

INFLORESCENCE

In some angiosperms individual flowers are quite large and are borne singly on the pedicel. Such flowers are termed as 'solitary flowers'.

In most angiosperms the flowers are small and occur in groups. Such cluster of flowers arranged on the floral axis is called an inflorescence.

Cluster of flowers in some way ensures pollination, fertilization and thus the reproductive success of the species.

MAJOR TYPES

The inflorescence may be:

1. Racemose
2. Cymose

1. RACEMOSE INFLORESCENCE

In a racemose inflorescence the main axis continue to grow indefinitely until the last flower is formed at its apex. The oldest flowers are towards the base of the inflorescence and the youngest ones towards the apex:

Chief types of racemose inflorescence are:

1. TYPICAL RACEME

In a typical raceme the main axis is elongated and bears laterally a number of flowers. Each flower has a pedicel or stalk. The lower or older flowers possess longer stalks than the upper or younger ones.

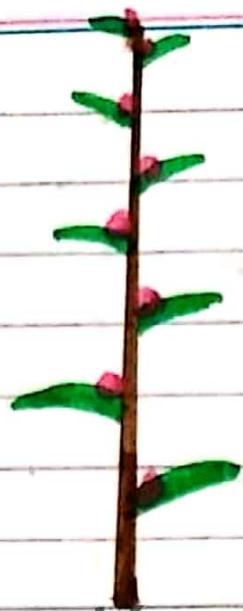
Examples include Cassia fistula (amaltas), radish, mustard (Brassica campestris) etc.



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2. THE SPIKE

The spike is a racemose inflorescence in which the main axis is elongated like raceme and the lower flowers are older i.e. opening earlier than the upper ones, but here the flowers are sessile i.e. without pedicel or stalk. e.g. Achyranthus (path kanda) and bottle brush.



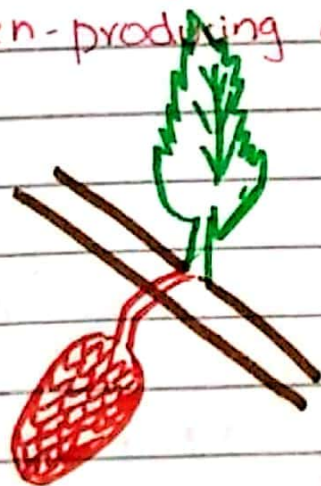
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3. CATKIN

This is a modified spike with a long and drooping axis bearing only pistillate or staminate flowers (i.e. unisexual flowers)

Examples are mulberry, willow, oak etc.

- * pistil → ovule-bearing organ of plant
- * stamen → pollen-producing organ of a flower

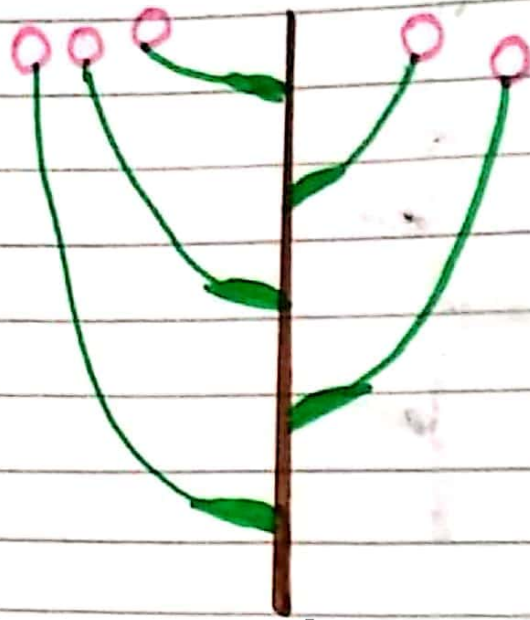


Female catkin of mulberry

4. CORYMB

In this case the main axis is comparatively short and the stalks of the lower flowers are longer than those of the upper younger ones. As a result, all the flowers lie about the same level e.g. Iberis

