

NONGAME FIELD NOTES

Ironwood

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SCIENTIFIC NAME: *Olneya tesota*. The genus honors botanist Stephen Olney; *tesota* is a corruption of the Spanish *tieso*, meaning "stiff."

DESCRIPTION: Ironwood is one of the largest and longest-lived Sonoran Desert plants, reaching 45 feet in height and persisting as long as 1,500 years. It is a single or multi-trunked evergreen tree, and displays lavender to pink flowers starting in March. By early summer, a mast of pods matures. Each 2-inch pod contains one to four shiny brown seeds that are relished by many Sonoran denizens, from small mammals and birds to humans. Its heavy, dark-brown, "iron"-like wood is renowned for making tools, carvings, and weapons.

HABITAT: Found only in the Sonoran Desert, in the dry locales below 2,500 feet. Ironwoods are most common in dry ephemeral washes.

DISTRIBUTION: Southwestern Arizona, southeastern California, and northwestern Mexico.

BIOLOGY: Ironwoods function as "oases" of fertile and sheltered habitat within a harsh and challenging desert landscape. As a tree becomes established, it tempers the physical environment beneath it, creating a micro-habitat with less direct sunlight, lower surface temperatures, more organic matter, higher water availability, and protection from herbivores. Air temperatures may be 15 degrees cooler under ironwoods than in the open desert five feet away. These conditions foster establishment of other plants; ironwood acts as a "nurse" plant for young saguaros, organ pipe cactus, and night-blooming cereus, allowing them to grow more quickly and larger.

The shaded sanctuary and richer soils afforded by ironwoods increase plant diversity and provide benefits to wildlife. Some 160 species of plants and 80 species of birds use ironwoods in some way. Ironwoods are too hard to provide

nesting cavities for birds, but the cacti that grow beneath them provide such opportunities. Insects abound within the ironwood complex, attracting birds and reptiles. As with other legumes, the ironwood's leaf litter supplies nitrogen to the soil, and its seeds provide a protein-rich resource for doves, quail, coyotes, and many small rodents.

STATUS: The ironwood is not listed or proposed for federal listing as endangered or threatened. It is widespread within its historical range in Arizona, but populations in Sonora are suffering from the conversion of Sonoran desertscrub to agricultural use, including the planting of South American buffelgrass. Periodic fires rage through the standing grass and destroy remaining trees. The cutting of wood for fuel and charcoal has further contributed to ironwood losses. The Seri, a small tribe on the coast of Sonora, and other artisans depend on dead ironwood for crafting stylized figurines to sell to tourists. They now find it difficult to sustain their livelihoods due to the disappearance of ironwood. Arizona's native plant laws prohibit transportation of ironwood.

MANAGEMENT NEEDS: In 1991, researchers, agencies, businesses, and universities in Arizona and Mexico established an Ironwood Task Force to study depletion problems and to formulate conservation strategies. Efforts are being made to conserve ironwood as both a "keystone" species and an important cultural resource. A Seri legend tells of a giant who chewed ironwood seeds and blew the pulp out over the sea, calming it so he could harpoon fish. Seri cultural mythology further emphasizes the importance of ironwood in sustaining the organisms of the Sonoran Desert, both plant and animal, for utilitarian as well as ecological purposes. Habitat protection and limits on commercial use are needed in Mexico to ensure that the ironwood persists and continues to play its crucial role in providing habitat for native plants and wildlife. 🦋

