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KEY TO FAMILIES OF FLOWERING PLANTS

1. Leaves usually reticulately veined; vascular bundles in a ring round a central pith; cambium present; flowers 4- or 5-merous rarely 3-merous; embryo with 2-cotyledons.

2. Flowers with distinct calyx and corolla or perianth.

3. Petals and stamens free or slightly united at base.

4. Petals free from calyx; stamens hypogynous.

5. Torus small or elongated.

6. Pistil apocarpous.

7. Aquatic herbs. NYMPHEACEAE

7'. Terrestrial plants.

8. Flowers dioecious or polygamous. MENISPERMACEAE

8'. Flowers bisexual.

9. Sepals 5, persistent. DILLENIACEAE

10. Leaves stipulate; sepals and petals similar. MAGNOLIACEAE

10'. Leaves extipulate; sepals and petals distinct.

11. Sepals 4-5, imbricate, caducous; fruits achenes. RANUNCULACEAE

11'. Sepals 3, valvate not caducous; fruits dry or succulent, not achenes. ANNONACEAE
6'. Pistil syncarpous.

12. Leaves thick and fleshy; sepals 2.
12'. Leaves membranous or coriaceous; sepals 4-5.

13. Two inner sepals large and petaloid; lowest petal keeled.
13'. Sepals similar; petal not keeled.

15. Flowers polygamous or dioecious.
15'. Flowers bisexual.

16. Stamens many, gynophore present.
16'. Stamens a few; gynophore absent.

17. Corolla cruciform; stamens 6, tetradyneamous.
17'. Corolla not cruciform; stamens 4-8, equal.

14'. Placentation axile.

18'. Sepals not wing-like in fruit.

19. Stamens indefinite, monadelphous.

20. Anthers bilocular.

21. Woody climbers; petals with 2-lateral lobes; capsules echinate.
21'. Large shrubs or trees; petals entire; capsules not echinate.

20'. Anthers unilocular.

22. Herbs or shrubs; leaves simple.
22*. Deciduous trees; leaves digitately compound. BOMBACACEAE

19* Stamens indefinite, free or variously connate into bundles.

23. Leaves opposite.

24. Non resinous, herbs; flowers bisexual; fruits capsular. HYPERICACEAE

24*. Resinous, trees; flowers unisexual or polygamous; fruits indehiscent. CLUSIACEAE

23*. Leaves alternate.

25. Large straggling or climbing shrubs. ACTINIDIACEAE

25*. Erect herbs, shrubs and trees.


27. Petals entire; stamens frequently on a short gynophore; anthers dehiscing by lateral slits. TILIACEAE

27*. Petals laciniate; stamens inserted on a fleshy disk; anthers dehiscing by terminal. ELAEOCARPACEAE

26*. Sepals imbricate.

28. Lateral nerves prominent; closely parallel flowers in cymose panicles. SAURAUIACEAE

28*. Lateral nerves neither prominent nor parallel; flowers mostly solitary. THEACEAE

5*. Torus flattened into a fleshy disk or absent.

29. Leaves decompound; flowers irregular; fruits elongate, pod-like. MORINGACEAE

29*. Leaves simple or compound but not decompound; fruits various.

30. Leaves opposite.
31. Leaves simple; fruits samaroid.

32. Stamens 10.

32'. Stamens 3.

31'. Leaves compound; fruits capsular or baccate.

33. Leaves digitately compound; fruits capsular.

33'. Leaves imparipinnately compound; fruits baccate.

30'. Leaves alternate.

34. Erect herbs or undershrubs.

35. Leaves simple; flowers irregular; stamens 5.

35'. Leaves compound; flowers regular; stamens 10.

34'. Erect or climbing shrubs, or trees.

36. Stamens monadelphous into a tube.

37. Petioles sheathing at base; petals 5, connate at base; fruits lobed.

37'. Petioles uniform to base; petals 3 - 6, free; fruits entire.

