

Selected Species of the Middle Rio Grande: A Plant Guide



A guide to the characteristics and identification of species commonly found by NMFWR's Monitoring crews during riparian monitoring for the Greater Rio Grande Watershed Alliance.

Created by Taryn Schlosser

With support from the Greater Rio Grande
Watershed Alliance



New Mexico
Forest and Watershed
Restoration Institute

New Mexico Highlands University

VEGETATION

A1 Plants to Know

A Few Notes

Species written in blue with EX are considered exotic.

Unless otherwise stated, wetland indicator status applies to all possible regions

Counties listed are only the counties with NMFWRl GRGWA plots and the species. They may exist in more counties around the state.

GRAMINOIDS

Grass Family (Poaceae)

Achnatherum hymenoides, Indian ricegrass

Aristida purpurea, purple three-awn

Arundo donax, giant reed EX

Bromus inermis ssp. *inermis*, smooth brome EX

Distichlis spicata, inland saltgrass

Elymus elymoides, squirreltail

Phragmites australis, common reed

Saccharum ravennae, ravenegrass EX

Sporobolus airoides, alkali sacaton

Sporobolus cryptandrus, sand dropseed

Cattail Family (Typhaceae)

Typha latifolia, broadleaf cattail

FORBS

Amaranth Family (Amaranthaceae)

Bassia scoparia, kochia EX

Salsola tragus, prickly Russian thistle EX

Aster Family (Asteraceae)

Helianthus annuus, sunflower

Lactuca serriola, prickly lettuce EX

Morning Glory Family (Convolvulaceae)

Convolvulus arvensis, field bindweed EX

Legume Family (Fabaceae)

Medicago sativa, alfalfa EX

Loosestrife Family (Lythraceae)

Lythrum salicaria, purple loosestrife EX

Buttercup Family (Ranunculaceae)

Clematis ligusticifolia, western white clematis

Lizard's Tail Family (Saururaceae)

Anemopsis californica, yerba mansa

Nightshade Family (Solanaceae)

Solanum elaeagnifolium, silverleaf nightshade

SHRUBS

Aster Family (Asteraceae)

Baccharis salicina, seepwillow

Olive Family (Oleaceae)

Forestiera pubescens var. *pubescens*,
New Mexico olive

Willow Family (Salicaceae)

Salix exigua, coyote willow

Nightshade Family (Solanaceae)

Lycium pallidum, pale wolfberry

Lycium torreyi, Torrey's wolfberry

TREES

Cypress Family (Cupressaceae)

Juniperus monosperma, one-seed juniper

Oleaster Family (Elaeagnaceae)

Elaeagnus angustifolia, Russian olive EX

Willow Family (Salicaceae)

Populus deltoides var. *wislizenii*,
Rio Grande cottonwood

Salix goodingii, Gooding's willow

Quassia Family (Simaroubaceae)

Ailanthus altissima, tree of heaven EX

Tamarix Family (Tamaricaceae)

Tamarix chinensis, saltcedar EX

Elm Family (Ulmaceae)

Ulmus pumila, Siberian Elm EX

Graminoids | Grass Family | Poaceae

Achnatherum hymenoides



Photo by Cecelia Alexander



Photo by Credible Corvid

Common Names: Indian ricegrass, sand ricegrass, Indian millet, sandgrass

Code: ACHY

Habitat: Found on dry, sandy, well-drained soil. Adapted to habitats like sandy plains or dunes, but can live in moist microclimates in drier environments. Often grows around sagebrush or juniper; common throughout New Mexico. Elevation range 1,500 to 11,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties. Obligate upland species for the Arid West and Western Mtns, Valleys, and Coast regions; facultative upland species for Great Plains region.

General: Perennial bunchgrass, not rhizomatous; 20-70 cm (0.6-2.3 ft) or more tall; stem nodes swollen or brittle.

Leaves: Ligule is membranous; leaf blade margins folded; leaf blades very narrow (less than 2 mm wide) and overlap each other.



Photo by Gabriel Campbell

Flowers and Fruits: Panicles evenly forking (dichotomously branching), to 20 cm (7.87 in.) long and 15 cm (5.91 in.) wide; lemmas are densely covered with long hairs, awns short (3-5 mm long); seedheads are ivory or black colored. The open, dichotomously branching panicle with long pedicels is unique among our species of *Eriocoma*. The seedhead has the same branching pattern as chicken-wire. Flowers from May to August.

