

Wisconsin Flora



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Liverworts of Central Wisconsin

Presented by Dr. Virginia Freire

Article by Theodore Cochrane

The afternoon portion of the scientific program ran from 1:20—2:20 p.m. and consisted of a one-hour, slide- and specimen-illustrated talk on the liverworts of central Wisconsin, concentrating on the Portage-Wood-Marathon county area. Dr. Virginia Freire, who knew the plants of central Wisconsin first-hand, presented an interesting and educational session. After giving a short and relatively elementary treatise on liverwort classification, she spent most of the time surveying representative species of selected genera, projecting distribution maps, describing their habitats, and passing around fresh or dried specimens of each example. Audience members were invited to examine these under hand lenses that were provided. The displays of plants in little boxes and dishes were observed again at leisure after the talk was over.

The bryophytes are divided into three classes, the liverworts, hornworts, and mosses. The differences between the three classes are primarily in the sporophytic generation. Liverworts are generally small and inconspicuous. There are two major groups of liverworts, one with two subgroups. Most are terrestrial, living on damp soil, rock, decaying wood, or bark, but a few live on or in water. Their gametophytes are generally flat. Some are said to be

differentiated into “leaves” and “stems,” but lacking food- and water-conducting tissues, these are not true leaves and stems. Some cells on the lower surface of the gametophyte are prolonged into unicellular unbranched rhizoids by which they are attached to the substrate. (The rhizoids of mosses are multicellular.) Late in development the sporophyte forms spore mother cells, which divide meiotically to form four spores. The spores have elaters, elongated sterile cells that aid in dispersal. (This feature helps distinguish liverworts from mosses, which lack elaters.)

Although especially abundant in the tropics and subtropics, the leafy liverworts (characterized by acrogynous sporophytes) are well represented in the temperate zone. Among the native liverworts we were shown were *Buziania trilobata*, with flagelliform branches; *Frullania tamarisci* and *F. inflata*, common liverworts that grows on bark; the very tiny *Lepidozia reptans*, with transversely inserted leaves; *Plagiochila calopogea*, which produces tiny gemmae, small outgrowths of the thallus that can grow into an entire new plant; and *Ptilidium pulcherrimum*, which



Dr. Virginia Freire

(Photo by Tom Eddy)