36'. Stamens free or epipetalous.

38. Petals notched or bifid at apex.

38'. Petals entire.

39. Leaves simple; disk absent.

39'. Leaves simple or compound; disk present.

40. Flowers more or less irregular.

40'. Flowers regular.

41. Resinous trees.
42. Leaves imparipinnate; ovules 2 in each cell. BURSERACEAE

42'. Leaves simple or imparipinnate; ovules solitary in each cell. ANACARDIACEAE

41. Nonresinous plants.

43. Aromatic plants; leaves gland-dotted. RUTACEAE

43'. Nonaromatic; leaves not gland dotted.

44. Stamens opposite to petals, with or without staminodes.

45. Calyx absent; stamens. OPILIACEAE

45'. Calyx present; stamens 4 or 5. ERYTHROPALACEAE

46. Staminodes 5.

46'. Staminodes absent.

47. Filaments adnate all along petals or at the base. OLACACEAE

47'. Filaments free from petals.

48. Petals imbricate; ovary compressed. SABIACEAE

48'. Petals valvate; ovary globose.

49. Unarmed tendril-climbers; petals present, not clawed. VITACEAE

49'. Prickly plants without tendrils; petals absent or present, usually clawed. RHAMNACEAE

44'. Stamens usually alternate without staminodes.

50. Leaves simple; fruits without accrescent petals and calyx. SIMAROUBACEAE

50'. Leaves simple; fruits without accrescent sepals and petals.
51. Disk quite prominent; seeds arillate. **CELASTRACEAE**

51'. Disk obscure; seeds not arillate. **ICACINACEAE**

4'. Petals inserted on the calyx-tube; stamens epigynous or perigynous. **MIMOSACEAE**

52. Ovary of one carpel; fruit a legume or lomentum.

53. Flowers regular; petals valvate. **MIMOSACEAE**

53'. Flowers irregular; petals imbricate. **CAESALPINIACEAE**

54. Corolla papilionaceous; upper petal outermost; stamens monadelphous or diadelphous. **FABACEAE**

54'. Corolla not papilionaceous, upper petal innermost; stamens free. **CAESALPINIACEAE**

52'. Ovary of more than 1 carpel rarely single; fruits various, neither a legume nor a lomentum. **ROSACEAE**

55. Leaves stipulate; styles subterminal, lateral or basal. **ROSACEAE**

55'. Leaves extipulate; styles terminal. **ITEACEAE**

56. Carpels free or nearly so.

57. Stamens 5, equal; carpels 2; ovules many in each carpel. **ITEACEAE**

57'. Stamens 10, unequal; carpels 5; ovules 2 in each carpel. **CONNARACEAE**

56'. Carpels united. **TETRAMELACEAE**

58. Flowers unisexual.

59. Large trees; flowers dioecious; petals absent; ovary inferior. **TETRAMELACEAE**
59'. Herbs, shrubs or trees; flowers monoecious; petals present, ovary superior or inferior.

60. Large trees; flowers in globose heads; ovary superior. 

60'. Herbs or shrubs; flowers not in globose heads; ovary inferior.

61. Erect succulent herbs; flowers irregular; stamens many, with ovoid anthers; fruits 2-or 3-winged.

61'. Tendril climbers or creepers; flowers regular; stamens a few (usually 3), with sinuous or conduplicate anthers; fruits not winged.

58'. Flowers bisexual.

62. Petals absent; when present, then trees.

63. Small herbs; fruits capsular. 

63'. Large shrubs or small trees; fruits succulent.

62'. Petals present or when absent, then trees.

64. Ovary superior.

65. Tendril climbers; flowers with prominent corona; petals smooth.

65'. Erect herbs or trees; flowers lacking corona; petals crumpled.

66. Trees; seeds tailed at both ends. 

66'. Herbs or trees; seeds not tailed.

64'. Ovary inferior.

