

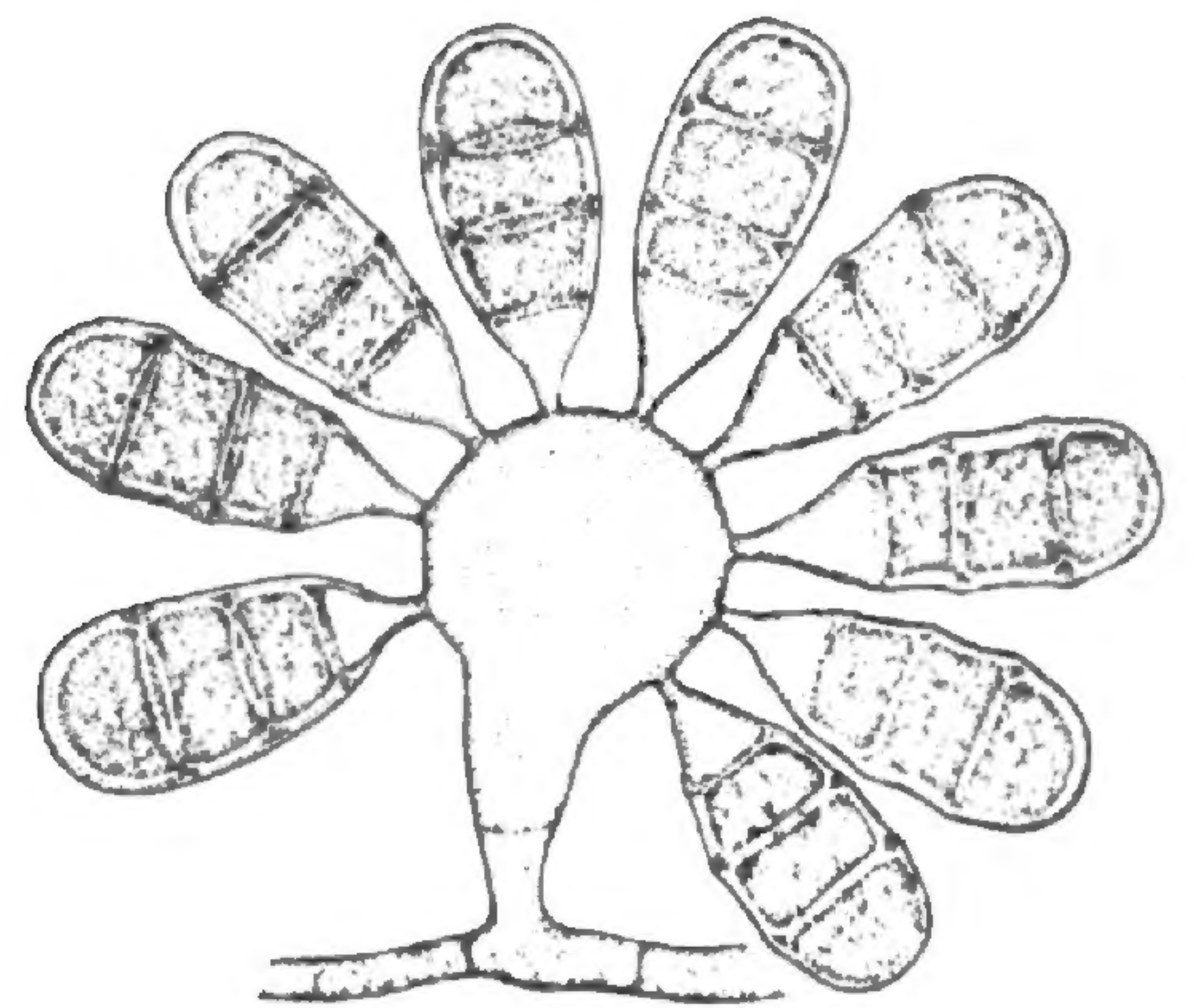
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A Nomenclatural Revision of F.J. Seaver's North American
Cup-Fungi (Operculates)



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Carolyn S. Hesterberg

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- No. 1. **Sylvia A. Earle**: *Hummbrella*, a New Red Alga of Uncertain Taxonomic Position from the Juan Fernandez Islands (June 1969).
- No. 2. **I. Mackenzie Lamb**: *Stereocaulon arenarium* (Sav.) M. Lamb, a Hitherto Overlooked Boreal-Arctic Lichen (June 1972).
- No. 3. **Sylvia A. Earle and Joyce Redemsky Young**: *Siphonoclathrus*, a New Genus of Chlorophyta (Siphonales: Codiaceae) from Panama (July 1972).
- No. 4. **I. Mackenzie Lamb, William A. Weber, H. Martin Jahns, Siegfried Huneck**: *Calathaspis*, a New Genus of the Lichen Family Cladoniaceae (July 1972).
- No. 5. **I. Mackenzie Lamb**: *Stereocaulon sterile* (Sav.) M. Lamb and *Stereocaulon groenlandicum* (Dahl) M. Lamb, Two More Hitherto Overlooked Lichen Species (March 1973).
- No. 6. **I. Mackenzie Lamb**: Further Observations on *Verrucaria serpuloides* M. Lamb, the Only Known Permanently Submerged Marine Lichen (April 1973).
- No. 7. **Bruce H. Tiffney and Elso S. Barghoorn**: The Fossil Record of the Fungi (June 1974).
- No. 8. **Donald H. Pfister**: The Genus *Acervus* (Ascomycetes, Pezizales). I. An Emendation. II. The Apothecial Ontogeny of *Acervus flavidus* with Comments on *A. epispertius* (May 1975).
- No. 9. **Donald H. Pfister**: A Synopsis of the Genus *Pulvinula*. A New Combination in the Genus *Gymnomyces*. **Norton G. Miller**: Studies on North American Quaternary Bryophyte Subfossils. I. A New Moss Assemblage from the Two Creeks Forest Bed of Wisconsin (July 1976).
- No. 10. **Emmanuel Sérusiaux**: Some Foliicolous Lichens from the Farlow Herbarium (August 1976).
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Continued on back cover

A NOMENCLATURAL REVISION OF F.J. SEAVER'S
NORTH AMERICAN CUP-FUNGI (OPERCULATES)

DONALD H. PFISTER

The North American Cup-fungi (Operculates) (Seaver 1928) has been a standard reference for more than 50 years. It was revised by Seaver in 1942 and has stood as an authoritative source since that time. No modern work on the Pezizales fails to cite it and, though there are some monographs for genera and some regional floras, one invariably still turns to this book when one is identifying Pezizales.

In the years since Seaver's work, the Pezizales have been reworked at the generic level and important cytological, histochemical, and developmental work has been done on the group. Several major monographs of genera have been written as well as checklists and regional reports. It is not surprising that, when using Seaver's treatment, one is often able to identify a species without having any idea of where the species belongs in modern generic systems. Seaver's treatment was a highly artificial one. I have set about annotating Seaver's nomenclature.

Modern currently accepted names for his concepts or names are provided in the list which follows. These are opinions. Certainly one can turn to Seaver's list of synonyms and find other opinions. I have tried to follow a conservative pathway and have listed binomials which for the most part are now in common usage. In a few cases some rearrangement is proposed but generic concepts are those which are found in Eckblad's (1968) revision, Rifai's (1968) treatment of the Austral-Asian Pezizales, Dennis's (1978) recent revision, or Korf's keys (1972, 1973a).

