

## INDEX

A glossary has not been prepared for this volume, but the page on which the definition of a technical term will be found is shown in the index in clarendon type, and the same method is used to indicate the principal reference to a family or species. Names of authors will be found in the list of literature on pp. 383 to 424.

- A* strain, 5, 40, 41, 155, 213, 219, 223, 246, 288, 312  
*Absidia*, 128, **133**  
*A. glauca*, 134 (Fig. 62), 135  
*A. spinosa*, 128  
*Acaulopage*, 142  
*Acer*, 241  
*Acetabularia*, 208  
*Achlya*, 52, 104, 105, 108, 109, 111  
*A. americana*, 108  
*A. polyandra*, 70 (Fig. 16), 108  
*A. racemosa*, 52 (Fig. 8), 70 (Fig. 17), 104 (Fig. 44)  
 Acids, 30, 31, 362  
 Aecidiomycetes, **302 et seq.**  
 Aecidiospore, 36, 303, **308**, 312, 314, 319 (Fig. 270), 320, 321, 323  
 Aecidiospore, discharge of, 308  
 Aecidiospore, germination of, 309, 320, 321 (Fig. 272), 322  
 Aecidiospore mother cell, 309, 312, 314, 315  
 Aecidium, 67, 303, 307, **308** (Fig. 252), 309 (Fig. 254), 310 (Fig. 255), 315, 318, 320, 323, 324  
*Aecidium*, 304  
*A. leucospermum*, 320  
*Aegopodium Podagraria*, 87  
 Aerotaxis, **33**  
 Aerotropism, **33**  
 Agar, 31, 32, 116, 119, 361, 362, 363, 364, 365, 366, 367, 378  
 Agaricaceae, 28, 37, 331, 334, **338 et seq.**, 345  
*Aithaloderma*, **195**  
*A. ferruginea*, 196 (Fig. 125)  
 Albuginaceae, 52, 111, 115, **120 et seq.**, 123  
*Albugo*, 56  
*A. Bliti*, **121**  
*A. candida*, see *Cystopus candidus*  
*A. Portulacae*, **121**  
 Albumen, egg, composition of, 370  
 Alcohol, 33, 153, 174, 366  
 Alcohol, acetic, 366, 373, 379  
 Alcoholic fermentation, **17**, 18, 19, 126, 174  
*Aleurodiscus polygonius*, 288  
 Algae, 13, 21, 22, 43, 44, 52, 57, 60, 61, 67, 71, 72, 74, 75, 78, 83, 93, 97, 103, 110, 114, 115, 165, 265, 266, 312  
*Alisma Plantago*, 78  
 Alkali, 33  
 Alkaloids, 253  
 Allelomorphs, 160  
*Allomyces*, 4, 6, 51, 89, **91**, 93, 94, 97  
*A. arbuscula*, 92 (Fig. 34), 93  
*A. javanicus*, 55, **92**, 93  
 Alternation of generations, 6, 7, 93, 97, 155, 157, 291, 296, 319  
*Amanita*, 339, 341  
*A. crenulata*, 35, 37  
*A. muscaria*, 28, 341  
*A. phalloides*, 35, 340 (Fig. 288), 341  
*Amauroascus verrucosus*, 177  
*Ambrosia artemisifolia*, 61  
 Amino acids, 15  
 Ammonia, 15, 32, 150  
 Amoeba, 45, 141, 142  
 Amoeboid movement, 45, 55, 59, 60, 61, 95  
*Amorphomyces Falagriae*, **281**, 282 (Figs. 221, 222, 223)  
 Amphispheariaceae, 256, **264**  
 Amphispore, **317**  
 Anaerobe, facultative, 13  
 Anaerobic respiration, 17, 175  
 Anastomosis, 2 (Fig. 2), 3 (Fig. 3), 5, 41, 42, 80, 126, 137, 143, 155, 158, 169, 212 (Fig. 140), 213, 224, 246, 247, 254, 287, 288, 289, 312, 347  
 Ancylistaceae, **83 et seq.**  
 Ancylistales, 50, 56, 58, 81, **83 et seq.**  
*Ancylistes*, 85, 87  
*A. Closteri*, **85** (Fig. 31)  
*Anemone nodosa*, 227

- Animals attacked by fungi, 57, 60, 78, 81, 84, 86, 103, 110, 141, 142, 143, 145, 146, 247, 250, 274, 325
- Animals, dispersal of spores by, 15, 234, 264, 345, 350, 356. *See also* insects
- Annulus, **339**
- Antennularia*, 194, 195
- Antheridium, 4, 5, 30, 40, 41, 56, 68, 69, 83 (Fig. 29), 84 (Fig. 30), 85, 89, 90, 95 (Fig. 36), 97, 98, 99 (Fig. 39), 100 (Fig. 40), 101 (Fig. 42), 103, 108, 109 (Fig. 48), 111, 112, 113 (Fig. 49), 114 (Fig. 50), 116 (Fig. 52), 120, 121, 155, 156, 157, 159 (Fig. 85), 163 (Fig. 80), 177, 181, 182 (Fig. 110), 183, (Fig. 111), 184, 191, 193, 201, 203 (Fig. 130), 204 (Fig. 131), 205 (Fig. 132), 206, 209, 210, 212, 213, 214, 217, 218 (Figs. 149, 150), 219 (Fig. 151), 220 (Fig. 152), 224, 247, 253, 257, 267, 277, 291, 314
- Antheridium, amphigynous, 116 (Fig. 52), **117**
- Antheridium, androgynous, **108**, 109 (Fig. 48), 112, 113 (Fig. 49)
- Antheridium, diclinous, **108**, 115
- Antheridium, paragynous, **112**, 11 (Fig. 49)
- Aphanomyces*, 51, 105, 109, 110, 111
- A. euteiches*, 110
- A. laevis*, 108
- Aphelidiopsis*, 44
- Aphelidium*, 44, 64
- Apium inundatum*, 88
- Aplanes*, 108
- Apodachlya*, 98, **101**
- A. brachynema*, 101
- A. pyrifer*, **101**, 102 (Fig. 43)
- Apogamy, 155, 161, 192, 201, 206, 215, 232, 246, 268
- Apothecium, 39, **153**, 154, 166, 200, 202 (Fig. 129), 208, 212, 214, 217, 225, 226, 227, 229, 231 (Fig. 165), 232 (Fig. 166), 236 (Fig. 170), 237, 238, 241 (Fig. 177), 242
- Appendages, 50, 58, 72, 132, 133, 137, 154, 176, 188, 190, **275**, 277
- Apple (*Pyrus*), 18, 167, 248, 267, 335
- Appressorium, **19**, 187
- Araiospora*, 98
- A. pulchra*, **100** (Fig. 40)
- Archicarp, **156**
- Archimycetes, 1, 4, 10, 13, 43, 44, 45, 51, 53, **57 et seq.**, 84, 89, 291
- Archimycetes, classification of, 58
- Armillaria*, 341
- A. mellea*, 23, 25, 26, **341**
- A. mucida*, 290 (Fig. 228)
- Ascobolaceae, 16, 153, 202, 207, **216 et seq.**, 232
- Ascobolus*, 17, 157, 217
- A. carbonarius*, **223** (Fig. 156)
- A. citrinus*, 224
- A. equinus*, 224
- A. furfuraceus*, 160 (Fig. 86); and *see A. stercorarius*
- A. glaber*, 224
- A. immersus*, 35
- A. Leveillei*, 224
- A. magnificus*, 40, 155, 156 (Fig. 82), **219**, 220 (Fig. 152), 221 (Figs. 153, 154), 222 (Fig. 155), 246
- A. stercorarius*, 35, 41, 212, **223** (Fig. 157), 224, 289
- A. strobilinus*, **219**
- A. viridulus*, 224 (Fig. 158)
- Ascocarp, 20, 36, **153 et seq.**, 154 (Fig. 80), 155 (Fig. 81), 166, 176 (Fig. 104), 178, 179 (Fig. 107), 181, 182, 184, 186, 189, 190, 195, 201, 202, 204, 207, 208, 209 (Fig. 136), 214 (Fig. 143), 216, 217, 219, 221, (Figs. 153, 154), 223, 225, 227, 228, 229, 231, 233, 234, 235, 236, 237, 238, 239 (Fig. 175), 242, 245 (Fig. 178), 256 (Fig. 186), 258 (Fig. 189), 265 (Fig. 199)
- Ascocarp (stalked), 227
- Ascocorticiaceae, 197
- Ascocortium*, 197
- Ascodesmis*, 157, 201, 202
- A. nigricans*, **202** (Fig. 129), 203 (Fig. 130)
- Ascogenous cell, 157 (Fig. 83), 279, 280
- Ascogenous hypha, **157 et seq.**, 160, 161, 162, 163 (Fig. 90), 166, 176, 177, 181, 183, 184, 192 (Fig. 119), 193 (Fig. 120), 196, 201, 204, 205, 206, 209, 210, 211, 213 (Fig. 141), 219, 222, 224, 225, 232, 244, 248, 249, 253, 263, 265, 268, 271, 274, 279
- Ascomycetes, 7, 9, 13, 15, 16, 30, 36, 38, 39, 40, 41, **149 et seq.**, 289, 291, 314, 331, 345, 359, 362
- Ascomycetes, classification, 10, 11, 165

## INDEX

427

- Ascomycetes, nuclear fusions in, 157  
*et seq.*
- Ascomycetes, phylogeny, 164
- Ascophanus*, 157
- A. Aurora*, 156 (Fig. 82), 157, 163  
 (Fig. 89), 217, 218 (Figs. 149,  
 150), 219 (Fig. 151), 223
- A. carneus*, 217
- A. ochraceus*, 217
- Ascophore, 153 *et seq.*, 231, 233
- Ascophore, stalked, 231, 233
- Ascospore, 6, 8, 9, 41, 149 (Figs. 75,  
 76), 150 *et seq.*, 157, 166, 168, 169 *et  
 seq.*, 172 (Figs. 99, 100), 174, 176,  
 178, 181, 184, 186, 196, 198, 199,  
 201, 204, 227, 228, 233, 234, 235  
 (Fig. 169), 237, 240, 246, 248,  
 249, 250, 257, 260, 262, 275, 279,  
 282 (Figs. 221, 222), 359
- Ascospore, appendiculate, 260 (Fig.  
 193)
- Ascospore, bicellular, 186, 196, 274  
 (Fig. 209)
- Ascospore, binucleate, 41, 149, 151,  
 246, 247, 258
- Ascospore, coloured, 149, 150, 186,  
 217, 229, 234, 244, 255
- Ascospore, dispersal of, 234, 241
- Ascospore, filiform, 241, 244, 250, 251,  
 252
- Ascospore, formation, 164 (Fig. 91),  
 175 (Fig. 102), 176, 190, 207  
 (Fig. 134)
- Ascospore, germination of, 149, 150,  
 187, 202, 204, 214, 217, 227, 246,  
 252, 261 (Fig. 195), 266 (Fig. 200),  
 276, 280
- Ascospore, multicellular, 261
- Ascospore, multinucleate, 258
- Ascospore, muriform, 9, 194, 264, 266
- Ascospore, septate, 207, 234, 241, 251,  
 255
- Ascospore, uninucleate, 41, 149, 151,  
 241, 247, 258
- Ascospores, biseriate, 152 (Fig. 78)
- Ascospores, continuous, 186, 207, 234
- Ascospores, discharge of, 17, 35, 150,  
 153, 217, 241, 257, 264, 266, 267,  
 280
- Ascospores, liberation of, 178, 181,  
 190, 194, 196, 271
- Ascospores, maturation of, 149
- Ascospores, multiseriate, 217
- Ascospores, uniseriate, 152 (Fig. 79),  
 207, 235
- Ascozonus*, 217 (Fig. 148)
- Ascus, 6, 7, 17, 35, 41, 149, 150 *et seq.*,  
 151 (Fig. 77), 157, 158 (Fig. 84),  
 159 (Fig. 85), 161, 166, 167, 168,  
 169, 170 (Fig. 94), 171 (Figs. 96,  
 97), 172 (Figs. 98, 100), 173, 174,  
 176, 178, 181, 182, 184, 185, 186,  
 187, 189, 192, 194 (Fig. 122), 196,  
 197, 199 (Figs. 127, 128), 200,  
 201, 204
- Ascus, binucleate, 158, 162
- Ascus, budding of, 279, 280
- Ascus, cytology of, 160; *and see* ascus,  
 development of
- Ascus, dehiscence of, 150, 152 (Figs.  
 78 and 79), 153, 200, 217 (Fig.  
 148), 226, 231, 233, 234, 261  
 (Fig. 194), 266
- Ascus, development of, 158, 159, 160,  
 169 (Fig. 93), 170, 173, 205, 207  
 (Fig. 134), 222, 263
- Ascus, multispored, 151, 225, 244
- Ascus, quadrinucleate, 158
- Ascus, trinucleate, 158
- Aseroë*, 351
- Ash (*Fraxinus*), 192
- Aspergillaceae, 167, 178 *et seq.*, 359,  
 362
- Aspergillus*, 14, 42, 140, 181
- A. nidulans*, 155
- Aster, 3, 164
- Asterella*, 197
- Asterina*, 197
- Asterophlyctis sarcoptoides*, 74
- Astral rays, 164
- Atrophy, 280
- Aureobasidium*, 334
- Auricularia*, 145
- A. sambucina*, 324 (Fig. 273)
- Auriculariaceae, 325
- Auriculariales, 284, 302, 324, 325,  
 326
- Autobasidiomycetes, 2, 7, 15, 137, 284,  
 285, 287, 289, 290, 291, 296,  
 326 *et seq.*
- Autobasidiomycetes, classification of,  
 332
- Autoclave, use of, 363, 364
- Autodigestion, 343
- Autoecism, 30, 321
- Avena*, 296, 320
- Azygospore, 126, 142, 144, 146
- B* strain, 5, 40, 41, 155, 213, 219, 223,  
 246, 288, 312

