cup-shaped
curtus, short
curvatus, curved
curvus, curved, bent
cusps, a point
cuspidatus, **cuspidate**, with a tooth
cuticula, ae, f., cuticle
cuticularized, with firm cover or cuticle

cutis, is, f., the skin
 cyanescens, turning blue
 cyaneus, blue
 cyathiformis, cup-like
 cyclus, i, m., a cycle, circle
 cylindræus, cylindricus, cylindric
 cymbiformis, boat-shaped
 cyphella, æ, f., an opening or hollow in a
 thallus, more or less cup-shaped
 cystidium, ii, n., cyst
 cystophore, the stalk which bears a cell
 or cyst

D

daedaleus, labyrinthine
 dealbatus, whitened
 debilis, weak
 deciduus, falling
 decies, ten times
 declivis, sloping
 decolor, without color
 decorticatus, without bark
 decumbens, prostrate
 decuplus, tenfold
 decurrens, decurrent, running down the
 stem
 defectus, lacking
 deficiens, lacking
 deficio, to lack
 definitus, definite, fixed, limited
 deflexus, deflexed, turned downward
 deformus, deformed, abnormal, misshapen
 defossus, dug, hidden
 degenero, to degenerate
 dehiscens, dehiscent, splitting
 dein, then, at length
 dejectus, fallen
 delapsus, fallen, sunken
 delicatulus, delicate, fine
 delineatus, figured
 deliquesces, deliquescing, liquefying
 delitescens, hiding
 delitescio, to conceal, lurk
 deltoideus, delta-like, triangular
 dematium-like, black and cobwebby
 dematius, black and cottony
 demonstro, to show
 demum, at length
 dendritic, tree-like, branched
 dendritice, dendritically, tree-like
 dendroideus, dendroid, tree-like
 denigratus, blackened
 denique, at length
 densus, close, dense
 dentatus, toothed
 denticulatus, denticulate, with little teeth
 denticuligerus, bearing little teeth
 denudans, denuding, uncovering
 denudatus, denuded, bare
 deorsum, downward
 dependens, hanging
 deplanatus, flattened
 depressus, depressed, flattened
 derasus, rubbed off, smoothed
 derumpens, breaking
 descendens, descending
 desciscens, leaving, deviating
 describo, to describe
 descriptus, described
 desicco, to dry up
 desinens, ending, closing
 desquamatus, rubbed off, not scaly
 destitutus, lacking
 destruens, destroying
 destruo, to destroy
 desum, to fail, to be absent
 detergibilis, removable, breakable
 deustus, burnt
 diametralis, of the diameter
 diametrum, i, n., diameter
 diaphanus, diaphanous, translucent
 diatrypoid, like Diatrype, with a stroma
 different from the tissue of the matrix
 dichotomus, dichotomous, two-forked
 diclinus, with separate sexes
 dictyosporus, having spores with cross
 and longitudinal walls
 didymosporus, with two-celled spores
 didymus, two-fold or two-celled
 differo, to differ
 difficilis, difficult
 diffuens, diffuent, dissolving
 difformis, diformis, of two forms, of un-
 usual or abnormal form
 diffractus, broken
 digestus, broken up
 digitaliformis, digitate, finger-like
 digitatus, digitate, finger-like
 digitiformis, finger-shaped
 dignosco, to distinguish
 dignotus, set apart
 dilabens, breaking apart
 dilatus, spread out
 dilute, dilutely
 dilutus, dilute
 dimidiatus, dimidiate, halved, shelf-like
 dimidius, half
 dimorphus, of two forms

dioecious, sex organs on separate plants
diphyletic, arising from two distinct ancestral groups
directio, onis, f., direction
directus, straight
dirumpens, breaking apart
disciformis, disk-shaped
discoïd, more or less disk-like
discolorus, **discolorous**, discolored
discretus, **discrete**, separate
discrimen, inis, n., difference
disculus, i, m., little disk
disparens, disappearing
dispergens, scattering, spreading
dispositus, arranged
dirumpens, breaking to pieces, shattering
disruptus, broken
disseco, to cut up
dissectus, cut up
disseminatus, scattered
dissentio, to disagree
dissepimentum, i, n., partition, wall
disseptum, i, n., barrier, partition
dissiliens, bursting, splitting
distal, distant, farther
distans, remote
distichus, **distichous**, in two rows
distinguo, to distinguish
disto, to be separate
diu, long
divaricatus, spreading
divello, to tear apart, destroy, remove
divergens, diverging
diversus modus, in different ways
diversus, **diverse**, different
divinans, conjecturing
divisio, onis, f., a division
divisus, divided
dolabriform, resembling a pickaxe
doliiformis, **doliiform**, cask-shaped, jar-shaped
dolium, ii, n., cask, jar
donacinus, of a reed
donatus, furnished
dorsiventral, with two unlike sides
dorsum, i, n., back
dothideaceus, like *Dothidea*, i. e., loculate
dothideoid, like *Dothidea*, the perithecia reduced to locules in a stroma
dubitanter, doubtfully
dubius, doubtful
duco, to lead
ductus, led

dulcis, sweet
dum, adv., now, yet; conj., while, where
dumetum, i, n., a thicket
duo, two
duodecim, twelve
duplo, twice
durities, ei, f., hardness
duriusculus, somewhat hard
durus, hard

E

eburneus, ivory-white
ecalcaratus, without a spur
ecaudatus, without a tail
eccentricus, **eccentric**, lateral
echinatus, spiny
echinulatus, **echinulate**, spiny
edulis, edible
efferent, leading outward
efficiens, causing, producing
effiguratus, shaped, formed
effoetus, worn out
efformatus, formed
effundo, to pour out, shed
effusus, **effuse**, spread out
egomet, myself
egrediens, growing out
elasticus, **elastic**, flexible
elater, an elastic filament or capillitium thread
elatus, tall
elevatus, raised
ellipsoideus, **ellipsoid**, somewhat elliptic
ellipticus, elliptical
elongatus, lengthened
emarcidus, withered, decayed
emarginatus, without a margin
emergens, emerging
emergo, to emerge
emersus, emerging
emittens, emitting
emortuus, dead
enatus, arising from
endobasidial, continuous with the basidium; with enclosed basidia
endobiotic, growing within living things
endochroma, atis, n., colored contents
endogenous, **endogenous**, borne within
endoparasiticus, internally parasitic
endoperidium, ii, n., inner peridium
endophytic, growing in plants
endoplasma, atis, n., protoplasm
endoxylus, within wood
endozoic, growing in animals

- enim**, for
entomogenus, **entomogenous**, living in insects
eodem, in the same place; besides
epelliculosus, without a covering or pellicle
epidermis, **idis**, *f.*, epiderm, the surface skin
epigaeus, **epigean**, on the ground
epigenus, borne above
epiphloeodus, on the bark
epiphragma, an upper wall or division
epiphyllus, on the upper side of the leaf
epiphytic, upon plants
episporium, *ii*, *n.*, outer wall of spore
epithecium, a layer above the asci, usually formed of the tips of the paraphyses
epizoic, growing on animals
equinus, **equine**, belonging to horses
erectus, erect
ergo, therefore
erostratus, without a beak
erostri, without a beak
erraticus, erratic, wandering
error, *is*, *m.*, error
eructans, emitting, belching
eructatus, thrown up
erumpens, **erumpent**, bursting out
erysiphoides, like Erysiphe, cobwebby
eseptate, without cross walls
estriatus, without lines or markings
etiam, also
etsi, although
eumorphus, well-formed
eutypoid, **eutypous**, like Eutype, with an effuse stroma similar to the tissue of the matrix
evacuans, emptying
evacuatus, emptied
evado, to escape
evaginatus, without a sheath
evanesens, **evanescent**, disappearing
evanidus, vanishing
evidentius, more clearly
evolutus, developed
evolvatus, without a volva
evolvens, developing
exacte, exactly
exalbescens, becoming white
exalbidus, whitish
exalbugo, to whiten
exannulatus, without a ring
exappendiculatus, not appendaged
exaridus, dried out
exasperans, roughening
exasperatus, roughened
exaspero, to roughen
excavatio, **onis**, *f.*, an excavation, hollowing out
excavatus, hollowed out
excedens, exceeding
excentric, out of the center, lateral
exciple, the outer wall or covering of an apothecium
excipuliformis, cup-shaped
excipulum, *i*, *n.*, exciple, margin
exclusus, excluded, separated
excrecens, growing out
excussus, made, molded
excutiens, shaking out
exemplaris, model
exemplarium, *ii*, *n.*, specimen, sample
exemplum, *i*, *n.*, an example
exesus, consumed, destroyed
exhibens, exhibiting
exigens, scanty
exiguitas, **atis**, *f.*, smallness, scantiness
exiguus, little, small
exilis, thin, slender
eximie, exceedingly
existimo, to estimate
exitus, *us*, *m.*, a departure, escape
exobasidial, separated by a wall from the basidium; with exposed basidia
exogenus, arising on the outside
exoletus, disused, obsolete
exoperidium, *ii*, *n.*, outer peridium
exordiens, beginning
exoriens, arising
exornatus, furnished, adorned
exosporium, *ii*, *n.*, **exospore**, outer wall of the spore
expallens, becoming pale
expers, free from, without
explodens, exploding
expulsus, expelled
exquisite, beautifully
exsertus, **exserted**, thrust out
exsiccatio, **onis**, *f.*, a drying out
exsiccatus, dried out
exsiliens, escaping
exsuccus, without milk or juice
exsurgo, to rise up
extans, projecting, protruding
extensio, **onis**, *f.*, extension
externus, external
extimus, outermost, ultimate
extra, without, outside

extrico, to extricate
extrinsecus, from without
extrorsum, toward the edge
extus, outside
exuvium, i, n., spoils, waste

F

fabiformis, bean-shaped
fabrica, ae, f., texture
facies, ei, f., face, form
facilis, easily
fagineus, beechen
falcatus, *falcate*, scythe-shaped, curved
falciformis, beak-shaped, scythe-shaped
familia, ae, f., family
familiola, ae, f., a little family
farctus, stuffed
farina, ae, f., meal, flour
farinaceus, mealy
fascia, ae, f., fascicle
fasciatus, grouped
fasciculatus, *fasciculate*, fascicled, in bundles
fastigiatus, bunched
fatiszens, disappearing, breaking up
favosus, hollow
femineus, feminine
fenestratus, with windows or openings
ferc, almost
fermentatio, onis, f., fermentation
fermentum, i, n., yeast
ferruginascens, turning rust-colored
ferrugineus, rust-colored
ferrumequinum, i, n., a horse-shoe
ferrum, i, n., iron
fibra, ae, f., a fiber, filament
fibrilla, ae, f., small fiber
fibrillula, ae, f., a little fibril
fibrosus, fibrous
fictitius, fictitious, false
filamentosus, *filamentous*, thread-like
filia, ae, f., daughter
filiformis, *filiform*, thread-shaped
filiger, filament-bearing
filum, i, n., thread
fimbria, ae, f., fringe
fimbrians, fringing
fimbriatulus, slightly fringed
fimbriatus, *fimbriate*, fringed
fimicola, *fimicole*, dwelling on dung
fmus, i, m., dung
findo, to cleave, divide
finis, is, m., end, limit

firmulus, somewhat firm
fissilis, cleft, ruptured
fissuratus, fissured, split
fissus, split
fistulosus, hollow
flabellate, fan-like
flabelliformis, fan-shaped
flaccidus, weak
flagella, ae, f., lash
flagellatus, bearing a long bristle or thread
flagelliformis, lash-like
flamens, flame-colored
flavens, yellowing
flavidus, yellowish
flavus, yellow
flexuosus, *flexuosus*, full of turns or windings
flexus, bent
flocciformis, tuft-like
floccosus, *floccose*, cottony
floccus, i, m., tuft
floralis, *floral*, of flowers, flowery
floricole, living on flowers
flumen, inis, n., river
fluvius, ij, m., a river
fluxilis, flowing
foedatus, dark, soiled
foetidus, with a bad odor
foetus, productive
foli-caulicole, growing on leaves and stems
foliicola, *folicole*, living on leaves
foliose, like a leaf in form
folium, ii, n., leaf
foramen, inis, n., a hole
forficulate, scissor-shaped
forma, ae, f., form
formans, forming
formo, to form
formosus, beautiful
fornicatus, arched, vaulted
fornix, icis, m., a vault
forsan, perhaps
forsitan, perhaps
fortasse, perhaps
forte, strongly
fovens, nourishing
fracidus, soft, mellow
fractus, broken
fragilis, fragile
fragmentum, i, n., fragment
frequens, frequent

- friabilis*, falling to pieces
frigidarium, ii, n., a cold place, cold storage
frondosus, leafy
frons, dis, f., a leaf
fruticola, living on fruits
fructiferus, *fructifer*, fruit-bearing
fructificans, fruiting
fructificatio, nis, f., a fruiting
fructus, us, m., fruit
frustulatus, fragmentary
frustum, i, n., a bit, piece
fruticosus, *fruticose*, shrub-like
fruticulosus, *fruticulose*, somewhat shrub-like
fucatus, colored
fucicole, living on *Fucus*
fugans, fleeting
fulciens, supporting, propping
fuliginus, *fuliginous*, sooty
fuligo, inis, f., soot
fulvus, supported
fulvellus, somewhat tawny
fulvescent, becoming tawny
fumagineus, *fumaginous*, smoky
fumago, inis, f., smoke, soot, sooty subiculum
fumidus, smoky
fumosus, smoky
fundus, i, m., bottom
fungicola, *fungicole*, growing on fungi
fungillus, i, m., a little fungus
fungus, i, m., a fungus
funicularis, rope-like
funiculus, i, m., a little rope
funiformis, rope-like
funis, is, m., rope, cord
furcatus, *furcate*, forked
furfur, uris, m., bran
furfuraceus, bran-like, powdered
furfurellus, somewhat covered with bran
fuscatus, darkened
fuscillus, somewhat dark
fuscescens, darkening
fuscidulus, dark
fuscidus, dark
fuscus, dark, or dark brown
fusiformis, *fusiform*, spindle-shaped
fusisporus, with spindle-shaped spores
fusoideus, *fusoid*, spindle-shaped
- G**
- galeiformis*, helmet- or hood-shaped
galeriformis, cap-shaped
gamete, sex-cell
gangliformis, forming knots
gangligerus, bearing knots
gaudeo, to rejoice, delight
gelatina, ae, f., gelatine
geminatus, *geminat*, paired, twinned
gemmaferus, bearing buds
gemmaferus, producing buds
generans, generating
genesis, is, f., origin
geniculatus, bent
genuflexus, bent
genuinus, genuine, authentic
genus, eris, n., genus
gerens, bearing
germinans, germinating
germinatio, onis, f., germination
germinativus, germinating
gero, to bear, have, exhibit
gibbosus, swollen
gigastylosporus, with very large stylospores
gignens, producing
gigno, to bear
gilvus, brownish
glaber, smooth
glabrescens, becoming smooth
glacies, ei, f., glacier, ice
glans, glandis, f., nut
glareosus, gravelly
glaucescens, turning bluish-green
glaucus, sea-green
gleba, ae, f., soil, mass
globosus, *globose*, rounded
globuliger, bearing a ball
globulus, i, m., a globule
gloeocystidia, cystidia of gelatinous or horny consistency
glomerula, ae, f., a little mass
glomerulatum, in heaps
gluten, inis, n., glue
glutinosus, *glutinous*, gluey
gonidium, ii, n., an algal cell
gossypinus, cottony
gracilis, graceful, slender
gradatim, gradually
gradus, us, m., grade, step
gramen, inis, n., grass
gramineus, grassy
graminicola, growing on grass
grandis, large
grandiusculus, somewhat large
granulatus, granular
granulosus, granular

graphidoideus, like *Graphis*, long and cleft
gratia, ae, f., favor, acknowledgment
graveolens, of unpleasant odor
gregarius, **gregarious**, in clusters
gregatim, in clusters
grex, gregis, m., a flock
griseolus, grayish
griseus, gray
grossus, thick
grumosus, heaped
grumulus, i, m., a heap
gumosus, gummy
gutta, ae, f., a vacuole
guttatus, with little drops
guttula, ae, f., a drop or vacuole
guttulosus, with drops
gyalectoideus, like *Gyalecta*
gypseus, gypsum-like
gyrosus, **gyrose**, spiral

H

habeo, to have
habitatio, onis, f., habitat
habitus, us, m., habit
hactenus, up to the present time
haemophile, **hemophile**, living in blood
haerens, adhering
haereo, to hold to
halos, o, f., a circle, halo
hamatus, **hamate**, hooked
haud, not at all
haustorium, ii, n., a sucker
helicoides, spiral-like
heliotropicus, **heliotropic**, turning to the sun
helvolus, deep purple
herba, ae, f., a plant
herbicola, dwelling on herbs
heteroecus, **heteroecious**, on two hosts
heterogamete, one of two unlike sex-cells
heterogamic, with unlike sex-cells
heterogeneous, **heterogeneous**, different
heteromorphus, **heteromorphic**, of different kinds
hexagonus, **hexagonal**, six-angled
hexasporus, six-spored
hians, gaping
hiascens, gaping
hibernans, resting
hic, **haec**, **hoc**, this
hicilluc, here and there
hiems, emis, f., winter
hilum, i, n., dot, mark, scar

himantoideus, like *Himantia*, velvety
hinc, hence
hinc illinc, on each side, here and there
hirtellus, somewhat shaggy
histogenus, produced directly from tissue, without conidiophores
histolysis, the dissolving of a wall or tissue
hodiernus, of today
holophytic, chlorophyllous, independent
homoeecus, on one host
homogeneous, **homogeneous**, uniform
homomorphus, alike, of one form
horizontalis, horizontal
hornotinus, of this year
horny, like horn in texture
horridus, rough, shaggy
hortus, i, m., a garden
hospes, itis, m., a host
hospitalis, of a host
huc, hither, in this direction
humectatus, wet
humectus, moist
humicole, growing on soil
humidulus, moist
humilis, low, small
humistratus, moist
humosus, earthy
hyalinulus, somewhat clear
hyalinus, hyaline, clear
hyalosporus, with clear, one-celled spores
hydrophilus, aquatic
hygrometricus, absorbing moisture
hygrophanus, translucent
hymeniferus, membrane-bearing
hymenium, ii, n., fruiting surface, consisting of asci or of basidia
hymenophorum, i, n., that which bears the hymenium
hypertrophians, **hypertrophying**, enlarging
hypertrophy, abnormal development, overgrowth
hypha, ae, f., fungus filament
hyphasma, atis, n., the mycelium
hyphoideus, hypha-like
hyphomycetus, mold-like, cobwebby
hyphopodium, a more or less lobed appendage to a hypha
hyphula, a short or delicate hypha
hypocreaceus, like *Hypocrea*, fleshy and bright-colored
hypodermicus, under the epiderm
hypogaeus, **hypogean**, underground

hypogenus, on the under side
hypophloeodus, under the bark
hypophyllus, on the under side of leaf
hypostroma, atis, n., a foot-like base, usually of a stroma
hypothallus, i, m., hypothallus
hypothecium, the area just below the layer of asci
hypoxylod, like *Hypoxylum*, forming a pulvinate or crustose stroma
hysteriformis, like *Hysterium*, long and cleft
hysterinus, long and cleft as in *Hysterium*
hysteroid, like *Hysterium*, long and cleft
hysterophytic, without chlorophyll, dependent
hysterothecium, an oblong or linear perithecium opening by a cleft

I

ibi, there, then
icon, onis, f., an image, figure
idem, the same
ideoque, therefore
idoneus, fit
igitur, therefore, accordingly
ignotus, unknown
ilico, there, on the spot
imbricatus, imbricate
immaculatus, without spots
immarginatus, without a margin
immaturus, young
immediate, direct
immersus, sunken
immotus, firm, immovable
immutatus, unchanged
impalpabilis, extremely fine and minute
imperspicuus, not clear
impervius, impervious, impassable
implens, filling
implexus, infolded
impolitus, not polished
impositus, imposed
imprimis, especially
improbabile, improbably
imus, lowest
inaequaliter, unequally
inaequilateralis, unequal-sided
inaequipolaris, with unequal poles
inanis, empty
inarticulatus, without divisions
incaeratus, hidden
incarnatus, pink
incertus, uncertain
incisio, onis, f., incision, cutting
incisus, cut
inclinatus, bent
inclusus, included, inclosed
incoctus, not cooked
incolens, dwelling in
incoloratus, without color
inconditus, confused, unformed
incrassatus, somewhat thickened
incrassatus, broadened, thickened
increasco, to grow in, increase
incrustans, encrusting
incrustatus, encrusted
incumbens, lying down
incurviusculus, somewhat incurved
incusus, forged, made
inde, then, thence, therefore
indeterminatus, indefinite
indico, to indicate
indigito, to utter, announce
indivisus, undivided
indoles, is, f., nature, natural ability
indumentum, i, n., a covering
induratus, hardened
indurescens, growing hard
indusium, ii, n., indusium, cover
indutus, covered
ineptum, improper
inermis, unarmed
infarciens, stuffing, filling
infectus, spoiled, diseased
inferior, lower
inferus, below, lower
infestans, infesting
inficiens, infecting
infimus, lowest
infixus, fastened in
inflans, inflating
inflatus, inflated
infossus, sunken
infra, lower, below
infundibuliformis, funnel-shaped
infuscatus, darkened
initio, at first
initium, ii, n., the beginning
innatus, innate, internal, covered
innotesco, to become clear
innumerus, innumerable
inordinatus, without order
inquinans, blackening
inquinatus, dirty
inquirendus, to be investigated
insculptus, insculptate, hollowed in

insectum, i, n., insect
insertio, onis, f., insertion
insertus, inserted
insidens, seated upon
insimul, at the same time
insitus, ingrafted
inspersus, scattered
inspissatus, thickened
instar, like
instructus, built up
insuetus, unusual
insula, ae, f., an island
integer, whole
intense, intensely
intercalary, in the midst of, between
interdum, sometimes
interim, meanwhile
intermedius, intermediate
intermixtus, mixed with
internervius, between the nerves
internodus, internode, space between two nodes or joints
internus, internal
interspersus, interspersed, scattered
interstitium, ii, n., a space
intertextus, intertwined
intracellularis, within a cell
intrans, entering
intricatus, intertwined
intuitus, us, m., look, view
intumescens, swelling
intus, within
invasus, invaded
inveniens, finding
inversus, inverted
investiens, covering
invicem, in turn, mutually
involucrum, i, n., involucre
involute, with the edges rolled inward
ipse, self
irregularis, irregular
irregulariter, irregularly
irrepens, creeping in
irroratus, bedewed
isabellinus, dull, tawny
isarioideus, isarioid, like *Isaria*, with a cylinder of hyphae
isogamete, one of two similar sex-cells
isogamic, producing equal sex-cells
isthmus, i, m., a connection
itaque, therefore
iteratus, repeatedly
iterum, again, once more

J

jacio, to throw
jam, now, already
jamdudum, this long time
jodicus, of iodine
jodus, i, m., iodine
junior, younger, young
jus, juris, n., law, right
juvenilis, young
juventus, utis, f., youth
juxta, near

K

kermesinus, carmine

L

labefactus, sunken, shaken, ruined
labiatus, lipped
labium, ii, n., lip
labrum, i, n., lip
labyrinthine, like a maze
lac, lactis, n., milk
laccatus, varnished, shining
lacerans, tearing
laceratus, lacerate, torn
lacerus, torn
lacina, ae, f., a tear
laciniatus, laciniate, torn lobed
lacrimiformis, tear-like
lactescens, milky
lacteus, milky
lactiginosus, filled with milk, milky
lacuna, ae, f., a hole
lacunosus, lacunose, with hollows
lacus, us, m., a lake
laeticolor, bright-colored
laetus, bright
laevis, smooth
lageniformis, lageniform, flask-shaped
lamella, ae, f., gill
lamelloid, plate-like, resembling the gills of mushrooms
lamina, ae, f., scale, layer, blade
laminaris, leaf-like
lanatus, lanate, woolly
lanceolatus, lance-shaped
languens, languescens, drooping, wilting, withering
languidus, weak, drooping
lanosus, woolly
lanuginosus, woolly
laricinus, of larch
larva, ae, f., larva

- lateritius*, brick-red
latitans, concealing, hiding
latitudo, inis, f., width
latusculus, somewhat wide
latus, eris, n., the side
latus, broad, wide
laxus, loose
lecanorine, like *Lecanora*, the exciple containing algae
lecideine, like *Lecidea*, with carbonous proper exciple
lectus, collected
lego, to collect
leiosporus, with smooth spores
lenis, soft, smooth, mild
leniter, slightly, gently
lenticularis, *lenticular*, lens-shaped
lentiformis, *lentiform*, lens-shaped
lentus, tough, flexible
leporinus, of a hare
leprosus, scab-like
leptodermus, thin-walled
leucosporus, with white spores
levigatus, smooth
levis, light, smooth
liber, free
liberans, freeing
liberatus, freed
licet, it is permitted
lichenicola, *lichenicole*, growing on lichens
lichenoides, lichen-like
lignatilis, of wood
ligneus, woody
lignicola, *lignicole*, growing on wood
lignum, i, n., wood
lilacinus, lilac-colored
limbatus, bordered
limbum, i, n., limb, border
limes, itis, m., limit
limitatus, limited
limoniformis, *limoniform*, lemon-shaped
linea, ae, f., line
linearis, linear
lineola, ae, f., little line
lineolatus, with fine lines
linguiformis, tongue-shaped
liquefaciens, liquefying
liquo, to melt
lirella, ae, f., furrow
lirelliform, furrow-like
lividus, livid, purple
lobulatus, somewhat lobed
locatus, located
locellatus, with chambers
locellus, i, m., a little cell
loco, to place, locate
loculatus, with chambers or hollows
loculiferus, containing hollows
loculiform, chamber-like
loculoid, chamber-like or containing chambers
loculus, i, m., *locule*, place, cell, hollow
locus, i, m., place
longicollus, with long beaks
longior, longer
longitrorsum, longitudinally
longitudinalis, lengthwise
longus, long
lophus, i, m., a crest
lubricus, slippery
lucidus, *lucid*, clear
luculenter, very well
ludibundus, playful
lumen, inis, n., opening
lunatus, *lunate*, crescent-shaped
lunulate, crescent-shaped
luridus, lurid
lutescens, yellowish
luteus, yellow
lutosus, muddy
lux, lucis, f., light

M

- maceratus*, softened
macro-, large
macula, ae, f., a spot
macularis, spotted
maculicola, *maculicole*, dwelling in spots
maculiformis, spot-shaped
madidus, moist, wet
mador, oris, m., moisture
magis, more
magniguttatus, with one or two large globules
magnitudo, inis, f., size
magnus, great, large
majusculus, somewhat large
male, poorly
mamillaris, protuberant
mamilliformis, shaped like a papilla
maneo, to stay, remain
manifestus, evident
manipulus, i, m., bundle
mappa, ae, f., a map
marcescens, withering
marginatus, margined
margo, inis, m., and f., margin
marmoratus, marble-like

- massa*, ae, f., mass
massula, ae, f., a little mass
matrix, belonging to the matrix
matrix, icis, f., *matrix*, layer or tissue of host
matrescens, ripening
maturus, mature
maxime, greatly
mazaedium, i, n., a dough-like mass of spores and paraphyses
medietas, atis, f., middle
mediocris, average
mediocriter, moderately
medius, i, m., medium
medulla, ae, f., the pith, medulla
medullary, belonging to the pith or medulla
medullatus, stuffed, pithy
melanosporus, with black spores
melioides, like *Meliola*
melius, better
melleus, honey-colored
mellinus, honey-colored
membrana, ae, f., membrane
membranaceus, *membranaceous*, *membranous*, thin or membrane-like
memoria, ae, f., memory
mens, mentis, f., mind
mensis, is, m., month
merda, ae, f., dung
merenchymaticus, with many cells
merens, deserving
meridionalis, southern
mesogenus, *mesogenous*, borne in the middle
mesopus, with central stalk
metallicus, metallic
metiens, measuring
metuliformis, pyramid-like
micans, sparkling, glittering
micro-, small
microconidiophorus, bearing small conidia
microcystis, small-celled
micronemeus, with short hyphae
microscopium, ii, n., microscope
migro, to move
miniatus, bright red
minimum, least
minor, smaller
minuties, ei, f., detail
minutus, minute
mire, wonderfully, exceedingly
mitis, pleasant, mild
mitratus, miter-shaped
mobilis, *mobile*, moving
modice, moderately
molecularis, molecule-like
mollis, smooth
molliusculus, somewhat smooth
monascus, *monascous*, containing a single ascus
moneo, to caution, warn
monile, is, n., a chain, necklace
moniliformis, *moniliform*, chain-like
monocephalus, *monocephalic*, one-headed
monocyclus, with one cycle
monoecus, *monoecious*, with both sex organs on the same plant
monophagous, mycelium confined to a single host-cell
monoplastus, uniform, with one protoplast
monospermus, one-spored
monosporus, one-spored
monostichus, *monostichous*, in one row
mons, tis, m., a mountain
monstrosus, monstrous
montanus, of mountains, mountainous
montosus, mountainous
morbosus, diseased
morbis, i, m., disease, malady
moriens, dying
moriformis, mulberry-like
mos, moris, m., manner, use
motilis, *motile*, able to move
movens, moving
mox, at length
mucedineus, white and cottony
mucidus, moldy
mucilago, inis, f., mucilage
mucor, oris, m., mold
mucosus, *mucose*, slimy, mucous
mucro, onis, m., a point
mucronatus, pointed
mucronulatus, with a little point
mucronulus, i, m., a little point
mucus, i, m., mucus, mucilage
multifidus, *multifid*, many-divided
multiform, of various shapes
multiguttatus, with many oil-drops
multilocularis, many-celled
multiloculatus, with many cells
multinucleate, with many nuclei
multisporus, many-spored
multizonatus, with many zones
multoties, many times, often
multus, much

munitus, furnished
murialis, muriform
muricatus, muricate, dotted, spiny
muriculatus, muriculate, spiny
muriformis, muriform, with cross and longitudinal walls
murinus, mouse-colored
murus, i, m., wall
muscosus, mossy
mutans, changing
mutatus, changed
muticus, muticate, not pointed
muto, to change
mutue, mutually
mutuus, mutual
mycelialis, mycelial
mycelicus, mycelial
mycelium, ii, n., *mycelium*, web of hyphae
mycogenus, dwelling on fungi
mycologus, i, m., a student of fungi
myochrous, mouse-colored
myriosporous, with numerous spores
mytiliform, shell-like

N

napiformis, turnip-shaped
nascens, arising
nascor, to be born
natalis, native
nafragium, ii, n., shipwreck
nauseosus, ill-smelling
navel, point of attachment
navicularis, boat-shaped
nebulosus, nebulous, cloudy, dark
ne, no, not
nec-non, *necnon*, and also
nectriaceus, like *Nectria*
nemorosus, woody, shady
nempe, certainly, without doubt
neque, and not
nervicola, growing on veins
nervisequus, *nervisequens*, following the veins
nescio, not to know
neutiquam, by no means, not quite
nidulans, nesting
nidulor, to nest
niduo, to nest
niger, black
nigredo, inis, f., blackness
nigresco, to grow black
nigricans, blackening
nigrifactus, blackened
nigrificatus, made black

nigrolimitatus, black-lined
nigropilus, black-hairy
nigropunctulatus, black-dotted
nigrostrigosus, black-hairy
nimis, too much, exceedingly
niinium, too, too much
nisi, unless
nitens, shining
niteo, to shine
nitor, oris, m., splendor, luster
niveus, snow-white
nobilis, grand
nodosus, with many or large joints
noduliferus, bearing knots
nodulosus, with joints
nodus, i, m., a joint, knot
nomen, inis, n., a name
non, not
nondum, not yet
nonne, not
nonnihil, somewhat
nonnisi, except
nonnullus, some
nonnumquam, sometimes
notatus, marked
notus, known
novus, new
nubecula, ae, f., a little cloud
nubilosus, cloudy
nucleiferus, nucleus-bearing
nucleus, i, m., center, nucleus
nudiusculus, somewhat naked
nudus, naked
nullimodus, in no wise
nullus, none
numerusus, *numerous*, many
numerus, i, m., a number
numquam, never
nunc, now
nutiquam, *ne-utiquam*, by no means
nuto, to incline
nutrix, icis, f., host
nux, nucis, f., a nut

O

ob, for, toward, on account of
obclavatus, reverse club-shaped
obconicus, reverse conical
obducens, covering
obduco, to cover
oblique, obliquely
obliterans, disappearing
obliteratus, lost, destroyed
oblongatus, oblong

- obpyriformis*, *obpyriform*, reverse pear-shaped
obrutus, covered
obscurus, dark
observandum, to be observed
observatus, seen, found
obsessus, surrounded
obsitus, covered, filled
obsolescent, nearly obsolete, disappearing
obsolete, rudimentary or lacking
obsoletus, *obsolete*, lacking
obtectus, covered
obtegens, covering
obtritrus, broken, crushed, rubbed
obturaculum, i. n., opening
obtusangulus, with obtuse angles
obtusatus, obtuse
obtutus, us, m., a looking at
obvallatus, surrounded
obvelo, to cover
obvius, clear, open
obvolutus, wrapped up, rolled up
obvolvens, enveloping
occupans, occupying
ocellatus, with openings
ochraceus, pale yellow
ochrosporous, with yellow or yellow-brown spores
octavus, eighth
octo, eight
octonus, in eights
octoseptatus, with eight cross-walls
octosporus, eight-spored
octuplus, eightfold
oculo armato, with the microscope or lens
oculo nudo, with unaided eye
oleosus, oily, with oil drops
olidus, smelling, odorous
oligosporus, few-spored
olim, formerly
olivaceus, olive
olivascens, *olivascens*, becoming olive
omissus, omitted
omnino, everywhere, entirely
oosporous, with resting spores formed by the union of unlike sex-cells, e. g., of egg and sperm
opacus, opaque
opalinus, clear
ope, by means of
operculatus, *operculate*, with a lid
operculiformis, lid-shaped
operculum, i. n., a cover, lid
oppidum, i. n., a town
oppletus, filled
oppositus, placed against, opposed
orbicularis, *orbicular*, round
orbiculatim, circularly
orbis, is, m., a circle
ordo, inis, m., order
organum, i. n., an organ
oriens, arising
orientalis, eastern
orificium, i. n., opening
origo, inis, f., origin
orior, to arise
oriundus, descended
ornatus, furnished
orthotropus, straight
ortus, arisen
os, oris, n., mouth
oscillans, oscillating
osculum, i. n., little mouth or opening
ostendo, to show
ostiolatus, *ostiolate*, with a mouth
ostiolum, i. n., ostiole, opening
ovalis, oval
ovaricola, growing in ovaries
ovatus, egg-shaped
ovinus, of or belonging to sheep
ovoideus, nearly egg-shaped

P

- pachydermaticus*, thick-walled
pachypleurus, thick-walled
paene, nearly
paenultimus, next to the last
pagina, ae, f., page, side
paleaceus, chaffy, chaff-like
paliformis, *paliform*, stake-shaped, pali-sade-like
pallescens, turning pale
pallidus, pale
palmatus, *palmate*, hand-like
palmicola, growing on palms
palpebra, ae, f., eyelid
paludosus, marshy
palumbinus, dove-colored, grayish
palus, udis, f., a marsh, swamp
palus, i. m., stake
panicula, ae, f., a panicle
paniculatus, *paniculate*, branched
panis, is, m., bread
pannosus, *pannose*, ragged
pannum, i. n., a rag, cloth
papilla, ae, f., nipple
papillaris, *papillate*, with a nipple

- papilliformis*, like a nipple
papillula, ae, f., a little nipple
papillulatus, *papillulate*, with a very small nipple
papulosus, with many pustules
papyraceus, papery
paradoxus, strange, contrary
paraphysate, with paraphyses
paraphyses, sterile hyphae between asci
paraphysoids, plates of cellular tissue between asci, more or less like paraphyses
paratus, prepared, designed
parcus, few, scanty
parenchymaticus, parenchyma-like
parenchymic, like parenchyma, cellular or appearing so
parenchymoid, more or less like parenchyma, cellular
paries, etis, m., a wall
paritas, atis, f., equality
pariter, equally, as well
paroechia, ae, f., parish
pars, partis, f., a part
partim, partly, some
partitus, divided
parum, too little, not very
parvulus, small
parvus, small
pascuum, i, n., pasture
passim, everywhere
patellaris, dish-like
patellate, like a plate
patelliformis, shaped like a dish
patelloid, more or less dish-like
patens, spreading
patenter, openly
pateo, to extend, to be clear
pator, to support, endure
patulus, spreading
paucilocularis, few-celled
paucus, few
paulatim, gradually
paulisper, for a little while
paulo, a little, somewhat
pectinate, like a comb
pectinatus, comb-like
pedatus, foot-like
pedicellatus, *pedicellate*, with a pedicel
pedicellus, i, m., a pedicel
pediculatus, pedicelled
pedunculatus, stalked
pedunculicola, growing on peduncles
pellicle, skin, covering
pellicula, ae, f., a little skin
pelliculosus, with a covering
pelluciditas, atis, f., clearness
pellucidus, *pellucid*, clear
peltatus, shield-shaped
pendo, to hang
pendulus, hanging
penetrans, penetrating
penicillate, brush-like
penicilliformis, brush-like
penitus, inward, inner, inwardly
pentagonus, *pentagonal*, five-sided
per, through, very
peraffinis, closely related
perbrevis, very short
percipiens, perceiving
percurrent, running throughout
percursus, run through
perdurans, hardening, lasting
perduro, to last
perennans, perennial
perennis, perennial
perenno, to continue, endure
perexiguus, very thin
perexilis, very slender
perfectus, perfect, complete
perforans, perforating
perforate, pierced
perforatus, perforated
perfossus, hollowed out
pericarpium, ii, n., *pericarp*, covering; also, the whole spore-body
peridermicus, belonging to the periderm
peridermium, ii, n., *periderm*, covering
peridiole, a small seed-like body in a peridium
peridium, ii, n., *peridium*, wall; else, the whole spore-body
periphericus, *peripheral*, around the edge
periphyses, filaments in an ostiole or canal
peristomium, ii, n., mouth
perithecialis, perithecial
perithecicole, parasitic in a perithecium
perithecigerus, perithecium-bearing
perithecioideus, perithecium-like
peritheciphorus, bearing perithecia
perithecium, a closed ascus fruit
perluceo, to shine through
permultus, very much
peronatus, rough, rough-booted
perparum, very little
perquam, extremely
perrumpens, breaking through

- persicinus**, peach-colored
persistans, persistent
perspicuus, transparent
perspicuus, clear
persuasus, convinced
pertenuis, very thin
pertineo, to belong
pertusus, protruded
pervius, passable
pes, pedis, m., foot
petiolum, i, n., petiole
petrifactus, made like rock, hardened
pezizoideus, **pezizoid**, cup-fungus-like, cup-like
phacidoideus, like *Phacidium*, black and disk-like
phaeophragmeus, with dark, transeptate spores
phaeosporus, with dark, one-celled spores
phaseoliformis, bean-shaped
phialiformis, saucer- or cup-shaped
phomatoideus, like *Phoma*
phyllachoroid, like *Phyllachora*, the stroma fused with the epiderm
phylogenus, **phylogenous**, borne on leaves
phyllostictoides, like *Phyllosticta*
phytogenus, **phytogenous**, dwelling on plants
phytographus, i, m., a botanist
phytophilus, **phytophilous**, growing on plants
pictura, ae, f., a painting
pictus, colored
pileatus, **pileate**, cap-shaped
pileiform, like a cap
pileus, i, m., a cap
pilosellus, somewhat hairy
pilosus, **pilose**, with hairs
pilum, i, n., a hair
pineus, piny
pingo, to paint
pinna, ae, f., a feather, leaflet
pinnatus, **pinnate**, feather-like
piperatus, peppery, pungent
piriform, pear-shaped
pirinversiformis, reverse pear-shaped
piscis, is, m., a fish
pisum, i, n., pea
placenta, ae, f., **placenta**, ovuliferous tissue
placentiformis, placenta-like, cake-like
plaga, ae, f., a spot
plagula, ae, f., a little spot
plaguliformis, spot-like
planta, ae, f., a plant
plantula, ae, f., a little plant
planus, **plane**, flat
plasma, atis, n., plasm, mass
plasmodium, ii, n., protoplasm-like mass
plectenchym, tissue woven of fibers or hyphae
plectenchymic, **plectenchymoid**, like plectenchym, woven or fibrous
pleiosporus, many-spored
plenus, full
plerumque, for the most part
pleuracrogenus, borne at the tip and at the sides
pleurogenus, **pleurogenous**, borne on the walls or sides
plica, ae, f., a fold
plicatus, **plicate**, folded
pliciformis, fold-form
plumbeus, lead-colored
plumosus, **plumose**, plummy, feathery
plures, many
pluriarticulatus, many-celled, many-jointed
pluriciliate, with many cilia
pluries, often
plurifurcatus, many-forked
pluriguttulatus, many-guttulate
plurilocellatus, with many hollows
pluriperforate, with several openings
pluristratosus, many-layered
poculiformis, cup-shaped
podetium, i, n., a stalk-like or cup-like erect thallus
polaris, polar
politus, polished
polleo, to be able, avail
pollex, icis, m., thumb
pollicaris, thumb-like, an inch long
polus, i, m., a pole
poly-, many
polyascus, with the asci in a single hymenium, not separated by sterile bands
polyascus, with many asci
polyblastus, many-celled
polycephalus, **polycephalous**, with many heads
polyedricus, **polyhedral**, many-sided
polygonus, with many angles
polyphagous, mycelium occupying several to many host-cells
polyrhizus, with many roots

- polystichus, polystichous**, in many rows
pondus, eris, n., weight
populus, i, f., poplar
poroid, with more or less evident pores
porosus, with pores
porrectus, extended, protracted
porrigo, to stretch out
portiuncula, ae, f., small gallery
porus, i, m., a pore
positus, placed
possum, to be able
postea, hereafter
posterius, later, afterward
postice, at the back
postremus, last
potius, rather
praebens, offering, exhibiting
praecedens, preceding
praecipue, especially
praeclarus, distinguished
praecox, early, abundant
praeditus, furnished
praefendum, preferred
praelongus, very long
praeprimis, especially
praesens, present
praesertim, particularly
praestans, distinguishing, excelling
praesumptus, assumed, presumed
praeter, past, against, besides
praetereaue, besides, moreover
praeteritus, past
pratium, i, n., a meadow
primitivus, primitive, original
primitus, at first
primus, first
prioritas, atis, f., priority
prismaticus, prism-like
pristinus, pristine, early, original, primitive
privus, without, deprived
pro, for
proba, ae, f., proof
probabilis, probable
procerus, tall
processus, us, m., projection
procreans, generating, producing
procul, far, remote
procumbens, procumbent, prostrate
prodeuns, projected
productus, carried out, produced
proferens, offering, producing
profiscor, to begin, arise
profunditas, atis, f., depth
profundus, deep
projectus, thrown off
proles, is, f., race, offspring
proliferate, to extend by offshoots or renewed growth
proliferus, proliferous, produced, proliferate
proliger, bearing offspring
prolongatio, onis, f., prolongation, lengthening
promiscuus, promiscuous, mixed, indiscriminate
promycelium, i, n., promycelium, germinating tube or cell series
prope, near
proper exciple, an apothecial covering or wall without algae
propinquus, adjacent
propius, more nearly, closer
propter, near, because of, on account of
propulsus, expelled
proratione, comparatively
prorsus, forwards, exactly
prorumpo, to break through
prosenchymaticus, prosenchymatic, consisting of long cells or filaments
prosenchymic, like prosenchyma, fibrous in structure
proteus, changing, variable
prothecium, a primitive or rudimentary perithecium, as in Gymnascaceae
protractus, extended
protrudens, projecting
provetus, prolonged, advanced
proveniens, coming
pruinosis, pruinose, powdery
pruinulosus, somewhat powdery
pseudo-, false
pseudocyphella, a pit-like structure resembling a cyphella, on the under side of some lichen thalli
pseudoparaphysis, a paraphysis-like filament found in other groups than Ascomycetes
pseudoparenchyma, false parenchyma, a tissue looking like parenchyma but formed of threads
pseudoperidium, a peridium, an enclosing membrane
pseudoplasmodium, ii, n., false plasmodium
pseudopodium, ii, n., false root, lobe
pseudostiolum, ii, n., false ostiole
pseudostroma, atis, n., false stroma

pseudostromaticus, resembling a stroma
pseudothallus, i, m., false thallus
puberulus, somewhat hairy
pubes, is, f. hairy
pubescens, hairy
puccinoideus, like *Puccinia*
pulchellus, beautiful
pulcher, beautiful
pulchre, beautifully
pulpa, ae, f., pulp, mass
pulposus, pulpy, fleshy
pulveraceus, powdery
pulverulentus, powdery
pulvinatus, *pulvinate*, like a cushion,
 strongly convex
pulvinoid, more or less cushion-like
pulvinulus, i, m., a little cushion
pulvis, eris, m., powder
punctiformis, *punctiform*, dot-like
punctulans, dotting
punctulatus, punctate, dotted
purpurascens, becoming purple
purus, pure
pusillus, tiny
pusio, onis, m., a growth
pustula, ae, f., a small swelling
pustulate, pertaining to a swollen mass
putamen, inis, n., shell
puto, to clean, adjust, consider
putredo, to decay
putrescens, decaying
putris, decaying
pycnicole, living in pycnium or pycnidium
pycnidicus, *pycnidial*, of a pycnidium.
pycnidium, i, n., *pycnidium*, receptacle
 bearing conidia
pycnium, ii, n., the spermagonium or
 pycnidium of rusts
pyconoconidium, the conidium produced
 in a pycnidium
pycnospore, a pycnidial conidium
pyreniformis, *pyreniform*, shaped like a
 nut
pyriformis, pear-shaped
pyxidatus, like a box

Q

quadrococcus, of four round cells
quadripartitus, four-divided
quadrisporus, four-spored
quadrum, i, n., a square
qualis, like
quam, than
quandoque, whenever, at some time

quartus, fourth
quasi, almost
quater, four times
quaternus, by fours
quattuor, four
quercinus, oaken
quia, because
quidam, a certain, somebody, something
quinqueseptatus, five-septate
quisque, each
quisquiliae, arum, f., dirt, trash
quoad, as long as, as much as
quod, that
quoque, also
quotannis, annually
quovis, to any place whatever