I have not tried to provide all of the synonyms but rather to fit Seaver's taxa into recognizable modern genera. This has been easier in some groups than in others as the listing which follows will amply show. Some genera have been well worked; others are woefully understudied. Still it is hoped that those using the book will find this annotation helpful.

The annotation is made up of three parts. Part I lists the name used by Seaver, the page number in North American Cup-fungi (Operculates) revised edition, and the equivalent name where known. Comments on some of the names are made in numbered notes referred to in the revised list. Those Seaver names which are underlined were listed as doubtful by Seaver. The Seaver names marked with a "+" represent names which for sundry reasons were not possible to verify in North America. Part II is an index to the revised names as listed in Part I. The page numbers refer to Seaver's book. With each generic name, reference to recent monographic work is given. Part III is a bibliography. Most recent treatments containing references to North American taxa are listed.

I wish to thank several curators who have seen to it that I had specimens for study. These are Clark T. Rogerson (NY), David Farr (BPI), John H. Haines (NYS), and Richard P. Korf (CUP). My debt to Prof. Korf is a profound one. He reviewed this manuscript, made suggestions, and gave encouragement. He provided many of the clues which lead to the solution of some of the tangles. He also got me started on discomycetes as a graduate student. This research was supported in part by National Science Foundation grant DEB 8023018 to the author.

PART I

Page	NAME USED BY SEAVER	REVISED NAME
43	<i>Sphaerospora trechispora</i>	<i>Scutellinia trechispora</i> (Berk. & Broome) Lambotte
44	<i>S. flavovirens</i>	<i>Scabropezia flavovirens</i> (Fuckel) Dissing & Pfister
45	<i>S. perplexa</i>	<i>Lamprospora fide Denison</i> (1960)
46	<i>S. brunnea</i>	<i>Trichophaea brunnea</i> (Alb. & Schw.) Batra in L. R. and S. T. Batra <i>T. confusa</i> (Cooke) Berthet
46	<i>S. hinnulea</i>	<i>T. hinnulea</i> (Berk. & Broome) Batra in L. R. and S. T. Batra
47	<i>S. monilifera</i>	<i>T. monilifera</i> (Berk. & Curtis) Pfister
48	<i>Pseudoplectania vogesiaca</i>	<i>Pseudoplectania melaena</i> (Fr.) Sacc. (1)
49	<i>P. nigrella</i>	<i>P. nigrella</i> (Pers.) Fuckel
50	<i>P. fulgens</i>	<i>Caloscypha fulgens</i> (Pers.) Boud.
51	<i>Sphaerosoma hesperium</i>	<i>Ruhlandiella berolinensis</i> P. Hennings
52	<i>Boudiera areolata</i>	<i>Boudiera areolata</i> Cooke & Phill.
52	<i>B. echinulata</i>	<i>B. echinulata</i> (Seaver) Seaver
53	<i>B. marginata</i>	<i>Ascobolus nodulosporus</i> Brum.
56	<i>Lamprospora crouani</i>	<i>Lamprospora miniata</i> De Not.
58	<i>L. laetirubra</i>	" <i>L. laetirubra</i> (Cooke) Lagarde"
58	<i>L. dictydiola</i>	<i>L. dictydiola</i> Boud.
59	<i>L. areolata</i>	<i>L. areolata</i> Seaver

60	<i>L. ascoboloides</i>	<i>L. ascoboloides</i> Seaver
60	<i>L. annulata</i>	<i>L. annulata</i> Seaver
61	<i>L. spinulosa</i>	<i>L. spinulosa</i> Seaver
62	<i>L. crec'hqueraultii</i>	<i>L. crec'hqueraultii</i> (Crouan & Crouan) Boud.
63	<i>L. macrantha</i>	<i>L. macracantha</i> (Boud.) Seaver
63	<i>L. brevispinosa</i>	<i>L. brevispinosa</i> Seaver
64	<i>L. tuberculata</i>	<i>L. tuberculata</i> Seaver
65	<i>L. maireana</i>	<i>L. maireana</i> Seaver
66	<i>L. wrightii</i>	<i>L. wrightii</i> (Berk. & Curtis in Berk. & Br.) Seaver
66	<i>L. tuberculatella</i>	<i>L. tuberculatella</i> Seaver
67	<i>L. amethystina</i>	? <i>Pulparia amethystina</i> (Quel.) Donadini
67	<i>L. carbonaria</i>	<i>Pulvinula carbonaria</i> (Fuckel) Boud.
68	<i>L. haemastigma</i>	<i>P. convexella</i> (P. Karst.) Pfister
69	<i>L. constellatio</i>	<i>P. convexella</i> (P. Karst.) Pfister
69	<i>L. wisconsinensis</i>	<i>P. laeterubra</i> (Rehm) Pfister
70	<i>L. gemmea</i>	<i>P. archeri</i> (Berk. & J. D. Hooker) Rifai
70	<i>L. discoidea</i>	<i>P. discoidea</i> (P. Henn. & E. Nym.) Batra
70	<i>L. salmonicolor</i>	<i>P. salmonicolor</i> (Seaver) Pfister
71	<i>L. trachycarpa</i>	<i>Plicaria trachycarpa</i> (Curr.) Fuckel
72	<i>L. detonia</i>	<i>Scabropezia flavovirens</i> (Fuckel) Dissing & Pfister
72	<i>L. nigrans</i>	<i>Plicaria nigrans</i> (Morgan) Pfister (2)

73	<i>L. leiocarpa</i>	<i>Plicaria endocarpoides</i> (Berk.) Rifai
74	<i>L. planchonis</i>	<i>Pulparia planchonis</i> (Dun. ex Boud.) Korf, J. K. Rogers, Pfister
74	<i>L. lobata</i>	<i>Lamprospora lobata</i> (Berk. & Curtis) Seaver
75	<i>L. exasperata</i>	<i>Plicaria recurva</i> (Berk.) Rifai
75	<i>L. polytrichina</i>	<i>Lamprospora polytrichina</i> (Rehm) Seaver
76	<i>Pithya pithya</i>	<i>Pithya vulgaris</i> Fuckel
77	<i>P. lacunosa</i>	<i>P. vulgaris</i> Fuckel
78	<i>P. cupressi</i>	<i>P. cupressina</i> (Batch) Fuckel (3)
79	<i>Ascodesmis microscopica</i>	<i>Ascodesmis sphaerospora</i> Obrist (4)
80	<i>A. porcina</i>	<i>A. porcina</i> Seaver
82	<i>Ascobolus stercorarius</i>	<i>Ascobolus furfuraceus</i> (Pers.) W. J. Hooke
83	<i>A. immersus</i>	<i>A. immersus</i> (Pers.) Pers.
83	<i>A. glaber</i>	<i>Saccobolus glaber</i> (Pers.) Lambotte
84	<i>A. winteri</i>	<i>A. elegans</i> J. Klein
85	<i>A. americanus</i>	<i>A. amoenus</i> Oudemans
85	<i>A. leveillei</i>	(5)
86	<i>A. viridulus</i>	<i>A. crenulatus</i> P. Karst.
86	<i>A. candidus</i>	<i>A. aglaosporus</i> Heimerl
87	<i>A. magnificus</i>	<i>A. scatigenus</i> (Berk.) Brumm.
87	<i>A. carbonarius</i>	<i>A. carbonarius</i> P. Karst.
88	<i>A. geophilus</i>	<i>A. geophilus</i> Seaver
89	<i>A. subglobosus</i>	<i>A. subglobosus</i> Seaver
89	<i>A. albinus</i>	<i>A. albinus</i>
90	<i>A. xylophilus</i>	<i>A. xylophilus</i> Seaver

