

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

(346)

INDEX.

ACANTHACEÆ.

A.

- Acanthaceæ*, 313
Acer campestre, 12, 308
Adoxa, 9
Ægiphila elata, 123
 ——— *mollis*, 123
 ——— *obdurata*, 124, 286
 Alefeld, Dr., on *Linum*, 100
Alisma natans, 311
Amphicarpæa, 327
Amsinckia spectabilis, 110; variability in length of stamens and pistil, 261, 266
Anchusa arvensis, 111
Androsace vitalliana, 53
 Anthers, size of, in different forms, 252; contabescent, 283
Arachis, 312
Arnebia hispidissima, 111
 Ascherson, Dr., on *Salvia cleistogama*, 313, 340; *Juncus bufonius*, 332; *Leersia oryzoides*, 335
Asclepias, 337
 Ash, the common, 11
Asperula scoparia, 285
 Axell on *Primula stricta*, 50

B.

- Babington, Prof., on *Primula elatior*, 72; *Stellaria graminea*, 313
 Baillon, emission of the tubes from pollen-grains, 337
 Belhomme, M., on ray-florets, 6
 Bennett, A. W., on *Impatiens fulva*, 327; flowers fertilised whilst in the bud state, 342
 Bentham, Mr., on the differentiation of the sexes, 11

COROLLA.

- Bentham, Mr., on the cleistogamic flowers of *Ononis*, 326
Boraginææ, 101
 Boreau on cowslip and primrose, 57
Borreria, 127
 Bouché on *Pavonia*, 313; effect of temperature and light on corolla, 342
Bouvardia leiantha, 135
 Braun on *Dracocephalum*, 299
 Breitenbach, W., on *Primula elatior*, 34, 272
 Bromfield, Dr., on primrose and cowslip, 57; *Primula elatior*, 73; *Specularia perfoliata*, 330
 Brown, Robert, on sexual changes, 282
 Buckwheat, the common, 111

C.

- Caltha palustris*, 13
Campanula colorata, 330
Cardamine amara, 307
 Caspary, Prof., on *Rhamnus catharticus*, 294
Cattleya, 313
Chamissoa, 292
Cinchona micrantha, 134
 Cleistogamic flowers, 310; list of genera, 312; on their origin, 343
Cnicus acaulis, 307
 ——— *palustris*, 307
Coccocypselum, 133; pollen-grains of, 250
Coprosma, 285
Cordia, 117; pistil of, 253
 Corolla, difference in size in the sexes of the same species, 307-309

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

INDEX.

347

CORYDALIS.

- Corydalis*, 146
Corylus avellana, 10
 Cowslip, the common, 14; short- and long-styled, 19-22, 56-71
Cratoxylon formosum, 123
 Crocker, C. W., on *Plantago lanceolata*, 306
Cryptostachys, 313, 332
Cuphea purpurea, 163

D.

- Darwin, Charles, on reproductive organs under cultivation, 7; intercrossed plants, 30; prepotency of pollen, 62; insects fertilising flowers, 79; *Cephalanthera grandiflora*, 98; *Epidendron* and *Catleya*, 313; number of pollen-grains, 338

—, W., on *Pulmonaria angustifolia*, 105, 107

Datura arborea, 251

- Delpino, plants fertilised by the wind, 10; on the walnut, 10; *Polygonaceæ*, 114; pollen-grains, 250; *Thymus serpyllum*, 299; closed or cleistogamic flowers, 311, 337; *Viola odorata*, 317

Dianthus barbatus, 30

Dickie, Dr., on *Eriophorum angustifolium*, 307

Dictamnus fraxinella, 146

Diodia, 135

Dioecious and sub-dioecious plants, 287

Discospermum, 286

Doubleday, H., on *Primula elatior*, 73

Dracocephalum Moldavicum, 299

Drosera Anglica, 329, 342

— *rotundifolia*, 328

Duval-Jouve, M., on *Cryptostachys*, 313; *Leersia oryzoides*, 333, 334

Dyer, Thiselton, on *Salvia Horminum*, 8; *Cratoxylon formosum*, 123

E.