67. Flowers in simple or compound umbels.
68. Odorous herbs; fruits dry, separating into 2 indehiscent-mericarps.  

68*. Inodorous trees or shrubs; fruits drupaceous or baccate.  

67'. Flowers not in umbels.  

69. Herbs or slender, under shrubs; flowers yellow; fruits capsular.  

69*. Shrubs or trees; flowers variously coloured; fruit drupaceous or baccate or rarely capsular then flowers not yellow.  

70. Stamens numerous, more than twice as many as petals.  

71. Leaves alternate.  

71*. Leaves opposite.  

70*. Stamens as many as or twice the petals.  

72. Filaments geniculate in bud; connective appendaged, when not stamens only 3.  

73. Small trees; leaves penkinerved, lacking prominent basal nerves; ovary 1-celled; seed 1 or 2, large.  

73*. Herbs or shrubs; leaves with prominent basal nerves, when penninerved, small herbs 3-merous flowers; ovary 3-to 5-celled; seeds many, minute.  

72*. Filaments erect; connective not appendaged.  

74. Trees, with glands at the base of leaves or large scandent shrubs; fruits winged or ridged.  

APIACEAE  
ARALIACEAE  
ONAGRACEAE  
LECYTHIDACEAE  
MEMECYLACEAE  
COMBRETACEAE
74*. Trees with eglandular leaves; fruits ribbed or not.

75. Large trees; petals ovate, silky appressed-hairy, with a medium ridge inside; filament glabrous; drupe 1-seeded. CORNACEAE

75*. Small trees; petals strap-shaped, puberulous without ride; filaments long-silky long hairy; drupe 2-seeded. ALANGLACEAE

3'. Petals united; stamens adnate to the corolla-tube, or rarely free.

76. Flowers in involucrate heads and fruits 1-seeded achenes, usually with pappus hairs. ASTERACEAE

76*. Flowers in various kinds of inflorescences, other than involucrate heads; fruits various, without pappus hairs.

77. Ovary superior.

78. Stamens 2, less than corolla-lobes. OLEACEAE

78*. Stamens more than 2, as many as, or more than the corolla-lobes.

79. Stamens opposite to the corolla-lobes; ovary 1-celled.

80. Calyx with stalked glands; stigma 5-branched; fruits capsular. PLUMBAGINACEAE

80*. Calyx without stalked glands; stigma simple or very shortly lobed; fruits baccate. MYRSINACEAE

79*. Stamens alternate or opposite to corolla-lobes; ovary 2-to many-celled.

81. Stamens free from the corolla.
82. Flowers dioecious; fruits coriaceous or fleshy, indehiscent.

82'. Flowers bisexual; fruits capsular.

81'. Stamens epipetalous.

83. Stamens opposite to the corolla-lobes.

84. Leaves alternate; flowers fasciculate.

84'. Leaves subopposite; flowers in racemes or panicles.

83'. Stamens alternating with corolla-lobes.

85. Corolla regular.

86. Scapigerous herbs; leaves radical; corolla-lobes 4.

86'. Habit otherwise; leaves opposite or alternate; corolla-lobes 5.

87. Leaves opposite.

88. Plants with milky sap; carpels free, but styles united.

89. Filaments connate; staminal corona present; styril-heads flattened; fruits follicular.

90. Pollen united into pollinia.

90'. Pollen in a loose mass.

89'. Filaments free; staminal corona absent; stigma 2-fid; fruits baccate or follicular.

88'. Plants without milky-sap; carpels connate; style simple.

91. Stipules absent; corolla short, rotate.
91'. Stipules present; corolla long-tubular.

92. Corolla-lobes imbricate; fruits 2-valved, septical-capsules.
   BUDDLEJACEAE

92'. Corolla-lobes valvate; fruits baccate with a hardened rind.
   STRYCHNACEAE

87'. Leaves alternate.

93. Corolla-lobes plicate; ovules many in each cell.
   SOLANACEAE

93'. Corolla-lobes imbricate to plicate; ovules 1-3 in each cell.