R

racemulus, i, m., a little raceme
racemus, *raceme*, i, m., a bunch of grapes
rachis, is, f., axis
radians, radiating
radiatim, radiately
radicalis, basal
radicans, root-like, rooting
radicatus, *radicate*, more or less rooted
radiciformis, root-shaped
radicosus, having many roots
radix, icis, f., a root
ramicola, *ramicole*, living on twigs
ramosus, *ramose*, much branched
ramulus, i, m., a little branch
ramus, i, m., a branch
rarius, more rarely
raro, rarely
rasus, leveled
ratio, onis, f., reckoning, list, affair
reabsorptus, reabsorbed
recedo, to recede, differ
recens, entis, *recent*, fresh, young
recensio, onis, f., a reviewing
receptaculum, i, n., *receptacle*, reservoir,
 chamber
recludens, opening
reclusus, disclosed, revealed
recognoscens, recognizing
rectangularis, *rectangular*, right-angled
rectangulus, rectangular
rectus, straight, true
recurvus, *recurved*, bent back
reddo, to return, restore
refertus, returned, referred
refractus, turned back
refrangens, refracting, breaking

refringens, refracting
 regio, onis, f., region
 rejectamentum, something thrown away,
 rubbish
 relatus, related
 relaxatus, relaxed, loosened, opened
 relinquens, leaving
 relinquo, to leave
 reliquus, left, remaining
 remote, distantly
 remotiusculus, somewhat distant
 reniformis, reniform, kidney-shaped
 repandus, turned back
 repens, creeping
 reperio, to find
 repertorium, ii, n., an inventory, catalogue
 repertus, found
 repete, repeatedly
 repetitus, repeated
 repletus, full
 repo, to crawl
 reptans, creeping
 res, rei, f., a thing
 resolvens, breaking up
 resorptus, absorbed
 restituo, to replace, restore, rebuild
 resupinatus, resupinate, horizontal, the
 hymenium turned up
 rete, n., retis, is, f., net
 reticulatus, reticulate, net-like
 reticulum, i, n., a net
 retiformis, net-like
 retineo, to retain, keep
 retis, is, f., a net
 retrorsus, backward
 retusus, with a little sinus
 revelo, to reveal, uncover
 revera, indeed, in fact
 revivescens, reviving
 revoco, to recall
 revolutus, folded back
 rhabarbarinus, yellow
 rhizoid, root
 rhizoideus, root-like
 rhizomorphoideus, root-like
 rhizophilus, growing on roots
 rhodosporus, with rose-colored spores
 rhomboideus, rhomboid
 rhytismoideus, like Rhytisma
 ricciformis, like Riccia, a liverwort
 rigens, stiff, rigid
 rigidulus, somewhat stiff
 rigidus, stiff
 rima, ae, f., cleft

rimosus, rimose, cleft, cracked
 ripa, ae, f., bank
 rite, rightly, fitly, well
 rivulosus, with channels
 rivus, i, m., brook
 robustus, robust
 roridus, like dew, bedewed
 ros, roris, m., dew
 roseolus, somewhat rosy
 roseus, rose-colored
 rostellatus, somewhat beaked
 rostratus, rostrate, beaked
 rostriformis, beak-like
 rostrum, i, n., beak
 rosulatus, rosette-like
 rotundatus, rounded
 rubedo, inis, f., redness
 rubellus, somewhat reddish
 rubens, reddening
 rubeolus, somewhat reddish
 ruber, red
 rubescens, growing red
 rubiginosus, rust-colored
 rubricosus, reddish
 rufescens, becoming reddish
 rufus, reddish
 rugosiusculus, more or less wrinkled
 rugosus, rugose, creased, wrinkled
 rugulosus, furrowed, roughened
 rumpens, breaking
 ruptus, broken
 rursus, backward
 rutilus, red

S

saccatus, saccate, sack-like
 saccharatus, sugared, sugary
 saccharinus, sugary
 saccharum, i, n., sugar
 sacciformis, sack-shaped
 sacculiformis, like a little sack
 sacculus, i, m., a little sack
 saepe, often
 salicinus, of willow
 salmonicolor, salmon-colored
 salmonius, salmon-colored
 saltem, at least
 samara, ae, f., key fruit
 samariform, key-shaped
 sanguineus, bloody, blood-colored
 sapidus, filled with sap, savory
 sapor, oris, m., flavor
 saprogenus, saprogenous, growing on
 decayed matter

- saprophilus*, growing on decaying matter
sarciniformis, sarciniform, packet-like
sarmentum, i, n., twig
sat, enough, sufficiently
satis, sufficient
saturatus, saturated
scaber, rough
scabridus, rough
scabriusculus, somewhat rough
scalaris, of a ladder, or staircase
scaliformis, ladder-like
scariosus, thin, papery
scheda, ae, f., sheet of paper
scio, to know
scissilis, splitting
sclerotiformis, sclerotium-like
sclerotioideus, sclerotioïd, sclerotium-like
sclerotium, i, n., sclerotium, a hard black mass
scobis, is, f., sawdust, filings
scolecosporus, with thread-shaped or acicular spores
scopulate, like a brush
scrobiculatus, roughened, furrowed
scrotiformis, bladder-like
scruposus, rough
scrutator, oris, m., an investigator
scutatus, shield-shaped
scutellatus, like a small shield
scutellum, i, n., the shield-like cover of the ascoma of *Microthyriales*
scutiformis, shield-shaped
secedens, separating
secernibilis, separable
sectio, onis, f., a section
secundarius, secondary
secundum, according to
secus, otherwise, badly
secussus, separated
sed, but
sedulus, diligent, careful
segmentiformis, segment-like
sejunctus, separate
semel, once
semen, inis, n., a seed
semi, half
semixerius, half extended
semiimmersus, half immersed
seminalis, seed-like
seminicola, growing on seeds
semipellucidus, partly clear
semiteres, half columnar
semiuncialis, a half inch
semper, always
senescens, growing old
sensim, gradually
sensus, us, m., opinion, sense
separabilis, *separable*, separating
separo, to separate
sepimentum, i, n., partition
sepono, to separate
septatus, *septate*, divided into cells
septentrionalis, northern
septulum, i, n., a little septum
sepulchrum, i, n., grave
sepultus, buried
sequens, following
sericellus, somewhat silky
sericeus, silky
series, ei, f., a series
serotinus, late
serpens, creeping
serpentinus, *serpentine*, of a serpent
serratus, *serrate*, saw-toothed
serus, late
servatus, saved, preserved
sesqui, more by half
sesquilinea, one inch and a half
sesquipedalian, very long
sessilis, seated, without a stalk
seta, ae, f., a bristle
setaceus, bearing one or more bristles
setiformis, bristle-shaped
setiger, bristle-bearing
setosus, *setose*, with bristles
setula, ae, f., a little bristle
setulose, with bristles or spines
seu, or
sexies, sixfold
sexilocularis, with six cells or locules
sexsporus, six-spored
sexsulcatus, six-furrowed
siccans, drying
siccus, dry
sigillatim, seal-like
sigmoideus, sigmoid, s-like
signatus, marked
sileo, to be silent
silva, ae, f., a forest
similaris, like
similis, similar
simple, not branched; one-celled (of spores)
simplex, icis, simple
simul, at the same time
simulate, apparently
simulo, to imitate, copy, represent
sine, without

- singularis**, peculiar, not in chains
singulus, each
sinuatus, sinuate, indented
sinuosus, crooked
sistens, comprising
sisto, to stand, place, contain
situs, placed
sociatus, grouped together
soleo, to be accustomed
solidiusculus, somewhat solid
solitarius, solitary
solitus, usual
sollertus, distinguished
solubilis, dissolving
solutus, dissolved
solvo, to loosen, dissolve
sordes, is, f., dirt
sordidus, dirty
sorus, i, m., spore mass
spadiceus, brownish
spargo, to scatter
sparsus, scattered, sparse
spatha, ae, f., a spathe
spatium, i, n., space
spatulatus, **spatulate** (spathulate), spoon-shaped
species, ei, f., species
spectans, looking
specto, to look
spermagonium, ii, n., a pycnidium-like body
spermatiferus, spermatia-bearing
spermatiformis, like a spermatium
spermatioideus, spermatium-like
spermatium, ii, n., a conidium-like body; a male sex-cell
spero, to hope
sphaericus, spherical
sphaeroideus, nearly spherical
sphaerula, ae, f., a sphere
spica, ae, f., a point, ear
spicatus, spike-like
spiculosus, spiny
spiculum, i, n., a little spine
spindle, a conidium-like structure in dermophytes
spiniformis, **spiniform**, spine-shaped, spiny
spinuligerus, spine-bearing
spinulosus, with little spines
spira, ae, f., a spiral
spiralliter, spirally
spissus, thick, dense
splendens, shining, splendid
spongilliformis, sponge-like
spongiosus, spongy
sponte, spontaneously
sporangiferus, bearing sporangia
sporangiolerus, bearing small sporangia
sporangiolum, i, n., a little sporangium
sporangiophore, the stalk of a sporangium
spore-print, the spore mass obtained by placing the cap of a mushroom flat on a piece of white paper
sporicus, sporal
sporidiolum, i, n., a little spore
sporidium, i, n., a spore
sporiferus, spore-bearing
sporodochium, a compact conidial body; mass of sporophores
sporoegenous, producing or bearing spores
sporomorphus, spore-shaped
sporophora, ae, f., **sporophore**, spore-body
spurius, false
squama, ae, f., a scale
squamosus, scaly
squarrose, with spreading scales or hairs
stans, stantis, standing, remaining
statim, steadily; forthwith
statuo, to erect, establish
statura, ae, f., stature, height
status, us, m., stage
stellatus, **stellate**, star-like
stelliformis, star-shaped
stercoratus, manured
stercus, oris, n., dung
sterigma, atis, n., stalk
stilbeus, Stilbum-like, mallet-like
stilbiformis, stalk-like
stilboid, with a stalked head, Stilbum-like
stipatus, crowded
stipes, itis, m., a stalk
stipitatus, **stipitate**, stalked
stipitellus, i, m., a little stalk
stiptiformis, stalk-like
stirps, pis, f., stem, stalk; source, race
stoloniferous, producing runners
stoloniformis, runner-like
stramineus, straw-colored
stratosus, in layers
stratum, i, n., a layer
strenuus, prompt, vigorous
stria, ae, f., a line
strigosus, **strigose**, long or coarsely hairy
striiformis, line-like

strobilus, i, m., a cone
stroma, atis, n., a covering, layer
stromate, with a stroma
stromaticus, **stromatic**, with a stroma
stromatiferus, bearing a stroma
stromoid, **stromatoid**, stroma-like
structura, ae, f., a structure
stuppeus, made of tow, tow-like
stuposus, tow-like
stylospora, ae, f., **stylospore**, spore borne on a hypha
suadens, persuading
suavis, pleasant
suavolens, fragrant
sub, affix meaning somewhat, slightly
subacutus, somewhat acute
subaequans, nearly equal
subalbus, nearly white
subalutaceus, somewhat yellow
subastomus, more or less mouthless
subbulbosus, somewhat bulbous
subcarbonaceus, slightly carbonaceous
subcarnulosus, slightly fleshy
subclypeate, somewhat shield-shaped
subcolumelliformis, somewhat like a columella
subconoideus, slightly conical
subcrustose, somewhat crust-like
subcuboideus, somewhat cubical
subcutaneus, under the epidermis
subdeterminatus, limited
subdiscoideus, somewhat disc-shaped
subelevatus, somewhat raised
suberosus, **suberose**, corky
subfuscus, **subfuscous**, somewhat dark
subglobosus, subglobose
subiculoid, more or less like a subicle
subiculum, i, n., **subicle**, a compact cottony mycelium
subimmersus, slightly immersed
subinde, presently, forthwith, now and then
subito, suddenly
subnullus, nearly lacking
substantia, ae, f., substance
subterraneus, **subterranean**, underground
subtilis, thin, slender
subtilitas, atis, f., fineness, thinness
subtiliter, finely, thinly
subulatus, **subulate**, awl-shaped
subuliformis, awl-shaped
subvitro, under the lens
succineus, like amber
succresco, to grow under

succus, i, m., sap, moisture
suffultus, supported
suffusus, spread out, diffuse; tinged
sulcatus, **sulcate**, furrowed
sulcula, ae, f., a little furrow
sulcus, i, m., a furrow
sulphurellus, sulphurish
sulphureus, sulphur-colored
summa, ae, f., highest point; sum
superans, exceeding
superficialis, **superficial**, arising on the surface or epidermis, opposed to innate and erumpent
superficies, ei, f., the surface
superimpositus, superimposed
superne, above, upwards
superpositus, superposed
superus, upper
supremus, uppermost
surculus, i, m., a shoot
sursum, upward
suspensor, supporting cell or group of cells
sustinens, supporting
sylva, ae, f., a forest (see *silva*)
sympodice, **sympodially**, alternately
synnema, atis, n., an erect fascicle of hyphae, as in *Stilbaceae*

T

tabacinus, tobacco-colored
tabesco, to melt
tabidus, dissolving, decaying
tactus, touched; us, m., touch
taeniola, ae, f., a little band
talis, such
tamen, however, yet
tandem, at length
tantillus, so little
tantum, so, so much; only
tapetum, i, n., nutritious layer
tarde, slowly, late
tartareus, powdery
tectus, covered
tegens, covering
tegmen, inis, n., a cover
teleutospora, ae, f., **teleutospore**, winter spore
teleutosporiferus, bearing teleutospores
teliospore, the winter spore of rusts
telium, the final stage in the life-cycle of rusts, consisting of teliospores
tenacellum, somewhat tenacious
tenellus, delicate

- tentacula*, ae, f., a tentacle
tentaculiformis, tentacle-shaped
tenuatim, drawn out
tenuis, slender
ter, three times
terete, *teres*, *etis*, rounded, cylindrical
teretiusculus, round, cylindrical
terminalis, terminal, end
terminatus, terminated, ended
ternate, in threes
ternus, three-fold
terra, ae, f., soil, earth
terrestris, terrestrial, on the ground
terricole, living on soil
tertius, third
tessellatus, checkered
testa, ae, f., a shell, coat
testaceus, brick-colored
tetradidymus, four-fold
tetragonus, four-angled
tetrasporus, four-spored
thalamium, i, n., a room
thallicola, growing on a thallus
thalliformis, thallus-like
thalline excipile, applied to an excipile containing algae
thallus, a more or less definite mass of hyphae typically parasitic on algae
thelephoroideus, like *Thelephora*
tigrinus, marked like a tiger
tinctus, tinged
tingens, tingeing
tomentellus, hairy
tomentosus, hairy
tornatus, rounded-off
tortuosus, flexuous
tortus, twisted
toruloideus, chain-like
torulosus, torulose, necklace-like
totaliter, totally
totidem, just as many
totus, all
trabs, is, f., a beam
tractus, us, m., a tract
trahendum, to be drawn
trama, ae, f., filling, weft
transeptate, with all cross-walls transverse
translucidus, clear
transiens, temporary
transversalis, transverse, crosswise
trapezoideus, trapezium-like, irregularly four-sided
tremelloideus, tremelloid, gelatinous
tremellosus, jelly-like
triangularis, *triangular*, three-angled
tribus, us, f., a tribe
tricornutus, with three horns
trifoveolatus, with three hollows
trigonus, *trigonous*, three-angled
trilobus, three-lobed
trinacriiformis, three-pronged
tripartitus, three-divided
tripedalis, three feet long
tripollicaris, three inches long
triquetrus, three-cornered
trisporus, three-spored
tristichus, in three rows
tropicus, tropical
truncatus, cut-off
truncicola, growing on trunks
trunculus, i, m., little trunk, stem
truncus, i, m., trunk
tuber, *eris*, n., tuber, swelling
tubercularinus, like *Tubercularia*
tubercularoideus, *tubercularoid*, like *Tubercularia*, warted
tuberculiformis, wart-like
tuberculosis, roughened
tuberiformis, *tuberiform*, tuber-shaped
tubulosus, tubular
tubulus, i, m., a tube
tum, then
tumescens, swelling
tumidulus, somewhat swollen
tumidus, swollen
tumifactus, swollen
tunc, then
tunica, ae, f., cloak, coating
tunicatus, *tunicate*, covered
turbinatus, *turbinate*, top-shaped
turgescens, swollen
turgidus, swollen
turriiformis, shaped like a tower
turritus, turreted, tower-like
tympaniform, drum-like
typice, usually, characteristically
typus, i, m., a type

U

- uber*, rich
ubi, where
ubiquemque, everywhere
udus, wet
uliginosus, rich, muddy
ullus, any
ulterior, farther
ultimus, last

ultra, beyond or more
-ulus, suffix, meaning small
umbellatus, umbellate, umbelled
umbelliformis, like an umbel
umbilicatus, umbilicate, with a navel,
 sunken in the center, somewhat funnel-
 form
umbilicus, i. m., navel
umbo, onis, is, m., boss, knob
umbonatus, umbonate, with a boss
umbra, ae, f., shade
umbrinus, brown
umbrosus, shady
uncia, ae, f., an inch
uncialis, an inch long
uncinatus, hooked
unde, whence
undique, in all directions
undulatus, wavy
unguis, is, f., nail
uniarticulatus, one-jointed
unicus, single
uniformis, of one form
unilateralis, one-sided
unilocular, with a single cavity or cell
uniserialis, one-rowed
uniseriatus, one-rowed
unistratosus, one-layered
unitus, joined
unquam, ever
urceolatus, urceolate, pitcher-shaped
uredinicola, uredicole, growing on rusts
uredium, sorus bearing summer spores
uredospora, urediospore, summer spore
 of rusts
uredosporiferus, bearing uredospores
urniformis, urn-shaped
uromorphus, tail-like
usque, up to
usurpatus, usurped
ut, uti, as
uterque, both
ut-plurimum, for the most part
utricularis, bladderly
utriculiformis, bladder-shaped
utrimque, on both sides, in both direc-
 tions
utroque, both ways
avidus, moist, wet

V

vaccinus, pertaining to a cow
vacuus, empty
vage, vaguely

vagina, ae, f., a sheath
vaginatus, sheathed
vagus, vague
valde, strongly
validiusculus, more or less stout
valsoid, **valsous**, like Valsa, with the
 perithecia in a circle in the stroma
valva, ae, f., a valve
valvatim, **valvate**, with valves or doors
variabilis, variable
varicolor, of several colors
varicosus, dilated
varie, variously
variegatus, of different colors
varius, different
-ve, or
vegetus, fresh, vegetating
vehementer, strongly
vel, or
velatus, veiled
vellus, eris, n., fleece, wool
velo, to cover
velocitas, atis, f., swiftness
velum, i, n., a veil
veluti, as
velutinus, velvety
vena, ae, f., a vein
venenatus, poisonous
veniformis, vein-like
ventricosus, swollen
venula, ae, f., veinlet
vere, truly
vergo, to approach
verisimiliter, apparently
vermicularis, worm-like
vermiformis, **vermiform**, worm-shaped
vernalis, **vernal**, of or belonging to
 spring
vero, truly
verruca, ae, f., height; wart
verruciformis, **verruciform**, wart-like
verruculosus, **verrucose**, warted
versatus, poured
versicolor, of different colors
versiformis, of different forms
versus, towards
vertens, turning
vertex, icis, m., the tip
verticalis, vertical
verticillatim, in whorls
verticillatus, **verticillate**, whorled
vescus, small, weak
vesicula, ae, f., **vesicle**, swollen cell
vesiculosus, **vesiculose**, swollen, bladderly

vestiens, covering
vestiguum, i, n., vestige, remnant
vestio, to cover
vestitus, furnished, covered
vetustus, old
vexo, to shake; injure
vibrans, changing
videor, to seem
vigens, growing
villosulus, somewhat woolly
villous, woolly
villus, i, m., a hairy covering
vinarius, of wine
vineus, of or belonging to wine
vinum, i, n., wine
violaceus, violet
violascens, turning violet
virens, becoming green
virgatus, rod-shaped
virgultum, i, n., bush, copse
viridarium, i, n., greenhouse
viridifuscus, greenish brown
viridis, green
viridulus, greenish
virosus, slimy, fetid; poisonous
viscidulus, viscid, somewhat sticky
visibilis, visible
visus, seen
vita, ae, f., life
vitellinus, yellow
vitreus, glassy
vitrum, i, n., glass
vittatus, striped or ridged lengthwise
vivens, living

vividus, living, vivid
vivus, alive
vix, hardly
volva, ae, f., a cup-like sheath at the base
 of a stem
volvaceus, with a volva
volvatus, with a volva
vulgatus, common
vulgo, commonly
vulpinus, of a fox

X

x-celled, with 2 or more transverse septa,
 two or more septate crosswise
xeric, xerophytic, dry
xylogenus, **xylogenous**, growing on wood
xylophilus, growing on wood

Z

zona, ae, f., a zone
zonula, ae, f., a little zone
zoogenus, on animals
zoogonid, zoospore, a motile propagative
 cell
zoospora, ae, f., zoospore, motile cell,
 usually asexual
zoosporangium, ii, n., **zoosporange**, vessel
 containing zoospores
zoosporiferus, producing zoospores
zygosporiacus, pertaining to a zygosporangium
zygosporous, with resting spores formed
 by the conjugation of similar sex cells
zymogenus, ferment-producing

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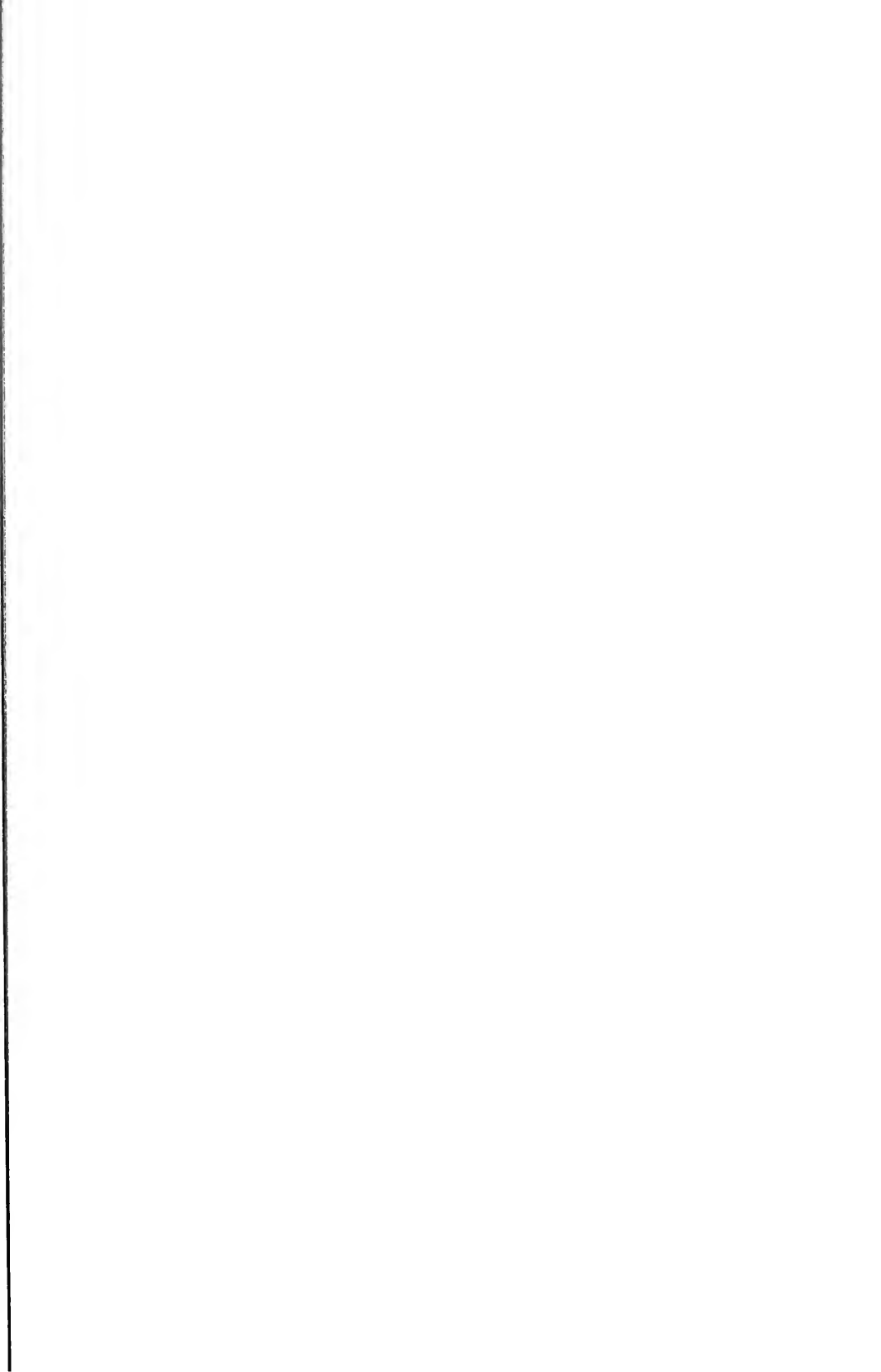
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PLATE 1
CHYTRIDIALES

1. *Plasmodiophora brassicae* Woron.
(Fitzpatrick The Lower Fungi, p. 57, after Chupp)
 - a. Multinucleate myxamoeba in base of root hair of cabbage
 - b. Spores and zoospores
2. *Sphaerita endogena* Dangeard
(Id., p. 72, after Dangeard)
 - a. Spiny resting sporangium
 - b. Young zoosporangium
3. *Olpidium endogenum* A. Br.
(Schroet. Nat. Pfl. p. 68, after A. Braun)
 - a. Emptied zoosporangia x400
4. *Phlyctochytrium hydrodictyi* (A. Br.) Schroet.
(Id. p. 78, after A. Braun)
 - a. Zoosporangium x800
5. *Synchytrium decipiens* Farl.
(Fl. Nebr. pl. 15, after Farlow)
 - a. Section of a gall
 - b. Zoosporangium and zoospores
6. *Diplophysa saprolegniae* (Cornu) Schroet.
(Schroet., Ib. p. 84, after Cornu)
 - a. Oosporangium
7. *Rhizidium mycophilum* A. Br.
(Id. p. 79, after Nowakowski)
 - a. Zoosporangium with zoospores
 - b. Resting sporangium with zoospore formation x400
8. *Rhizophidium ampullaceum* A. Br.
(Id. p. 76, after A. Braun)
 - a. Zoosporangia on an algal cell x300
 - b. Zoosporangia x500
9. *Chytridium olla* A. Br.
(Id. p. 80)
 - a. Zoosporangia in host x200, after A. Braun
 - b. Zoosporangia and oosporangia, after DeBary
10. *Obelidium mucronatum* Now.
(Fitzpatrick Ib. p. 92, after Nowakowski)
 - a. Sporangium with zoospores escaping through a lateral pore
11. *Podochytrium clavatum* Pftz.
(Id. p. 93, after Zopf)
 - a. Mature plant
12. *Polyphagus euglenae* (Bail.) Now.
(Schroet. Ib. p. 85, after Nowakowski)
 - a. Zoosporangium with escaping zoospores x400
 - b. Zoospore x550
 - c. Oosporangia
13. *Catenaria anguillulae* Sorok.
(Fitzpatrick Ib. p. 103, after Dangeard)
 - a. Young thallus developed from zoospore
 - b. Mature thallus with zoosporangia
 - c. Zoosporangium with escaping zoospores
14. *Physoderma menyanthis* DeBary
(Schroet. Ib. p. 81, after DeBary)
 - a. Mycelium and young sporangia x390
 - b. Mature sporangia x190

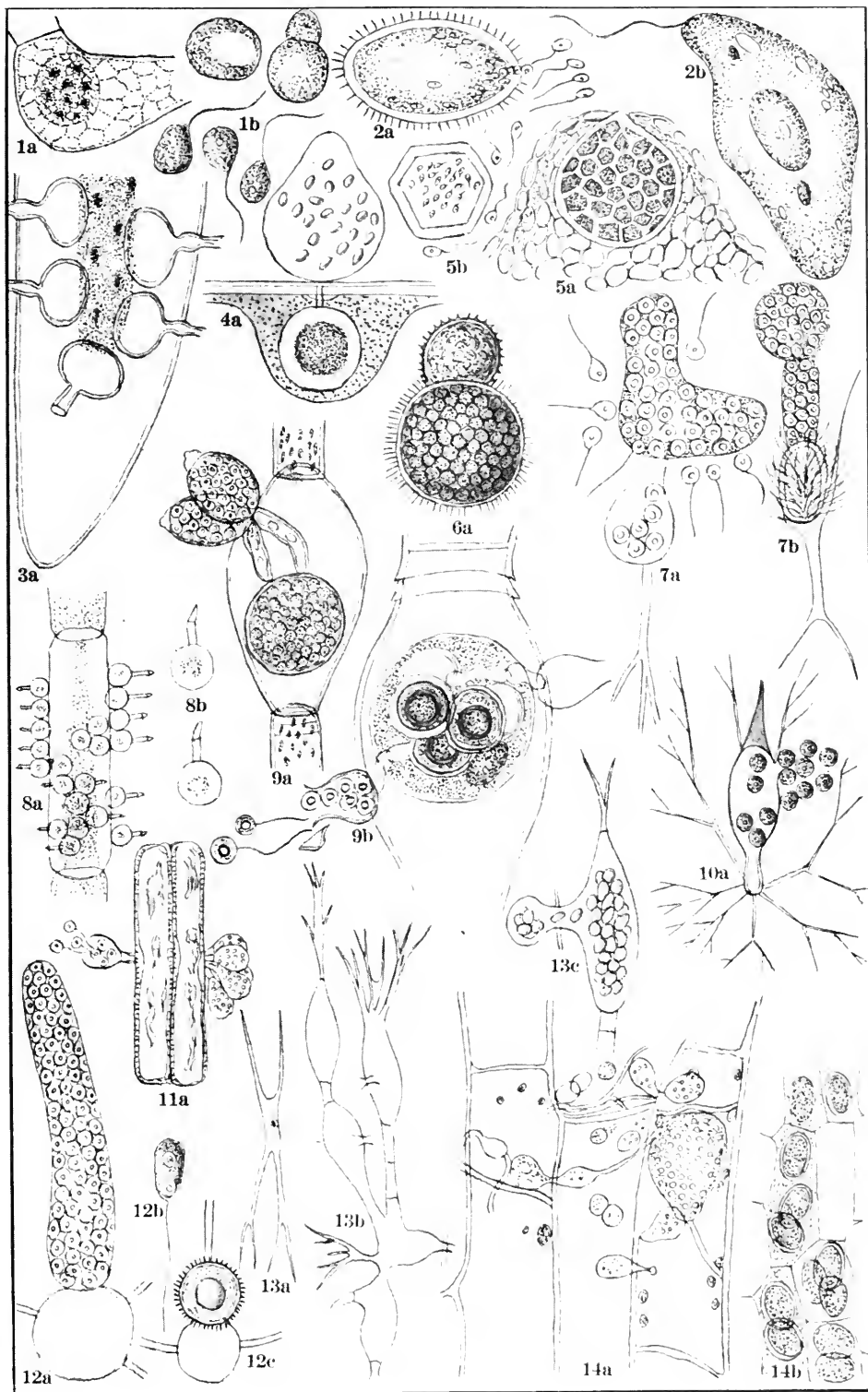


PLATE 1

PLATE 2

MUCORACEAE—EMPUSACEAE

1. **Mucor mucedo** L.
(Schroet. Nat. Pfl. p. 124, after Sachs)
 - a. Sporangium with columella
 - b. Zygospore
2. **Thamnidium elegans** Link
(Id. p. 128)
 - a. Main and accessory sporangia $\times 120$, after Brefeld
 - b. Zygospore $\times 120$, after Bainier
3. **Pilobolus kleini** van Tiegh.
(Id. p. 129)
 - a. Sporangia $\times 200$, after Brefeld
 - b. Zygospore of *P. crystallinus* $\times 80$, after Zopf
4. **Phycomyces nitens** Kze. & Schm.
(Id. p. 126, after van Tieghem & le Monnier)
 - a. Zygospore $\times 50$
5. **Mortierella polycephala** Coem.
(Id. p. 130)
 - a. Conidia $\times 50$
6. **Chaetocladium brefeldi** van Tiegh. & le Mon.
(Id. p. 132, after Brefeld)
 - a. Conidiophores and zygospore $\times 450$
7. **Choanophora infundibula** (Curr.) Sacc.
(Id. p. 131, after Cunningham)
 - a. Conidiophores with heads of conidia $\times 76$
 - b. Sporangia $\times 180$
8. **Piptocephalis freseniana** DeBary
(Id. p. 133, after Brefeld)
 - a. Conidiophores and conidia $\times 300$
 - b. Zygospore $\times 630$
9. **Syncephalastrum racemosum** F. Cohn
(Id., after Schroeter)
 - a. Conidiophores and conidia $\times 60$
10. **Syncephalis cordata** van Tiegh. & le Mon.
(Id.)
 - a. Conidiophores and conidia $\times 80$
 - b. Chains of conidia
11. **Empusa muscae** F. Cohn
(Id. p. 138, after Brefeld)
 - a. Host fly and detached conidia $\times 1$
 - b. Conidiophores and conidia $\times 80$
 - c. Conidiophore $\times 300$
12. **Empusa sphaerosperma** Fres.
(Id. p. 139, after Brefeld)
 - a. Caterpillar killed by fungus $\times 1$
 - b. Branched basidiophores $\times 300$
 - c. Mature resting spore $\times 350$, after Nowakowski
13. **Conidiobolus utriculosus** Bref.
(Id. p. 140, after Brefeld)
 - a. Layer of conidiophores $\times 80$
14. **Basidiobolus ranarum** Eidam
(Id. p. 141, after Eidam)
 - a. Layer of conidiophores $\times 60$
 - b. Basidium with conidium $\times 500$
 - c. Mycelium with resting spores $\times 200$

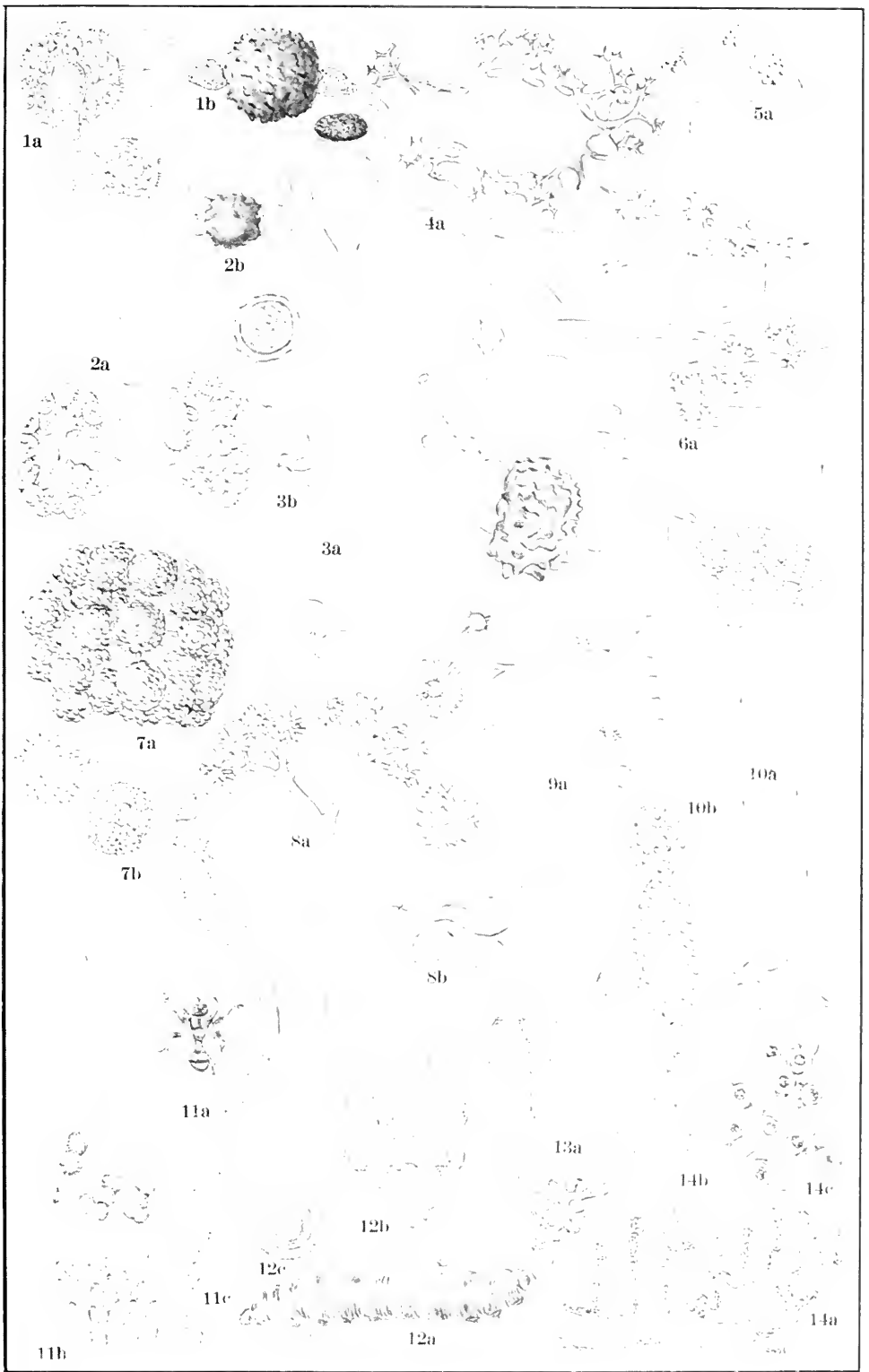


PLATE 2

PLATE 3

SAPROLEGNACEAE—ANCYLISTACEAE

1. *Saprolegnia ferax* (Fr.) Nees
(Schroet. Nat. Pfl. p. 97, after Thuret)
 - a. Fly with mycelium x1
 - b. Oogonia and antheridia x400, after DeBary
 - c. Zoosporangium and zoospores x200
2. *Pythiopsis cymosa* DeBary
(Id. p. 97, after DeBary)
 - a. Zoosporangia x160
 - b. Oogone with antheridia x750
3. *Dictyuchus monosporus* Leitg.
(Id. p. 99, after Leitgeb)
 - a. Zoosporangia x180
 - b. Zoospore x400
 - c. Mature oospore x400
4. *Aphanomyces stellatus* DeBary
(Id. p. 100, after DeBary)
 - a. Oogones with antheridia
 - b. Cluster of zoosporangia
 - c. Zoospores
5. *Leptolegnia caudata* DeBary
(Id. p. 100, after DeBary)
 - a. Hyphae bearing oogones x160
 - b. Oospore x500
6. *Aplanes brauni* DeBary
(Id. p. 101, after DeBary)
 - a. Oogones x30
 - b. Sporangia and germinating spores x30
7. *Leptomitus lacteus* Ag.
(Id. p. 102, after Pringsheim)
 - a. Mature zoosporangia x300
 - b. Zoospores x430
8. *Rhipidium interruptum* Cornu
(Id. p. 103, after Cornu)
 - a. Whole plant
 - b. Disk filament with zoosporangium and oosporangium x500
9. *Apodachyla pirifera* (Zopf) Pring.
(Id. p. 102, after Zopf)
 - a. Terminal conidium x500
 - b. Zoosporangia x250
10. *Pythium debaryanum* Hesse
(Id. p. 105, after Hesse)
 - a. Oogones and antherids x375, after DeBary
 - b. Mycelium with young zoosporangia x200
 - c. Zoospores x300 (typically 2-ciliate)
11. *Myzocyttium proliferum* Schenck
(Id. p. 90, after Zopf)
 - a. Chain of sporangia x250
 - b. Oospores and emptied antheridia, x250
12. *Lagenidium rabenhorsti* Zopf
(Id. p. 90, after Zopf)
 - a. Oospores x720
 - b. One-celled plant forming zoospores x720
13. *Ancylistes closteri* Pfitz.
(Id. p. 92, after Pfitzer)
 - a. Closterium with several hyphae x500
 - b. Oospores x500

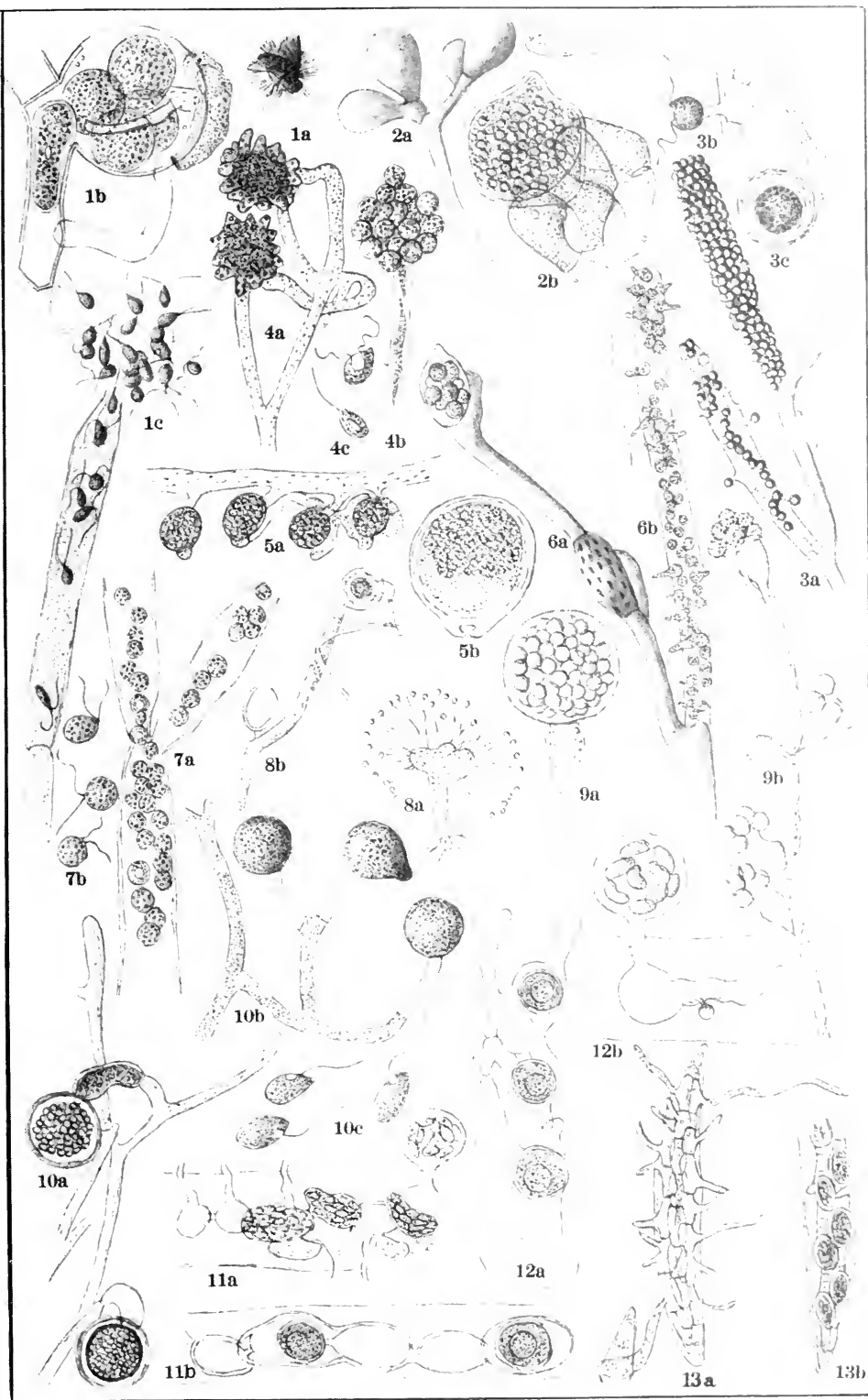


PLATE 4
PERONOSPORACEAE

(a. Conidiophore and conidia x200; b. Mature conidia x500;
c. Oospore x500; except as otherwise indicated)

1. **Albugo candida (Pers.) Gray**
(Schroet. Nat. Pfl. p. 111, after DeBary)
 - a. Conidiophores and conidia
 - b. Formation of zoospores
 - c. Oospore
2. **Bremia lactucae Regel**
 - a. (Fl. Nebr. pl. 16, after F. E. Clements)
 - b. (Schroet. Ib. p. 117)
 - c. (Fl. Nebr. Id.)
 - d. Tip of conidiophore (Schroet. Ib.)
3. **Plasmopara halstedii (Earle) Berl. & De Toni**
(Fl. Nebr. Id.)
4. **Sclerospora graminicola (Sacc.) Schroet.**
(Id.)
5. **Peronospora parasitica (Pers.) Fr.**
(Id.)
6. **Phytophthora infestans (Mont.) DeBary**
(Schroet. Ib. p. 113, after DeBary)
 - b. Exit of zoospores x390
 - c. Zoospores x390
7. **Basidiophora entospora Roze & Cornu**
(Id. p. 114, after Cornu)
 - b. Zoospore formation x300
 - c. x300
8. **Monoblepharis sphaerica Cornu**
(Id. p. 107, after Cornu)
 - a., b., c., Stages in the development of oogone and antheridium x800
9. **Gonapodya prolifera (Cornu) A. Fisch.**
(Id., after Reinsch)
 - a. Cluster of empty and proliferating zoosporangia
 - b. Zoospores in sporangium x240

