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Reproduction in Anthoceros →

In Anthoceros reproduction takes place by following methods -

- (i) Vegetative Reproduction
- (ii) Sexual Reproduction.

(i) Vegetative Reproduction / Propagation are as follows.

(a) By progressive death and decay of thallus :- When the thallus dyes gradually, its posterior part reaches to the point of dichotomy and the lobes separate where each grow into new independent plant (thallus).

(b) By Tubers :- Generally tubers are formed during unfavourable condition i.e. prolonged drought. The tubers have an outer protective covering layer which is corky and resistant to extreme desiccation. Each tuber have capability to grow in to new plant sufficient moisture and favourable condition found.

(c) By Gemmae :- Some species like *A. pearsonii* and *A. fusiformis* develops a stalked structure at dorsal surface of thallus known as gemmae. On separation from ~~the~~ thallus, gemmae give rise to a new plant.

(d) By persistent growing apices :-

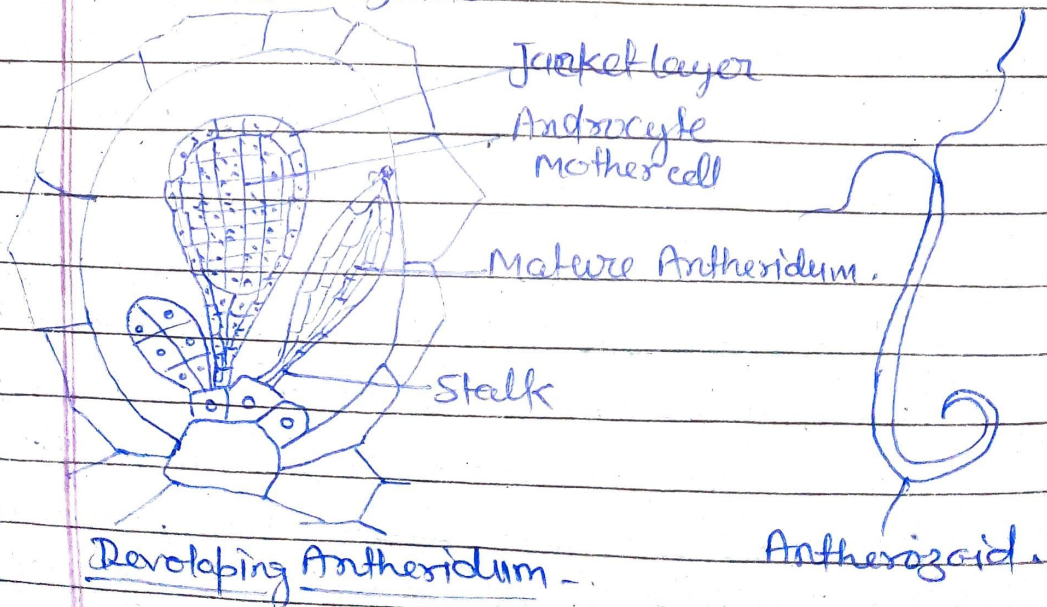
During summer all parts of thallus except the apical region become dry. These apical part remain dry during summer but become active (able to grow in to new plant) during ~~rainy~~ rainy season.

[11] :- Sexual Reproduction :-

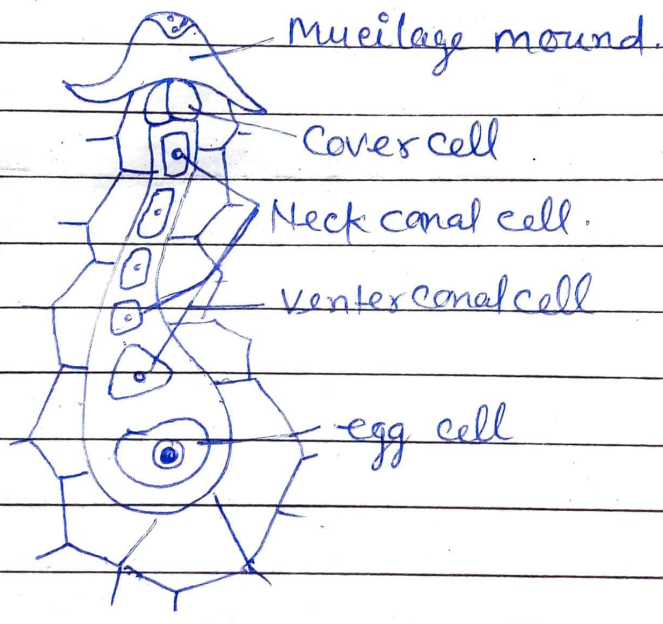
Species of *Anthoceros* are both monoecious or homothallic and dioecious or heterothallic.

The male sex organ is called antheridium where as female sex organ is called oogonium.

The mature antheridium has a club shaped or pouch-like body born on a slender stalk. The wall of antheridium is composed of a single layer of plastid containing polygonal or elongated cells. These cells enclosed a mass of androcytes which metamorphose into antherozoids.



The mature archegonium is embedded in the dorsal surface of the gametophyte. The neck of archegonium composed of 6 vertical rows of neck cells and the narrow cavity of the neck is occupied by an axial row of 4-6 or more neck canal cells. The lower swollen venter contains a large egg and relatively small venter canal cell.



A mature Archegonium.

Fertilization:- At the time of fertilization the cover cell separate and the neck canal cell and venter canal cell disintegrate at the same time to forming a mucilage mass at tip of archegonium where freely swimming antherozoids attaches with this and one of them fuses to egg this zospore is formed.