94. Twining shrubs.
   CONVOLVULACEAE

94'. Erect herbs or shrubs.
   BORAGINACEAE

85'. Corolla irregular.

95. Aromatic herbs; styles gynobasic.
   LAMIACEAE

95'. Non aromatic plants; styles not gynobasic.

96. Ovary 1-celled; ovules many, placentation parietal.
   OROBANCACEAE

97. Terrestrial, leafless, root-parasitic herbs.
   GESNERIACEAE

97'. Epiphytes or lithophytes, leaf non-parasitic herbs.

96'. Ovary 2-to 4-celled; ovules 1 to several; placentation various.

98. Ovary 2 or 4-celled; ovule single in each cell.
   VERBENACEAE

98'. Ovary 2-celled; ovules 2 or more in each cell.

99. Herbs or shrubs; seeds usually a few, supported on upcurved processes (retinacula) or when seeds many and
retinacula absent, then anther cells separate and muticous.

99'. Habit various; seeds a few to many, not supported on retinacula; anther cells connate.

100. Large twining climbers; seeds a few.
100'. Erect herbs or trees; seeds many.

101. Trees; leaves pinnately compound; capsules elongated; seeds winged.
101'. Herbs; leaves simple; fruits short; seeds not winged.

102. Ovules many, bunched; placentation axile.
102'. Ovules many, uniseriate; placentation parietal.

77'. Ovary inferior.

103. Stamens free or nearly so from corolla.

104. Corolla oblique, 2-lipped; anthers connate, 2 lower ones tipped with bristles, not spurred; ovary 2-celled.
104'. Corolla regular; stamens free, anthers, not connate, without bristles, spurred at apex; ovary 5-celled.

103'. Stamens epipetalous.

105. Stipules inter- or intra-petiolar or absent stamens 2.
105'. Stipules absent and then stamens 5 or more, or when present then free lateral.

106. Ovule solitary in each cell.
106'. Ovules 2 to many in each cell.

107'. Stamens more than 10, often many in several series.

2'. Flowers without calyx and corolla or one of them present.

108. Flowers bisexual, very rarely unisexual then aromatic trees and anthers introrse.


110. Stipules ochraceous.

110'. Stipules otherwise or absent.

111. Perianth tube long, rarely short then glandular outside.

112. Perianth-lobes 4, valvate, recurved; ovules 2.

112'. Perianth-lobes 2 - 5, plicate or imbricate, not recurved; ovule solitary.

113. Leaves opposite; perianth-lobes plicate, tube adhering to the ovary, persistent and enclosing the fruit.

113'. Leaves alternate; perianth-lobes imbricate in bud, tube free, not persistent.

111'. Perianth-tube very short, eglandular.

114. Perianth-lobes biseriate; stamens in whorls of 3 each.

115'. Aromatic leaf shrubs or trees.  

LAURACEAE

114'. Perianth-lobes and stamens in one  
whorl each.

114'. Perianth-lobes and stamens in one  
whorl each.

AMARANTHACEAE

116. Inodorous plants; bracts, braceoles  
and perianth all dry and scarious  
or hyaline.

116. Inodorous plants; bracts, braceoles  
and perianth all dry and scarious  
or hyaline.

CHENOPODIACEAE

116'. Pungent smelling plants; bracts  
and perianth neither dry nor  
scarious or hyaline.

116'. Pungent smelling plants; bracts  
and perianth neither dry nor  
scarious or hyaline.

CHENOPODIACEAE

109'. Ovary inferior, 1- or more-celled.

109'. Ovary inferior, 1- or more-celled.

117. Non-parasitic limbers; stamens twice  
or thrice as many as the perianth-  
lobes; ovary 4- to 6-celled; ovules  
many.

117. Non-parasitic limbers; stamens twice  
or thrice as many as the perianth-  
lobes; ovary 4- to 6-celled; ovules  
many.

