

INDEX

For particular plants reference should also be made to the classified notes in the following pages: vegetative organs, 152-79; pollination, 202-18; fruits and seeds, 228-38; trees, 407-20; climbing plants, 421-32; water-plants, 441-5; or under the proper Family in Section IV or Supplement.

For subjects see also the Table of Contents.

- Absciss layer, 401
 absorption of food by cotyledons, 243-4, 247, 251; of mineral salts, 88-95; of water, 69-77; by seeds, 262
 Aconite, Winter, 283
 Acorn, 246
 actinomorphic, 198
 adaptation, 105-11, 382-5
 adventitious roots, 9
 Agaricus, 490
 Agrimony, 233
 air in the soil, 76
 air-spaces, 34, 113, 116, 118, 498; in water-plants, 434
 Albugo, 489
 albuminous seeds, 247
 Alder, 413
 Algae, 469-81
 Almond, flower, 189; fruit, 381
 alternation of generations, 496, 510
 Amaryllidaceae, 360
 anaerobic life, 487
 anatomy, 112
 animal starch, 487
 androecium, 181, 186
 Anemone, 285
 Angiosperms, 375
 annual rings, 140, 393
 annuals, 181, 382
 anther, 182
 antheridiophore, 499
 antheridium, 494, 501, 509
 antherozoid, 476, 480, 495, 502, 509
 apex of root and shoot, 147-50
 apical growth, 4, 146, 265
 apocarpous, 378
 Apple, fruit of, 380
 archegoniophore, 499
 archegonium, 495, 500, 509, 513
 Arrowhead, 442
 Artichoke, Jerusalem, 168
 Arum, 216, 235
 ascospores, 486
 Ash, 418; leaf-fall, 402; woods, 460
 ash of plants, 15, 90
 Aspergillus, 485
 assimilating tissue, 115-22
 assimilation of carbon, 30
 associations, plant-, 447
 atmospheric pressure, 73
 autumn wood, 393
 available water, 75
 axil of leaf, 4, 7
 axile placentation, 224
 bacteria, 482; in soil, 95; nitrogen fixing, 96
 Banana, 235
 Barberry, 162; flower, 216
 bark, 141, 394
 basidiospore, 490
 bast, *see* phloem
 Bean, Broad, 97, 154, 324; Kidney, 239, 324; Runner, 154, 160, 246, 324, 423
 Beech, 394-6, 398, 414; woods, 460
 bee-flowers, 213
 Beet-root, secondary thickening of, 178
 berry, 226, 235, 381
 biennials, 172, 176
 Birch, 232, 412
 Birds, dispersal of seeds by, 220, 234, 238
 Bird's Nest Orchid, 369, 461
 Blackberry, fruit, 225
 Bladderwrack, 478
 bleeding, 72
 bogs, 462
 Bracken Fern, 505

