

Family: Apiaceae (Umbelliferae)

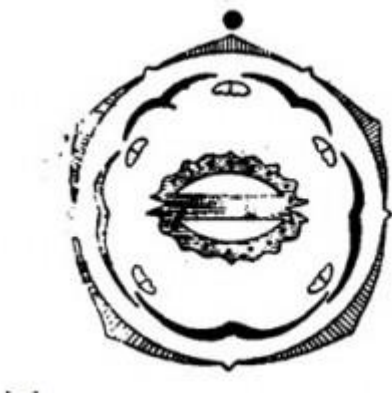
Apiaceae (Umbelliferae) Carrot Family

Diagnostic characters

1. **Habits:** Annual or perennial herbs rarely shrubs.
2. **Roots:** Tap root, branched, sometimes, tuberous due to presence of stored food.
3. **Stem:** Herbaceous stem, erect or prostrate with swollen nodes.
4. **Leaves:** Petiolate, Alternate, simple, exstipulate, reticulate venation. Usually sheathing at the base.
5. **Inflorescence:** Cymose, **umbel** (old name of family Umbelliferae derive from umbel), simple or compound. Umbel is surrounded by thin leafy bracts **involucre** and involucrel.
6. **Flower:** Pedicel late, ebracteate, actinomorphic, Regular, complete, hermaphrodite; epigynous with a disc, pentamerous, sometimes, outer petal of marginal flowers of umbel are enlarged. Therefore, the flowers are irregular and zygomorphic.
7. **Calyx:** 5 sepals, adnate to ovary, superior, free.
8. **Corolla:** 5, free, often bifid, unequal velvate or imbricate, superior.
9. **Stamens:** 5 Stamens, free, alternating with petals, anther versatile, superior.
10. **Carpel:** Bicarpillary, syncarpous, ovary inferior, bilocular with single pendulous ovule in each loculus, style two, stigma two, placentation parietal.
11. **Fruits:** **Cremocarp**, oblong, ridged.
12. **Seed:** Albuminous seed

Floral formula and Floral Diagram

—ED or t, , K_g or C₅, A₁. 'Cm.



Economic importance

1. **Food:** This family has many vegetables like carrot, parsley, parsnip and sowa.
2. **Fodder:** Several members of this family are important as forage plants for cattle and horses. Some of these plants are carrot, wild parsley, cow-parnip, angelicas etc.
3. **Condiments:** Many members of this family are used as condiments. For example, Ferula (**Hing**), Carum (**Ajwan**), Cuminum (**Zira**), Foeniculum (**Saunf**), coriandrum (**Dhania**) and peucedanum (Sowa). Volatile oils, resins etc are produced in the bark, leaves, and fruits give the plant their fragrance.
4. **Medicinal:** This family has many medicinal plants. For example, Ligusticum (**Lovage-Ajwain**), Ferula (**Hing**), Foeniculum (**Saunf**), Anethum (**Dill or Sowa**) are used in many drugs for

digestive disorders.. **Hing** is obtained from resinous gum produced from the roots of *Ferula asafetida* in Afghanistan and Iran. *Centella* or *Hydrocotyle* (*Brahmin booti*) is useful for brain work.

5. **Poisons:** Several members of this family give acrid watery juice. It has narcotic effects in animals. Among these, the most important is conium (*Hemlock*). Every part of this plant especially fresh leaves and fruits contain a volatile oily alkali called **conine**. It is much poisonous. Its few drops can kill some small animals. It acts on nervous system. Therefore, its small doze is effective for cancerous and nervous disorders. Several

British species like *Oenanthe*, *Cicuta* and *Aethusa* are also poisonous. Their fleshy roots are very deadly to all kinds of livestock. These are also fatal to human.

6. **Oil:** Oil is obtained from coriander (*Dhania*) and *Centella* (*Brahmi*). These are used as hair oil.
7. **Ornamental plants:** Several plants are cultivated domestically as ornamental plants like blue lac flower or didicans (*Trachymene*), *Angeica* (*Angelica*), sea holly (*Eryngium*) and cow parsnip (*Heraclaeum*).

Distribution pattern

This family is commonly known as carrot or parsely family. It is a large family. It contains about 200 genera and 2900 species. Most of its members are oily or aromatic. They are Wia:ly distributed. They are mos.. abundant in the north temperate and sub-tropical regions. They are mostly absent from tropics.

important Species

1. *Daucus carota*, Carrot (*Gajar*)
2. *Foeniculum vulgare* Fennel-Saul&
3. *Coriandrum sativum*, Corriander-Dhania
4. *Apium graveoloens*, Celery —Ajmud