

Native Plants of the Italionalis trail, Taos Ski Valley

Prepared as a guide by the students of Dr. Ubelaker

Not for Sale

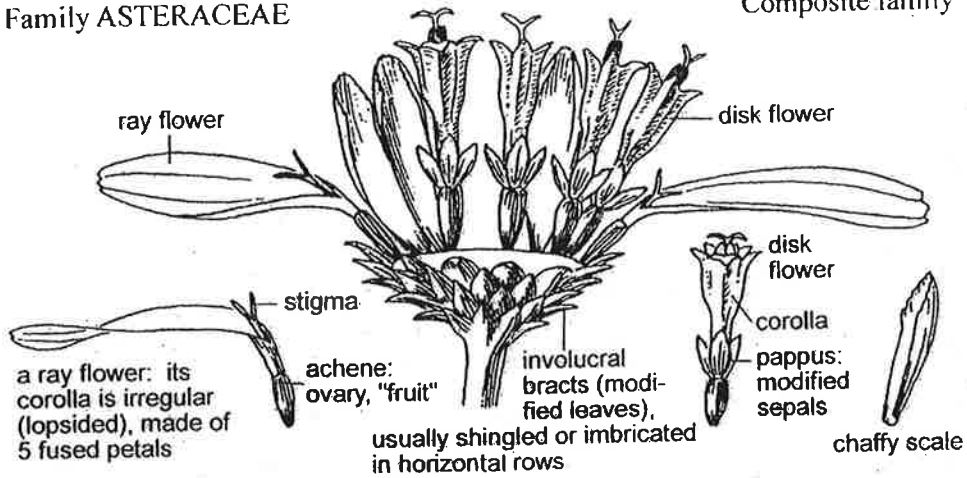
The hike will begin from the parking lot and we will hike up the trail to an Aspen park. We will cross the stream 7 times.

Because we are in the mountains please provide bug spray and apply to your legs and shoulders and neck. The guide provides descriptions of the various plants we will see and you are encouraged to work in pairs, identify the plant in question and learn the characteristics of the family. Use a hand lens that will be provided and identify at least 20 plants and their family. Instructors will be available to help you identify plants and provide additional material about them.

Recognizing Common Families

Family ASTERACEAE

Composite family



some variations:



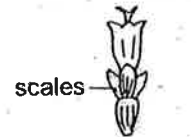
disk flowers only



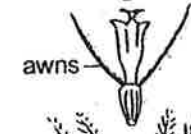
ray flowers only



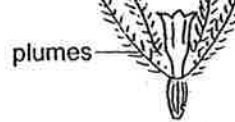
pappus types



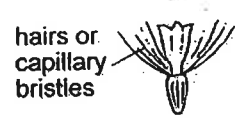
scales



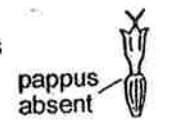
awns



plumes

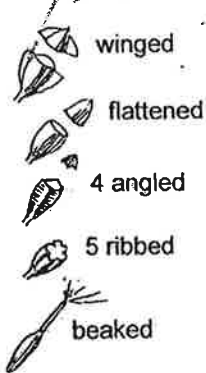


hairs or capillary bristles

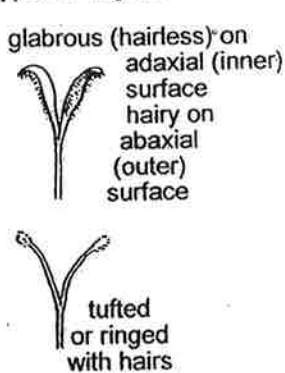


pappus absent

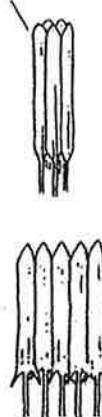
types of achenes



types of stigmas



coalescent stamens



APIACEAE Parsley family

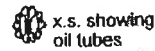
5 petals, 5 stamens, ovary inferior, styles 2



