

## Hydrophytes :-

- Plants living wholly (or) partly (or) in very wet places are known as hydrophytes
- The hydric environment is characterized by the following conditions:-
  1. Poor development of mechanical tissue (Sclerenchyma & Colenchyma)
  2. Extensive development of aerenchyma
- Divided into 3 Categories :-
  1. Submerged
  2. Floating
  3. Amphibious
- Stomata are absent & if present, they are non-functional
- Chlorenchyma is mostly of spongy type.

Examples of submerged plants :

1. *Carotophyllum demersum*
2. *Potamogeton Crispus*
3. *Hydrilla Verticillate*
4. *Vallisneria spiralis*

Free floating aquatics - Common examples are

- *Nostoc*
- *Salvinia* – Pteridophyte
- *Lemna*, *Eichornia* (Polluto Water)
- *Pistia stratiotes*
- *Trapa luispinosa*
- *Nymphaea* (Nymphaeaceae)
- *Nelumbium* (Nymphaeaceae)
- *Aeschynomene* (Fabaceae)
- Marsh (or) Swamp Plants

Examples: \* *Typha* (Typhaceae)

\* *Begonia*

\* Aroids (all plants in araceae like colocasia etc.)

## xerophytes

- The xerophytes have to face 2 difficulties namely :-
- Inadequate water supply
- Excessive transpiration

Drought endures:

Eg : \* Calotropis gigantea, C.Procera

\*Nerium

\*Zizyphus species etc.

Drought resisters : (or) (succulent)

Eg

- Opuntia
- Agave
- Aloe vera
- Euphorbia's etc.

\*Adaptations of xerophytes

\* The cell walls are thickened

\* There is an abundance of supporting & Conducting tissues such as scleranchyma & xylem

\* But when this stomata close cumulatively all these features, in bringing down cuticular transpiration.

## Halophytes

Types Halophytes : 4 types:

\* Lithophilous

\* Psummophilous

\* Pelophilous

\* Heliophilous