ANATOMICAL ADOPTATIONS OF XEROPHYTES

INTRODUCTION → These are plant growing in dry habitats or xeric conditions. They occur in various places. Such as dry climate, desert, rock surfaces wastened physiologically dry habitat where the light intensity and wind velocity are extremely high.

SOME IMPORTANT XEROPHYTES → These plants are very common in our localities. Some xerophytes are Opuntia, Artemesia, Astragalus, Casuarina, Euphorbia, Ulmus, Aloe etc.

TYPES OF XEROPHYTES → Xerophytes have been classified into the following three classes —

1. Drought Escaping → These Xerophytes are short lived. During unsuitable periods this survives in the form of resistant structure like seeds and fruits. At the advent of favourable condition the seeds or other dormant structure germinated into new small sized plants which complete their life cycle within a few weeks time. Ex - Astragalus, Artemasia and the members of the family Boraginaceae.

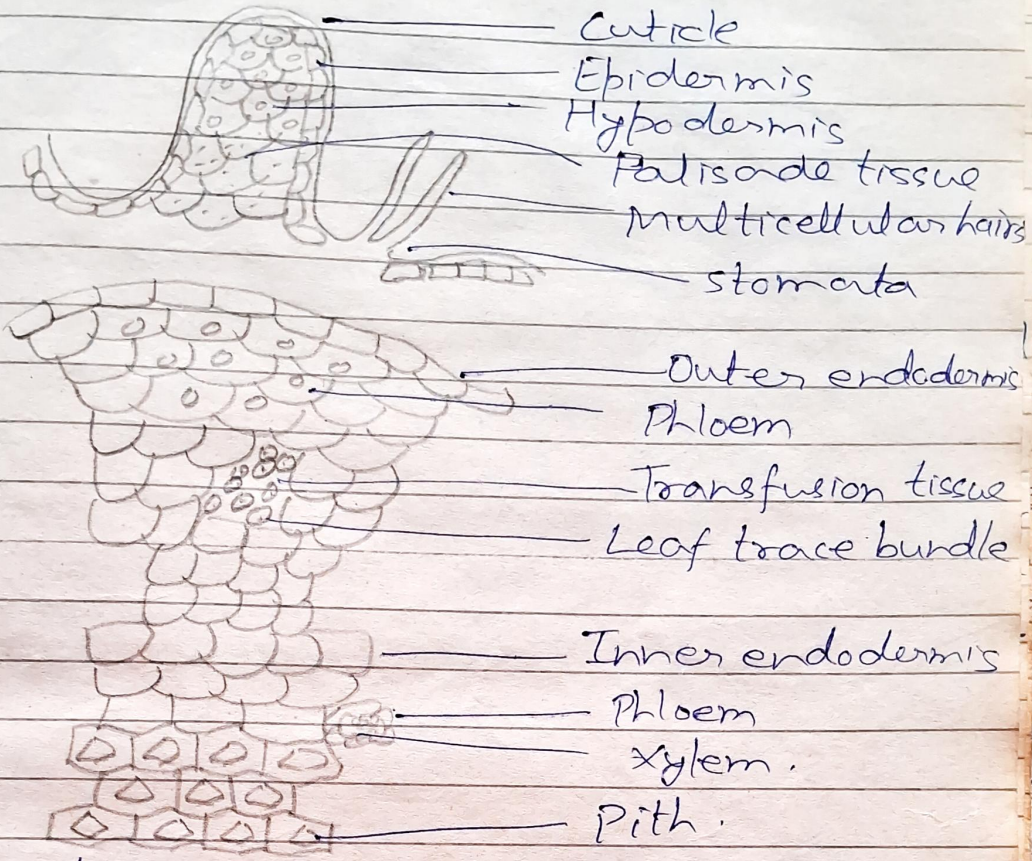
2. Drought Endwring → These are small sized plants which have capacity to tolerate droughts.

3. Drought Resistant → These plants develop certain adoptive features in them through which they resist to extreme droughts.

ANATOMICAL ADOPTATIONS OF XEROPHYTES

The xerophytes bear the following adoptive features —

1. The epidermis consist of thick walled cells.
2. In some plants, the epidermis consists of many layers. This has been called as multiple epidermis as in Banyan Ficus, Nerium etc.
3. The outer epidermal cells remain covered with a thick layer of cutide.
4. The ground tissue is made up of small, compact cells.
5. There is no intercellular spaces or if present they are small.
6. Mechanical tissue are highly developed.
7. Some plants have water storage cell and tissues as in Aloe.
8. The vascular elements are also highly developed.
9. stomata are found located in pith. They are known as "Sunken-stomata



A portion enlarged of T.S of Casuarivs stem

CONCLUSION → These plants grow in soil, where there is little moisture content They can with stand extreme dry conditions, low humidity and high temperature.

The adoptaies of xerophyte airs mainly at the following objections.

1. To absorb as much water as they can.
2. To retain water in their organs for very long time.
3. To reduce the transpiration into minimum.
4. To check high consuption of water.