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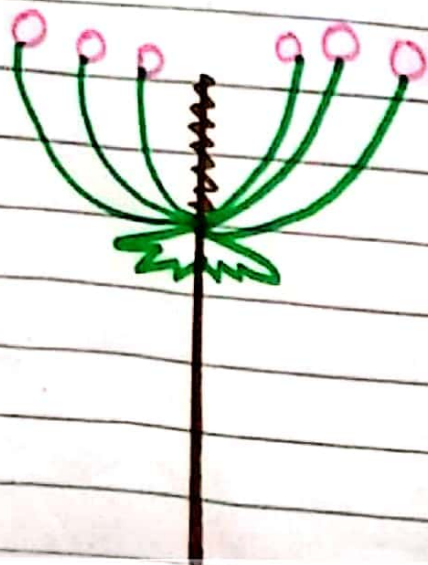


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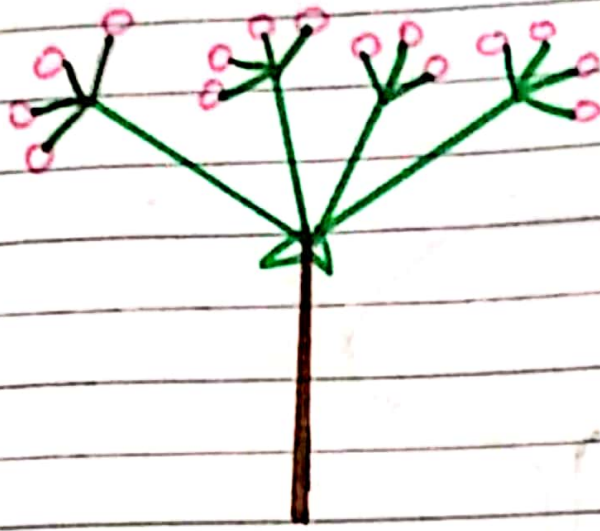
5. UMBEL

In this inflorescence the main axis remains comparatively short, and it bears at its tip a group of flowers which possess pedicels or stalks of more or less equal lengths so that the flowers are seen to spread out from a common point e.g. hydrocotyl

In some cases a number of umbels are present at the tip of main axis. Such a compound inflorescence is called umbel of umbels or compound umbel e.g. carrot.

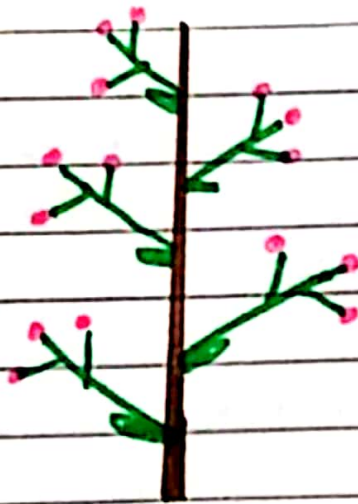


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6. PANICLE

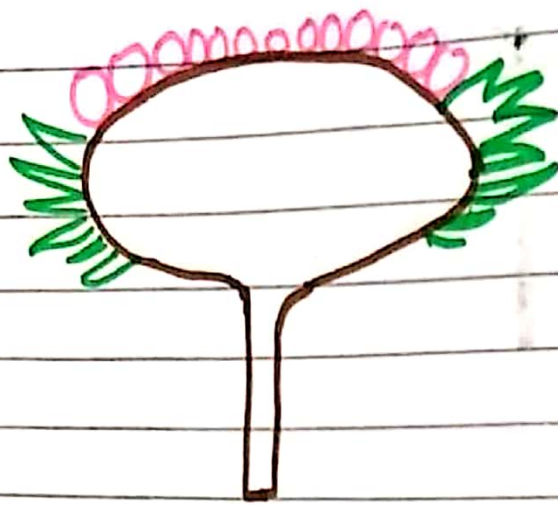
A branched raceme is called panicle e.g. mango and oat, grapes



7. CAPITULUM

In this type of inflorescence the main axis or receptacle becomes suppressed, and almost flat, and the flowers (also known as florets) are sessile (without stalk) so that they become crowded together on the flat surface of receptacle. The florets are arranged in a centripetal manner on the receptacle i.e. the outer

Flowers are older and open earlier than the inner ones. e.g. sunflower



2. CYMOSE

In a cymose inflorescence the main axis soon ends in a flower. One, two or more lateral branches develop below the terminal flower, each ending in a flower like the main axis. In this case the terminal flower is the oldest and the lateral flowers are younger.