Graminoids | Grass Family | Poaceae

Aristida purpurea

Photo by Cecelia Alexander



Photo by Cecelia Alexander

Common Names: purple threeawn,
red threeawn

Code: ARPU9

Habitat: Found on dry plains, slopes, foothills, sandy sites, disturbed ground, found commonly along roadsides. Widespread throughout New Mexico. Elevation range 1,000 to 7,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties.

Similar Species: Some species of *Eriocoma* look similar, but *Aristida* does not have membranous ligules.

General: Densely tufted bunchgrass, perennial, not rhizomatous, 10-100 cm (0.3-3.3 ft) tall; usually unbranched above the base.

Leaves: Ligules have conspicuous hairs; the leaves are mostly basal or mostly cauline, blades are usually rolled but not curled like wood shavings.

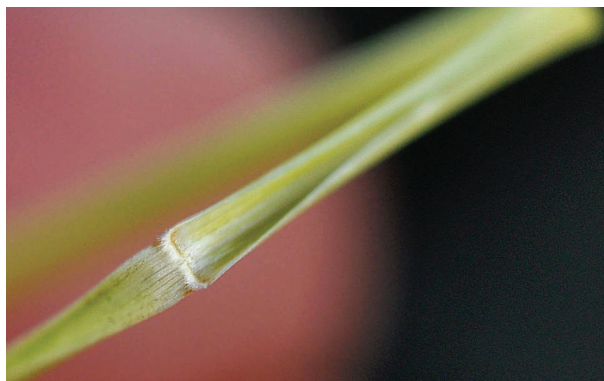


Photo by Robert L. Carr

Flowers and Fruits: The glumes (bracts subtending floret) are often light brown to a reddish-purple color and are noticeably unequal in length; lower glume is shorter than the upper glume; three awns per lemma, equal to sub-equal, deeply colored and often purple; central awn occasionally thicker and longer than lateral. Flowers April - October. There are six varieties in NM, all of them widespread.

Graminoids | Grass Family | Poaceae | Exotic

Arundo donax



Photo by Brandt Magic



Photo by Alex Abair



Photo by Brandt Magic



Photo by Matt Lavin

Common Name: giant reed

Code: ARDO4

Habitat: Found as an ornamental, along ditches, culverts, roadsides, stream banks, and in disturbed habitat. Can tolerate high salinity. Grows up to 8,200 ft. Mostly in the southern half of the state but some occurrences northward. In Sandoval, Santa Fe, Bernalillo, Valencia, and Tarrant counties.

Similar Species: *Saccharum ravennae*, but *S. ravennae* has prominently pubescent blades near the ligules, and *Phragmites australis* has glabrous florets, hairy rachilla, and generally smaller diameter culms.

General: Mostly rhizomatous perennial; rhizomes thick and knotty; stems hard and fibrous (almost woody), up to 10 m (33 ft) tall; stem internodes hollow.

Leaves: Ligules less than 1 mm long; leaf blades

numerous, flat, glabrous or scabrous, 2-9 cm (0.8-4 in) wide, with a wedge-shaped brownish colored area near the base; margins scabrous.

Flowers and Fruits: Panicle dense, erect, mostly 30-60 cm (1-2 ft) long; spikelets with 3-6 florets; rachilla glabrous; florets disarticulate above the glumes; glumes as long as the spikelets, thin, brownish or purplish, 3-5 veined; lemmas 3-5 veined, pilose, midvein ends in an awn; paleas pilose at base, shorter than lemmas. Flowers late summer.

Notes: A form with variegated leaves (cultivar 'VARIEGATA') is an attractive ornamental. Dried stems have been used for thousands of years in the making of reeds for woodwind instruments, as well as for flutes and musical pipes, animal calls, whistles, straws, thatch, mats, baskets, pens and cages, fish traps, furniture, spear shafts and arrows, walking sticks, and fishing poles. It's also planted as a windbreak.

Graminoids | Grass Family | Poaceae | Exotic

Bromus inermis* ssp. *inermis

Photo by Cecelia Alexander



Photo by William Harmon

Common Names: smooth brome, awnless brome, brome inerne, Hungarian brome

Code: BRINI, BRIN2

Habitat: Found on disturbed soils, often pastures and flats, mountain slopes, roadside swales and slopes; throughout the state. Native to Eurasia. Elevation range 4,000 to 11,000 ft. In Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, Valencia, and Socorro counties.