ARISTOLOCHIACEAE

117'. Parasitic shrubs or trees; stamens  
as many as and opposite to perianth-  
lobes; ovary 1-celled; ovules 1 or  
a few.

117'. Parasitic shrubs or trees; stamens  
as many as and opposite to perianth-  
lobes; ovary 1-celled; ovules 1 or  
a few.

ARISTOLOCHIACEAE

118. Epiphytic shrubs, stem-parasites;  

ovules solitary.

118. Epiphytic shrubs, stem-parasites;  

ovules solitary.

LORANTHACEAE

118'. Trees root-parasites; ovules 2 - 4.

118'. Trees root-parasites; ovules 2 - 4.

SANTALACEAE

108'. Flowers unisexual; habit various, neither  
aromatic nor anthers intorse.

108'. Flowers unisexual; habit various, neither  
aromatic nor anthers intorse.

119. Leafless, root-parasites, in dense,  
large clumps; inflorescences stout,  
fleasoby.

119. Leafless, root-parasites, in dense,  
large clumps; inflorescences stout,  
fleasoby.

BALANOPHORACEAE

119'. Leafy herbs, shrubs or trees;  
inflorescences otherwise.

119'. Leafy herbs, shrubs or trees;  
inflorescences otherwise.

SAURURACEAE

120. Bracts petaloid; carpels free or  
connate only at base; ovules many.

120. Bracts petaloid; carpels free or  
connate only at base; ovules many.

SAURURACEAE
120*. Bracts not petaloid; ovary syncarpous; ovules 1 - many.

121. Ovary 2- or more-celled.

122. Large trees, exuding reddish-rum when cut; leaves palmately compound; flowers in paniculate racemes; ovary 3- or 4-celled. BISCOFIACEAE

122*. Habit various; without reddish-gum; leaves simple; flowers variously arranged; ovary 2- to 3-celled.

123. Plants with milky sap; inflorescences various; fruits capsular or drupaceous. EUPHORBIACEAE

123*. Plants without milky sap; male flowers in pendulous catkins; female flowers in spikes; fruit a nut.

124. Ovary 3-celled; ovules 2 in each cell; fruit an acorn. FAGACEAE

124*. Ovary 2-celled; ovule solitary in each cell; fruit a winged nut. BETULACEAE

121*. Ovary 1-celled.

125. Disk present; ovules many; seeds with long silky, deciduous hairs. SALICACEAE

125*. Disk absent; ovule solitary; seeds without hairs.

126. Leaves pinnately compound; fruits with much enlarged calyx-wings. JUGLANDACEAE

126*. Leaves simple; fruits without wings.

127. Perianth absent.

128. Leaves serrate at margins; male and female flowers cohering within a bract. CHLORANTHACEAE
128'. Leaves entire; male and female flowers separate.

127'. Perianth present.

129. Filaments inflexed in bud.

130. Trees or shrubs with milky sap; flowers crowded on globese, cylindric or in hollow receptacles.

130'. Herbs or shrubs with watery sap; flowers in clusters or in compact heads.

129'. Filaments not inflexed in bud.

131. Herbs; leaves opposite; fruit an achene.

131'. Trees; leaves alternate; fruits otherwise.

132. Perianth-lobes usually 3, rarely 2 or 4; fruit fleshy, splitting into two valves; seeds arillate.

132'. Perianth-lobes 4 or 5; fruit a drupe or samara; indehiscent; seeds not arillate.

1'. Leaves usually parallel veined; vascular bundles scattered, without a central pith; cambium absent; flowers typically 3-merous; embryo with 1-cotyledon.

133. Stamen 1, uniting with style to form a column, opposite the lip; pollen cohering to form pollinia; ovary inferior and twisted half a turn; seeds very many, minute.

133'. Stamens 1 - 6; column absent; pollen granular; ovary inferior or superior, not twisted; seeds various.
134. Flowers in spikelets, with imbricating glumes; perianth absent or of bristles or scales; ovary 1-celled; ovule solitary.