- Bacteria, 15, 18, 91, 362  
 Bacteria, influence on development of  
 fungi, 12, 13, 91  
*Bacterium vermiforme*, 18  
*Balsamia*, 236  
*B. vulgaris*, 237 (Figs. 171, 172)  
 Barberry (*Berberis*), 30  
 Barley, 18  
 Barnes' medium, 361, 362, 378  
 Basal cell, 311, 315, 317, 318. *See also*  
 fertile cell  
*Basidiobolus*, 51, 54, 146, 148, 364  
*B. ranarum*, 146 (Fig. 73), 147 (Fig.  
 74)  
 Basidiomycetes, 6, 12, 13, 16, 40, 41,  
 159, 284 *et seq.*, 359, 362  
 Basidiomycetes, classification of, 10,  
 11, 291  
 Basidiomycetes, phylogeny, 291  
 Basidiomycetes, sexuality, 286  
*Basidiophora entospora*, 123, 124 (Fig.  
 57)  
 Basidiospore, 6, 8, 36, 284, 285 (Fig.  
 224), 291, 294 (Fig. 232), 295 (Fig.  
 233), 296, 297, 298 (Fig. 237),  
 299, 300, 306, 317, 319, 322, 324,  
 (Fig. 273), 325, 327, 334, 337, 342,  
 343, 345, 346, 358, 359  
 Basidiospore, bicellular, 320  
 Basidiospore, coloured, 284, 329, 338,  
 342  
 Basidiospore, development of, 293,  
 329 (Fig. 278)  
 Basidiospore, discharge of, 285, 286,  
 300, 306, 332, 358  
 Basidiospore, dispersal, 332, 345, 346,  
 350, 352, 356  
 Basidiospore, echinulate, 284  
 Basidiospore, germination of, 287,  
 307, 319, 324, 344  
 Basidiospore, liberation of, 285, 297,  
 343, 353  
 Basidiospore, numbers, 328, 331  
 Basidiospore, septate, 300, 329  
 Basidiospores, conjugation of, 294  
 (Fig. 232), 295 (Fig. 233), 299  
 (Fig. 240), 300 (Fig. 241), 320,  
 328 (Fig. 276)  
 Basidium, 6, 7, 284, 285 (Fig. 224),  
 291, 293, 296, 299, 318, 323, 324,  
 325, 326, 327 (Fig. 275), 328  
 (Fig. 276), 329 (Figs. 277, 278),  
 330 (Fig. 279), 332, 333 (Fig. 280),  
 334 (Fig. 281), 337 (Fig. 285), 342,  
 343, 345, 346, 351, 354  
 Basidium, aseptate, 284, 291, 296, 299,  
 326  
 Basidium, cytology, 284, 326  
 Basidium, development, 286 (Fig.  
 225), 287, 293 (Fig. 231), 329  
 (Fig. 277), 339 (Fig. 287)  
 Basidium, septate, 284, 291, 296, 302,  
 306, 324 (Fig. 273), 325, 326  
 (Fig. 274)  
*Battarrea*, 353  
 2 BD, 367, 369, 373, 379  
*Bdellospora helicoides*, 142  
 Beech (*Fagus*), 192, 229, 238  
 Beef steak fungus, 344  
 Beer, 18  
 Bees, 171, 176  
*Berberis vulgaris*, 320  
 Biologic form, 29  
 Biologic species, 29, 296  
 Bipolar species, 289  
 Birch, 28  
 Bird's nest fungus, 354  
 Black rot, 262  
*Blakeslea*, 136, 359  
*B. trispora*, 136 (Fig. 65)  
*Blastoclada*, 91, 94  
*B. Pringsheimii*, 93 (Fig. 35)  
 Blastocladiales, 91 *et seq.*  
 Bleaching agents, 373, 381  
 Bleaching sections, 373  
 Blepharoplast, 45  
*Bletilla hyacinthina*, 24  
 Blight, 187  
 Blossom wilt, 227  
 Blueing, 344  
 Boletol, 344  
*Boletus*, 343, 344  
*B. badius*, 28  
*B. granulatus*, 331  
*B. scaber*, 28  
*B. versipellis*, 28  
*Bombardia lunata*, 261  
*Botrytis*, 20, 36, 227, 359  
*B. cinerea*, 19, 32, 42  
*Boudiera*, 217  
*Bovista*, 345, 352  
*Brachymeiosis*, 160, 161, 206, 223,  
 263  
 Bracket fungi, 37, 284, 332, 338, 343,  
 344, 345  
 Brand fungi, 292  
 Brand spore, 284, 292, 293, 295, 296  
 (Fig. 234), 297, 298 (Figs. 238,  
 239), 299, 300, 301 (Fig. 242)

## INDEX

429

- Brazil nut, 17  
 Bread, 18, 29, 245, 253, 362  
 Breinl's stain, 371, 376, 379  
*Bremia lactucae*, **123**, 124 (Fig. 57), 125  
 Brewing, 18  
 Broad bean, 19  
 Brown rot, 227  
 Bryophyta, 7, 23, 65, 67, 214, 233, 266  
 Budding, 8, 18, 126, 140, 143, 144, 168, 173, 198, 201, 251, 286 (Fig. 226), 294, 295, 297, 299, 306, 314, 315, 322  
 Bulbs, 227  
*Bulgaria polymorpha*, 229  
 Bunts, **292 et seq.**  
 Burmanniaceae, 25  
 Burnt ground, 29, 204, 209, 223
- Caeoma, 309 (Fig. 253), **310**, 318, 319, 323  
*Caeoma*, 304  
 Calberla's fluid, 367, 369, 370  
 Calcium oxalate, 238  
*Calluna vulgaris*, 24, 25  
*Calocera*, 328, 337  
*Calyptospora*, 323  
 Canada balsam, 367, 374  
 Candle-snuff fungus, 273  
*Cantherellus Friesii*, 328  
 Capillitium, **46**, **345**, 346, 351, 353  
*Capnodium*, 194, **195**  
*Capsella Bursa pastoris*, 120  
 Carbohydrates, 4, 13, 14, 17, 18, 22, 24, 27, 38, 55, 90  
 Carbohydrates, influence on development, 38, 90  
 Carbon, 14, 34  
 Carbon dioxide, 17, 18, 32  
 Carospore, 165, 312  
*Catenaria anguillulae*, 78, **81**  
*Cattleya*, 23, 24  
 Celandine, 122  
 Celidiaceae, 202, **228**  
 Cell wall, 4, 48, 65  
 Cell wall, laminated, 275  
 Cellulose, 91, 98, 103  
 Cellulose, 4, 14, 15, 16, 46, 68, 69, 87, 98, 103, 344  
 Cenangiaceae, 202, **228**  
 Centrosome, 3, 164  
 Cephalidaceae, 129, 137, **139 et seq.**  
*Ceratomyces rostratus*, 277 (Fig. 213)  
 Ceratomycetaceae, 283  
 Ceratostomataceae, 256, **262**, 264
- Ceratostomella adiposum*, 264  
*C. ampullasca*, 264  
*C. coerulea*, 264  
*C. fimbriata*, 2 (Fig. 1), 9 (Fig. 7), **262** (Fig. 197), 263 (Fig. 198), 264  
*C. multiannulata*, 264  
*C. piceae*, 264  
*C. plurianulata*, 264  
*C. quercus*, 264  
*C. Ulmi*, 264  
 Chaetocladiaceae, 128, **137**  
*Chaetocladium Brefeldii*, 137  
 Chaetomiaceae, **256**, 257  
*Chaetomium*, 42, 149  
*C. fimeti*, 257  
*C. globosum*, 257 (Fig. 188)  
*C. Kunzeanum*, 149 (Fig. 75), 257 (Fig. 187)  
*C. pannosum*, 255 (Fig. 186)
- Charcoal, 223  
 Cheese, 29  
 Cheese, ripening of, 17  
 Chemotaxis, **30**  
 Chemotropism, **31**  
 Cherry leaf scorch, 268  
 Chestnut, 238  
 Chitin, 4, 276  
 Chlamydo-spore, 8, 51, 104, 126, 138, 139, 143, 149, 157, 167, 172, 178, 184, 197, 201, 211, 243, 262, 329, 333, 359  
 Chlorophyll, 1, 12, 23, 24, 25, 26, 48, 65, 78  
 Chlor-zinc iodide, 54, 64  
*Choanephora*, **136**  
*C. infundibulifera*, 137  
 Choanephoraceae, 126, 128, **136 et seq.**  
 Chromacetic fixative, 369, 379  
 Chromatin, 3, 47, 161, 222, 303, 327  
 Chromosome, 3, 6, 47, 161 (Fig. 87), 194, 233, 303  
 Chromosome number, 160, 161, 164, 194, 204, 205, 206, 212, 214, 215, 217, 222, 223, 224, 241, 247, 263, 268, 280, 287  
*Chrysomyxa*, 323  
*Chrysopsora*, **306**  
 Chytridiales, 20, 21, 45, 52, 55, **58 et seq.**, 112  
*Chytridium*, 59, **72**  
*C. Olla*, **73**  
*Cidaris*, 232  
 Cider, 18  
 Cladochytriaceae, 60, **78 et seq.**

- Cladochytrium*, 81  
*C. Alismatis*, 78 (Fig. 25), 79  
*Cladosporium*, 14  
*C. herbarum*, 39  
 Clamp connections, 2, 3 (Fig. 4), 159, 288 (Fig. 224), 289, 290 (Fig. 228), 297, 324, 334, 346, 358  
 Classification, 7, 9, 10, 11, 57, 58, 59, 91, 111, 125, 128, 142, 165, 166, 167, 186, 197, 201, 202, 207, 231, 244, 245, 255, 256, 283, 291, 296, 302, 322, 332, 334, 346, 360  
*Clathrus cancellatus*, 351 (Fig. 297)  
*Clavaria*, 250, 336, 337  
*C. cardinalis*, 337 (Fig. 284)  
 Clavariaceae, 250, 334, 336  
*Claviceps*, 252  
*C. purpurea*, 252  
 Cleavage, 47, 90, 109  
 Cleavage, spore formation by, 53, 88, 89, 103, 105, 112, 130  
*Closterium*, 85  
 Clover, 227  
 Club root, 48  
 Cluster cups, 308 (Fig. 252)  
 Coccideae, 27  
*Coccomyces hiemalis*, 240 (Fig. 176)  
 Coenocyte, 1, 149, 181  
 Coenogametangium, 4, 5  
 Co-enzyme, 18  
 Coleoptera, 27, 147, 274  
 Coleosporiaceae, 322, 323  
*Coleosporium*, 306, 323, 324  
*C. Sonchi*, 305 (Fig. 246), 315 (Fig. 266)  
*Coleroa*, 261  
*C. Potentillae*, 262 (Fig. 196)  
 Collenchyma, 357  
*Collybia conigena*, 290 (Fig. 228)  
 Columella, 126, 129 (Fig. 58), 130, 136, 347 (Fig. 290), 351  
 Compatibility, 5  
 Competition, effect on growth, 13  
*Completozia complens*, 145  
 Compositae, 123  
*Compsomyces verticillatus*, 280 (Fig. 217)  
 Congo red, 373, 374, 377, 380  
*Conidiobolus utriculosus*, 145 (Fig. 72)  
*C. villosus*, 145  
 Conidiophore, 7, 8 (Fig. 6), 39, 124, (Fig. 57), 125, 142, 143, 144, 145 (Figs. 71, 72), 147, 178, 179 (Fig. 106), 180 (Fig. 108), 182, 187, 188 (Fig. 114), 209, 240 (Fig. 176), 243, 251, 266, 268, 273, 359, 360  
 Conidium, 2 (Figs. 1, 2), 7, 8 (Fig. 6), 9, 36, 38, 41, 42, 49, 51, 53, 54, 89, 111, 112, 115, 116, 119, 125, 136, 137, 138, 140, 141, 142, 143, 144, 145, 146 (Fig. 73), 147, 149, 157, 166, 178, 180 (Fig. 108), 181, 182, 184, 187, 188 (Fig. 114), 198, 201, 209, 223, 227, 240, 241, 242, 243, 245 (Fig. 178), 246, 248, 250, 251, 253, 254, 255, 262, 264, 266, 267, 268, 269 (Fig. 202), 271, 273, 285, 294, 295, 300, 301, 314, 324, 325, 329, 333 (Fig. 280), 334, 343, 346, 359, 360  
 Conidium, formation of, 7, 125, 171 (Fig. 95), 178, 179 (Fig. 106), 208 (Fig. 135)  
 Conidium, germination of, 2 (Fig. 1), 7, 41, 125, 145, 146 (Fig. 73), 187  
 Conidium, multicellular, 266  
 Conidium, violent discharge of, 54, 142, 143, 147, 300  
 Conidium, yeast-like, 167, 168, 169  
 Conifers, 231, 242, 344  
*Coniophora*, 144  
 Conjugatae, 13, 67, 83  
 Conjugate division, 287, 303 (Fig. 244)  
 Conjugation, 75 (Fig. 22), 76, 77 (Fig. 24), 84, 85 (Fig. 31), 86 (Fig. 32), 128, 131 (Fig. 59), 133, 134 (Fig. 63), 135, 137, 139 (Fig. 66), 141, 145, 174, 175 (Fig. 102), 176, 294 (Fig. 232), 295 (Fig. 233), 296, 297 (Figs. 235, 236), 298 (Fig. 238), 299 (Fig. 240), 300 (Fig. 241), 301, 314 (Fig. 264)  
 Conjugation tube, 56, 59, 77 (Fig. 24), 84, 85, 86, 90, 98, 103, 109 (Fig. 48), 113 (Fig. 49), 114 (Fig. 50), 117, 127, 171, 294, 297, 300  
*Coprinus*, 3 (Fig. 4), 36, 287, 329, 331, 342  
*C. aratus*, 342 (Fig. 289)  
*C. bisporus*, 328  
*C. comatus*, 35  
*C. curtus*, 35  
*C. fimetarius*, 288  
*C. lagopus*, 288, 289, 330 (Fig. 279)  
*C. narcoticus*, 328  
*C. niveus*, 35  
*C. radians*, 288  
*C. sterquilinus*, 286 (Fig. 225)  
*Corallorhiza*, 23