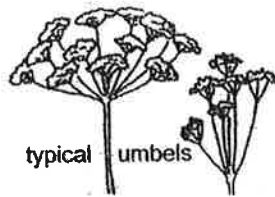
calyx absent or of 5 small lobes



ribbed, 2-parted fruits

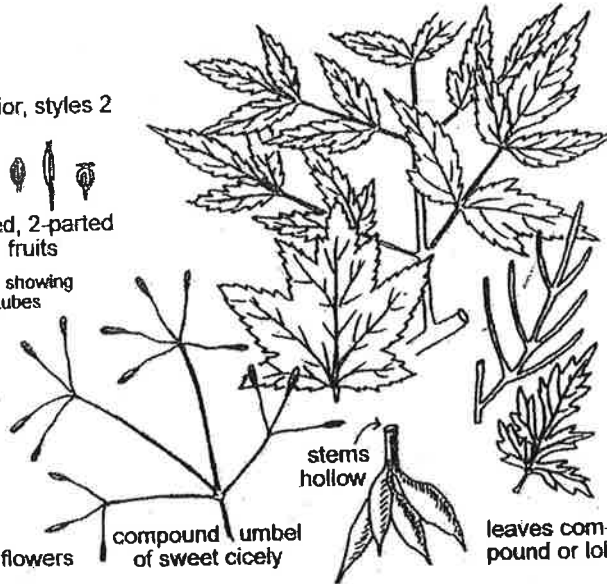


x.s. showing oil tubes



typical umbels

inflorescence is more recognizable than individual flowers



stems hollow

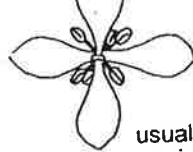
compound umbel of sweet cicely

leaves compound or lobed

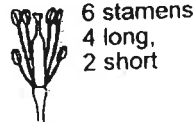
BRASSICACEAE Mustard family



always in a 4 petals cross



usually 4 upright sepals



usually 6 stamens 4 long, 2 short



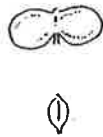
leaves alternate



stipe



fruit compressed at rt. angles to septum



compressed parallel to septum



terete

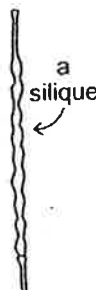


quad-rangular

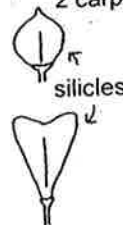


beak

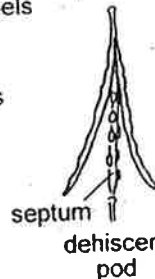
always a distinctive pod of 2 carpels



a silique



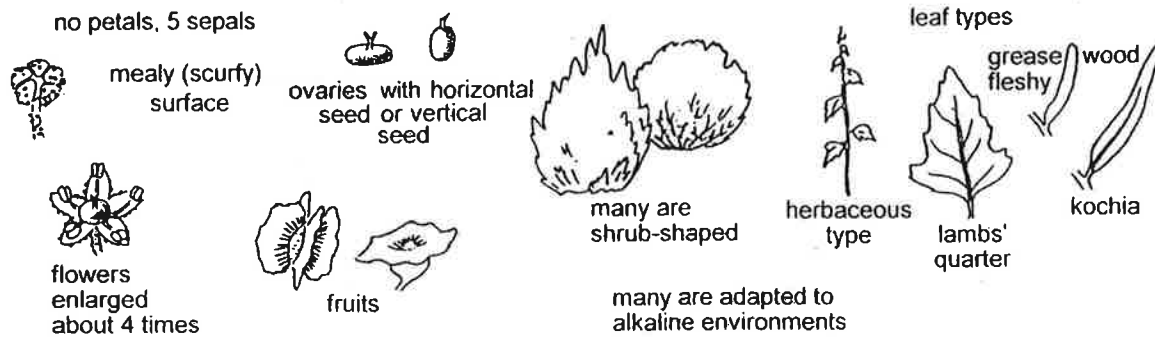
silicles



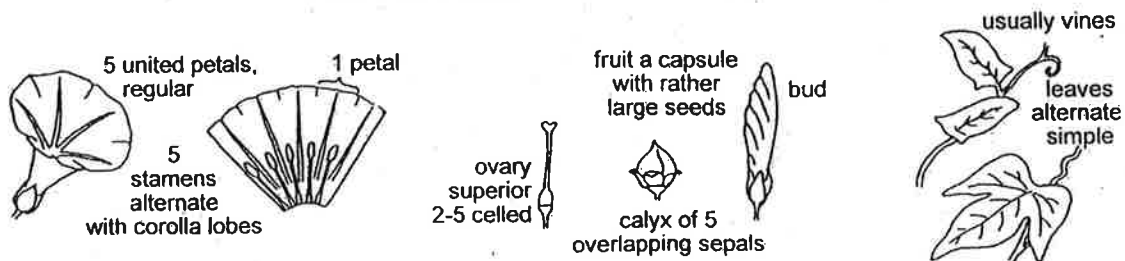
septum

dehiscent pod

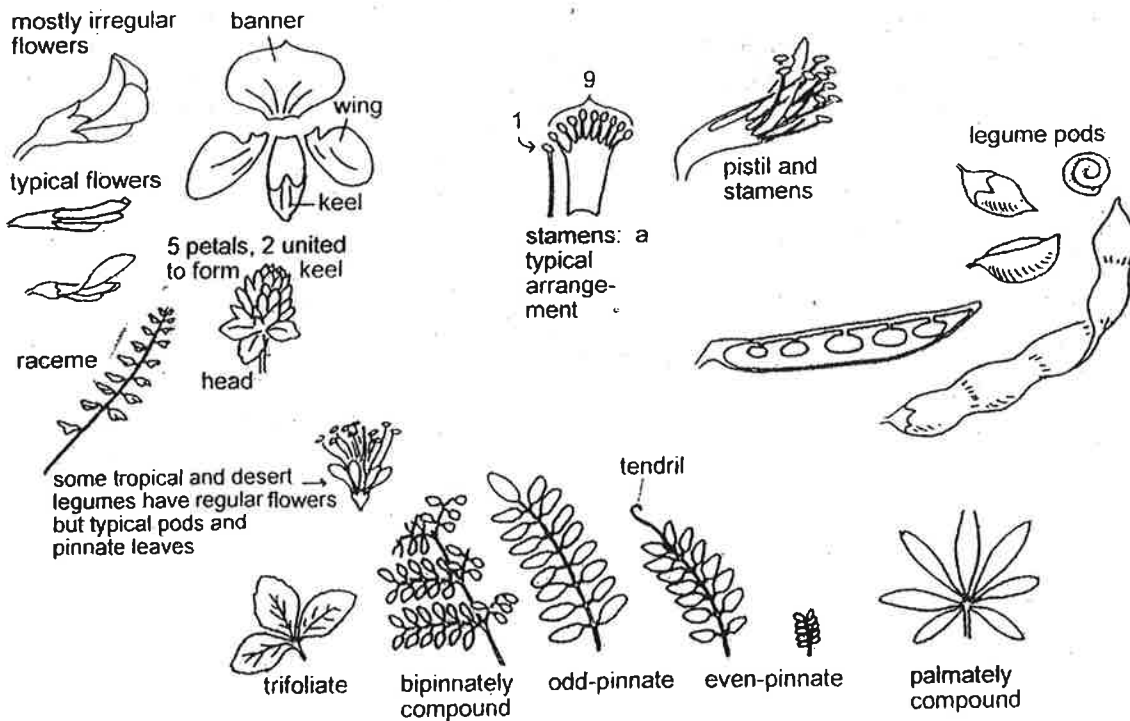
CHENOPODIACEAE Goosefoot family



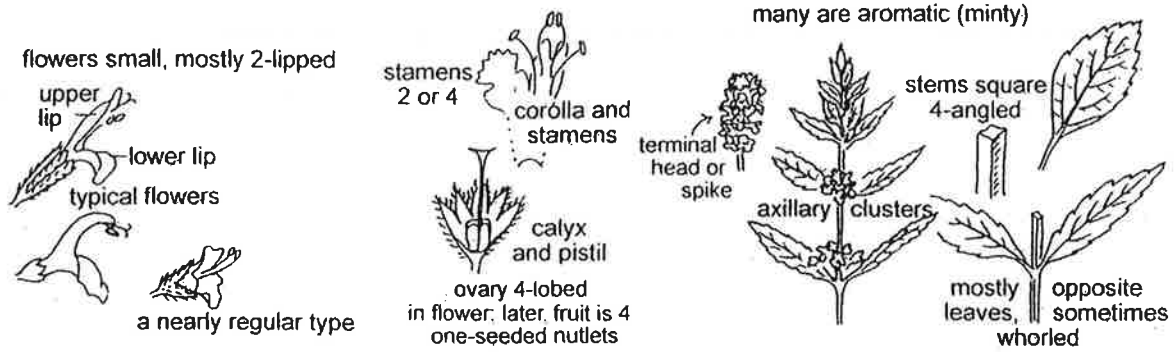
CONVOLVULACEAE Morning glory family



FABACEAE Bean family



LAMIACEAE Mint family

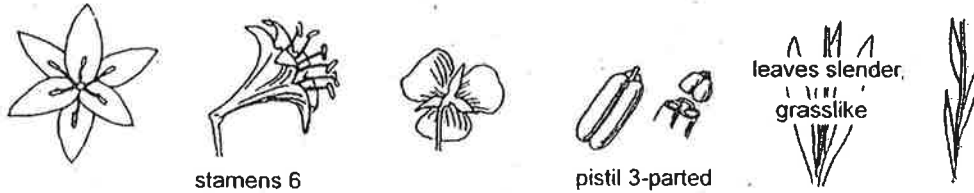


LILIACEAE Lily family

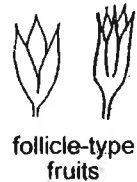
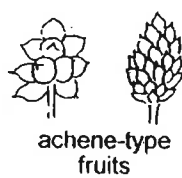
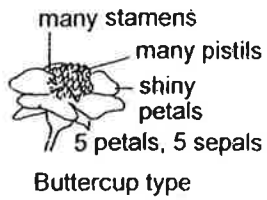
flower parts radially symmetrical, or "regular"

typically 3 sepals and 3 petals, all alike, separate or united;

