



# Recognizing and Describing Plant Communities

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## PLANT COMMUNITIES

Plants grow in communities. All plants have neighbors, other plants, with whom they interact with in many ways. These plant communities occur in complex patterns that don't appear to be chance affairs because we see the same general patterns repeating themselves over the landscape. Plant communities are often dominated by a few species while other species are scarcer. Noting which plants are dominant, which are common and which are rare can describe plant communities. For practical purposes, plant communities may be considered subdivisions of a vegetation cover. Wherever the plant covering the soil shows more or less obvious spatial changes, one may distinguish a different plant community.

These changes may be caused by spatial changes in the plant species that make up the soil cover, changes in spacing and height of plants, or changes in growth form or life form of plants. Actually, within a particular climatic area, these plant communities reflect physical changes of the landscape. Dry hillslopes, rocky outcrops, wetlands, valley bottoms with deep soils, are all examples of these physical changes. Each particular kind of soil and site is generally suited to a selection of locally available plants and these plants are found growing together wherever those physical conditions occur.

## PLANT LIFE FORMS (groups of species)

Plants on the natural landscape are commonly grouped into the categories of grasses, forbs (herbaceous broad-leaved plants) and shrubs and trees. Grasses are monocots, meaning they just have one seed leaf. Monocotyledonous plants or monocots can be recognized by the parallel veination of their leaves. Dicotyledonous plants, or dicots, are broad-leaved plants with net or branched veins in their leaves. Forbs are herbaceous or non-woody dicots, often called weeds. Shrubs are usually broad-leaved plants with woody bases and or stems. Trees are woody plants over some predetermined height, usually 10-20 feet.

Even within the grass family there is much life form diversity. There are annual grasses, which grow from seed and complete their life cycle in one growing season. There are perennial grasses that live for many years. There are cool season grasses that begin growth early in the spring when soil temperatures reach 45 degrees or so, and complete their reproductive cycle (form seeds) before the hot summer weather sets in. And there are warm season grasses that begin their surge of growth later in the summer after the soil warms to about 65 degrees. Grasses can be further classified according to their growth stature and forms. There are tall, mid and short grasses in addition to bunch grasses and sod-forming grasses.

## DESCRIBING PLANT COMMUNITIES

Plant communities can be described by the various physical characteristics of their respective plant species. Physical characteristics are traits that can be measured or quantified in some way. For example, plant biomass is one of the most commonly measured attributes of plant communities, and refers to the weight or yield of the plant material within a given area. Other physical characteristics of plant communities that may be measured include soil cover, plant density, and species composition. Soil cover is a vertical projection of the plant canopy onto the ground when viewed from above. Plant density describes the number of individual plants in a given area and plant frequency describes the probability of finding a species or plant within a particular area. Each of these characteristics may be described for a particular species, groups of species or entire plant community. Species composition then, refers to the contribution of each plant species to the vegetation as a whole.

So the next time you look out over the landscape, try to recognize the repeating plant communities that can be seen. And if you are really ambitious you can try to describe some of these to determine what makes these plant communities recognizable from one another.