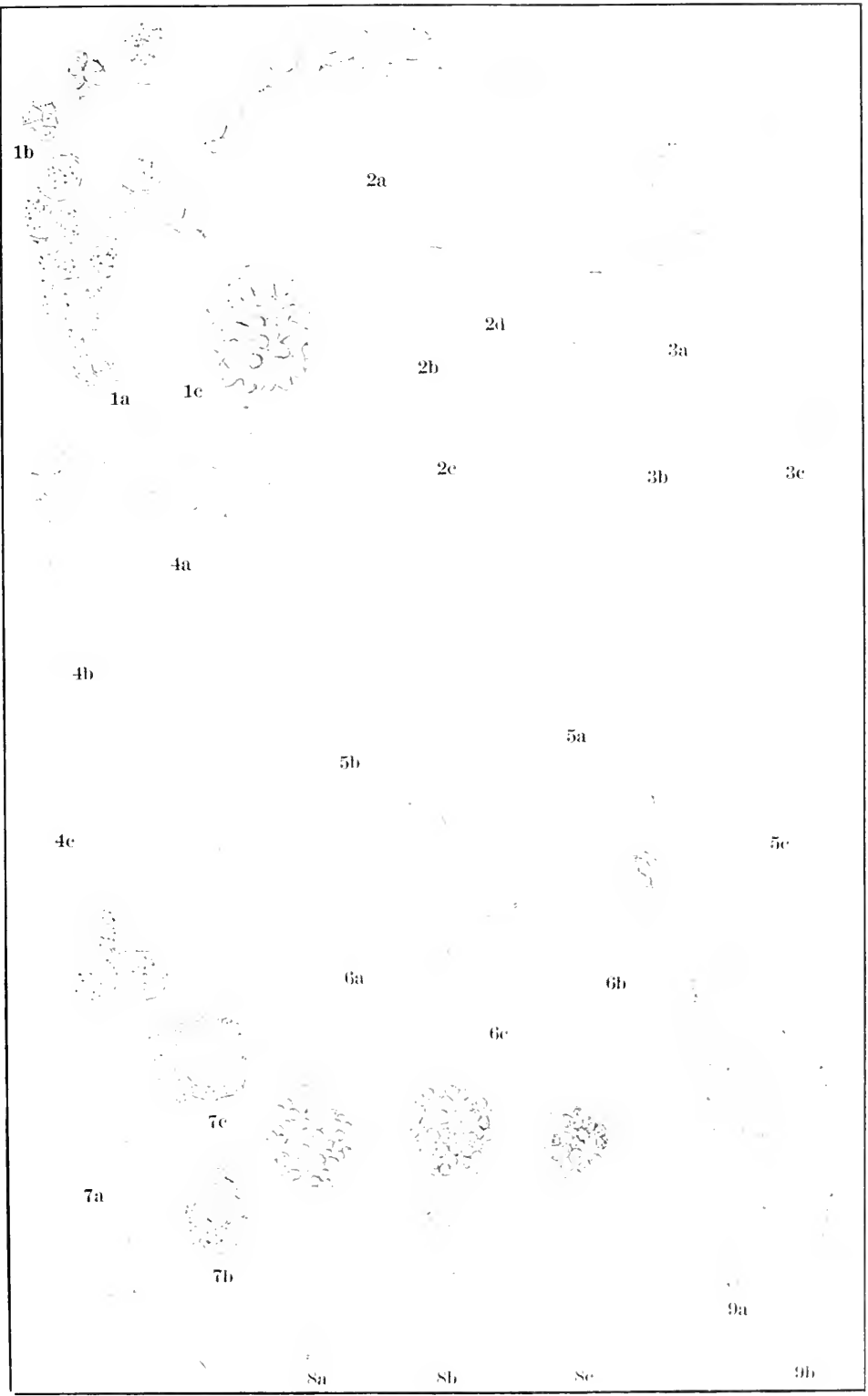


PLATE 5
LABOULBENIALES

(a. Mature individual; b. Spore; except as otherwise indicated)

1. *Dimeromyces africanus* Thaxt.
(Thaxter: Laboulbeniaceae pl. 14)
 - a. Female individual
 - b. Male individual
2. *Haplomyces californicus* Thaxt.
(Id. pl. 7)
3. *Chitonomyces melanurus* Peyritsch
(Id. pl. 26)
4. *Chaetomyces pinophili* Thaxt.
(Id. pl. 11)
5. *Compsomyces verticillatus* Thaxt.
(Id.)
6. *Cantharomyces bleidi* Thaxt.
(Id. pl. 7)
7. *Monoecomyces homalotae* Thaxt.
(Id. pl. 35)
8. *Corethromyces cryptobi* Thaxt.
(Id. pl. 9)
9. *Arthrorhynchus nycteribiae* (Peyr.) Thaxt.
(Id. pl. 8, after Peyritsch)
10. *Rhachomyces lathrobi* Thaxt.
(Id. pl. 10)
11. *Rickia wasmanni* Cav.
(Id. pl. 34)
12. *Dichomyces furciferus* Thaxt.
(Id. pl. 6)
13. *Ectinomyces trichopterophilus* Thaxt.
(Id. pl. 51)
14. *Camptomyces melanopus* Thaxt.
(Id. pl. 6)
15. *Diplomyces actobianus* Thaxt.
(Id. pl. 10)
16. *Dioecomyces anthici* Thaxt.
(Id. pl. 42)
 - a. Male individual x290
 - b. Male spore x1100
 - c. Female individual x290
 - d. Female spore x1100
17. *Ceratomyces mirabilis* Thaxt.
(Id. pl. 24)
18. *Laboulbenia europaea* Thaxt.
(Id. pl. 16)



PLATE 5

PLATE 6

EXASCACEAE—GYMNASCACEAE—EUROTIACEAE

(a. Ascoma; b. Ascus and spores; except as otherwise indicated)

1. *Endomyces decipiens* (Tul.) Reess
(Schroet. Nat. Pfl. p. 155, after Brefeld)
 - a. Mycelium with conidia x240
 - b. Mycelium with asci and spores x320
2. *Saccharomyces cervisiae* Meyen
(Id. p. 153, after Reess)
 - a. Vegetative cells x750
 - b. Spore formation x750
3. *Trichocoma paradoxa* Jungh.
(Fischer Nat. Pfl. p. 310)
 - a. Ascoma x2; section x4
 - b. Young and mature spores x1300
4. *Gymnascus reessi* Baran.
(Id. p. 295, after Brefeld)
 - a. Mature ascoma showing asci x200
 - b. x540
 - c. Hyphae bearing asci x600 (after Baranetsky)
5. *Myxotrichum uncinatum* Eidam
(Id. p. 296, after Eidam)
 - a. Conidiophores x400
 - b. Outer hyphae of peridium x400
6. *Myxotrichum chartarum* Kze.
(Id. p. 296, after Preuss)
7. *Micrascus sordidus* Zukal
(Id. p. 298, after Zukal)
 - a. Ascoma and section of same x100
 - b. Young and mature spores x600
8. *Onygena equina* (Willd.) Pers.
(Id. p. 309, after Tulasne)
 - a. Habit x1; group of ascomata and section enlarged
 - b. x1300 (after Fischer)
9. *Cephalotheca sulfurea* Fkl.
(Id. p. 298)
10. *Magnusia nitida* Sacc.
(Id., after Rabenhorst)

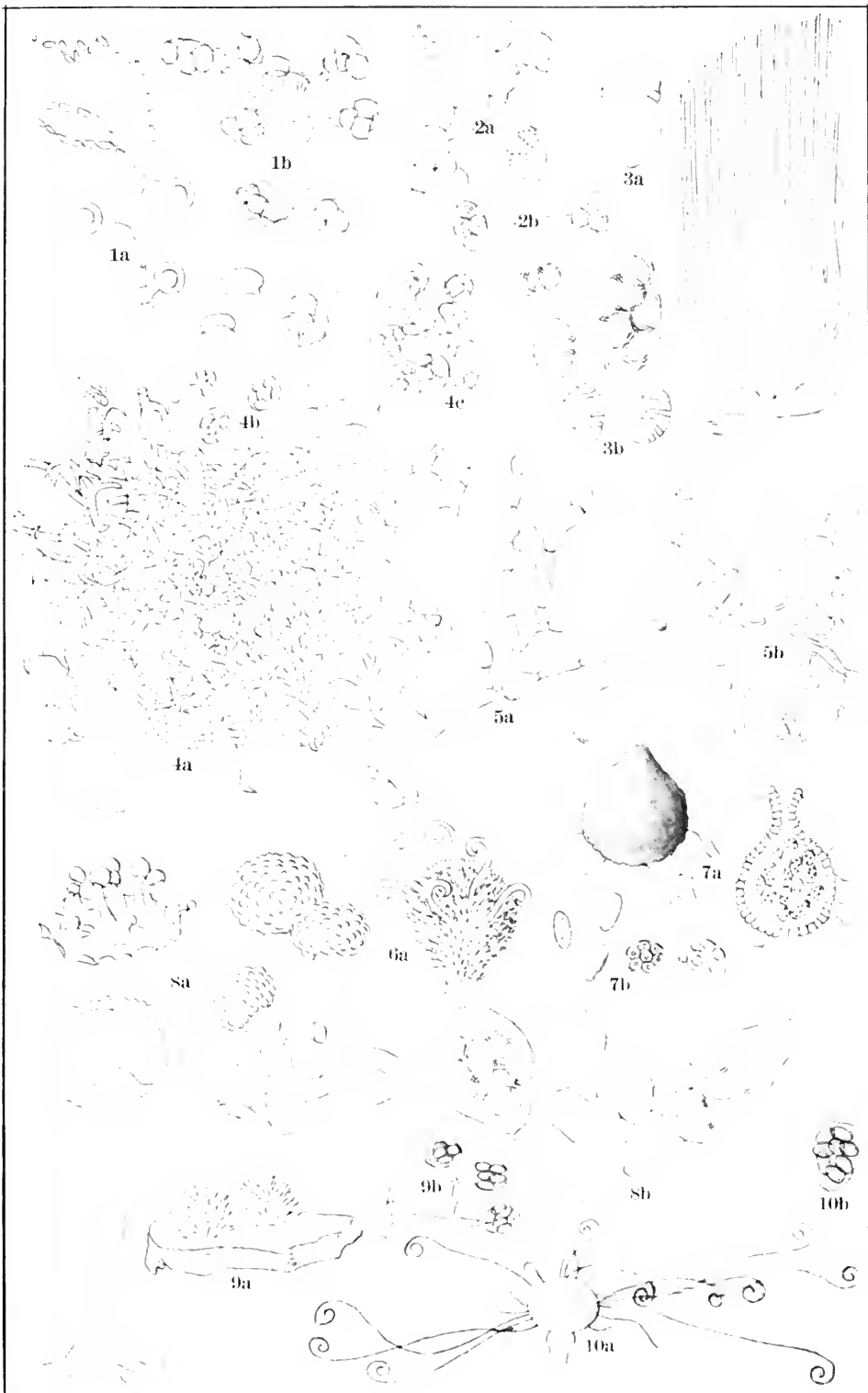


PLATE 6

PLATE 7
ERYSIPHACEAE

(a. Perithecium x200; b. Ascus x200; c. Separate spores x400)

1. *Uncinula salicis* (DC.) Wint.
2. *Erysiphe cichoracearum* DC.
3. *Phyllactinia suffulta* (Reb.) Nees
4. *Sphaerotheca humilis* (DC.) Burrill
5. *Microsphaeraalni* (DC.) Wint.
6. *Podosphaera oxyacanthae* (DC.) DeBary

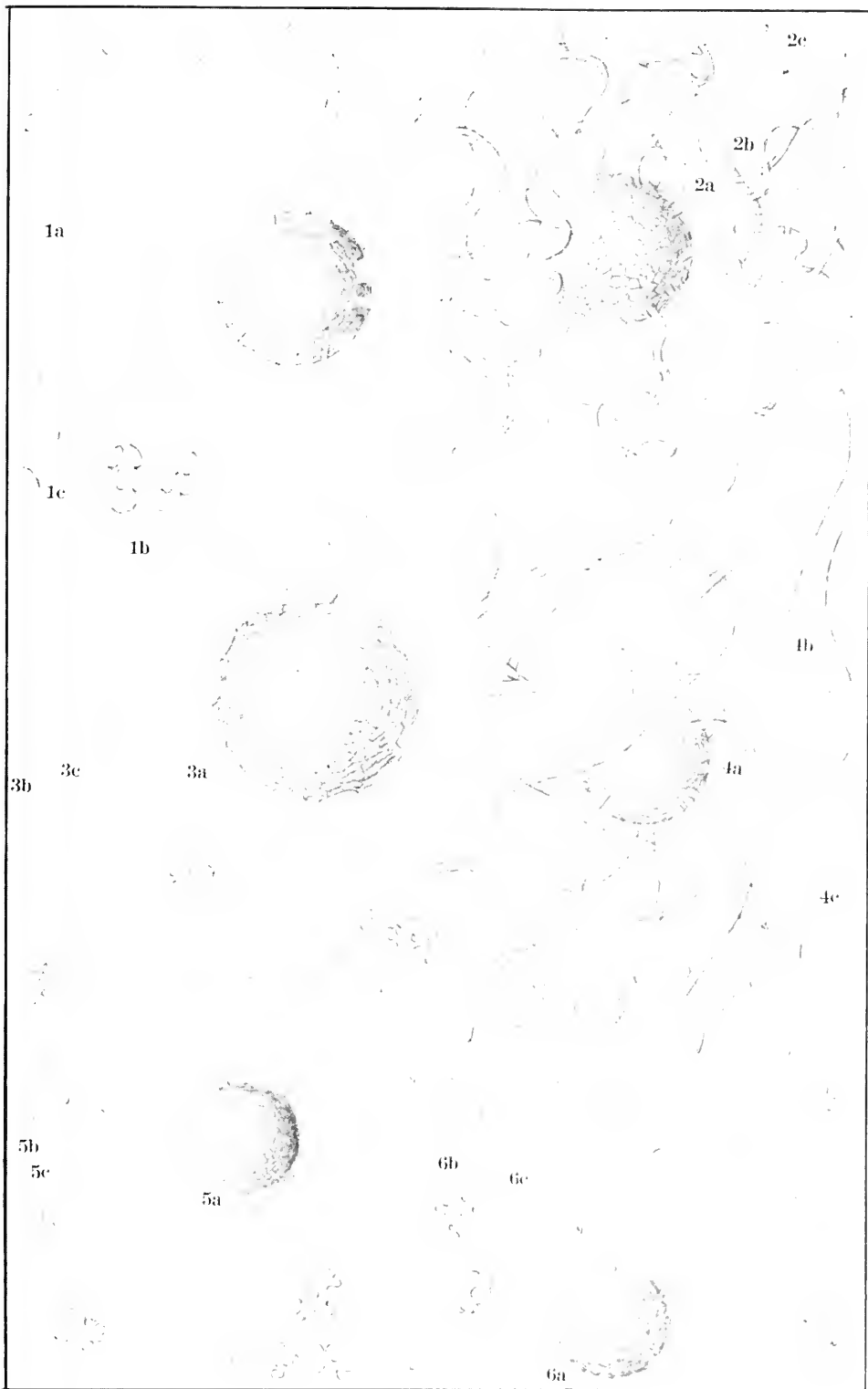


PLATE 8

EUROTIACEAE—PERISPORIACEAE— TRICHOthyRIACEAE

(a. Habit x5; b. Perithecium; c. Ascus and paraphyses x500;
separate spores x1000; except as otherwise indicated)

1. *Eurotium herbariorum* (Wigg.) Link
(Sacc. Myc. Ven. no. 634)
 - a. x50
 - b. x200
 - c. Group of spores in ascus and single spore
x1000 (E. & E. N. A. Pyr. pl. 8)
2. *Lasiobotrys lonicerae* Kze. & Schm.
(E. & E. N. A. Fung. no. 3107)
 - b. x200
 - d. Stroma x50
3. *Mycogala parietina* (Schrad.) Rost.
(Krieg. Fung. Sax. no. 1567)
 - b. x100
4. *Thielavia basicola* Zopf
(Conn. Exp. Sta. Bull. 269, pl. 38)
 - b. x200
 - c. x1000
5. *Chaetostigme horridula* Syd.
(U. S. D. A., Langlois)
 - b. x200
6. *Parodiella grammodes* (Kze.) Cke.
(Clem. Colo.)
 - b. x100
7. *Meliola amphitricha* Fr.
(Id.)
 - b. x100
8. *Perisporium vulgare* Cda.
(Griffith West Am. Fung. no. 178)
 - b. x50
9. *Capnodium salicinum* (A. & S.) Mont.
(Krieg. Ib. no. 1959)
 - b. x100
10. *Trichothyriella quercigena* (Berk.) Theiss.
(Theiss. & Syd. Ann. Myc. 13:486)
 - b. Perithecium with mycelia
11. *Actinopeltis peristomalis* Hoehn.
(Id. p. 487, after Hoehnel)
 - a. Side view of perithecium
12. *Loranthomyces sordidulus* (Lev.) Hoehn.
(Id. p. 484)
 - a. Section of a stroma

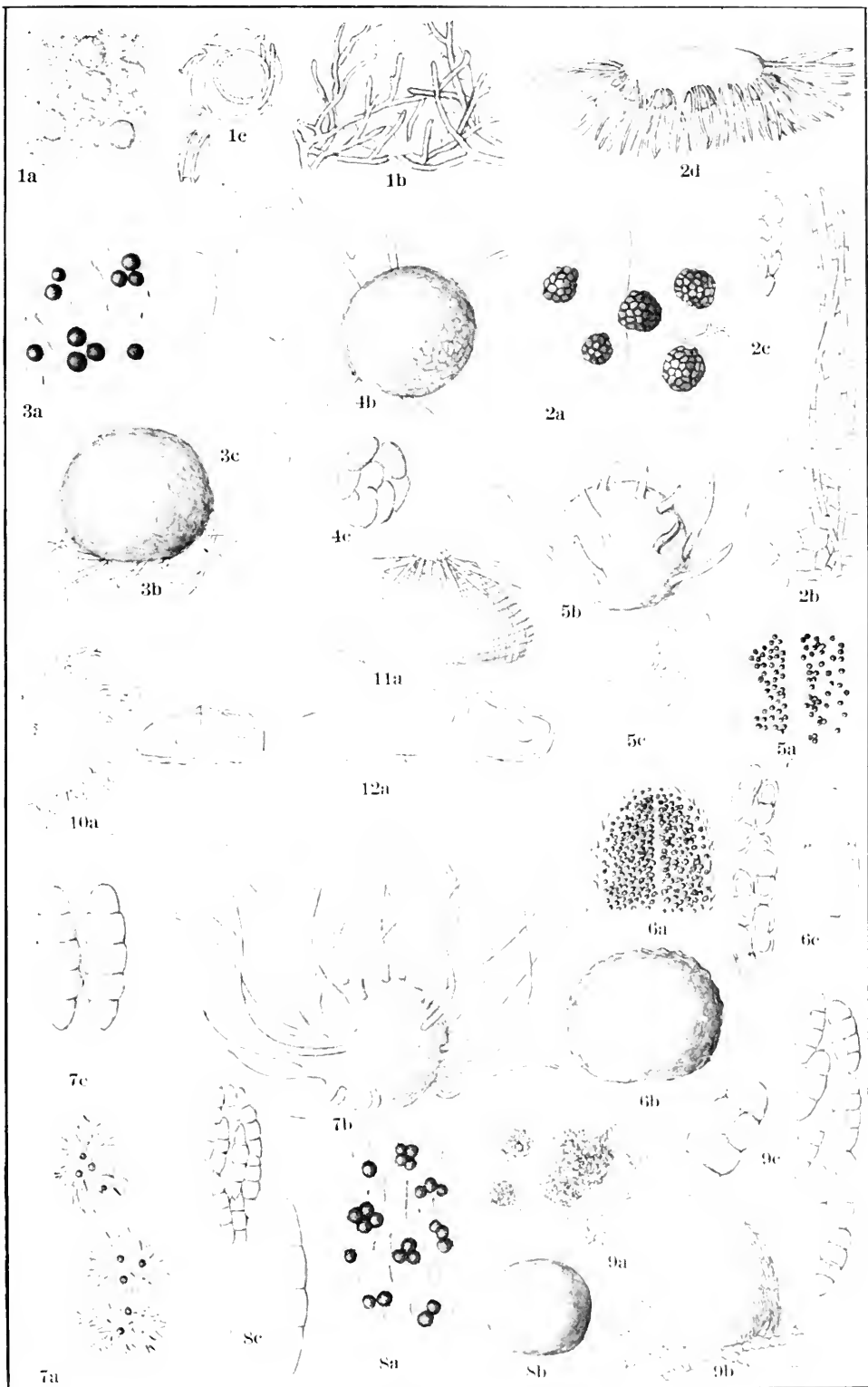


PLATE 9
SPHAERIACEAE

(a. Habit x10; b. Ascus and paraphyses x500; separate spores x1000; c. Perithecium, or section of stroma; except as otherwise indicated)

1. *Nitschkea cupularis* (Pers.) Karst.
(Theum. Myc. Univ. no. 1947)
a. x5
c. x100
2. *Calosphaeria princeps* Tul.
(E. Barthol. Fung. Colum. no. 2208)
a. x5
c. x20
d. Ascus and paraphyses x1000
3. *Fracchiæa subcongregata* (B. & C.) Karst.
(U. S. D. A., Langlois)
4. *Valsa ceratophora* Tul.
(E. & E. N. A. Fung. no. 864d)
c. x40
5. *Eutypa lata* (Pers.) Tul.
c. x50
6. *Eutypella cerviculata* (Fr.) Sacc.
(Petr. Fung. Pol. Exs. no. 406)
a. x5
c. x15
d. Ostiole x10
7. *Diatrype disciformis* (Hoffm.) Fr.
(U. S. D. A., Saxony, 1889)
c. x40
8. *Ceratostomella barbirostris* (Duf.) Sacc.
(Ellis N. A. Fung. no. 186)
c. x50
9. *Gnomoniella tubaeformis* (Tode) Sacc.
(Petr. Fl. Bohem. no. 154)
c. x50
10. *Physalospora gregaria* Sacc.
(Sacc. Myc. Ital. no. 83)
c. x100



PLATE 9

PLATE 10
SPHAERIACEAE

(a. Habit or perithecium; b. Ascus and paraphyses x500; Separate spores x1000; except as otherwise indicated)

1. *Sphaerognomonium carpinea* (Fr.) Poteb.
(Krieg. Fung. Sax. no. 1467)
a. x200
2. *Trichosphaeria pulchriseta* (Pk.) E. & E.
(E. & E. N. A. Fung. no. 3218)
a. x200
3. *Botryosphaeria berengeriana* DeN.
(Sacc. Myc. Ital. no. 85)
a. x10
d. Section of stroma x50
4. *Glomerella cingulata* (Atk.) S. & S.
(U. S. D. A., Shear)
a. x200
5. *Anthostomella phaeosticta* (Berk.) Sacc.
(Relum Ascom. no. 2106)
a. x100
6. *Ceratostoma avocetta* (C. & E.) Sacc.
(U. S. D. A., Langlois)
a. x50
7. *Sordaria coprophila* Ces. & DeN.
(Speg. Dec. Myc. Ital. no. 43)
a. x50
8. *Hypocropa fimicola* (Rob.) Sacc.
(E. & E. Ib. no. 2749)
a. x50
9. *Chaetomium comatum* (Tode) Fr.
(Jaap Fung. Sci. Exs. no. 372)
a. x25
10. *Rosellinia aquila* (Fr.) DeN.
(E. & E. Fung. Colum. no. 1979)
a. Habit x5; section of perithecium x25
11. *Anthostoma gastrinum* (Fr.) Sacc.
(E. & E. N. A. Fung. no. 2513)
a. x3
d. Section of stroma x10
12. *Bombardia fasciculata* Fr.
(Petr. Fung. Pol. Exs. no. 304)
a. Habit x5; section of perithecium x25
b. Ascus with immature spores, and paraphyses
c. Stages in development of spore x500

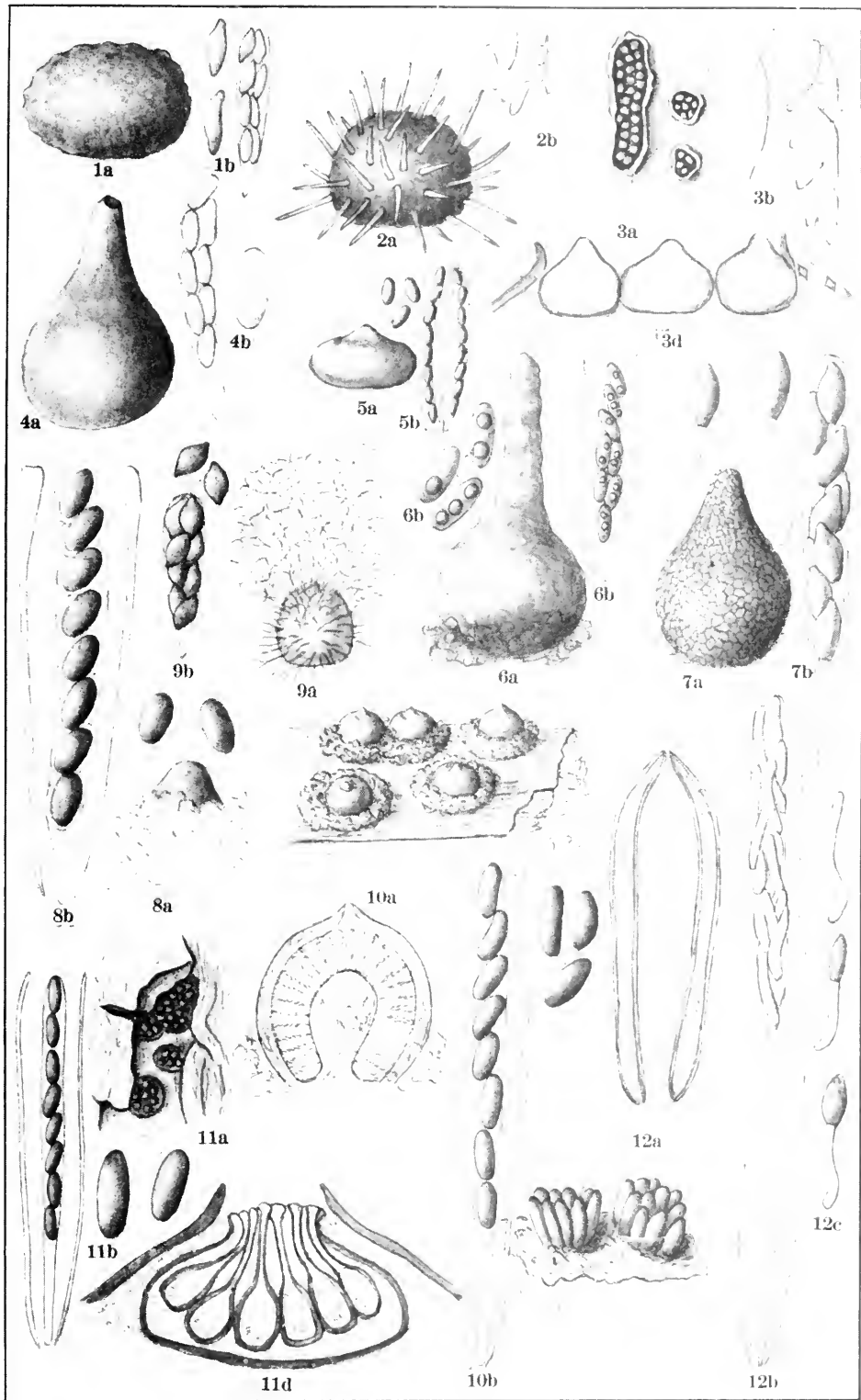


PLATE 11
SPHAERIACEAE

(a. Habit (1-6); single perithecium (7-11); b. Ascus and paraphyses x500; separate spores x1000; c. Section of stroma; except as otherwise indicated)

1. *Xylaria hypoxyla* (L.) Grev.
(U. S. D. A., Langlois, 1901)
a. x1
c. x10; detail x50
2. *Daldinia concentrica* (Bolt.) Ces. & DeN.
(Ib. Holway, 1885)
a. Stroma x1
c. x1; detail x10
3. *Ustulina vulgaris* Tul.
(Ib. West Va., 1907)
c. x1
4. *Hypoxylum coccineum* Bull.
(Syd. Myc. Germ. no. 79)
a. x1
c. x10
5. *Nummularia discreta* Tul.
(U. S. D. A., Mass., 1902)
c. x5
6. *Poronia punctata* (L.) Lk.
(Linhart Fung. Hun. no. 183)
c. x5
7. *Gnomonia setacea* (Pers.) DeN.
(Krieg. Fung. Sax. no. 1234)
a. x50
b. x1000
8. *Didymella lophospora* Sacc. & Speg.
(Ellis N. A. Fung. no. 588)
a. x100
9. *Mycosphaerella oenotherae* (E. & E.) Shear
(E. & E. N. A. Fung. no. 1681)
a. x100
10. *Melanopsamma pomiformis* (Pers.) Sacc.
(Cav. Fung. Long. Exs. no. 170)
a. Habit x10; perithecium x50
11. *Venturia chlorospora* (Ces.) Karst.
(Sacc. Myc. Ital. no. 486)
a. x200

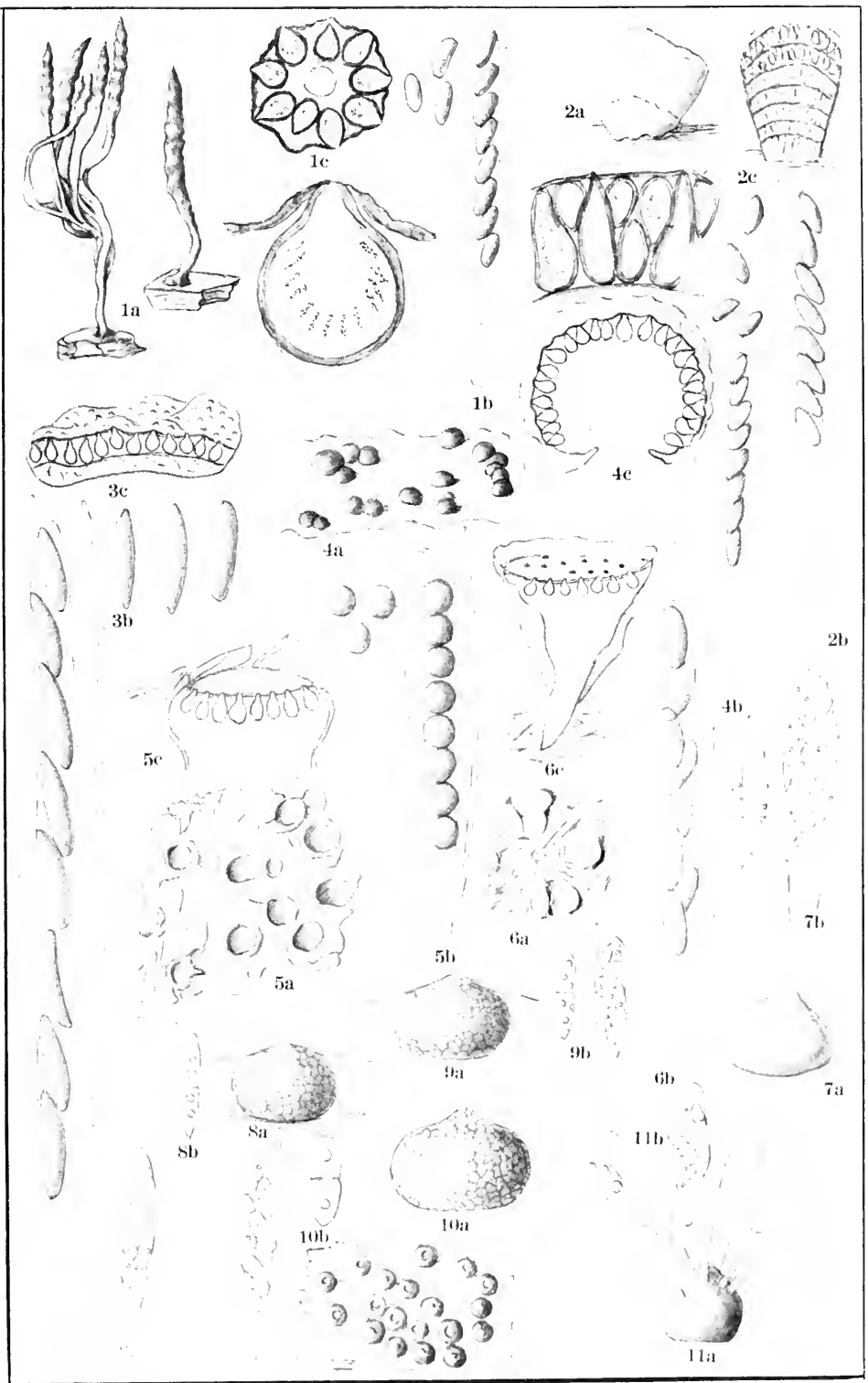


PLATE 12
SPHAERIACEAE

(a. Habit, or perithecium; b. Ascus and paraphyses x500; separate spores x1000; c. Section of stroma; except as otherwise indicated)

1. *Endothia tropicalis* Shear & Stevens
(U. S. D. A., Ceylon, 1913)
a. x5
c. x20
2. *Chorostate strumella* (Fr.) Trav.
(Petr. Fung. Pol. Exs. no. 357)
a. x5
c. x20
3. *Didymosphaeria conoidea* Niessl
(Kze. Fung. Sel. Exs. no. 326)
a. x50
4. *Amphisphaeria umbrina* (Fr.) DeN.
(Vest. Mic. Rar. Sel. no. 38)
a. x15
5. *Otthia distegiae* T. & E.
(Clem. Crypt. Form. Colo. no. 431)
a. x4
c. Section of perithecia x25
6. *Valsaria insitiva* (Fr.) Ces. & DeN.
(Mycoth. Ross. no. 29)
a. x5
c. x10
7. *Ceratosphaeria castillensis* C. L. Smith
(Smith Cent. Am. Fung. no. 13)
a. x25
8. *Metasphaeria gaurina* E. & E.
(E. & E. N. A. Fung. no. 3021)
a. x20; perithecium x100
9. *Zignoella pulviuscula* (Curr.) Sacc.
(Sacc. Myc. Ven. no. 87)
a. x20
10. *Lasiosphaeria hirsuta* (Fr.) Ces. & DeN.
(U. S. D. A., Langlois)
a. x25
11. *Calospora platanoides* (Pers.) Niessl
(Sacc. Myc. Ital. no. 650)
a. x5
c. x20

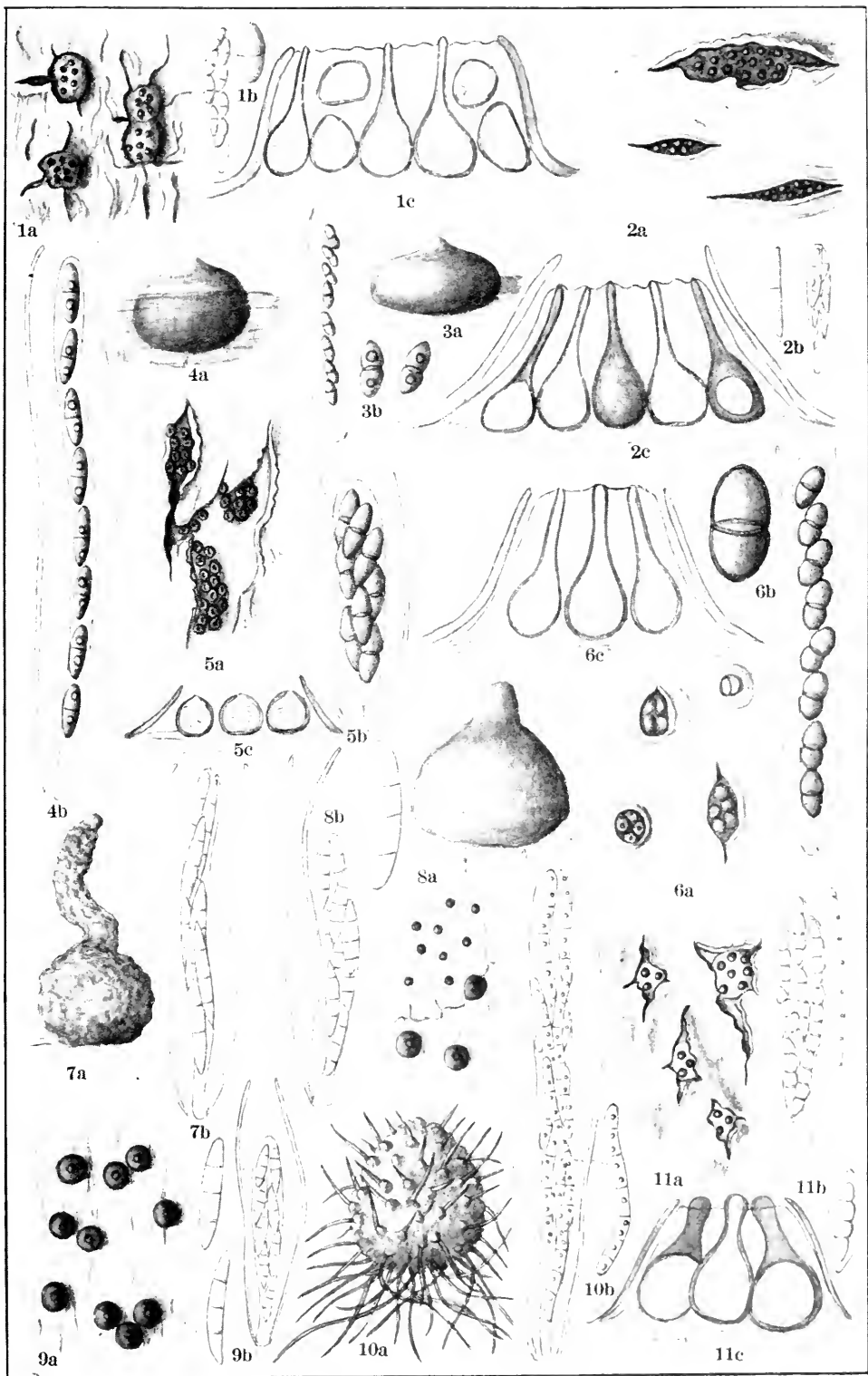


PLATE 13
SPHAERIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000; c. Perithecium or section of same; except as otherwise indicated)

1. *Massaria inquinans* (Tode) Fr.
(Krieg. Fung. Sax. no. 1071)
b. Ascus x200; spore x500
c. x20
2. *Clypeosphaeria notarisi* Fkl.
(Id. no. 1615)
c. x20
3. *Leptosphaeria doliolum* (Pers.) DeN.
(Kze. Fung. Sel. Exs. no. 335)
c. x50
4. *Melanomma pulvis-pyrius* (Pers.) Fkl.
(Cav. Fung. Long. Exs. no. 175)
c. x50
5. *Trematosphaeria pertusa* (Pers.) Fkl.
(Fkl. Fung. Rhen. Exs. no. 537)
6. *Sporormia minima* Auersw.
(Berl. Icon. 1: pl. 28, f. 5)
c. x200
7. *Chaetosphaeria phaeostroma* Fkl.
(Id. pl. 17, f. 5)
c. x100
8. *Aglaospora profusa* (Fr.) DeN.
(Krieg. Ib. no. 435)
c. Section of stroma x30
9. *Melogramma vagans* DeN.
(Petr. Myc. Carp. no. 246)
c. Section of stroma x20

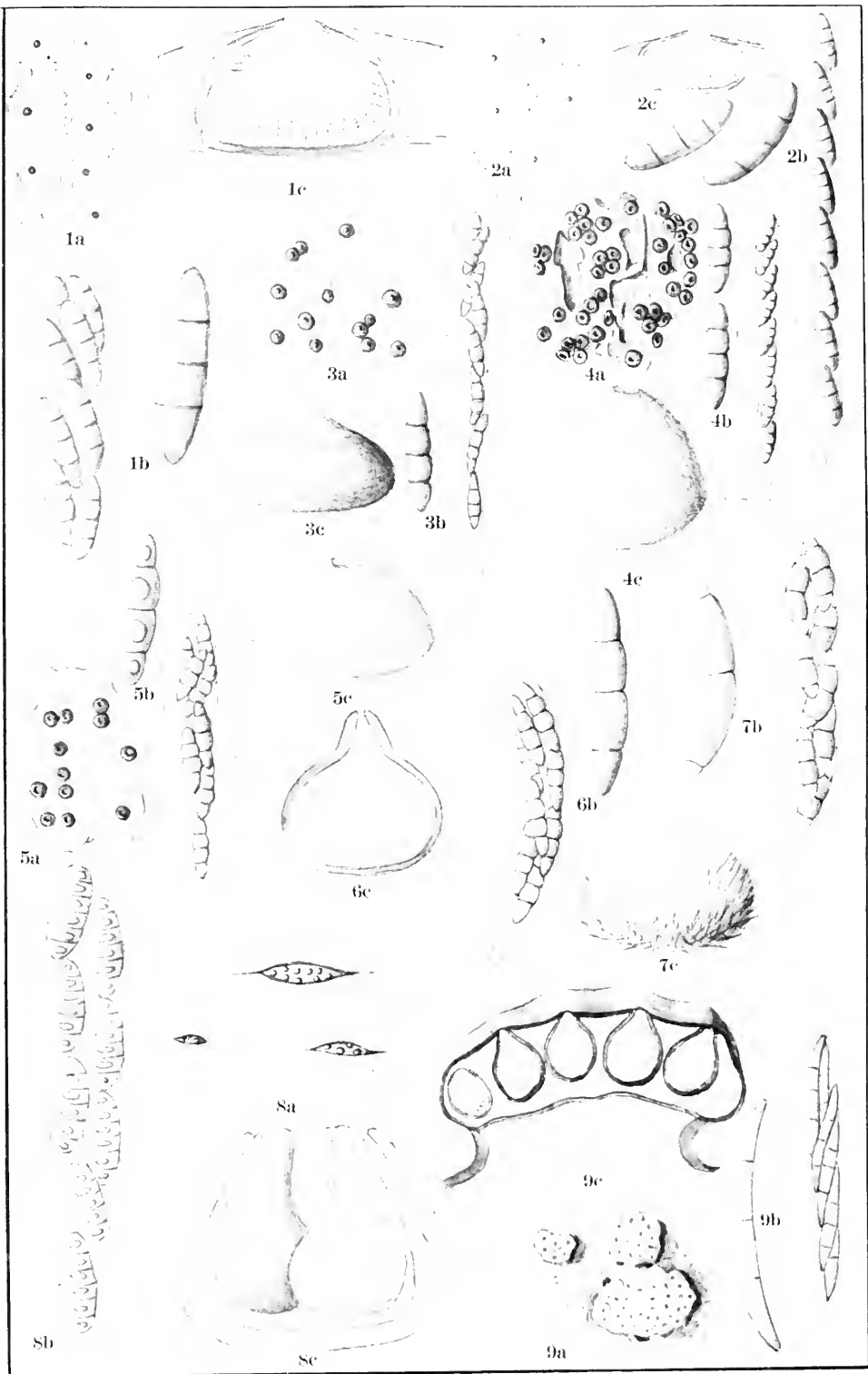


PLATE 13

PLATE 14
SPHAERIACEAE

(a. Section of perithecium; b. Ascus x500; separate spores x1000;
except as otherwise indicated)

1. *Pringsheimia rosarum* Schulz.
(Berl. Icon. 1: pl. 131, f. 1)
a. x200
2. *Peltosphaeria vitriospora* (Cke. & Hark.) Berl.
(Id. 2: pl. 141, f. 1)
a. x50
3. *Tichosporella cervariensis* Sacc. & Berl.
(Id. pl. 137, f. 3)
a. x100
4. *Berlesiella hirtella* (Bacc. & Av.) Sacc.
(Id. pl. 143, f. 1)
a. Section of stroma; detail of perithecium
5. *Pleospora herbarum* (Pers.) Rabh.
(Jaap Fung. Sel. Exs. no. 772)
a. Habit x5; section of perithecium x100
6. *Pyrenophora phaeocomes* (Reb.) Fr.
(Rehm Ascom. no. 1664)
a. Habit x5; perithecium x50
b. Ascus x200; separate spore x500
7. *Tichospora trabicola* Fkl.
(Berl. Ib. 2: pl. 63, f. 2)
a. x100
8. *Fenestella princeps* Tul.
(Id. pl. 110)
a. Section of stroma x25
9. *Cucurbitaria berberidis* (Pers.) Gray
(U. S. D. A., Bresadola, Europe, 1922)
a. Habit x4; section of stroma (Berl. Ib. pl. 133)

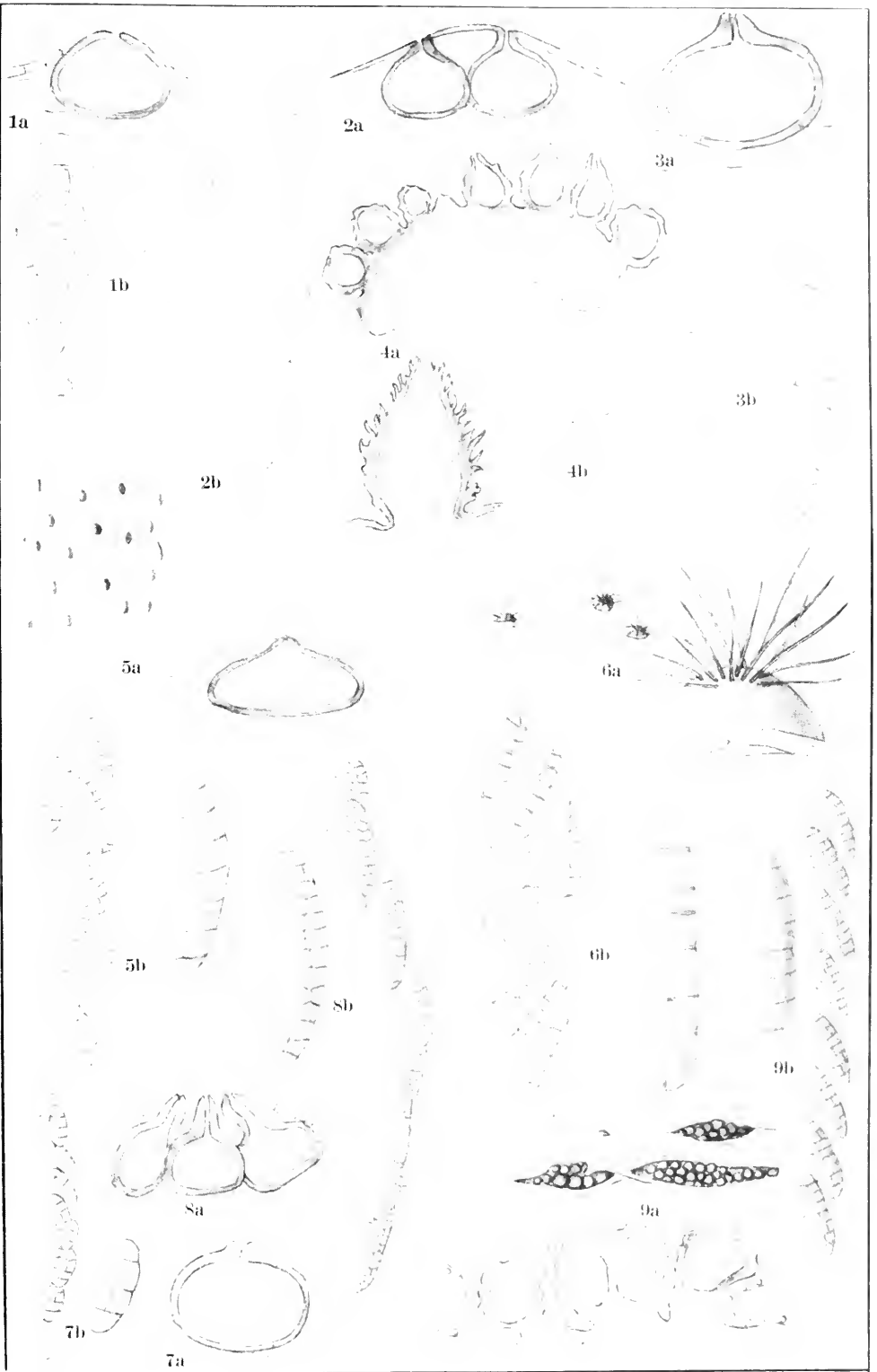


PLATE 15

SPHAERIACEAE—HYPOCREACEAE

(a. Habit x5; b. Ascus, paraphyses and spores x500; c. Perithecia; except as otherwise indicated)