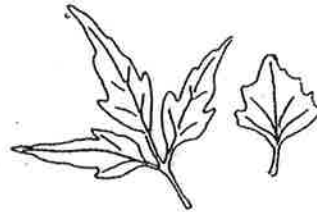
sometimes in unlike groups of 3



RANUNCULACEAE Buttercup family



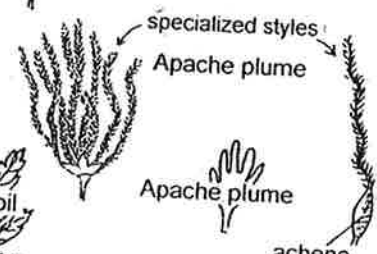
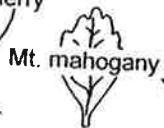
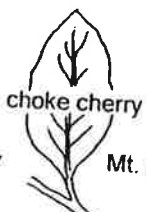
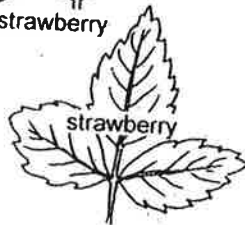
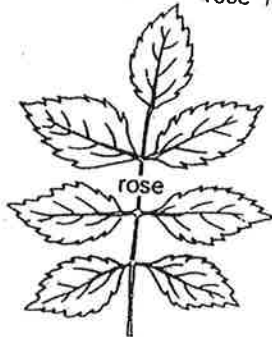
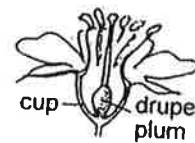
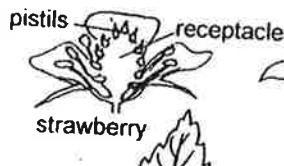
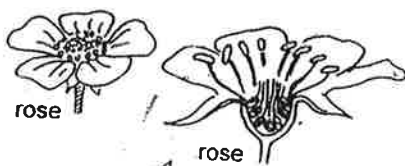
leaves typically
alternate and
without stipules



Family characteristics are inconsistent and difficult to define or recognize. These plants may perhaps best be learned as genera or species.

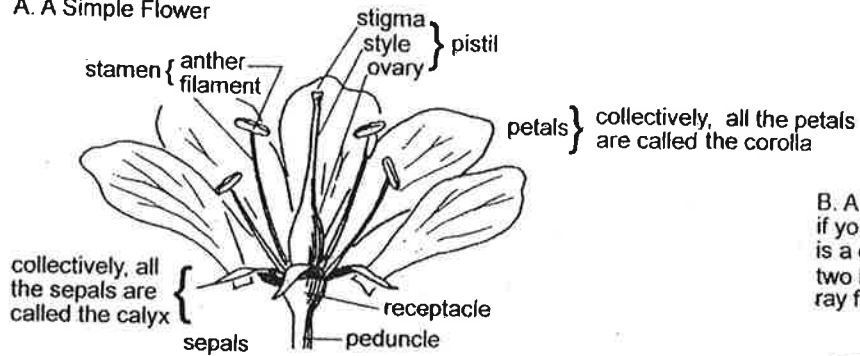
ROSACEAE Rose family

typically 5 petals, 5 sepals, 5 to many stamens, 1 to many simple pistils; ovary superior to inferior; a floral cup

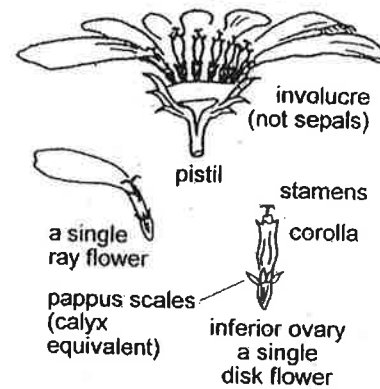


PARTS OF TYPICAL FLOWERS

A. A Simple Flower

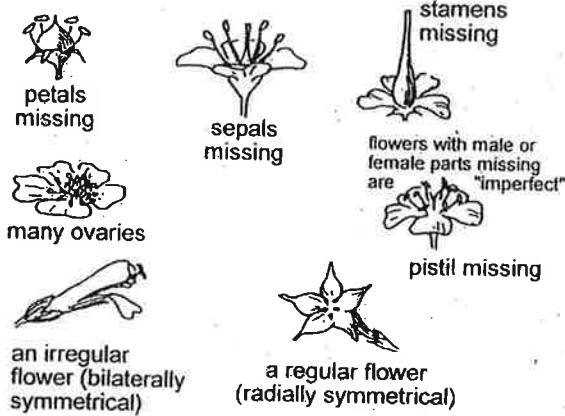


B. A Composite Head:
if you suspect that your flower
is a composite, break it into
two halves to reveal disk or
ray flowers

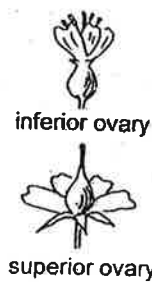
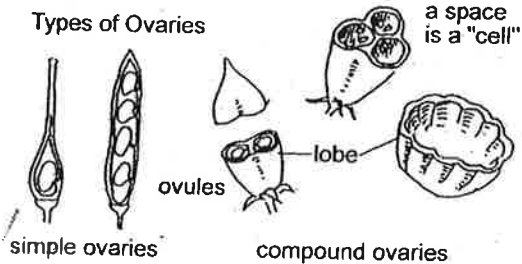


see: family Compositae

some variations exist



Types of Ovaries



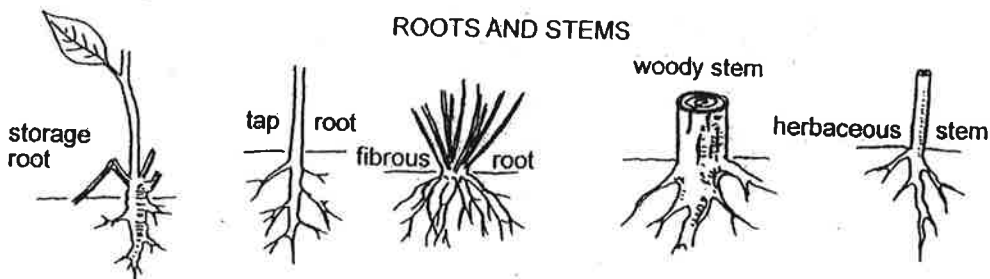
separate male & female
flowers
on same
plant

