KEY TO GROUPS

The simplest way to identify a new plant is to go directly to the key for the family to which it belongs. Plant families are listed in the Index under Latin and common names. If the family is not known, this brief key will lead to one of four Group Keys, which will help you find the family for an unfamiliar plant.

These keys to the Plants of Michigan are for identification of gymnosperms (Pinophyta) and flowering plants (Magnoliophyta) only. Non-vascular plants and the ferns (Polypodiophyta) and “fern allies” (Lycopodiophyta, or clubmosses, spikemosses, and quillworts; and Equisetophyta, or horsetails) are not included. Ferns are recognized by their (usually) finely dissected leaves, circinate leaf development (“fiddleheads”) and spore clusters (sori) on the backs of leaves or in specialized fronds. Club mosses and horsetails do not have true leaves. See Billington (1952) or Lellinger (1985) for more information.

1a. Trees, shrubs, or woody vines—Group 1, Woody Plants
1b. Herbaceous plants, with little or no woody tissue—2

2a. Plants aquatic, submerged or floating; flowers or fruits may not be readily visible—Group 2, Unusual Plants
2b. Plants terrestrial or with leaves and flowers emergent if growing in shallow water—3

3a. Plant consists of flowers and supporting stems only, with no vegetative parts visible—Group 2, Unusual Plants
3b. Plant consists of both flowers and vegetative parts—4

4a. Leaves are missing or scale-like; plants may be colorless, or yellow to brown, or purplish with no green tissue obvious during the growing season—Group 2, Unusual Plants
4b. Leaves present; plants are green in most parts—5

5a. Leaves linear to sword-shaped, with parallel venation; petioles are absent and leaf bases sheath the stem—6
5b. Leaves narrowly lanceolate to broad in outline, with net or parallel venation; petioles present or absent—7

6a. Floral parts in 3s or 6s—Group 3, Monocots
6b. Floral parts in 4s or 5s—Group 4, Herbaceous Dicots

7a. Leaves simple, with parallel venation; floral parts in 3s or 6s—Group 3, Monocots
7b. Leaves simple or compound, with net venation; floral parts in 4s or 5s—
Group 4, Herbaceous Dicots

The distinction between monocots (Class Liliopsida) and dicots (Class Magnoliopsida) is not as clear-cut as has often been assumed. The most reliable characters are not good field characters, namely, the number of cotyledons in the seed (1 vs. 2), storage materials in the sieve tube plastids (protein vs. starch), or the arrangement of vascular bundles in the stem (scattered vs. in a single ring) (Zomlefer, 1994). While the floral and leaf features given in couplet 7 usually work, there are a number of exceptions among both the monocots and dicots in Michigan flora. The keys to Groups 3 and 4 each include some plants which do not fit neatly into these simple distinctions. For example, *Trillium* spp. (Liliaceae) have net-veined leaves, but floral parts in 3s. *Arisaema* spp. (Araceae) are our only monocots with compound leaves. *Florkea proserpinacoides* (Limnanthaceae) and members of the Aristolochiaceae are the only Michigan herbaceous dicots with all whorls of floral parts in 3s. The keys have been designed to lead the reader to the correct family where these exceptions exist.