1. *Ophiobolus acuminatus* (Sow.) Duby
(Krieg. Fung. Sax. no. 1257)
c. x50
2. *Dilophia graminis* (Fkl.) Sacc.
(Jaap Fung. Sel. Exs. no. 515)
b. Separate spores (Berl. Icon. 2: pl. 172, f. 3)
c. x25
3. *Sillia ferruginea* (Pers.) Karst.
(Krieg. Ib. no. 2224)
b. Separate spore x750
c. Section of stroma x20
4. *Cryptospora suffusa* (Fr.) Tul.
(Krieg. Schäd. Pilz. Exs., 1908)
c. x15
5. *Linospora capreae* (DC.) Fkl.
(All. & Schn. Fung. Bav. no. 545)
c. x25
6. *Allantonectria miltina* (Mont.) Weese
(Fung. Colo. no. 3204)
a. x10
b. Ascus x1000; spores x2000
c. x50
d. Section of stroma x75
7. *Notarisiella rousseliana* (Mont.) Sacc.
(Tranz. & Sereb. Myc. Ross. no. 170)
a. x1
b. x1000
c. x100
8. *Polystigma rubrum* (Pers.) DC.
(Eriks. Fung. Scand. no. 345)
a. x1
b. x1000
9. *Melanospora chionea* (Fr.) Cda.
(Vesterg., Micr. Rar. Sel. no. 602)
a. x10
b. x1000
c. x50
10. *Chilonectria cucurbitula* (Curr.) Sacc.
(Shear N. Y. Fung. no. 362)
b. Ascus, spores and sporidia x1000
c. x25

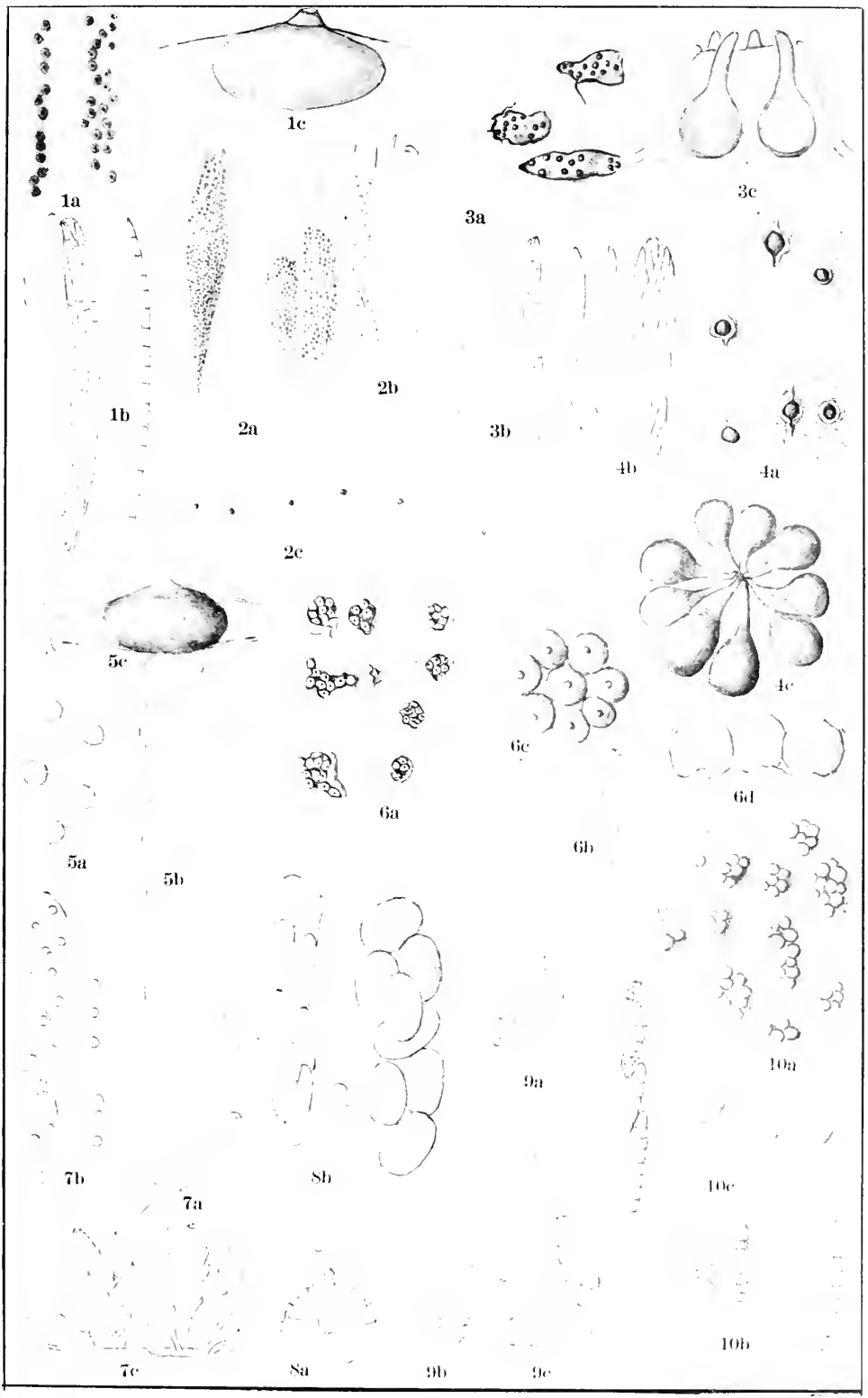


PLATE 16
HYPOCREACEAE

(a. Habit x5; b. Ascus x500; separate spores x1000; c. Perithecium or section of stroma; except as otherwise indicated)

1. *Nectria cinnabarina* (Tode) Fr.
(All. & Schn. Fung. Bav. no. 153)
c. x100
2. *Sphaerostilbe gracilipes* Tul.
(U. S. D. A., Langlois, 1886)
c. x25
3. *Hypomyces lactifluorum* (Schw.) Tul.
(Schrad. Rav. Fung. no. 54)
a. x10
c. x30
4. *Hypocrea rufa* (Pers.) Tul.
(Krieg. Fung. Sax. no. 1015)
c. x30
5. *Letendraea eurotioides* Sacc.
(Lind. Nat. Pfl. p. 352, after Winter)
a. x1
6. *Gibberella pulicaris* (Fr.) Sacc.
(Petr. Fl. Bohem. no. 964)
c. x50
7. *Broomella vitalbae* (B. & Br.) Sacc.
(Linn. Soc. Jour. Bot. 14: pl. 9)
a. x1
8. *Pleonectria berolinensis* Sacc.
(U. S. D. A., Bres., Italy)
c. x50
9. *Ophionectria trichospora* (B. & Br.) Sacc.
(Linn. Soc. Jour. Bot. pl. 6)
10. *Claviceps purpurea* (Fr.) Tul.
(Krieg. Ib. no. 2059)
c. x50
11. *Cordyceps militaris* (Linn.) Lk.
(U. S. D. A., Shear, Va., 1926)
a. x2
b. Ascus x200; separate spore x250
c. x50
12. *Epichloe typhina* (Pers.) Tul.
(Krieg. Schäd. Pilz. no. 178)
a. x2
b. x200
c. x50

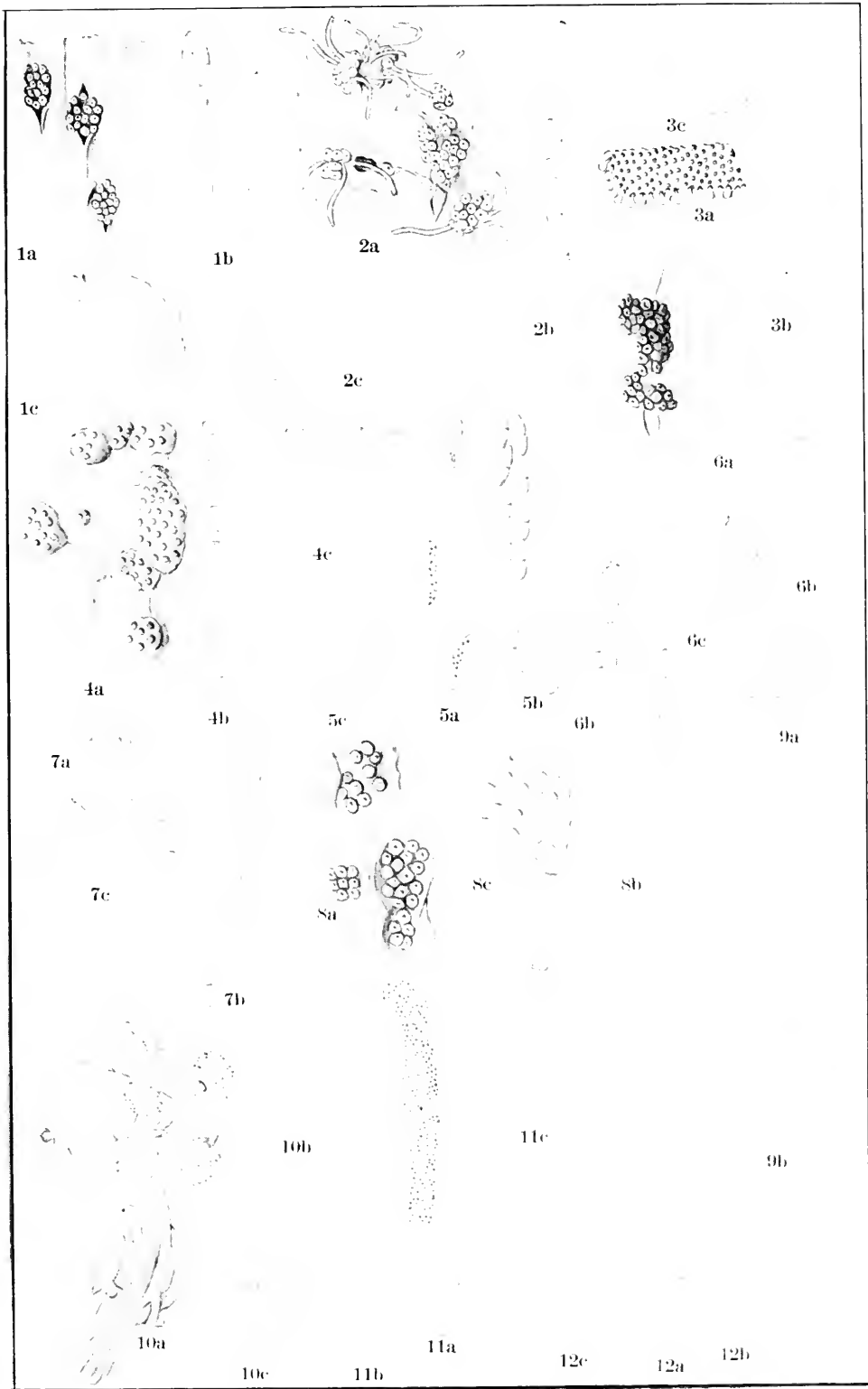


PLATE 17
MICROTHYRIACEAE—LOPHIOSTOMACEAE—
CORYNELIACEAE

(a. Habit or perithecium; b. Ascus and paraphyses x500; separate spores x1000; c. Section of perithecia; except as otherwise indicated; illustrations copied are adapted to the same scale)

1. *Microthyrium microscopicum* Desm.
(Sacc. Myc. Ven. no. 1481)
a. x100
b. 8-spored ascus x1000
2. *Seynesia orbiculata* Syd.
(U. S. D. A., no. 11384)
a. x1
c. x100
3. *Micropeltis applanata* Mont.
(Ib., San Salvador, 1925)
a. x5
4. *Lophiosphaera schizostoma* (Mont.) Trev.
(Sacc. Fung. Ital. f. 358)
a. x1; perithecia (Lind. Nat. Pfl. p. 418, after Berlese)
5. *Schizostoma montelicum* Sacc.
(Lind. Ib.)
a. Habit x1 (Sacc. Ib. f. 146)
6. *Lophiotrema nucula* (Fr.) Sacc.
(Sacc. Ib. f. 249)
a. (Lind. Ib.)
7. *Lophiostoma caulium* (Fr.) Ces. & DeN.
(E. & E. Fung. Colum. no. 1538)
a. x100
c. x25
8. *Platystomum compressum* (Pers.) Trev.
(Sacc. Ib. f. 233)
9. *Lophionema bambusae* Hoehn.
(Port. Ric. Fung. no. 72597)
a. x5
10. *Corynelia clavata* (L.) Sacc.
(U. S. D. A., Fitzp. no. 1575)
a. x5; perithecium x20

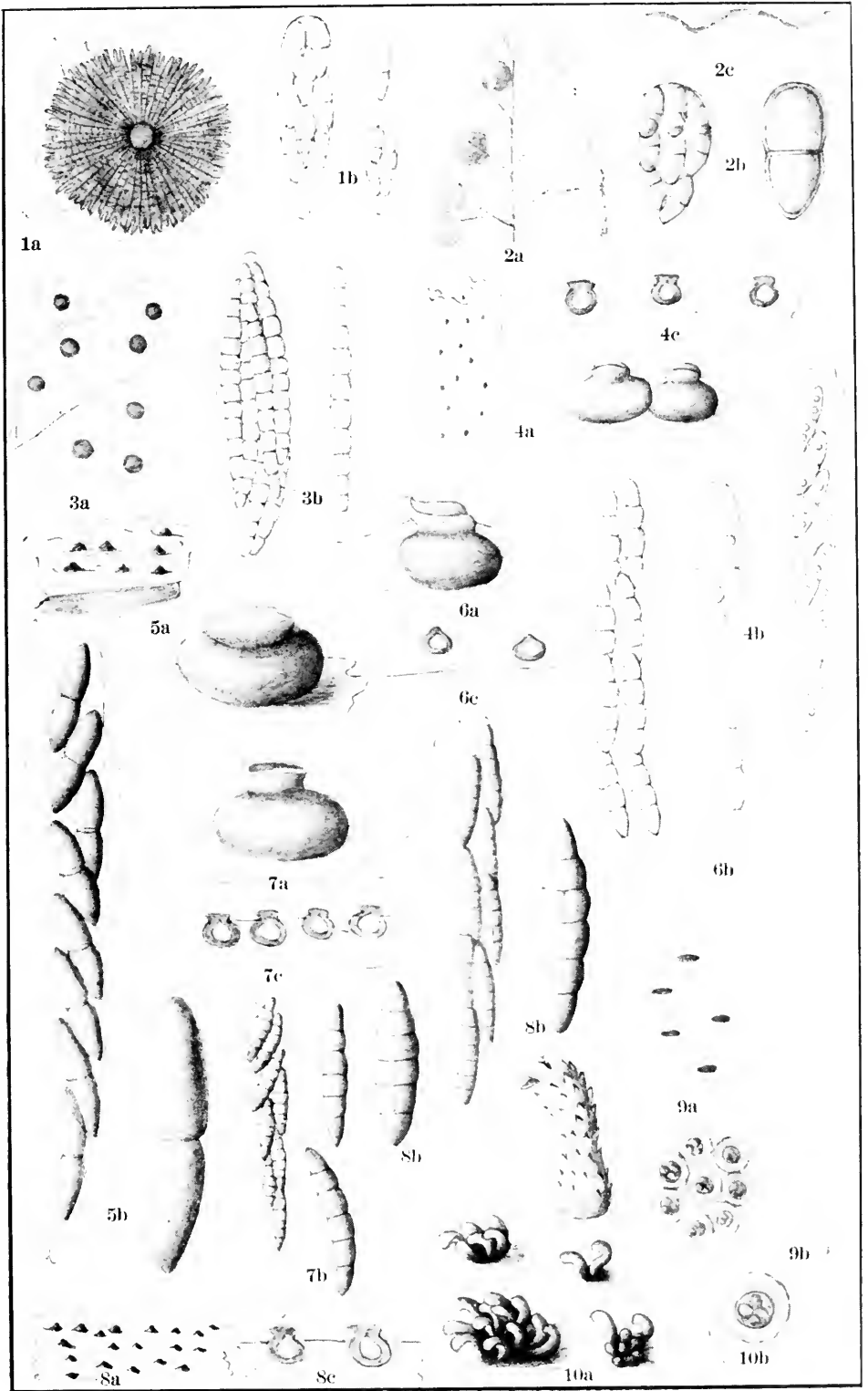


PLATE 18
VERRUCARIACEAE

(a. Habit; b. Section of perithecium; c. Spores; except as otherwise indicated)

1. **Epigloea bactrospora** Zuk.
(Zahlbr. Nat. Pfl. p. 64, after Zukal)
2. **Aspidothelium cinerascens** Wain.
(Id. p. 70)
a. Perithecium from above and the side
3. **Pyrenidium actinellum** Nyl.
(Id. p. 91, after Crombie)
a. Lobes of thallus
4. **Pyrenula nitida** (Weig.) Ach.
(Lind. Flecht. 19:30)
a. x5 (Merrill Lich. Exs. no. 12)
5. **Strigula elegans** (Fee) Muell. Arg.
(Zahlbr. Ib. p. 89)
6. **Campylothelium puiggari** Muell. Arg.
(Id. p. 85)
7. **Dermatocarpum miniatum** (L.) Mann
(Fink Lich. Minn. p. 243, after Reinke)
a. x1
b. x75
8. **Endocarpum pusillum** Hedw.
(Lind. Ib. 19:19)
9. **Trypethelium eluteriae** Spreng.
(Zahlbr. Ib. p. 83)
b. Section of stroma
10. **Pyrenocollema tremelloides** Reinke
(Id. p. 165, after Reinke)
a. x1
b. x130
11. **Verrucaria muralis** Ach.
(Fink Lich. Minn. no. 125)
a. x1
12. **Verrucaria dolomitica** (Mass.) Koerb.
(Zahlbr. Ib. p. 66)
c. x1000
13. **Verrucaria rupestris** Schrad.
(Id.)

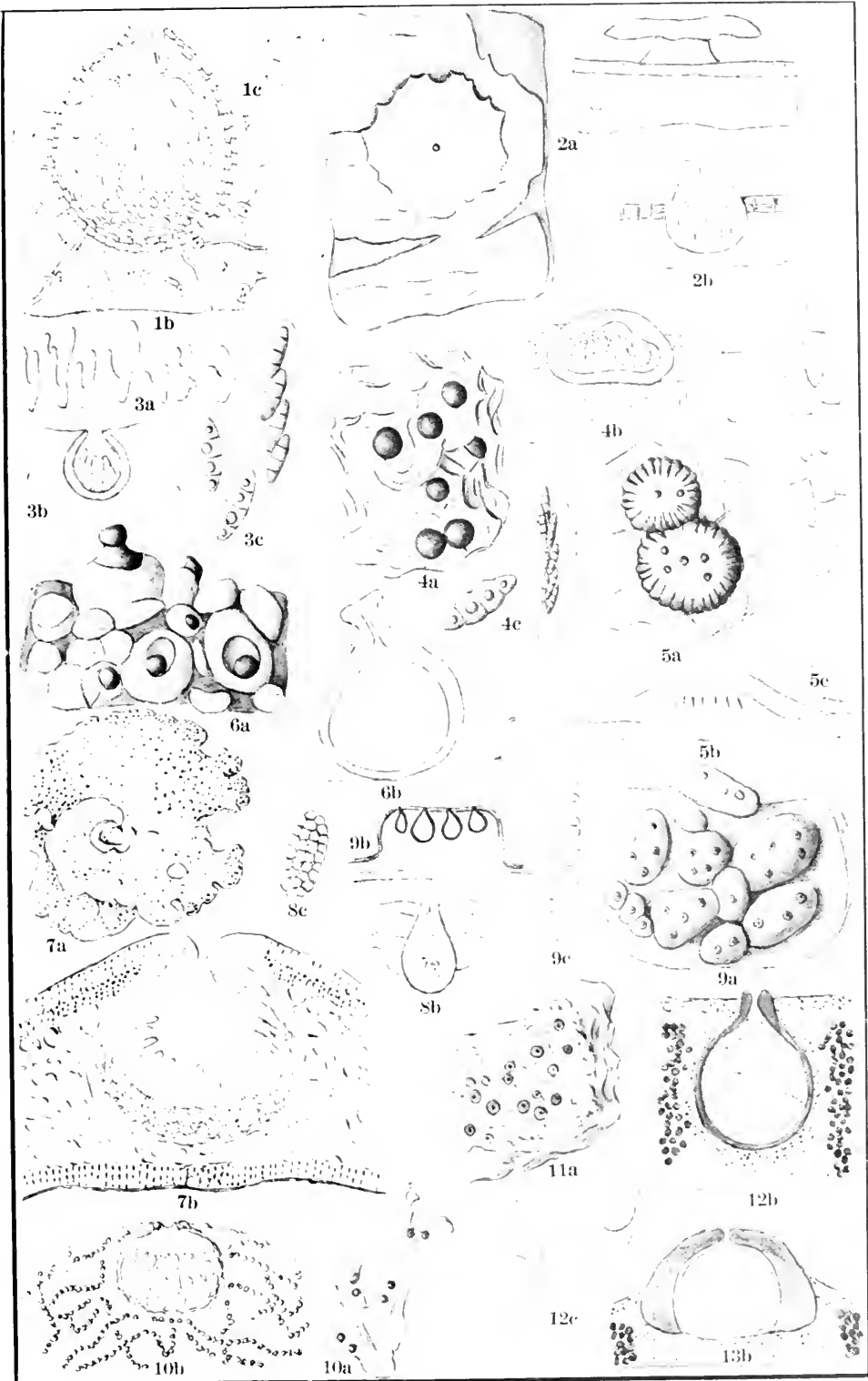


PLATE 19
DOTHIDEACEAE

(a. Habit x5; b. Ascus x500; separate spores x1000; c. Section of stroma or perithecium; except as otherwise indicated)

1. *Phyllachora graminis* (Pers.) Fkl.
(Krieg. Fung. Sax. no. 242)
a. x20
2. *Phyllachora lathyri* (Lev.) T. & S.
(Lind. Nat. Pfl. p. 377 (Diachora), after Mueller)
3. *Phyllachora inclusa* (B. & C.) Sacc.
(T. & S. Dothideales pl. 3, f. 14)
4. *Plowrightia ribesia* (Pers.) Sacc.
(Krieg. Ib. no. 583)
a. x20
5. *Scirrhia rimosa* (A. & S.) Zuck.
(Lind. Ib. p. 380)
a. x1
6. *Dothidea sambuci* (Pers.) Fr.
(Kunze Fung. Sel. Exs. no. 158)
7. *Dangeardiella macrospora* (Schroet.) Sacc. & Syd.
(Petr. Myc. Carp. Exs. no. 217)
c. x50
8. *Rosenscheldia heliopsidis* (Schw.) T. & S.
(Rehm Ascom. no. 2028)
a. x4
c. x35
9. *Homostegia piggoti* (B. & Br.) Karst.
(U. S. D. A., Fockel, no. 755)
c. x25
10. *Bagnisiopsis praestans* (Lev.) T. & S.
(T. & S. Ib. pl 2, f. 6)
11. *Scolecodothis fici* (Bessey)
(U. S. D. A., Bessey, Florida, 1907)
a. x1
c. x25
12. *Diplochorella pseudohypoxyla* (Rehm) T. & S.
(T. & S. Ib. pl. 2, f. 14)
13. *Crotone emmoti* (P. Henn.) T. & S.
(Id. f. 13)

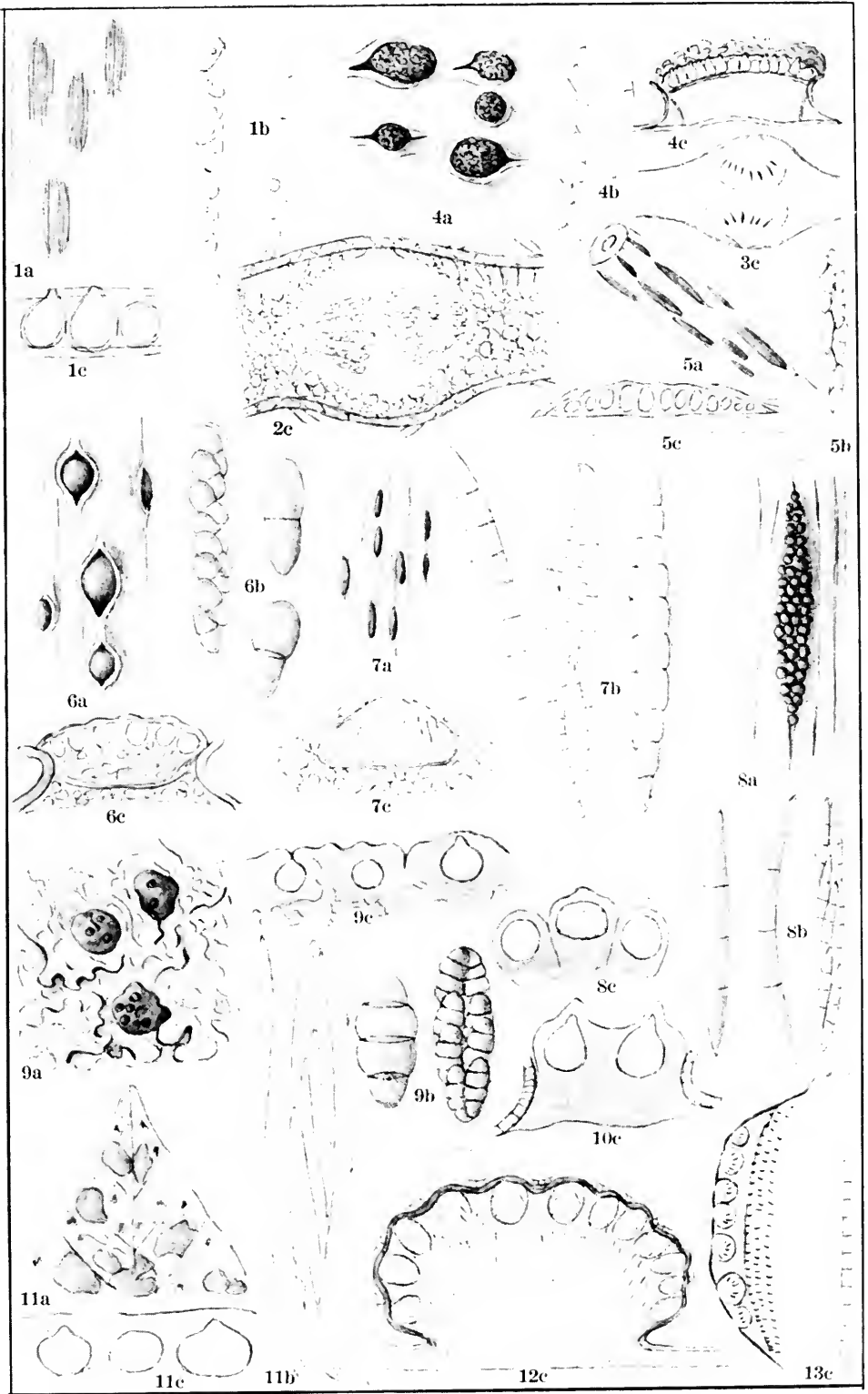


PLATE 20

DOTHIDEACEAE—MYRIANGIACEAE

(a. Stroma or ascoma; b. Ascus or spores; c. Habit; except as otherwise indicated)

1. *Stalagmites tumefaciens* (Syd.) T. & S.
(T. & S. Ann. Myc. 13: pl. 4, f. 15)
2. *Euryachora thoracella* (Rostr.) Schroet.
(Id. pl. 3, f. 7)
3. *Microcyclus angolensis* Sacc. & Syd.
(Id. pl. 5, f. 4, after Theissen)
4. *Catabotrys palmarum* (Pat.) T. & S.
(Id. pl. 2, f. 5)
5. *Placostroma litseae* (Rac.)
(Id. pl. 4, f. 10)
6. *Rhopographus filicinus* (Fr.) Nke.
(Id. pl. 3, f. 9)
7. *Coccostroma puttemansi* (P. Henn.) T. & S.
(Id. pl. 2, f. 12)
8. *Phaeochora washingtoniae* (Shear) T. & S.
(Id. pl. 4, f. 6)
9. *Myriangium duriaei* Mont.
(Fischer Nat. Pfl. p. 320, after Millardet)
a. x³⁰
b. x²⁵⁰
c. x⁵
10. *Plectodiscella piri* Woron.
(T. & S. 15: p. 434, after Woronichin)
11. *Kusanoa japonica* P. Henn.
(Id. p. 440, after Hoehnel)
12. *Myxomyriangis ricki* (Rehm) Theiss.
(Id. p. 434, after Theissen)
13. *Yoshinagaia quercus* P. Henn.
(Id. p. 445)
a. Section of ascoma and detail
14. *Dothiora sorbi* (Wahl.) Fkl.
(Id., after Theissen)
15. *Myriangina mirabilis* (Henn.) Hoehn.
(Id. p. 436, after Theissen)
16. *Bagnisiella mirabilis* (Starb.) Theiss.
(Id. p. 445, after Starbaeck)
17. *Wettsteinina gigaspora* Hoehn.
(Id. p. 447, after Hoehn.)
18. *Dictyonella erysiphoides* (Rehm) Hoehn.
(Id. p. 441, after Hoehnel)

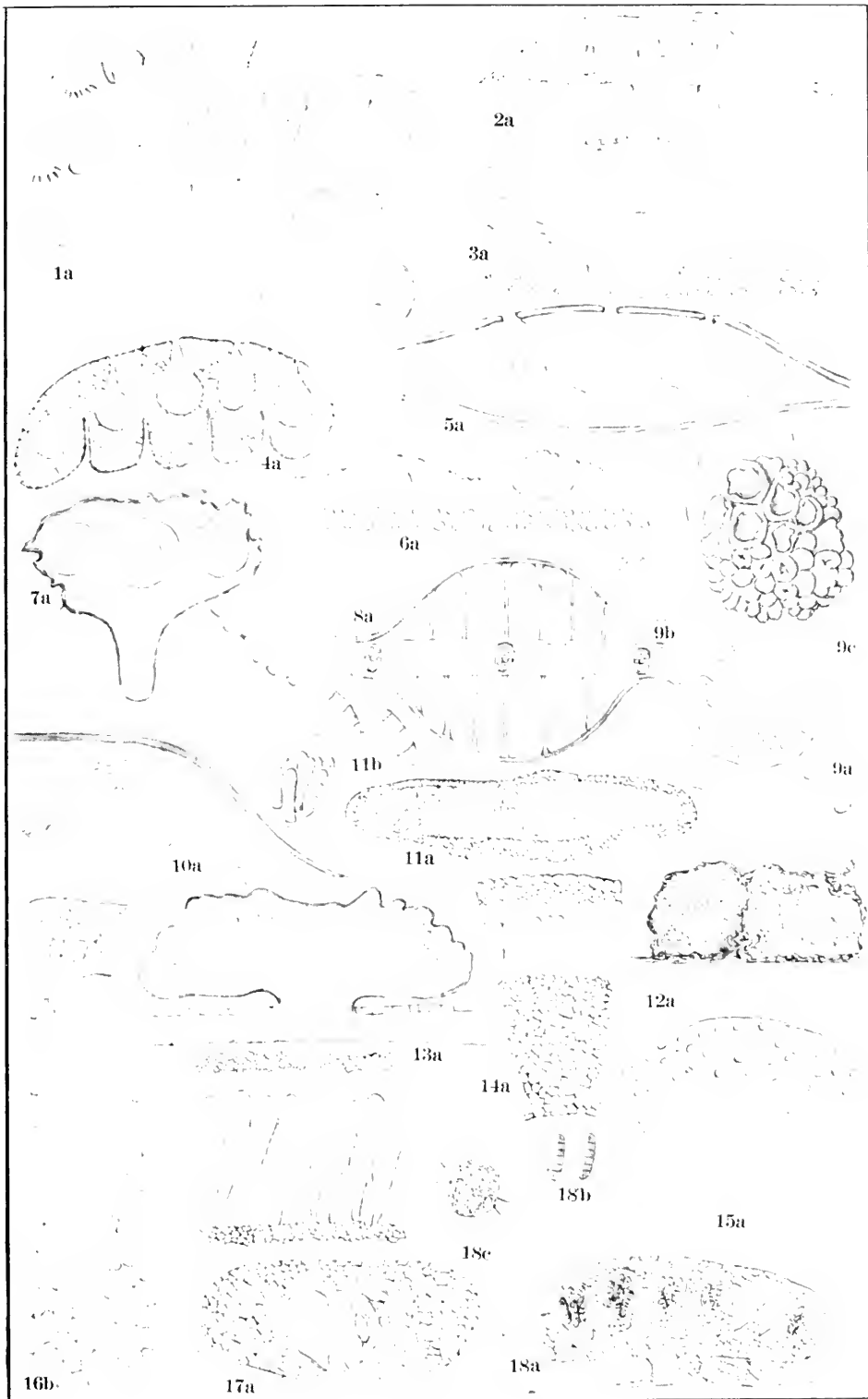


PLATE 21

POLYSTOMELLACEAE—MICROTHYRIACEAE— MICROPELTACEAE

(a. Ascoma or section of same; b. Ascus and spores; except as otherwise indicated)

1. *Schneeepia guaranitica* Speg.
(Rehm Ascom. no. 1687)
 - a. Habit x5; section of ascomata x20
 - b. Ascus x500; spore x1000
2. *Stigmathea robertiani* Fr.
(T. & S. Ann. Myc. 15: p. 400)
3. *Cocconia concentrica* Syd.
(Ib. 13: pl. 1, f. 5)
 - a. Single ascoma and diagrammatic arrangement
4. *Inocyclus myrtacearum* (Rehm) T. & S.
(Id. pl. 1, f. 7)
5. *Cyclotheca miconiae* (Syd.) Theiss.
(Id. pl. 6, f. 7)
6. *Blasdalea disciformis* (Rehm) Sacc. & Syd.
(Id. pl. 5, f. 9)
7. *Melanochlamys leucoptera* Syd.
(Id. pl. 6, f. 9a)
8. *Aulacostroma palawanense* Syd.
(Id. f. 13)
9. *Vizella conferta* (Cke.) Sacc.
(Id. f. 5)
10. *Coscinopeltis argentinensis* Speg.
(Id. pl. 1, f. 9)
11. *Symphaster gesneraceae* Henn.
(Id. pl. 6, f. 8)
 - a. Habit
12. *Dielsiella pritzeli* Henn.
(Id. pl. 1, f. 3)
13. *Dothidasteris sepulta* (B. & C.) Hoehn.
(Id. pl. 2, f. 1)
14. *Trichopeltis pulchella* Speg.
(Ib. 15: p. 426)
 - a. Portion of thallus
15. *Asterina melastomatis* Lev.
(Rehm Ascom. no. 1749)
 - a. Habit x5; ascoma x50
 - b. x500
16. *Pycnocarpum magnificum* (Syd. & Butl.) Theiss.
(T. & S. Ib. 15: p. 426)
 - a. Thallus with pycnidia
17. *Amazonia psychotriae* (Henn.) Theiss.
(Id. p. 420, after Theissen)
18. *Scolecopeltis aeruginea* (Zimm.) Hoehn.
(Id. p. 428, after Hoehnel)

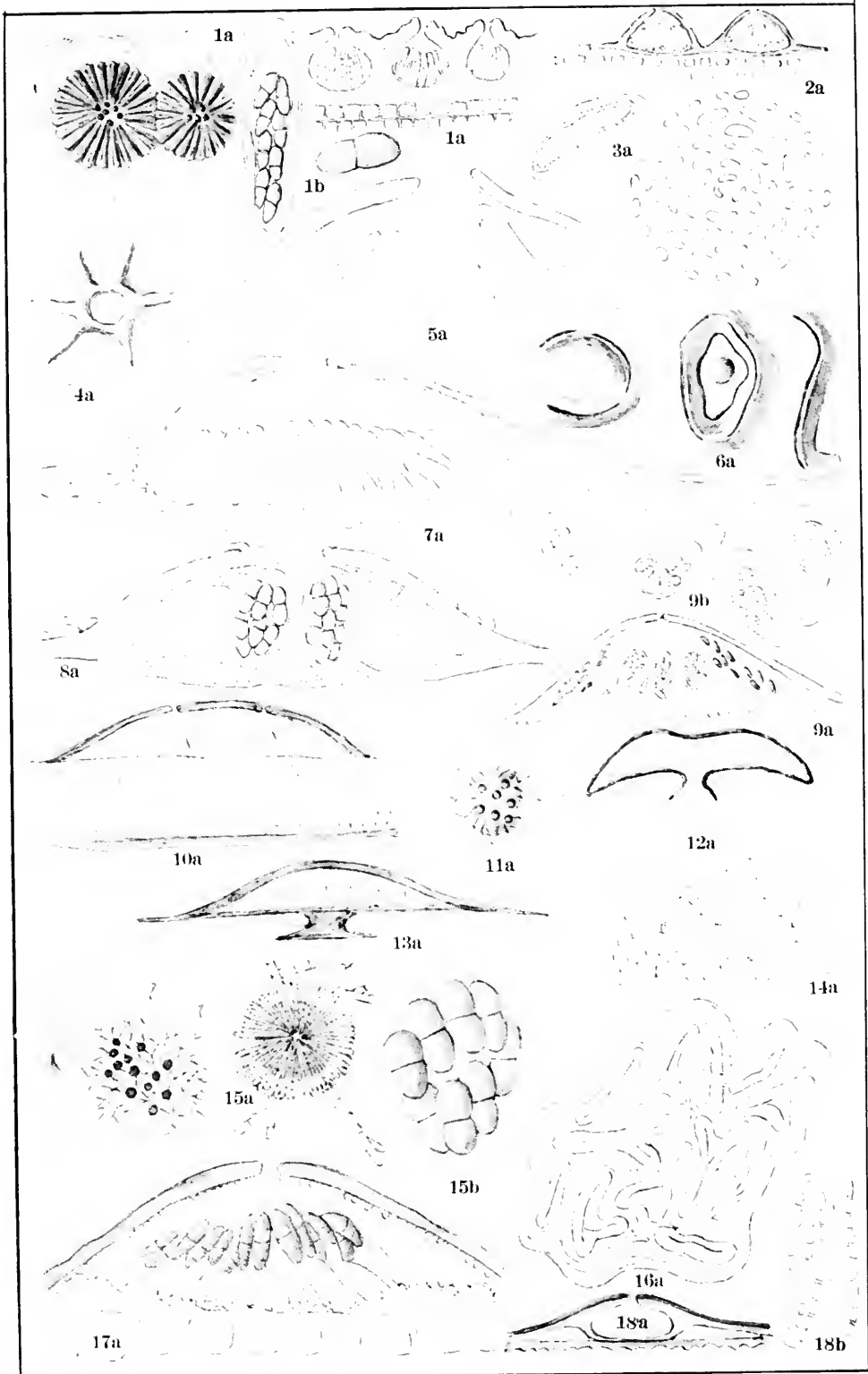


PLATE 22

HYSTERIACEAE—PHACIDIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;
c. Perithecium; except as otherwise indicated)

1. *Aulographum vagum* Desm.
(Petr. Fl. Bohem. no. 1207)
b. x1000
c. x50
2. *Glonium stellatum* Muhl.
(Ellis N. A. Fung. no. 462)
a. x2; detail x5
3. *Gloniella typhae* Fkl.
(Herb. Barb. Bois. no. 971)
c. x10
4. *Pseudographis pinicola* (Nyl.) Rehm
(U. S. D. A., Bres., 1897)
5. *Dichaena quercina* (Pers.) Fr.
(Ellis Ib. no. 793)
b. (Rehm Discom. p. 49)
6. *Hysterium pulicare* Pers.
(U. S. D. A., Clinton, N. Y.)
c. x10
7. *Mytilidium rhenanum* Fkl.
(Fkl. Fung. Rhen. no. 761)
8. *Graphyllum chloes* Clem.
(U. S. D. A., no 1668)
c. x50; detail of wall x500
9. *Hysterographium fraxini* (Pers.) DeN.
(Wilson & Seaver Ascom. no. 36)
10. *Lophium mytilinum* (Pers.) Fr.
(Krieg. Fung. Sax. no. 1832)
11. *Hypoderma virgultorum* DC.
(E. & E. N. A. Fung. no. 2378)
12. *Lophodermium arundinaceum* (Schrad.) Chev.
(Alask. Fung. no. 287)
13. *Acrospermum compressum* Tode
(Ellis Ib. no. 1318)

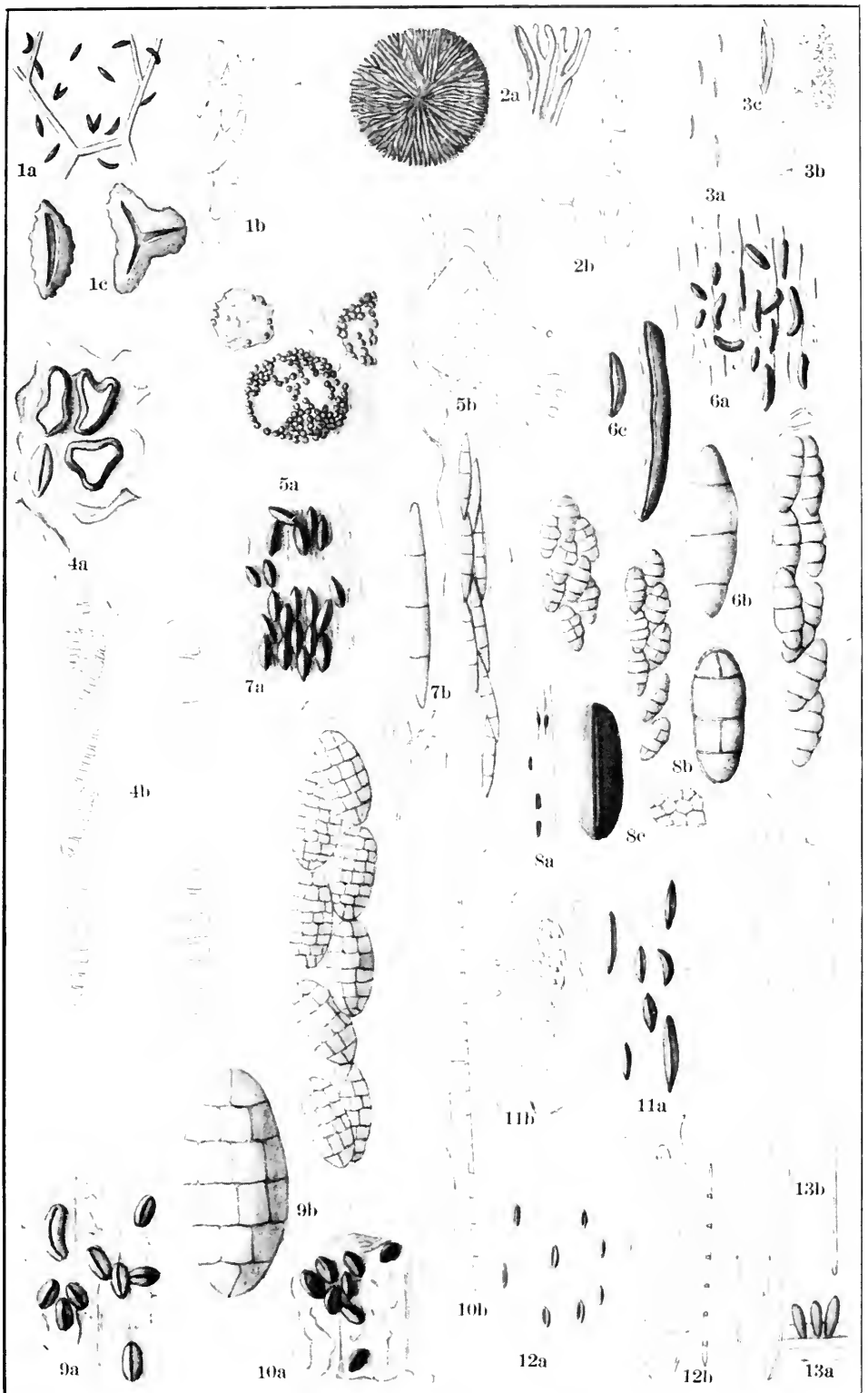


PLATE 23

MYCOPORACEAE—GRAPHIDACEAE—CALICIACEAE

(a. Habit; b. Section of apothecium or stroma; c. Ascus and paraphyses; separate spores x1000; except as otherwise indicated)

1. *Mycoporum elabens* Fw.
(Zahlbr. Nat. Pfl. p. 93)
2. *Arthonia radiata* (Pers.) Th. Fr.
a. x5 (Dec. N. A. Lich. no. 178)
b. (Lind. Flecht 41:43)
c. (Zahlbr. Ib. p. 105)
3. *Graphis scripta* (L.) Ach.
(Zahlbr. Ib. p. 111)
a. x5 (Dec. N. A. Lich. no. 40)
b. x50
4. *Opegrapha varia* Pers.
(Zahlbr. Id.)
a. x5 (Dec. N. A. Lich. no. 173)
b. x50
5. *Acanthothesis pachygraphoides* Wain.
(Zahlbr. Ib. p. 117)
6. *Dirina ceratonia* (Ach.) DeN.
(Id. p. 123, after Reinke)
7. *Roccellographa cretacea* Stur.
(Id. p. 125)
a. Habit x1; lobe of thallus enlarged
b. x50
8. *Roccella fuciformis* DC.
(Id. p. 124, after Reinke & Tulasne)
9. *Cyphelium tigillare* (Pers.) Th. Fr.
(Merrill Lich. Exs. no. 123)
a. x5
c. x500
10. *Caliciopsis stenocyboides* (Nyl.) Rehm
(Rehm Ascom. p. 383)
11. *Sphinctrina turbinata* (Pers.) Fr.
(Id. p. 384, after Tulasne)
12. *Chiodectum myrticola* Fee
(Id. p. 121)