90	<i>A. striisporus</i>	<i>A. follicola</i> Berk. & Broome
91	<i>A. epimyces</i>	<i>A. epimyces</i> (Cooke) Seaver
<u>92</u>	<u><i>A. atrofuscus</i></u>	<i>A. carbinarius</i> P. Karst.
<u>92</u>	<u><i>A. viridis</i></u>	(6)
<u>92</u>	<u><i>A. purpurascens</i></u>	(7)
<u>92</u>	<u><i>A. brunneus</i></u>	(8)
<u>92</u>	<u><i>A. cubensis</i></u>	<i>A. cubensis</i> Berk. & Curtis
<u>92</u>	<u><i>A. vinosus</i></u>	(9)
<u>92</u>	<u><i>A. major</i></u>	<u><i>A. scatigenus</i></u> (Berk.) Brumm.
<u>92</u>	<u><i>A. conglomeratus</i></u>	<i>Angelina rufescens</i> (Schw.) Inby fide Seaver (not a member of the Pezizales).
<u>92</u>	<u><i>A. trifolii</i></u>	<u><i>Pseudopeziza trifolii</i></u> (not a member of the Pezizales)
<u>92</u>	<u><i>A. pusillus</i></u>	<i>A. pusillus</i> Boud. (10)
93	<i>Saccobolus kerverni</i>	<i>S. glaber</i> (Pers.) Lambotte
94	<i>S. portoricensis</i>	<i>S. portoricensis</i> Seaver
94	<i>S. violascens</i>	<i>S. versicolor</i> (P. Karst.) P. Karst.
95	<i>S. depauperatus</i>	<i>S. depauperatus</i> (Berk. & Broome) E. C. Hansen
95	<i>S. globuliferellus</i>	<i>S. globuliferellus</i> Seaver
<u>96</u>	<u><i>S. obscurus</i></u>	(11)
97	<i>Aleuria aurantia</i>	<i>Aleuria aurantia</i> (Pers.) Fuckel
98	<i>A. wisconsinensis</i>	<i>A. aurantia</i>
98	<i>A. cestrica</i>	<i>A. cestrica</i> (Ellis & Everh.) Seaver
99	<i>A. bicucullata</i>	<i>A. bicucullata</i> Boud.
99	<i>A. rhenana</i>	<i>A. rhenana</i> Fuckel

100	<i>A. rutilans</i>	<i>Leucoscypha rutilans</i> (Fr.) Dennis & Rifai
101	<i>Aleurina atrovinosa</i>	<i>Peziza atrovinosa</i> Gerard
102	<i>A. aquehongensis</i>	(12)
103	<i>Melastiza charteri</i> [sic]	<i>Melastiza charteri</i> (W. G. Smith) Boud.
104	<i>M. asperrima</i>	<i>Scutellinia asperrima</i> (Ell. & Everh. ex Seaver) Le Gal
104	<i>Melastiza pennsylvanica</i>	<i>S. pennsylvanica</i> (Seaver) Denison
106	<i>Psilopezia nummularia</i>	(13)
106	<i>P. hydrophila</i>	<i>Pachyella hydrophila</i> (Peck ex Sacc.) Pfister
107	<i>P. deligata</i>	<i>Psilopezia deligata</i> (Peck) Seaver
107	<i>P. trachyspora</i>	<i>Pachyella adnata</i> (Berk. & Curtis) Pfister
108	<i>P. flavida</i>	<i>Acervus flavidus</i> (Berk. & Curtis) Pfister
108	<i>P. aquatica</i>	<i>Miladina lechithina</i> (Cooke) Svrček
<u>109</u>	<u><i>P. mirabilis</i></u>	<i>Aleurodiscus</i> , a Basidiomycete
109	<i>Pyronema omphalodes</i>	<i>Pyronema omphalodes</i> (Bull.) Fuckel
<u>110</u>	<u><i>P. leucobasis</i></u>	<i>Psilopezia deligata</i> (Peck) Seaver
112	<i>Ascophanus Holmskjoldii</i>	<i>Thecotheus?</i> <i>cinereus</i> (Crouan & Crouan) Chenantais
112	<i>A. isabellinus</i>	<i>T. cinereus</i> (Crouan & Crouan) Chenantais
113	<i>A. sarcobius</i>	<i>Iodophanus sarcobius</i> (Boud.) Kimbr.
113	<i>A. bermudensis</i>	<i>I. bermudensis</i> (Seaver) Kimbr.

114	<i>A. vicinus</i>	(14)
114	<i>A. lacteus</i>	<i>Coprotus lacteus</i> (Cooke & Phill.) Kimbr., Luck-Allen, and Cain
114	<i>A. argenteus</i>	<i>Coprotus argenteus</i> (Curr.) Kimbr., Luck-Allen, and Cain
115	<i>A. aurora</i>	<i>C. aurora</i> (Crouan & Crouan) Kimbr., Luck-Allen and Cain
115	<i>A. carneus</i>	<i>Iodophanus carneus</i> (Pers.) Korf <i>Peziza humosoides</i> in syn. = immature <u><i>Iodophanus</i></u>
116	<i>A. granulatus</i>	<i>Coprobria granulata</i> (Bull.) Boud.
117	<i>A. granuliformis</i>	<i>Coprotus granuliformis</i> (Crouan & Crouan) Kimbr.
117	<i>A. ochraceus</i>	<i>C. ochraceus</i> (Crouan & Crouan) Larsen
118	<i>A. gallinaceus</i>	(15)
118	<i>A. cinereus</i>	<i>Thecotheus cinereus</i> (Crouan & Crouan) Chenantais
119	<i>A. tetraonalis</i>	(16)
120	<i>A. lilacinus</i> Cooke ⁺	
120	<i>A. cinerellus</i> (Karst.) Speg. ⁺	
120	<i>A. microsporus</i>	(17)
121	<i>A. cesatii</i>	(18)
121	<i>A. glaucellus</i>	<i>Coprotus glaucellus</i> (Rehm) Kimbr.
124	<i>Humarina axillaris</i>	<i>Octospora axillaris</i> (Nees) Moser
124	<i>H. ithacaensis</i>	(19)
124	<i>H. pallens</i>	<i>Thecotheus pallens</i> (Boud.) Kimbr. (20)

125	<i>H. clausa</i> ⁺	
125	<i>H. testacea</i>	<i>Iodophanus testaceus</i> (Moug. in Fr.) Korf
127	<i>H. orthotricha</i>	<i>Octospora orthotricha</i> (Cooke & Ell.) Khare & Tewari
127	<i>H. Clementsii</i> ⁺	<i>Octospora</i> sp.
127	<i>H. rubens</i>	<i>O. rubens</i> (Boud.) Moser in Gams
128	<i>H. convexula</i> ⁺	<i>Octospora</i> sp.
128	<i>H. lilacina</i>	(21)
129	<i>H. leucoloma</i>	<i>Octospora leucoloma</i> Hedwig and <i>O. Humosa</i> (Fr.) Dennis included in synonymy
130	<i>H. araneosa</i> ⁺	<i>Geopyxis carbonaria</i>
130	<i>H. semiimmersa</i>	<i>O. semiimmersa</i> (Karst.) Khare & Tewari
131	<i>H. ochroleuca</i> ⁺	
131	<i>H. rufa</i> ⁺	
132	<i>H. wisconsinensis</i> ⁺	
132	<i>H. nectriodes</i>	<i>Iodophanus testaceus</i> (Moug. in Fr.) Korf (22)
132	<i>H. deligata</i>	<i>I. testaceus</i> (23)
133	<i>H. glumarum</i> ⁺	
133	<i>H. peckii</i>	<i>Octospora peckii</i> (House) Khare & Tewari
134	<i>H. phyllogena</i>	(24)
134	<i>H. tetraspora</i>	<i>Byssonectria tetraspora</i> (Fuckel) Korf
134	<i>H. permuda</i> [sic]	<i>B. fusispora</i> (Berk.) Rogerson and Korf in Korf
135	<i>H. ollaris</i> ⁺	
136	<i>H. aggregata</i>	<i>Byssonectria aggregata</i> (Berk. & Broome) Rogerson & Korf