Similar Species: *Bromus pumpellianus*, but unlike *B. inermis* ssp. *inermis*, *B. pumpellianus* is hairy.

General: Rhizomatous perennial; stem nodes usually hairless; stems 50-130 cm (1.6-4.3 ft) tall, singly or together, with 3-5 nodes.

Leaves: Leaf blades 11-35 cm (4.3-13.8 in) long, 5-15 mm wide, flat, usually hairless; sheaths usually glabrous, rarely hairy; auricles sometimes present; ligules to 3 mm, glabrous, ends abruptly; margins irregular.



Photo by Cecelia Alexander

Flowers and Fruits: Panicles are 10-20 cm long and branches are mostly ascending; awns 0-3 mm long; spikelets purplish when young and brownish to bronze when mature. Flowers from May to September.

Graminoids | Grass Family | Poaceae

Distichlis spicata



Photos by Cecelia Alexander

Common Names: saltgrass, inland saltgrass, desert saltgrass, zacate espinudo, zacate salado

Code: DISP

Habitat: Found on floodplains, saline soils, swales, salt flats, and marshes. Common throughout New Mexico. Grows at elevations up to 9,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, and Socorro counties. Facultative species for the Arid West region; facultative wetland species for Western Mtns, Valleys, Coast, and Great Plains regions.

General: Rhizomatous to sometimes stoloniferous perennial; 10-60 cm (0.3-2 ft) tall, usually erect

Leaves: Foliage usually exceeding the pistillate panicle but often shorter than the staminate; leaves arranged in two opposite rows and hairless; blades stiff; ligules a short membrane. Leaves are often dusted with salt crystals.



Flowers and Fruits: Spikelets 5-20 mm long and awnless; glumes unequal; lemmas 3-6 mm long. Flowers June to September.

Graminoids | Grass Family | Poaceae

Elymus elymoides

Photos by Craig Martin

Common Names: squirreltail, western bottle-brush grass, bottlebrush squirreltail, cola de ardilla, zacate ladera

Code: ELEL5

Habitat: Found in plains, grasslands, woodlands, forest clearings, and roadsides. Widespread throughout New Mexico and ecologically diverse. Elevation range 2,000 to 11,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Tarrant, and Socorro counties. Facultative upland species for Arid West and Westerns Mtns, Valleys, and Coast regions; obligate upland species for Great Plains region.

Similar Species: *Hordeum jubatum* looks alike but has 3 spikelets per node with more slender and bristle-like awns that lack a central groove.

General: Tufted perennial, not rhizomatous;



15-70 cm (6-2.3 ft) tall; the stems erect but can be bent at a sharp angle; the nodes mostly concealed by the sheaths. Grazed upon when young.

Leaves: Sheaths hairless to densely villous; auricles about 1 mm long; blades 2-6 mm wide, hairless to villous.

Flowers and Fruits: Spikes 5-20 cm long, erect to sharply bent over, with 2-3 spikelets

per node; the florets disconnect from their stem and are pulled down; glumes 2-13 cm long; lemmas 6-12 mm long, hairless to hairy; lemma awns 2-12 cm long, flattish and grooved, sometimes split, often purplish or reddish curl outwards when dry. Flowers from late May to July.

Note: Hybridizes with *Elymus canadensis*.

Graminoids | Grass Family | Poaceae

Phragmites australis



Photo by Rob Curtis



Photo by Kallum McDonald

Common Names: common reed, carrizo

Code: PHAU7

Habitat: Found along streams, rivers, drainages, ditches, canals, in wetlands, and on sandbars and islands. Can also be found in wet ground around springs and seeps. Found at elevations up to 7,000 ft. In Sandoval, Bernalillo, Valencia, Rio Arriba, Cibola, and Tarrant counties.

Similar Species: *Saccharum (Tripidium) ravennae*, but that species has prominently pubescent blades near the ligules, and *Arundo donax*, but that species has pilose florets, glabrous rachilla, and generally larger diameter culms.

The Situation: *Phragmites australis* has three subspecies, two of which are native. To tell them apart:

- *Phragmites australis* subsp. *americanus* (American common reed, native lineage, PHAUA6): Ligules 1.0-1.7 mm long, leaf sheaths deciduous

with age; culms exposed in the winter, smooth and shiny; rarely occurs in a monoculture; sometimes purplish at the nodes and internodes.