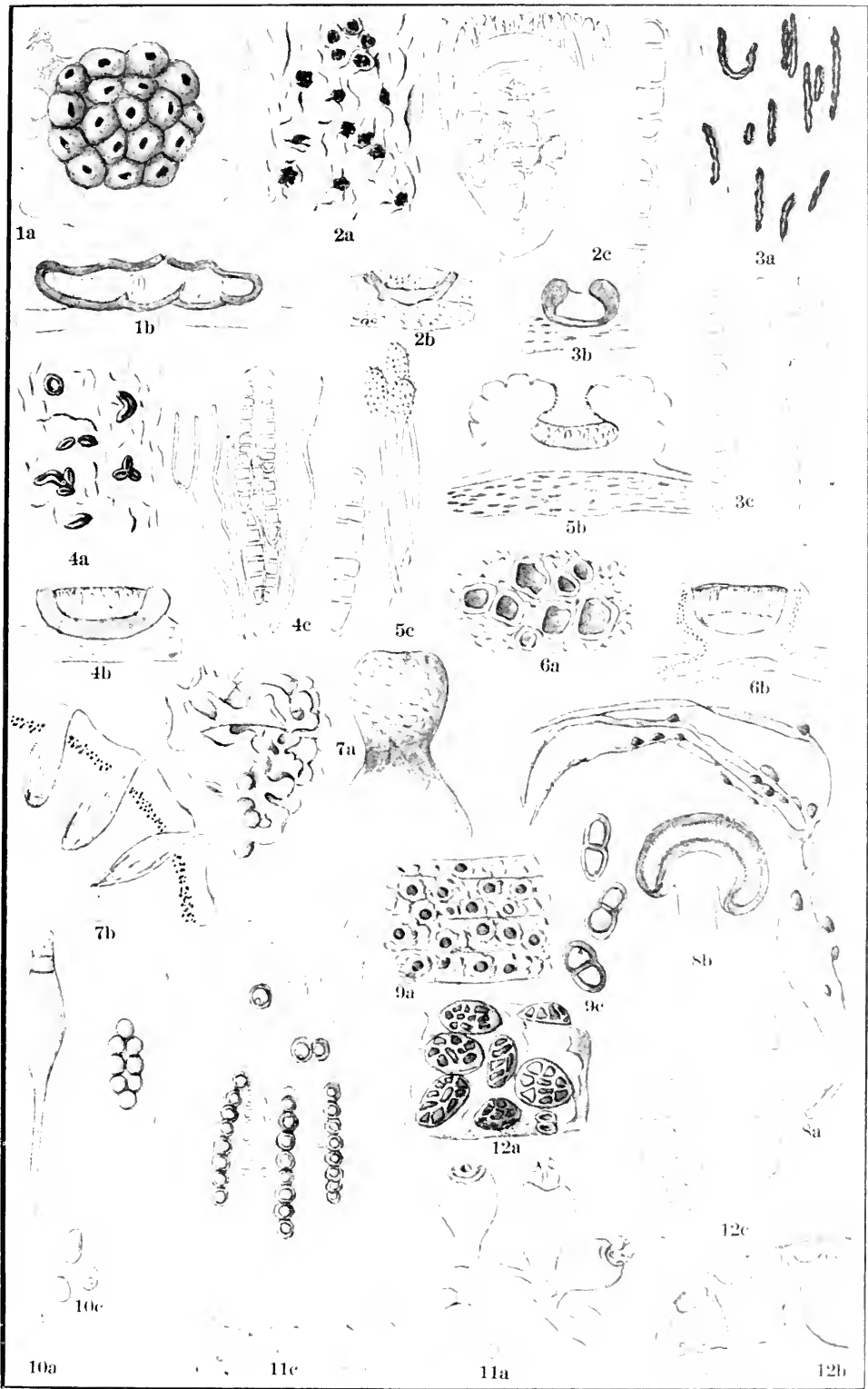


PLATE 24

PHACIDIACEAE—STICTIDACEAE

(a. Habit; b. Ascus and paraphyses x500; separate spores x1000;
c. Section of apothecium x20; except as otherwise indicated)

1. *Phacidium vaccini* Fr.
(Grant Fl. West Wash., 1923)
a. x5; detail x10
2. *Cryptomyces maximus* (Fr.) Rehm
(Jaap Fung. Sel. Exs. no. 766)
a. and c. x5
3. *Schizothyrium ptarmicae* Desm.
(Krieg. Fung. Sax. no. 384)
a. x5; detail x20
4. *Keithia tetraspora* (Ph:ll.) Sacc.
(Jaap Ib. no. 706)
a. x5
5. *Sphaeropezia vaccini* (Rehm) Sacc.
(Krieg. Ib. no. 1786)
a. x5; detail x20
6. *Dothiora sphaeroides* (Pers.) Fr.
(Id. no. 969)
7. *Rhytisma acerinum* (Pers.) Fr.
(U. S. D. A., Arkansas)
a. x1
8. *Coccomyces coronatus* (Schum.) Rehm
(Migula Krypt. Germ. no. 55)
9. *Clithris quercina* (Pers.) Fr.
(Martin Fung. Iowa no. 727)
c. x10
10. *Stegia lauri* (Cald.) Sacc.
(Sacc. Myc. Ven. no. 111)
a. x10
11. *Propolis faginea* (Schrad.) Karst.
(All. & Schn. Fung. Bav. no. 349)
12. *Xylographa parallela* (Ach.) Fr.
(Sacc. Myc. Ital. no. 679)
a. x10

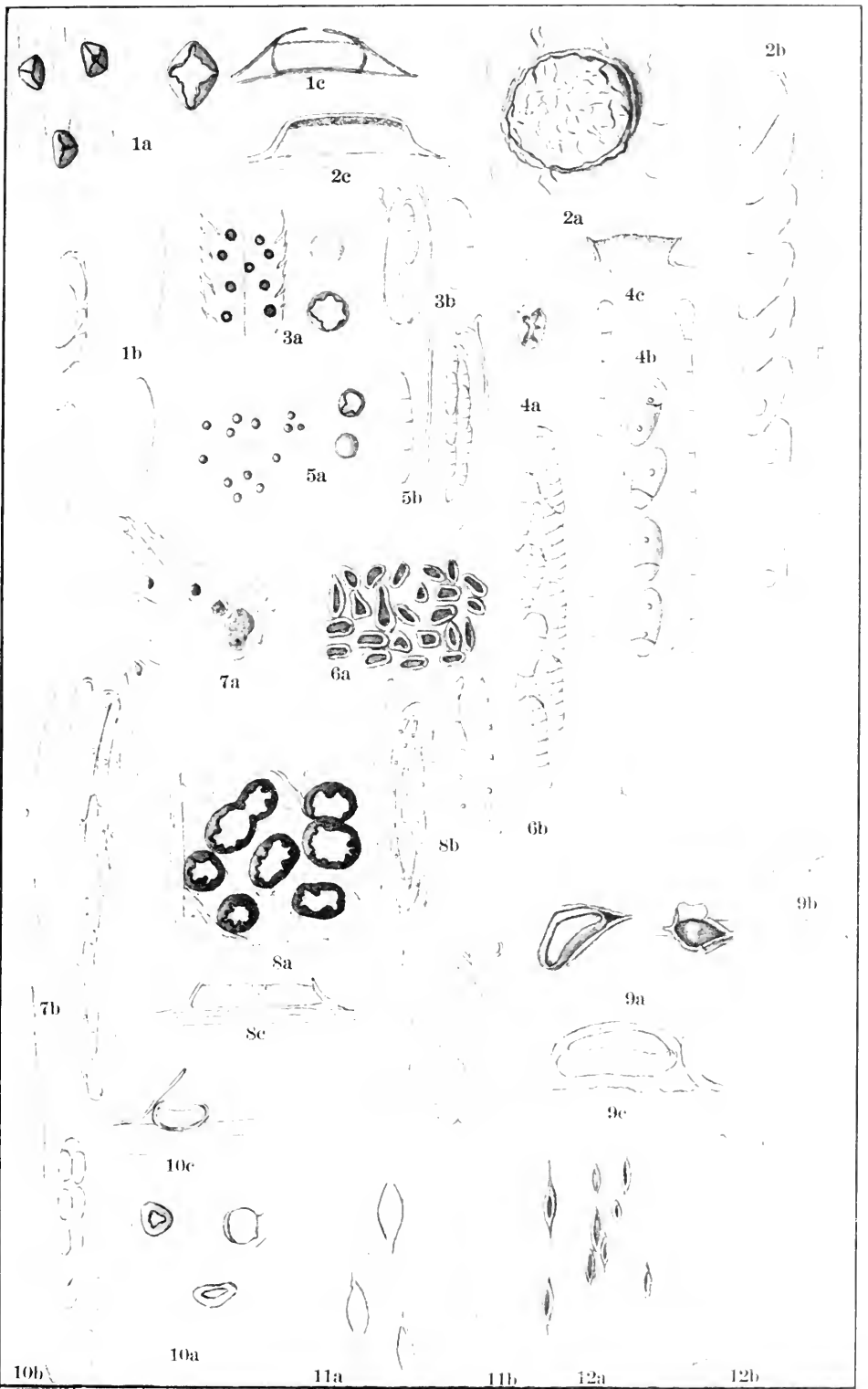


PLATE 25

STICTIDACEAE—TRYBLIDIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;
c. Section of apothecia; except as otherwise indicated)

1. *Xylogramma sticticum* (Fr.) Wallr.
(Rehm Ascom. p. 124)
a. x10
2. *Cryptodiscus pallidus* (Pers.) Cda.
(Speg. Myc. Ital. no. 102)
a. x5
3. *Schizoxylum berkleyanum* (Dur. & Lev.) Fkl.
(Petr. Fl. Bohem. no. 281)
a. x5; detail x25
b. Spore fragments x1000
c. (Rehm Ib. p. 126)
4. *Stictis radiata* (L.) Pers.
(U. S. D. A., Clinton, N. Y.)
c. (Rehm Ib.)
5. *Ostropa cinerea* (Pers.) Fr.
(U. S. D. A., Schnabl. Munich, 1895)
c. (Rehm Ib. p. 186)
6. *Trybliopsis pinastri* (Pers.) Karst.
(Rehm Ib. p. 192)
a. (Clem. Crypt. Form. Colo. no. 73)
7. *Heterosphaeria patella* (Tode) Grev.
(Syd. Myc. Germ. no. 1103)
a. Apothecia x10: wet and dry conditions
8. *Odontotrema hemisphaericum* (Fr.) Rehm
a. (Fkl. Barb. Bois. Herb. no. 1099)
b. (Rehm Ib. p. 200)
9. *Tryblidium calyciforme* Reb.
(Petr. Ib. no. 34)
10. *Scleroderris ribesia* (Pers.) Karst.
(Migula Crypt. Germ. no. 216)

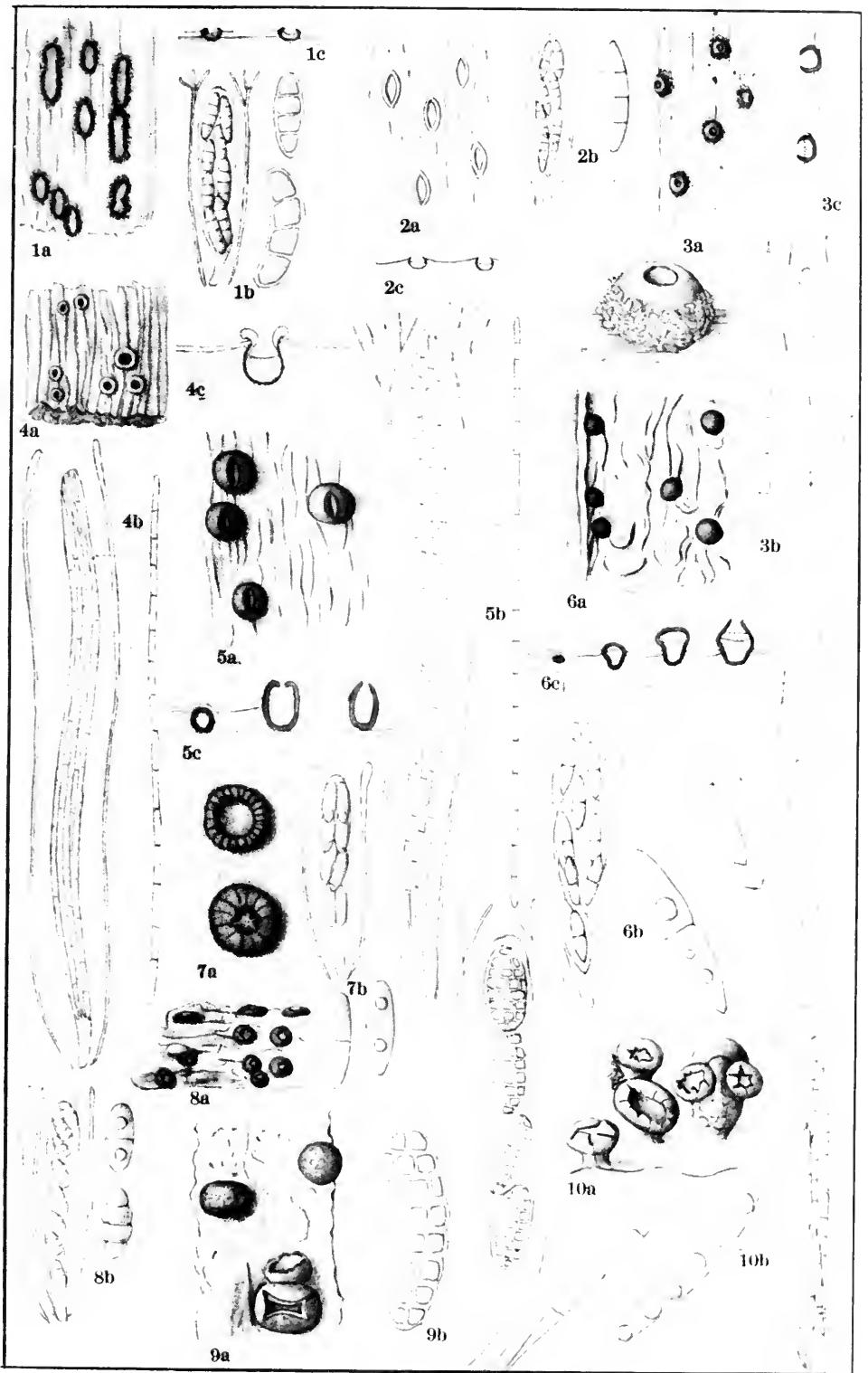


PLATE 26

DERMATEACEAE—BULGARIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;
c. Section of apothecia, except as otherwise indicated)

1. *Dermatea cerasi* (Pers.) DeN.
(U. S. D. A., Barthol., 1912)
a. x3
c. (Rehm *Ascom.* p. 242)
2. *Cenangium populneum* (Pers.) Rehm
(Rehm *Ib.* p. 215)
3. *Tympanis pinastris* Tul.
(*Id.* p. 245)
a. Ascus filled with spermatoids
4. *Crumenula pinicola* (Reb.) Karst.
(Rehm *Ib.* p. 217)
a. (Jaap *Fung. Sel. Exs.* no. 184)
5. *Trybliidiella rufula* (Spreng.) Sacc.
(U. S. D. A., Weir, 1925)
6. *Godronia urceolus* (A. & S.) Karst.
(Rehm *Ib.* p. 217)
a. x10
7. *Agyrium rufum* (Pers.) Fr.
(Ellis N. A. *Fung.* no. 450)
c. (Rehm *Ib.* p. 447)
8. *Ombrophila violacea* (Hedw.) Fr.
(Ellis *Ib.* no. 392)
9. *Bulgaria inquinans* Fr.
(Ex. *Herb. Rorer*, Conn., 1901)
a. x1
c. (Rehm *Ib.* p. 472)
10. *Calloria fusarioides* (Berk.) Fr.
(Rehm *Ib.* p. 448)
a. x10 (Krieg. *Fung. Sax.* no. 387)
11. *Coryne sarcodes* (Jacq.) Tul.
(U. S. D. A., Bres.)
a. x2
c. (Rehm *Ib.* p. 471)
12. *Holwaya ophiobola* (L.) Sacc.
b. (Ellis *Ib.* no. 996)
c. x3 (Bull. Torr. Club 28: pl. 26, after Durand)

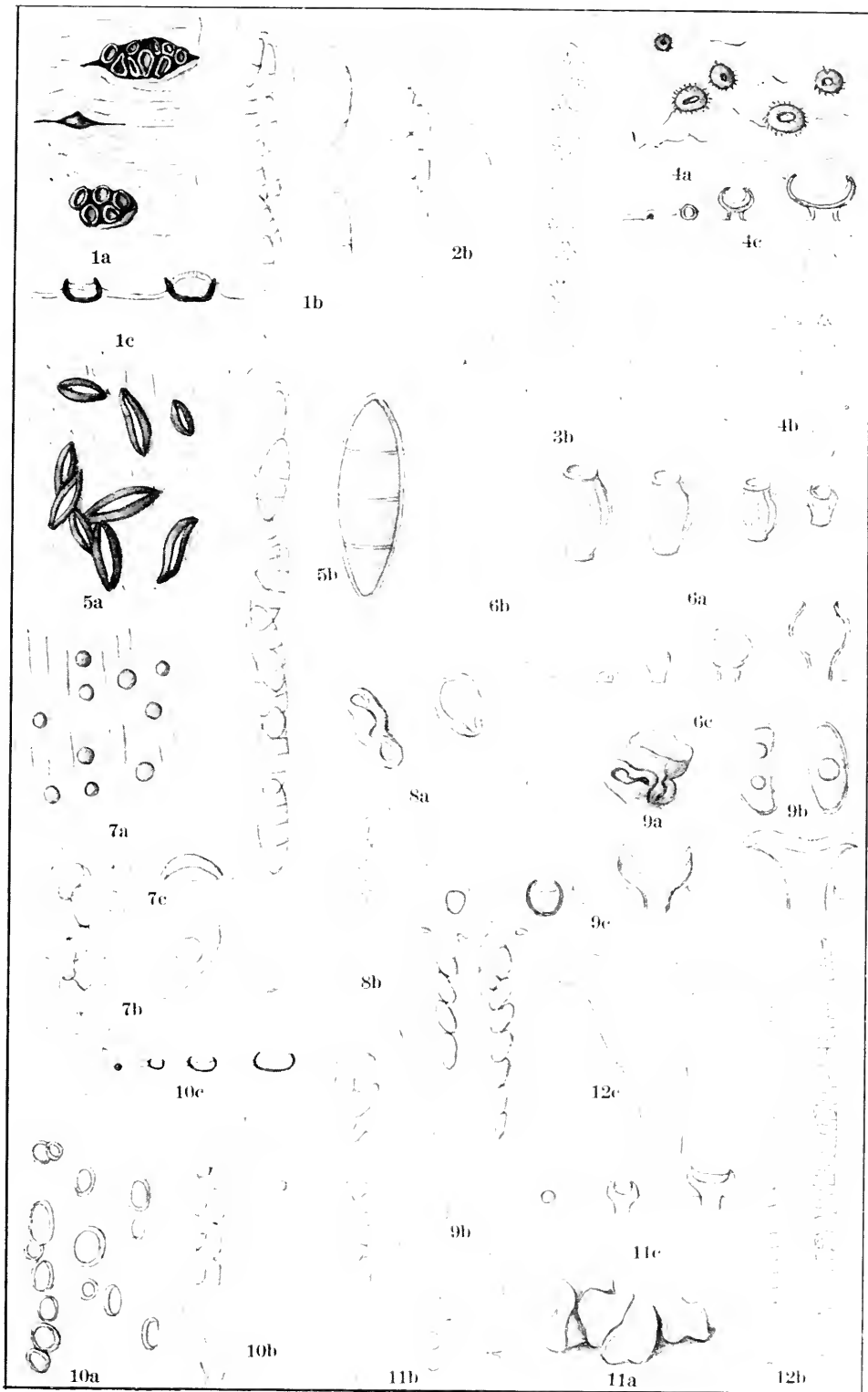


PLATE 27
PATELLARIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;
c. Section of apothecia; except as otherwise indicated)

1. *Biatorella resinae* (Fr.) Mudd
(Rehm Ascom. p. 292)
a. (Herb. Haglund, 1892)
2. *Patinella punctiformis* Rehm
(Rehm Ib. p. 293)
a. x10
3. *Psilothecium incurvum* Clem.
(Clem. Colo., 1896)
a. x10
4. *Patellea sanguinea* (Pers.) Rehm
(Vest. Mic. Rar. Sci. no. 1763)
a. x10
5. *Karschia lignyota* (Fr.) Sacc.
(Fink Ascom. Ohio)
c. (Rehm Ib. p. 299)
6. *Abrothallus parmeliarum* (Sommerf.) Nyl.
(Simmer Krypt. Kreuz. no. 2001)
c. (Rehm Ib.)
7. *Caldesia sabina* (DeN.) Rehm
(Clem. Ib.)
c. (Rehm Ib. p. 283)
8. *Baggea pachyasca* Auersw.
(Rehm Ib. p. 301)
a. x10
9. *Durella compressa* (Pers.) Tul.
(Ellis N. A. Fung. no. 145)
a. x10
10. *Patellaria atrata* (Hedw.) Fr.
(U. S. D. A., Ellis, New Jersey)
c. (Rehm Ib. p. 295)
11. *Mycobacidia herbarum* (Hepp) Rehm
(Id. p. 296)

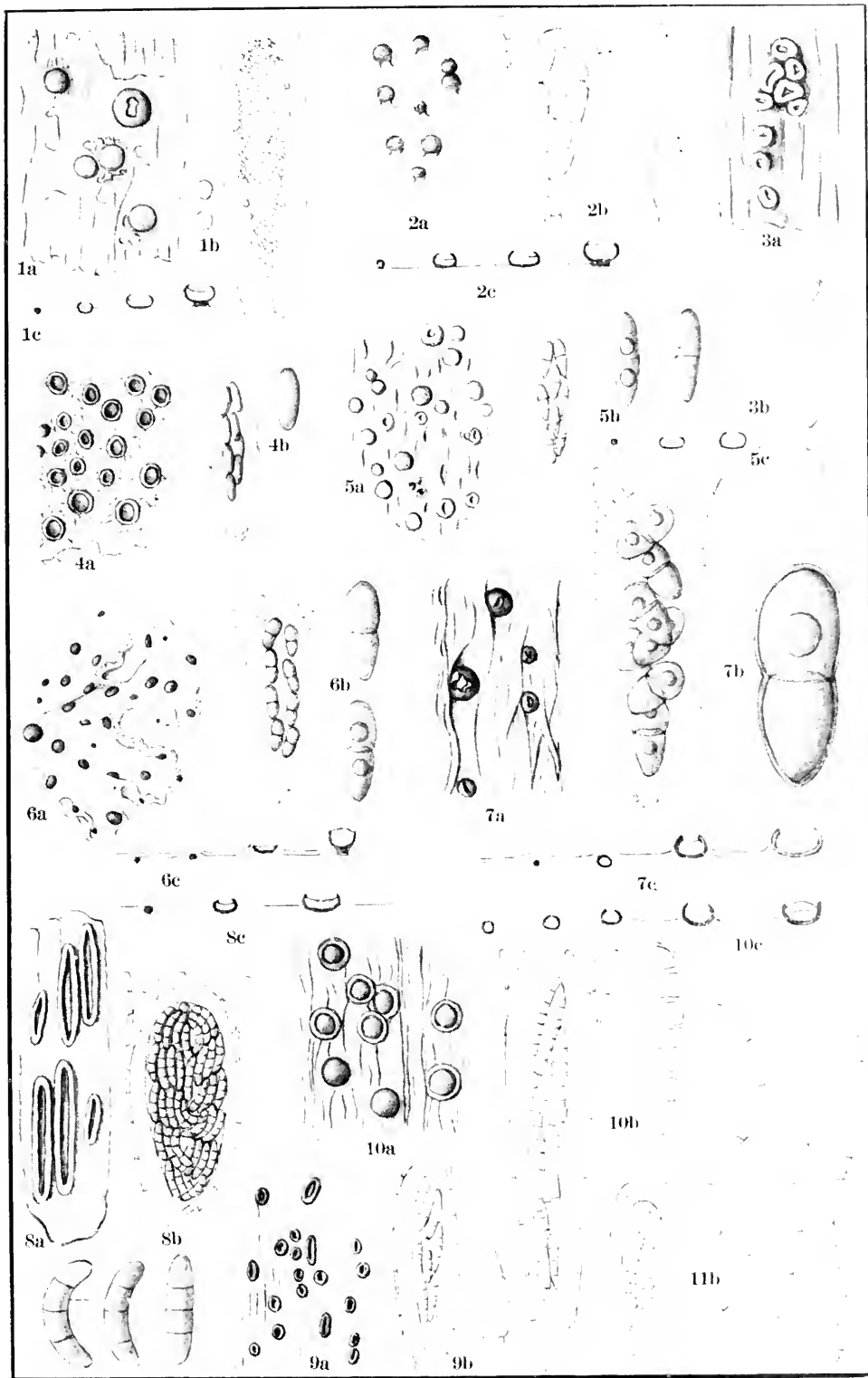


PLATE 28

CALICIACEAE—COLLEMACEAE

(a. Habit or apothecium; b. Separate spores x1000; c. Section of apothecium or thallus; except as otherwise indicated)

1. *Pyrgillus javanicus* Nyl.
(Merrill Lich. Exs. no. 120)
a. x5
c. (Zahlbr. Nat. Pfl. p. 99, after Reinke)
2. *Coniocybe furfuracea* Ach.
(Id., p. 96)
3. *Acolium sessile* (Pers.) Rehm
(Rehm Ascom. p. 386)
4. *Stenocybe major* Nyl.
(Id. p. 387)
b. x500
5. *Chaenotheca chrysocephala* (Turn.) Th. Fr.
(Zahlbr. Ib. p. 96)
6. *Calicium hyperellum* (Ach.) Pers.
(Id.)
7. *Tholurna dissimilis* Norm.
(Id. p. 101)
8. *Sphaerophorus coralloides* Pers.
(Id.)
9. *Chrysothrix noli-tangere* Mont.
(Id. p. 135)
10. *Phylliscum demangeoni* (Mont. & Moug.) Nyl.
(Id. p. 156, after Reinke)
11. *Jenmania goebeli* Waecht.
(Id. p. 159, after Waechter)

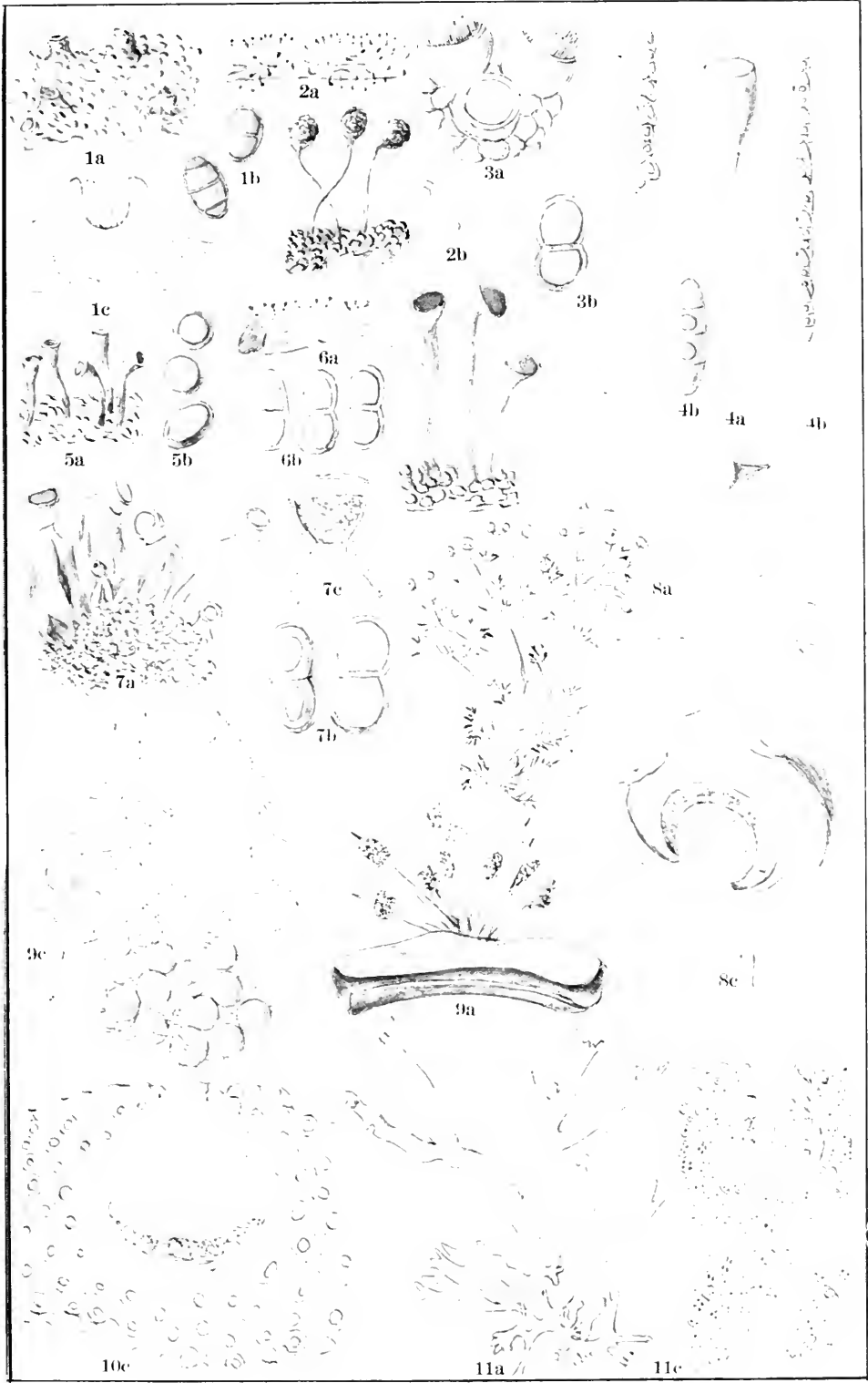


PLATE 29

COLLEMACEAE—PELTIGERACEAE

(a. Habit $\times 1$; b. Section of apothecium; c. Spores; except as otherwise indicated)

1. **Collema pulposum** (Bernh.) Ach.
(Fink Lich. Minn. pl. 21, after Schneider)
b. $\times 400$
c. $\times 650$
2. **Leprocollema americanum** Wain.
(Zahlbr. Nat. Pfl. p. 166, after Reinke)
a. $\times 6$
b. $\times 120$
3. **Leptogium tremelloides** (L.) S. F. Gray
(Fink Ib. pl. 22, after Schneider)
b. $\times 400$
c. $\times 650$
4. **Thermutis velutina** (Ach.) Th. Fr.
(Zahlbr. Ib. p. 150, after Reinke)
a. Habit $\times 1$; apothecia and hyphae $\times 15$
b. $\times 50$
5. **Ephebe lanata** (L.) Wain.
(Id. p. 151)
a. Habit $\times 1$; tip of thallus $\times 350$
6. **Heppia virescens** (Despr.) Nyl.
(Id. p. 174, after Reinke)
a. $\times 3$
b. $\times 50$
c. $\times 1000$
7. **Peltigera canina** (L.) Hoffm.
(Clem. Colo., 1929)
b. $\times 45$ (Fink Ib. p. 163, after Reinke)
c. $\times 500$
8. **Solorina saccata** (L.) Ach.
(Lind. Flecht. 153:90)

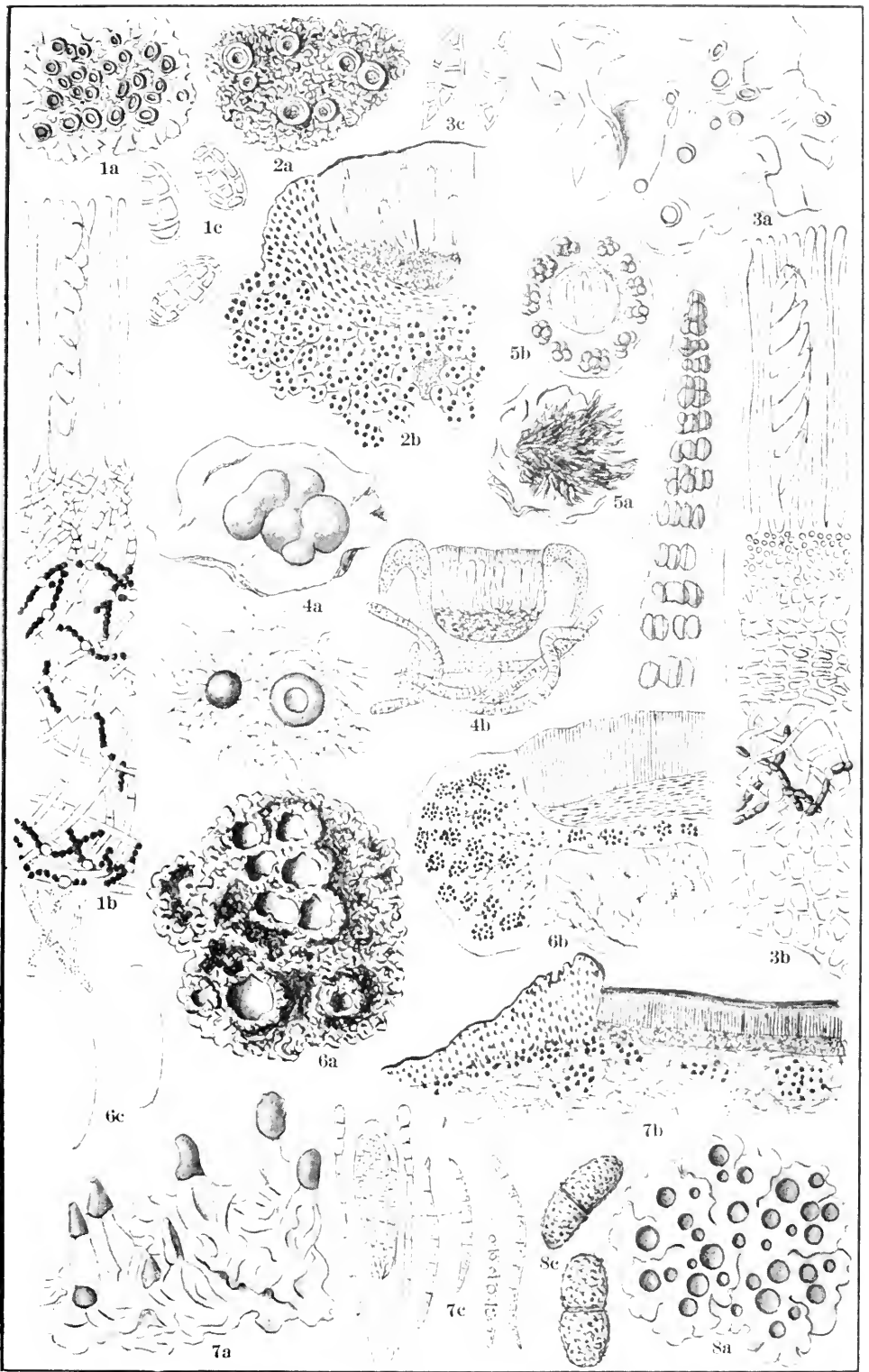


PLATE 30

CLADONIACEAE—LECIDEACEAE

(a. Habit; b. Ascus, paraphyses and spores x500; separate spores x1000; c. Section of apothecium; except as otherwise indicated)

1. *Baeomyces byssoides* (L.) Ach.
(Willey Coll. U. S. Nat. Herb.)
a. x2½ (Fink Lich. Minn. pl. 10)
2. *Pilophorum cereolus* Th. Fr.
(Lind. Flecht. 103:105)
a. x1; detail enlarged
3. *Gymnoderma coccocarpum* Nyl.
(Zahlbr. Nat. Pfl. p. 204, after Reinke)
a. x1; detail enlarged
4. *Stereocaulum paschale* (L.) Hoffm.
(Dec. N. A. Lich. no. 25)
a. x1; detail x5
5. *Cladonia rangeriferina* (L.) Web.
(Zahlbr. Ib. p. 206, after Reinke)
a. x1
6. *Argopsis megalospora* Th. Fr.
(Id. p. 209, after Reinke)
a. x1; cephalodia and phyllocladia
7. *Lecanactis abietina* (Ach.) Koerb.
(Id. p. 132, after Reinke)
b. (After Zahlbr.)
8. *Schismatomma abietinum* (Ehrb.) Koerb.
(Id.)
b. (Lind. Ib. 55:59)
9. *Lecidea enteroleuca* Ach.
(Herb. Hasse, no. 225)
a. x5
10. *Biatora vernalis* (L.) Th. Fr.
(Lind. Ib. 67:80)
11. *Sphaerophoropsis stereocauloides* Wain.
(Zahlbr. Ib. p. 195, after Reinke)
12. *Lopadium pezizoideum* (Ach.) Koerb.
(Lind. Ib. 103:98)
13. *Bacidia rosella* (Pers.) DeN.
a. x5 (Merrill Lich. Exs. no. 30)
b. (Lind. Ib. 89:92)
14. *Rhizocarpum geographicum* (L.) DC.
(Dec. N. A. Lich. no. 218)
a. x5
b. x500
15. *Buellia parasema* (Ach.) Th. Fr.
(Clem. Colo.)
a. x5
b. x500
16. *Bacidia rubella* (Ehrb.) Massal.
(Lind. Ib. 89:93)

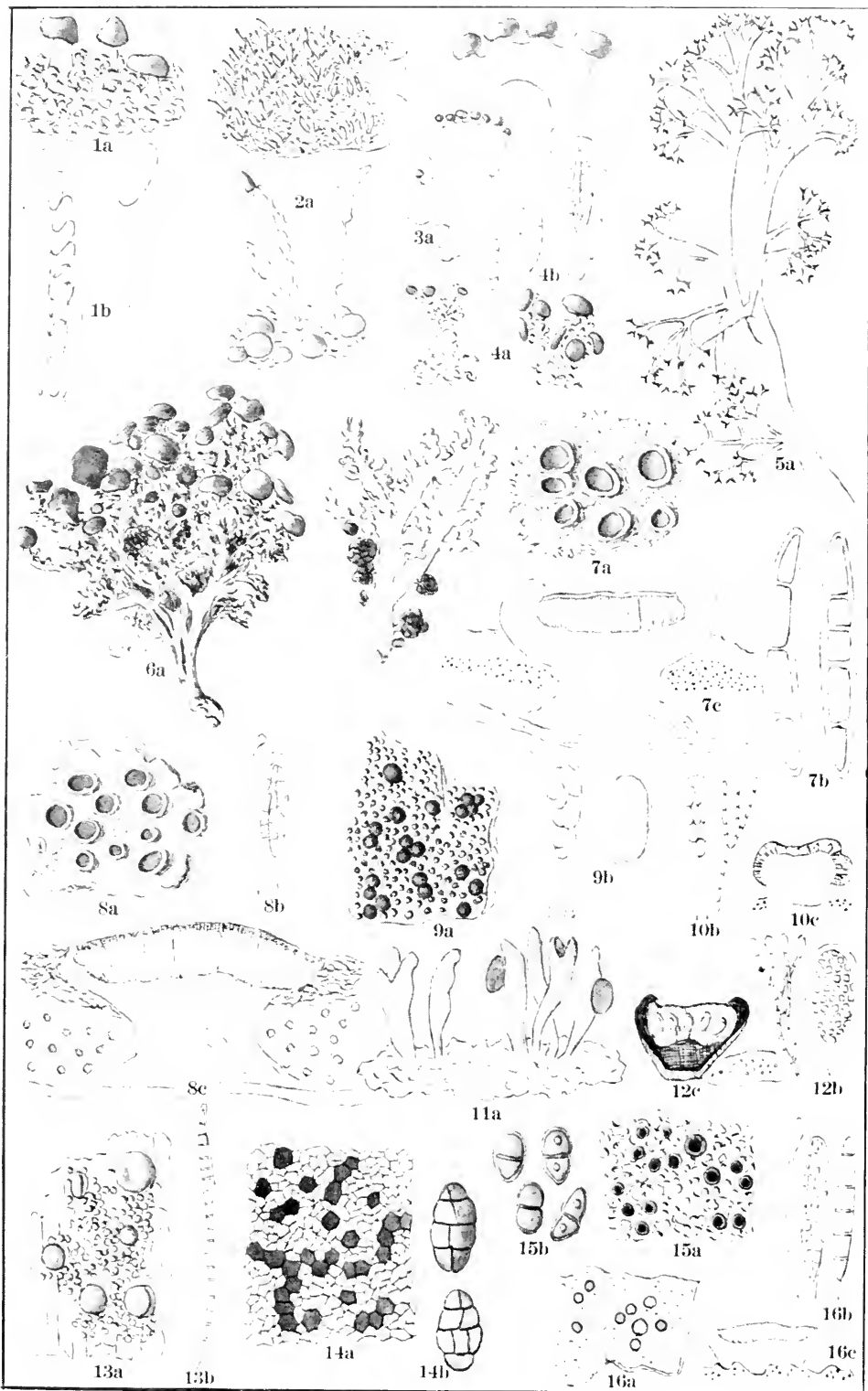


PLATE 31

LECIDEACEAE—PARMELIACEAE

(a. Habit; b. Ascus and paraphyses x500; separate spores x1000;
c. Section of apothecium)

1. *Gyrophora vellea* (L.) Ach.
(Merrill Lich. Exs. no. 45)
a. x1 (Lind. Flecht. 130:148); detail of lobe
of thallus x5
2. *Umbilicaria pustulata* (L.) Hoffm.
(Dec. N. A. Lich. no. 15)
a. x1; detail of lobe of thallus x5
3. *Lecanora subfusca* (L.) Ach.
(Id. no. 22)
a. x5
c. (Lind. Ib. 166:209)
4. *Psoroma hypnorum* (Dicks.) Hoffm.
(Clem. Colo.)
a. x5
b. x500
5. *Icmadophila ericetorum* (L.) Zahlbr.
(Merrill Lich. Exs. no. 9)
a. x5
6. *Diploschistes scruposus* (L.) Norm.
(Zahlbr. Nat. Pfl. p. 141, after Reinke)
a. x5 (Merrill Lich. Exs. no. 102)
b. x500
7. *Pertusaria bryontha* (Ach.) Nyl.
a. x1 (Lind. Ib. 166:200)
c. x30 (Zahlbr. Ib. p. 218, after Reinke)
8. *Acarospora chlorophana* (Wahlb.) Mass.
(Clem., Colo.)
a. x5
9. *Thelotrema lepadinum* Ach.
(Zahlbr. Ib. p. 138)
a. (After Reinke)
10. *Gyrostomum scyphuliferum* (Ach.) Fr.
(Merrill Lich. Exs. no. 33)
a. x10
b. x500
c. (Zahlbr. Ib. p. 140)
11. *Gyalecta cupularis* (Ehrh.) Fr.
(Zahlbr. Ib. p. 146, after Reinke)
b. (Lind. Ib. 55:66)
12. *Lobaria pulmonaria* (L.) Hoffm.
a. x1 (Dec. N. A. Lich. no. 16)
b. (Zahlbr. Ib. p. 184)

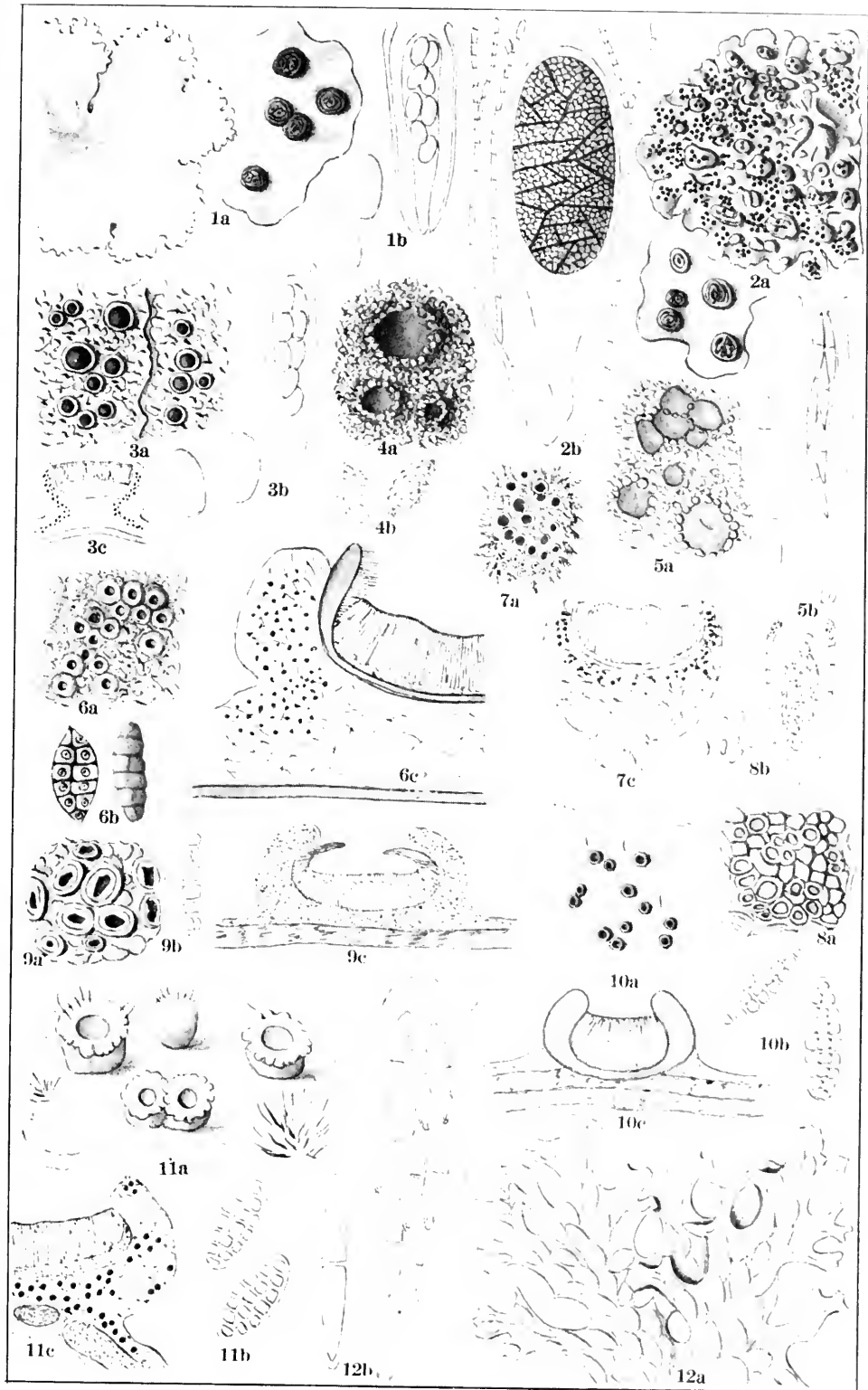


PLATE 32

PARMELIACEAE—PHYSICIACEAE

(a. Habit x1; b. Ascus, paraphyses and spores x500; c. Section of apothecium; except as otherwise indicated)

