

APPENDIX E

SPECIAL STATUS PLANTS TOHONO O'ODHAM NATION

The following list of plants and their uses are plants that are special to the Tohono O'odham. The information on their uses are based on anthropological studies and do not include conversations with a medicine person of the Tohono O'odham. This list does not fully express the value of a given plant to the Tohono O'odham. To say that a given plant is used for a headache or sore eyes does not fully express the value of the medicinal plants in the everyday life of those who use them. It is not the same as going to the corner drug store and buying a bottle of aspirin and some eye drops. Someone must search for the plant, prepare and administer it according to set procedures. The plant is a gift from the creator which has given a part of itself. The individual must interact with the land, the plant, the community, and family in most cases, to utilize plants for healing. The role of those who perform, prescribe, and preserve this form of healing is a matter of interpersonal relations more pervasive than modern medicine or pharmaceuticals in the lives of those who receive such treatment. Indeed the effect of such healing may be heavily influenced by the interaction as well as the chemical or biological reaction. Some of the chemical and biological characteristics have found their way into modern medical treatments. Plants and traditional healers are often used to measure the extent of traditional values held by individuals and groups. (Plants noted with an asterisk (*) are names that have been updated or corrected from Russell 1980.)

-- Amaranth (Amaranthus palmeri) is abundant in river bottoms and irrigated farmland (Kearney and Peebles, 1969). Small plants or young leaves were collected for greens in summer and autumn. The seeds were an important part of the diet (Crosswhite, 1981).

-- Annual saltbush (Atriplex wrightii) is a weedlike plant that is common at roadsides and in waste land in southern Arizona (Kearney and Peebles, 1969). The young leaves and upper stems were collected in spring for cooking (Crosswhite, 1981).

--* Arrowweed (Tessaria sericea) is usually restricted to river floodplains and margins of lakes, it is remotely possible along the margins of some of the charcos (Reichenbacher, 1988). The bark is separated by pounding it between stones and then placing it in water to extract a liquid for washing the face and for sore eyes (Russell, 1980). This plant will remain abundant in the Santa Cruz river bed where it is currently more abundant than in the project area.

--* Barrel cactus (Ferocactus wislizenii) occurs in Pima County up to an elevation of 4,500 feet (Kearney and Peebles, 1969). The pulp is used in lieu of water or eaten after it is cut in strips and boiled all day (Russell, 1980).

-- Buffalo gourd, calabazilla (Cucurbita foetidissima) occurs in Pima County at elevations ranging from 1,000 to 7,000 feet, mostly in alluvial soil and often at roadsides (Kearney and Peebles, 1969). Seeds of the gourd are roasted and eaten (Russell 1980).

--* Burroweed (Isocoma tenuisecta) is common throughout most of the site. Jimmy weed (Isocoma heterophyllus) is usually restricted to roadside ditches and saline soils and possibly occurs along margins of the charcos (Reichenbacher, 1988). Two

unidentified species of Isocoma are used as a dressing for wounds; bruised leaves are applied to bleeding surfaces that have been cut with glass (Russell, 1980).

-- Catclaw acacia (Acacia greggii) occurs in Pima County below elevations of 4,500 feet. It often forms thickets along streams and washes (Kearney and Peebles, 1969). Historically, the beans were eaten (Russell, 1980). The wood is used for firewood, brush fences, and for making bows (Curtin, 1984). This plant is abundant in surrounding areas.

-- Chia (Salvia columbaria) occurs in Pima County below 3,500 feet and is common in sandy washes (Kearney and Peebles, 1969). The seeds are infused in water to form a mucilaginous (gummy) beverage (Russell, 1980).

-- Cholla (Opuntia spp.) is common throughout much of the project area. Cholla joints and buds are pit-baked and dried and used in stews (Crosswhite, 1981).

--* Cocklebur (Xanthium spp.) possibly occurs in drying mud in charcos (Reichenbacher, 1988). The pulp is combined with soot as a remedy for sore eyes (Russell, 1980). Xanthium saccharum leaves are mashed and placed on screw-worm sores on livestock. The burs can be boiled into a tea for constipation or diarrhea (Curtin, 1984).