- bracteoles, 298
bracts, 162
Bramble, 430
Brussels Sprouts, 174
Bryophyta, 493
budding of yeast, 487
buds, 3-9, 174
bulb, 42, 171-2
Burdock, 233
Burnet, 320
Butcher's Broom, 172
Butterbur, 353
Buttercup, 182-8, 179-81
butterfly-flowers, 214
Butterwort, 162
- Cacti, 173
calyx, 181; -tube, 192
cambium, 127, 403; -cylinder, 139
Canadian Water-weed, 437-9
Canterbury Bell, 217
capitulum, 211, 347
capsule, 219
carbohydrates, 40
carbon assimilation, 30
carbon dioxide, 15-17; produced
in respiration, 48
carbonic acid gas, *see* carbon
dioxide
carpels, 181, 183
Caryophyllaceae, 308
Castor-oil, seed and seedling, 247
catkins, 371
Celandine, Lesser, 281; root-
tubers, 177
cells, cell-sap, cell-wall, 79, 83
censer mechanism, 222
central cylinder, 129
Century Plant, 181, 362
Cherry, flower, 188; fruit, 220
Chestnut, Sweet, 414
chlorophyll, 35
chloroplasts, 116
circumnutation, 422
classification, 278
cleistogamous flowers, 218
climbing plants, 421-32
Clover, leaf-movements, 160, 161
coast vegetation, 465-8
Coconut, 381
cold, influence on plants, 74, 108
collenchyma, 125, 128
colloids, 46
colour of flowers, 208
Columbine, 285; floral diagram, 298
combustion, 18
Compositae, 346-55, 377
conducting tissues, 123-8, 135-
431, 438
conidia, 484, 489
conidiophore, 484
Conifers, 408
conjugation, 473, 483
Convolvulus, 215, 424
corm, 42, 169
corolla, 181; -tube, 192
cortex, 128
Cotton, 231; -grass, 231, 462
cotyledons, 240, 244, 514
Couch-grass, 166
Cranesbill, fruit, 237
Crocus corm, 169-71
cross-pollination, 188
Crowfoots, Water, 281, 443-4
Cruciferae, 303
crystalloids, 46
Cuckoo-pint, 216, 235
Currants, 225
cuticle, 115; loss of moisture
through, 103-5
cymose inflorescences, 309, 344
Cystopus, 489
- Dandelion, 10-11
Darwin, Charles, 290
Date, germination, 242-4; fruit,
235, 381
Deadnettle, 195-8
decay, 482
deciduous, 108, 387
decussate, 160
dehiscent fruits, 229
deserts, 384
dew, 101
diastase, 39, 46
dichasium, 309
dichogamy, 204
Dicotyledons, 374
digestion, 39
dioecious, 204
disease, 482
dispersal, 470
Dock, stipules, 157; flower, 201,
202; fruit, 232
Dodder, 178
Dog-rose, 190-2
dominant species, 449
dormant buds, 9
Dragon Tree, 359
drip-tip, 159

- drought, protection against, 109
 drupe, 234, 381
 dwarf-shoots, 173, 395
- Ecology, 385, 446–68
 egg-cell, 255, 476
 Elder, 419; berry, 381
 elements, essential, 94
 Elm, 415
 Elodea, 437–9
 embryo, 241; -sac, 255
 endodermis, 129
 endogenous origin of roots, 150
 endosperm, 244, 256
 energy, liberated in combustion, 20; stored during photosynthesis, 36–7
 environment, 383
 enzymes, 39, 46
 ephemerals, 181, 382
 epicalyx, 317
 epidermis, 33, 115, 128
 epigynous, 318
 epiphytes, 369
 etiolation, 260
 Eurotium, 485
 evergreens, 387, 399
 evolution, 290; of seed plants, 515–7
 exalbuminous, 245
 exodermis, 146
 exogenous origin of leaves and branches, 150
 explosive fruits, 236
- fallow, 96
 Family, 289
 fens, 449, 463
 fermentation, 487
 ferments, *see* enzymes
 Ferns, 375, 505
 fertilisation, 252, 256, 477, 480
 fibres, 126
 Fig, 236, 381
 Figwort, 339
 filament, 471
 Firs, 400, 410
 floral diagram and formula, 297
 flower-buds, 175
 follicle, 230, 284
 food of plants, 16; substances, 43
 forms of plants, 385
 free central placentation, 228, 313–4
 fruits, 184; aggregate, 235; com-
- pound, 225, 235; morphology of, 378–81
 Fucus, 477
 Funaria, 500
 Fungi, 482–492
- gamopetalous, *see* sympetalous
 gamosepalous, *see* sepals, joined
 gaseous exchange, 54
 gemma, 497
 genus, 280
 geotropism, 272; of twining stems, 423
 Geranium, 217, 237
 germination, 49, 239; conditions of, 258
 gluten, 44
 glycogen, 487
 Gooseberry, flower, 212; fruit, 235; spines, 157
 Gorse-seedling, 155
 Gourd, germination, 245
 grafting, 403
 grain of timber, 406
 Grass, 6–9; flower, 199; stigma, 252; seed, 230; of Parnassus, 217
 grassland, 457
 gravity, 269
 growing points, structure of, 146
 growth, 264; direction of, 266; -curvatures, 266
 Guelder-rose, 210, 420
 Gymnosperms, 375
 gynaecium, 181, 186
- habit, 12
 hairs, 105, 106
 halophytes, 465
 Harebell, fruit, 229
 haustorium, 178, 489
 Hazel, 413; pollination, 200–1
 heart-wood, 405
 Heather, pollination, 215
 heaths, 461
 heliotropism, 274–5
 heredity, 291, 496
 hermaphrodite, 204
 heterostyly, 215
 Holly, 399; fruit, 381
 honey-glands, *see* nectaries; -guides, 209; -leaves, 283
 Honeysuckle, 214, 235
 hook-climbers, 430
 hooked fruits, 233