plant monoecious

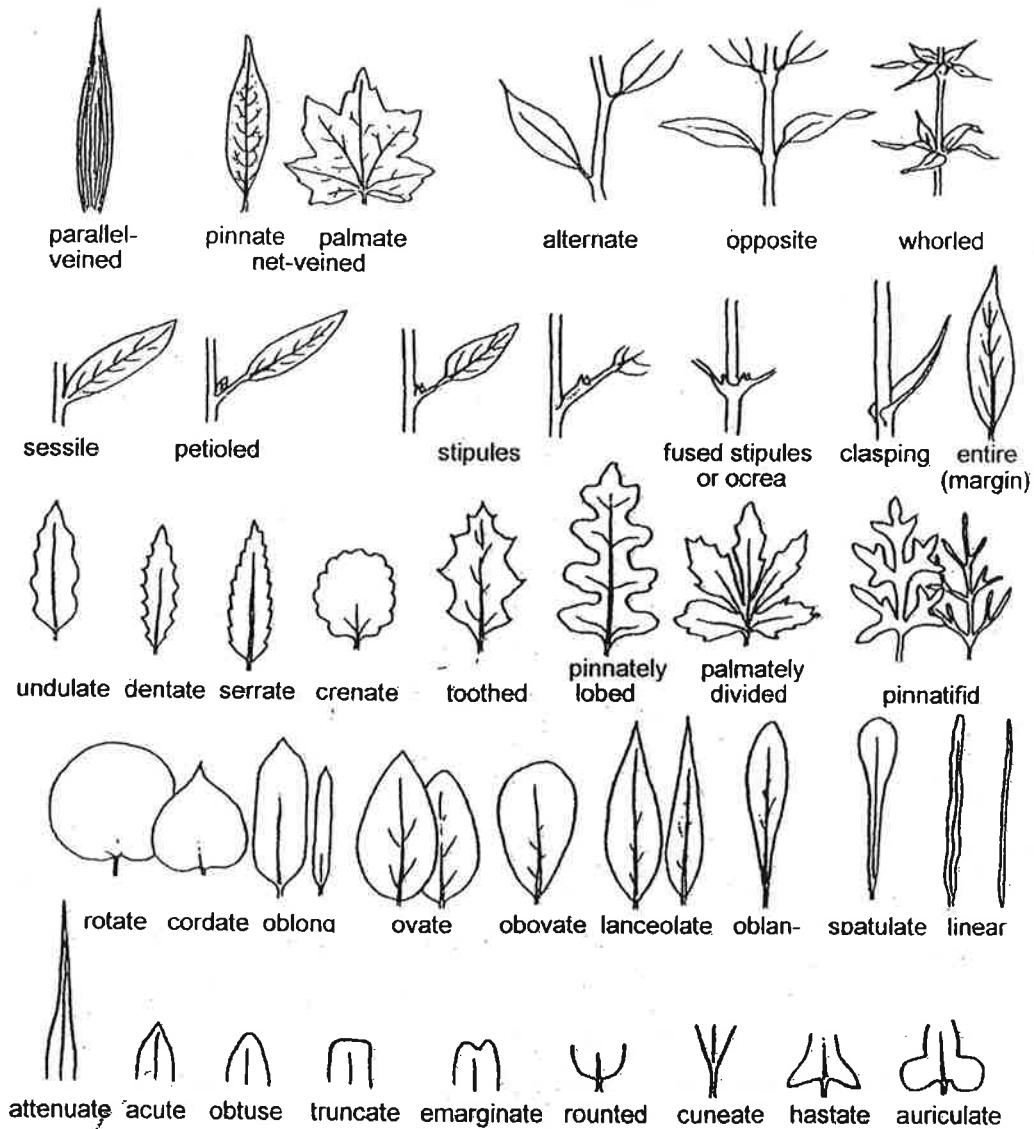
separate m. & f. plants
plants dioecious