## INDEX

431

- Cordyceps*, 186, 244, **250**, 252, 253  
*C. Barnesii*, 253 (Fig. 185)  
*C. capitata*, 186, 252  
*C. militaris*, 251, 252 (Fig. 184)  
*C. ophioglossoides*, 186, 252 (Fig. 184)  
*C. sinensis*, 251  
**Coremium**, **360**  
*Coremium*, 359  
*Coreomyces*, 277  
**Corticium**, **334**  
*C. anceps*, 334  
*C. fuciforme*, 334  
*C. salmonicolor*, 334  
*C. serum*, 290 (Fig. 228)  
*Cortinarius rubripes*, 28  
*Coryne sarcoides*, 229  
*C. urnalis*, 229  
 Cotton blue, 381  
 Coverslips, to clean, 381  
*Craterellus*, 336, 338  
*C. cornucopioides*, 336 (Fig. 283)  
 Cronartiaceae, 322, **323**  
*Cronartium*, 323  
*C. asclepiadeum*, 305 (Fig. 247)  
 Crozier, 157 (Fig. 83), **158**, 164  
*Crucibulum*, **354**, 356  
*C. vulgare*, 354 (Figs. 302, 303), 355 (Fig. 304)  
 Cruciferae, 120  
*Cryptomyces Pteridis*, 241  
*Ctenomyces serratus*, 177 (Fig. 105)  
*Cubonia*, 217  
*Cudonia lutea*, 234  
*Cudoniopsis*, 232  
 Cultivation of fungi, **361 et seq.**  
 Culture media, composition of, 361, **378**  
 Cultures, preparation of, **361 et seq.**  
*Cunninghamella*, 17, 136  
*C. echinulata*, 137  
 Cupping cell, **135**, 137, 140  
 Currant, 20  
 Cushion cells, 263  
 Cuticle, 19, 20, 200, 241, 265, 302, 307, 322  
*Cyathea*, 26  
*Cyathus*, **356**, 358  
*C. striatus*, 356 (Fig. 305)  
*Cylindrocystis*, 75  
*Cyphella*, 336  
 Cyst, 44, 55, 101, 104 (Fig. 44), 105, 106 (Fig. 46), 108, 168  
 Cystidium, **330** (Fig. 279), 334 (Fig. 281), 339  
*Cystopus candidus*, 52 (Fig. 8), **120**, 121 (Fig. 55)  
 Cytology, 93, **158 et seq.**, 280, 281  
 Cytoplasm, 2, 3, 39, 47, 48, 61, 65, 79, 87, 94, 95, 104, 105, 108, 112, 113, 117, 120, 121, 122, 126, 129, 130, 135, 137, 140, 143, 149, 150, 162, 164, 173, 180, 189, 260, 268, 303, 306, 307, 311, 322, 327, 328  
*Cytospora ludibunda*, 155  
*Cyttaria*, 229  
*C. Darwinii*, **229**  
*C. Gunnii*, 230 (Fig. 164)  
 Cyttariaceae, 202, **229**  
*Dacryomyces*, 328, 329, 333, 337  
*D. ceribriformis*, 337 (Fig. 285)  
*D. chrysocomus*, 337 (Fig. 285)  
*Daedalea*, 343, 345  
*Daldinia*, 269  
 Damping off, see *Pythium*  
*Daphnia*, 173  
*Dasybolus immersus*, 150  
*Dasyscypha Willkommii*, 227  
 Dead men's fingers, 347  
 Definitive nucleus, **150**, 206, 213, 215, 223, 225, 246, 247  
 Delignification, 14, 344  
 Deliquescence, 130, 153, 257, 343, 345  
*Delitschia furfuracea*, 149 (Fig. 75)  
 Dermataceae, 229  
*Dermocystidium pusula*, 64  
 Desiccation, protection against, 1  
 Desmids, 13, 81  
*Diaporthe*, 268  
*D. perniciosa*, 155, **268**  
 Diatoms, 13, 44, 64  
 Dichotomy, 202, 205  
*Dicranophora*, 56, **135** (Fig. 64)  
*Dictyophora phalloidea*, 350 (Fig. 296)  
*Dictyuchus*, 7 (Fig. 5), 104 (Fig. 44), 105, 106 (Fig. 46), 108, 109  
 Dikaryophase, 287  
*Dimeromyces Africamus*, 277 (Fig. 214)  
*Dimerosporium*, 194  
*D. Collinsii*, 195  
 Dioecism, 5, 40, 85, 108, 155, 171, 281  
 Diplanetism, **55**, 57, 59, 64, 103, 105, 108  
 Diplophase, 6, 40, 93, 157, 173, 287, 288, 312, 319, 320  
*Dipodascus*, **170**  
*D. albidus*, 171 (Fig. 97)  
 Discomycetes, 15, 153, 165, 166, **200 et seq.**, 242, 243, 360  
 Discomycetes, classification of, 201  
*Dispira*, 51  
*D. cornuta*, 139

- Dissophora*, 138  
*Doassansia*, 299, 300  
   *D. Alismatis*, 301 (Fig. 242)  
   *D. Sagittaria*, 301  
*Docidium*, 81  
*Dothidea*, 254  
 Dothideaceae, 254  
 Dothideales, 196, 243, 244, 254  
 Drought, 60  
 Dry rot, 14, 344  
 Dung, 16, 29, 139, 140, 142, 147, 176,  
   207, 212, 217, 219, 223, 256, 260,  
   269, 294, 361, 362  
 Dung agar, 16, 211, 361, 362, 378  
 Dutch elm disease, 264
- Ectocarpales, 64  
 Ectophytic parasite, 20, 186  
 Ectotrophic mycorrhiza, 22, 27 *et seq.*  
*Ectrogella Bacillariacearum*, 64  
 Eelworms, 81, 86, 87  
 Egg, 4, 55  
*Elaphomyces*, 186, 252  
   *E. granulatus*, 186  
   *E. variegatus*, 186  
 Elaphomycetaceae, 15, 167, 185  
 Elater, 46  
*Elodea*, 80  
 Embedding, 370  
 Emergence, repeated, 55  
*Emericella*, 178  
*Empusa*, 143  
   *E. Muscae*, 144, 145 (Fig. 71)  
 Encystment, 48, 54, 55, 86, 101, 102  
   (Fig. 43), 105, 106, 108  
*Endocochlus asteroides*, 141, 142  
 Endoconidium, 7, 8 (Fig. 7), 262  
 Endogamy, 5  
 Endogonaceae, 129, 138  
*Endogone fasciculata*, 139  
   *E. lactiflua*, 138, 139 (Fig. 66)  
   *E. malleola*, 139  
*Endomyces*, 167, 168, 170  
   *E. albicans*, 167  
   *E. decipiens*, 175 (Fig. 103)  
   *E. fibuliger*, 169, 170 (Fig. 94), 171  
   (Fig. 95), 175 (Fig. 103), 176  
   *E. Lindneri*, 169, 171 (Fig. 96)  
   *E. Magnusi*, 168, 170 (Fig. 94), 175  
   (Fig. 103), 176  
   *E. Mali*, 167  
 Endomycetaceae, 153, 167 *et seq.*,  
   176  
 Endoperidium, 345, 347, 352, 353,  
   355, 356, 357
- Endophyllum*, 319, 323  
   *E. Euphorbiae*, 320  
   *E. Sempervivi*, 319 (Fig. 270), 320  
   (Fig. 271), 321 (Fig. 272)  
 Endophytic parasite, 20, 26, 46,  
   290  
 Endospore, 9, 68, 85, 109, 174, 293  
 Endotrophic mycorrhiza, 22 *et seq.*  
*Entomophthora*, 143, 144, 148  
   *E. americana*, 143, 144 (Fig. 69)  
   *E. rhizospora*, 144 (Fig. 70)  
 Entomophthoraceae, 142, 143 *et*  
   *seq.*  
 Entomophthorales, 125, 142 *et seq.*,  
   146, 148  
*Entophlyctis bulligera*, 74 (Fig. 21)  
*Entyloma*, 293, 295, 299, 300  
   *E. Glaucii*, 301 (Fig. 242)  
 Environment, effect on development,  
   48, 90, 111, 120, 187  
 Enzymes, 4, 14, 17, 18  
*Epichloë*, 250, 367  
 Epidermis, 19, 20, 60, 65, 78, 87, 89,  
   120, 187, 198, 199, 200, 248, 254,  
   265, 268, 307, 309, 311, 322, 323,  
   360  
 Epiphragm, 355, 356  
 Epiplasm, 150, 260  
 Episporium, 9, 109, 149, 181, 204, 235,  
   293, 299, 329, 334  
 Epithecium, 238  
*Eremascus*, 167, 170  
   *E. albus*, 167, 168 (Fig. 92)  
   *E. fertilis*, 167, 169 (Fig. 93), 175  
   (Fig. 103)  
 Ergometrine, 253  
 Ergot, 252  
 Ergotamine, 253  
 Ergotoxine, 253  
 Ericaceae, 21, 22, 24, 25, 336  
*Erigeron canadense*, 123  
 Erysiphaceae, 20, 149, 186, 187 *et seq.*,  
   279  
 Erysiphales, 8, 166, 186 *et seq.*, 283  
*Erysiphe*, 156, 157, 187, 190  
   *E. Graminis*, 187  
   *E. Polygoni*, 188 (Fig. 115), 192  
   (Fig. 119)  
   *E. taurica*, 187  
   *E. tortilis*, 189 (Fig. 116)  
 Erythrosin glycerine, 381  
 Euapogamy, 216, 299  
*Euglena*, 76  
   *E. viridis*, 34  
*Euphorbia sylvatica*, 320



## INDEX

433

- Eurotium*, 17, 156, **178 et seq.**, 182, 183,  
 201, 243  
*E. Fischeri*, 181  
*E. herbariorum*, 29, 36, 38, 39, 42,  
 179 (Figs. 106, 107), 180, 181, 362  
*E. repens*, 180, 181  
*Eurychasma*, 64  
*E. Dicksonii*, 63 (Fig. 12), 64  
*Evernia prunastri*, 22  
 Excretions attractive to insects, 253,  
 308, 346, 350  
*Exidia recisa*, 326 (Fig. 274)  
 Exit tube, 60, 61, 84  
 Exoascaceae, 8, 21, **197 et seq.**  
 Exoascales, 166, **197 et seq.**  
*Exoascus*, 21, **198**  
*E. Cerasi*, 198  
*E. deformans*, 198 (Fig. 126), 199, 200  
*E. Pruni*, 198  
*Exobasidium*, 21, 328, 336  
*E. Vaccinii*, 336  
 Exogamy, 5  
 Exoperidium, **345**, 347, 352, 353, 354,  
 356, 357  
 Exosmosis, 19
- Fairy club, 336  
 Fairy rings, **15**, 332  
 False truffles, 347  
 Fermentation, alcoholic, **17**, 18, 19,  
 126, 174  
 Fern prothallus, 145, 214  
 Fertile cell, 310 (Fig. 256), **311** (Figs.  
 257, 258, 259), 312 (Fig. 260),  
 314 (Figs. 263, 264), 315, 317, 319  
 (Fig. 270). *See also* basal cell
- Fertilisation, 5, 6, 26, 42, 49, 55, 56,  
 59, 85, 86, 90, 95, 96 (Fig. 37), 98,  
 103, 109, 113 (Fig. 49), 117, 118  
 (Fig. 54), 121, 122, 132, 135, 155,  
 156, 157, 159, 160, 161, 166, 170,  
 176, 192 (Fig. 119), 193 (Fig.  
 121), 201, 212, 214, 217, 219, 222,  
 246, 248, 277, 279, 281  
 Fertilisation, reduced, 5, 173  
*Ficus carica*, 266  
 Filter paper, 16, 361, 362  
 Fir woods, 29  
*Fistulina*, 343, 344  
*F. hepatica*, 344  
 Fixation, 366, **367**  
 Fixatives, composition of, **378**  
 Flagellates, 54, 56  
 Flagellum, 44, 45, 54, 55, 59, 60, 63,  
 64, 65, 66, 68, 69, 79, 81, 83, 86,  
 91, 92, 94, 96, 101, 103, 105, 108,  
 112, 115, 120  
 Flask cultures, **364**  
 Flemming's fluid, 369, 373, 378, 379  
 Flemming's triple stain, 376, 380  
 Fly agaric, 341  
*Fomes*, 344  
*F. applanatus*, 331, 344  
*F. officinalis*, 344  
 Food materials, 4, 17, 20, 42, 126, 129,  
 150  
 Form genus, **359**  
 Free cell formation, 150  
 Frog, 146, 147  
 Fructification, 1, 5, 9, 15, 16, 22, 23,  
 28, 38, 39, 42, 136, 139, 140, 153,  
 158, 166, 178, 186, 189, 196, 200,  
 217, 219, 228, 231, 235, 242, 288,  
 324, 326, 331, 359  
 Fruit body, 1, 4, 16, 34, 35, 37, 41  
 138, 185, 200, 208, 210, 234, 238,  
 284, 288, 324  
 Fruit rot, 114, 178  
*Fuligo varians*, 46  
 Fungi, **1**  
 Fungi, amphibious, 49, 51, 53, 54,  
 89  
 Fungi, aquatic, 7, 12, 13, 38, 49, 51,  
 52, 53, 54, 55, 89, 90, 91, 94 *et*  
*seq.*, 115, 119, 120, 361  
 Fungi, classification, 9, 10, 11; *and see*  
*classification*  
 Fungi, coprophilous, **16**, 17, 35, 36,  
 202, 212, 223, 225, 257, 261, 361,  
 362. *See also* dung  
 Fungi, culture of, **361 et seq.**  
 Fungi, epiphytic, 186, 194, 197  
 Fungi, on fatty substrata, **17**, 143  
 Fungi, filamentous, 18, 20  
 Fungi, fossil, 1  
 Fungi, hypogaeal, **15**, 185, 234, 235,  
 345, 347  
 Fungi, marine, 64, 114, 254  
 Fungi, micro-, 15  
 Fungi, parasitic on algae, 13, 60, 61,  
 64, 71, 72, 74, 75, 78, 83, 85, 103,  
 110, 114, 115, 254, 265, 266  
 Fungi, parasitic on animals, 49, 57, 60,  
 78, 81, 84, 86, 103, 110, 141, 142,  
 143, 145, 146, 167, 171, 173, 243,  
 248, 250, 274, 325  
 Fungi, parasitic on fungi, 67 *et seq.*,  
 73, 103, 110, 134, 137, 139, 145,  
 167, 186, 245, 250, 252, 343