Chief types of cymose inflorescence are:

1. UNIPAROUS CYME (MONOCHASTAL CYME)

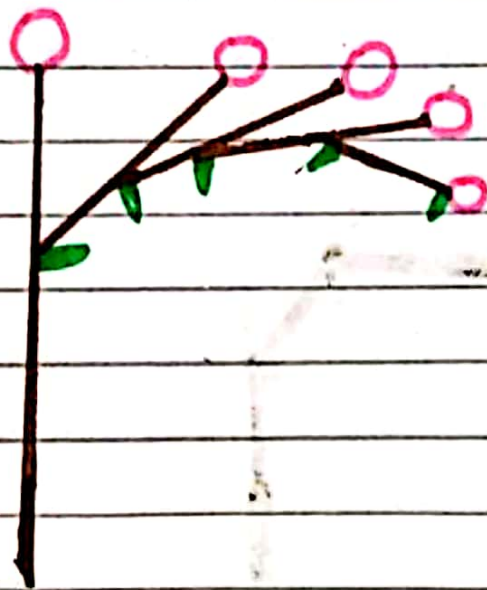
In this case the main axis ends in a flower and it produces only one daughter axis (lateral branch) at a time ending in a flower. The lateral and succeeding branches

again produce only one branch at a time like the primary one. e.g. Begonia, Tradescantia etc. There are three forms of uniparous cyme:

1. Helicoid
2. Scorpioid
3. Sympodial

a) HELICOID

When the lateral axes develop successively on the same side, forming a sort of helix, the cymose inflorescence is known as helicoid or one-sided cyme.



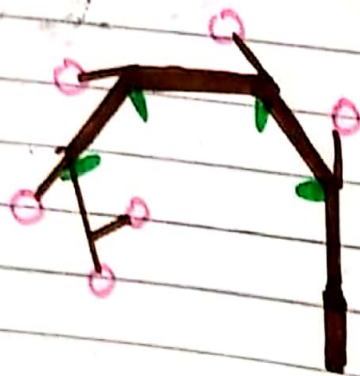
b) SCORPIOID

When the lateral branches develop on alternate sides, forming a zigzag, the cymose inflorescence is known as scorpioid or alternate-sided cyme.



c) SYMPODIAL

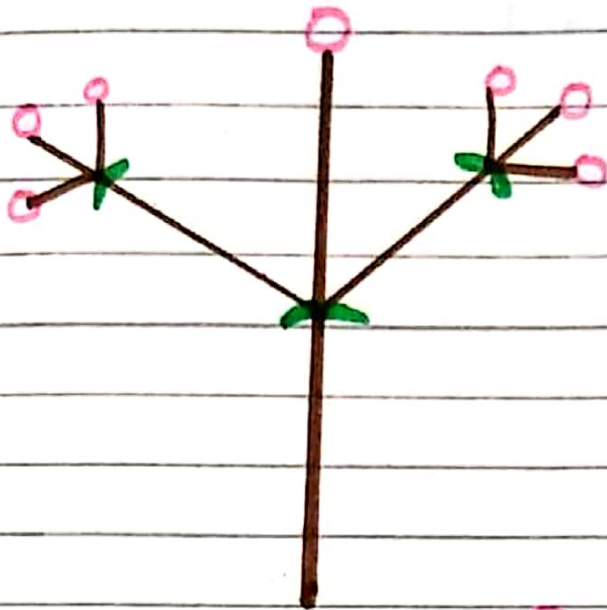
Sometimes, in monochasial or uniparous cyme successive axes may be at first curved or zig-zag but later on it becomes straight due to rapid growth, thus forming a central or pseudo axis.



2. BIPAROUS Cyme (DICHASIAL Cyme)

In biparous cyme the main axis ends in a flower and produces two daughter axis. Each of the two daughter axis again ends in a flower and produces

two daughter axis which may continue the branching in the same manner. e.g. Silene, Ipomoea, jasmine etc.



3. MULTIPAROUS CYME

In multiparous cyme the main axis ends in a flower and produces three or more daughter axis each of which continues the branching in the similar manner e.g. Euphorbia