Cambridge University Press

978-1-107-58631-4 - Botany: A Senior Text-Book for Schools

D. Thoday

Index

[More information](#)

INDEX

521

- Hop, 421-3
 Hornbeam, 414; fruit, 232
 Horse-chestnut, 387-94, 418; pro-
 togyne, 206; leaf-fall, 401
 humus, 17
 hybrids, 292, 335
 hygrophytic plants, 383
 hypocotyl, 244

 immunity, 490
 indehiscent fruits, 229
 infection, 483
 inferior ovary, 224
 inflorescence, 209
 infructescence, 236, 381
 insectivorous plants, 162
 insects that visit flowers, 207
 integument, 254
 involucre, 211
 Iridaceae, 362
 iron, necessary for formation of
 chlorophyll, 94
 irritability, 272
 Ivy, 430; leaf-mosaic, 23

 Kidney Bean, seed and seedling,
 239-41; flower, 324
 klinostat, 270
 knots, 406

 Labiatae, 342
 Lady's Mantle, 320
 Larch, 410
 Larkspur, 286
 latex, 301, 352
 leaf, parts of, 157; compound,
 157; structure of, 115, 120-2,
 135-6; -mosaic, 23; -fall, 401;
 -scars, 388; -spines, 162; -ten-
 drils, 162, 425
 leaflet, 157
 leaves, arrangement of, 22, 159;
 forms of, 158, 442; origin of,
 149; rolled, 107, 461
 legume, 324
 Leguminosae, 322; root-nodules,
 97
 lenticels, 390
 ligule, 7, 511
 Liliaceae, 356
 Lime, 396-7, 416
 Ling. grooved leaves, 107
 Liverworts, 493
 Loosestrife, Purple, 215; Yellow,
 336

 Lousewort, 341
 Lunularia, 497

 Maize, stem, 143-5; grain, 250
 manures, 95
 Maple, 417
 Marchantia, 497
 Marigold, 353; Marsh, 294
 marsh plants, 109, 445, 464
 meadows, 459
 mechanical tissues, 126; arrange-
 ment in stems and roots, 133;
 of leaves, 135-6
 medullary rays, 129, 392, 398
 megaspore, 512
 mesophytes, 384
 micropyle, 240
 microspore, 512
 mildews, 482
 mineral salts, absorption of, 88
 Mistletoe, 178
 modified leaves, 161; shoots, 164;
 roots, 176
 Monkshood, 213, 286; floral dia-
 gram, 298
 Monocotyledons, 374; stems and
 roots of, 143-6; seedlings of,
 249
 monoecious, 204
 moors, 461
 Mosses, 375, 493
 moth-flowers, 214
 moulds, 482
 Mountain Ash, 419; fruit, 379
 movements of leaves, 160-1
 Mucor, 482
 Mucor yeast, 488
 Mullein, 339
 multiplication, 470
 mushroom, 490
 mycelium, 482

 natural selection, 294
 nectar, protection of, 212
 nectary, 182
 needle-leaves, 400
 Nigella, fruit, 295
 nitrates, 95
 nitrogen, 20; fixation of, 96-7
 nodules of leguminous plants, 97
 nucellus, 254
 nucleus, 82
 nuts, 238

