1. Gymnosperm......2

1. Angiosperm......4

2. Photosynthetic stems with scale-like leaves, strobili in whorls at nodes......Ephedraceae

2. Needle-like or scaly leaves without photosynthetic stems......3

3. Leaves needle-shaped, arranged spirally or in fascicles, microsporangiate strobili small and in groupings, megasporangiate strobili larger and woody......Pinaceae

3. Leaves scale-like, microsporangiate strobili small with few (<16) sporophylls, megasporangiate strobili with few (<12) scales, cones woody or fleshy......Cupressaceae

4. Grass-like, one or more distichously arranged distal florets on a zigzag extension of the rachilla, each floret embraced by a lemma and palea......Poaceae

4. Plant otherwise......5

5. Perianth not present, inflorescences indeterminate, erect to pendent catkins......Salicaceae

5. Perianth present......6

6. Perianth composed of multiple florets borne in a capitulum (which is itself surrounded by an involucre of phyllaries), inflorescence composed of ray, disk, and/or ligulate florets, no sepals......Asteraceae

6. Perianth otherwise......7

7. Perianth not strictly divided into calyx and corolla (tepals evident)......8

7. Separate calyx and corolla evident......17

8. Cactus-like, stems succulent, leaves are modified shoots (areoles) with spines, numerous tepals......Cactaceae

8. Plant otherwise......9

9. Pistillate flowers solitary or in clusters of 1-3, staminate inflorescences usually dangling catkin or head-like cluster, fruit a nut enveloped by a cupule......Fagaceae

9. Inflorescence otherwise......10

10. Tepals typically 5-merous......11

10. Tepals ranging from 2-6......12

11. Leaves asymmetrical at base with palmate venation, fruit a globose yellow-red drupe......Cannabaceae

11. Tepals white, yellow, or blue, numerous helically inserted stamens, fruit a follicle or achene......Ranunculaceae

12. Perianth composed of 6 tepals, leathery, fibrous, or succulent leaves in rosettes and usually with spine at apex; or plant grass-like with 3-ranked, parallel-veined basal leaves with sheaths, round stem......13

12. Tepals varying from 2-6......14

13. Leathery, fibrous, or succulent leaves in rosettes with spine at apex, seeds with black crust and inner layers collapsed......Asparagaceae

13. Plant grass-like with 3-ranked, parallel-veined basal leaves with sheaths, round stem, solid throughout, head-like inflorescence......Juncaceae

14. Leaves and stem produce milky latex, inflorescence a cyathium; or flowering stems triangular in cross-section, leaves 3-ranked with closed sheath......15

14. Perianth either in single or two whorls, 3-6 tepals may be dry and papery with small and clustered flowers; or plant may have swollen nodes with ocreae......16

15. Leaves and stem produce milky latex, 3 carpels and styles (the latter divided), inflorescence a cyathium......Euphorbiaceae

15. Flowering stems triangular in cross-section, leaves 3-ranked above the base with closed sheath, inflorescence of small spikes with bracts......Cyperaceae

16. Perianth of 3-5 tepals, dry and papery, flowers small and clustered......Amaranthaceae

16. Perianth in two whorls comprising 3-6 tepals, swollen nodes with ocreae......Polygonaceae

17. Perianth not 5-merous......18

17. Perianth 5-merous......21

18. Pistillate and staminate flowers in separate indeterminate inflorescences, hanging peduncles with 1-7 globose heads......Platanaceae

18. Inflorescences otherwise......19

19. Perianth 4-merous, 4-lobed or branched stigma with 8 stamens; or petals clawed and form cross when open with 6 stamens (4 long and 2 short filaments)......20

19. Calyx of 2-3 distinct sepals, corolla of 4-6 distinct petals (crumpled in bud), plant produces milky sap......Papaveraceae

20. Petals clawed and form cross when open with 6 stamens (4 long and 2 short filaments), gynophore below ovary, fruit a capsule, silique, or silicle......Brassicaceae

20. 4-lobed or branched stigma with 8 stamens, fruit a capsule, berry, or nut......Onagraceae

21. Petals and sepals connate......22

21. Petals and sepals otherwise......24

22. Corolla bilabiate......23

22. Corolla not bilabiate, funnel-shaped corolla......Solanaceae

23. Stamens in two pairs and didynamous, 2-lobed stigma......Bignoniaceae

23. Plant aromatic, inflorescences in pseudowhorls, divided style......Lamiaceae

24. Petals and sepals distinct......25

24. Either (or) petals or sepals connate......28

25. Inflorescence an umbel, sheathing leaf bases, stems hollow in internodes......Apiaceae

25. Inflorescence not an umbel......26

26. Staminodes (5-10) and carpellodes (approx. 3) with single fertile stamen and carpel, intrastaminal nectar disk; or stamens in two whorls and more numerous than the petals (10-15), 2-12 carpels......27

26. Sepals 5-lobed, arising from a perigynous or epigynous structure, stamens 4-5 enclosed by petals, alternate with sepals, hypanthium with nectar disc around styles......Rhamnaceae

27. Staminodes (5-10) and carpellodes (approx. 3), single fertile stamen and carpel, capitate stigma, intrastaminal nectar disk, fruit a flattened asymmetrical drupe......Anacardiaceae

27. Stamens in two whorls and more numerous than the petals (10-15), 2-12 carpels (approx. 5), fruit a schizocarp......Zygophyllaceae

28. Stamens monodelphous, petals convolute, epicalyx present......Malvaceae

28. Stamens not monodelphous......29

29. Flowers contain short hypanthium, 10+ stamens, curved style, indeterminate inflorescence, fruit a legume......Fabaceae

29. Clawed petals, showy corolla, often more than 15 stamens, leaves toothed, fruit may be fleshy or dry......Rosaceae