- Fungi, pathogenic, 64, 167, 173, 177, 253  
 Fungi, poisonous, 253, 341  
 Fungi, in soil, 14, 89, 91, 103, 104, 108, 115, 135, 137, 138, 363  
 Fungi, unicellular, 20, 21, 173  
 Fungi, on wood, *see* wood, fungi on  
*Fungi imperfecti*, 6, 7, 9, 137, 359, 362  
*Fusarium*, 14, 32  
*Fusicladium dendriticum*, 267  
 Fusion, nuclear, *see* nuclear fusion  
 Fusion of gametes, 4, 30, 49, 55, 56, 92, 95  
 Fusion of sexual organs, 30, 49, 56, 77, 126, 132, 139, 170, 171 (Figs. 96, 97), 181, 253, 311  
 Fusion of spores, 172 (Fig. 100), 173, 287. *See also* basidiospores, conjugation of  
 Galls caused by fungi, 79, 292 (Fig. 229), 336  
 Gametangium, 4, 5, 38, 56, 72, 75, 77, 84, 86, 91, 92, 112, 119, 125, 126, 127, 128, 131 (Fig. 59), 132 (Fig. 60), 135, 137, 138, 141 (Fig. 68), 147 (Fig. 74), 155, 168 (Fig. 92), 169, 171 (Figs. 96, 97), 176, 177, 183  
 Gamete, 4, 55, 65, 67, 77, 90, 94, 95, 96, 128  
 Gametes, facultative, 44, 55, 60, 65, 79  
 Gametes, free swimming, 4, 43, 55, 66, 67, 72, 89, 92  
 Gametophyte, 5, 6, 7, 23, 30, 40, 41, 128, 157, 166, 178, 192, 211, 291, 296, 301, 320, 322, 331, 359  
 Gasteromycetales, 235, 331, 332, 338, 345 *et seq.*  
 Gastric juice, 372, 379  
*Gastrodia*, 22  
*G. elata*, 23, 25  
*Gautieria morchellaeformis*, 347 (Fig. 290)  
*Gaeaster*, 352, 353  
*G. Berkleyi*, 353 (Fig. 300)  
*G. formicatus*, 353 (Fig. 300)  
*Gelasinospira tetrasperma*, 258  
 Gemini, 161 (Fig. 87), 205, 212, 215, 223, 263  
 Gemma, 7, 104  
*Genea*, 235, 236  
*G. hispidula*, 236 (Fig. 170)  
*G. Klotzschii*, 236 (Fig. 170)  
*G. sphaerica*, 236 (Fig. 170)  
 Genetics, 322  
 Gentian violet, 376, 377  
 Gentianaceae, 25  
 Geoglossaceae, 231, 233, 250  
*Geoglossum*, 9, 234  
*G. difforme*, 149 (Fig. 75)  
*G. hirsutum*, 233, 234 (Fig. 168), 235 (Fig. 169)  
*Geolegnia*, 108, 109  
*G. inflata*, 107 (Fig. 47)  
 Geophily, 21  
*Geopyxis*, 208  
 Geotropism, 35, 36, 129  
*Geranium*, 266  
 Germ pore, 1, 308, 316  
 Germ tube, 1, 2 (Fig. 2), 7, 19, 31, 33, 36, 53, 55, 71, 73, 74, 78, 79, 83, 86, 87, 89, 94, 96, 105, 108, 110, 111, 112, 113, 115, 116, 120, 123, 125, 126, 128, 132, 143, 147, 198, 199, 227, 241, 251, 307, 322, 324, 329, 358  
 Germination, direct, 111, 115, 120, 125  
 Gill cavity, 341  
 Gills, 37, 291, 330 (Fig. 279), 331, 332, 336, 338, 339 (Fig. 287), 341, 343, 345  
 Ginger beer plant, 18  
 Glacial acetic acid, 366, 375  
 Gleba, 235, 236, 345, 347, 349, 350, 351, 353, 354  
*Glomerella cingulata*, 36, 41, 155, 289  
 Glycerine, 153, 366, 367  
 Glycerine jelly, 366, 367  
 Glycogen, 4, 150, 173, 251, 357  
*Gnomonia*, 267  
*G. erythrostoma*, 268  
 Gnomoniaceae, 256, 267  
*Gonapodya*, 97  
*G. prolifera*, 13, 97 (Fig. 38)  
*Goodyera repens*, 23  
 Gramineae, 86, 250, 252, 266, 320, 322  
 Grapes, 18  
 Gravity, influence of, 35, 36, 37, 332  
 Growth, 1, 12, 24, 30 *et seq.*, 60  
 Growth, apical, 1, 51  
 Gymnoascaceae, 167, 176 *et seq.*  
*Gymnoascus*, 166, 176 (Fig. 104), 177, 183  
*G. candidus*, 177 (Fig. 105)  
*G. Reesii*, 176, 177 (Fig. 105)  
*Gymnoconia interstitialis*, 319

## INDEX

435

- Gymnosporangium*, **322**, 323  
*G. clavariaeforme*, 304 (Fig. 245),  
 306 (Figs. 249, 250), 307 (Fig.  
 251)  
*Gyromitra*, 232
- Haematoxylin, 373, 375, 380  
 Haemoglobin, 90  
 Haplophase, 6, 157, 173, 174, 287, 289,  
 291, 317, 326  
*Haplosporangium bisporale*, 138  
*H. decipiens*, 138  
*Harpochytrium*, 52, 77  
 Haustorium, **20**, 87, 111, 120, 121  
 (Fig. 55), 122 (Fig. 56), 140, 142,  
 187, 198, 240, 276, 295, 303,  
 325  
 Hazel (*Corylus*), 192  
 Heart rot, 344  
 Heat, influence on development, 31,  
 32, 33, 36, 38, 42, 111, 120, 123,  
 127, 150, 214. *See also* tempera-  
 ture  
*Hedysarum*, 254  
 Heliotropism, *see* phototropism  
 Helotiaceae, 202, **226** *et seq.*, 234  
*Helotium ciliatosporum*, 227  
*Helvella*, **232**, 233  
*H. crispa*, **232**, 233 (Fig. 167)  
 Helvellaceae, 231, **232**, 234  
 Helvellales, 36, 200, 201, **231** *et seq.*  
 Hemibasidiomycetes, 284, 287, 289,  
 290, **291** *et seq.*  
 Hemibasidiomycetes, classification of,  
 296  
*Hemileia*, **322**  
 Hemi-parasite, **12**  
 Hemi-saprophyte, **12**, 324  
 Hermaphroditism, 281  
 Heteroecism, **30**, 320, 321  
 Heterosporangy, **132**  
 Heterospory, **132**  
 Heterothallism, **5**, **40**, **127**, 132 *et seq.*,  
 137, 155, 199, 209, 261, 289, 312,  
 321, 322, 337. *See also* incom-  
 patibility, self-incompatibility and  
 self-sterility  
*Hirneola*, **324**  
*H. Auricula-Judae*, 325  
 Homothallism, **5**, 41, 127, 132, 135,  
 289. *See also* self-compatibility,  
 self-fertility  
 Hop, 122  
 Hop mildew, 159, 191  
*Hordeum*, 296
- Hornbeam (*Carpinus*), 28, 192  
 Host, invasion of, 19, 20, 21. *See also*  
 cuticle, epidermis and stomata  
 Host, susceptibility, 20, 29  
 H-piece, **2**  
*Humaria*, **208**  
*H. aggregata*, **214**  
*H. carbonigena*, 216  
*H. granulata*, 40, 41, 150, 156 (Fig.  
 82), 210 (Figs. 137, 138), 211  
 (Fig. 139), **212** (Fig. 140), 213  
 (Fig. 141), 224  
*H. Roumegueri*, 216  
*H. rutilans*, 151 (Fig. 77), 157 (Fig.  
 83), 158 (Fig. 84), 161 (Fig. 87),  
 164 (Fig. 91), **214** (Figs. 142, 143),  
 215 (Figs. 144, 145), 216 (Figs. 146,  
 147), 232  
 Humus, 12, 28, 347, 349  
*Hyaloria*, 326  
 Hyaloriaceae, 326  
*Hydatinophagus*, 110  
 Hydnaceae, 37, 325, 331, 334, **337**  
*Hydnum*, 29, 338  
*H. omnivorum*, 359  
*H. repandum*, 338 (Fig. 286)  
 Hydrogen, 12  
 Hydrotaxis, 46  
 Hydrotropism, **33**, 129  
 Hygroscopic movements, 46, 191  
 Hymenial layer, 151 (Fig. 77)  
 Hymenium, **6**, 37, 153, 200, 217, 229,  
 231, 232, 235, 236, 237 (Fig. 171),  
 238, 239 (Fig. 174), 242, 266, 285  
 (Fig. 224), 287, 324, 325, 326, 327  
 (Fig. 275), 329 *et seq.*, 332, 334 *et*  
*seq.*, 339 (Fig. 287), 343, 345, 346  
*Hymenochaete*, 334  
*H. Cacao*, 334 (Fig. 281)  
*H. rubiginosa*, 335  
*Hymenogaster*, 347, 351  
*H. decorus*, 348 (Figs. 291, 292)  
*H. tener*, 348 (Fig. 293)  
 Hymenogastraceae, 15, 343, 346, **347**  
 Hymenomycetales, 36, 37, 38, 212,  
**332** *et seq.*, 346, 368  
 Hypertrophy, **21**, 46, 48, 197, 292, 303  
 Hyppha, **1**, 3 (Figs. 3, 4), 4, 7, 8, 9, 13,  
 22, 23, 24, 31, 33, 39, 56, 68, 69,  
 79, 94, 98, 101, 103, 104, 111, 112,  
 120, 122, 126, 133, 134, 135, 137,  
 138, 140, 141, 166, 167, 200, 226,  
 231, 237, 246, 248, 249, 259, **273**,  
 325, 331, 355  
 Hyppha, growth of, 1

- Hyphae, fusions of, *see* anastomosis  
 Hyphae, septation in, 1, 4, 9, 49, 51, 84, 85, 86, 103, 104, 112, 116, 126, 143, 149, 172, 287  
 Hyphal bodies, 143, 144 (Fig. 69), 145, 146, 148  
 Hypochytriaceae, 60, 82  
*Hypoholoma Candolleum*, 288  
 Hypohomycetales, 14, 359, 360  
*Hypochnus*, 23, 145, 328, 334  
   *H. subtilis*, 285 (Fig. 224), 327 (Fig. 275)  
*Hypocopa*, 257  
*Hypocrea*, 249  
 Hypocreaceae, 245, 248 *et seq.*  
 Hypocreales, 243, 244 *et seq.*, 255, 267  
 Hypodermataceae, 242  
*Hypomyces*, 245  
 Hypothecium, 200, 206  
*Hypoxylon*, 269, 273  
   *H. coccineum*, 269 (Fig. 202), 273  
*Hysterangium*, 347, 351  
   *H. clathroides*, 348 (Fig. 294)  
 Hysteriaceae, 242  
 Hysteriales, 200, 201, 238, 242, 265  
  
*Ichthyophonus intestinalis*, 147  
 Incompatibility, 5, 127. *See also* heterothallism, self-incompatibility, and self-sterility  
 Ingestion, 45, 48, 55, 142  
 Ink cap, 342  
 Inoculation, 364, 365  
 Insects, 14, 20, 21, 27, 46, 74, 84, 90, 112, 142, 145, 146, 171, 195, 227, 243, 248, 250, 253, 274, 325, 351, 361  
 Insects, dispersal of spores by, 253, 308, 346, 350  
 Intercalary cell, 166, 308, 309, 312, 315, 318  
 Invertase, 18  
 Iodine gentian violet, 377  
 Iron, 12, 33, 238  
 Iron alum, 375  
*Irpex*, 338, 345  
 Isogamy, 5, 40, 55, 56, 59  
 Isolation of fungi, 361  
  
 Jam, 27  
 Johannisberg yeast, 175 (Fig. 103)  
  
 Karyokinesis, 3, 150, 168, 173, 225  
 Kinoplasmic thread, 303  
*Kunkelia nitens*, 319, 320  
  
*Laboulbenia*, 280  
   *L. chaetophora*, 275 (Fig. 210)  
   *L. elongata*, 274 (Fig. 209)  
   *L. inflata*, 280  
   *L. triordinata*, 275 (Fig. 211)  
 Laboulbeniaceae, 155, 283  
 Laboulbeniales, 20, 21, 151, 243, 244, 274 *et seq.*  
 Laccase, 344  
*Lachnea*, 2 (Fig. 2), 208  
   *L. abundans*, 3 (Fig. 3), 39  
   *L. cretea*, 8 (Fig. 6), 150, 157, 208 (Fig. 135), 209 (Fig. 136)  
   *L. melaloma*, 157, 209  
   *L. scutellata*, 210  
   *L. stercorea*, 155 (Fig. 81), 212  
*Lactarius deliciosus*, 28  
*Laelia*, 24  
*Lagena radiculicola*, 86  
*Lagenidium*, 84, 85, 86, 115  
   *L. giganteum*, 84  
   *L. Rabenhorstii*, 83 (Fig. 29)  
 Lamella, 291, 331  
 Lamellae, origin of, 341  
 Larch (*Larix*), 227  
 Leaf curl, 197  
 Leaf scorch, 268  
 Leaf spot, 227, 240, 254, 265  
 Leather, 29  
*Lecanium hemisphericum*, 27  
 Leguminosae, 67, 173  
*Lemanea*, 267  
*Lentinus*, 343  
   *L. lepideus*, 14, 35, 36, 343  
*Lenzites*, 343  
*Leotia*, 234  
   *L. lubrica*, 233, 234 (Fig. 168)  
*Leptolegnia*, 105  
   *L. caudata*, 108  
 Leptomitaceae, 82, 98 *et seq.*  
 Leptomitales, 83, 91, 98 *et seq.*  
*Leptomitus*, 98  
   *L. lacteus*, 13, 102 (Fig. 43), 103  
*Leptosphaeria*, 267  
   *L. Lemaneae*, 267 (Fig. 201)  
 Lethal substances, 31, 42  
 Lichenes, 22, 159, 266  
 Light, formative influence of, 36  
 Light, influence on development, 31  
   34, 35, 36, 123, 227  
 Light, influence on distribution, 12  
*Ligniera radicalis*, 48  
 Lime, 12  
 Lipase, 17  
*Listera*, 23