OTHER PLANT PARTS

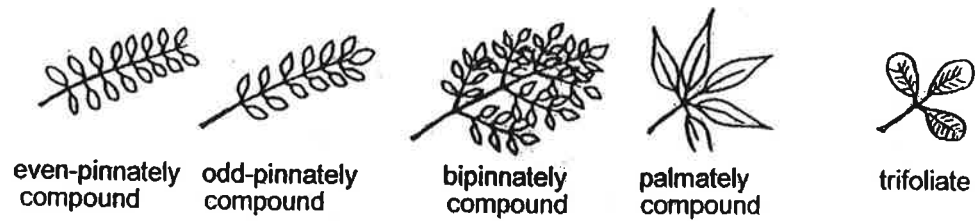
ROOTS AND STEMS



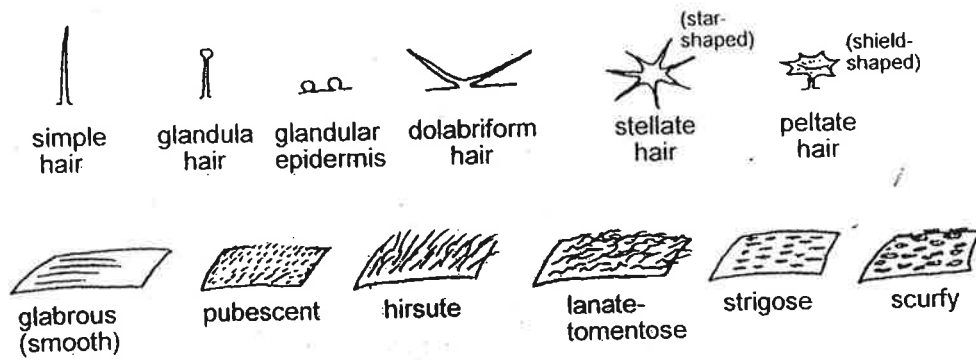
SIMPLE LEAVES AND LEAFLETS



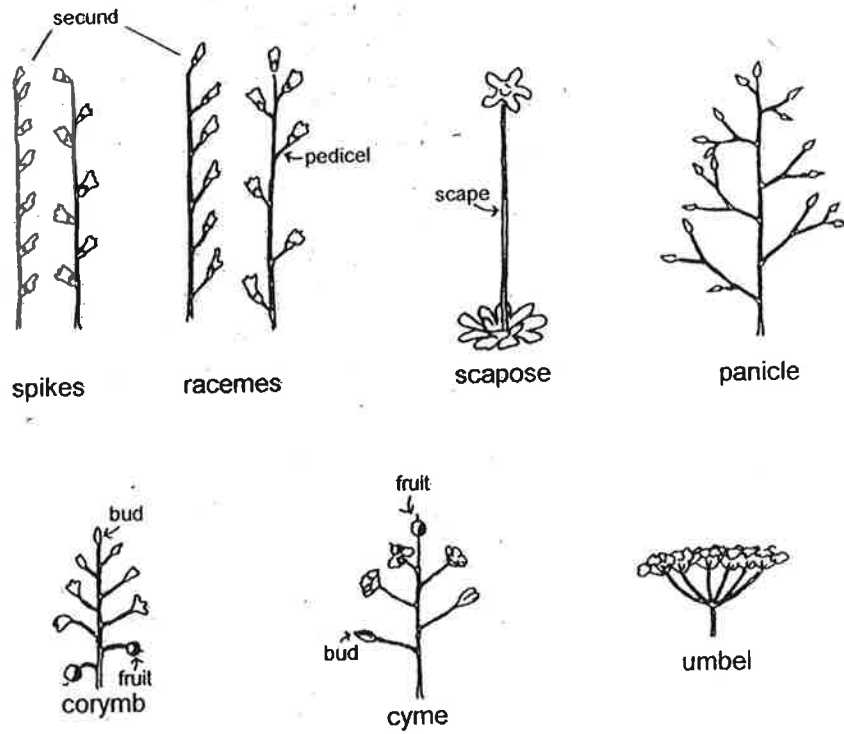
COMPOUND LEAVES



HAIRS AND OTHER EPIDERMAL STRUCTURES



INFLORESCENCE TYPES



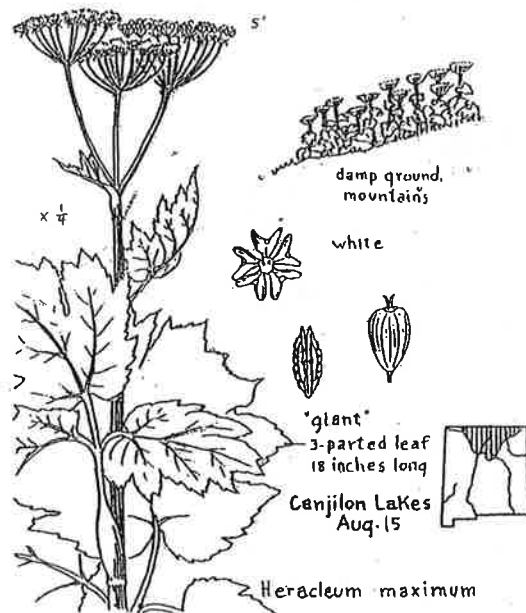
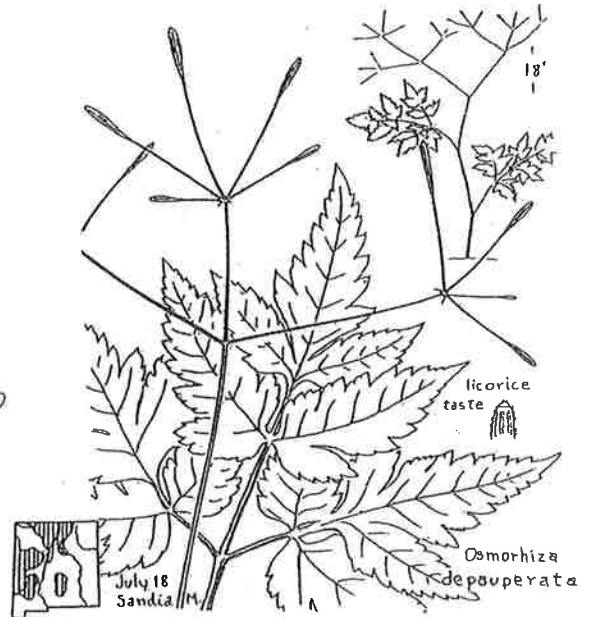
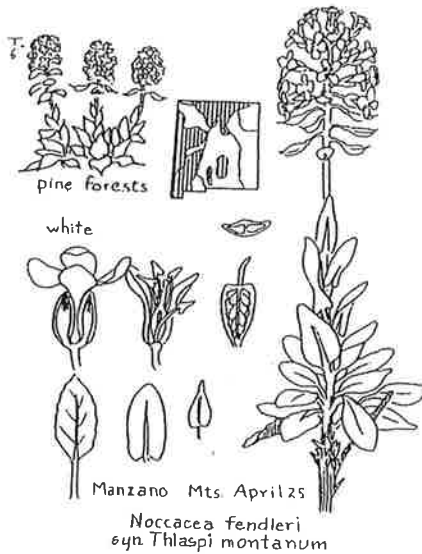
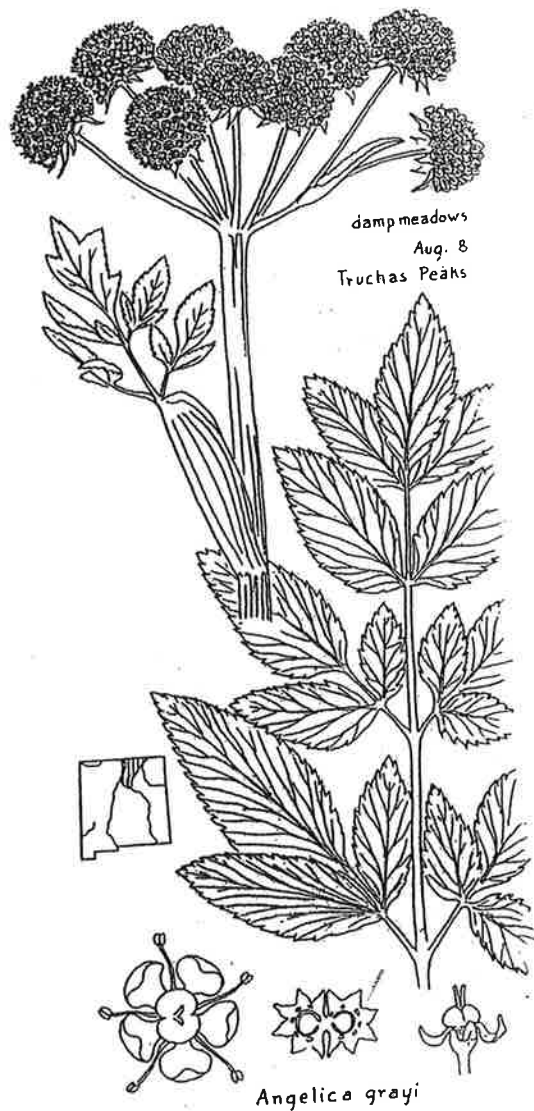
Adoxaceae

Shrubs, small trees or perennial herbs from rhizomes. Leaves opposite or basal, simple to compound, entire to variously toothed; stipules present or absent. Flowers individually small, perfect, actinomorphic in heads or umbels; sepals 2-5, petals 4-5, connate into a short tube; stamens mostly 5 pistil single, inferior. Fruit a drupe.



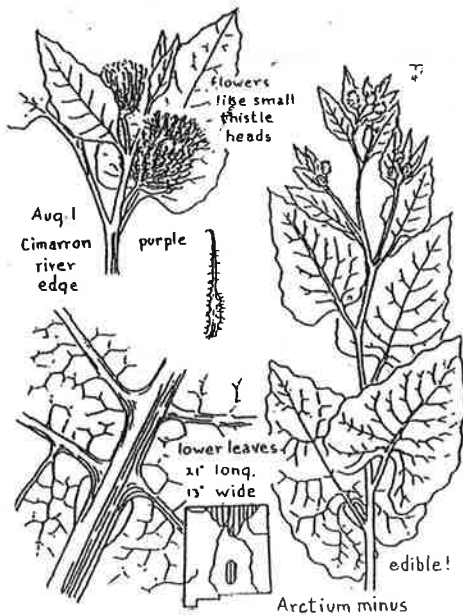
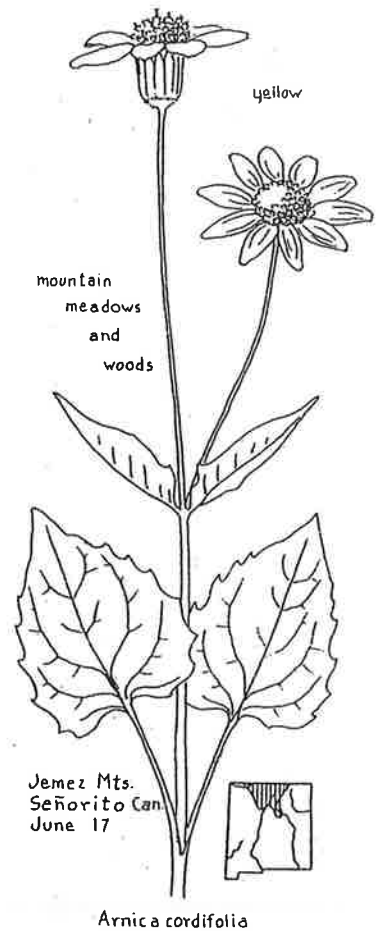
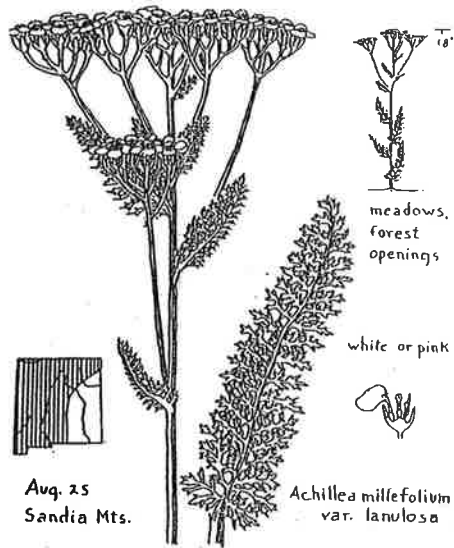
Apiaceae Celery family