- Echium vulgare*, 111, 305, 307
Epidendron, 313

GRAY.

- Epigæa repens*, 297
Eranthemum ambiguum, 329
Eriophorum angustifolium, 307
Erythroxyllum, 121; pollen-grains of, 250
Euonymus Europæus, 287-293
Euphrasia officinalis, 4
Euryale, 311

F.

- Faramea*, 128; pollen-grains of, 129
 Fitzgerald, Mr., on *Thelymitra*, 313
Forsythia suspensa, 117; stamens, 252
 — *viridissima*, 117
Fragaria Chilensis, 293
 — *elatior*, 293
 — *vesca*, 293
 — *Virginiana*, 293
Fraxinus excelsior, 11

G.

- Galium cruciatum*, 286
 Gärtner on the sterility of unions between distinct species, 29; *Primula vulgaris* and *veris*, 58, 59; hybrid *Verbascums*, 76, 77, 80; prepotency of pollen, 241; variation in the sexual powers of plants, 267; contabescent anthers, 193, 285
Gentianææ, 115
Geraniaceæ, 169
Geranium sylvaticum, 308
Gesmeria pendulina, 261
Gilia aggregata, 118
 — *coronopifolia*, 119
 — *micrantha*, 119
 — *nudicaulis*, 119
 — *pulchella*, 118
 Gillibert on *Menyanthes*, 311
 Gloriosa Lily, the, 146
 Godron on hybrid *Primulas*, 55
 Gray, Prof. Ása, proposes the term *heterogone* or *heterogonous*, 2; on *Linum*, 101; *Leucosmia Burnettiana* and *acuminata*, 114; *Forsythia suspensa*, 117; *Gilia pulchella*, 118; *G. coronopifolia*,

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

348

INDEX.

GYNO-DICEIOUS.

119; *Phlox subulata*, 119; *Mitchella repens*, 125; heterostyled plants, 244; *Coprosma*, 285; *Eunymus*, 287; *Rhamnus lanceolatus*, 295, 296; *Epigæa repens*, 297; *Ilex opaca*, 298; *Plantago media*, 307; *Oxybaphus* and *Nyctaginta*, 313; *Impatiens fulva*, 328; *Leersia*, 334; cleistogamic flowers, 342

Gyno-diceious plants, 298

H.

Hart, Mr., on *Nepeta glechoma*, 301
Hautbois Strawberry, the, 293

Hedyotis, 133Henslow, Rev. Prof., on hybrid *Primulæ*, 61

Henslow, Rev. G., on flowers self-fertilised during the winter, 343

Herbert, Dr., on hybrid *Primulæ*, 61

Heterostyled plants, illegitimate offspring of, 188-243; essential character of, 244; summary of the differences of fertility between legitimately and illegitimately fertilised plants, 246; diameter of pollen-grains, 249; size of anthers, structure of stigma, 252; list of genera, 255; advantages derived from Heterostylism, 258; means by which plants became heterostyled, 260; transmission of form, 268; equal-styled varieties, 272; final remarks, 275

— dimorphic plants, 14-54, 81-136

— trimorphic plants, 137-187

Hibiscus, pollen-grains, 338

Hildebrand, Prof., introduces the word "heterostyled," 2; on the ray-florets of the *Compositæ*, 5, 6; *Primula Sinensis*, 38, 40-43, 192, 217; *Linum grandiflorum*, 86, 87; *L. perenne*, 92; *Pulmonaria officinalis*, 101-103, 107, 239; *P. azurea*, 110; *Polygonum fagopyrum*, 111; *Oxalis*, 169, 171-174, 178, 182, 211-213, 322; herma-

KERNER.

phrodite plants becoming unisexual, 283; *Hordeum*, 333

Homostyled species of *Primula*, 49Hooker, Dr., on *Campanula*, 330*Hordeum*, 332*Hottonia inflata*, 53, 313— *palustris*, 50; relative fertility, 52; anthers of, 252; papillæ on stigma, 254*Houstonia cœrulea*, 132, 254*Hoya carnosa*, 331Hybrid *Primulas*, 55-71*Hydrangea*, 6, 7*Hypericineæ*, 123*Hyssopus officinalis*, 299

I.

