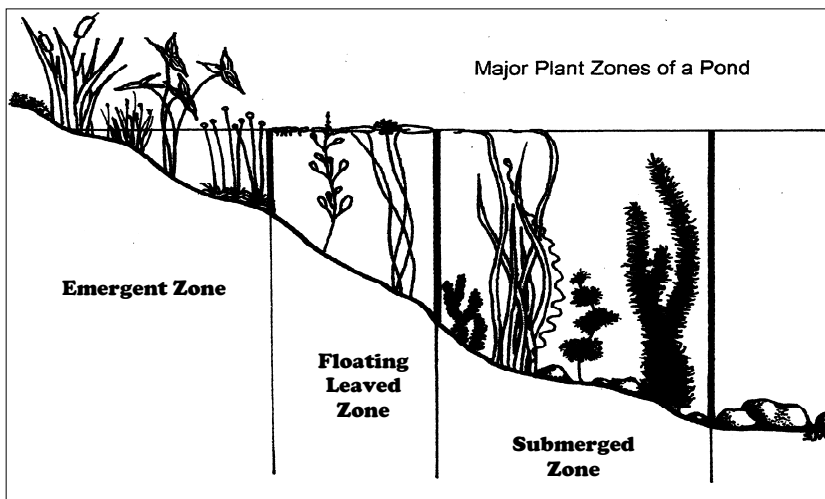


AQUATIC PLANT COMMUNITIES Roberta Hill

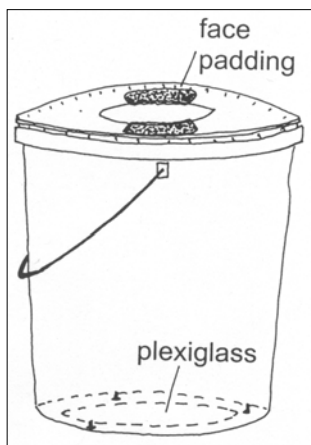
You are out in your little boat exploring the “fertile fringe” of your lake or pond, the shallow areas where sunlight penetrates to the bottom sediments and the rooted aquatic plants create a blurry mosaic of form and color. You notice that within the littoral area, the plants are loosely arranged in distinct, though overlapping “zones” or “communities.” The *emergent* plants such as cattails, pickerelweed and arrowhead hug the shore. These plants are adapted to withstand wave action and fluctuating water levels. With stiff but buoyant leaves and heavy-duty interlocking roots, they form an excellent defense against shoreline erosion and important cover for nesting waterfowl.

Beyond the emergent plants you find the floating leaved plant community. This community is notable for the patches of circular or elliptical leaves floating on the surface and later in the season for the beautiful and often fragrant flowers that emerge among the leaves. Some (like the spatterdock and fragrant water lily) are anchored to the bottom sediments by tough elastic stalks; some (like the tiny duckweeds) float freely among the rooted plants.

When you look very closely, down below the water’s surface, you notice a third community: the graceful and wondrously varied world of the submersed plants. This group includes the translucent leaved pondweeds, the tiny waterweeds, the delicate naiads and the free-floating, plankton-eating bladderworts. These plants are all well adapted to the buoyancy of life underwater and many lack the stiff cell structure needed for life at or above the surface. The leaves here are finely divided or long and wispy, like cellophane noodles. Some submersed plants also produce a set of different, more durable, leaves to accompany their flowering parts at or above the surface.



Littoral zone plant communities



“Wide Angle” Scope

The best time to view the submersed community is when the air is very still and the sunlight is not directly overhead. Early morning and late afternoon usually provide the best viewing conditions. Under these conditions, and perhaps with a pair of polarized sunglasses, you can see through the surface of the lake as if it were polished glass, each plant fully revealed in exquisite detail. However, if the wind picks up and begins to ruffle the surface you will need a piece of equipment - a simple viewing scope - to continue your exploration. The 4 ½” scope used by LSM water quality monitors generally will not provide a wide enough field of view for plant survey work. To the left is a diagram of an inexpensive, build-it-yourself “wide-angle” viewing scope. For complete instructions for constructing a simple bucket scope, please see page 3.2.1 or download it from the LSM website

www.lakestewardsme.org/volunteer-info/invasive-plant-monitors/ipp-resources/#Survey