Herbs with hollow internodes, often aromatic. Leaves alternate or basal, simple or compound, petiole bases sheathing; stipules absent. Flowers small, actinomorphic, perfect 5 sepals and petals, stamens 5. Fruit a schizocarp of 2 segments attached by a common stalk, often ribbed, winged or bumpy.



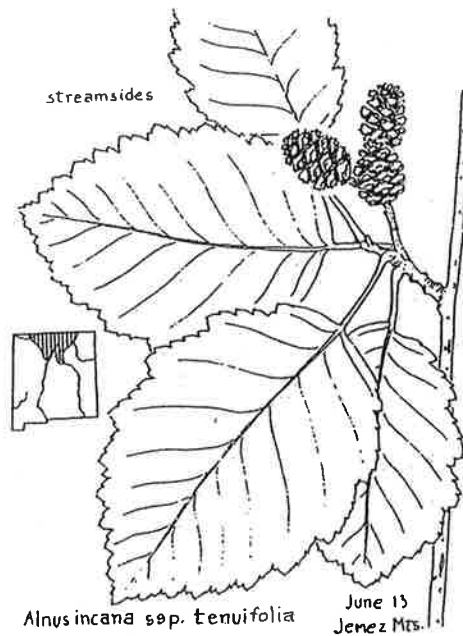
Asteraceae (Compositae) Sunflower Family

Herbs or shrubs sometimes with milky juice. Leaves alternate or opposite, simple to pinnately compound. Stipules absent. Flowers borne in dense heads subtended by an involucre of phyllaries; sepals modified into a pappus or absent; Ray flowers zygomorphic, disk flowers actinomorphic petals connate into a tube. Fruit an achene.



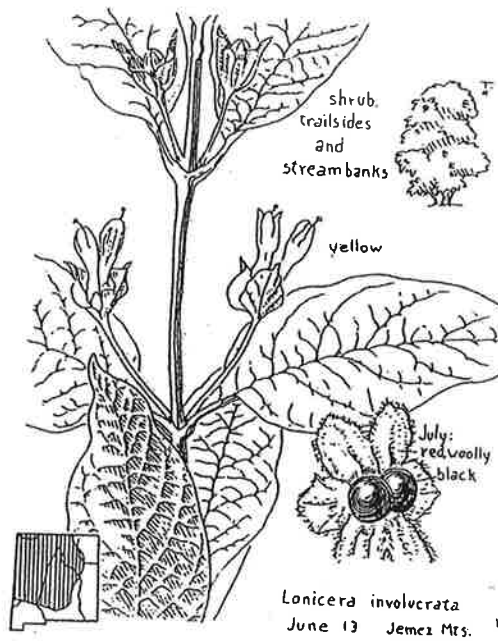
Betulaceae Birch family

Deciduous trees or shrubs, often with peeling, thin-layered bark and horizontal lenticels. Leaves alternate, simple, toothed, pinnately veined. Flowers small, unisexual wind-pollinated in hanging catkins; sepals 1-6, petals absent. Fruit a nutlet, winged or not. Alder is a common plant along Italionalis trail



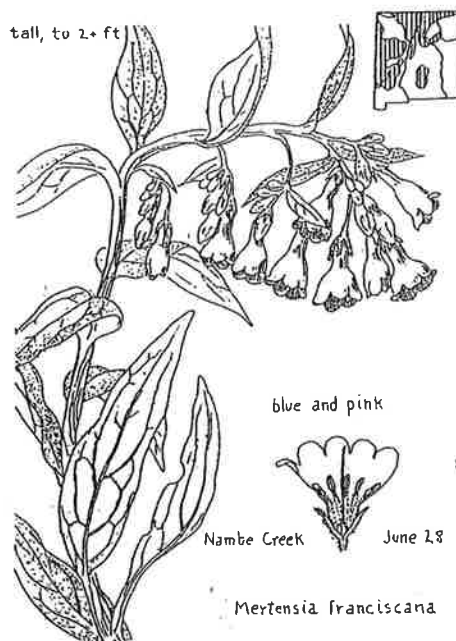
Berberidaceae Barberry family

Herbs shrubs or small trees. Leaves alternate, rarely opposite) deciduous or evergreen, simple or pinnately compound. Flowers small, actinomorphic, perfect; perianth of 6-9 members, stamens mostly 6 anthers opening by pores; Fruit a berry



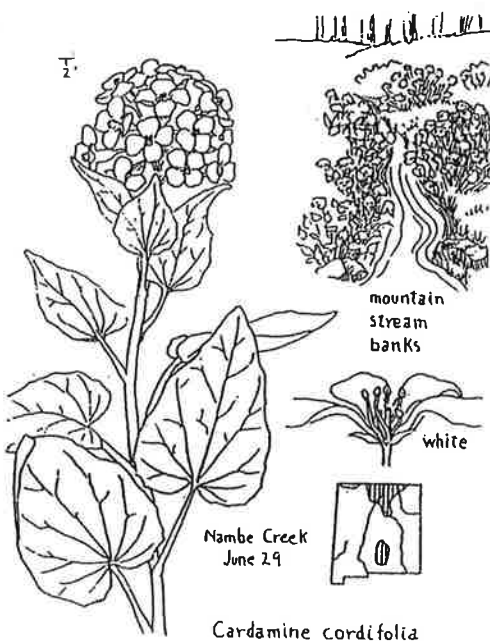
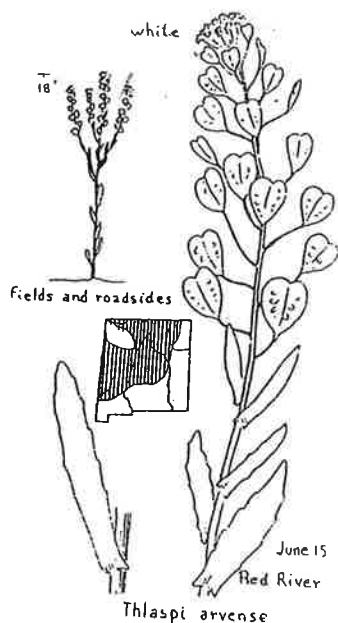
Boraginaceae Forget me Not Family

Herbs often with stiff hairs. Leaves usually alternate, simple, often entire; stipules absent. Flowers actinomorphic, perfect, sepals and petals 5, connate into a funnel- or saucer-shaped corolla; Fruit of 2-4 nutlets often covered with bumps or wrinkles, or a drupe.