1. *Parmelia conspersa* (Ehrh.) Ach.
(Zahlbr. Nat. Pfl. p. 232, after Reinke)
2. *Cetraria islandica* (L.) Ach.
(Merrill Lich. Exs. no. 116)
3. *Alectoria ochroleuca* (Ehrh.) Nyl.
(Lind. Flecht. 199:255)
4. *Dufourea madreporiformis* (Wulf.) Ach.
(Id. 199:253)
5. *Evernia prunastri* (L.) Ach.
(Id. 199:250)
6. *Usnea florida* (L.) Hoffm.
(Zahlbr. Ib. p. 246)
a. (After Reinke)
7. *Pannaria pezizoides* (Web.) Lightf.
(Lind. Ib. 142:183)
8. *Ramalina calicaris* (L.) Fr.
(Fink Lich. Minn. pl. 40, after Schneider)
b. x650
9. *Lepidocollema carassense* Wain.
(Zahlbr. Ib. p. 178, after Reinke)
a. x3
c. x160
10. *Caloplaca aurantiaca* (Lightf.) Th. Fr.
(Lich. Bor. Am. no. 46)
a. x5
11. *Xanthoria parietina* (L.) Th. Fr.
(Merrill Lich. Exs. no. 133)
12. *Theloschistes chrysophthalmus* (L.) Norm.
a. Group of apothecia enlarged (Zahlbr. Ib. p. 252)
b. (Lich. Bor. Am. no. 84)
13. *Rinodina sophodes* (Ach.) Th. Fr.
(Dec. N. A. Lich. no. 169)
a. x5
c. (Lind. Ib. 231:283)
14. *Physcia stellaris* (L.) Nyl.
(Dec. N. A. Lich. no. 12)
c. x35
15. *Anaptychia leucomelaena* (L.) Wain.
(Zahlbr. Ib. p. 258)

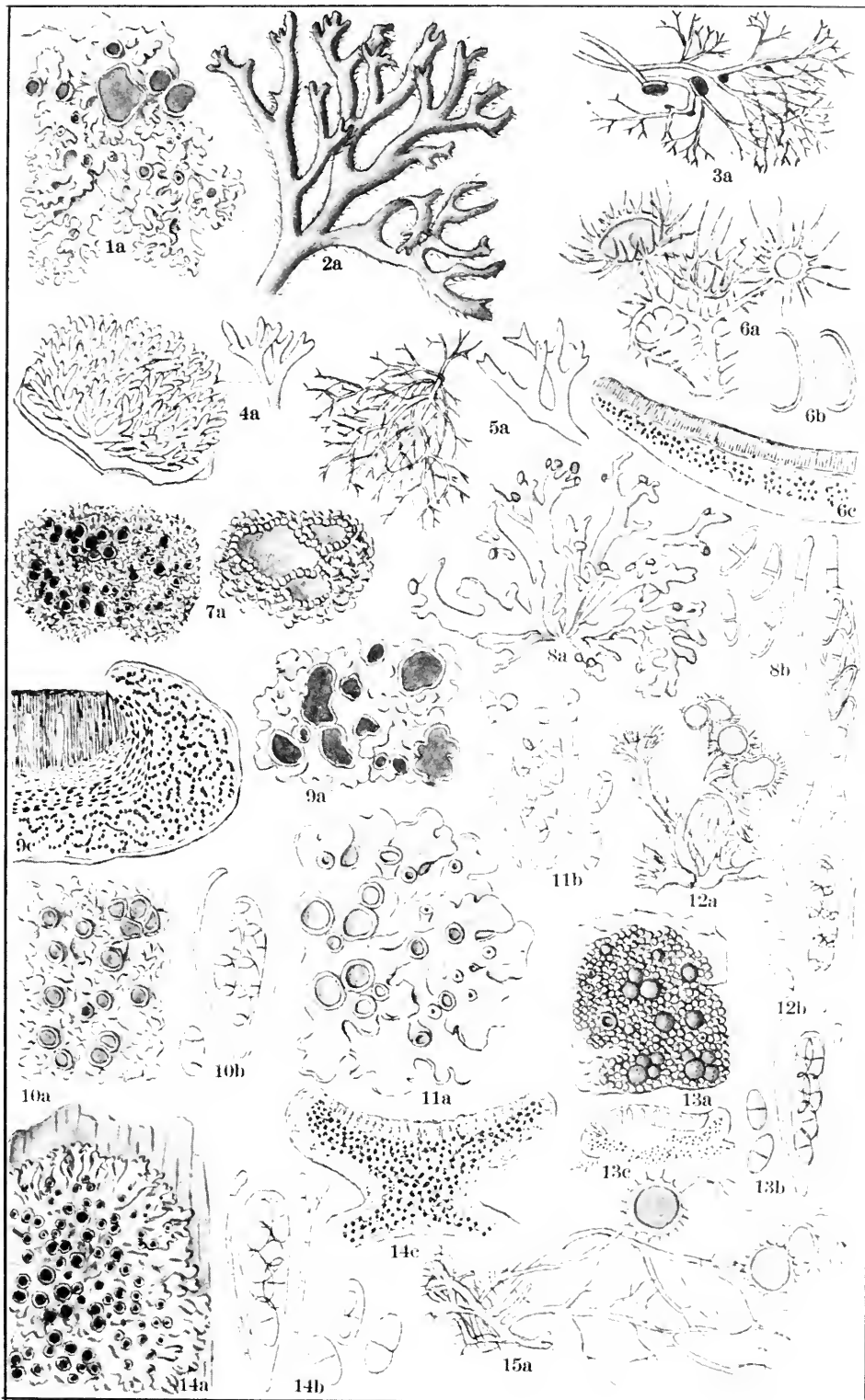


PLATE 33

MOLLISIACEAE—HELOTIACEAE

(a. Habit x5, represented in moist condition; b. Ascus and paraphyses x500; separate spores x1000; c. Section of apothecia; except as otherwise indicated)

1. *Mollisia cinerea* (Batsch) Karst.
(Rehm Ascom. p. 505)
 - a. (Petr. Fl. Bohem. no. 269)
 - c. (*M. benesuada*)
2. *Tapesia fusca* (Pers.) Fkl.
(Krypt. Exs. Vienna Mus. no. 1926)
 - a. Habit, both wet and dry
3. *Niptera ramealis* Karst.
(Id. no. 956)
4. *Pyrenopeziza rubi* (Fr.) Rehm
(Krieg. Fung. Sax. no. 879)
 - c. (Rehm Ib. p. 604)
5. *Fabraea ranunculi* (Fr.) Karst.
(Petr. Myc. Carp. no. 16)
6. *Eriopeziza caesia* (Pers.) Rehm
(Phillips Elvel. Brit. no. 76)
 - a. x10
7. *Sclerotinia tuberosa* (Hedw.) Fr.
 - a. x1 (Hone Minn. Bot. Stud. June 1909, pl. 14)
 - b. (Rehm Ib. p. 802)
8. *Helotium citrinum* (Hedw.) Fr.
(Krypt. Exs. Vienna Mus. no. 205b)
 - a. Habit x5; apothecium x10
9. *Cyathicula coronata* (Bull.) DeN.
(Rehm Ib. p. 705)
 - a. Habit x1; apothecium enlarged
10. *Hymenoscypha virgultorum* (Vahl) Phill.
(Vest. Mic. Rar. Sel. no. 1759)
11. *Pocillum cesati* (Mont.) DeN.
(Sacc. Myc. Ven. no. 952)
 - a. x20
12. *Lachnellula chrysophthalma* (Pers.) Karst.
(Id. no. 919)
13. *Lachnum bicolor* (Bull.) Karst.
(Rehm Ib. p. 865)
 - a. Habit x1; apothecium enlarged
14. *Dasyscypha cerina* (Pers.) Fkl.
(Clem. Crypt. Form. Colo. no. 81)
 - a. Habit x1; apothecium x5
15. *Lachnella flammea* (A. & S.) Fr.
(Rehm Ib. p. 828)
 - a. Habit x5; apothecium x10 (E. & E. N. A. Fung. no. 3534)

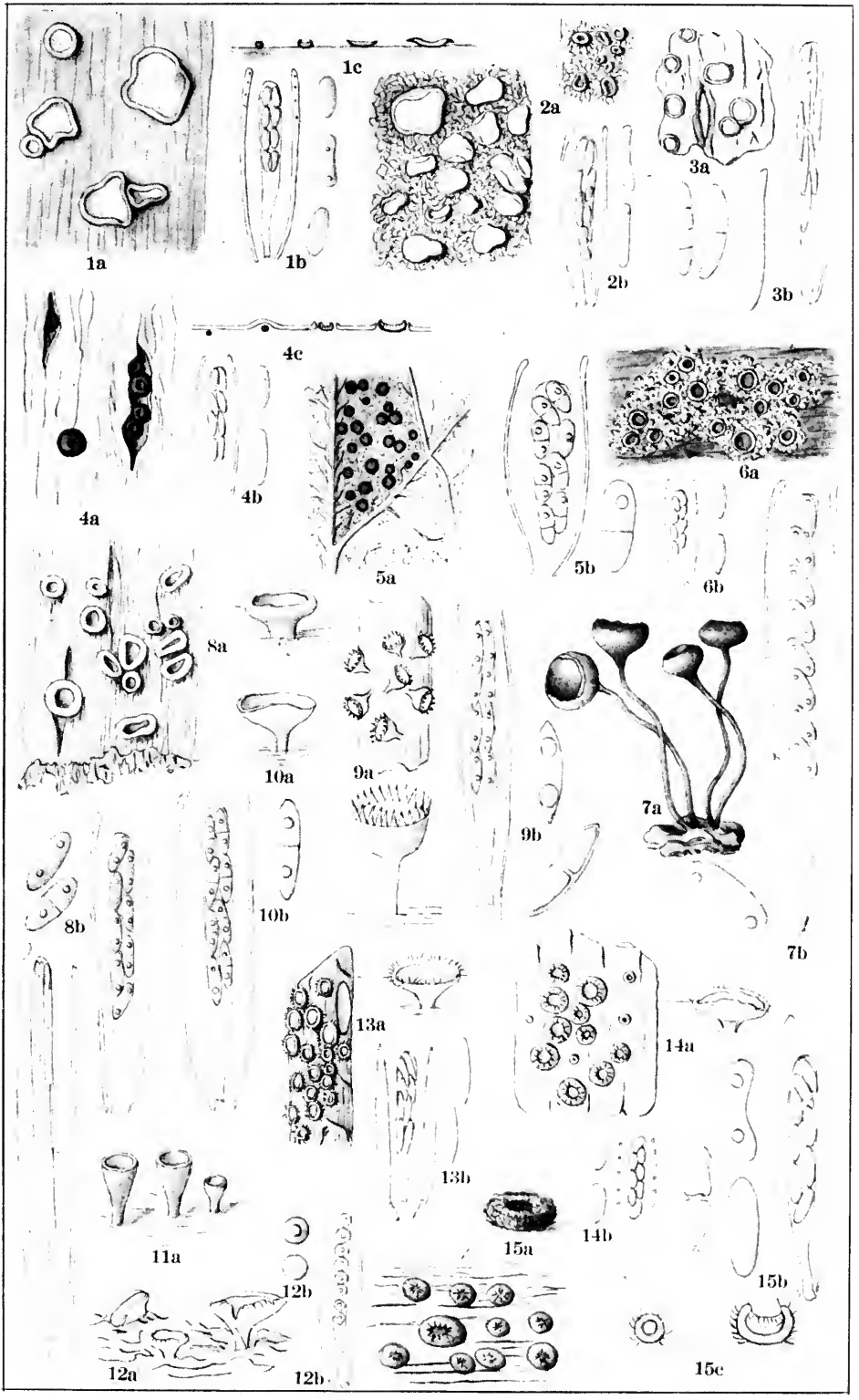


PLATE 34
PEZIZACEAE

(a. Habit x1; b. Ascus and paraphyses x500; separate spores x100
except as otherwise indicated)

1. **Otidea leporina (Batsch) Fkl.**
 - a. (Cooke Mycographia f. 211)
 - b. (Rehm Ascom. p. 1022)
2. **Pitya vulgaris Fkl.**

(Krypt. Exs. Vienna Mus. no. 1731)

 - b. x200; separate spore x500
3. **Lamprospora miniata (Crouan) DeN.**

(Cooke Ib. f. 17)

 - b. x200; separate spore x800
4. **Aleuria aurantia (Muell.) Fkl.**

(Petr. Fl. Bohem. no. 253)
5. **Humaria leucoloma (Hedw.) Boud.**

(Cooke Ib. f. 28)

 - a. x5
6. **Macropodia macropus (Pers.) Fkl.**

(Clem. Colo.)

 - b. x200; separate spore x500
7. **Pyronema omphalodes (Bull.) Fkl.**

(Rehm Ib. p. 919)

 - a. x5
8. **Geopyxis cupularis (L.) Sacc.**

(Clem. Colo.)

 - b. x200
9. **Acetabula vulgaris Fkl.**

(Krypt. Exs. Mus. Pal. Vind. no. 1730)

 - b. x200; separate spore x500
10. **Discina venosa (Pers.) Sacc.**

(U. S. D. A., Bres.)

 - a. (Rehm Ib. p. 922, after Winter)
 - b. x200; separate spore x500
11. **Plicariella leiocarpa (Curr.) Rehm**

(Id. p. 989)

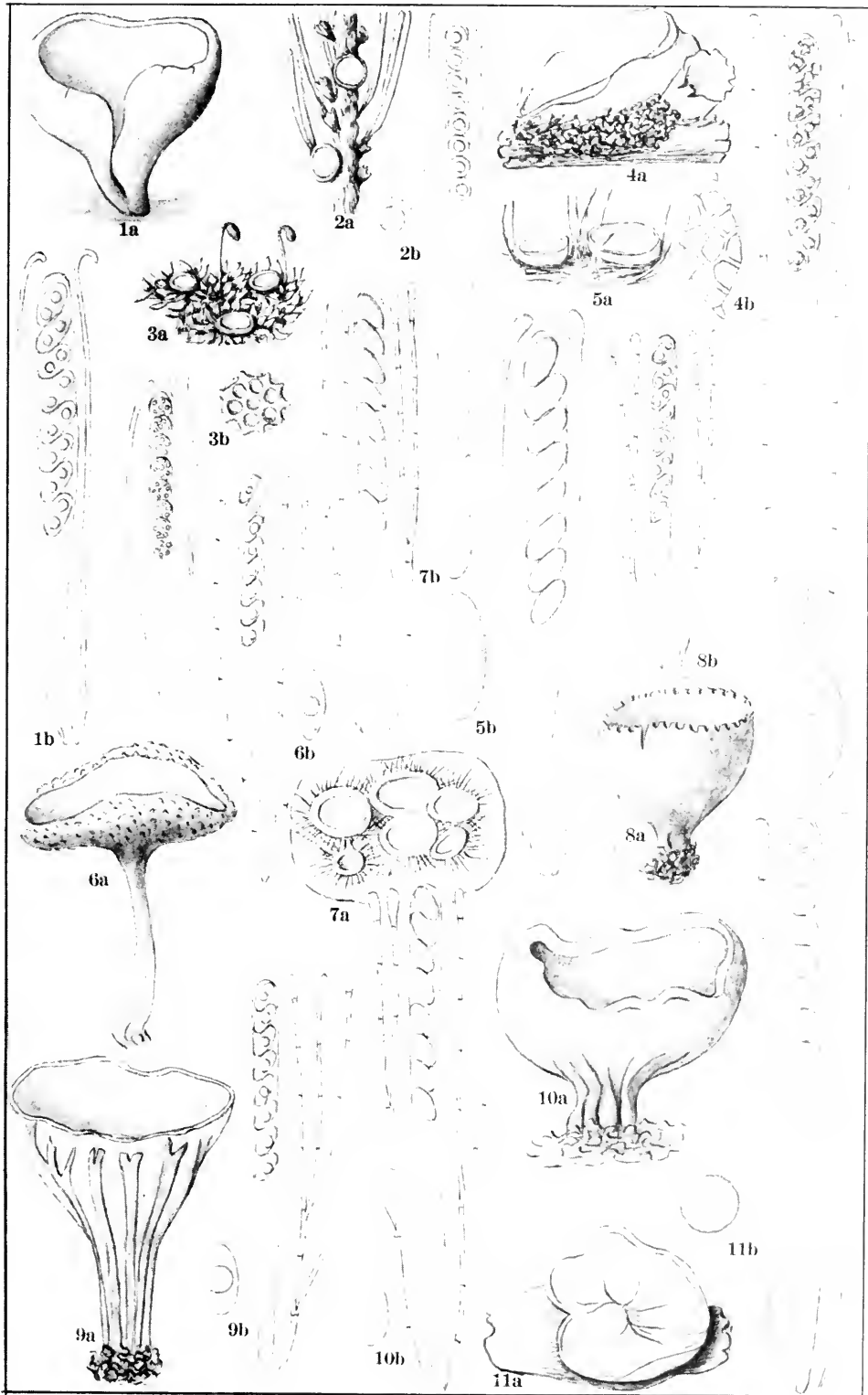


PLATE 35
PEZIZACEAE

(a. Habit or single apothecium x1; b. Ascus and paraphyses x200;
Separate spores x500; except as otherwise indicated)

1. *Galactinia coerulea* Clem.
(Clem., Colo., 1902)
b. x500
2. *Urnula craterium* (Schw.) Fr.
(U. S. D. A., James, Ohio)
3. *Peziza badia* (Pers.) Fkl.
(Jaczewski, Russia, 1895)
a. (Cooke Mycographia f. 226)
4. *Tarzetia rapulum* (Bull.) Cke.
(Rehm Ascom. p. 993)
a. (Cooke Ib. f. 197)
b. x500; separate spore x1000
5. *Peziza vesiculosa* Bull.
(Clem. Ib., 1927)
6. *Pseudoplectania nigrella* (Pers.) Fkl.
(Id.)
7. *Sphaerospora trechispora* (B. & Br.) Sacc.
(Phillips Elvel. Brit. no. 160)
d. Section of apothecia (Rehm Ib. p. 1029)
8. *Sarcosphaera coronaria* (Jacq.) Schroet.
(Cooke Ib. f. 238)
a. x $\frac{1}{3}$
9. *Scutellinia scutellata* (L.) Lamb.
(Clem. Ib.)
10. *Plectania melastoma* (Sow.) Fkl.
(Cooke Ib. f. 103)
11. *Sepultaria sepulta* (Fr.) Cke.
(Clem., Ariz., 1924)
12. *Sarcoscypha coccinea* (Jacq.) Cke.
(Ellis N. A. Fung. no. 434)
a. (Cooke Ib. f. 95)
13. *Desmazierella acicola* Lib.
(Rehm Ib. p. 1031)

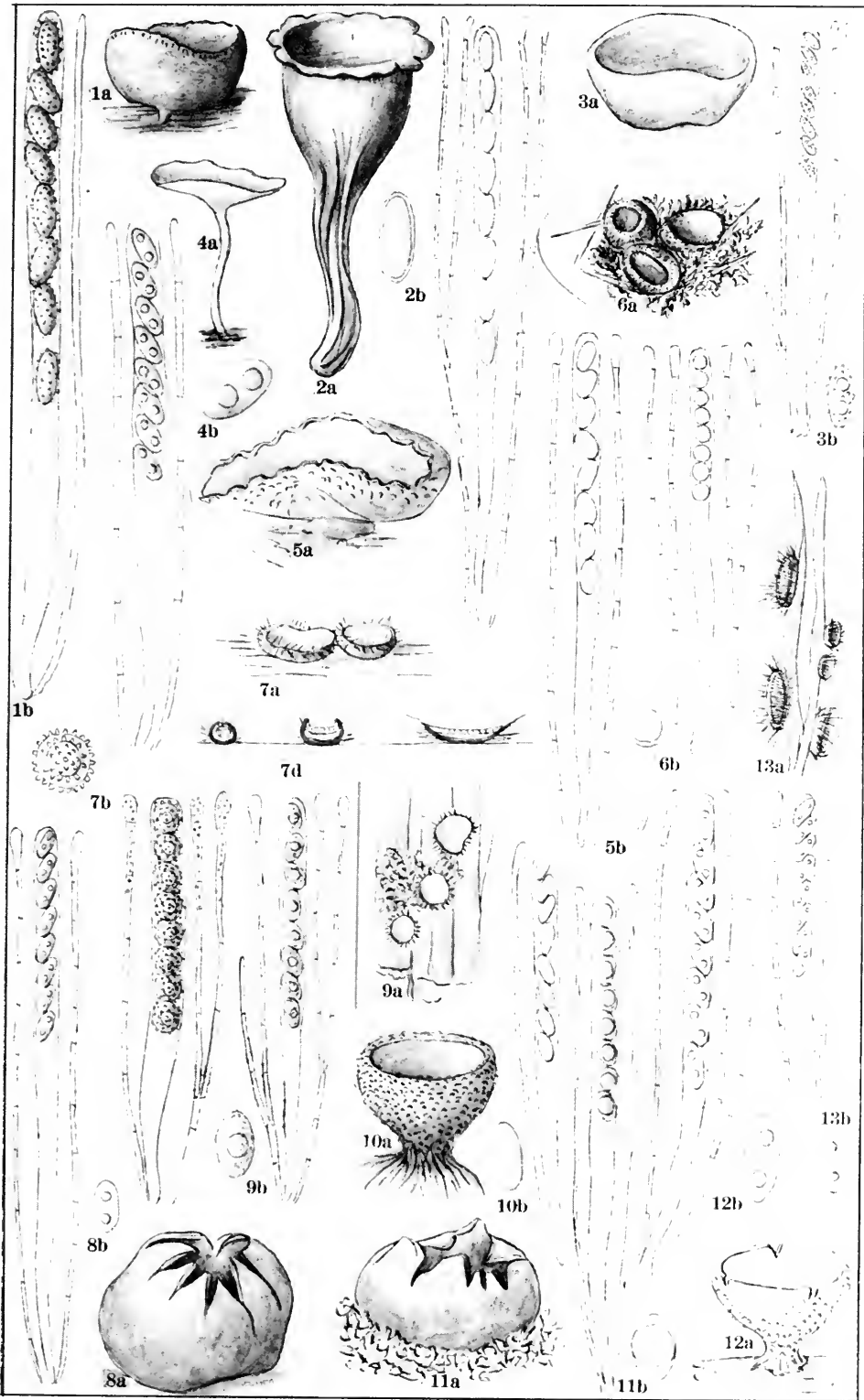


PLATE 36

HELVELLACEAE

(a. Ascoma and section x1; b. Ascus and paraphyses x500; separate spores x1000; except as otherwise indicated)

1. *Sphaerosoma fuscescens* Klotsch
a. (Lind. Nat. Pfl. p. 172, after Tulasne)
b. (Corda Icon. 11, f. 100)
2. *Rhizina inflata* (Schaeff.) Quel.
(Syd. Myc. Germ. no. 1935)
a. (Rehm Ascom. p. 1136, after Haenssiger)
b. x200; separate spore x500
3. *Morchella esculenta* (L.) Pers.
(U. S. D. A., Seaman)
a. (Minn. Mushrooms f. 102)
b. x200; separate spore x500
4. *Helvella lacunosa* Afz.
(Clem. Colo., 1927)
b. x200; separate spore x500
5. *Vibrissea truncorum* (A. & S.) Fr.
(Id.)
6. *Cudonia circinans* (Pers.) Fr.
(Id.)
a. (Cooke Mycographia f. 172)
7. *Verpa conica* (Muell.) Schwartz
(Clem. Ib.)
b. x200; separate spore x500
8. *Leotia lubrica* (Scop.) Pers.
(U. S. D. A., Morgan)
a. (Cooke Ib. f. 171)
9. *Mitrula phalloides* (Bull.) Chev.
(Rehm Ib. p. 1143, after Sturm)
a. (Cooke Ib. f. 175)
10. *Spathularia clavata* (Schaeff.) Sacc.
(Clem. Ib.)
11. *Geoglossum glabrum* Pers.
(E. & E. N. A. Fung. no. 2031)

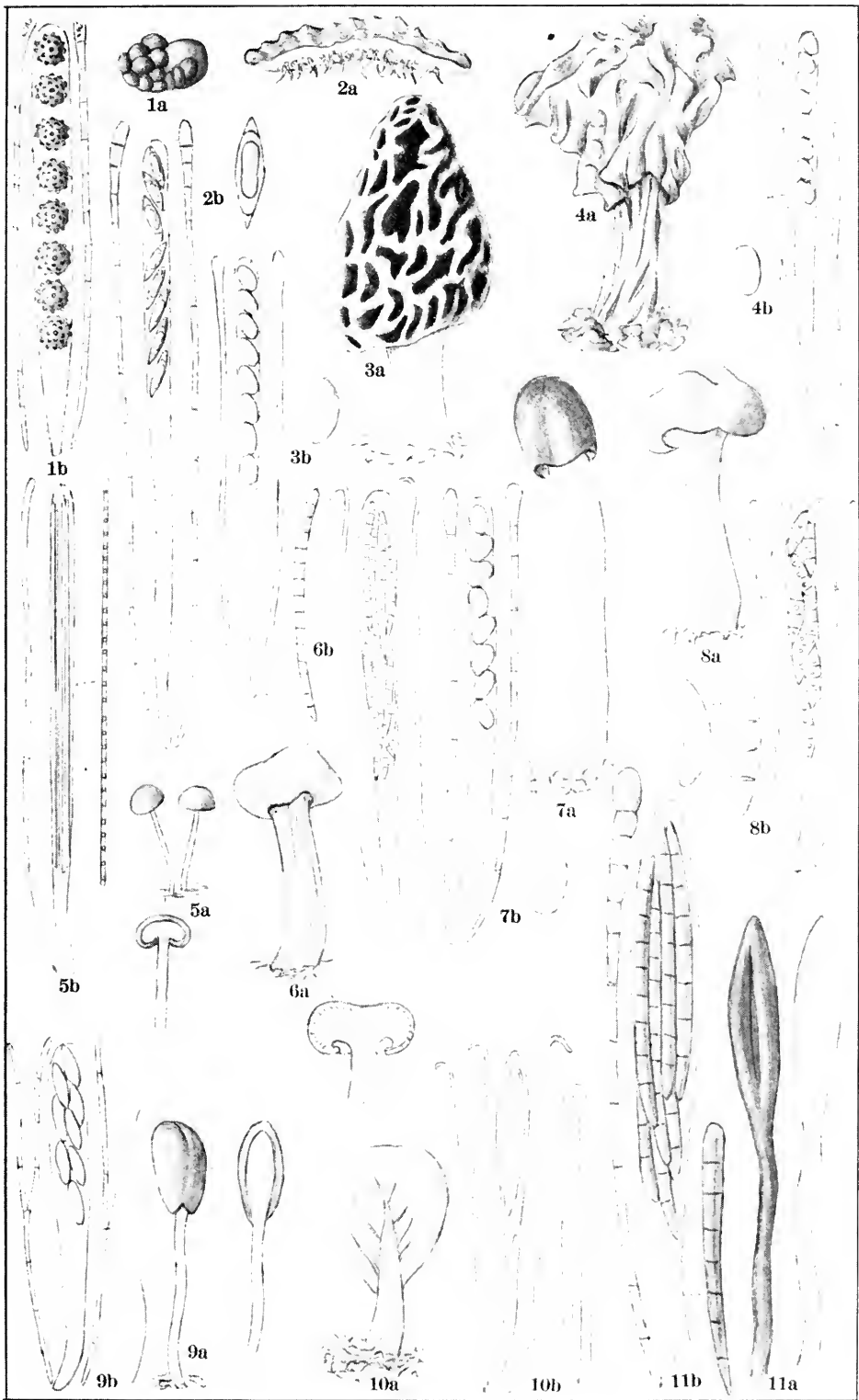


PLATE 37

ASCOBOLACEAE—EXASCACEAE

(a. Habit; b. Ascus and paraphyses; separate spores; c. Section of apothecium; except as otherwise indicated)

1. *Ascophanus carneus* (Pers.) Boud.
(Rehm Ascom. p. 1080)
 - a. Habit x1; group of apothecia (after Boudier)
 - b. Separate spore of *A. holmsjoldi* (p. 1079, after Zukal)
2. *Lasiobolus equinus* (Muell.) Karst.
(Petr. Fl. Bohem. no 768)
 - a. Habit x5; apothecium x20
 - b. x500
 - c. (Rehm Ib. p. 1081)
3. *Rhyarobius crustaceus* (Fkl.) Rehm
(Rehm Ib. p. 1083, after Boudier)
 - b. Separate spores x1000
4. *Zukalina neglecta* O. Kze.
(Id. p. 1084, after Zukal)
5. *Boudiera areolata* Cke. & Phill.
(Id. p. 1110, after Phillips)
6. *Ascobolus stercorarius* (Bull.) Schroet.
(Id. p. 1112, after Boudier)
 - b. (Krieg. Fung. Sax. no. 1179); separate spore x1000
7. *Saccobolus kerverni* (Crouan) Boud.
(Rehm Ib. p. 1111, after Boudier)
 - b. Separate spores x1000
8. *Ascocorticium albidum* Brefeld
(Schroet. Nat. Pfl. p. 161, after Brefeld)
 - a. Hymenium
 - b. Separate spores x1000
9. *Taphrina aurea* (Pers.) Fkl.
(Id. p. 159, after Sadebeck)
 - b. Mature and immature asci
10. *Exascus pruni* Fkl.
(Id.)
 - a. x1
 - b. Mature and immature asci

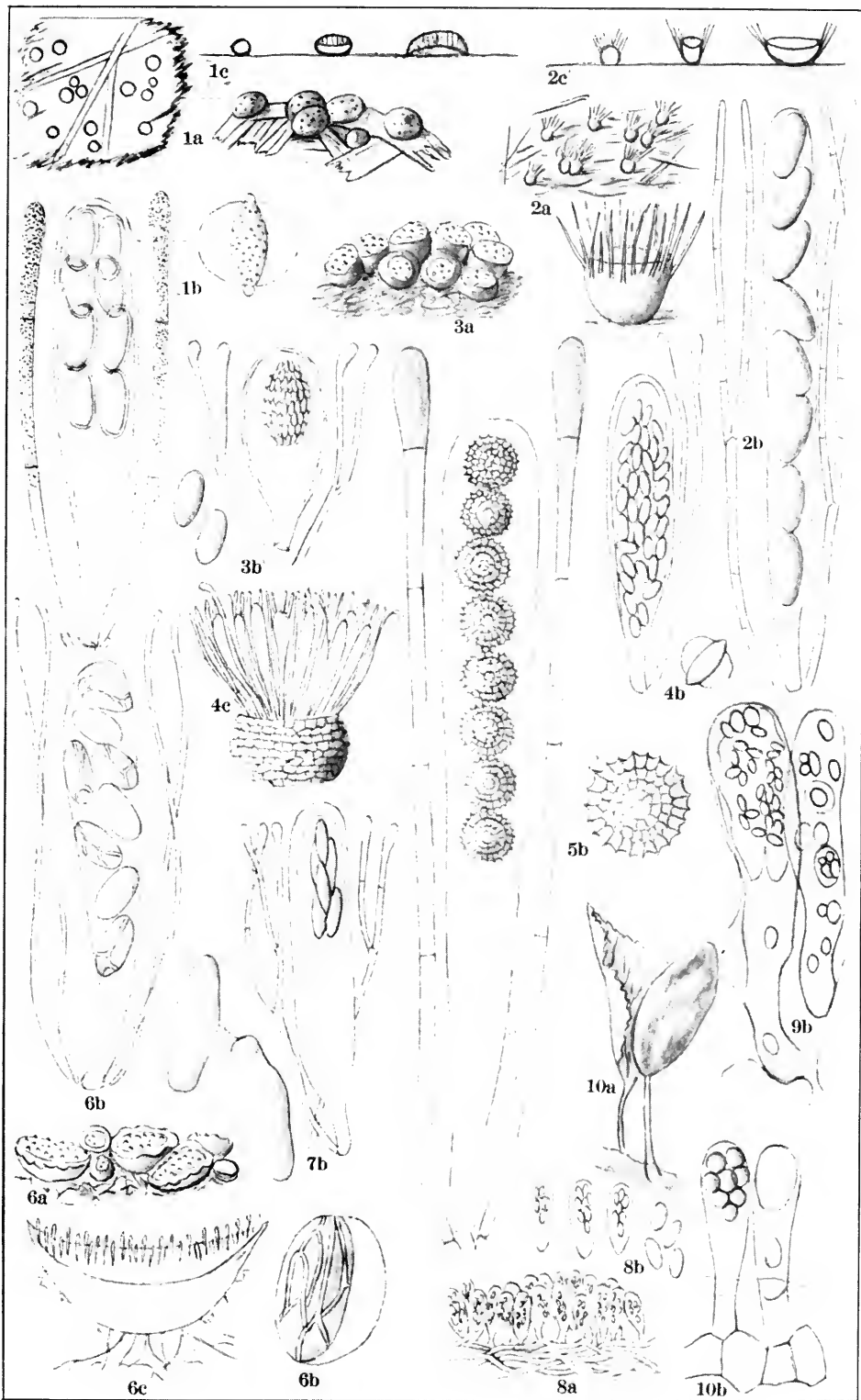


PLATE 38
CYTTARIACEAE—ELAPHOMYCETACEAE—
TUBERACEAE

(a. Ascoma or section of same x1; b. Ascus and spores)

1. *Cyttaria*

(Lind. Nat. Pfl. p. 241, after Fischer)

- a. Stroma of *C. gunni*; section of *C. harioti*
- b. Ascus and spores of *C. harioti* x720

2. *Pseudohydnotrya harknessi* Fisch.

(Fisch. Nat. Pfl. p. 283)

- a. x4

3. *Genea verrucosa* Vitt.

(Id. p. 282)

- c. Section of hymenium

4. *Balsamia vulgaris* Vitt.

(Id. p. 289, after Tulasne)

- b. x360

5. *Tuber aestivum* Vitt.

(Id. p. 287, after Tulasne)

6. *Delastria rosea* Tul.

(Id. p. 317)

- a. Section of gleba

7. *Hydnocystis arenaria* Tul.

(Id. p. 289, after Tulasne)

- a. Somewhat enlarged
- b. x360

8. *Stephensia bombycina* (Vitt.) Tul.

(Id. p. 284, after Vittadini)

- a. Section enlarged
- b. (After Tulasne)

9. *Hydnotrya tulasnei* Berk. & Br.

(Id. p. 283)

- a. x190

10. *Elaphomyces cervinus* (Pers.) Schroet.

(Id. p. 311)

11. *Terfezia leonis* Tul.

(Lind. Ib. p. 224)

- b. x500

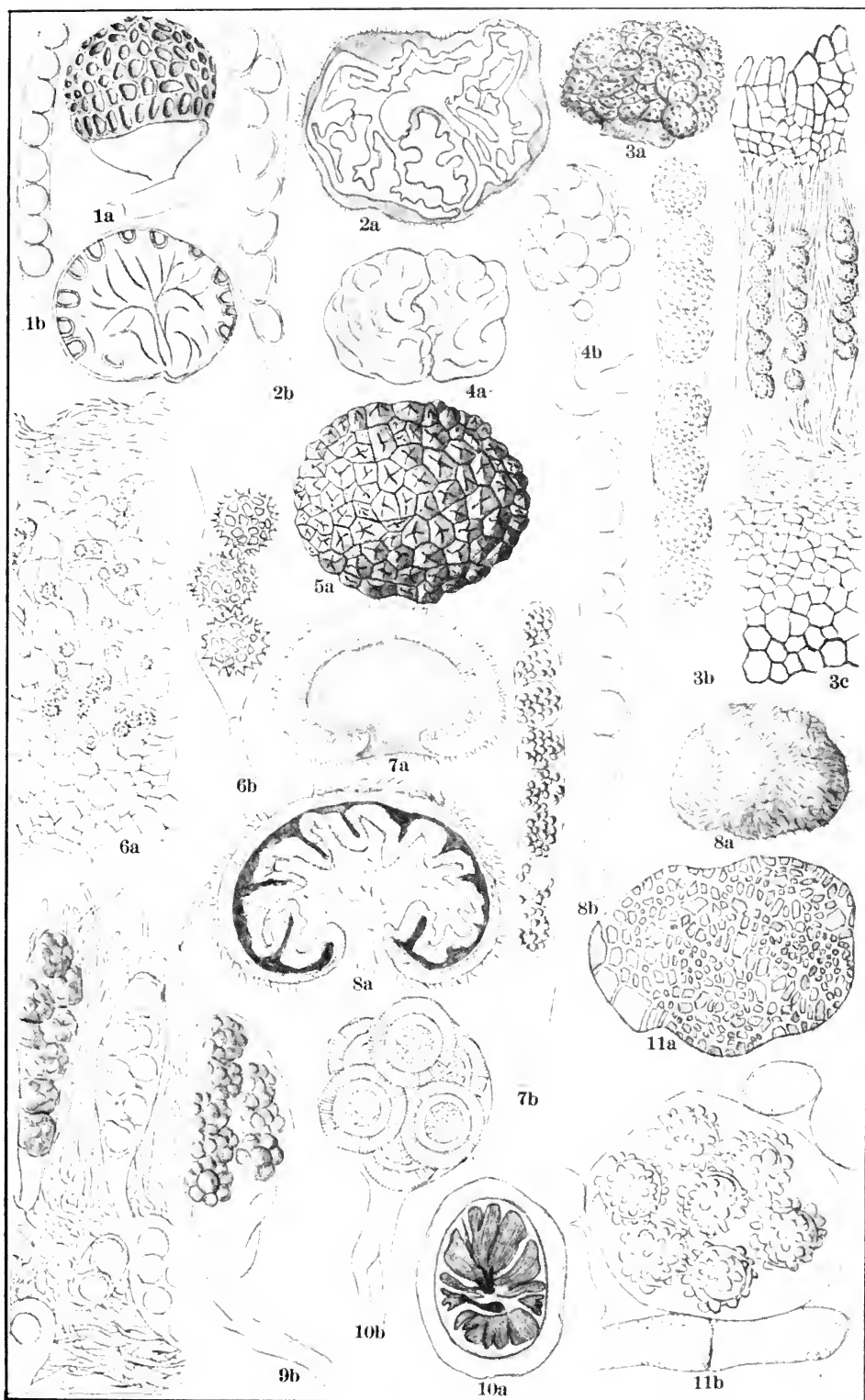


PLATE 39
PUCGINIALES

(a. Aecia x10; aeciospores x200; b. Urediospores x200; c. Telia x10; teliospores x200; d. Microscopic details)

1. **Uromyces appendiculatus (Pers.) Lk.**
(U. S. D. A., Path. Myc. Coll. no. 863)
a. (Syd. Ured no. 1359)
2. **Melampsora euphorbiae (Schub.) Cast.**
(Krieg. Fung. Sax. no. 220)
d. Section of telium x200
3. **Cronartium flaccidum (A. & S.) Wint.**
(Dietel Nat. Pfl. p. 42-43)
a. Aecia x1; detail enlarged
Aeciospores (Migula Krypt. Germ. no. 230)
b. (After Tulasne)
c. (Krieg. Ib. no. 614)
d. Portions of telium with teliospores x400
(after Tulasne)
4. **Puccinosira pallidula (Speg.) Lagerh.**
(U. S. D. A., Ib. no. 64772)
d. Partial section of a telium (Dietel Ib. p. 96)
5. **Uropyxis amorphae (Curt.) Schroet.**
(Barth. N. A. Ured. no. 1399)
b. (Fung. Dak. no. 248)
6. **Puccinia graminis Pers.**
(Fung. Colum. no. 3461)
d. Section of leaf with aecia and spermagonia
(Linhart Fung. Hung. no. 5)
7. **Gymnosporangium sabinae (Dicks) Wint.**
(Krieg. Schäd. Pilze no. 15)
a. Group of aecia x3; single aecium x5
c. Telia x1 (Dietel Ib. p. 73)
8. **Phragmidium subcorticium (Schroet.) Wint.**
(Krieg. Ib. nos. 11, 12)
b. Urediospores and paraphyses
d. Section of aecium (U. S. D. A. Rep. Veg. Path., 1887, pl. 10)
9. **Chrysomyxa abietis (Wallr.) Ung.**
(Dietel Ib. p. 44, after DeBary)
d. Section of telium

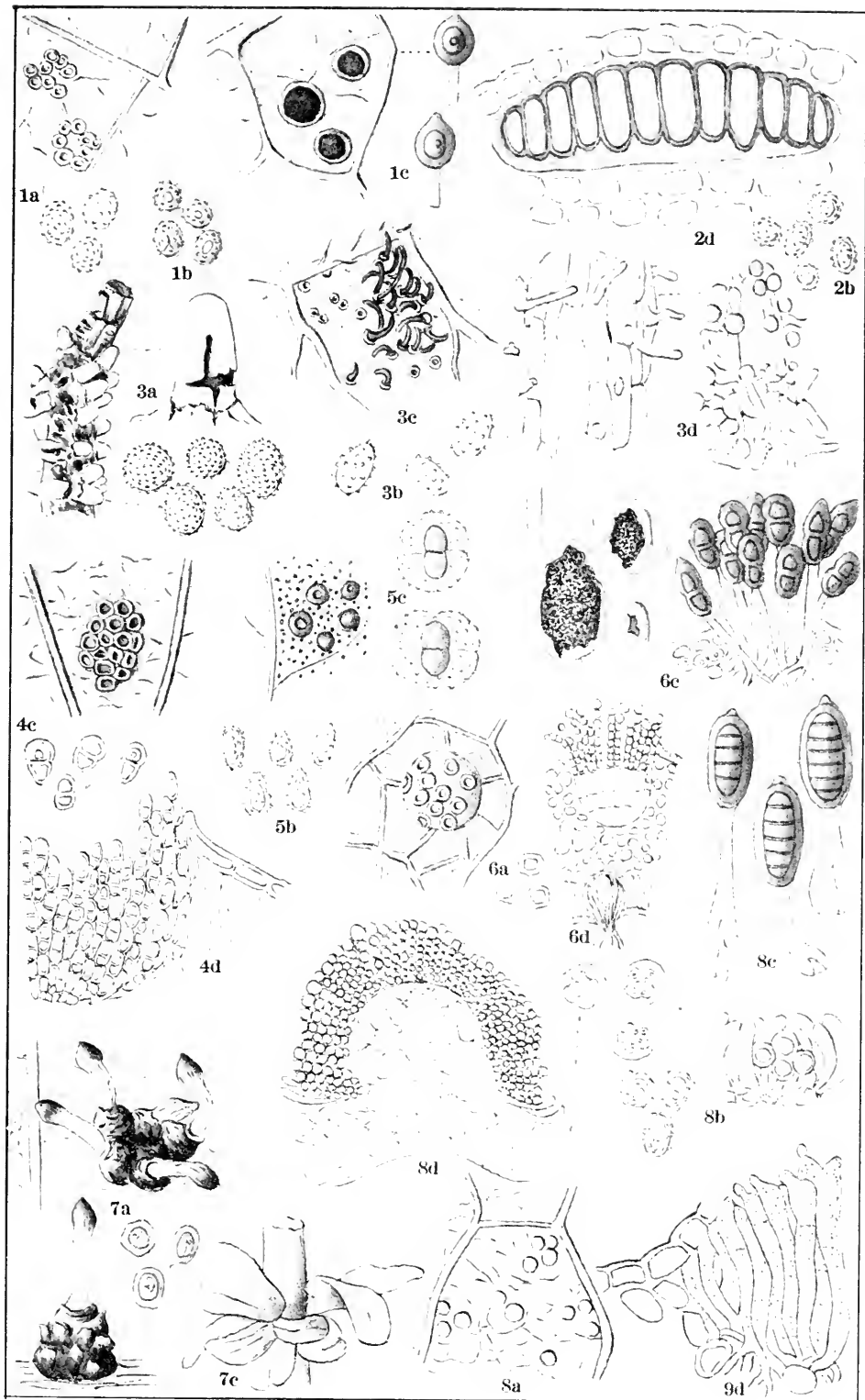


PLATE 40

PUCCINIALES—USTILAGINALES

(Nos. 1-3: aecia, uredia and telia x5; spores x200; Nos. 4-11: spores x500)

1. *Calyptospora goeppertiana* Kuehn
(Dietel Nat. Pfl. p. 38)
 - a. Aecia and aeciospores (Vest. Mic. Rar. Sel. no. 754)
 - b. Twig deformed by fungus
 - c. Section of bark with germinating teliospores
2. *Triphragmium ulmariae* (Schum.) Lk.
(Syd. Ured. no. 2636)
 - a. Uredia and urediospores
 - b. Telia and teliospores
3. *Ravenelia epiphylla* (Schw.) Diet.
(Barthol. N. A. Ured. no. 2783)
 - a. Teliospores x5
 - b. Teliospore x200
4. *Tolyposporium junci* (Schroet.) Woron.
(Dietel Ib. p. 15, after Brefeld)
 - a. Germinating spore ball x250
5. *Sorosporium saponariae* Rudolphi
(Id.)
 - a. Stages in development of spore ball, x400, and single spore
6. *Doassansia alismatis* (Nees) Cornu
(Id. p. 23)
 - a. Partial section of spore ball x500
7. *Entyloma microsporum* (Ung.) Schroet.
(Petr. Fung. Eich. no. 78)
 - a. Infected leaf of *Ranunculus* x5
 - b. Spores
 - c. Stages in germination of spore x600 (Dietel Ib. p. 18, after De Bary)
8. *Sphacelotheca hydropiperis* (Schum.) DeBary
(Dietel Ib. p. 12, after DeBary)
 - a. Mass of spores emerging from fruiting body
 - b. Section of mature fruiting body
 - c. Spores (Syd. Ustilag. no. 332)
9. *Ustilago avenae* (Pers.) Jen.
(Id. p. 8)
 - a. Habit x1
 - b. Spores (Myc. Herb. Rau, no. 82)
 - c. Germinating spores (after Brefeld)
10. *Polysaccopsis hieronymi* (Schroet.) Henn.
(Id. p. 22)
 - a. Section of fungus-gall x1
 - b. Spore sacks from interior of gall
 - c. Hyphae with mature spore balls.
11. *Tilletia tritici* (Bjerk.) Wint.
(Id. p. 17, after Swingle)
 - a. Spike of infected wheat x1
 - b. Germinating spore (Camb. Bot. Handb. p. 193)
 - c. Spore (Eriks. Fung. Par. Scan. no. 256)