- *Phragmites australis* subsp. *berlandieri* (subtropical common reed, Gulf Coast lineage, PHAUB2): Culm smooth and shiny; leaf sheaths not deciduous with age; may occur as a monoculture; likely limited to southern New Mexico.
- *Phragmites australis* subsp. *australis* (introduced common reed, European common reed, introduced lineage, PHAUA7): Culm ridged and not shiny; leaf sheaths not deciduous with age; often occurs as a monoculture.

Efforts to describe morphology have mostly been limited to the more widespread subspecies *americanus* and subsp. *australis*. Here are features that can be used to tell those subspecies apart. It is essential to decide subspecies based on multiple characteristics on multiple plants because using



Photo by Kallum McDonald



Photo by Rob Curtis

only one can be misleading. Several traits do not translate well to photos.

- When approaching a stand, the first thing to look at is the stand as a whole. Subsp. *australis* and subsp. *berlandieri* are more likely to grow in a monoculture than subsp. *americanus*. The native subspecies are more likely to have mixed vegetative communities, and the introduced is likely to be homogenous. See stand photos opposite page and above left.

- Subspecies *americanus* and subsp. *australis* can grow very sparsely or very densely. When growing densely, the introduced subspecies is more difficult to walk through. The native subspecies does not have the weedy tendency of the introduced subspecies. See stand photos opposite page and above left.
- The native subspecies are more likely to have more stem coloration lower down on the plants where dead leaves are present than the introduced subspecies. If there is little variation, it is more likely to be exotic. See stand photos opposite page and above left.
- Look low on the stem. How tightly the sheath remains attached to the stem is diagnostic. On subsp. *americanus*, the sheath is



Photo by Kallum McDonald

deciduous. Occasionally it can remain attached past winter, but it can be easily removed. On subsp. *australis*, the sheaths take effort to remove even when they are starting to break down. See photos above.

- Increased sun exposure on the stems causes a reddish/purplish color to appear. This is more common on subsp. *americanus* because the leaf sheaths are deciduous but can also occur on subsp. *australis*. See stem photos next page.



Photo by Kallum McDonald



Photo by Thurman Johnson



Photo by GWT2012

- Look at exposed stems (the sheath may have to be removed). If you feel minimal or no ridges when running a fingernail over the stem and the color is not flat, it is likely one of the native varieties. If you can feel ridges and the color is more flat, it is likely subsp. *australis*.
- All subspecies can get mildew spots, but only subsp. *americanus* can develop distinct black fungal dots. These fungal spots do not always occur.
- The ligule on subsp. *australis* is usually shorter than those of subsp. *americanus*.
- In younger plants:
 - Subspecies *americanus* has leaves that tend to be floppier and come off the stems at a more horizontal angle. They are generally more yellowish-green.
 - Subspecies *australis* has leaves that are stiffer and come off the stem around a 45-60 degree angle. They are generally more bluish-green.
- The introduced subspecies often stays green later into the year but not always.

Note: Neither USDA PLANTS nor POWO have subsp. *australis* occurring in New Mexico, but there are many accounts of it growing in the state. There is also some debate about the nativity status of subsp. *berlandieri*. There are very few resources covering the differences between the three subspecies in New Mexico. None of

the photos included for the species were taken in New Mexico.

Links to other identification resources:

Guide to Identifying Native and Non-Native

Phragmites australis (https://www.lccmr.mn.gov/projects/2013/finals/2013_06a-17_mn_phrag_identification_guide.pdf)

Phragmites—Native or Not? (<https://mnfi.anr.msu.edu/pdfs/phragmites-native-non-native.pdf>)

Winter Identification of Native and Exotic *Phragmites* Subspecies in SE Wisconsin (<https://prairiebotanist.com/2016/01/30/winter-identification-of-native-and-exotic-phragmites-subspecies-in-se-wisconsin/>)

Phragmites Field Guide: Distinguishing Native and Exotic Forms of Common Reed (*Phragmites australis*) in the United States (<https://bugwood-cloud.org/mura/mipn/assets/File/Educational%20Resources/Phragmites%20Field%20Guide.pdf>)

Native vs. Non-Native *Phragmites* (<https://www.greatlakesphragmites.net/phragbasics/native-vs-nonnative/>)

Fact Sheet: Giant Reed (<https://www.invasive.org/alien/fact/pdf/phau1.pdf>)