 Oak, 414; woods, 458

- oily seeds, 44–5
 Onion bulb, 172; seedling, 249
 oogonium, 476
 oospore, 477
 opposite leaves, 160
 optimum temperature, 384
 Orchidaceae, 365
 origin of species, 290
 osmosis, 79; and absorption, 85
 osmotic membranes, 80; pressure, 82
 ovary, 183; forms of, 228
 oxygen, 20; given off in photosynthesis, 25, 26, 37
- palisade parenchyma, 116
 palmate leaves, 158
 Pansy, fruit, 222; seed, 247
 Papaveraceae, 300
 pappus, 349
 parasites, 178
 parasitism of sporogonium, 495–496
 parenchymatous tissue, 114
 parietal placentation, 224
 peat, 109
 Pellia, 493
 Penicillium, 484
 perennation, 164
 perennials, 180, 382
 perianth, 181
 pericarp, 381
 pericycle, 129
 periderm, 391
 perigynous, 318
 perithecium, 485, 486
 Peronospora, 489
 petiole, 157
 phloëm, 126
 photosynthesis, 30, 35–37; sugar first product of, 40; in dry situations, 110
 phototropism, 274–5
 piliferous layer, 130
 Pimpernel, 229, 336
 Pine, 408; germinations, 248
 Pineapple, 236
 Pinus, 515
 pinnate leaves, 158
 pinna, 505
 pith, 129
 placentation, free central, 193; axile and parietal, 224
 Plane, 417
 plant communities, 446
- Plantain, 158, 206, 229
 plasmolysis, 84
 Pleurococcus, 470
 plumule, 240
 pollard Willows, 411
 pollen-flowers, 211; -tube, 252
 pollination, 186, 188; special mechanisms for, 215
 pome, 381
 ponds, 464
 Pondweed, 441
 Poplars, 411
 Poppy, See Horned, 304, 468
 Potato tubers, 112, 152–4, 167
 potometer, 65
 pressure of the atmosphere, 73
 prickles, 430
 Prickly Pear, 173
 Primrose, 192–5; Evening, 214
 Primulaceae, 334
 propagation, vegetative, 641
 protandrous, 206
 proteins, tests for, 44
 prothallus, 508, 513
 protogynous, 206
 protonema, 503
 protoplasm, 82, 88
 protoxylem, 148
 Pteridophyta, 505
 pyrenoids, 471
- racemes, 210
 radical leaves, 160
 radicle, 241
 Ranunculaceae, 278–90, 295–6, 376–7
 receptacle, 183, 189
 reproduction, 180
 respiration, 47–54; and photosynthesis, 54–6
 rhizoid, 493, 501
 rhizome, 165, 505
 rolled leaves, 107, 461
 root-cap, 149; -climbers, 430; -hairs, 69, 78; -nodules, 97; -parasites, 179; -pressure, 71, 85; -tubers, 176
 roots, secondary growth of, 141; structure of, 129; lateral, origin of, 149
 Rosaceae, 315
 rosette-plants, 11, 169
 rotation of crops, 97
 runner, 165
 Runner Bean, 423; germination, 246