Ilex aquifolium, 297— *opaca*, 298

Illegitimate offspring of heterostyled plants, 188; *Lythrum salicaria*, dwarfed stature and sterility, 192; *Oxalis*, transmission of form to seedlings, 212; *Primula Sinensis*, in some degree dwarfed, 215; equal-styled varieties, 218-223; *Primula vulgaris*, 224; transmission of form and colour, 225; seedlings, 227; *P. veris*, 228; dwarfed stature and sterility, 229-234; equal-styled varieties, 234, 238; parallelism between illegitimate fertilisation and hybridism, 242

Illecebrum, 311*Impatiens*, pollen-grains of, 338— *balsamina*, 328— *fulva*, 327— *noli-me-tangere*, 328

J.

Juglans regia, 10*Juncus bufonius*, 332, 343Jussieu, A. de, on *Malpighiaceæ*, 331

K.

Kerner, Prof., on ray-florets, 6; *Auricula*, 43; hybrid forms of *Primula*, 55, 73; on use of hairs within

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

INDEX.

349

KIRK.

- the corolla, 128; size of corolla in male flowers, 309; use of glands as a protection to flowers, 331
 Kirk, Dr., on *Monochoria vaginalis*, 331
Knoxia, 135
 Koch on *Primula longiflora*, 50
Krascheninikowia, 312
 Kuhn, Dr., on cleistogamic flowers, 3, 310, 311; list of plants producing differently formed seeds, 9; heterostyled plants, 244; *Vandellia nummularifolia*, 324; *V. sessiflora*, 325

L.

- Lagerstrœmia Indica*, 167
 — *parviflora*, 168
 — *reginæ*, 168
Lathyrus nissolia, 326, 342
 Lecoq, H., on the common maple, 12; cowslips and primroses, 57; *Primula elatior*, 72; *Linum Austriacum*, 98; *Lythrum hyssopifolia*, 166; *Rhamnus*, 296; gynodioecious plants, 299; *Scabiosa succisa*, 305; *Viola odorata*, 317
Leersia oryzoides, 333-335; pollen-grains of, 338
 Leggett, Mr., *Pontederia cordata*, 187
 Legitimate unions, summary on the fertility of the two, compared with that of the two illegitimate in *Primula*, 46-49; fertility of, compared with illegitimate, 246
 Leighton, Rev. W. A., on the cowslip and primrose, 56; *Verbascum virgatum*, 78
Leontodon, pollen-grains, 338
Leptosiphon, 119
Leucosmia acuminata, 114
 — *Burmettiana*, 114; stigma, 253
 Lily, the *Gloriosa*, 146
Limnanthemum Indicum, 116; pollen-grains, 250; anthers, 252
Linaria spuria, 325
 Lindley on *Fragaria elatior*, 293
 Linnæus on *Primula veris*, *vulgaris*, and *elatior*, 56
Linum angustifolium, 100

MENYANTHES.

- Linum Austriacum*, 97
 — *catharticum*, 100
 — *corymbiferum*, 100
 — *flavum*, 81, 98; stamens, 252
 — *grandiflorum*, 81; various experiments, 87-89, 96; pistils and stamens, 253, 254; sterile with its own-form pollen, 264, 266
 — *Lewisii*, 101
 — *perenne*, 90; torsion of the styles, 95; long-styled form, 97; stigma, 247
 — *salsoloides*, 100
 — *trigynum*, 100
 — *usitatissimum*, 100
Lipostoma, 134
Lysimachia vulgaris, 4, 342
Lythrum Græfferi, 165
 — *hyssopifolia*, 166
 — *salicaria*, 116, 137; power of mutual fertilisation between the three forms, 149-157; summary of results, 157-165; illegitimate offspring from the three forms, 191-203; concluding remarks on, 203-211; mid-styled form, 241, 257, 258, 280; seeds, 248
 — *thymifolia*, 165

M.