-- Creosotebush (Larrea divaricata) is common throughout much of the site (Reichenbacher, 1988). It is used to reduce high fever by preparing an emetic of boiled creosote leaves in water. It is also used as a lotion to dry up sores or impetigo or held in the mouth for a toothache. The Salt River Indian Community's women used a warm tea of creosote to massage into the scalp for removal of dandruff. Creosotebush can also be used as a deodorant. A decoction of creosote gum is given for tuberculosis. Brewed as a tea, it is used as a gargle and a hot drink for colds. Cooled, it can be taken to relieve gas or upset stomach. Painful body parts can be held over the steam of creosote for relief. Heated creosote wrapped in a cloth can be applied to a bruise. It can also relieve rheumatic pains when cooked and used for baths and rubs, or for disuria when taken internally. Leaves can be cooked and applied as a plaster for scratches and wounds on the skin (Curtin, 1984).

-- Desert hackberry (Celtis pallida) occurs in Pima County at elevations from 1,500 to 3,500 feet on foothills and mesas (Kearney and Peebles, 1969). The fruits can be eaten fresh or dried (Crosswhite, 1981).

-- Desert mistletoe (Phoradendron californicum) is parasitic chiefly on leguminous (pods) shrubs and trees such as acacia, mesquite, and palo verde (Kearney and Peebles, 1969). The berries are boiled and eaten (Russell, 1980), or eaten fresh or dried (Crosswhite, 1981).

-- Devil's claw (Proboscidea spp.) occurs on roadsides, plains, and mesas (Kearney and Peebles, 1969). Young pods

were eaten as a vegetable, mature pods were used in basketry. Seeds were boiled and eaten (Crosswhite, 1981).

-- Goosefoot nettle (Chenopodium murale) is a common winter weed in waste places in southern Arizona from 150 to 8,000 feet in elevation (Kearney and Peebles, 1969). The seed is parched and ground and eaten as pinole or ground with other meals (Russell, 1980).

--* Graythorn (Ziziphus obtusifolia) is widely scattered throughout much of the site (Reichenbacher, 1988). The root is pounded in mortars and boiled, the liquid extracted is used as a remedy for sore eyes (Russell, 1980). The berry can be cooked and the syrup used (Crosswhite, 1981) or the berry can be eaten raw (Russell, 1980).

-- Ironwood (Olneya tesota) occurs in Arizona at elevations of 2,500 feet or lower (Kearney and Peebles, 1969). The nuts are parched and eaten (Russell, 1980), or eaten when still green, tasting like green peas (Crosswhite, 1981).

-- Narrow-leaf globemallow (Sphaeralcea angustifolia) has a high probability of occurring in the project area. It is especially common on roadsides and floodplains of larger washes and rivers (Reichenbacher, 1988). The leaves are boiled and used as a remedy for diarrhea. The root is boiled as a remedy for biliousness (Russell, 1980).

-- Night-blooming cereus (Peniocereus greggii) is common at low altitudes in creosote habitats (Kearney and Peebles, 1969). Reichenbacher (1985) found 15 of these cacti in the project area and estimated that 60 probably existed there. The raw tuber was used to quench thirst or as food when baked and peeled (Crosswhite, 1981).

-- Pencil cholla (Opuntia arbuscula) occurs in Pima County at elevations ranging from 1,000 to 3,000 feet (Kearney and Peebles, 1969). The fruit is cooked in a fire pit with saltbush then boiled, salted, and eaten with pinole (Russell, 1980).

-- Prickly pear (Opuntia phaeacantha) is found throughout most of Arizona from 1,200 to 7,500 feet elevation (Curtin, 1984) and has become a pest on some cattle ranges (Kearney and Peebles, 1969). Young leaves are sliced, cooked, and eaten (Curtin, 1984). The fruit is made into syrup or eaten raw (Russell, 1980). (Curtin (1984) cautions that too much darkish-purple pricklypear fruit results in chills but that light-red fruit is not poisonous). The large waxy flowers were washed and fried in deer tallow (Crosswhite, 1981). The fruit can also be used as a dye (Curtin, 1984). Heated pads of prickly pear can be applied to the breasts to encourage the flow of mother's milk. Poultices can be used to relieve pain and reduce swelling (Curtin, 1984).

--* Range ratany, wood ratany, littleleaf ratany (Krameria parvifolia) is locally common throughout much of the development site (Reichenbacher, 1988). The root is powdered and applied to sores (Russell, 1980).

--* Rattlesnake weed (Euphorbia albomarginata) is common in flat sandy-soiled open areas (Reichenbacher, 1988). The root is chewed as an emetic (Russell, 1980).