- Ruscus*, 172
- Salicaceae, 370, 410
 salt in soil, effect of, 111
 salt marshes, 465
 sand-dunes, 467
 saprophytism, 483
 saprophytes, 369
 sap-wood, 405
 Scabious, 210
 scale-leaf, 161
 scent of flowers, 208
 schizocarp, 229
 Scrophulariaceae, 337
 scutellum, 250
 Sea Holly, 333
 Sea Horned Poppy, 304, 468
 seaweeds, 375, 478
 secondary growth, 137–43
 section cutting, 112, 115
 seed-dispersal, 228; -leaves, 241, 244
 seeds, 239; properties of, 258
 Selaginella, 511
 self-pollination, 188, 217
 self-sterile, 188
 Sensitive Plant, 327
 sepals, 181; joined, 192
 septum, 224
 sessile, 157
 shoots, 2, 7, 163; modified, 164–74; short, or dwarf, 173, 396
 shrubs, 400
 sieve-tube, 126
 silicule, 305
 silique, 305
 sleep-movements of leaves, 160
 sling-fruits, 236
 social flowers, 211
 societies of plants, 447
 soil, 75; water-logged, 76; kinds of, 452
 Solomon's Seal, rhizome, 167
 Sorrel, flowers, 204; Wood, 160, 215, 218, 237
 spathe, 216
 Spearworts, 281
 specialised flowers, 198
 species, 278
 spectrum, 36
 Speedwell, 340
 spike, 210
 spines, 155, 157, 162, 173
 Spirogyra, 471
 spongy tissue, 116
 sporangia, 483, 507
 spores, 473, 483, 496
 sporogonium, 494, 500
 spring flowers, 356, 456
 spring wood, 393
 Spruce, 410
 spur, 216
 stamens, 181
 staminode, 339
 starch formation, 28; formed by chloroplasts, 117, 494, by pyrenoids, 471; iodine test for, 29; a reserve product, 41; grains, 113; sheath, 129
 stems, structure of, 123; functions of, 163
 stem-tendrils, 427; -tubers, 167–8
 stigma, 183
 stimuli, response to, 476
 stimulus, 272
 stipular bud-scales, 396
 stipules, 157
 stomata, structure of, 119; regulate transpiration, 67–8; and photosynthesis, 34
 stone-fruits, 381
 Stonecrop, 162
 storage of food-materials, 42; organs, 42
 Stork's-bill fruit, 237
 Strawberry, 225
 struggle for existence, 294
 style, 183, 193
 succession, 455, 464–7
 succulent fruits, 225; leaves, 162; plants, 110, 173
 sugar, 40
 Sundew, 163
 Sunflower, 1–5; structure of stem, 123–9; secondary growth, 137–9
 suspensor, 256, 513
 Sweet Pea, 425; fruit, 221
 Sycamore, 417; fruit, 223
 Sympetalae, 374, 376
 sympetalous, 376
 syncarpous, 296
 tap-root, 11; tuberous, 176
 tendril, 425
 terminal bud, 397
 thallus, 478, 493
 thorns, 173
 tissues, 112; development of, 146
 Toadflax, Ivy-leaves, sowing mechanism, 237
 Tobacco flower, 214

Cambridge University Press

978-1-107-58631-4 - Botany: A Senior Text-Book for Schools

D. Thoday

Index

[More information](#)

524

Tomato, 378
 tracheid, 147
 transpiration, 57-68
 trap-flowers, 216
 trees, 107
 tropism, 272
 tropophytes, 384
 tuber, 42, 153, 168
 Tulip bulb, 171-2
 turgidity, 84
 twining plants, 421

 umbel, 329
 Umbelliferae, 328
 unisexual flowers, 203

 variation, 291
 vascular bundle, 63, 128
 vascular tissue, 506, 511
 Vaucheria, 474
 vegetation maps, 454
 venation of leaves, 135-7, 158
 vessels, 124, 147
 Violet, 215-6, 247
 Virginian Creeper, 428; leaf-fall, 402
 vittae, 331

 Walnut, 381, 414
 water, proportion of, in plants,
 15; absorbed by seeds, 262;
 protection against loss of, 104-
 11; loss of, through cuticle,
 60, 103; dispersal by, 236

INDEX

Water Crowfoot, 444
 water-culture, 90
 Water-lilies, 236, 433-7
 water-plants, 433-45; associa-
 tions of, 464
 weeds, 448
 Willow-herb, 217, 224
 Willows, 370, 411; Alpine, 400
 wilting of leaves, 102-3
 wind-dispersal, 229; -pollinated
 flowers, 198
 winter, protection of plants in
 108; -buds, 174, 388
 wood, 124
 Wood Sorrel, 160, 215, 218, 237
 woodland, 456
 wounds, healing of, 402

 xeromorphy, 107
 xerophytes, 383
 xylem, 124

 Yellow-rattle, 341; winged seed,
 232
 Yeast, 487
 Yew, 410
 Yucca, 410

 zonation, 455, 465
 zoospore, 474
 zygomorphic, 197
 zygosporium, 473, 483