## INDEX

437

- Lolium*, 26  
 Lophiostomataceae, 256, **265**  
*Lophodermium pinastri*, **242**  
 Luminosity, 342  
*Lychnis dioica*, 292  
 Lycoperdaceae, 185, 346, **351**  
*Lycoperdon*, 345, 346, 351  
   *L. Bovista*, 331  
   *L. echinatum*, 352 (Fig. 298)  
   *L. pyriforme*, 351, 352 (Fig. 298)  
*Lycopodium*, 26  
*Lysurus*, 351
- Macrochytrium*, 50  
   *M. botrydioides*, 13, 50, **82** (Fig. 28)  
*Magnusiella Potentillae*, 200  
 Maize, 19  
 Malt, 167  
 Manure, 16, 38  
 Marattiaceae, 26, 120  
*Marchantia*, 7  
*Massospora cicadina*, **146**  
 Media, liquid, **363**, 378  
 Media, solid, 32, 126, **362**, 378  
 Media, synthetic, 362, 378  
*Medicago sativa*, 79  
 Medium M, 362, 378  
*Megachytrium Westonii*, **80**  
 Meiosis, 6, 46, 47, 93, 96, 110, 121, 157, 160, 161, 172, 194, 206, 212, 223, 246, 247, 263, 284, 287, 291, 303, 304 (Fig. 245), 320, 326, 328 (Fig. 276)  
*Melampsora*, 310, 323  
   *M. betulina*, 305 (Fig. 248)  
   *M. Rostrupi*, 311 (Fig. 258)  
 Melampsoraceae, 322, **323**  
 Melanconiales, 360  
*Melanconis stilbostoma*, 28  
*Melanogaster*, 347  
*Melanospora*, 244, 245  
 Mendelism, 6, 29, 41, 42, 246, 322  
*Mercurialis annua*, 27  
   *M. perennis*, 27  
 Merkel's fluid, 367, 369, 373, 379  
*Merulius*, 343, 344, 345  
   *M. lachrymans*, 14, 344, 345  
*Mesocarpus*, 84 (Fig. 30)  
 Mesospore, **304**  
 Metachromatic granules, 173  
 Methylene blue and erythrosin, 375, 381  
 Mica, 31  
*Microascus*, 178  
 Microconidia, 227, 228 (Fig. 162), 229, 240 (Fig. 176), 245 (Fig. 178), 259  
*Microeotium albidum*, **181**  
 Micro-fungi, 15  
*Micromyces*, 67  
 Microscopic examination, **365 et seq.**  
*Microsphaera*, 189 (Fig. 116), 190  
 Microthyriaceae, 186, 187, **196**  
*Microthyrium*, 196  
 Microtome, 371  
 Migration, nuclear, *see* nuclear migration  
 Minus strains, 5, 40, 41, **127**, 132, 135  
*Mitochytridium ramosum*, 81 (Fig. 27)  
 Mitosis, 3, 24, 45, 47, 60, 66, 160, 162 (Fig. 88), 172, 181, 192, 200, 205, 206 (Fig. 133), 222, 279, 318. *See also* karyokinesis and nuclear division  
*Mitrula*, 233  
   *M. laricina*, 152 (Fig. 78)  
 Moisture, influence on development, 33, 39, III, 123, 227  
 Mollisiaceae, 202, **226 et seq.**  
*Monadineae zoosporeae*, 9, **43 et seq.**  
*Monascus*, **183**  
   *M. Barkeri*, 182 (Fig. 110)  
   *M. heterosporus*, 17  
   *M. purpureus*, 156, 183 (Fig. 111), 184  
   *M. ruber*, 184  
   *M. X*, 183 (Fig. 111)  
*Monilia*, 227, 359  
 Monoblepharidaceae, 90, **94 et seq.**  
 Monoblepharidales, 50, 91, **94 et seq.**  
*Monoblepharis*, 4, 52, 55, 90, 97  
   *M. polymorpha*, **96** (Fig. 37)  
   *M. sphaerica*, **94**, 95 (Fig. 36), 96  
*Monochytrium Stevensianum*, 56, **61**  
 Monoecism, 5, 40, 84, 155, 219, 246, 277, 280, 314  
*Monospora bicuspidata*, 173  
*Morchella*, 15, **232**  
   *M. esculenta*, 232  
   *M. vulgaris*, 233 (Fig. 167)  
 Mordants, 380  
*Mortierella*, 138, 139  
   *M. stylospora*, 138  
 Mortierellaceae, 126, 129, **137**  
 Movement, amoeboid, *see* amoeboid movement  
 Mucilage, 257, 260, 264, 346, 349, 357, 360  
*Mucor*, 8, 13, 14, 34, 36, 40, 51, 56, 129, 130, 134, 137, 140, 361, 362  
   *M. hiemalis*, 126, 129 (Fig. 58), **131** (Fig. 59)

- Mucor* (*cont.*)  
*M. mucedo*, 127, 129, 130, **131**, 132, 137  
*M. racemosus*, 18, 126  
*M. V.*, 128  
Mucoraceae, 126, 128, **129 et seq.**, 138  
Mucorales, 14, 33, 42, 53, **125 et seq.**, 137, 139  
Mucor-yeasts, 18  
Multiplication, accessory, **7**, 8, 125, 243, 359  
Mushroom, 326, 328, 331, 339, 341  
*Mutinus*, 350  
Mycelial fusions, *see* anastomosis  
Mycelium, **1**, 8, 15, 16, 22, 24, 25, 26, 31, 36, 38, 39, 50, 51, 56, 58, 78, 82, 83, 87, 89, 90, 92, 103, 111, 112, 114, 120, 125, 137, 141, 142, 148, 149, 167, 168, 172, 173, 181, 187, 194, 196, 197, 199, 204, 227, 228, 231, 240, 241, 242, 246, 247, 251, 268, 284, 287, 295, 296, 297, 300, 303, 315, 319, 320, 322, 324, 326, 331, 342, 346, 351  
Mycelium, absence of, **1**, 173  
Mycelium, continuous, 104  
Mycelium, endophytic, 20, 302  
Mycelium, origin of, **1**  
Mycelium, perennial, 21, 198, 295, 303, 332  
Mycelium, primary, **287**, 288, 289, 290  
Mycelium, rudimentary, 10, 49  
Mycelium, secondary, **154**, 159, 259 (Fig. 191), **287**, 288, 289, 290 (Fig. 228)  
Mycorrhiza, **22 et seq.**, 120, 238, 341, 346  
Mycorrhiza, ectotrophic, **22**, 27 *et seq.*  
Mycorrhiza, endotrophic, **22 et seq.**  
*Mycosphaerella Boleana*, 266  
*M. nigerristigma*, 266  
Mycosphaerellaceae, 256, **265**  
*Myriostoma*, 352  
Myxamoeba, **45**, 46, 47, 48  
Myxomycetes, 9, 43, **45**, 46, 185  
*Myzocyttium*, 84, 85  
*M. proliferum*, 84 (Fig. 30)  
  
*Nectria*, 245, **247**, 248  
*N. cinnabarina*, 20, **247** (Fig. 179)  
*N. galligena*, 248  
Nectriaceae, **245 et seq.**  
Nematodes, 141, 142  
*Nematospora*, 173  
*N. Phaseoli*, 173  
  
*Neottia*, 23  
*Neurospora*, 151, **245**  
*N. sitophila*, 245 (Fig. 178), **246**  
*N. tetrasperma*, 41, 245 (Fig. 178), **246**, 258, 263  
Neutral strain, **127**  
*Nidularia*, 354  
Nidulariaceae, 346, **354 et seq.**  
Nitrates, 15, 90  
Nitric acid, 13  
Nitrogen, 13, 14, 15, 16, 22, 38  
Nitrogen, fixation of, 15, 22  
*Nothofagus*, 229  
*Nowakowskiella ramosa*, **79**  
Nuclear association, 5, 41, 113, 114 (Fig. 50), 147 (Fig. 74), 164, 184, 219, 280, 287, 294, 295, 297, 299, 300, 302, 320  
Nuclear beak, 164  
Nuclear degeneration, 56, 113, 117, 122, 171, 204, 205  
Nuclear division, 46, 47, 60, 62, 65, 66, 68, 76, 77, 87, 88, 105, 109, 113, 117, 121, 122, 130, 147, 149, 157, 158, 160 (Fig. 86), 161, 162, 169, 171, 193, 194, 195 (Fig. 124), 196, 199, 214 (Fig. 142), 215 (Fig. 145), 216, 222 (Fig. 155), 233, 246, 279, 284, 287, 289, 293, 294, 302, 303, 306, 317; *and see* karyokinesis, meiosis *and* mitosis  
Nuclear division, simplified, 173  
Nuclear fusion, 5, 6, 47, 55, 56, 66, 68, 89, 109, 113, 117, 121, 122, 132, 139, 144, 147, 157 (Fig. 83), 158, 159, 160, 161, 162, 164, 168, 169, 171, 173, 174, 177, 181, 192, 193, 194, 195 (Fig. 123), 197, 204, 205, 206, 212, 213, 214, 217, 219, 222, 224, 225, 246, 247, 263, 279, 280, 284, 287, 291, 295, 297, 299, 300, 317, 319, 320 (Fig. 271), 324, 326  
Nuclear migration, 214, 221, 287, 289, 311 (Fig. 257), 312 (Fig. 260), 313 (Fig. 261), 319, 327  
Nuclei, paired, *see* nuclear association  
Nucleolus, 3, 47  
Nucleus, **2**, 3, 4, 5, 40, 41, 46, 47, 59, 65, 68, 76, 77, 79, 89, 94, 95, 98, 104, 105, 108, 109, 112, 113, 114 (Fig. 50), 117, 120, 121, 122, 126, 130, 135, 137, 139, 140, 143, 146, 147, 150, 151, 156, 157, 158, 161, 162, 163, 173, 180, 181, 184, 191, 193, 197, 198, 200, 203, 204, 205,

## INDEX

439

- Nucleus** (*cont.*)  
 206, 213, 214, 217, 219, 221, 222, 225, 248, 254, 260, 267, 268, 271, 284, 287, 296, 297, 302, 306, 307, 308, 313, 324, 326, 328, 331, 343, 346, 358  
**Nucleus, definitive**, 150, 206, 213, 215, 223, 225, 246, 247  
**Nucleus, diploid**, 160, 162, 174, 205, 206, 213, 222, 247, 299, 300  
**Nucleus, haploid**, 160, 161, 162, 206, 212, 214, 215, 217, 224, 247, 263, 280, 326  
*Nummularia*, 269  
**Nutrition**, 2, 6, 12 *et seq.*, 30, 39, 42, 45, 58, 79, 90, 127, 134, 135  
*Nyctalis*, 333, 343
- Oak** (*Quercus*), 28, 192, 238, 261, 344  
**Ocellus**, 131, 147  
*Ochropsora*, 306, 321  
**Oedocephaloid head**, 136 (Fig. 65)  
*Oedocephalum*, 137, 359  
*Oedogonium*, 61, 361  
**Oenothera**, 67  
**Oidium**, 8, 167, 168, 169, 201, 223, 288 (Fig. 227), 289, 359  
*Oidium*, 188  
**Oil**, 4, 9, 17, 47, 59, 68, 110, 149, 173, 251  
**Oil cake**, 17  
**Olpidiaceae**, 59, 60 *et seq.*, 69  
*Olpidiopsis*, 55, 59, 68 (Fig. 14), 69  
*Olpidium*, 45, 50, 59, 61, 62 (Fig. 11), 64, 68, 72, 85  
*O. Brassicae*, 61, 62 (Fig. 10)  
*O. Viciae*, 55, 60, 61 (Fig. 9), 65  
*Onygena*, 184  
*O. equina*, 29, 184  
**Onygenaceae**, 167, 184  
**Oogonial incept**, 116 (Fig. 52)  
**Oogonial region**, 157, 209, 216, 219, 271  
**Oogonium**, 4, 5, 30, 40, 41, 55, 56, 68, 83, 84 (Fig. 30), 85, 89, 90, 94, 95 (Fig. 36), 96, 97, 98, 99 (Fig. 39), 100 (Fig. 40), 101 (Fig. 42), 103, 107 (Fig. 47), 108, 109 (Fig. 48), 111, 112, 113 (Fig. 49), 114 (Fig. 50), 115, 116 (Fig. 52), 118 (Fig. 54), 119, 120, 121, 123, 156, 157, 158, 159 (Fig. 85), 161, 162, 163 (Fig. 89), 166, 170 (Fig. 94), 171, 172, 177, 180, 181, 182 (Fig. 110), 183 (Fig. 111), 184, 190 (Fig. 117), 191 (Fig. 118), 192, 196, 201, 203 (Fig. 130), 204 (Fig. 131), 205
- Oogonium** (*cont.*)  
 (Fig. 132), 206, 209, 210 (Fig. 137), 211, 212 (Fig. 140), 213 (Fig. 141), 214, 217, 218 (Figs. 149, 150), 219 (Fig. 151), 220 (Fig. 152), 224, 232, 242, 253, 266, 279, 299, 311, 312, 314, 318, 320  
**Oomycetes**, 4, 13, 14, 30, 51, 53, 56, 57, 59, 67, 71, 89 *et seq.*  
**Oomycetes, classification of**, 91  
**Ooplasm**, 113, 121, 122  
**Oosphere**, 56, 85, 86, 90, 94, 95, 98, 103, 109 (Fig. 48), 111, 112, 117  
**Oospore**, 49, 68, 71, 83 (Fig. 29), 84, 85 (Fig. 31), 86 (Fig. 32), 96, 98, 100, 101, 109, 110, 111, 113, 115, 117, 119, 121, 123  
**Ophioglossaceae**, 26  
**Orchidaceae**, 22, 23, 24, 25  
*Orobis coccineus*, 27  
*O. tuberosus*, 27  
**Osmotic pressure**, 150, 357  
**Ostiole**, 153, 186, 196, 243, 255, 256, 257, 261, 265, 266, 267, 271, 307, 360  
**Otidea**, 208  
*O. aurantia*, 216  
**Oxygen**, 12, 13, 17, 33, 34, 39, 119, 126, 175, 294  
**Ozone**, 33
- Pachyphloeus*, 235, 236  
*Pachysterigma*, 334  
*Panaeolus*, 331  
*P. campanulatus*, 329 (Fig. 277), 339 (Fig. 287)  
**Paraffin, embedding in**, 370  
**Paraphysis**, 6, 151 (Fig. 77), 152 (Figs. 78, 79), 154, 200, 201, 206, 215, 228, 232 (Fig. 166), 235 (Fig. 169), 243, 258 (Fig. 189), 265, 267, 307, 315, 318, 330, 339  
**Parasite**, 1, 4, 12, 13, 22, 23, 25, 26, 29, 43, 44, 47, 48, 49, 57, 60, 64, 65, 66, 67, 68, 69, 71, 72, 73, 74, 75, 78, 79, 80, 81, 83, 84, 85, 87, 88, 89, 104, 110, 111, 115, 118, 119, 120 *et seq.*, 125, 134, 137, 139, 141, 142, 167, 171, 173, 227, 229, 240, 245, 248, 250, 252, 254, 261, 265, 266, 267, 296, 299, 301, 332, 333, 336, 341, 343, 344, 360, 362  
**Parasite, ectophytic**, 20, 186  
**Parasite, endophytic**, 20, 26, 46, 290