136	<i>H. fusispora</i>	<i>B. fusispora</i> (Berk.) Rogerson and Korf in Korf
137	<i>H. coccinea</i>	<i>Octospora coccinea</i> (Crouan & Crouan) Brumm.
137	<i>H. cookeina</i>	<i>Hymenoscyphus</i> sp.
138	<i>H. gerardi</i>	<i>Peziza gerardi</i> Cooke and Gerard
138	<i>H. purpurea</i>	(25)
139	<i>H. hepatica</i>	<i>Fimaria hepatica</i> (Batsch) Brumm.
139	<i>H. trachyderma</i> ⁺	
<u>140</u>	<u><i>Humaria bella</i></u>	<i>Nanoscypha bella</i> (Berk. & Curtis) Pfister
<u>140</u>	<u><i>H. scatigena</i></u>	<i>Ascobolus scatigenus</i> (Berk. & Curtis) Brumm.
<u>140</u>	<u><i>H. salmonicolor</i></u> ⁺	
<u>140</u>	<u><i>H. olivatra</i></u> ⁺	an inoperculate disco- mycete
<u>140</u>	<u><i>H. fuscocarpa</i></u> ⁺	
<u>140</u>	<u><i>H. vitigena</i></u> ⁺	
<u>140</u>	<u><i>H. subcrenulata</i></u> ⁺	
<u>140</u>	<u><i>H. secreta</i></u> ⁺	
<u>140</u>	<u><i>H. groenlandica</i></u> ⁺	
<u>141</u>	<u><i>H. microspora</i></u>	<i>Acervus epispartius</i> (Berk. & Curtis) Pfister
<u>141</u>	<u><i>H. xanthomela americana</i></u> ⁺	
<u>141</u>	<u><i>Peziza elachroa</i></u>	<i>Peziza elachroa</i> Berk. & Curtis
<u>141</u>	<u><i>Humaria subgranulata</i></u>	<i>Iodophanus subgranulatus</i> (Berk. & Curtis) Pfister
141	<i>Pseudombrophila deerata</i>	<i>Pseudombrophila deerata</i> (Karst.) Seaver
142	<i>Streptotheca crouani</i>	<i>Ascozonus crouani</i> (Renny) Schroet.
143	<i>S. woolhopensis</i>	<i>A. woolhopensis</i> (Berk. & Broome) Boud.

143	<i>S. obscura</i>	<i>Thelebolus obscurus</i> (Seaver) Eckblad
144	<i>Ryparobius sexdecimisporus</i>	<i>Coprotus sexdecimisporus</i> (Crouan & Crouan) Kimbr.
145	<i>R. crustaceus</i>	<i>Thelebolus crustaceus</i> (Fuckel) Kimbr.
145	<i>R. hyalinellus</i>	<i>Thelebolus</i> sp.
146	<i>R. polysporus</i> ⁺	<i>Thelebolus</i> sp.
147	<i>R. monascus</i>	<i>Thelebolus stercoreus</i> (Tode) Fr.
<u>147</u>	<u><i>R. niveus</i></u>	<i>Coprotus niveus</i> (Fuckel) Kimbrough, Luck-Allen and Cain
148	<i>Thecotheus pelletieri</i>	<i>Thecotheus pelletieri</i> (Crouan & Crouan) Boud.
149	<i>Sepultaria arenicola</i>	<i>Geopora sepulta</i> (Fr.) Korf & Burdsall
150	<i>S. longii</i>	<i>G. longii</i> (Seaver) Burdsall & Korf
151	<i>S. arenosa</i>	<i>G. arenosa</i> (Fuckel) Ahmad
152	<i>S. aurantia</i>	<i>Scutellinia aurantia</i> (Clements) Waraitch (26)
152	<i>S. pellita</i>	<i>Geopora pellita</i> (Cooke & Peck) T. Schumacher
153	<i>Pseudopithyella minuscula</i>	<i>Pseudopithyella minuscula</i> (Boud. & Torrend) Seaver
154	<i>Perrotia flammea</i>	An inoperculate disco- mycete
155	<i>Lasiobolus equinus</i>	<i>Lasiobolus equinus</i> (Müll.) P. Karst.
156	<i>L. ruber</i>	<i>L. ruber</i> (Quel.) Sacc.
159	<i>Patella scutellata</i>	<i>Scutellinia scutellata</i> (L) Lambotte
160	<i>P. piliseta</i> ⁺	

160	<i>P. cubensis</i>	<i>Scutellinia cubensis</i> (Berk. & Curtis) Gamundi <i>S. texensis</i> (Berk. & Curtis) Le Gal
161	<i>P. umbrorum</i>	<i>S. umbrorum</i> (Fr.) Lamotte
162	<i>P. lusatiae</i>	<i>S. lusatiae</i> (Cooke) O. Kuntze
162	<i>P. miniata</i> ⁺	
163	<i>P. albocincta</i>	<i>Leucoscypha vivida</i> (Nyl.) Dennis
163	<i>P. ovilla</i>	<i>L. ovilla</i> (Peck) Harmaja
164	<i>P. hetieri</i>	<i>L. hetieri</i> (Boud.) Rifai
165	<i>P. ricciophila</i>	(27)
165	<i>P. punicea</i> ⁺	
166	<i>P. gilva</i>	<i>Tricharina gilva</i> (Boud.) Eckblad
166	<i>P. setosa</i>	<i>Scutellinia setosa</i> (Nees) Kuntze
167	<i>P. sequoiae</i>	(28)
167	<i>P. melaloma</i>	<i>Anthracobia melaloma</i> (Albertini & Schw.) Boud.
168	<i>P. crucipila</i>	<i>Cheilymenia crucipila</i> (Cooke & Phill.) Le Gal in Denison
169	<i>P. stercorea</i>	<i>C. ciliata</i> (Bull.) Maas
170	<i>P. theleboloides</i>	<i>C. theleboloides</i> (Alber- tini & Schw.) Boud.
171	<i>P. coprinaria</i>	<i>C. coprinaria</i> (Cooke) Boud. (30)
172	<i>P. maculosa</i> ⁺	
172	<i>P. pulcherrima</i>	<i>C. pulcherrima</i> (Crouan & Crouan) Boud.
173	<i>P. raripila</i>	<i>C. raripila</i> (Phill.) Dennis