- Malpighiaceæ*, 331
Manettia bicolor, 135
 Maple, the common, 12
 Marshall, W., on *Primula elatior*, 73; *Plantago lanceolata*, 306
 Masters, Dr. Maxwell, on cleistogamic flowers, 3
 Maximowicz on *Krascheninikowia*, 312
 Meehan, Mr., on *Mitchella*, 285; *Epigæa repens*, 297
Melissa clemnoidium, 299
 — *officinalis*, 299
 Mello, Correa de, on *Arachis*, 312; *Voandzeia*, 327
Mentha aquatica, 299
 — *hirsuta*, 298
 — *vulgaris*, 298
Menyanthes, 311
 — *trifoliata*, 115

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

350

INDEX.

MICHALET.

- Michalet on *Oxalis acetosella*, 321 ;
Linaria spuria, 325
Mitchella, 285
 — *repens*, 125
 Mohl, H. von, on the common
 cowslip, 14 ; size of corolla in the
 sexes of the same species, 307,
 308 ; *Trifolium* and *Arachis*, 312 ;
 cleistogamic flowers, 314, 342 ;
Oxalis acetosella, 321 ; *Impatiens*
noli-me-tangere, 320 ; *Specularia*
perfoliata, 330
Mollia lepidota, 168
 — *speciosa*, 168
 Monnier, M., on *Viola*, 318
Monochoria vaginalis, 330
 Mulberry, the, 10
 Müller, D., on *Viola canina*, 314
 Müller, Fritz, on pollen of the *Vil-*
larsia, 116 ; *Faramea*, 128–130 ;
Posoqueria fragrans, 131 ; *Nesaea*,
 167 ; *Oxalis*, 180, 181 ; *Pontederia*,
 183–185 ; *Oxalis Regnelli*, 212 ;
Chamissoa, 292
 Müller, H., on the frequency of
 visits by insects to the *Umbelli-*
feræ and *Compositæ*, 5 ; on dichogamy,
 10 ; on *Anthophora* and
Bombylus sucking the cowslip,
 22 ; *Primula elatior*, 32 ; *P. villosa*,
 49 ; *Hottonia palustris*, 51 ; table
 of relative fertility of, 52, 53 ;
Linum catharticum, 100 ; *Polygonum*
fagopyrum, 113 ; *Lythrum*
salicaria, 145 ; on the origin of
 heterostylism, 263 ; on the *La-*
biatæ, 299, 304 ; *Thymus serpyllum*,
 300 ; *Scabiosa arvensis*, 305 ; *Plan-*
tago lanceolata, 306 ; size of corolla
 in the two sexes of the same
 species, 308 ; *Impatiens balsa-*
mina, 328 ; *Lysimachia*, 343
Myosotis, 308

N.

- Nepeta glechoma*, 301
Nertera, 285
Nesaea verticillata, 167
Nolana prostrata, variability in
 length of stamens and pistil, 261
Nyctaginia, 313

POLEMONIACEÆ.

O.

- Oldenlandia*, 132
Oleaceæ, 117
 Oliver, Prof., on ovules of *Primula*
veris, 17 ; *Viola*, 318 ; *Campanula*
colorata, 330
Ononis colummæ, 325
 — *minutissima*, 326, 341
 — *parviflora*, 326
Origanum vulgare, 298
Oxalis acetosella, 181, 182 ; pistil of,
 261 ; cleistogamic flowers, 321 ;
 pollen-grains, 338
 — *Bowii*, 179
 — *compressa*, 179
 — *corniculata*, 181
 — *Deppei*, 179
 — *hedysaroides*, 213
 — homostyled species, 181
 — *incarnata*, 322
 — *Regnelli*, 173–175, 212
 — *rosea*, 178, 213
 — (*Biophytum*) *sensitiva*, 181,
 322 ; stigma, 253
 — *speciosa*, 169, 175, 212
 — *stricta*, 181, 182
 — *tropæoloides*, 182
 — *Valdiviana*, 170–172, 211, 212
 Oxlip, the Bardwell, 32, 72
 —, the common, 55 ; differences
 in structure and function between
 the two parent-species, 56 ; effects
 of crossing, 60 ; a hybrid between
 the cowslip and primrose, 70
Orybaphus, 313