- Parasite, facultative, **12**, 14, **19**, 266, 302  
 Parasite, obligate, **12**, **20**, 30, 122 *et seq.*,  
 137, 139, 187, 197, 290, 292, 302  
*Parasitella simplex*, **133**, 135  
 Parasitism, 6, **19**, 25, 28; *and see*  
 parasite  
 Parthenogenesis, 118, 167, 169, 170  
 (Fig. 94), 280  
 Partial veil, **339**, 341  
*Pâté de foie gras*, 354  
 Patellariaceae, 200, 202, **228**  
 Pea (*Pisum*), 92, 110  
 Pea agar, 378  
 Peach leaf curl, 21, 197  
 Pedicel, *see* stalk  
*Penicillium*, 14, 17, 39, 42, 178, **182**, 359  
*P. bacillosporum*, 182  
*P. fluitans*, 13  
*P. glaucum*, 29, 36, 180 (Fig. 108),  
 182 (Fig. 109)  
*P. luteum*, 41, 182  
*Peniophora*, 334  
 Penultimate cell, 181, 184, 192, 193,  
 279, 317  
*Pericystis*, **171**  
*P. apis*, 155, **171**, 172 (Figs. 98, 99)  
 Peridermium, **310**  
 Peridiolum, **345**, 346, 354, 355 (Fig.  
 304), 356 (Fig. 305), 357 (Fig.  
 306), 358  
 Peridium, 138, 139, **153**, 154, 186, 201,  
 202, 207, 215, 216, 226, 237, 238,  
 242, 256, 261, 265, 266, 324, 343,  
 345, 346, 347, 350, 351, 353, 354,  
 355, 356, 357  
 Periphysis, 242, **243**, 258 (Fig. 189)  
 Periplasm, **90**, 98, 100, 111, 113, 117,  
 122  
 Perisporiaceae, 166, 186, 187, **194 et**  
*seq.*, 254  
 Perithecium, 17, 35, 36, 38, **153**, 155,  
 166, 181, 184, 186, 187, 188 (Fig.  
 115), 189 (Fig. 116), 190 (Fig.  
 117), 191, 192 (Fig. 119), 193  
 (Fig. 121), 194 (Fig. 122), 196,  
 243, 244, 246, 247 (Fig. 179), 248,  
 249, 250 (Fig. 182), 251 (Fig.  
 183), 253 (Fig. 185), 254, 255,  
 256, 257 (Figs. 187, 188), 259  
 (Fig. 191), 261, 262 (Fig. 196), 263  
 (Fig. 198), 264, 265, 266, 267  
 (Fig. 201), 269, 272 (Fig. 206),  
 273 (Fig. 207), 275 (Fig. 210),  
 277, 278 (Fig. 215), 279, 282 (Fig.  
 223)  
 Perithecium, appendages to, 153, 188,  
 189 (Fig. 116), **190**, 194, 256, 261  
 Perithecium, immersed, 243, 244, 248,  
 250, 251, 253, 254, 255, 257, 264,  
 265, 266, 267, 268, 269 (Fig. 202)  
 Permanent preparations, 370  
*Peronospora*, 51, 89, **122**, 125, 367  
*P. calotheca*, 122 (Fig. 56)  
*P. Ficariae*, 122  
*P. leptosperma*, 124 (Fig. 57)  
*P. parasitica*, 36  
 Peronosporaceae, 111, **122 et seq.**, 359  
 Peronosporales, 50, 53, 91, 110, **111 et**  
*seq.*  
 Petri dishes, 39, 361, 362  
 Peyritschellaceae, 283  
*Peziza*, 208, 231  
*P. subumbrina*, 216  
*P. tectoria*, 216  
*P. theleboloides*, 216  
*P. vesiculosa*, 150, 158, 216  
 Pezizaceae, 202, **207 et seq.**, 216, 226,  
 235  
 Pezizales, 200, **201 et seq.**, 234  
 Phacidiaceae, **238 et seq.**  
 Phacidiales, 200, 201, **238 et seq.**, 242  
 Phaeophyceae, 52  
 Phallaceae, 346, **347 et seq.**  
*Phallus*, 346, 350, 351  
*P. impudicus*, **347**, 349 (Fig. 295), 351  
*Philocopra curvicollis*, 151  
*P. pleiospora*, 151  
*Phlebia*, 338, 345  
*Phlyctochytrium stellatum*, 73 (Fig.  
 20), **74**  
*Pholiota aurivella*, 288 (Fig. 227)  
*Phoma*, 15, 24, 25, 360  
 Phosphate, 18, 30, 31, 90  
 Phototaxis, **34**  
 Phototropism, 17, **34**, 129, 131, 147  
*Phragmidium*, 307, 310, 322, 323  
*P. bulbosum*, 305 (Fig. 246)  
*P. Potentillae-Canadensis*, 314 (Fig.  
 264)  
*P. Rubi*, 315 (Fig. 265), 316 (Fig.  
 267)  
*P. speciosum*, 310 (Fig. 256)  
*P. violaceum*, 306 (Fig. 250), 309  
 (Fig. 253), 311 (Fig. 257), 312  
 (Fig. 260), 315 (Fig. 265), 316  
 (Fig. 267), 317 (Fig. 269)  
*Phycomyces*, 17, 33, 34, 36, 56, 133  
*P. Blakesleeanus*, 129, **132** (Fig. 60).  
 133 (Fig. 61)  
*P. nitens*, 33, 35



## INDEX

441

- Phycomycetes, 7, 38, 40, 44, **49 et seq.**,  
 75, 105, 291, 359  
 Phycomycetes, classification of, 10, 57  
 Phycomycetes, septate mycelium, 104  
*Phyllachora Lathyri*, 254  
*Phyllactinia*, 151, 187, **190**, 191, 194  
*P. Corylea*, 29, 187, 189 (Fig. 116),  
**192**, 193 (Figs. 120, 121), 194  
 (Fig. 122), 195 (Figs. 123, 124)  
*Phyllochorella oceanica*, 254  
 Phylogeny, 43, 187, 197, 283  
 Phylogeny of Ascomycetes, **164**  
 Phylogeny of Basidiomycetes, **291**  
 Phylogeny of Phycomycetes, **56**  
 Physiology, 12 *et seq.*  
*Physoderma*, 81  
*P. maculare*, 78, 79  
*P. zea-maydis*, 79  
*Phytophthora*, 14, 38, 54, **115 et seq.**,  
 120, 361, 364  
*P. Cactorum*, **118** (Fig. 54)  
*P. cryptogea*, 118  
*P. erythrosetica*, **116** (Fig. 52), 117,  
 118, 119  
*P. Faberi*, 119  
*P. infestans*, 117 (Fig. 53), **118**  
*P. palmivorum*, 117 (Fig. 53)  
 Pigments, 9, 39, 43  
*Pilacre*, 324, 326  
 Pilacreaceae, 325  
*Pilacrella*, 325  
*Pilaira*, 130, 131  
 Pileus, 35, 36, 37, 233, **291**, 331, 338,  
 339, 340, 341, 343, 344, 349, 350,  
 351  
*Pilobolus*, 16, 17, 34, 54, 130, 147, 212,  
 362  
*P. crystallinus*, 63 (Fig. 12), **133**  
*P. Kleini*, 63  
 Pine blight, 242  
 Pine woods, 28  
 Pink disease, 334  
*Pinus sylvestris*, 242  
*Piptocephalis*, 51, 137, **140**, 141, 143,  
 362  
*Pistillaria*, 337  
*P. maculaecola*, 328  
*Placosphaeria*, 254  
*Plasmodiophora Brassicae*, 47, 48, 61  
 Plasmodiophoraceae, 46  
 Plasmodiophorales, 9, 43, **46 et seq.**  
 Plasmodium, 45, 46, 47  
*Plasmopara densa*, **123**  
*P. viticola*, **123**  
 Platinum foil, 33  
 Plectascales, **166 et seq.**, 186, 201,  
 286  
 Plectomycetes, 153, 165, **166 et seq.**,  
 359  
 Plectomycetes, classification of, 166  
*Plectospira*, 51, 104, **110**  
*Pleolpidium*, 63, 64  
*P. inflatum*, 64, 69  
*Pleospora*, 9, 149 (Fig. 76), **265** (Fig.  
 200)  
*P. herbarum*, 266  
 Pleosporaceae, 256, **266**, 267  
*Pleotrachelus*, 50, 63, 64  
*P. fulgens*, 63 (Fig. 12)  
*P. Pollagaster*, 63 (Fig. 12)  
*Pleurotus*, 343  
*Plowrightia morbosa*, 254  
 Plum, cultivated, 335  
 Plus strains, 5, 40, 41, **127**, 132, 135  
 Pocket plums, 198  
*Podocrea*, 249, 250  
*P. alutacea*, 250  
*Podosphaera*, 189, 190  
*Podospora*, 157, **259**  
*P. anserina*, 41, **259** (Fig. 190), 260  
 (Fig. 193)  
*P. curvicola*, **260**  
*P. minuta*, 149 (Fig. 75), **259**  
*Polyascomyces*, 280  
*P. Trichophyae*, 281 (Fig. 219)  
*Polygonum chinense*, 292  
*Polyphagus*, 59, **76**  
*P. Euglenae*, 34, 50, 56, **76** (Fig. 23),  
 77 (Fig. 24)  
 Polyporaceae, 37, 331, 334, 338, **343**  
*Polyporus*, 37, 343, 344  
*P. squamosus*, 36  
*Polysaccum*, 354  
*Polystictus*, 37, 343, 344  
*P. cinnabarinus*, 37  
*Polystigma*, 248, 266, 267, 268  
*P. rubrum*, **248**, 249 (Figs. 180, 181),  
 250 (Fig. 182), 251 (Fig. 183)  
 Poplar, 199  
 Pores, 37, 291, 331, 332, 338, 343, 344,  
 345  
*Poria*, 343, 345  
*P. vaporaria*, 14, 344  
*Poronia punctata*, 36, **269**, 271 (Fig.  
 204), 272 (Figs. 205, 206)  
 Potassium bicarbonate, 32  
 Potato, 27, 47, 48, 65, 67, 116, 118,  
 227, 262, 362  
 Potato agar, 32, 362, 378  
*Potentilla*, 261

- Powdery mildew, 187  
*Primula*, 301  
 Probasidia, **325**  
 Progametangium, **131** (Fig. 59), 134 (Fig. 63), 135 (Fig. 64)  
 Proliferation, 51, **52**, 57, 78 (Fig. 25), 89, 97 (Fig. 38), 104 (Fig. 44), 115 (Fig. 51), 119, 159  
 Promycelium, 284, 293, 296, 299, 306, 307, 319, 320, 322, 324, 325  
 Propagation, vegetative, 7, 22  
*Protascus subuliformis*, **86** (Fig. 32)  
 Protein, 4, 14, 15, 30, 31, 139, 143, 253  
 Protista, 9, 57  
 Protobasidiomycetes, 284, 285, 287, 289, 291, **302 et seq.**  
 Protobasidiomycetes, classification of, 302  
*Protomyces*, 20  
   *P. inundatus*, **88**  
   *P. macrosporus*, **87**, **88** (Fig. 33)  
   *P. pachydermus*, **88** (Fig. 33)  
 Protomycetaceae, **87 et seq.**  
 Protomycetales, **58**, **87 et seq.**, 197  
 Protoplasmic streaming, 4, 46  
 Protoplast, 2, 4, 19, 20, 44, 50, 51, 55, 58, 64, 68  
 Protozoa, 148  
 Prune agar, 362, 378  
*Prunus*, 227, 248, 254  
   *P. avium*, 268  
   *P. instititia*, 248  
   *P. pennsylvanicae*, 266  
   *P. spinosa*, 248  
*Psalliota*, 341, 343  
   *P. campestris*, 35, 326, 328 (Fig. 276), 331, **341**  
 Pseudapogamy, 89, 162, 216, 249  
*Pseudolpidium*, 59, 69  
   *P. gracile*, 69 (Fig. 15)  
 Pseudoparenchyma, **1**, 80, **226**, 231, 356  
 Pseudoperidium, **309**, 315, 318, 323, 324  
*Pseudoperonospora Cubensis*, 123  
   *P. Humuli*, 122  
*Pseudopeziza Trifolii*, 227  
 Pseudoplasmodium, **45**  
 Pseudopodium, 45, 47  
 Pseudoprosenchyma, 202, **226**  
 Pseudosepta, 91  
*Pseudospora*, 64  
   *P. parasitica*, 44  
   *P. Rovignensis*, 43  
*Pseudovalsa lanciformis*, 28  
 Psilotaceae, 26  
 Pteridophyta, 7, 65, 115, 266  
*Pteris*, 334  
   *P. biaurita*, 198  
*Pterula*, 337  
*Puccinia*, 318, **322**  
   *P. Arenariae*, 317  
   *P. Caricis*, 303  
   *P. Falcariae*, 314 (Fig. 263)  
   *P. glumarum*, 29  
   *P. Graminis*, 30, 313, 320  
   *P. Malvacearum*, 36  
   *P. Phragmites*, 313 (Fig. 262)  
   *P. Poarum*, 36  
   *P. Podophylli*, 317 (Fig. 268)  
   *P. Sonchi*, 313 (Fig. 262)  
   *P. Sorghi*, 313  
   *P. suaveolens*, 308  
 Pucciniaceae, **322**  
*Pucciniastrum*, 323  
 Puff ball, 284, 345, 351  
 Puffing, 153  
*Pustularia bolaroides*, 216  
 Pycnidium, 7, 155, 194, 229, 241, 242, 243, 266, 268, 360  
 Pyrenomycetes, 35, 36, 153, 165, 166, 187, 212, 242, **243 et seq.**, 255, 360  
 Pyrenomycetes, classification of, 244  
*Pyrenophora*, 266  
 Pyrolaceae, 25  
*Pyronema*, 157, 201, **202**, 208, 212, 367  
   *P. confluens*, 29, 162 (Fig. 88), 163 (Fig. 90), **204** (Fig. 131), 205 (Fig. 132), 206 (Fig. 133), 217  
   *P. domesticum*, 36, 162, **206**, 207 (Fig. 134)  
 Pyronemaceae, **202 et seq.**  
*Pyrus*, 227  
 Pythiaceae, **111 et seq.**  
*Pythiogeton*, 54, **119**  
*Pythiomorpha gonapodioides*, **119**  
*Pythiopsis cymosa*, 104, **108**  
*Pythium*, 14, 50, 51, 52, 54, 69, 84, 90, 110, **114**, 115, 116, 118, 119, 123, 361  
   *P. adhaerens*, 55  
   *P. angustatum*, 115  
   *P. aphanidermatum*, 114  
   *P. Artotrogus*, 115  
   *P. de Baryanum*, **112 et seq.**, 113 (Fig. 49), 114 (Fig. 50), 115, 118, 121