173	<i>P. fimetaria</i> ⁺	
174	<i>P. paludosa</i>	<i>Trichophaea paludosa</i> Boud.
174	<i>P. tuberculata</i>	<i>T. tuberculata</i> (Seaver) Kanouse
175	<i>P. albida</i>	<i>Humaria hemispherica</i> (Wigg.) Fuckel
176	<i>P. gregaria</i>	<i>Trichophaea gregaria</i> (Rehm) Boud.
177	<i>P. irregularis</i> ⁺	
177	<i>P. abundans</i>	<i>T. abundans</i> (P. Karst.) Boud.
178	<i>P. erinaceus</i>	<i>Scutellinia erinaceus</i> (Schw.) Kuntze
178	<i>P. albospadicea</i>	<i>Trichophaea albospadicea</i> (Grev.) Boud. -- a species complex
179	<i>P. pygmaea</i>	<i>Trichophaea pygmaea</i> (Clements) Waraitch (31)
<u>179</u>	<u><i>Lachnea vitellina</i></u>	<i>Cheilymenia vitellina</i> (Pers.) Dennis
<u>179</u>	<u><i>L. crispata</i></u>	<i>Phillipsia crispata</i> (Berk. & Curtis) Le Gal
<u>180</u>	<u><i>Neottiella spraguei</i></u>	<i>Peziza spraguei</i> Berk. & Curtis
<u>180</u>	<u><i>Lachnea livida</i></u> ⁺	
<u>180</u>	<u><i>Neottiella albotecta</i></u>	a lichen
<u>180</u>	<u><i>Lachnea hirta</i></u>	<i>Scutellinia hirta</i> (Schum.) Lamb.
<u>180</u>	<u><i>Neottiella sericeovillosa</i></u> ⁺	
<u>180</u>	<u><i>Lachnea fissilis</i></u> ⁺	
<u>180</u>	<u><i>Neottiella callichroa</i></u>	<i>Octospora callichroa</i> (Boud.) Arpin
<u>180</u>	<u><i>Neottiopezis macrospora</i></u> ⁺	
181	<i>Wynnea gigantea</i>	<i>Wynnea gigantea</i> Berk. & Curtis
181	<i>W. americana</i>	<i>W. americana</i> Thaxter

182	<i>Phillipsia domingensis</i>	<i>Phillipsia domingensis</i> Berk.
183	<i>P. gigantea</i>	<i>P. domingensis</i>
183	<i>P. chardoniana</i>	<i>P. domingensis</i>
184	<i>P. dochmia</i>	<i>Aurophora dochmia</i> (Berk. & Curtis) Rifai
185	<i>Scodellina leporina</i>	<i>Otidea leporina</i> (Fr.) Fuckel
185	<i>S. auricula</i>	<i>Wynnella silvicola</i> (Berk. in Sacc.) Nannf.
186	<i>S. grandis</i>	<i>Otidea grandis</i> (Pers.) Rehm
187	<u><i>Otidea obtecta</i></u> ⁺	
187	<i>Cookeina tricholoma</i>	<i>Cookeina tricholoma</i> (Mont.) Kuntze
188	<i>C. sulcipes</i>	<i>C. sulcipes</i> (Berk.) Kuntze
189	<i>C. tetraspora</i>	<i>Nanoscypha tetraspora</i> (Seaver) Denison
190	<i>C. colensoi</i>	<i>C. venezuelae</i> (Berk. & Curtis) Le Gal (Denison 1967)
191	<i>Plectania coccinea</i>	<i>Sarcoscypha coccinea</i> (Scop.) Sacc.
192	<i>P. floccosa</i>	<i>Microstoma floccosum</i> (Schw.) Raitviir
193	<i>P. occidentalis</i>	<i>Sarcoscypha occidentalis</i> (Schw.) Sacc.
193	<i>P. hiemalis</i>	<i>Microstoma protractum</i> (Fr.) Kanouse
194	<u><i>Sarcoscypha roseotincta</i></u> ⁺	
195	<i>Bulgaria globosa</i>	<i>Sarcosoma globosum</i> (Fr.) Casp. in Rehm
196	<i>B. rufa</i>	<i>Galiella rufa</i> (Schw.) Nannf. & Korf
197	<i>B. melastoma</i>	<i>Plectania melastoma</i> (Sow.) Fuckel

<u>198</u>	<u>Peziza aurantiopsis</u>	Wolfina aurantiopsis (Ellis) Eckblad
199	Urnula craterium	Urnula craterium (Schw.) Fr.
200	U. geaster	Chorioactis geaster (Peck) Eckblad
<u>200</u>	<u>U. terrestris</u> ⁺	
202	Paxina acetabulum	Helvella acetabulum (L.) Quel.
203	P. macropus	H. macropus (Pers.) P. Karst.
203	P. platypodia	H. queletii Bres.
204	P. leucomelas	H. leucomelas (Pers.) Nannf.
204	P. sulcata	H. solitarius (P. Karst.) P. Karst.
205	P. barlae	H. acetabulum (L.) Quel.
205	P. hispida	H. villosa (Hedw.) Dissing & Nannf.
206	P. subclavipes	H. macropus (Pers.) P. Karst.
207	P. dupainii	H. queleti Bres.
208	P. corium	H. corium (Weberb.) Massee
208	P. nigrella	Plectania nannfeldtii Korf
209	P. semitosta	Jafnea semitosta (Berk. & Curtis) Korf
210	P. fusicarpa	J. fusicarpa (Gerard) Korf
211	P. olivacea ⁺	
<u>211</u>	<u>Macropodia schweinitzii</u> ⁺	
<u>211</u>	<u>Plectania rimosa</u> Peck ⁺	
212	Geopyxis cupularis	Tarzetta cupularis (L.) Korf and J. K. Rogers

213	<i>G. bronca</i>	<i>T. bronca</i> (Peck) Korf & J. K. Rogers
213	<i>G. catinus</i>	<i>T. catinus</i> (Holmsk.) Korf and J. K. Rogers
214	<i>G. vulcanalis</i>	<i>Geopyxis vulcanalis</i> (Peck) Sacc.
<u>214</u>	<u><i>G. nebulosa</i></u> ⁺	
<u>214</u>	<u><i>G. nebulosoides</i></u> ⁺	
<u>214</u>	<u><i>G. cinerascens</i></u> ⁺	
<u>214</u>	<u><i>G. verruculosa</i></u>	<i>Helvella acetabulum</i> (L.) Quel.
<u>215</u>	<u><i>G. Hicksii</i></u> ⁺	
215	<i>Rhizina inflata</i>	<i>Rhizina undulata</i> Fr.
<u>216</u>	<u><i>R. spongiosa</i></u>	<i>Galiella spongiosa</i> (Berk. & Curtis) Pfister
216	<i>Discina ancilis</i>	<i>Gyromitra perlata</i> (Fr.) Harmaja
217	<i>D. apiculata</i>	<i>Peziza apiculata</i> Cooke
218	<i>D. convoluta</i>	<i>Gyromitra leucoxantha</i> (Bres.) Harmaja
218	<i>D. leucoxantha</i>	<i>G. leucoxantha</i> (Bres.) Harmaja
221	<i>Peziza badia</i>	<i>Peziza badio-confusa</i> Korf (32)
222	<i>P. brunneoatra</i>	<i>P. brunneoatra</i> Desmaz.
222	<i>P. spissa</i>	<i>P. spissa</i> Berk.
223	<i>P. succosa</i>	<i>P. succosa</i> Berk.
224	<i>P. pustulata</i>	<i>P. petersii</i> Berk.
224	<i>P. emileia</i>	<i>P. emileia</i> Cooke
225	<i>P. melaleuca</i>	<i>Gyromitra melaleuca</i> (Bres.) Donadini
225	<i>P. melaleucoides</i>	<i>G. melaleucoides</i> (Seaver) Pfister
226	<i>P. violacea</i>	<i>Peziza praetervisa</i> Bres. (33)