P.

- Pæony, pollen-grains of, 338
 Parallelism between illegitimate and
 hybrid fertilisation, 239
Pæonia, 313
Phlox Hentzii, 120
 — *nivalis*, 120
 — *subulata*, 119, 287
 Planchon on *Linum salsoloides*, 100 ;
L. Lewisii, 101 ; on *Hugonia*, 100
Plantago lanceolata, 306
 — *media*, 307
Polemoniaceæ, 118

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

INDEX.

351

POLLEN-GRAINS.

- Pollen-grains, relative diameter of, 249
- Polyanthus*, 18
- Polygonaceæ*, 111
- Polygonum bistorta*, 114
- *jagopyrum*, 111, 239; pollen-grains, 251
- Pontederia*, 183; pollen-grains, 186; size of anthers, 252
- *cordata*, 187
- Posoqueria fragrans*, 131
- Primrose, the common, 34, 57–71
- Primula*, the, heterostyled species of, 14; summary on, 45–49; homostyled species, 49
- *auricula*, 30, 43, 48, 74, 223
- equal-styled varieties, 273
- *cortusoides*, 44
- *elata*, 49
- *elutior*, Jacq., 32; relative fertility of the two forms, 33, 47; not a hybrid, 72, 73; equal-styled var. of, 224, 273
- *farinosa*, 45; equal-styled var., 224, 273
- *hirsuta*, 74
- *involucrata*, 45
- *longiflora*, 50
- *mollis*, 49, 50
- *Scotica*, 49, 50
- *Sibirica*, 49
- *Sikkimensis*, 44, 47
- *Sinensis*, 22, 30, 38; relative fertility, 39–43, 47, 49; long-styled, 213; short-styled, 215; transmission of form, constitution and fertility, 216; equal-styled variety, 218–223, 273, 274
- *stricta*, 50
- *veris*, 14; difference in structure between the two forms, 15; degrees of fertility when legitimately or illegitimately united, 25–32; fertility possessed by illegitimate plants, 228–234; equal-styled red variety, 234–238; long-styled, 241; length of pistil, 261, 266
- *verticillata*, 49, 50
- *villosa*, 49
- *vulgaris* (var. *acaulis* Linn.), 34; pollen-grains, 35; relative fer-

SETHIA.

- tility of the two forms, 37; length of pistil, 266
- Primula vulgaris*, var. *rubra*, 224–228
- Prunella vulgaris*, 299
- Psychotria*, 135
- Pulmonaria angustifolia*, 104, 239; anthers, 252, 287
- *azurea*, 110
- *officinalis*, 101, 238; number of flowers, 248; pistil, 250

R.

- Ranunculus aquatilis*, 311
- Ray-florets, their use, 5, 6
- Rhannus catharticus*, 294, 307; size of corolla, 308
- *frangula*, 297
- *lanceolatus*, 295
- Rhinanthus crista-galli*, 4
- Rubiaceæ*, 125, 131–136; size of anthers, 252; stigmas, 253; number of heterostyled genera, 284, 285
- Rudgea eriantha*, 135
- Rue, the common, 9
- Ruellia tuberosa*, 329

S.