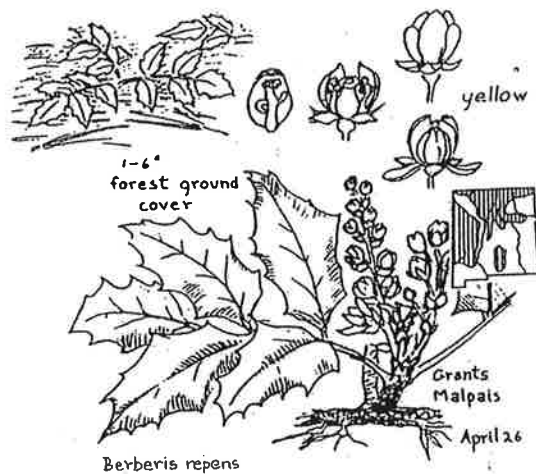
Brassicaceae (Cruciferae) Mustard family

Herbs or shrubs with mustard-oil glycosides. Leaves alternate, simple to compound; stipules absent, hairs diverse, simple to stellate or peltate. Flowers actinomorphic, perfect, sepals and petals 4 distinct in the shape of a cross; stamens usually 6. Fruit a silique or silicle.



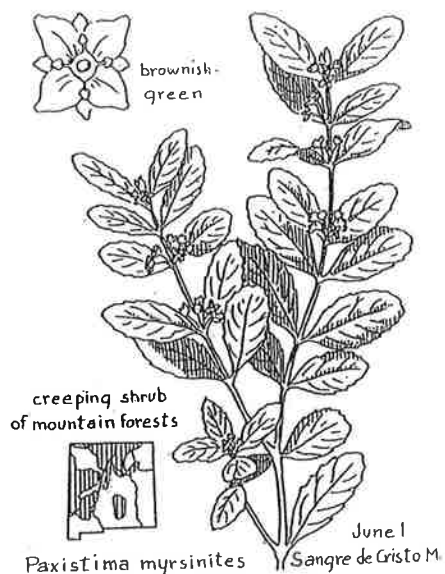
Caprifoliaceae Honeysuckle family

Herbs to small trees. Leaves opposite, simple; stipules lacking. Flowers actinomorphic or zygomorphic, perfect; 5 sepals and petals, stamens 1-5, single. Fruit an achene, berry capsule or drupe



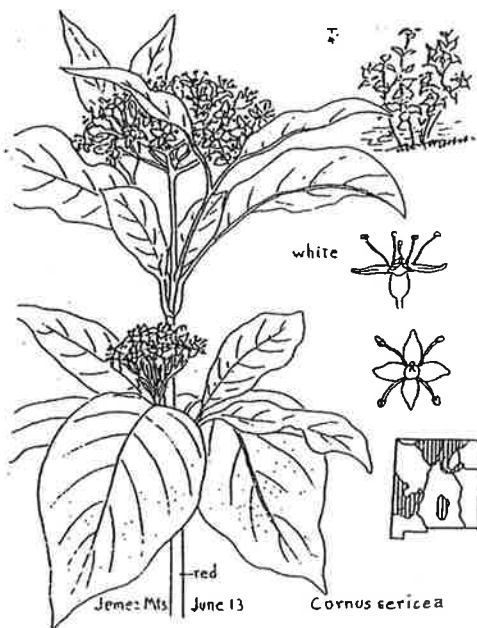
Celastraceae Staff-tree family

Shrubs with leathery leaves, opposite or alternate, simple, entire glabrous, stipules absent. Flowers usually small, actinomorphic, perfect or unisexual, sepals and petals 3-5, stamens 3-5, pistil single. Fruit a berry, capsule, drupe or samara.



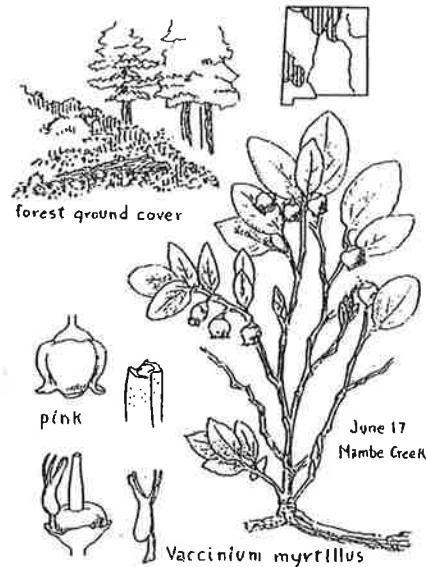
Cornaceae Dogwood family

Shrubs or trees. Leaves commonly opposite, simple, pinnately veined, stipules absent. Flowers actinomorphic, perfect, commonly surrounded by showy bracts; sepals and petals 4 – 5, distinct, stamens 4-5. Fruit a berry or drupe



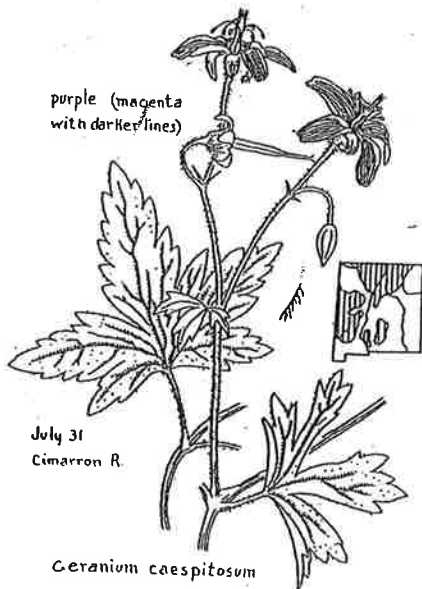
Ericaceae Heath family

Herbs or shrubs to small trees, Leaves alternate, simple, entire, deciduous or evergreen; stipules absent. Flowers actinomorphic, perfect, sepals 4-5; pistils 4-5, distinct or connate. Stamens usually twice the number of petals. Fruit a berry or capsule.