227	<i>P. griseorosea</i>	<i>P. griseorosea</i> Gerard
227	<i>P. proteana</i>	<i>P. proteana</i> (Boud.) Seaver
228	<i>P. concentrica</i>	<i>P. concentrica</i> Seaver
228	<i>P. abietina</i>	<i>Otidea propinquata</i> (Karst.) Harmaja
229	<i>P. venosa</i>	<i>Disciotis venosa</i> (Pers.) Boud.
230	<i>P. domiciliana</i>	<i>Peziza domiciliana</i> Cooke
231	<i>P. repanda</i>	<i>P. repanda</i> Pers.
231	<i>P. vesiculosa</i>	<i>P. vesiculosa</i> Bull.
232	<i>P. fimeti</i>	<i>P. fimeti</i> (Fuckel) Seaver
233	<i>P. sylvestris</i>	<i>P. sylvestris</i> (Boud.) Sacc. & Trott.
233	<i>P. clypeata</i>	<i>Pachyella clypeata</i> (Schw.) Le Gal
<u>234</u>	<u><i>P. caeruleomaculata</i></u>	<i>Peziza caeruleomaculata</i> Rehm (34)
<u>234</u>	<u><i>Humaria lacteocinerea</i></u> ⁺	
<u>234</u>	<u><i>Peziza brunneovinosa</i></u>	<i>Peziza michelii</i> (Boud.) Dennis
<u>234</u>	<u><i>P. chrysopela</i></u> ⁺	
<u>235</u>	<u><i>P. roseolilacina</i></u> ⁺	
<u>234</u>	<u><i>P. caligans</i></u> ⁺	
<u>235</u>	<u><i>P. irrorata</i></u>	<i>P. irrorata</i> Berk. & Curtis
<u>235</u>	<u><i>P. repandoides</i></u>	<i>P. repandoides</i> (Rehm) Sacc. & Trott.
<u>235</u>	<u><i>P. irregularis</i></u> ⁺	
<u>235</u>	<u><i>P. convoluta</i></u>	<i>P. vesiculosa</i> Bull.
235	<i>Sarcosphaera coronaria</i>	<i>Sarcosphaera coronaria</i> (Jacq.) Schroet. in Cohn
237	<i>Morchella crassipes</i>	<i>Morcella crassipes</i> (Vent.) Pers.
238	<i>M. esculenta</i>	<i>M. esculenta</i> (L.) Pers.

239	<i>M. conica</i>	<i>M. conica</i> Pers.
240	<i>M. deliciosa</i>	<i>M. deliciosa</i> Fr.
240	<i>M. angusticeps</i>	<i>M. angusticeps</i> Peck
241	<i>M. hybrida</i>	<i>M. semilibera</i> DC.
242	<i>Durandiomyces phillipsii</i>	<i>Peziza proteana</i> forma <i>sparassoides</i> (Boud.) Korf
243	<i>Verpa conica</i>	<i>Verpa conica</i> (Mull.) Swartz
244	<i>V. bohémica</i>	<i>V. bohémica</i> (Kromb.) Schroet in Cohn
<u>245</u>	<u><i>V. atroalba</i></u> ⁺	
<u>245</u>	<u><i>V. perpusilla</i></u> ⁺	
246	<i>Elvela mitra</i>	<i>Helvella lacunosa</i> Afzel.
247	<i>E. crispa</i>	<i>H. crispa</i> (Scop.) Fr.
247	<i>E. palustris</i>	<i>H. lacunosa</i> Afzel
248	<i>E. atra</i>	<i>H. atra</i> Oed.
249	<i>E. elastica</i>	<i>H. elastica</i> Bull.
249	<i>E. klotzschiana</i>	<i>H. elastica</i> Bull.
250	<i>E. adhaerens</i>	<i>H. elastica</i> Bull.
250	<i>E. californica</i>	<i>Gyromitra californica</i> (Phill.) Raitviir
251	<i>E. umbraculiformis</i>	<i>G. californica</i> (Phill.) Raitviir
251	<i>E. infula</i>	<i>G. infula</i> (Schaeff.) Quel.
252	<i>E. brevissima</i> ⁺	
253	<i>E. albipes</i>	<i>Helvella leucopus</i> Pers.
253	<i>E. caroliniana</i>	<i>Gyromitra caroliniana</i> (Fr.) Fr.
254	<i>E. underwoodii</i>	<i>G. brunnea</i> Underw.
254	<i>E. sphaerospora</i>	<i>Pseudorhizina sphaero-</i> <i>spora</i> (Peck) Pouz.
255	<i>Underwoodia columnaris</i>	<i>Underwoodia columnaris</i> Peck

New taxa listed from the revised section

304	<i>Boudiera walkerae</i>	<i>Boudiera walkerae</i> Seaver
306	<i>Lamprospora sphagicola</i>	<i>Lamprospora sphagicola</i> Seaver
306	<i>P. pyrophila</i>	? <i>Pulvinula archeri</i> (Berk. in Hook.) Rifai
307	<i>Cubonia bulbifera</i>	
311	<i>Humarina waterstonii</i>	<i>Nanoscypha waterstonii</i> (Seaver) Pfister (35)
314	<i>Patella contradicta</i>	<i>Trichophaea contradicta</i> (Seaver) H. J. Larsen
315	<i>P. michiganensis</i>	<i>Cheilymenia coprinaria</i> (Cooke) Boud.
318	<i>Sarcoscypha imperialis</i>	<i>Sowerbyella imperialis</i> (Peck) Korf
321	<i>Wolfina aurantiopsis</i>	<i>Wolfina aurantiopsis</i> (Ellis) Eckblad
325	<i>Paxina compressa</i>	<i>Helvella compressa</i> (Snyder) Weber
326	<i>P. recurva</i>	<i>Gyromitra melaleucoides</i> (Seaver) Pfister
332	<i>Peziza pseudoclypeata</i>	<i>Pachyella adnata</i> (Berk. & Curtis) Pfister
332	<i>P. waltersii</i>	<i>Peziza waltersii</i> Seaver
333	<i>Sarcosphaera ammophila</i>	<i>Peziza ammophila</i> Dur. & Lév.
337	<i>Daleomyces phillipsii</i>	<i>Peziza proteana</i> forma <i>sparassoides</i> (Boud.) Korf

NOTES REFERRED TO IN PART I

- (1) This species is still widely known as Pseudoplectania vogesiaca. Though the name Peziza vogesiaca was proposed in 1818, Fries in 1822 did not use it but rather proposed Peziza melaena and listed P. vogesiaca as a synonym. Under the ICBN, Fries's name should be used. Saccardo and Boudier treated the species in the genus Melascypha.
- (2) Plicaria nigrans (Morgan) Pfister comb. nov. \equiv Peziza nigrans Morgan, J. Cinn. Soc. Nat. Hist. 18: 43. 1895. The Plicarias in North America have never been completely worked out. Lamprospora nigrans is a distinctive Plicaria. The asci and hymenium blue faintly, the paraphyses are agglutinated, the spores are heavily warted and are 7-8 μ m.
- (3) Pithya cupressina and P. vulgaris have been considered identical by many recent authors but Denison (1972) thought them distinct.
- (4) Ascodesmis microscopica (Crouan & Crouan) Seaver was based on material with sphaerical spores which Obrist (1961) renamed A. sphaerospora.
- (5) According to van Brummelen's (1967) study of type specimens, Ascobolus leveillei is correctly named A. boudieri Quél. but it is known only from Europe. It is not clear to which species Seaver was referring.
- (6) Ascobolus viridis, according to van Brummelen (1967), has not been recorded from North America. This was also Seaver's decision when he redescribed the species as A. geophilous, an accepted species.
- (7) This may refer to a misprint of "furfuraceus."
- (8) According to van Brummelen's (1967) study of the type specimen, this is a species of Rhyparobius. There is no report of the species from North America.
- (9) No North American collections are definitely known under this name.
- (10) van Brummelen (1967) has studied the Dodge specimen referred to by Seaver and finds it to be Ascobolus pusillus.