- Salvia*, 308
- *cleistogama*, 340
- *Horminum*, 8
- Satureia hortensis*, 303, 304
- Scabiosa arvensis*, 305
- *atro purpurea*, 305, 307
- *succisa*, 305
- Scott, J., on *Primula auricula*, 30, 43, 223; *P. vulgaris*, 34; (var. *rubra*), 224; *P. Sikkimensis*, 44; *P. farinosa*, 45, 224; homostyled *Primula*, 49, 50; hybrids, 74, 75; length of pistil, 272; *Hottonia palustris*, 51; *Androsace vitaliana*, 53; *Polyanthus*, 58; *Mitchella repens*, 127; *Acanthaceæ*, 313; *Eranthemum ambiguum* bearing three kinds of flowers, 329
- Scrophularia aquatica*, 147
- Serratula tinctoria*, 280, 307
- Sethia acuminata*, 122

Cambridge University Press

978-1-108-01827-2 - The Different Forms of Flowers on Plants of the Same Species

Charles Darwin

Index

[More information](#)

352

INDEX.

- SETHIA.
- Sethia obtusifolia*, 122
 Smith, Sir J. E., on the carrot, 8;
 hybrid *Verbascums*, 76, 78; *Serratula tinctoria*, 280; *Cnicus*, 307; *Subularia*, 311
Soldanella alpina, 54
Specularia perfoliata, 330
 Spence, Mr., on *Mollia*, 168
Spermacoce, 135
 Sprengel on *Hottonia palustris*, 51
Stellaria graminea, 313
 Strawberry, the Hantbois, 293
Subularia, 311
Sutera, 131
- T.
- Thelymitra*, 313
 Thomson, Dr., on *Campanula*, 330
 Thrum-eyed, origin of term, 14
 Thwaites, Mr., on ovules of *Limnanthemum Indicum*, 116; *Sethia acuminata*, 122; *Discospermum*, 286
Thymelia, 114
Thymus citriodorus, 301
 — *serpyllum*, 299, 301, 302, 304
 — *vulgaris*, 302
 Timbal-Lagrave, M., on hybrids in genus *Cistus*, 76
 Torrey, Dr., on *Hottonia inflata*, 53, 313
 Transmission of the two forms of heterostyled plants, 268–270
 Treviranus on *Androsace vitaliana*, 53; *Linum*, 81
- V.
- Vandellia nummularifolia*, 324
 — *sessiflora*, 325
 Vaucher on the carrot, 8; *Soldanella alpina*, 54; *Lythrum salicaria*, 138, 144; *L. thymifolia*, 165; *Nex aquifolium*, 297; on
- WRAY.
- Labiatae*, 299; *Viola hirta* and *collina*, 317
Verbascum, wild hybrids of, 75–80
 — *lychnitis*, 30, 76–78
 — *phoeniceum*, 78
 — *thapsus*, 76–79
 — *virgatum*, 78
Viburnum, 6, 7
Vicia, 327
Villarsia, 116; anthers, 252
Viola alba, 315, 320
 — *bicolor*, 320
 — *biflora*, 320
 — *canina*, 314, 321
 — *collina*, 317
 — *elatior*, 320
 — *hirta*, 318, 320
 — *ionodium*, 320
 — *lanceifolia*, 320
 — *mirabilis*, 320
 — *nana*, 319, 320; pollen-grains of, 338
 — *odorata*, 317, 336
 — *palustris*, 320
 — *Roxburghiana*, 319
 — *Ruppii*, 320
 — *sylvatica*, 320
 — *tricolor*, 4, 320
Voandzeia, 327
- W.
- Walnut, the, 10
 Watson, H. C., on cowslips, primroses, and oxlips, 57, 60, 63;
Primula elatior, 72, 73
 Weddell, Dr., on hybrids between *Aceras* and *Orchis*, 76
 Wetterhan, Mr., on *Corylus*, 10
 Wichura, Max, on hybrid willows, 76; sterile hybrids, 240
 Wirtgen on *Lythrum salicaria*, 138, 144, 148
 Wooler, W., on *Polyanthus*, 18
 Wray, Leonard, on *Fragaria*, 293