Theophrastus (370-285 B.C.) wrote in his "Enquiry into Plants" about the hydrophytes as "For there are some plants which cannot live except in wet and again these are distinguished from one another by their fondness for different kinds of wetness; so that some grow in marshes, others in lakes, others in rivers, others even in the sea ...................... Some are water plants to the extent of being submerged while some project a little from the water; of some again the roots and a small part of the stem are under the water, but the rest of the body is altogether above it". That is the first of its kind of clear cut definition of hydrophytes. "Hydrophytes" are the plants that are found both in and by the water. These plants grow in a variety of habitats but true definition still remains controversial.

Whereas Weaver and Clements (1936) stated "Typical hydrophytes" grow in water, in soil covered with water, or in soil that is usually saturated. Muenscher (1944) considered aquatic plants as "those species which normally stand in water, either completely submerged or "emersed". Whereas according to Reid (1961) the water plants are "those whose seeds germinate either in water phase or the substrate of a body of water, and which must spent part of their cycle in water". This ecological grouping includes plants which grow completely submerged. Den Hartog and Segal (1964) defined hydrophytes as plants which are able to achieve their generative cycle when all vegetative parts are submerged or are supported by the water (floating leaves), or which occur normally submerged but are induced to reproduce sexually when their vegetative parts are dying due to emersion.

Most of the water masses of the district are greatly disturbed by biotic factors, particularly by human beings and other domestic as well as wild animals. Human beings disturb the water bodies mainly for cultivation and regular fishing leading to a loss of aquatic flora. However, some aquatic bodies are not disturbed as yet and there occur a number of hydrophytic plants that usually grow luxuriantly and flower abundantly.

The main variables in the water masses are depth of water, the presence or absence of water throughout the year, intensity of light at different depth of water, presence or absence of floating, submerged flora in the district and chemical composition of the substrate.
1. Aquatic vegetation in a jheel and nearby marshy areas in Srikona

The following factors have great influence on the production of flowers in aquatic plants. They are (a) quiet water, (b) shallow water or lowering of water level and increased exposure to sunlight or dessication and (c) type of substrate. Species that grow in water throughout the year remain usually green and metabolically active. However, some of the hydrophytes such as *Hydrilla verticillata* (L.f.) Royle, remains in vegetative condition throughout the year, it flowers only in winter. Some species of *Nymphaea*, *Nymphoides* etc. practically flower almost throughout the year except the spring months.

Some aquatic plants such as *Aeschynomene* growing along the banks of deep and shallow water bodies drop their leaves and remain dormant over most part of the year.

There is a wide range of variation regarding the occurrence of hydrophytes. Some hydrophytes occur in almost all the water bodies (Photo - 1). These include of Angiosperms Viz., *Eichhornia crassipes* (Mart.) Solms., *Pistia stratiotes* L., *Nymphaea nouchali* Burm. f., *Spirodela polyrrhiza* (L.) Schl., *S. punctata* (Meyer) Thompson, *Utricularia aurea* Lour., *Wolffia arrhiza* (L.) H.K. & Wimm., etc. These species are often found with the association of hydrophytic ferns viz., *Salvinia cucullata*, *Azolla pinnata*. Others such as *Nelumbo nucifera* Gaertn., *Euryale ferox* Salisb., *Myriophyllum tuberculatum* Roxb., *Neptunia prostrata* (Lamk.) Baillon., etc. are restricted to certain water bodies only. Whereas *Ceratophyllum demersum* L., *Ottelia alismoides* (L.) Pers., *Hydrilla verticillata* (L.f.) Royle etc. are restricted to stagnant water for better development. On the other hand *Blyxa aubertii* Rich. prefers slow moving water and a few such as *Ottelia alismoides* (L.) Pers. show their growth both in stagnant as well as slow moving water.

3. *Nymphoides cristata* (Roxb.) O. Kuntze with white flowers growing in beets of Srikona.

5. *Schumannianthus dichotomus* (Roxb.) Gagnep. growing in marshes in Srikona.

6. *Cyperus pilosus* Vahl. associated with *Eichhornia crassipes* and *Ipomoea carnea* var. *fistula*. 
Water depth and aquatic vegetation: The depth of water has a considerable affect upon aquatic vegetation. In general, growth of aquatic vegetation is less in deep water and fast moving streams, rivers etc. However, some species show their optimum development in deep water, whereas some other species show their development in shallow water. Again there are some species that show their development both in deep and shallow water. The following is a list of some species that favour shallow or deep water.


The following species favour both shallow and deep water:


7. *Ottelia* sp.nov. growing in cultivated paddy fields.

O. Kuntze., N. indicum (L.) O. Kuntze., Oenanthe javanica (Bl.) DC.,
Ottelia sp. nov. (Photo - 7), Panicum brevifolium L., P. paludosum Roxb., P.
repens L., Paspalum scrobiculatum L., Pistia stratiotes L., Polygonum glabrum
Wild., P. hydropiper L. (Photo - 8), P. plebejum R. Br., Rotala densiflora
(Roth.) Koehne., R. rotundifolia (Roxb.) Koehne, Sagittaria guayanensis H.B.K. ssp.
lapula (D.Don) Bogin., S. sagittifolia L. (Photo - 9), Scirpus juncoides Roxb.,
Setaria pallide-fusca Stapf., Urena lobata L., Utricularia bifida L., Xyris
pauciflora Willd. etc.

10. *Eichhornia crassipes* (Mart.) Solms., a common floating hydrophyte, growing in Doloo lakes.