## INDEX

443

- Pythium* (cont.)  
*P. gracile*, 114  
*P. intermedium*, 115 (Fig. 51)  
*P. marinum*, 114  
*P. myriotylum*, 114  
*P. proliferum*, 114, 115 (Fig. 51)  
*P. ultimum*, 89, 115
- Queletia*, 352
- Radulum*, 338
- Receptacle, 7, 275, 276, 279, 347, 351
- Receptive bodies, 228 (Fig. 163)
- Receptive papilla, 113, 117
- Red algae, 114, 165, 312
- Red bread mould, 245
- Reducing division, 89, 150, 160, 162, 223, 233, 247, 268, 291; and see meiosis
- Repeated emergence, 55
- Respiration, 17, 22, 39
- Reticulum, 3, 47
- Rhinosporidium Seeberi*, 64
- Rhipidium*, 50, 82, 98, 100  
*R. americanum*, 98 (Fig. 39)
- Rhizidiaceae, 60, 71 et seq., 82
- Rhizidiomyces apophysatus*, 72 (Fig. 19), 73
- Rhizina*, 200, 231, 236  
*R. inflata*, 231  
*R. undulata*, 231
- Rhizinaeae, 231, 235
- Rhizoclosmatium globosum*, 73 (Fig. 20), 74
- Rhizoctonia*, 23, 24
- Rhizoid, 50, 58, 67, 71, 73, 76, 78 (Fig. 25), 79, 81, 91, 94, 98, 133, 276
- Rhizoidal system, 50, 71, 74, 76, 78, 82, 276
- Rhizomorph, 1, 341, 346, 347, 350
- Rhizophidium*, 50, 71, 72, 73, 78  
*R. apophysatus*, 72 (Fig. 19)  
*R. brevipes*, 71 (Fig. 18)  
*R. goniosporum*, 72  
*R. pollinis*, 33, 34  
*R. septocarpoides*, 71 (Fig. 18)  
*R. sphaerocarpus*, 71 (Fig. 18)  
*R. sphaerotheca*, 33
- Rhizophlyctis vorax*, 34
- Rhizopogon*, 347, 351
- Rhizopus*, 32, 33, 56, 133, 362  
*R. nigricans*, 31, 127, 135  
*Rhyarobius*, 151, 217, 225
- Rhytisma*, 238, 360  
*R. Acerinum*, 241 (Fig. 177)
- Rind, 1
- Ring, 15, 16, 331, 339, 341
- Rodents, 15, 234, 345
- Roestelia, 310, 323
- Rosellina quercina*, 261
- Rotifers, 110
- Rots, 114, 227, 262. See also dry rot, fruit rot, heart rot and timber rot
- Rozella*, 69  
*R. septigena*, 69, 70 (Fig. 16)
- Rubber trees, 262, 334
- Rubus*, 261
- Russula fragilis*, 28
- Rust fungi, 3, 6, 7, 21, 29, 30, 41, 67, 286, 287, 291, 296, 302 et seq., 325. See also Uredinales
- Rye, 252, 320
- Saccharomyces*, 173, 175 (Fig. 103), 176  
*S. piriformis*, 18  
*S. validus*, 174 (Fig. 101)
- Saccharomycetaceae, 153, 167, 173 et seq. See also yeasts
- Saccharomycopsis*, 174  
*S. capsularis*, 175 (Fig. 103)
- Saccobolus*, 217  
*S. depauperatus*, 225  
*S. obscurus*, 225
- Safranin, gentian violet and orange G, 376, 380
- Safranin and light green, 367, 374, 380
- Safranin, polychrome methylene blue and orange tannin, 376, 379
- Saltations, 43, 155
- Salts, 31, 32, 33, 42, 90, 344, 362
- Saprolegnia*, 13, 51, 52, 55, 64, 90, 104, 105, 108, 109, 110  
*S. hypogyna*, 90, 108  
*S. mixta*, 30, 90  
*S. monoica*, 52 (Fig. 8), 104 (Fig. 44), 108, 109 (Fig. 48)  
*S. spiralis*, 70 (Fig. 16)  
*S. torulosa*, 104
- Saprolegniaceae, 56, 64, 90, 103, 104 et seq.
- Saprolegniales, 14, 50, 64, 68, 69, 91, 103 et seq., 110
- Sapromyces*, 50, 98  
*S. Reinschii*, 100 (Fig. 41), 101 (Fig. 42)

- Saprophyte, 1, **12**, 19, 20, 22, 23, 25, 29, 49, 57, 71, 74, 89, 91, 94 *et seq.*, 104, 111, 112, 114, 115, 116, 125, 137, 138, 139, 140, 142, 167, 176, 194, 204, 207, 209, 226, 227, 231, 238, 241, 242, 245, 248, 249, 254, 255, 261, 266, 267, 268, 296, 324, 325, 332, 337, 346, 362
- Saprophyte, facultative, **12**, 112, 361
- Saprophyte, obligate, **12**, 302, 361
- Saprophytism, **12**, 14. *See also* saprophyte
- Sargassum*, 254
- Schizophyllum*, 343
- S. commune*, 343
- Schizosaccharomyces*, **173**, 176
- S. Mellacei*, 175 (Fig. 103)
- S. octosporus*, 173, 175 (Figs. 102, 103)
- Schwanniomyces*, 176
- Scleroderma*, 345, 346, 353, 354
- S. vulgare*, 353 (Fig. 301), **354**
- Sclerodermaceae, 346, **353**
- Sclerospora*, 123
- S. graminicola*, 124 (Fig. 57), 125
- Sclerotinia*, 157, **227**, 359
- S. cinerea*, 227
- S. fructigena*, 227
- S. Gladioli*, 227, 228 (Figs. 162, 163)
- S. Ledi*, 30
- S. sclerotiorum*, 227
- S. trifoliorum*, 227
- S. tuberosa*, 226 (Fig. 161), 227
- Sclerotium, **1**, 2, 46, 178, 201, 226 (Fig. 161), 227, 241, 247, 250, 251, 252, 253, 262, 337
- Secondary mycelium, **154**, 159, 259 (Fig. 191), **287**, 288, 289, 290 (Fig. 228)
- Secotium*, 343
- Selaginella*, 26
- Self-compatibility, 41, 264, 288
- Self-fertility, 5, 182, 202, 211, 219, 224, 225, 246, 258
- Self-incompatibility, 5, 40, 41, 155, 182, 227, 246, 258, 264, 288, 312, 314
- Self-sterility, 5, 40, 155, 174, 213, 219, 246, 319, 331
- Septate basidium, *see* basidium, septate
- Septation in hyphae, *see* hyphae, septation in
- Septobasidium*, **325**
- Septolpidium*, 50
- Sepultaria*, 208
- S. coronaria*, 152 (Fig. 79)
- Sexual reproduction, **4**, 5, 7, 9, 38, 40, 41, **55**, 57, 68, 76, 77, 79, 84, 85, 86, 87, 89, 90, 94, 95, 96, 97, 98, 101, 103, 108, 109, 112, 116, 118, 119, 120, 121, 123, 125, 126 *et seq.*, 131 *et seq.*, 137, 138, 141, 142, 143, 147, **155**, 167, 169 *et seq.*, 170 (Fig. 94), 171 (Figs. 96, 97), 324; *and see* antheridium, apogamy, conjugation, euapogamy, fertilisation, gametangium, oogonium, parthenogenesis *and* pseud-apogamy
- Silver leaf, 21, 335
- Single spore cultures, 40, 41, 42, 127, 182, 213, 224, 246, 247, 289, 312, **365**
- Siphonaria variabilis*, **74**
- Sira medium, 374
- Sirobasidiaceae, 326
- Sirobasidium*, 284, 325, 326
- Slides, preparation of, **370**
- Slides, to clean, 381
- Sloe (*Prunus*), 20
- Smuts, 286, 288, **292** *et seq.*
- Soil fungi, **14**. *See also* fungi on soil
- Solanum Maglia*, 27
- Sommerstorffia*, 110
- Soot fungi, 195
- Sordaria*, 17, 35, 149, 151, 154 (Fig. 80), 257, **258** (Fig. 189)
- S. Brefeldii*, 259 (Fig. 191)
- S. fmicola*, **258**, 261 (Fig. 195)
- S. maxima*, 151
- Sordariaceae, 16, 256, **257** *et seq.*
- Sorosphaera Veronicae*, 46, 47
- Sorus, 44, 65, 66 (Fig. 13), 67, 68, 70 (Fig. 17), 292, 303, 307
- Sparassis*, 336
- Spathularia*, 234
- S. clavata*, 234 (Fig. 168), 235 (Fig. 169)
- Specialisation, **29**, 30, 45
- Spermatial hypha, 248 (Fig. 180), 307
- Spermatium, 5, 41, 201, 240 (Fig. 167), 241, 243, 246, 248, 259, 266, 268, 277 (Figs. 213, 214), 280, 281 (Fig. 218), 283, 303, 307 (Fig. 251), 313, 314, 322
- Spermatozoid, 4, 55, 95, 97
- Spermatogonium, 5, 242, 243, 248, 249 (Fig. 180), 268, 303, 306 (Fig. 250), **307**, 310, 312, 313, 318, 319, 320

## INDEX

445

- Spermophthora Gossypii*, 172 (Fig. 100)  
*Sphaelia*, 253  
*Sphaerella lacustris*, 34  
 Sphaeriaceae, 256, 258, 261, 262, 264  
 Sphaeriales, 242, 243, 244, 254 *et seq.*, 269  
*Sphaerita*, 45  
   *S. endogena*, 64  
*Sphaerobolus*, 346, 356  
   *S. stellatus*, 357 (Fig. 306)  
 Sphaeropsidales, 360  
*Sphaerosoma*, 200, 231  
   *S. fuscescens*, 231 (Fig. 165)  
   *S. Janczewskianum*, 232 (Fig. 166)  
*Sphaerotheca*, 181, 189, 190, 192, 194  
   *S. Humuli*, 159 (Fig. 85), 190 (Fig. 117), 191 (Fig. 118)  
   *S. pannosa*, 188 (Fig. 114)  
 Spindle, 3, 162, 163, 287, 289, 303  
 Spindle, origin of, 3  
 Spines, 37, 59, 77, 100, 115, 141, 334, 337, 352  
*Spirogyra*, 44, 61, 74, 83, 361  
*Spongospora subterranea*, 47, 48  
 Sporangial sac, 87, 88 (Fig. 33), 197  
 Sporangial vesicle, 54, 57, 67, 73, 74, 82 (Fig. 28), 83 (Fig. 29), 84, 86, 98, 99 (Fig. 39), 112, 113 (Fig. 49), 114, 118, 119, 130  
 Sporangium, 125, 126, 129, 136 (Fig. 65), 137, 138  
 Sporangiphore, 17, 33, 34, 35, 36, 51, 52, 53, 54, 89, 103, 111, 117 (Fig. 53), 118, 119, 120, 121 (Fig. 55), 122, 123, 124 (Fig. 57), 125, 126, 129 (Fig. 58), 130, 131, 137, 138, 140 (Fig. 67), 359  
 Sporangiospore, 49, 106 (Fig. 45), 125, 127, 136, 137, 140, 147, 148, 359  
 Sporangium, 7, 16, 34, 35, 39, 46, 49, 50, 51 *et seq.*, 56, 57, 58, 60, 62 (Figs. 10, 11), 63 (Fig. 12), 65, 68 (Fig. 14), 69 (Fig. 15), 71 (Fig. 18), 72 (Fig. 19), 73, 74 (Fig. 21), 75, 76 (Fig. 23), 77, 78 (Fig. 25), 80, 81 (Fig. 27), 82 (Fig. 28), 84, 85, 86 (Fig. 32), 87, 88, 89, 92 (Fig. 34), 93 (Fig. 35), 100 (Figs. 40, 41), 101 (Fig. 42), 103, 104 (Fig. 44), 105, 106 (Fig. 45), 107 (Fig. 47), 108, 110, 111, 112, 113 (Fig. 49), 114, 115 (Fig. 51), 116, 118, 119, 120, 121 (Fig. 55), 122, 123, 125, 126, 127, 129 (Fig. 58), 130, 132, 136 (Fig. 65), 137, 138, 139, 140 (Fig. 67), 141, 142, 147, 172 (Fig. 100)  
 Sporangium, dehiscence, 53, 54, 60, 126, 130, 131, 137  
 Sporangium, development, 51, 52, 53  
 Sporangium, functioning as a conidium, 7, 53, 89, 111, 112, 119  
 Sporangium, lidded, 54, 57, 58, 73, 75 (Fig. 22), 79, 82 (Fig. 28), 98  
 Sporangium, monosporous, 137, 138  
 Sporangium, renewal of, *see* proliferation  
 Sporangium, resting, 49, 66, 67, 68 (Fig. 14), 69 (Fig. 15), 70 (Figs. 16, 17), 72, 73 (Fig. 20), 78, 79, 80 (Fig. 26), 87, 88, 89, 100  
 Sporangium, undifferentiated, 114  
 Spore, 1, 2, 6, 7, 8, 9, 13, 19, 20, 23, 31, 32, 38, 39, 40, 42, 43, 44, 45, 46, 47, 49, 53, 54, 65, 72, 73, 74, 75, 80 (Fig. 26), 86 (Fig. 32), 87, 88 (Fig. 33), 89, 91, 92, 93, 94, 98, 125, 126, 127, 130, 131, 132, 133, 136 (Fig. 65), 138, 139, 140 (Fig. 67), 141, 142, 145, 146, 147, 173, 360; *and see* aecidiospore, amphispore, ascospore, basidiospore, brand spore, chlamydospore, conidium, oidium, sporangiospore, teleutospore, uredospore *and* zoospore  
 Spore, accessory, 7, 8, 38, 157, 194, 201, 204, 219, 255, 291, 312, 317, 319, 334. *See also* chlamydospore, conidium, oidium, sporangiospore *and* zoospore  
 Spore, bicellular, *see* ascospore, bicellular  
 Spore, dwarf, 258, 259  
 Spore, endogenous, 6  
 Spore, exogenous, 6  
 Spore, formation, 6, 46, 53, 88, 130, 140  
 Spore, germination, 19, 46, 47, 59, 126  
 Spore, giant, 259  
 Spore, morphology of, 9  
 Spore, muriform, 9  
 Spore ball, 88, 292, 293 (Fig. 230), 295, 301 (Fig. 243)  
 Spore forms, omission of, in Uredinales, 318