It is the only collection of this species which van Brummelen reported from North America.

(11) Seaver reported the name from Clements' Crypto. Form. Colo. no. 301 but excluded it because no specimens could be found. Van Brummelen (1967) accepts the species but lists no North American collections.

(12) This and several other species are very like Peziza badia. The apothecia are dark colored and the spores are reticulate. The detailed study necessary to properly place taxa in this complex has not yet been done.

(13) Psilopezia nummularia is known from North America but the description Seaver gives seems to refer to Pachyella bawingtonii, a name listed by Seaver among the synonyms but considered distinct by Pfister (1973a; 1973b).

(14) The specimen upon which Seaver based his conclusions does not seem to have been recently examined. Van Brummelen (1967) suggests that this is close to Ascophanus granuliformis (= Coprotus granuliformis).

(15) The type collection was examined but no ascocarps could be found.

(16) Type material was examined. The species is very close to Peziza fimeti; it differs in the habitat, partridge or grouse dung, and the ascospore size. The ascospores are 16-18 μm in length, a range which is slightly larger than that of Peziza fimeti.

(17) Type material has not been seen. Van Brummelen (1967) states that this is a very common species of "Ascophanus."

(18) Van Brummelen (1967) says this is Ascophanus microporus (Berk. & Broome) E. C. Hansen.

(19) Rifai (1968) briefly discussed this taxon, which has been variously placed in the Pezizales, he writes, "Neot-tiella crozalsiana, Humaria ithacaensis and Peziza ricciae differ from the other species of Leucoscypha in their small (usually less than 1.3 μm diam.) apothecia, in the poorly developed medullary excipulum and in the possession of vegetative mycelium of a mildew, which is probably due to their peculiar habitat, growing directly on hepatics rather than among mosses." Rifai suggests a separate genus. North

American materials need to be critically examined. I do not agree with the inclusion of this species in Octospora as done by Khare (1975).

(20) Kimbrough (1969) stated that Thecotheus pallens was not known in North America but he had overlooked Seaver's report of it under the genus Humarina. The specimen in NY which was examined agrees with Boudier's original description. The large spores which reach a length of more than 40 μ m and unusual habitat, on soil among mosses, makes this a distinctive species. The habitat is unusual for a Thecotheus which has been known to occur primarily on dung and occasionally on water soaked wood; T. phycophilus Pfister is similar (see Pfister 1981).

(21) Type material has been examined but is fragmentary. No conclusive placement could be made.

(22) I have examined Seaver's type material and found apothecia of Iodophanus testaceus.

(23) See Pfister (1979c)

(24) This is a member of the Sarcoscyphaceae, perhaps belonging to an undescribed genus. Khare and Tewari (1978) placed it in Octospora, a position with which I cannot agree.

(25) Material from the type locality shows asci which are faintly J+. Little material is available but based on Seaver's slide and description, this is most likely a small species of Peziza.

(26) I have not examined the material of Clements' type which was apparently not examined by Waraitch (1977) when he combined Clements' name in Scutellina.

(27) See note 21. Seaver's name is a later synonym being predated by Peziza ricciae Crouan and Crouan.

(28) Denison (1959) could not properly place this species.

(29) There is a difference of opinion; see Maas Geestanus (1969).

(30) Cheilymenia dalmeniensis placed by Seaver in synonymy has been recognized as a distinct species.

(31) Material has been examined but resolution of generic placement remains. It differs from Trichophaea.

(32) Both Peziza badia and P. badio-confusa exist in North America. Elliot & Kaufert (1974) discuss these and cite various collections.

(33) Peziza praetervisa has lightly ornamented spores as described by Seaver for P. violacea. The spores of P. violacea are completely smooth. Though P. violacea exists in North America, it is infrequently collected. Most collections under that name are P. praetervisa.

(34) See Pfister (1979b)

(35) Khare & Tawari (1978) included this species in Octospora, a view with which I cannot agree.

PART II

Morchellaceae

Disciotis

D. venosa p. 229

Morchella

M. angusticeps p. 240

M. conica p. 239

M. crassipes p. 237

M. deliciosa p. 240

M. esculenta p. 238

M. hybrida p. 241

Verpa

V. bohemica p. 244

V. conica p. 243

Helvellaceae

Gyromitra ref. Kempton & Wells (1973) McKnight (1969, 1971, 1973) and Pfister (1980).

G. brunnea p. 254

G. californica p. 251

G. carolinae p. 253

G. infula p. 251

G. leucoxantha p. 218

G. melaleuca p. 225

G. melaleucoides p. 225, 326

G. perlata p. 216

Helvella ref. Weber (1972, 1975) and Dissing (1966)

Dissing & Lange (1967) Kempton & Wells (1970).

H. acetabulum p. 202, 205, 214

H. atra p. 248

H. compressa p. 325

H. corium p. 208

H. crispa p. 247

H. elastica p. 249, 250

H. lacunosa p. 246, 247

H. leucomelas p. 204

H. leucopus p. 253

H. macropus p. 203, 206

H. queletii p. 203, 207

H. solitarius p. 204

H. villosa

Pseudorhizina

P. sphaerospora p. 254

Rhizina

R. undulata p. 215

Underwoodia

U. columnaris

Wynnella

W. silvicola p. 185

Ascobolaceae

Ascobolus ref. Van

Brummelen (1967)

A. aglaosporus p. 86

A. albinus p. 89

A. amoenus p. 85

A. carbonarius p. 87, 92

A. crenulatus p. 86

A. cubensis p. 92

A. elegans p. 84

A. epimyces p. 91

A. follicola p. 90

A. furfuraceus p. 82

A. geophilus p. 88

A. immersus p. 83

A. nodulosporus p. 53

A. pusillus p. 92

A. scatigluses p. 87, 92, 140

A. subglobosus p. 89

A. xylophilus p. 90

Saccobolus ref. Van Brummelen (1967)

S. depauperatus p. 95

S. glaber p. 83, 93

S. globuliferellus p. 95

- S. obscurus* p. 96
S. portoricensis p. 94
S. versicolor p. 94

Pezizaceae

Boudiera ref. Dissing & Schumacher (1979) 1979)

- B. areolata* p. 52
B. echinulata p. 52
B. walkerae p. 304

Iodophanus ref. Kimbrough, Luck-Allen, and Cain (1969)

- I. bermudensis* p. 113
I. carneus p. 115
I. sarcobius p. 113
I. testaceus p. 125, 132
I. subgranulatus p. 141

Pachyella ref. Pfister (1973b)

- P. adnata* p. 107, 332
P. babingtonii p. 106
P. clypeata p. 233
P. hydrophila p. 106

