

Arizona Biomes

Arizona's major biomes are desert scrub, desert grasslands, chaparral, woodlands, montane forests, subalpine forests, and riparian. As you travel up in elevation, biomes transition in a relatively predictable pattern that is generalized below. (See the Arizona Game and Fish Web site for a helpful diagram and photos: <http://explore.azgfd.gov/Default.aspx?tabid=54>).

Desert Scrub

Desert scrub occurs at lower elevations ranging from around 100 feet in the southern part of the state to 5,000 feet in the northern part of the state. Desert scrub is characterized by different shrubs and cacti in each of Arizona's three deserts. In the Sonoran Desert, it is characterized by mesquite, acacia, and saguaro; in the Mojave Desert, it is characterized by creosote and Mojave yucca; and in the Great Basin desert, it is characterized by sagebrush, black brush, and fourwing salt bush.

Desert Grasslands

Grasslands occur at elevations of 3,500 to 5,500 feet. They are natural open areas, dominated by a mixture of perennial and annual grasses. Grasslands can form large expanses of open fields or be broken by scatterings of shrubs or trees.

Chaparral

Chaparral can be found from 3,500 to 6,000 feet. Chaparral refers to dense stands of shrubs (and/or small trees) made up of a mixture of species. Some of the more common plants of the chaparral complex include scrub oak, mountain mahogany, and manzanita. Central Arizona has some of the most extensive areas of chaparral in the southwestern United States.

Woodlands

Open woodlands of small trees are often found at elevations of 4,500 to 6,500 feet. In the northern part of the state (Colorado Plateau and Great Basin), piñon and juniper trees are the characteristic plant species. A variety of shrubs, grasses, and other plants grow within piñon/juniper woodlands. In the southeastern part of the state, woodlands are dominated by evergreen oaks, junipers, and Mexican piñon.



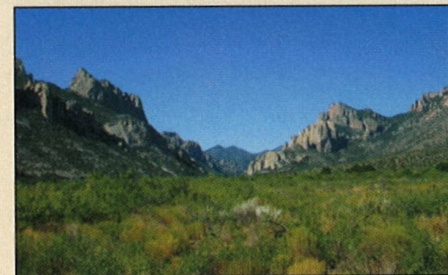
Kerry Schwartz

Looking from Coronado National Memorial towards the Mule Mountains across desert scrub.



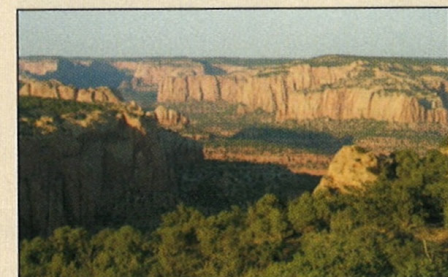
Kerry Schwartz

Desert grasslands near Tombstone.



Kerry Schwartz

Chaparral in Cave Creek Canyon.



Justin Howe

Piñon/juniper woodland in Navajo National Monument.

Montane Conifer Forests

Mixed conifer and ponderosa pine forests (together called Montane Forests) are the dominant forests of the higher elevations in Arizona. They can be found from 5,000 to 8,000 feet or higher. Ponderosa pine forests are generally found at lower elevations than are mixed conifer. Ponderosa pine forests include smaller trees and shrubs like Gambel's oak, Arizona white oak, juniper, mountain mahogany, sumac, and manzanita.

Mixed conifer forests are dominated by Douglas fir, white fir, and southwestern white pine; aspen is also common. These forests are usually most fully developed between about 8,000 to 9,500 feet in elevation. They typically have well-developed understories with some of the same species as are found in ponderosa pine forests.

Subalpine Conifer Forests

Often referred to as spruce-fir forests, subalpine conifer forests are found at about 9,000 to 11,500 feet (tree line). The primary species are subalpine fir and Engelmann spruce. These forests are cold and moist. Limber pine, bristlecone pine, and aspen also grow here. Understory plants include common juniper, bush honeysuckle, elderberry, and thimbleberry. At tree line, the forest transitions to tundra with low-lying shrubs and plants. Alpine tundra is only found in a few places in Arizona, such as the top of Mount Humphreys.

Riparian

Riparian vegetation is found at all elevations along streams, rivers, washes, and other watercourses and consists mostly of broad-leaved trees and shrubs with grasses, sedges, wildflowers, and annual plants. Some of the larger trees found in a riparian area form a woodland. These large trees often include cottonwoods, sycamores, walnuts, boxelders, ashes, and alders. Willows, mesquite, tamarisk (a non-native invasive plant), and other small trees and shrubs make up an important understory component in riparian areas.



Kerry Schwartz

Ponderosa pine forest near Flagstaff.



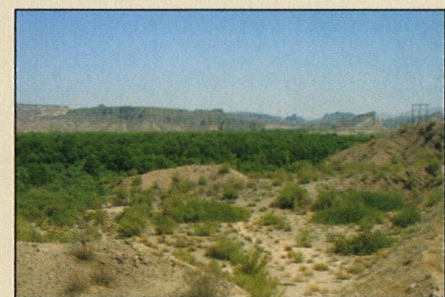
Wade Albrecht

Mixed conifer forest along West Clear Creek.



Kerry Schwartz

Subalpine conifer forest along the East Fork of the Black River.



Justin Howe

Riparian area along the Bill Williams River.