- Spore mother cell, **6**. *See also* aecidio-spore, ascus, basidium, teleuto-spore *and* uredospore
- Spore wall, **1**, **9**, 59, 80, 91, 92
- Spores, dispersal of, **6**, 15, 16, 30, 34, 35, 37, 46, 49, 51, 53, 54, 89, 106, 119, 120, 126, 130, 231, 234, 264, 304, 359
- Spores, liberation of, 7, 17, 53, 54, 56, 57, 58, 60, 71, 73, 77, 79, 80, 82 (Fig. 28), 87, 88, 94, 98, 105, 106 (Fig. 46), 108, 111, 112, 119, 140, 146
- Sporidium, 293, 306
- Sporobolomyces*, 286 (Fig. 226)
- Sporodinia grandis*, 39, 56, 126, 127, 129, 130
- Sporodochium, **360**
- Sporophlyctis*, 59
- S. rostrata*, 72
- Sporophore, 15, 35, 36, 37, **284**, 287, 289, **290**, 302, 324, 325, 326, 331, 332, 334, 335, 336 (Fig. 283), 337, 342 (Fig. 289), 345, 346, 347 (Fig. 290), 348 (Figs. 291, 292, 293, 294), 349 (Fig. 295), 350 (Fig. 296), 351 (Fig. 297), 352 (Figs. 298, 299), 353 (Figs. 300, 301), 354 (Figs. 302, 303), 355, 356 (Fig. 305)
- Sporophore, development of, 287, 340
- Sporophore, resupinate, **334**, 335 (Fig. 282), 336, 338, 343, 345
- Sporophore, stipitate, 325, 338 (Fig. 286)
- Sporophyte, 5, 6, 7, 23, 30, 40, 41, 42, 132, 157, 170, 173, 176, 249, 287, 291, 296, 299, 300, 312, 317, 319, 320, 331
- Sporormia*, **260**, 265
- S. bipartis*, 261 (Fig. 194)
- S. intermedia*, 260 (Fig. 192), **261**
- Staining, **373**
- Stains, composition of, 373 *et seq.*, 379, 380, 381
- Staling, 31, 32, 33, 34, 39
- Stalk, stalk cells, 158, 191, 193, 201, 203, 209, 213, 217, 221, 279, 315, 316, 317, 318, 319, 322
- Starch, storage of, 303
- Stephensia*, 236
- Stereum*, 37, **335**
- S. purpureum*, 335
- Sterigma, **9**, 122, 123, 124 (Fig. 57), 179 (Fig. 106), 180, 284, 300, 306, 326, 329, 337, 343, 346
- Sterile cell, 310 (Fig. 256), **311** (Figs. 257, 258)
- Sterilisation, **363**
- Stictaceae, **238**
- Stigeosporium Marattiacearum*, 120
- Stigmatea*, 265
- S. Robertiani*, 266
- Stigmatomyces*, 156, 276
- S. Baeri*, 278 (Fig. 215), **279** (Fig. 216)
- S. Sarcophagae*, 280, 282 (Fig. 220)
- Stimuli, interaction of, 38 *et seq.*
- Stimuli, reactions to, **30 et seq.**, 40, 155, 294
- Stink brands, 299
- Stinkhorn, 347
- Stipe, 35, 36, 37, **291**, 325, 331, 338, 339, 340, 341, 343, 344, 346, 349, 352
- Stomata, 20, 65, 122, 187, 241, 248, 309, 322
- Storage materials, 4
- Strains, 5, 29, 40, 41, 42, 127, 155, 182, 213, 219, 223, 228, 246, 258, 259, 288, 289, 294, 312, 322
- Strawberry mildew, 191
- Strickeria*, 264, 265 (Fig. 199)
- Stroma, **1**, 39, 187, 194, 195, 196 (Fig. 125), 227, 228, 229, 230 (Fig. 164), 238, 240, 243, 244, 247, 248, 249, 250, 251, 252, 253, 254, 255, 257, 265, 267, 268, 269 (Fig. 202), 272 (Fig. 205), 273, 325
- Stroma, stalked, 360
- Stropharia semiglobata*, 329 (Fig. 278)
- Stylospores, **138**
- Subhymenium, **6**, 200, 242, 331, 339
- Subsporangial swelling, 34, 73, 74, 118, 147
- Subterminal cell, 158
- Succession on dung, 16, 362
- Sugars, 4, 16, 18, 33, 38, 150, 167, 173, 174, 307, 357
- Sulphur bacteria, 12
- Suspensor, **126**, 131 (Fig. 59), 132 (Fig. 60), 133, 135, 138
- Symbiont, **12**
- Symbiont, obligate, **12**
- Symbiosis, 18, 21, **22**, 325, 346
- Syncephalastrum*, **140**, 141
- S. racemosum*, 140 (Fig. 67)
- Syncephalis*, **140**, 142
- S. nodosa*, **141** (Fig. 68)
- S. pycnosperma*, 140 (Fig. 67)
- Synchaetophagus*, 110
- Synchytriaceae, 60, **65 et seq.**, 68, 69

## INDEX

447

- Synchytrium*, 3, 21, 45, 59, **65**, 67  
*S. aureum*, 29, 67  
*S. decipiens*, 67  
*S. endobioticum*, 55, **65**, 66 (Fig. 13)  
*S. fulgens*, 67  
 Synzesis, 161, 303  
 Synkaryon, **287**, 288, 289, 303, 318  
 Synthetic media, *see* media, synthetic
- Tallow, fungi on, 17  
*Taphridium*, 197  
*T. algeriense*, 88  
*T. umbelliferarum*, 88  
*Taphrina*, 198  
*T. aurea*, 197, 198, 199 (Figs. 127, 128)  
*T. epiphylla*, 198  
*T. Klebahnii*, 199  
*Taphrinopsis*, 200  
*T. Laurencia*, 198  
*Taxus*, 132  
 Tea, 334  
 Technique, mycological, **361 et seq.**  
 Teeth, 291, 325, 331, 338  
 Teleutosorus, 316 (Fig. 267), **317**, 318, 319, 320  
 Teleutospore, **292**, 303, **304**, 305 (Figs. 246, 247, 248), 306 (Fig. 249), 315, 316, 317 (Figs. 268, 269), 319, 322, 323, 324  
 Teleutospore cell, 284, 306, 307, 319, 325  
 Temperature, influence on development, 31, 32, 33, 36, 38, 42, 111, 120, 123, 127, 150, 214  
*Terfezia olbiensis*, 184 (Fig. 112), 185 (Fig. 113)  
 Terfeziaceae, 15, 167, **185**  
 Terminal cell, 157 (Fig. 83), 158 (Fig. 84), 159, 166, 181, 184, 201, 287, 317, 331  
*Tetramyxa parasitica*, 47  
 Tetraploidy, 160, 205, 206, 212, 223  
 Tetrapolar species, **289**  
 Tetraspore mother cell, 291  
 Thallophyta, **1**  
 Thallus, evolution of, 49  
 Thallus, form of, 1, 49, 57, 58, 98  
*Thamnidium*, 359  
*T. elegans*, 42, 51, 129  
*Thecotheus*, 217  
*Thelebolus*, 217, 225  
*T. stercoreus*, **225** (Figs. 159, 160)  
*Thelephora*, 336  
*T. tabacina*, 335 (Fig. 282)
- Thelephoraceae, 286, 328, **334**  
*Thielavia basicola*, **178**  
*Thraustotheca*, 105  
*T. clavata*, 106 (Fig. 45), 108  
*Tilletia*, 294, **299**  
*T. caries*, 294 (Fig. 232), **299**, 300 (Fig. 241)  
*T. laevis*, **299**  
 Tilletiaceae, 296, **299 et seq.**  
 Timber rot, 335  
 Toadstools, 284, 332  
 Tobacco, 178  
*Tomentella*, 333, 334  
*T. flava*, 333 (Fig. 280)  
*Torulaspora*, 176  
 Touchwood, 14  
*Trachysphaera fructigena*, **119**  
 Trama, 37, **331**, 339, 354  
*Tremella*, 325  
 Tremellaceae, 37, 326  
 Tremellales, 284, 302, **325**  
*Tremellodon*, 37, 325  
 Trichogyne, 30, **156**, 180, 181, 184, 201, 203, 205, 206, 209, 212, 213, 214, 217, 219, 220, 223, 243, 244, 260, 266, 267, 271, 277, 279, 280  
 Trimethylamine, 299  
*Triphragmium*, 322, 323  
*T. Ulmariae*, 305 (Fig. 246)  
*Triticum*, 296  
 Trout, 148  
 Trout agar, 148  
 Truffle, 15, 238, 347  
 Tube cultures, **364**  
*Tuber*, 15, 151, 235, **236**, 238, 347  
*T. macrosporum*, 354  
*T. melanosporum*, 238  
*T. puberulum*, **237**, 239 (Fig. 175)  
*T. rufum*, 239 (Figs. 173, 174)  
 Tuberales, 235  
 Tuberales, 15, 201, **234 et seq.**  
 Tubes, 344  
*Tubercimia*, 295, **299**  
*T. primulicola*, 296, **301**  
*Tulostoma*, 352  
*T. mammosum*, 352 (Fig. 299)  
 Turpentine, 33  
*Typhula*, 337  
*T. erythropus*, 337  
*T. Trifolii*, 337
- Umbelliferae, 20, 87  
*Uncinula*, 190, 191  
*U. Aceris*, 189 (Fig. 116)

- Uniseriate spores, *see* ascospores, uniseriate
- Urea, 30
- Uredinales, 284, 290, **302 et seq.** *See also* rust fungi
- Uredinales, spore forms of, 302, **303 et seq.**, 318, 324
- Uredinopsis, 323
- Uredo, 304
- Uredosorus, **315** (Figs. 265, 266), 318
- Uredosorus, primary, 311 (Fig. 259), 313 (Fig. 262), 314 (Fig. 263), **315**, 318, 319, 320, 323
- Uredospore, 303, **315**, 317, 318, 319, 322, 323
- Uredospore mother cell, 315
- Urocystis, 299, 300
- U. Anemones*, 301 (Fig. 243)
- U. Fischeri*, 293 (Fig. 230)
- U. Viola*, 292
- Uromyces, **322**
- U. appendiculatus (Fabae)*, 305 (Fig. 246)
- U. Poae*, 303 (Fig. 244), 308 (Fig. 252), 309 (Fig. 254), 310 (Fig. 255), 313 (Fig. 261)
- Urophlyctis alfalfae*, **79**, 80 (Fig. 26), 81
- Urtica parvifolia*, 303
- Ustilaginaceae, **296 et seq.**
- Ustilaginales, 8, 21, 284, 285, **291 et seq.**
- Ustilaginales, classification of, 296
- Ustilago, **292, 296**
- U. antherarum*, 292, 294, 295 (Fig. 233), 298 (Fig. 239), 299
- U. Carbo*, **296** (Fig. 234), 297 (Fig. 235), 299
- U. Hordei*, 297 (Fig. 236)
- U. longissima*, 288
- U. Maydis*, 292, **297**, 298 (Figs. 237, 238), 301
- U. Scabiosae*, 293 (Fig. 231)
- U. Tragopogi-pratensis*, 299 (Fig. 240), 300
- U. Treubii*, 292 (Fig. 229)
- U. Vaillantii*, 297
- Vaccinium Myrtillus*, 336
- Vacuole, 2, 4, 44, 45, 53, 65, 87, 90, 105, 109, 164, 173, 328
- Vacuole, contractile, 45
- Valsa, 268
- Valsaceae, 256, **268**
- Vanda, 23
- Variation, **42**, 90
- Vaucheria piloboloides*, 43
- Vegetable tripe, 354
- Veil, 231, 233
- Velum parziale, **339**, 341
- Velum universale, **339**, 341
- Venturia inaequalis*, 267
- Veronica*, 47
- Verpa*, 232
- Vesicle, 1, 130
- Vesicle, sporangial, 54, 57, 67, 73, 74, 79, 82 (Fig. 28), 83 (Fig. 29), 84, 98, 99 (Fig. 39), 112, 119
- Vibrissia*, 234
- Vicia unijuga*, 60
- Victoria plum, 20
- Vine, mildew of, 123
- Viola*, 292
- Volutin, 173
- Volva, **339**, 341, 343, 345
- Wart disease, 65
- Water, influence on development, 33, 39, 60, 65, 89, 120
- Water, running, 13
- Wheat, 29, 30, 79, 320
- Wheat rust, 320, 322
- Wind, dispersal of spores by, 16
- Witch's broom, 21, 195, 197
- Wood, agents destroying, 14, 20, 247, 264, 342, 343, 344
- Wood, fungi on, **13**, 20, 207, 210, 231, 233, 238, 242, 245, 247, 250, 255, 261, 265, 268, 269, 324, 337, 341, 344
- Woronina*, 69
- W. polycystis*, 69, 70 (Fig. 17)
- Woroninaceae, 59, 60, 64, **67 et seq.**
- Woronin's hypha, 244
- Wound parasites, **20**, 344
- Xanthophyceae, 52, 78
- X-rays, 42
- Xylaria*, 244, 269, **273**
- X. Hypoxylon*, 36, 39, 270 (Fig. 203)
- X. polymorpha*, 273 (Fig. 207), 274 (Fig. 208)
- Xylariaceae, 256, **269 et seq.**
- Xylem, 14, 20, 247, 342
- Yeast forms, 126
- Yeasts, 1, 4, 6, 8, 17, 18, 27, 149, 195, 198, 286; *and see* Saccharomycetaceae
- Yeasts, phylogeny of, 175 (Fig. 103)



## INDEX

449

- Zaghouania*, 323, **324**  
*Zea Mays*, 292, 297  
*Zodiomyces*, 30, **280**  
*Z. vorticellarius*, 277, 281 (Fig. 218)  
 Zonation, 31  
 Zoopagaceae, 129, **141**  
*Zoopage phanera*, 142  
*Zoophagus insidians*, 110  
*Zoosporangium*, 7, 44, 51, 53, 57, 58, 59, 60, 61 (Fig. 9), 63, 64, 66, 68, 69, 70 (Fig. 16), 71 (Fig. 18), 74, 75, 78, 79, 84, 91, 92, 93, 94, 97, 98, 101, 103, 104 (Fig. 44), 105, 110  
*Zoosporangium*, primary, 104  
*Zoospore*, 1, 7 (Fig. 5), 20, 30, 31, 33, 34, 43, 44, 45, 47, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61 (Fig. 9), 62 (Fig. 11), 63, 64, 65, 66, 67, 68, 69, 71 (Fig. 18), 73, 74, 75 (Fig. 22), 76, 77, 78 (Fig. 25), 79, 80, 81, 82 (Fig. 28), 83 (Fig. 29),  
*Zoospore (cont.)*  
 84, 85, 86, 80, 91, 92, 93, 94, 95, 97, 101, 103, 105, 106 (Fig. 46), 108, 110, 111, 112, 114, 115, 118, 119, 120, 121, 123, 125  
*Zygomycetes*, 4, 5, 16, 50, 51, 53, 56, 57, **125 et seq.**, 142, 359  
*Zygomycetes*, classification, 125  
*Zygorhizidium*, 59, 75, 76  
*Z. Willei*, 56, **75** (Fig. 22)  
*Zygorhynchus*, 56, 135  
*Z. Moelleri*, 134 (Fig. 63), **135**  
*Zygosaccharomyces*, 173, 175 (Fig. 103)  
*Zygospor*, 39, 49, 56, **126**, 127, 128, 131 (Fig. 59), 132, 133 (Fig. 61), 134 (Fig. 62), 135 (Fig. 64), 137, 138, 139, 141 (Fig. 68), 142, 143, 144 (Figs. 69, 70), 145, 147  
*Zygote*, 4, 6, 44, 45, 46, 61, 62, 66, 67, 77 (Fig. 24), 79, 87, 93, 95, 127, 135, 139, 141, 143, 291  
*Zymase*, 17, 18