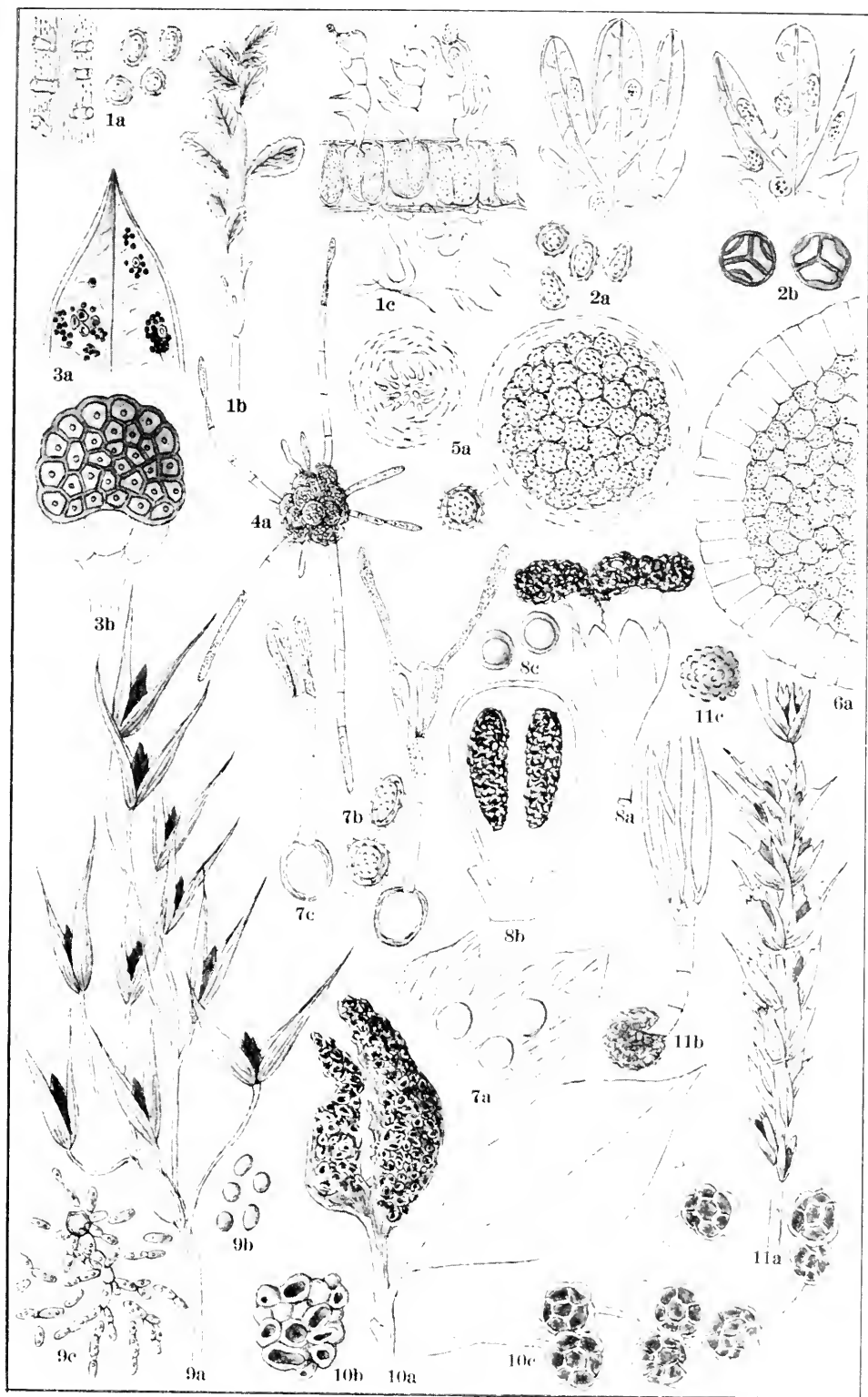


PLATE 41
TREMELLALES

(a. Habit x1; b. Basidia and spores)

1. *Platygloea nigricans* (Fr.) Schroet.
(Killermann Nat. Pfl. p. 107, after Brefeld)
b. x300
2. *Auricularia mesenterica* (Dicks) Fr.
(Rick Fung. Aus. Amer. no. 122)
3. *Hirneola auricula-judae* (L.) Berk.
a. (Clem. Minn. Mushrooms, f. 83)
b. x300 (Killermann Ib.)
4. *Gyrocephalus rufus* (Jacq.) Bref.
(Killermann Ib. p. 117, after Bresadola)
5. *Hirneolina incarnata* (Bres.) Sacc.
(Id. p. 114, after Bresadola)
c. Hymenium x300
6. *Saccoblastia ovispora* A. Moell.
(Id. p. 107, after Moeller)
a. Hyphae with basidia and sack-like cells x220
b. x500
c. Germinated spore with conidia x220
7. *Exidia glandulosa* (Bull.) Fr.
(Id. p. 112, after Brefeld)
b. x350
8. *Sebacina incrustans* (Pers.) Tul.
(Id.)
b. x400
9. *Tremella frondosa* Fr.
(U. S. D. A., Shear)
b. x500
10. *Dacryomyces stillatus* Nees
(Killermann Ib. p. 121, after Brefeld)
b. Germinating spore x350
11. *Guepinia spathularia* (Schw.) Fr.
(Id.)
12. *Dacryomitra glossoides* (Pers.) Bref.
(Id.)
b. Germinating spore x300

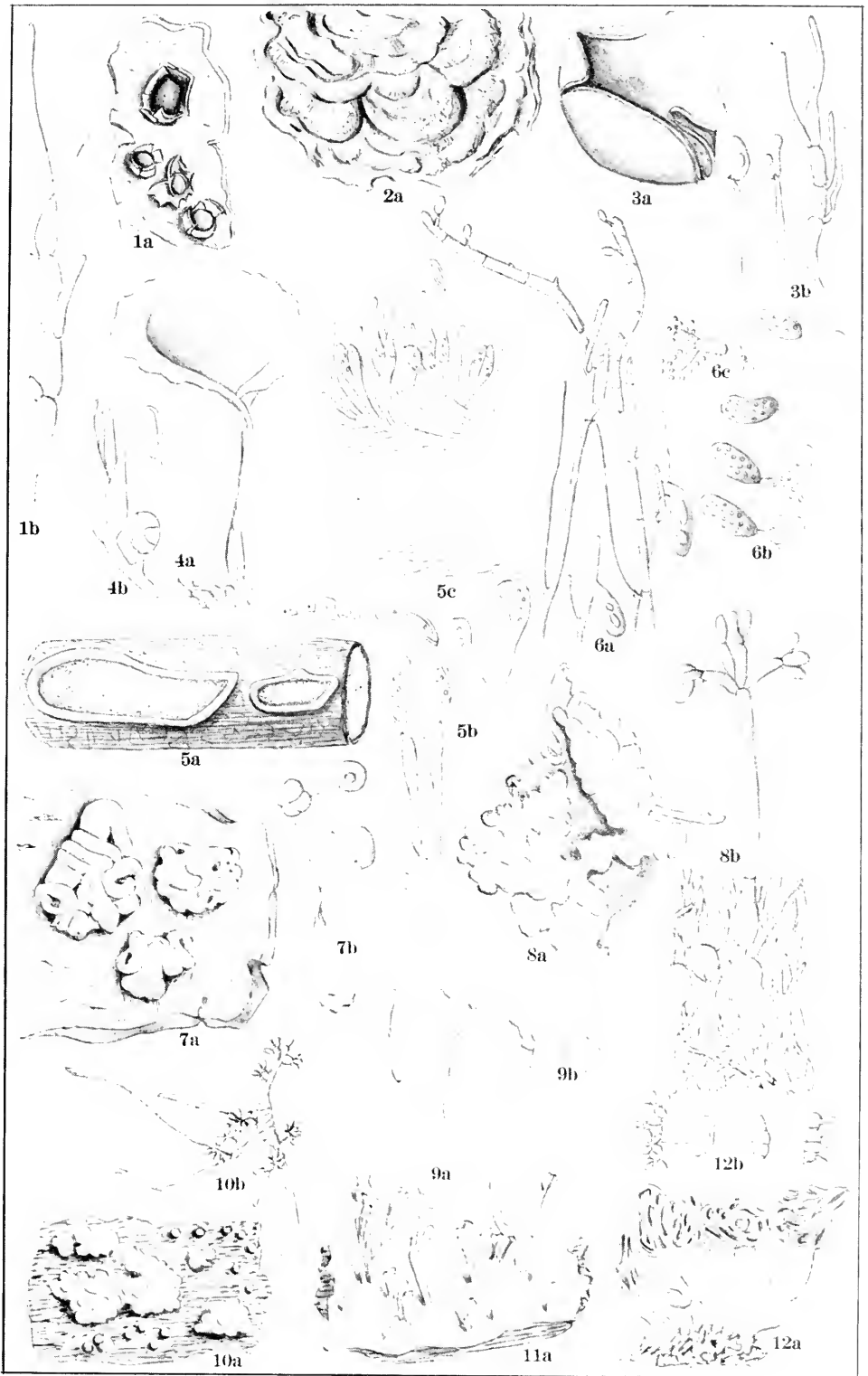


PLATE 42

TREMELLACEAE—CLAVARIACEAE—
THELEPHORACEAE

(a. Pileus x1; b. Spores, with or without basidia x1000;
except as otherwise indicated)

1. *Calocera viscosa* (Pers.) Fr.
(Killermann Nat. T'fl. p. 122)
b. x300 (after Brefeld)
2. *Tremellodon gelatinosum* (Scop.) Pers.
(Id. p. 118, after Moeller)
3. *Sparassis crispa* (Wulf.) Fr.
a. (Clem. Minn. Mushrooms, f. 73)
b. (Krieg. Fung. Sax. no. 858)
4. *Pistillaria micans* (Pers.) Fr.
(Killermann Ib. p. 153)
b. x500
c. Sporophores x25
5. *Clavaria botrytis* Pers.
(Id. p. 155)
6. *Physalacria inflata* Pk.
(Id. p. 153)
b. (U. S. D. A., Martin no. 498)
7. *Craterellus cornucopiodes* (L.) Pers.
(U. S. D. A., James)
8. *Stereum hirsutum* (Willd.) Pers.
(U. S. D. A. Ex. Herb. Kew no. 10683)
9. *Thelephora terrestris* Ehrh.
(Killermann Ib. p. 147)
b. x300
10. *Corticium roseum* Pers.
(Krypt. Exs. Vienna Mus. no. 715)
11. *Hypochnus ferrugineus* (Pers.) Fr.
(Rel. Farl. no. 330)
12. *Solenia candida* Pers.
(Killermann Ib. p. 149)
13. *Coniophora cerebella* (Pers.) Schroet.
(Id. p. 137)
b. x300
14. *Exobasidium vaccini* (Fkl.) Wor.
(Id. p. 132, after Woronin)
a. Habit x1
b. x712
c. Section of hymenium x620
d. Germinating spores x620

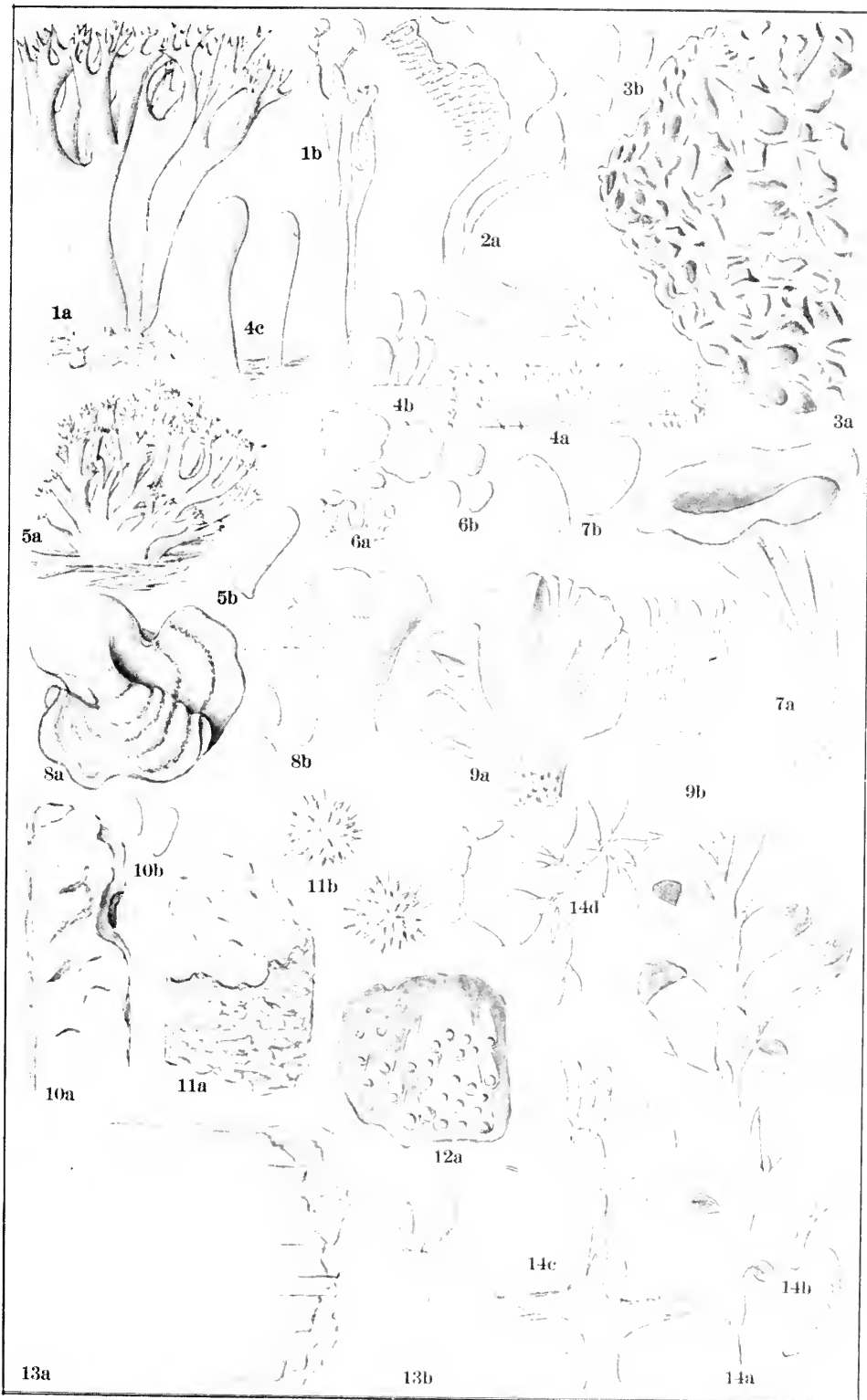


PLATE 43

HYDNACEAE—POLYPORACEAE

(a. Pileus x1; b. Section of pileus x1; c. Spores; except as otherwise indicated)

1. *Hydnum imbricatum* L.
(U. S. D. A., Bres., 1902)
a. $\times\frac{1}{2}$ (Clem. Minn. Mushrooms p. 105)
b. Detail of teeth $\times 10$; also $\times 25$
2. *Hydnochaete badia* Bres.
(Killermann Nat. Pfl. p. 163)
b. Detail of teeth $\times 20$
3. *Odontia fimbriata* Pers.
(Id. p. 161)
b. Detail of teeth $\times 25$
4. *Lopharia lirellosa* K. & M.
(Id. p. 163)
b. Detail of teeth $\times 10$
c. Spores $\times 500$
5. *Radulum orbiculare* Fr.
(Id.)
6. *Fistulina hepatica* (Schaeff.) Fr.
(Id. p. 204)
a. $\times\frac{1}{6}$
c. Basidia and spores $\times 380$ (after Brefeld)
7. *Strobilomyces strobilaceus* (Scop.) Berk.
(Id. p. 205)
a. $\times\frac{1}{2}$
c. $\times 1000$
8. *Polyporus brumalis* (Pers.) Fr.
(Krieg. Fung. Sax. no. 1458)
9. *Cryptoporus volvatus* (Pk.) Shear
(U. S. D. A., Flowers no. 13138)
10. *Fomes officinalis* (Fr.) Bres.
(Killermann Ib. p. 189)
b. $\times\frac{1}{6}$
11. *Trametes pini* (Brot.) Fr.
(Id. p. 195)
a. $\times\frac{1}{6}$
12. *Daedalea unicolor* (Bull.) Fr.
(Id. p. 197)

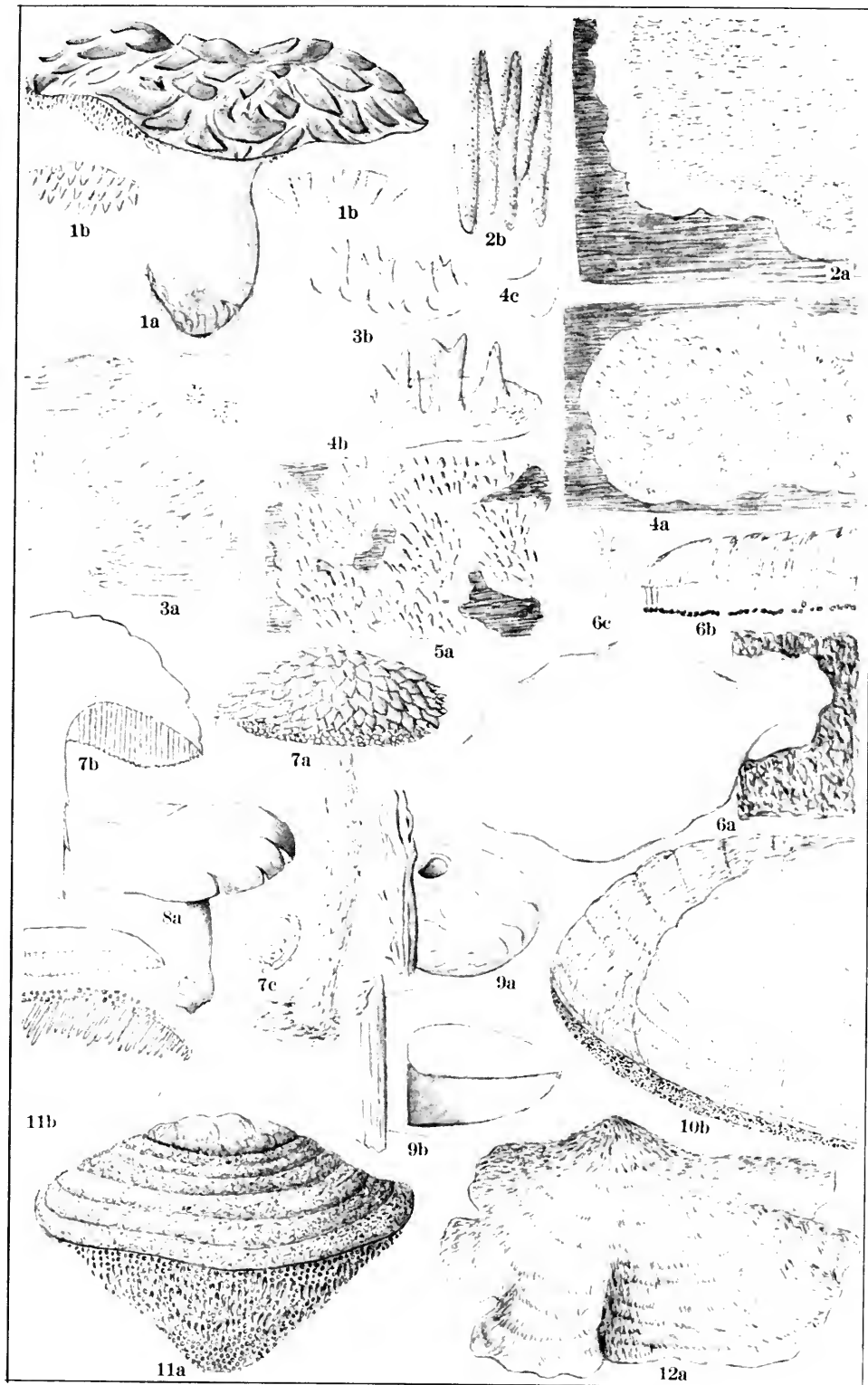


PLATE 44
POLYPORACEAE—AGARICACEAE

(a. Pileus x1; b. Spores)

1. *Merulius tremellosus* Schrad.
(Killermann Nat. Pil. p. 171)
c. Basidia and cystidia
d. Hymenium x35
2. *Cyclomyces fuscus* Kze.
(Id. p. 201)
3. *Amanita muscaria* (L.) Pers.
a. (Clem., Colo.)
b. (Ricken Blatterpilze pl. 79)
4. *Tricholoma personatum* Fr.
(Ricken Ib. pl. 95)
c. Gill attachment of *T. flavobrunneum*
(Pl. 88)
5. *Lepiota procera* (Scop.) Fr.
(Id. pl. 83)
a. (Clem. Minn. Mushrooms p. 12)
c. Basidium of *L. excoriata*
d. Gill attachment of *L. cristata* (Pl. 84)
6. *Marasmius rotula* (Scop.) Fr.
(Id. pl. 25)
7. *Cantharellus aurantiacus* (Wulf.) Fr.
(Killermann Ib. p. 249)
8. *Collybia dryophila* (Bull.) Fr.
(Ricken Ib. pl. 108)
a. (Clem. Minn. Mushrooms pl. 1)
c. Gill attachment of *C. rancida*
9. *Trogia crispa* (Pers.) Fr.
(Killermann Ib. p. 249)
10. *Schizophyllum commune* Fr.
(Id. p. 255)
b. Lamellae
c. Cross-section of same

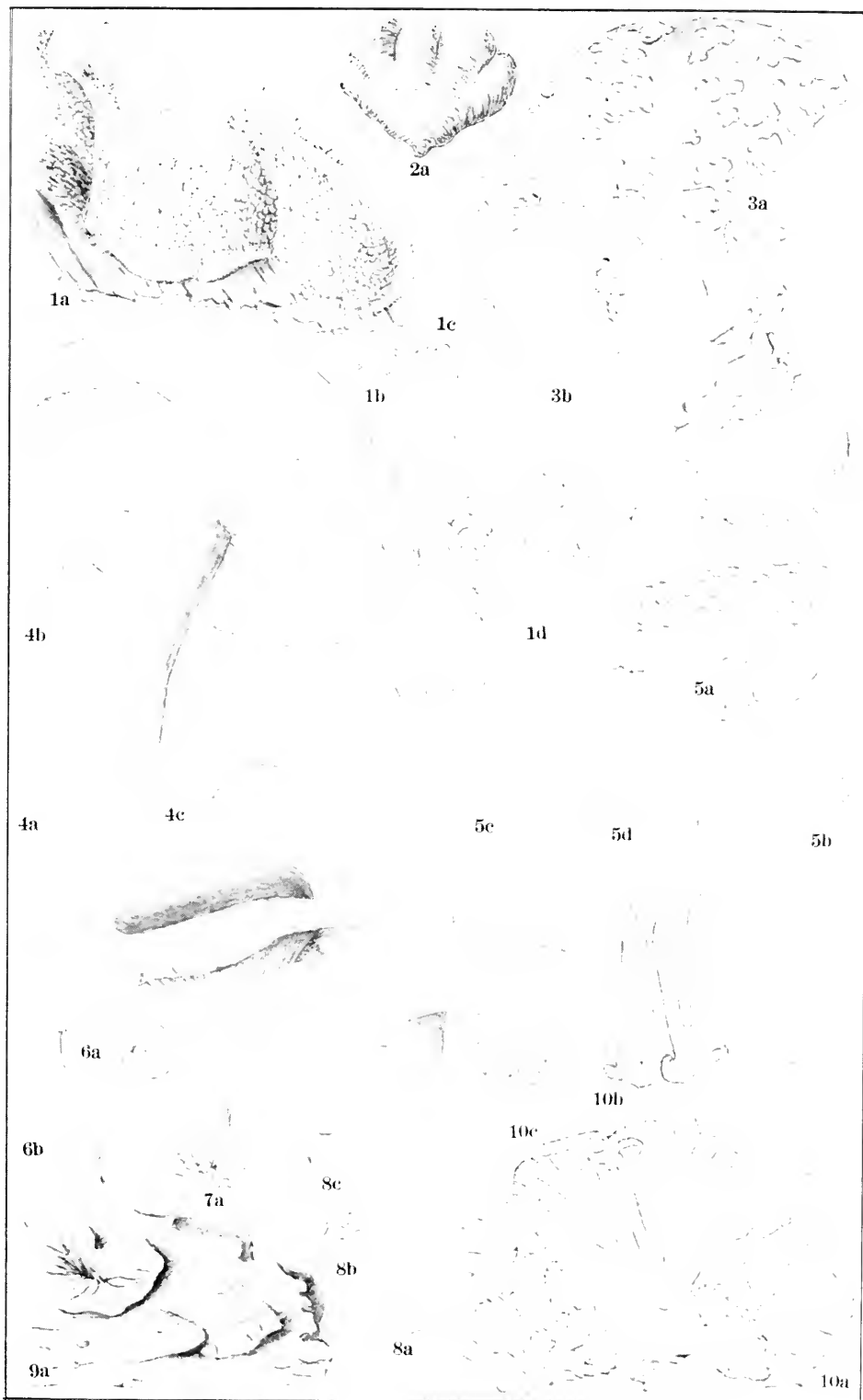


PLATE 45

AGARICACEAE

(a. Pileus x1; b. Spores)

1. **Flammula flavida** (Schaeff.) Fr.
(Ricken Blätterpilze pl. 58)
c. Gill attachment x1
2. **Clitopilus prunulus** (Scop.) Fr.
(Killermann Nat. Pfl. p. 243)
3. **Pluteus cervinus** (Schaeff.) Fr.
(Ricken Ib. pl. 71)
a. (Clem. Minn. Mushrooms p. 54)
c. Cystidium
4. **Claudopus variabilis** (Pers.) W. G. Smith
(Killermann Ib. p. 243)
5. **Naucoria pediades** Fr.
(Clem. Minn. Mushrooms p. 67)
6. **Agaricus campestris** L.
(Killermann Ib. p. 239)
b. Basidium and spores
7. **Entoloma rhodopolium** Fr.
(Ricken Ib. pl. 73)
8. **Coprinus comatus** Fr.
(Killermann Ib. p. 232)
9. **Hypholoma appendiculatum** (Bull.) Fr.
(Ricken Ib. pl. 64)
a. (Clem. Minn. Mushrooms p. 78)
c. Cystidium
10. **Crepidotus mollis** (Schaeff.) Fr.
(Killermann Ib. p. 219)
11. **Gomphidius viscidus** (L.) Fr.
(Id. p. 231)
a. x $\frac{1}{2}$

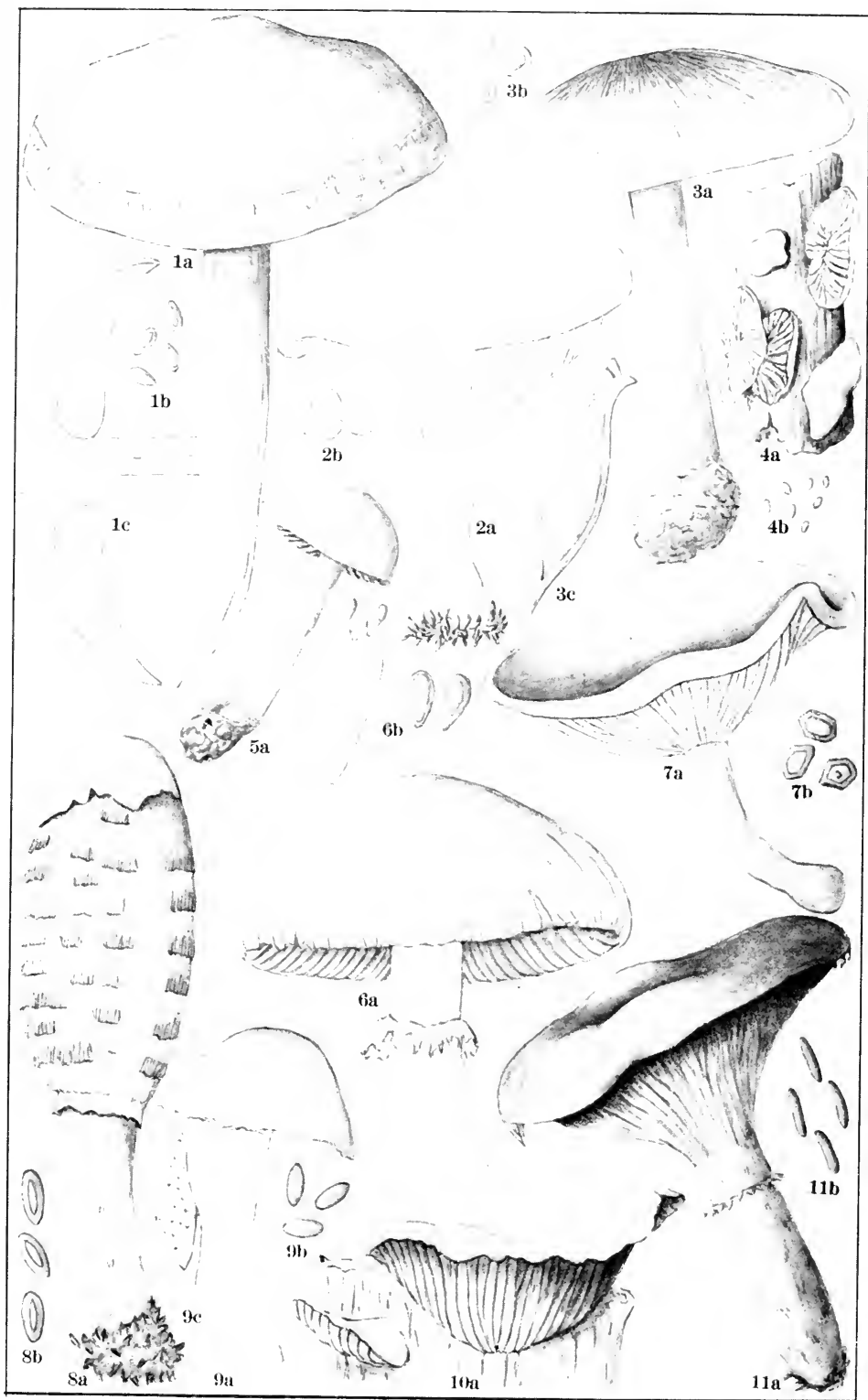


PLATE 45

PLATE 46
PHALLACEAE

(a. Receptacle; b. Spores $\times 750$)

1. **Dictyophora phalloidea** Desv.
(Fischer Nat. Pf. p. 294, after A. Moeller)
a. $\times \frac{2}{3}$
2. **Aseroe rubra** La Bill., forma **actinobola**
(Id. p. 287, after Berkeley)
a. $\times \frac{2}{3}$
3. **Simblum sphaerocephalum** Schlecht.
(Id. p. 284, after Gerard)
a. $\times \frac{2}{3}$
4. **Lysurus mokusin** (Cib.) Fr.
(Id. p. 285, after Cibot)
5. **Mutinus caninus** (Huds.) Fr.
(Hollo's Gast. Hung. pl. 1)
6. **Colus hirundinosus** Cav. & Sech.
(Fischer Ib. p. 285, after Tulasne)
a. $\times 1$
7. **Dictyobole texensis** (Atk. & Long.)
(Atkinson Bot. Gaz. 34:43, f. 3)
8. **Phallus impudicus** L.
a. $\times 1\frac{1}{2}$ (Fischer Ib., p. 293)
b. (Hollo's Ib.)
9. **Anthurus muellerianus** Kalch.
(Lloyd Syn. Phall. p. 42)
10. **Clathrus cancellatus** L.
(Fischer Ib. p. 282)



PLATE 47

LYCOPERDACEAE

(a. Peridium x1; b. Section of same x1)

1. **Gyrophragmium delilei** Mont.
(Fischer Nat. Pfl. p. 303, after Montagne)
b. (From young specimen)
2. **Secotium erythrocephalum** Tul.
(Id. p. 300, after Tulasne)
c. Basidium and spores
3. **Cauloglossum transversarium** (Bosc.) Fr.
(Lloyd Myc. Notes pl. 40)
4. **Podaxon carcinomalis** (L.) Fr.
(Fischer Ib. p. 332, after Schweinfurth)
a. x $\frac{1}{2}$
5. **Geaster pectinatus** Pers.
(Hollos Gast. Hung. pl. 8, f. 1)
6. **Lycoperdum gemmatum** Batsch.
(Fischer Ib. p. 317)
7. **Bovista nigrescens** Pers.
(Hollos Ib. pl. 22, f. 42)
8. **Broomeia congregata** Berk. & Curt.
(Fischer Ib. p. 323)
b. Section of stroma x1 (after Murray)
c. Spores (after Berkeley)
9. **Tylostoma mammosum** Fr.
(Dried specimen)
10. **Pisolithus crassipes** DC.
(Fischer Ib. p. 337)
a. x $\frac{2}{3}$
11. **Scleroderma vulgare** Hornem.
(Id. p. 336, after Tulasne)
12. **Catastoma circumscissum** (B. & C.) Morg.
(Id. p. 318, after Morgan)
a. Peridium; upper half reversed
13. **Mitromyces lutescens** Schw.
(Lloyd Gen. Gast. pl. 5, f. 30)

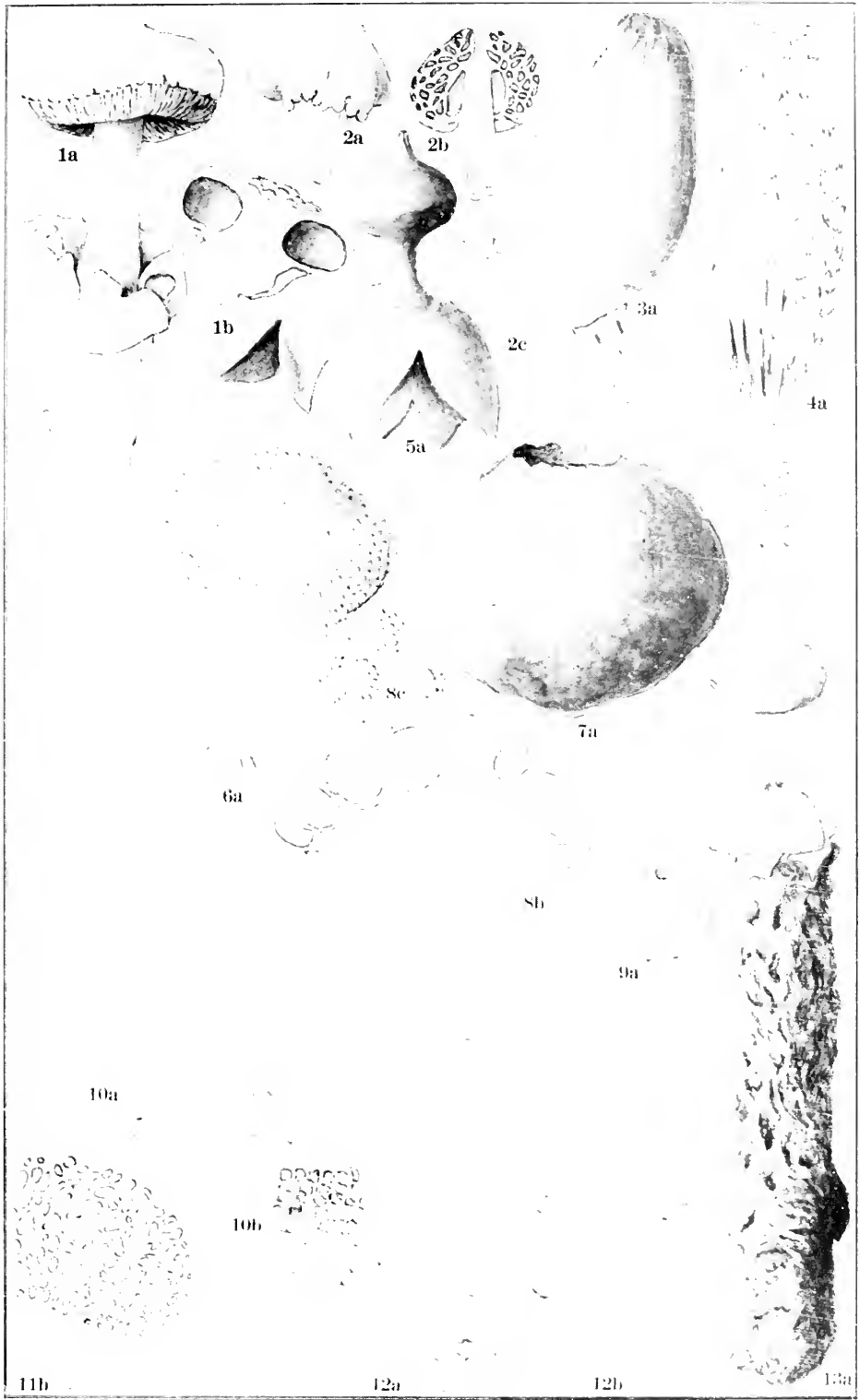


PLATE 47

PLATE 48

HYMENOGASTRACEAE—NIDULARIACEAE

(a. Peridium $\times 1$; b. Section of peridium; c. Basidia and spores)

1. **Macowanites agaricinus** Kalchbr.
(Fischer Nat. Pfl. p. 300)
a. (After Kalchbrenner)
2. **Hymenogaster tener** Berk.
(Id. p. 309, after Tulasne)
b. $\times 3\frac{1}{2}$
c. $\times 450$
3. **Gautieria morchellaeformis** Vitt.
(Id. p. 304, after Vittadini)
4. **Rhizopogon luteolus** Fr.
(Id. p. 311, after Tulasne)
b. $\times 14$
5. **Hysterangium clathroides** Vitt.
(Id. p. 305)
b. $\times 2$
c. (After Tulasne)
6. **Nidularia australis** Tul.
(Id. p. 326)
7. **Cyathus striatus** (Huds.) Hoffm.
(Id. p. 328)
a. (Hollo's Fung. Hung. pl. 28, f. 7);
detail (after Tulasne)
8. **Crucibulum vulgare** Tul.
(Id. p. 327)
9. **Nidula candida** (Pk.) White
(Lloyd Myc. Notes pl. 103)
10. **Sphaerobolus stellatus** Tode
(Fischer Ib. p. 345)
a. $\times 4$
b. $\times 60$
c. $\times 1200$

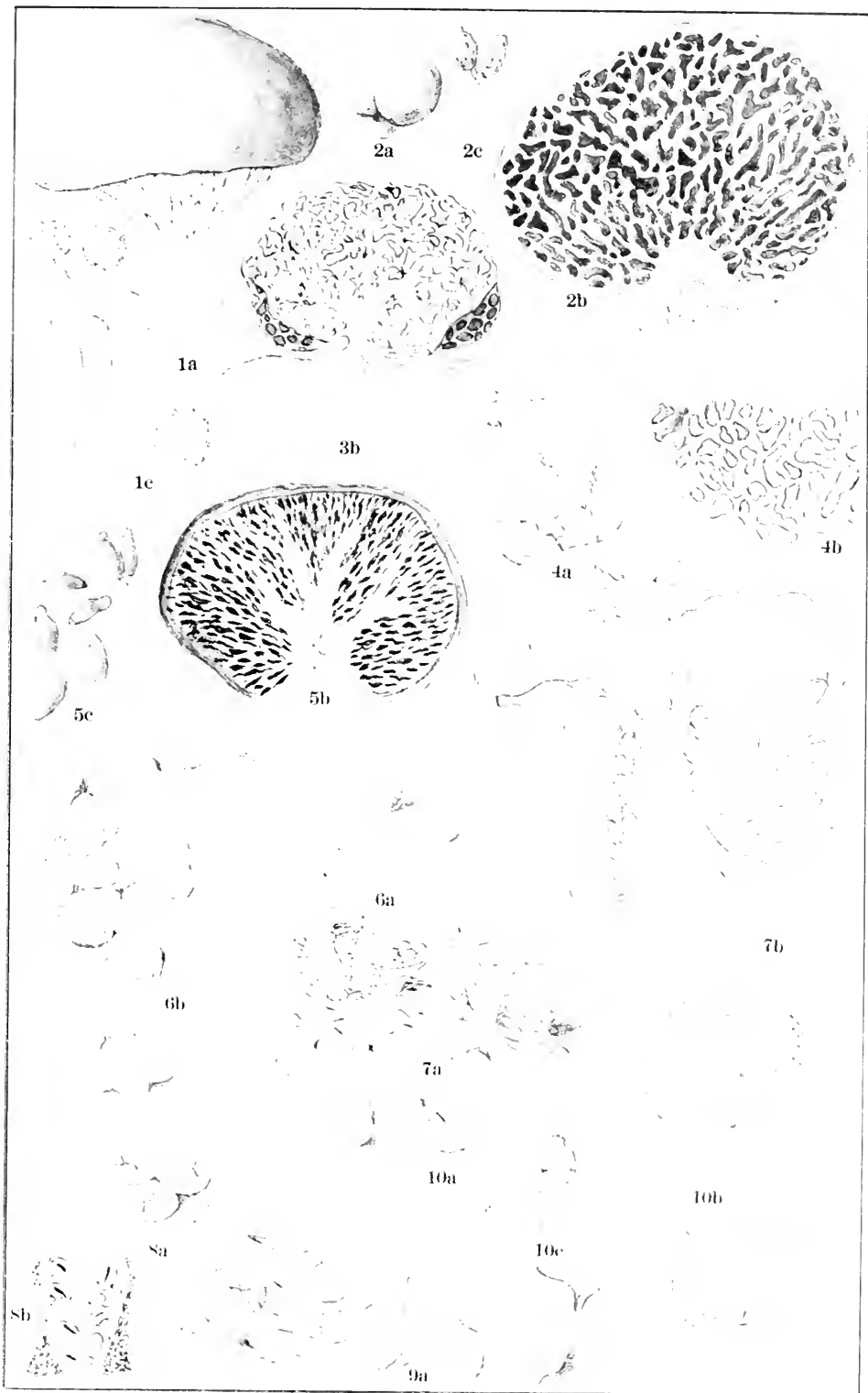


PLATE 49
PHOMACEAE

(a. Habit x5, represented in moist condition; b. Basidia and conidia x500; c. Pycnidium or section of pycnidia; except as otherwise indicated)

1. *Phyllosticta convallariae* Pers.
(Tranz. & Sereb. Myc. Ross. no. 280)
c. x100
2. *Phomopsis oncostoma* (Thuem.) Hoehn.
(U. S. D. A., Herb. Bres., 1889)
3. *Phoma herbarum* West
(Krieg. Fung. Sax. no. 1841)
4. *Dendrophoma pleurospora* Sacc.
a. (Syd. Myc. Germ. no. 265)
b. (Sacc. Fung. Ital. no. 1451)
c. x25 (Id.)
5. *Crocicreas gramineum* Fr.
(Fkl. Fung. Rhen. no. 548)
6. *Sphaeronema aquaticum* Jacz.
b. x1000 (U. S. D. A., Bates no. 2663)
c. (Lind. Nat. Pfl. p. 356, after Jaczewski)
7. *Neottiospora arenaria* Syd.
(Syd. Ib. no. 1124)
8. *Vermicularia dematium* (Pers.) Fr.
(Krieg. Fung. Sax. no. 2286)
a. x10
c. x100
9. *Dothiorella gregaria* Sacc.
(Cav. Fung. Long. Exs. no. 138)
c. x25
10. *Rabenhorstia tiliae* Fr.
(E. & E. N. A. Fung. no. 2522)
c. x15 (Tulasne Sel. Fung. Carp. pl. 19, f. 13)
11. *Cytospora leucostoma* (Pers.) Sacc.
(Syd. Ib. no. 1126)
b. x1000
c. x10
12. *Harknessia eucalypti* Cke.
(Ellis N. A. Fung. no. 633)
a. x10
c. x50
13. *Coniothyrium fuckeli* Sacc.
(Petr. Fl. Bohem. no. 1913)
b. x1000
c. (Sacc. Ib. no. 1179)
14. *Sphaeropsis malorum* Pk.
(Cornell Exp. Sta. no. 2536)
c. x30
15. *Chaetomella atra* Fkl.
(Fkl. Ib. no. 1572)
c. x50
16. *Haplosporella chlorostroma* Speg.
(U. S. D. A., Barth. no. 1276)
c. x50
17. *Ascochyta pisi* Lib.
(Lib. Pl. Crypt. Ard. no. 59)
18. *Diplodina salicis* West
(U. S. D. A., Pammel, 1886)
c. x30
19. *Darluca filum* (Biv.) Cast.
(Tranz. & Sereb. Ib. no. 233)

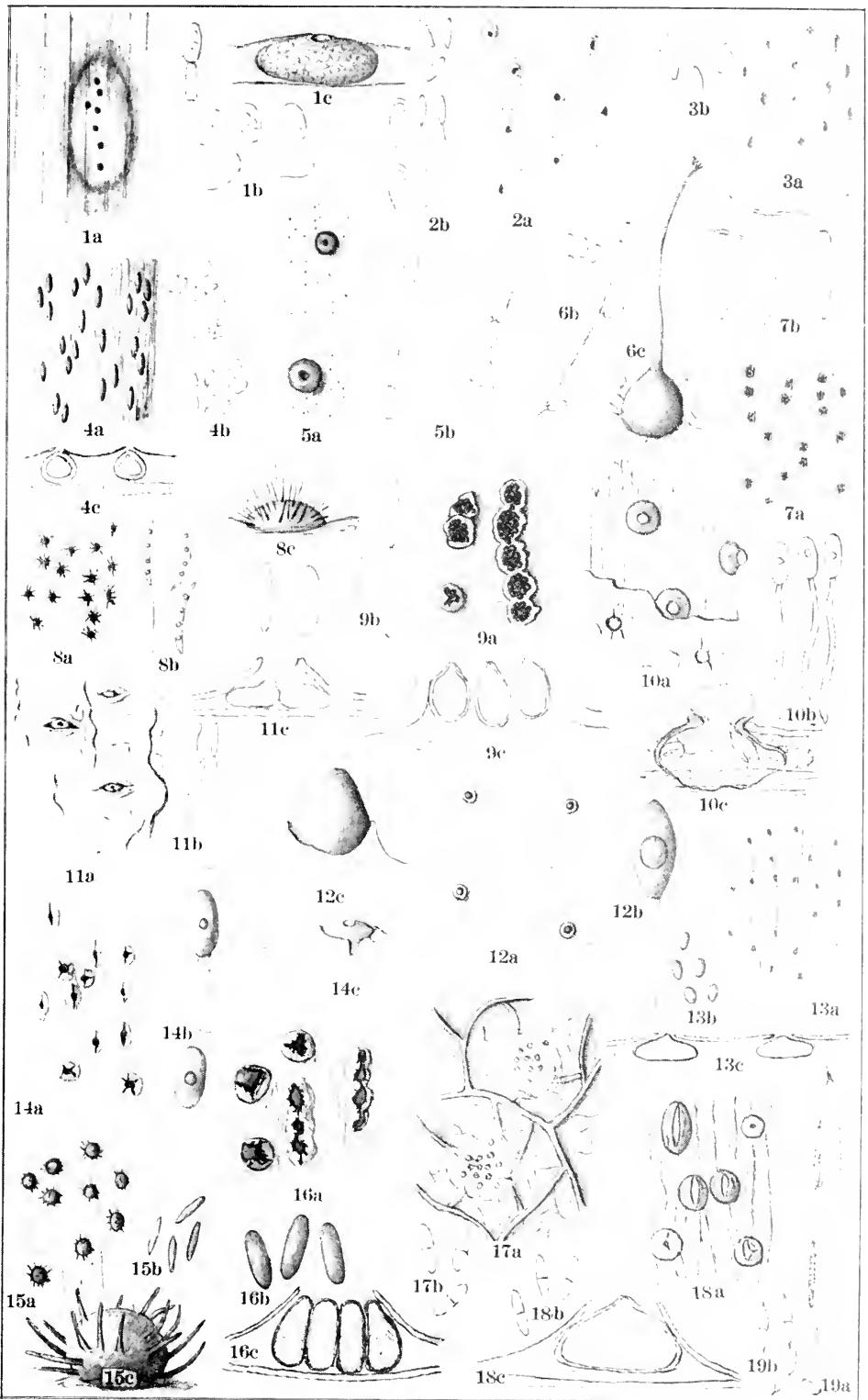


PLATE 50

PHOMACEAE—ZYTHIACEAE

(a. Habit x5, represented in moist condition; b. Pycnidia or section of same; c. Basidia and conidia x500; except as otherwise indicated)