-- Saguaro (Cereus giganteus) occurs, but is not common, in the project area. Peeled ripe fruit is cooked in water with whole wheat into a porridge to make the stomach warm and keep the milk flowing after childbirth (Curtin, 1984). The fruit is eaten raw, boiled into a syrup, or boiled and fermented into intoxicating liquor (Curtin, 1984; Russell, 1980). The seeds are ground into meal for bread (Russell, 1980). The seeds which are high in vitamin C are also fed to chickens, or used in tanning (Curtin, 1984). Additional saguaro products used are jam, dehydrated pulp, seed oil, pinole, atole, snack foods, soft drinks, and vinegar (Crosswhite, 1981). Excess saguaro products were traded to the Akimel O'odham (Crosswhite, 1981). The Tohono O'odham calendar begins with the ripening of Saguaro fruit and is kept on schedule by reference to phenology of the saguaro, crops, and wild plants (Crosswhite 1981). The distributional boundaries of this Nation are limited by the saguaro to the north, east, south, and west (Crosswhite, 1981). The ribs of the saguaro were used in constructing houses (Crosswhite, 1981). Saguaros are fairly uncommon in the project area. Saguaros occur in greater densities in other parts of the San Xavier District.

-- Saltbush (Atriplex polycarpa) occurs in moderately saline or nonsaline soil, in pure stands or associated with creosotebush (Kearney and Peebles, 1969). The seeds are dried, parched, and ground to be eaten as pinole (Russell, 1980). When rubbed in water, the leaves will produce a lather to wash clothing and baskets (although it is too strong for the hands) (Curtin, 1984).

-- Velvet mesquite (Prosopis velutina) is common throughout the site (Reichenbacher, 1988). The mesquite bean ripen just as the Tohono people finish the annual saguaro harvest (Crosswhite, 1981). Mesquite occurs in greater densities near the Santa Cruz River.

Medicinal Uses: The black gum of mesquite (kwi choovadak) can be boiled with a little water, and applied to sore lips, chapped and cracked fingers, or taken internally to cleanse the system. As a tea it is held in the mouth to heal painful gums. Dry mesquite beans can be used as a bleach after severe sunburn. Young mesquite roots can be made into a tea and drunk to cure diarrhea. A tea from green mesquite leaves is good for a bad headache and stomach trouble. Mesquite gum can be pounded into powder and mixed with very fine sand strained through cheesecloth. The compound is sprinkled on the navel to prevent infection of a newborn child. For relief of pink eye, green mesquite leaves are boiled in water and placed on the eyes (Curtin, 1984).

Food Uses: Mesquite beans (vihok) are pounded to powder in a stone mortar, mixed with cold water, then strained to make a sweet drink called "vau" (Curtin, 1984). Catkins are eaten by stripping them from the stem with the teeth (Russell, 1980). The mesquite gum was eaten as a sweet (Curtin, 1984). The inner bark can be used as a substitute for rennet (Russell, 1980). A mild and nutritious drink can be made from mesquite and is called "women's wine" (Crosswhite, 1981).

Other Uses: A hair dye can be made from mesquite gum boiled in water, which is applied to the hair. Black clay or mud is plastered on the dyed hair and allowed to remain over night. Before sunrise the following morning, the concoction is washed off in three tubs of water. Mesquite boiled in water is also used as a paint for pottery (Curtin, 1984).

-- Verdolaga blanca (Trianthema portulacastrum) is a common weed in irrigated land in southern Arizona; it is locally known also as pigweed (Kearney and Peebles, 1969). The leaves and young stems were collected in summer and autumn and used as greens (Crosswhite 1981).

-- Wild rhubarb (Rumex hymenosepalus) probably occurs in the project area. It is especially common in sandy soils of washes and wash floodplains (Reichenbacher, 1988). The tuber is used for tanning, dyeing, and curative purposes. The seeds can be roasted, ground, and made into flat cakes. The tender, red stems can be made into a pie. In spring, young succulent leaves are boiled and eaten as greens, although they are bitter. Roots can be chewed for relief from colds, coughs, sore throats, and sore gums. A powder made from the dried roots can be used to heal skin sores (Curtin, 1984). This plant is probably more common along the Santa Cruz River.

-- Wolfberry (Lycium fremontii) occurs in southern Arizona up to elevations of 2,500 feet and grows commonly along washes and on dry slopes (Kearney and Peebles, 1969). The red berry is boiled and eaten (Russell, 1980) or boiled and mashed into a liquid (Curtin, 1984).