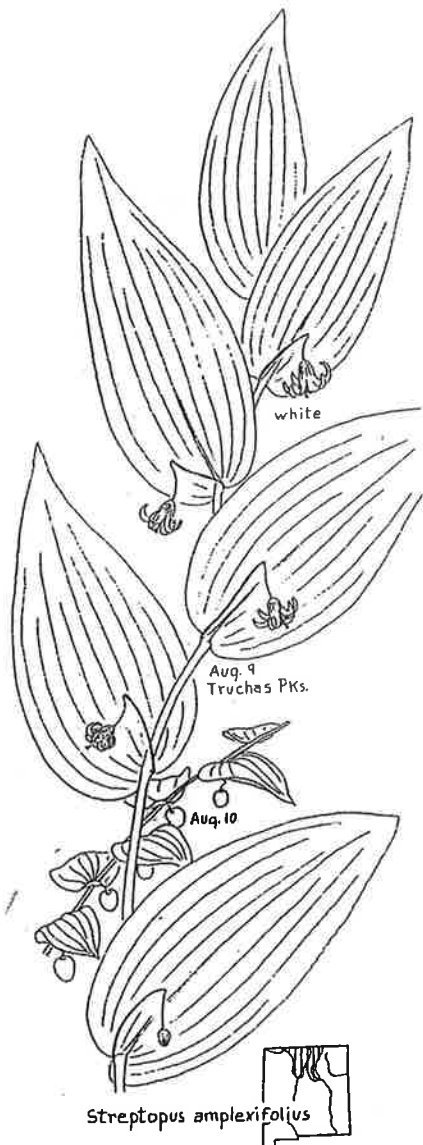
Geraniaceae Geranium family

Herbs, often with glandular hairs and swollen nodes. Leaves alternate or opposite, simple to compound pinnate to palmate, stipules present. Flowers often showy, actinomorphic, perfect, sepals and petals 5, distinct, brightly colored, stamens 10, pistil single. Fruit a schizocarp splitting from the base toward the apex.



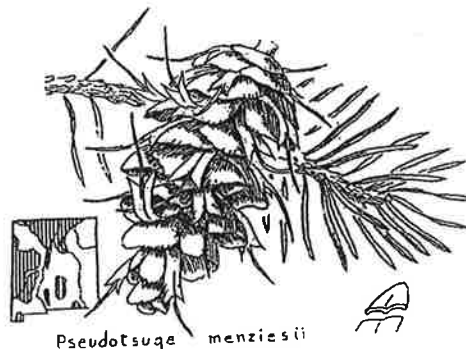
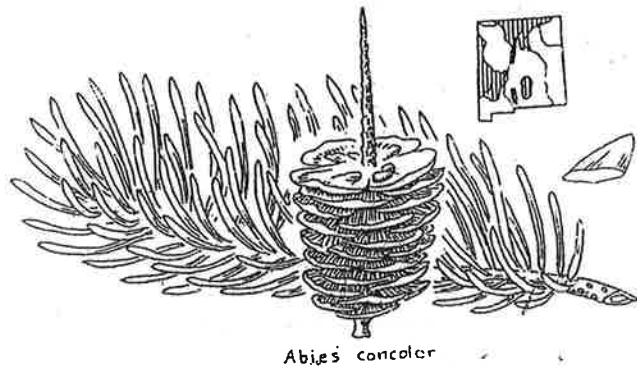
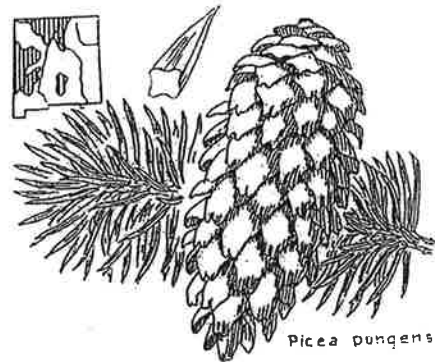
Liliaceae Lily family

Perennial herbs commonly from bulbs or rhizomes. Leaves alternate or whorled, simple, parallel-veined, often with a sheathing base. Flowers often showy, actinomorphic, often solitary or in a terminal raceme or umbel. Perianth of 6 petaloid tepals. Fruit a capsule.



Pinaceae Pine family

Small to large trees with whorled branches, buds enclosed in bud scales. Leaves needle-like, single, spirally attached to the branch or in sheathed clusters of 2-5. Monoecious, male cones small and papery; female cones woody with persistent scales or fleshy and deciduous.

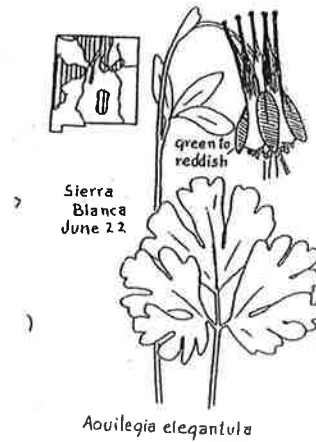
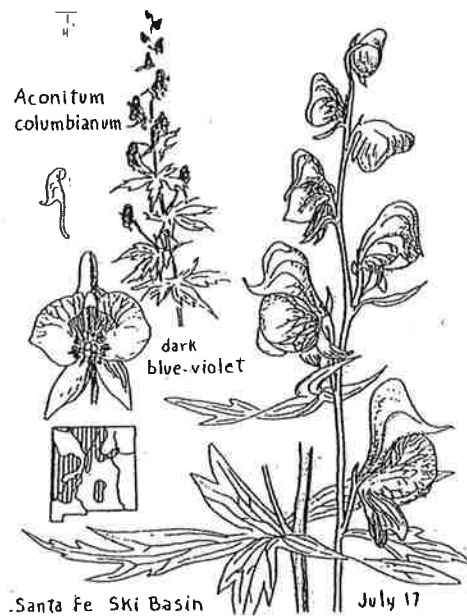


Ranunculaceae Buttercup family

Herbs or shrubs; leaves alternate, opposite or whorled, simple or compound, lacking stipules. Flowers actinomorphic but some zygomorphic; stamens and pistils numerous; petals and sepals often poorly distinguishable.

Aconitum columbianum wolfbane

Contains pseudaconitine; aconitine absorbed across skin, an arrow poison, symptoms within an hour. Death within hours.

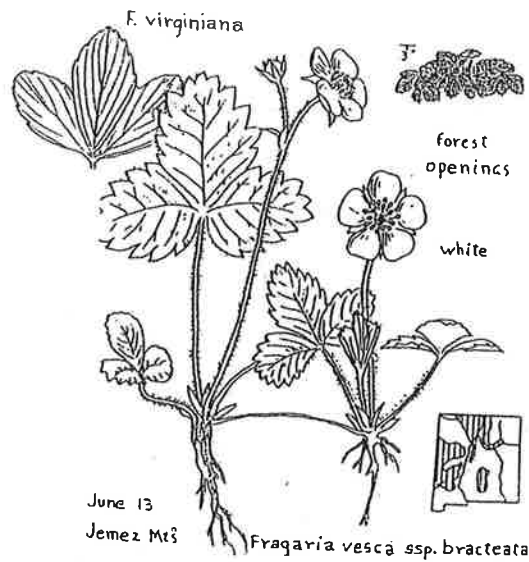


Rosaceae Rose Family

Herbs, shrubs or trees. Leaves usually alternate, simple or compound, often with paired glands at the base of the blade. Stipules usually present.

Flowers often large, actinomorphic, perfect, insect-pollinated, sepals and petals 5,

Fruit an achene, drupe or aggregate



Salicaceae Willow family

Shrubs or trees usually with phenolic compounds like salicin and populin. Leaves alternate, deciduous, simple; stipules early deciduous. Flowers unisexual, borne in catkins often appearing before or at the same time as the leaves; sepals none, petals none, stamens 2-many. Fruit a capsule, the seeds with long hairs.