Peziza

- P. ammophila* p. 333
P. apiculata p. 217
P. atrovinosa p. 101
P. badio-confusa p. 101
P. brunneoatra p. 222
P. caeruleomaculata p. 234
P. concentrica p. 228
P. domiciliana p. 230
P. elachroa p. 141
P. emileia p. 224
P. fimeti p. 232
P. gerardii p. 138
P. grislorosea p. 227
P. irrorata p. 235
P. michelii p. 234
P. petersii p. 224
P. praetervisa p. 226
P. proteana p. 227
 var. *sparassoides*
 p. 242, 337
P. repanda p. 231

- P. repandoides* p. 235
P. spissa p. 222
P. spraguei p. 180
P. succosa p. 223
P. sylvestris p. 233
P. vesiculosa p. 231
P. waltersii p. 332

Plicaria

- P. endocarpoides* p. 73
P. nigrans p. 72
P. recurva p. 75
P. trachycarpa p. 71

Ruhlandiella ref. Dissing and Korf (1980)

- R. berolinensis* p. 51

Sarcosphaera

- S. crassa* p. 235

Scabropezia ref. Dissing and Pfister (1981)

- S. flavovirens* p. 44,
72

Thecotheus ref. Kimbrough (1969)

- T. cinereus* p. 112, 118
T. pelleturi p. 148
T. pallens p. 124

Acervus ref. Pfister (1975a)

- A. epispartius* p. 141
A. flavidus p. 108

Aleuria

- A. aurantia* p. 97, 98
A. bicucullata p. 99
A. cestrica p. 98
A. rhenana p. 99

Anthracobia

- A. melaloma* p. 167

Ascodesmis ref. Obrist (1961)

- A. porcina*
A. sphaerospora

Ascozonus

Seaver treated two species:

- A. crouani p. 142
- A. woolhopensis p. 143

Byssonectria ref. Dennis & Itzerott (1973) under the name Inermisia.

- B. aggregata p. 136
- B. fusispora p. 134, 136
- B. tetraspora p. 134

Caloscypha

- C. fulgens p. 50

Cheilymenia ref. Denison (1964)

- C. ciliata p. 169
- C. coprinarina p. 171, 315
- C. crucipila p. 168
- C. pulcherrima p. 172
- C. raripila p. 173
- C. theleboloides p. 170
- C. vitellina p. 179

Coprobia

- C. granulata p. 116

Coprotus ref. Kimbrough, Luck-Allen and Cain (1972)

- C. argenteus p. 114
- C. aurora p. 115
- C. glaucellus p. 121
- C. granuliformis p. 117
- C. lacteus p. 114
- C. niveus p. 147
- C. ochraceus p. 117
- C. sexdecimsporus p. 144

Fimaria ref. Van Brummelen (1962)

- F. hepatica (p. 139 only)

Geopora ref. Burdsall (1968)

- G. arenosa p. 151
- G. longii p. 150
- G. pellita p. 152
- G. sepulta p. 149

Geopyxis

- G. vulcanalis p. 214

Humaria

- H. hemispherica p. 175

Jafnea ref. Korf (1960)

- J. fusicarpa p. 210
- J. semitosta p. 209

Lamprospora

- L. annulata p. 60
- L. areolata p. 59
- L. ascoboloides p. 60
- L. brevispinosa p. 63
- L. crec'hqueraultii p. 62
- L. dictyiola p. 58
- L. laetirubra p. 58
- L. lobata p. 74
- L. macrantha p. 63
- L. maireana p. 65
- L. miniata p. 56
- L. polytrichina p. 75
- L. sphagnicola p. 306
- L. spinulosa p. 61
- L. tuberculata p. 64
- L. tuberculatella p. 66
- L. wrightii p. 66

Lasiobolus ref. Bezerra & Kimbrough (1975)

- L. equinus p. 155
- L. ruber p. 156

Leucoscypha

- L. albocincta p. 163
- L. hetieri p. 164
- L. ovilla p. 163
- L. rutilans p. 100

Melastiza ref. Lassueur (1980)

- M. chateri p. 103

Miladina ref. Pfister & Korf (1974)

- M. lechithina p. 108

Octospora ref. Khare &

Tewari (1978), Dennis and Itzerott (1973).

- O. axillaris p. 124

- O. callichroa* p. 180
O. coccinea p. 137
O. leucoloma p. 129
O. orthotricha p. 127
O. peckii p. 133
O. rubens p. 127
O. semi-immersa p. 130
- Otidea ref. Kanouse (1950)
O. grandis p. 186
O. leporina p. 185
O. propinquata p. 228
- Pseudombrophila
P. deerata p. 141
- Psilopezia ref. Pfister (1973a)
P. deligata p. 107, 110
- Pulparia ref. Donadini (1976)
P. amethystina p. 67
P. planchonis p. 74
- Pulvinula ref. Pfister (1975b)
P. archeri p. 70
P. carbonaria p. 67
P. convexella p. 68
P. discoidea p. 70
P. laeterubra p. 69
P. slamonicolor p. 71
- Pyronema ref. Moore & Korf (1963)
P. omphalodes p. 109
- Scutellinia ref. Denison (1959)
S. asperrima p. 104
S. aurantia p. 152
S. cubensis p. 160
S. erinaceous p. 178
S. hirta p. 180
S. lusatiae p. 162
S. pennsylvanica p. 104
S. scutellata p. 159
S. setosa p. 166
S. texensis p. 160
S. trechispora p. 43
S. umbrorum p. 161
- Sowerbyella
S. imperialis p. 318
- Tarzetta
T. bronca p. 213
T. catinus p. 213
T. cupularis p. 212
- Thelebolus
T. obscurus p. 143
T. stercoreus p. 147
- Tricharia
T. gilva p. 166
- Trichophaea ref. Kanouse (1958)
T. abundans p. 177
T. brunnea p. 46
T. contradicta p. 314
T. gregaria p. 176
T. hinnulea p. 46
T. monilifera p. 47
T. paludosa p. 174
T. pygmaea p. 179
T. tuberculata p. 174
T. woolhopeia p. 178
- Sarcosomataceae
- Chorioactis
C. geaster p. 200
- Galiella
G. rufa p. 196
G. spongiosa p. 216
- Plectania ref. Korf (1956a), Paden & Tylutki (1969)
P. melastoma p. 197
P. nannfeldtii p. 208
- Pseudoplectania
P. melaena p. 48
P. nigrella p. 49
- Sarcosoma
S. globosum p. 195
- Urnula ref. Kempton & Wells (1974)
U. craterium p. 199

Wolfina

W. aurantiopsis p. 198,
321

Sarcoscyphaceae

Aurophora

A. dochmia p. 184

Cookeina ref. Denison (1967)

C. colensoi p. 190
C. sulcipes p. 188
C. tricholoma p. 187
C. venezuelae p. 190

Microstoma ref. Kanouse
(1949)

M. floccosum p. 193
M. protractum p. 193

Nanoscypha ref. Denison
(1972)

N. bella p. 140
N. tetraspora p. 189
N. watersonii p. 311

Phillipsia ref. Denison
(1969)

P. crispata p. 179
P. domingensis p. 182, 183

Pithya ref. Denison (1972)

P. cupressina p. 78
P. vulgaris p. 76, 77

Pseudopithyella

P. minuscula p. 153

Sarcoscypha ref. Denison
(1972)

S. coccinea p. 191
S. occidentalis p. 193

Wynnea ref. Pfister (1979a)

W. americana p. 181
W. gigantea p. 181

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