135. Culms noded, usually hollow except at the nodes; cylindric; leaves 2-ranked; leaf-sheath split; fruit a caryopsis.

135'. Culms not noded; mostly solid, usually triquetrous; leaves 3-ranked; leaf-sheath not split; fruit an achene.

134'. Flowers variously arranged without imbricating glumes; perianth present or absent, various; ovary 1- to 3-celled; ovules 1 to many.

136. Aquatic or marsh plants.

137. Leaves sagittate, hastate or cordate.

138. Scape subtented by leaf; flowers subumbellate in clusters, arising from the tumid, spath-like portion of the petiole; rachis very short; filaments horned on one side.

138'. Scape not subtented by leaf; flowers, in panicles, axillary; rachis very long; filaments smooth, compressed.

137'. Leaves ovate or linear or absent.

139. Aquatic submerged plants.

140. Leaves dimorphic, those within water filiform, those without ovate elliptic; flowers bisexual.
140'. Leaves monomorphic, submerged or not linear lanceolate; flowers dioecious.  
HYDROCHARITACEAE

139'. Marsh plants.  
BURMANNIACEAE

141. Leaves reduced to scales; flower solitary or a few in short simple spikes.  
SPARGANIACEAE

141'. Leafy plants; flowers in globose heads.  
JUNCACEAE

142. Robust herbs; leaves linear; flowers monoecious.  
SMILACACEAE

142'. Small grass-like herbs; leaves terete, hollow with distant septa; flowers bisexual.  
DIOSCOREACEAE

136'. Normal land plants.  
MUSACEAE

143. Twiners or tendril climbers.  

144. Tendril climbers; stem prickly; petiole-base sheathed; flowers in umbels; fruit a globose berry.  

144'. Twiners; stem smooth; petiole uniform; flowers in pendulous spikes or racemes; fruit a 3-winged capsule.  

143'. Erect, decumbent or prostrate plants or stragglers or climbers with aerial roots.  

145. Leaves very large entire oblong stem cylindrical, of enrolled leaf-sheaths; inflorescence a stout, arched compound spadix.  

145'. Leaves various, simple or compound; stem when present distinct, solid; inflorescences various.  

146. Leaves radical; flowers in umbels.
147. Leaves sessile, linear, channelled; bracts 2 spathaceous; bracteoles short, linear-lanceolate.
147'. Leaves petioled, ovate, flat; bracts 4, foliaceous; bracteoles, filiform.
146'. Leaves radical or otherwise; flowers not in umbels.
148. Inflorescence a spadix.
   149. Erect tuberous herbs, or climbers with aerial roots; flowers monoecious or bisexual; spadix simple.
   149'. Erect non-tuberous plants or stragglers; flowers monoecious or dioecious; spadix simple or branched.
150. Leaves 3-farious and spinulose along the margins and keels; flowers dioecious, perianth absent.
150'. Leaves pinnately compound or pinnatisect smooth; flowers monoecious or dioecious, perianth present.
148'. Inflorescence not a spadix.
   151. Spikes capitate, lateral on the petiole.
   151'. Inflorescence various, not on the petioles.
   152. Flowers with labellum; stamens 1; staminodes petaloid.
   152'. Flowers without labellum; stamens 3 - 6; staminodes when present not petaloid.

AMARYLLIDACEAE
TACCACEAE
ARACEAE
PANDANACEAE
ARECACEAE
MARANTACEAE
ZINGIBERACEAE
153. Flowers in subcapitate racemose cluster, on a long, later, scape from the base of stem; stamens 6.  

153'. Flowers in cymes or racemes, but neither in subcapitate cluster nor long later scapes; stamens 3 - 6.  

154. Leaf-sheaths tubular or infundibular, persistent; outer whorl of perianth calycine, inner whorl corolline.  

154'. Leaf-sheaths split on one side; not tubular, both perianth whorls corolline.