1. *Chaetodiplodia caulina* Karst.
(All. & Schn. Fung. Bav. no. 365)
b. x50
2. *Diplodia mutila* Fr. & Mont.
(Sacc. Myc. Ven. no. 339)
b. x30
3. *Kellermannia yuccaegena* E. & E.
(U. S. D. A., Cockerell, Colo. 1889)
b. x10
4. *Stagonospora subseriata* (Desm.) Sacc.
(Krieg. Fung. Sax. no. 1797)
b. x50
5. *Hendersonia sarmentorum* Fr.
(Kab. & Bub. Fung. Imp. Exs. no. 817)
b. x50
6. *Prosthemium betulinum* Kze.
(Petr. Fung. Pol. Exs. no. 506)
c. x200
7. *Camarosporium quaternatum* (Hazsl.) Sacc.
(Kab. & Bub. Ib. no. 16)
b. x15
8. *Dichomera saubineti* (Mont.) Cke.
(Petr. Ib. no. 370)
b. Section of stroma x25
9. *Septoria urticae* Desm. & Rob.
(Krieg. Ib. no. 1648)
a. x1
b. x100
10. *Rhabdospora herbarum* (Fr.) Sacc.
(U. S. D. A., Diehl, no. 6410)
b. x50
11. *Phlyctaena vagabunda* Desm.
(Krieg. Ib. no. 1795)
b. x25
12. *Cytosporina ludibunda* Sacc.
(Sacc. Ib. no. 940)
13. *Zythia resinae* (Ehrenb.) Karst.
(Krieg. Ib. no. 2151)
c. x1000
14. *Aschersonia tahitensis* Mont.
(Lind. Nat. Pfl. p. 384, after Montagne)
a. Habit x1
b. Stroma from above and section of same x16
d. Conidium x1000
15. *Diplozythia scolecospora* Bub.
(Kab. & Bub. Fung. Imp. Exs. no. 278)
a. x1
b. x5
16. *Polystigmia rubra* (Desm.) Sacc.
(All. & Schn. Ib. no. 378)
a. x1
b. x25
17. *Sirocyphis nivea* Clem.
(Clem. Minn. Bot. Stud. 4:188)
a. x20
b. Hair x500
c. Chain of conidia x500; separate conidia x1000
18. *Verrucaster lichenicola* Tobler
(Abh. Nat. Ver. Bremen 21:364)
a. x2
b. Stroma and pycnidia x12
c. x1000

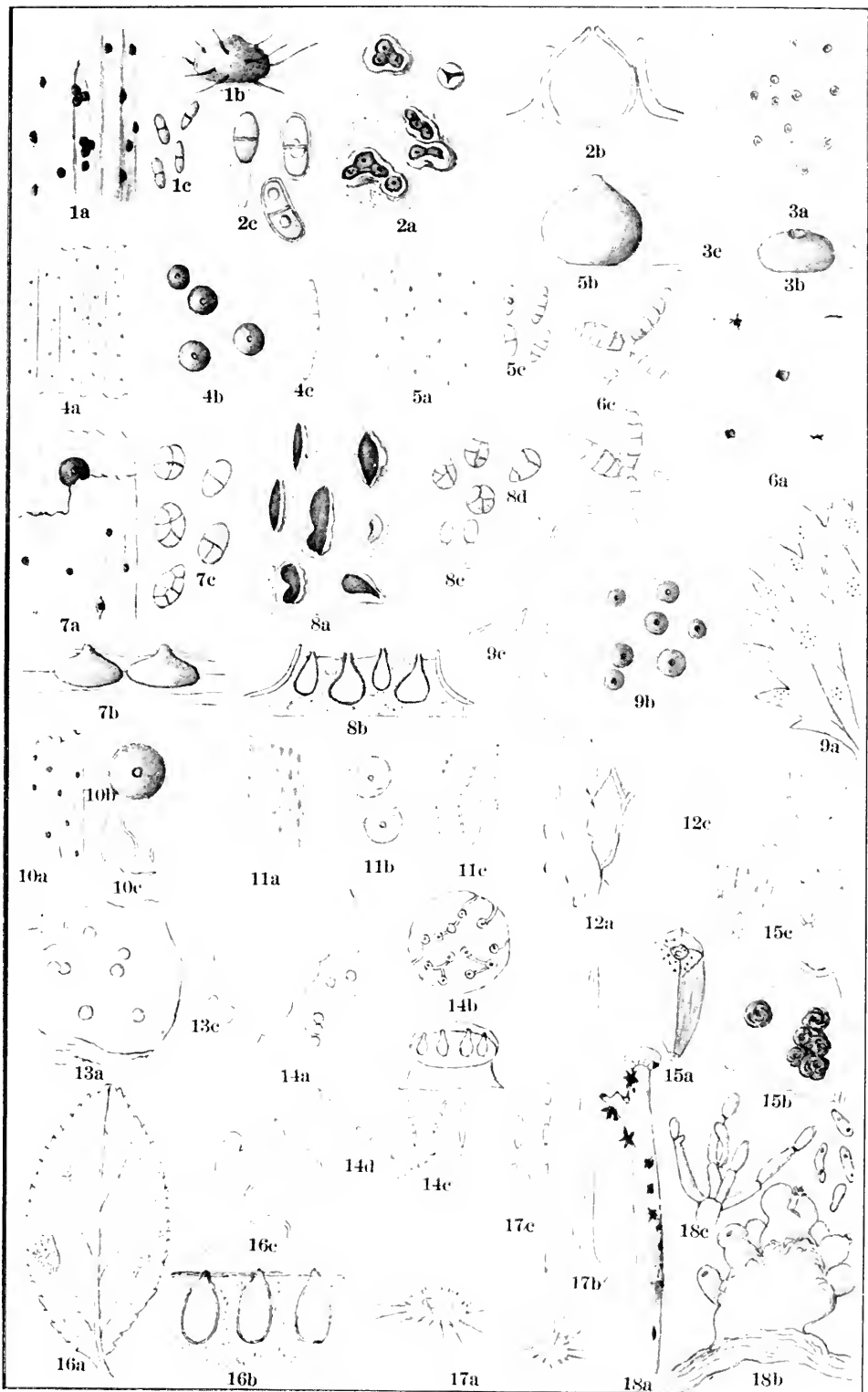


PLATE 51

LEPTOSTROMACEAE—DISCELLACEAE—
MELANCONIACEAE

(a. Habit x5; b. Pycnidia x50, in wet condition; c. Conidia x500;
except as otherwise indicated)

1. *Leptostroma scirpinum* Fr.
(U. S. D. A.)
2. *Leptothyrium lunariae* Kze. & Schm.
(Krieg. Fung. Sax. no. 948)
3. *Melasmia acerina* Lev.
(All. & Schn. Fung. Bav. no. 379)
a. x1
b. x5
4. *Kabatia latemarensis* Bub.
(Kab. & Bub. Fung. Imp. Exs. no. 180)
a. x1
5. *Discosia artocreas* (Tode) Fr.
(Petr. Fung. Pol. Exs. no. 41)
a. x1
6. *Entomosporium maculatum* Lev.
(U. S. D. A., New Jersey, 1924)
7. *Actinothyrium graminis* Kze.
(Syd. Myc. Germ. no. 1719)
8. *Leptostromella hysteroidea* (Fr.) Sacc.
(Krieg. Ib. no. 1892)
9. *Dinemasporium gramineum* Lev.
(E. & E. N. A. Fung. no. 3465)
10. *Heteropatella lacera* Fkl.
(Fkl. Herb. Barb. Bois. no. 2441)
11. *Dothichiza populea* Sacc. & Br.
(Krieg. Ib. no. 1100)
b. Section of pycnidium (Br. & Cav. Fung.
Par. no. 445)
d. Basidia and conidia (Id.)
12. *Discella carbonacea* (Fr.) Berk. & Br.
(Kab. & Bub. Ib. no. 476)
b. x5
13. *Psilospora faginea* Rav.
(U. S. D. A.)
14. *Protostegia magnoliae* Rav.
(Rav. Fung. Am. Exs. no. 696)
15. *Gloeosporium ribis* (Lib.) Mont.
(Br. & Cav. Ib. no. 222)
b. Section of acervulus
16. *Pestalotiella subsessilis* S. & E.
(Ellis N. A. Fung. no. 1223)
a. x1; detail of spot x5

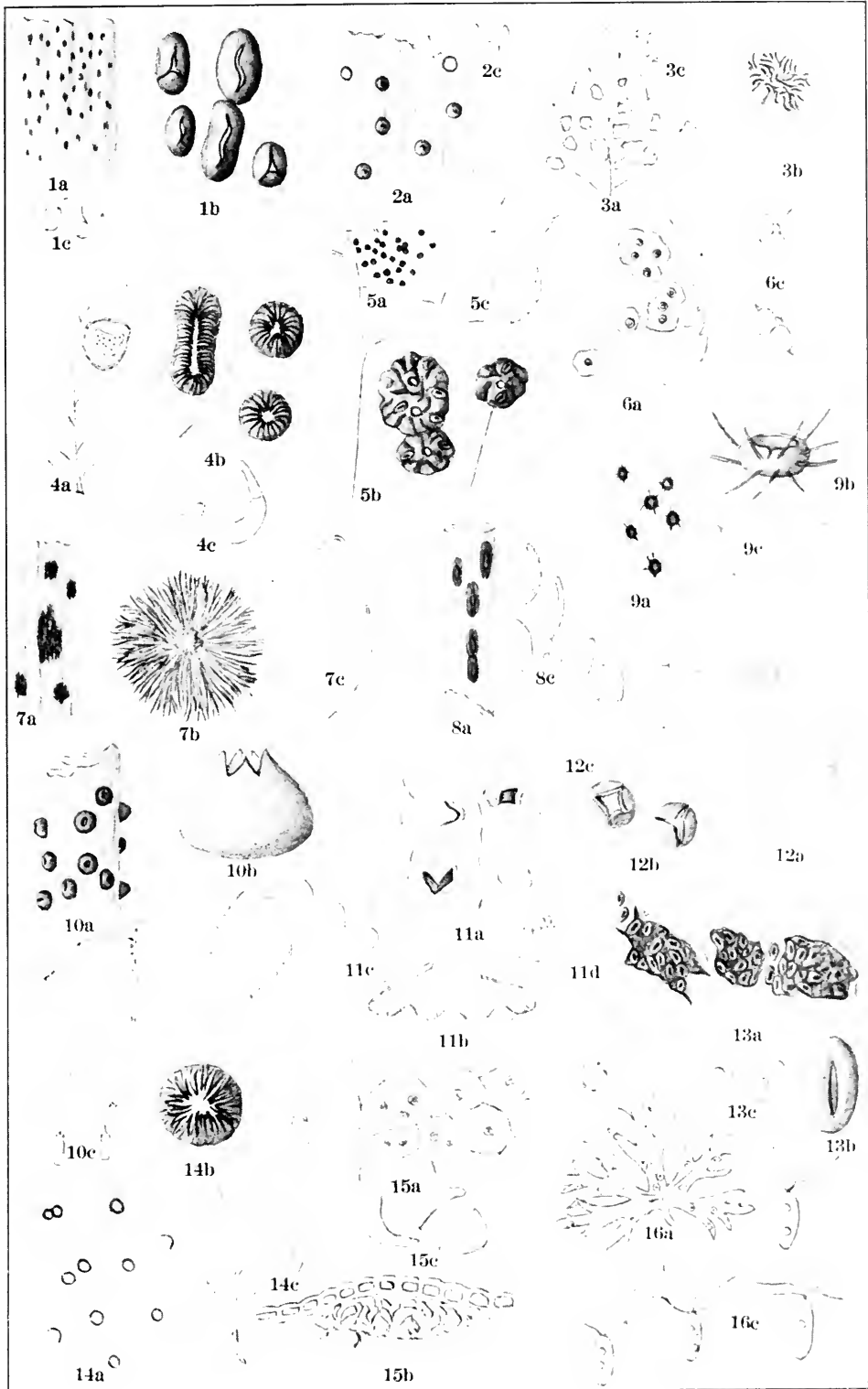


PLATE 52
MELANCONIACEAE

(a. Habit; b. Conidia x500; c. Section of acervulus; except as otherwise indicated)

1. **Blennoria buxi Fr.**
(Herb. Barb. Bois no. 1854)
 - a. Habit x1; detail x5
 - b. (Sacc. Fung. Ital. f. 1092)
2. **Melanconium juglandinum Kze.**
(Krieg. Fung. Sax. no. 348)
 - a. Habit x1; detail x5
3. **Trullula olivascens Sacc.**
(Cav. Fung. Long. Exs. no. 192)
 - a. x5
4. **Didymosporium striola Sacc.**
(Sacc. Ib. f. 1098)
 - b. Separate conidia x500; with basidia x1000
5. **Septogloeum acerinum (Pers.) Sacc.**
(Id. f. 1071)
 - b. Separate conidia x500; with basidia x1000
6. **Scolecosporium fagi Lib.**
(Kab. & Pub. Fung. Imp. Exs. no. 531)
 - a. x3
 - b. x200 (Lind. Nat. Pfl. p. 411)
7. **Coryneum umbonatum Nees**
(Sacc. Myc. Ital. no. 1568)
 - a. x3
8. **Asterosporium hofmanni Kze.**
(Krieg. Ib. no. 349)
 - a. x3
 - b. Separate conidia x500; with basidia x200
 - c. (U. S. D. A. Taylor)
9. **Pestalozzia funerea Desm.**
(Br. & Cav. Fung. Par. no. 200)
 - a. Habit x1; detail x3
10. **Phragmotrichum chailletti Kze.**
(J. K. T. Fung. Ross. Exs. no. 347)
 - a. x5
11. **Naemospora croceola Sacc.**
(Krypt. Exs. Mus. Pal. Vind. no. 1937)
 - a. x5
 - b. Separate conidia x500; with basidia x1000
(Lind. Nat. Pfl. p. 402, after Saccardo)
12. **Cylindrosporium padi Karst.**
(F. & E. Fung. Colum. no. 1527)
 - a. x5
13. **Cylindrosporium neesi (Cda.)**
(Lind. Ib. p. 414, after Saccardo)
 - a. x1

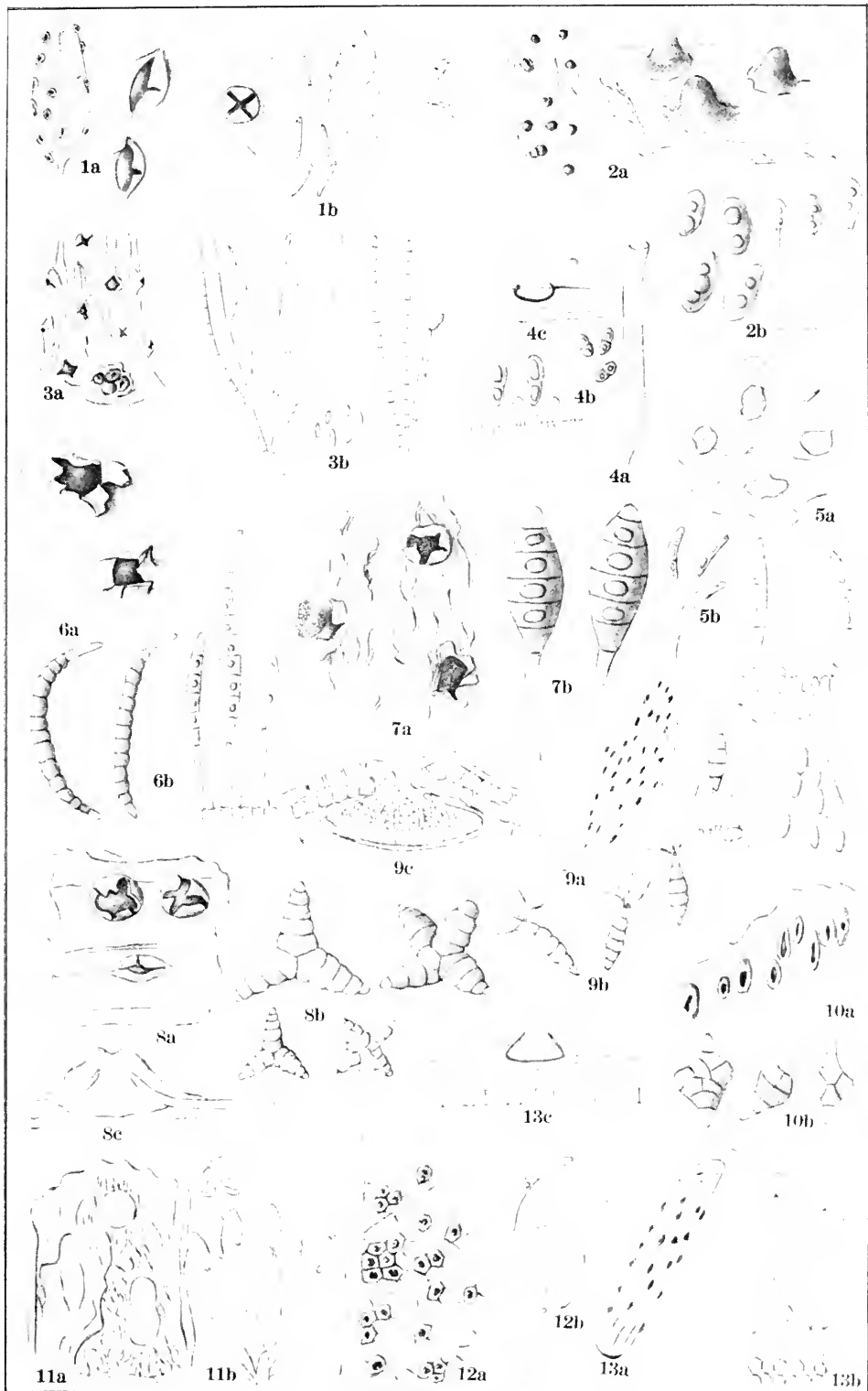


PLATE 53
MONILIACEAE

(a. Conidiophores and conidia; b. Details of same more highly magnified; except as otherwise indicated)

1. **Chromosporium viride** Cda.
(Sacc. Myc. Ven. no. 5166)
a. x500
2. **Microstroma juglandis** (Bereng.) Sacc.
(U. S. D. A.)
a. Conidia from the side and top x560
b. Conidiophores and conidia x1000
3. **Glomerularia corni** Pk.
(U. S. D. A., Langlois)
a. x400
4. **Fusidium carneolum** Sacc.
(Sacc. Fung. Ital. f. 37)
5. **Monilia fructigena** Pers.
(Br. & Cav. Fung. Par. no. 182)
a. x200
b. x500
6. **Oidium erysiphoides** Fr.
(Id. no. 41)
a. x200
b. x500
7. **Rhopalomyces elegans** Cda.
(Corda Prachtfl. pl. 2)
8. **Hyalopus mycophilus** Cda.
(Corda Icon. Fung. 1:267)
9. **Haplotrichum capitatum** Lk.
(Id. 1:265)
10. **Botryosporium pulchrum** Cda.
(U. S. D. A., Herb. Ill. Taylor)
a. x120
c. Clusters of conidia
d. Conidia x500
11. **Haplaria grisea** Lk.
(Lind. Nat. Pfl. p. 433, after Saccardo)
12. **Amblyosporium botrytis** Fres.
(Sacc. Fung. Ital. f. 708)
13. **Penicillium expansum** Lk.
(Thom. U. S. D. A. Bull. 118, f. 1)
14. **Rhinotrichum repens** Preuss
(Lind. Ib., after Preuss)

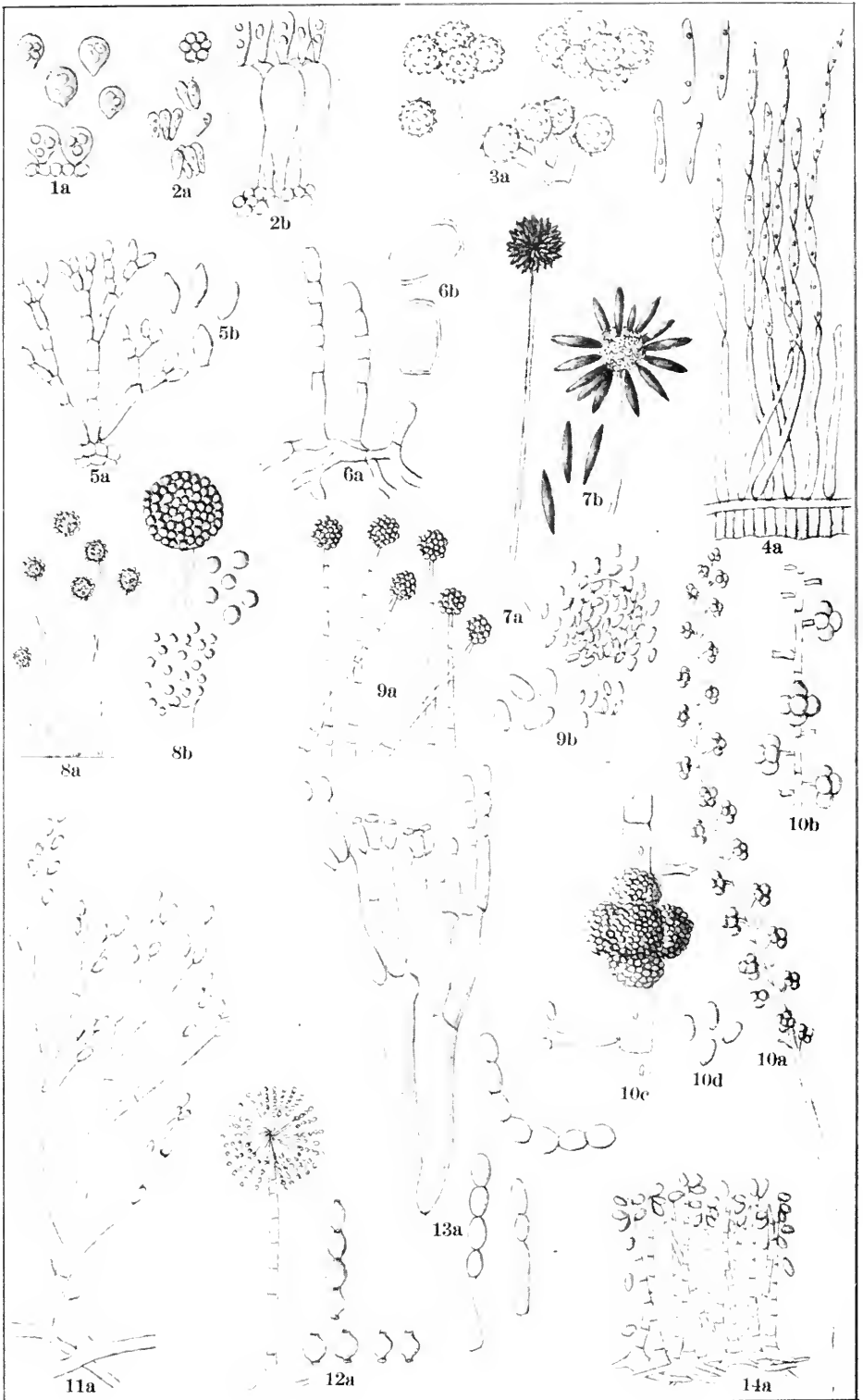


PLATE 54
MONILIACEAE

(a. Conidiophores and conidia)

1. *Acremonium alternatum* Lk.
(Lind. Nat. Pl. p. 433, after Saccardo)
2. *Monosporium spinosum* Bon.
(Sacc. Fung. Ital. f. 869)
3. *Sporotrichum roseum* Lk.
(Id. f. 747)
4. *Botrytis cinerea* Pers.
(Id. f. 699)
5. *Acrostalagmus cinnabarinus* Cda.
(Corda Icon. 2:66)
b. Tip of branch with conidium
c. Branch with drop of mucilage and conidia
6. *Asterophora agaricicola* Cda.
(Id. 4:24)
7. *Mycogone rosea* Lk.
(Sacc. Ib. f. 867)
8. *Verticillium agaricinum* (Lk.) Cda.
(Corda Ib. 2:68)
9. *Helicomycetes roseus* Lk.
(Sacc. Ib. f. 813)
10. *Titaea callispora* Sacc.
(Id. f. 1)
11. *Ramularia urticae* Ces.
(Id. f. 992)
12. *Blastotrichum confervoides* Cda.
(Corda Ib. 2:50)
13. *Cephalothecium roseum* Cda.
(Id. 2:62)
14. *Arthrotrichum superba* Cda.
(Corda Prachtfl. pl. 21)
15. *Gonatobotrys simplex* Cda.
(Id. pl. 5)

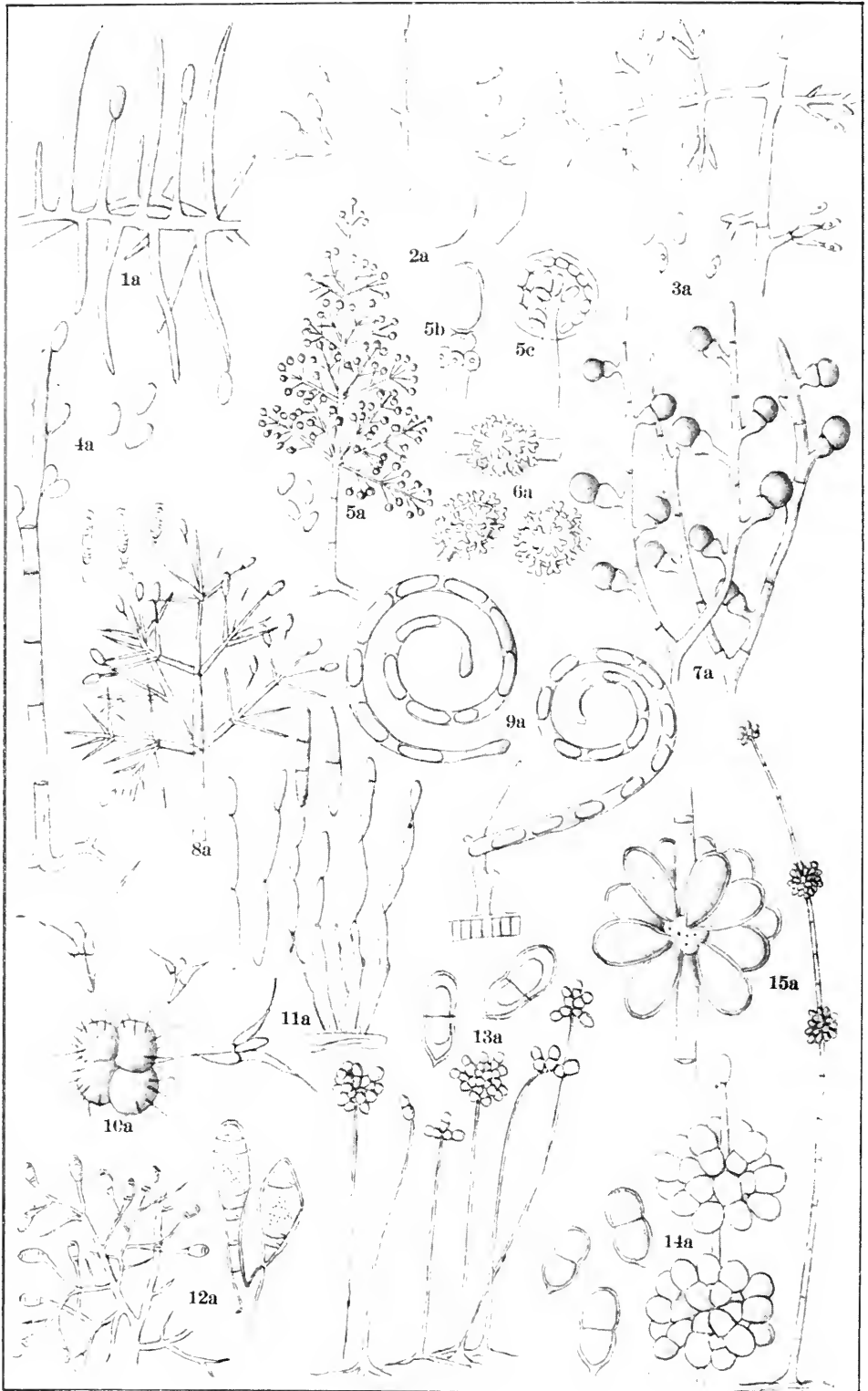


PLATE 54

PLATE 55
DEMATIACEAE

(a. Conidiophores and conidia)

1. *Coniosporium apiosporioides* Sacc.
(Sacc. Fung. Ital. no. 732)
2. *Torula herbarum* Lk.
(Id. f. 950)
3. *Echinobotryum atrum* Cda.
(Corda Icon. 3:6)
4. *Stachobotrys atra* Cda.
(Id. 1:278)
5. *Arthrinium curvatum* (K. & S.) Hoehn.
(Id. 3:17)
6. *Zygodesmus fuscus* Cda.
(Id. 4:81)
7. *Streptothrix fusca* Cda.
(Corda Prachtfl. pl. 13)
8. *Gonatobotryum fuscum* Sacc.
(Sacc. Ib. f. 48)
9. *Mesobotrys fusca* (Cda.) Sacc.
(Corda Icon. 1:243)
10. *Hormodendrum olivaceum* (Cda.) Bon.
(Id. 3:35)
11. *Ceratocladium microspermum* Cda.
(Corda Prachtfl. pl. 20)
a. Conidiophore with terminal appendages
b. Portion of conidiophore showing basidia
c. Basidium and conidia
12. *Glenospora curtisi* B. & Desm.
(Sacc. Ib. f. 792)
13. *Sarcopodium fuscum* (Cda.) Sacc.
(Corda Icon. 5:20)
14. *Hadrotrichum phragmites* Fkl.
(Sacc. Ib. f. 796)

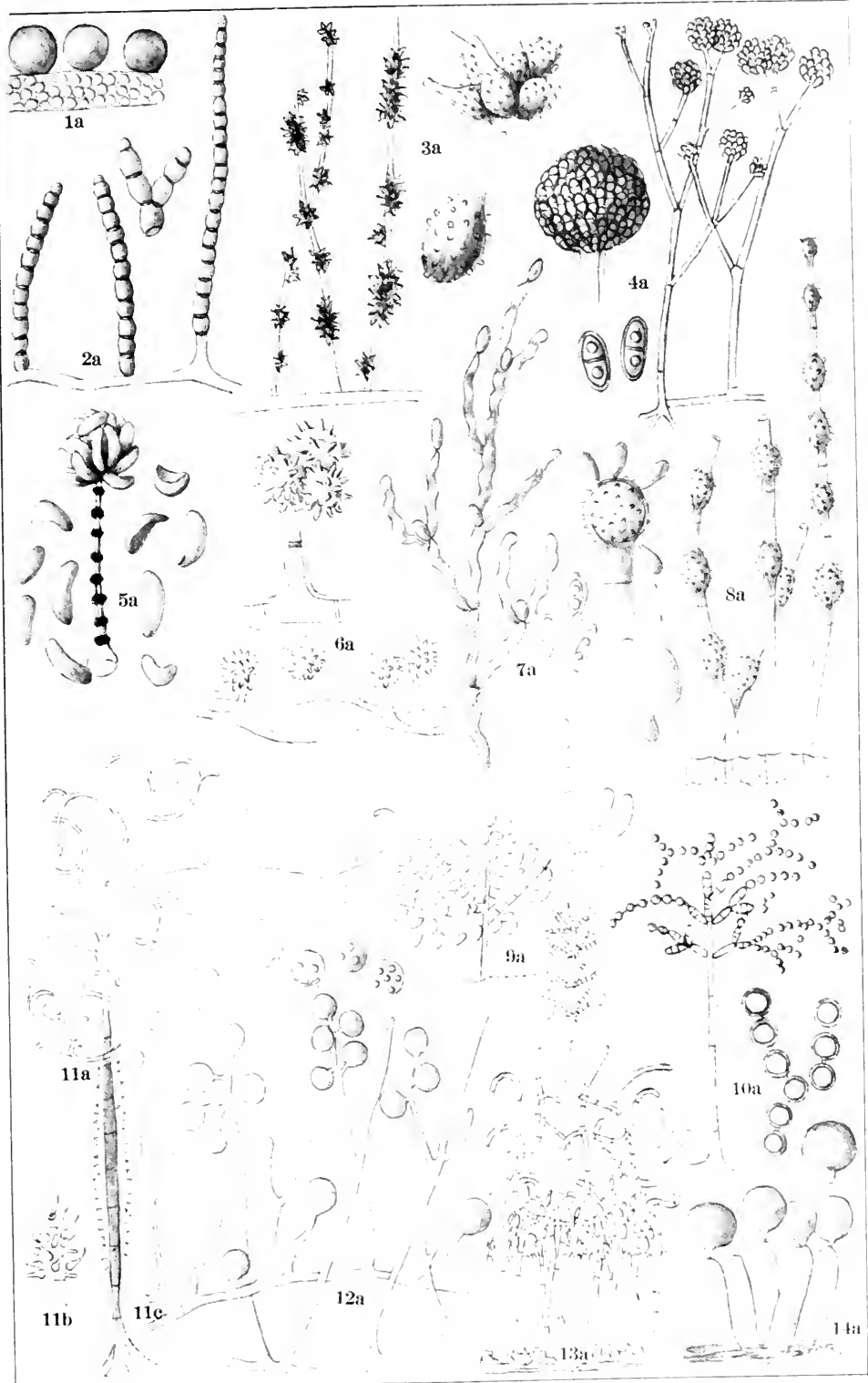


PLATE 56
DEMATIACEAE

(a. Conidiophores and conidia)

1. *Stachylidium bicolor* Lk.
(Sacc. Fung. Ital. f. 50)
2. *Cladotrichum polysporum* Cda.
(Corda Icon. 4:83)
3. *Gonytrichum caesium* Nees
(Sacc. Ib. f. 791)
4. *Beltrania rhombica* Penz.
(Id. f. 1204)
5. *Bispora monilioides* Cda.
(Corda Ib. 1:143)
6. *Polythrincium trifolii* Kze.
(Id. 3:25)
7. *Cercospora apii* Fres.
(Sacc. Ib. f. 667)
8. *Helminthosporium tiliae* Fr.
(Id. f. 823)
9. *Septonema secedens* Cda.
(Corda 1:147)
10. *Dictyosporium elegans* Cda.
(Id. 2:29)
11. *Sirodesmium granulosum* DeN.
(Sacc. Ib. f. 916)
12. *Macrosporium commune* Rab.
(Id. f. 1207)
13. *Sporoschisma mirabile* B. & Br.
(Id. f. 928)
14. *Sporodesmium cellulorum* Sacc.
(Id. f. 907)
15. *Acrothecium bulbosum* Sacc.
(Id. f. 6B)
16. *Fusariella viridatra* Sacc.
(Id. f. 45)

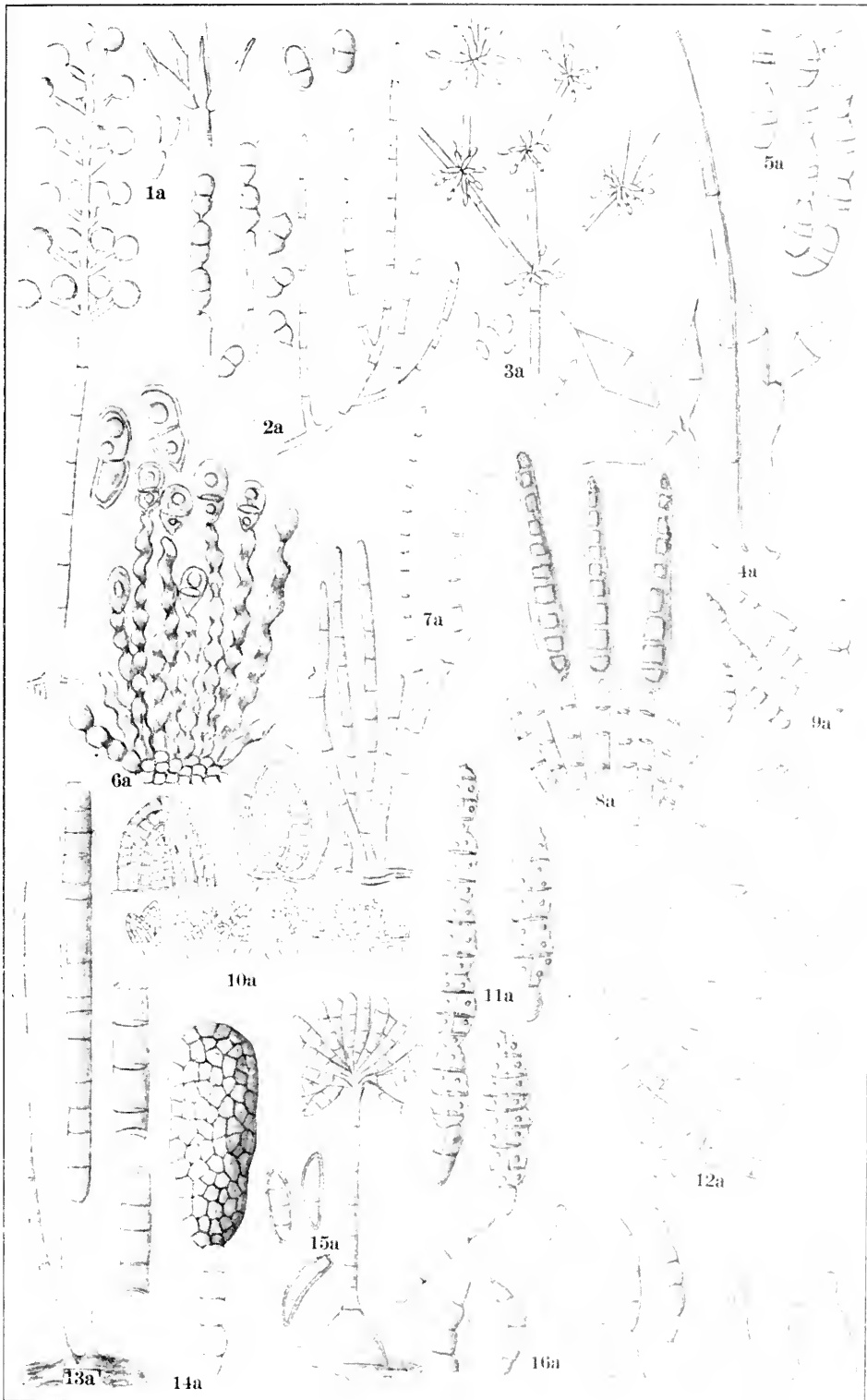


PLATE 57

DEMATIACEAE—STILBACEAE

(a. Conidiophore and conidia: nos. 1-4; synnema in addition:
nos. 5-12)

1. *Helicosporium pulvinatum* (Nees) Fr.
(Sacc. Fung. Ital. f. 811)
2. *Triposporium elegans* Cda.
(Corda Icon. 1:220)
3. *Alternaria tenuis* Nees
(Sacc. Ib. f. 737)
4. *Sarcinella heterospora* Sacc.
(Id. f. 126)
a. Conidiophore with both falcate and sarciniform conidia
5. *Atractium albicans* (Sacc.) Hoehn.
(Id. f. 10)
6. *Sporocybe byssoides* (Pers.) Bon.
(Id. f. 941)
7. *Coremium glaucum* Fr.
(Corda Prachtfl. pl. 25)
a. Different forms of the synnema
b. Group of conidiophores with chains of conidia
c. Conidia
8. *Gibellula pulchra* Cav.
(Sacc. Ib. f. 46)
b. Details
9. *Riessia semiophora* Fres.
(Fres. Beitr. Myk. pl. 9)
b. Top and side views of conidia
10. *Ciliciopus sanguineus* Cda.
(Corda Icon. 4:91)
11. *Stysanus stemonites* (Pers.) Cda.
(Id. 1:283)
12. *Isaria farinosa* (Dicks.) Fr.
(Tulasne Sel. Fung. Carp. pl. 1)
a. x1
b. Detail x380

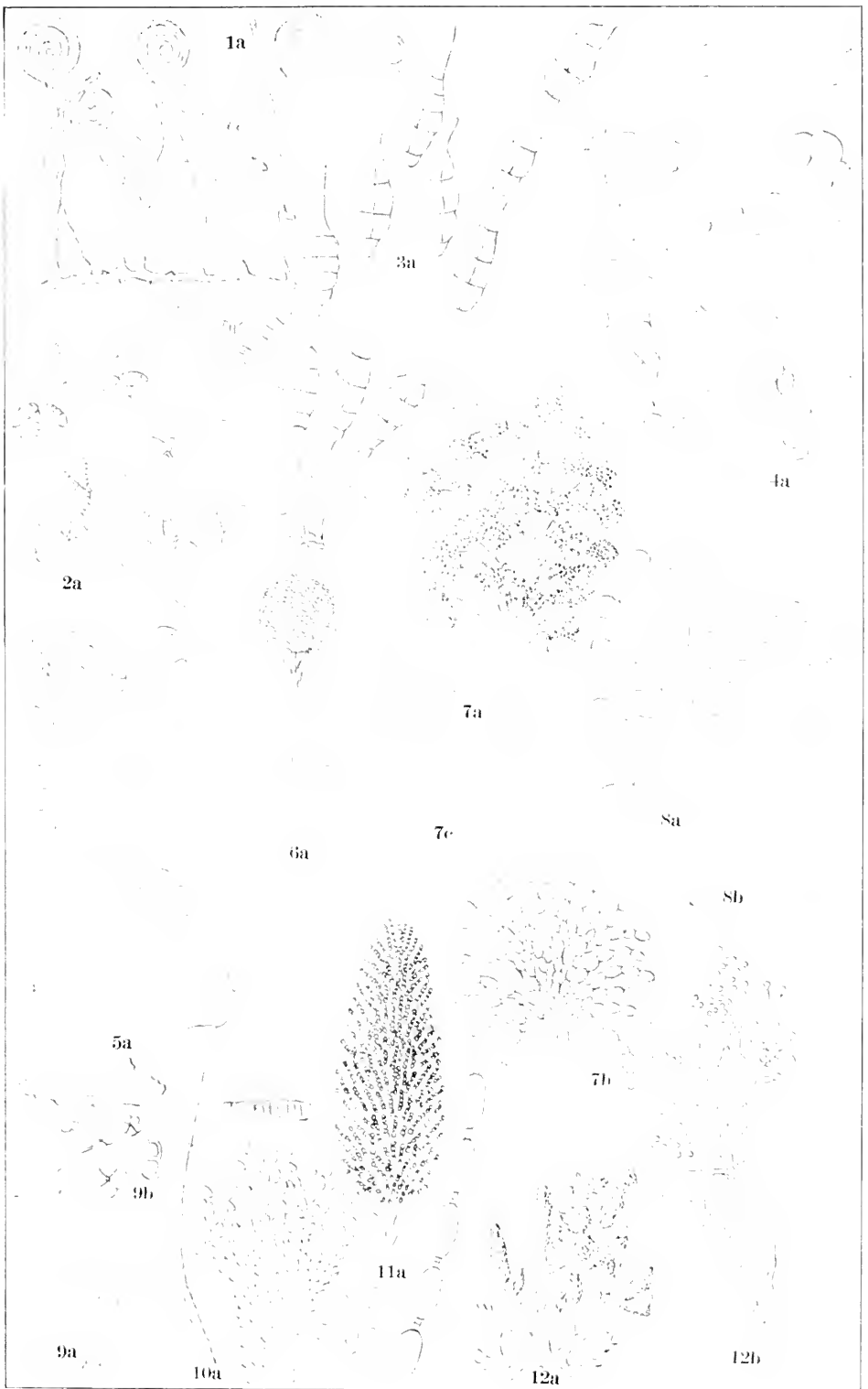


PLATE 58

TUBERCULARIACEAE

(a. Sporodochium; b. Conidiophores and conidia; except as otherwise indicated)

1. *Tubercularia vulgaris* Tode
(Petr. Fl. Bohem. no. 592)
a. x5
b. x500
2. *Tuberculina persicina* Sacc.
(Sacc. Fung. Ital. f. 964)
3. *Dendrodochium aurantiacum* Bon.
(Id. f. 771)
4. *Cylindrocolla urticae* (Pers.) Bon.
(Corda Icon. 2:113)
5. *Periola hirsuta* (Schum.) Fr.
(Id. 2:106)
a. Portion of sporodochium
b. Chains of conidia
6. *Volutella ciliata* (A. & S.) Fr.
(Sacc. Ib. f. 729)
a. Side and top views
7. *Fusarium roseum* Lk.
(Corda Ib. 1:55)
8. *Cosmariospora bizzozeriana* Sacc.
(Sacc. Ib. f. 769)
9. *Chaetostroma atrum* Sacc.
(Id. f. 752)
10. *Strumella olivatra* Sacc.
(Id. f. 79)
a. Hyphae
11. *Bactridium flavum* Kze.
(Id. f. 767)
12. *Epicoccum nigrum* Lk.
(Id. f. 1218)
13. *Exosporium melampsoroides* Sacc.
(Sacc. Ib. f. 777)
a. Section of sporodochium