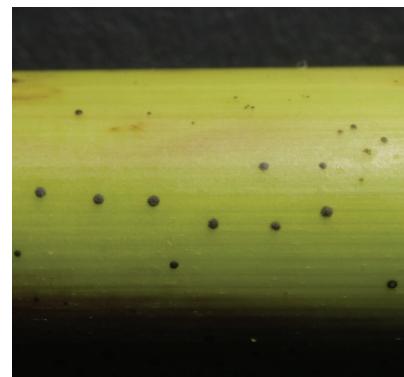


Photo by Brian Daggs

Graminoids | Grass Family | Poaceae | Exotic

Saccharum ravennae

Photo by Sandia Mountain Natural History Center

Common Names: ravengrass, elephant grass, plume grass, hardy pampas grass

Code: SARA3

Habitat: Found in open, disturbed locations at both moist and dry sites, including marshes, ditch banks, seeps, floodplains, rocky hillsides, gravel roadsides, and escaped from yards. Tolerant of cold weather. Elevation range up to 8,000 ft. In Bernalillo and Santa Fe counties. Facultative species for Arid West and Western Mtns, Valleys, and Coast regions; obligate upland species for Great Plains region.

Similar Species: *Cortaderia jubata* (jubata) and *Cortaderia selloana* (pampas grass) are bunchgrasses that look similar, but *S. ravennae* has densely hairy leaf and stem bases, thick and white midveins on the upper side of the blades, and the flowering stems can be reddish.

General: large, tussocky, tufted perennial, not



Photo by Fiana Shapiro

rhizomatous; stems 2-4 m (3.3-14.4 ft) tall; culms and leaves hairless.

Leaves: Leaves born along the stem; blades to 100 cm (3.3 ft) long and 1.4 cm wide, flat; leaf margins are serrated and have a thick, white mid-vein on the upper side of blades; leaf bases are densely covered with long, fuzzy hairs that typically hide the ligule; ligules a ciliate membrane, about 1 mm long.

Flowers and Fruits: Panicles elevated usually far above the leaves, 40-80 cm (1.3-2.6 ft) long and about 1/3 as wide; spikelets 4-6 mm long and can be stalked or stalkless, the stalkless spikelets are straw colored; florets covered in tufts of silky hairs and are purplish, maturing to silver to tan. Flowers from July to October.

Note: Likely escaped from use as a landscaping plant and the ABQ zoo.

Graminoids | Grass Family | Poaceae

Sporobolus airoides



Photos by Cecelia Alexander

Common Names: alkali sacaton, zacate alcalina, zacate de agua, cresta de gallo, zacatón

Code: SPAI

Habitat: Found on sandy, gravelly, clayey plains, flats, mesas, playas, floodplains, throughout the state. Grows in saline and non-saline soils and can often be found in alkaline soils. Floodplains and playa beds can be covered with an almost solid expanse. Elevation range 2,500 to 7,500 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties. Facultative species.

Similar Species: *Sporobolus wrightii* looks similar, but *S. airoides* has spreading pedicels, branchlets without spikelets to the base, and is usually shorter. *S. cryptandrus* can look similar, but it has flag blades almost perpendicular to the stem and mostly appressed pedicels whereas *S. airoides* has ascending flag blades and somewhat spreading pedicels.

General: Densely tufted perennial, forming large tussocks to 1 m (3.3 ft) or more across, not rhizomatous; 35-150 cm (1.1-4.9 ft) tall; adventitious roots thick, 2-4 mm diameter.

Leaves: Lower sheaths shiny, becoming straw-colored; sheath apices hairless or only sparsely hairy with long hairs; ligules less than 0.5 mm long; blades to 60 cm (2 ft) long, weeping.

Flowers and Fruits: Panicles 15-45 cm long, very open and diffuse at maturity, the base often included in the sheath; pedicels 0.5-2 mm long; spikelets 1.3-2.8 mm long, purplish or greenish; unequal glumes; no awns; difficult to uproot. Flowers from May to October.

Note: Rattlesnakes seem to like to hide in areas expansively covered by alkali sacaton.

Graminoids | Grass Family | Poaceae

Sporobolus cryptandrus

Photos by Cecelia Alexander

Common Names: sand dropseed, zacate de arena, zacate encubierto

Code: SPCR

Habitat: Sandy or gravelly plains, dry slopes, mesas, roadsides, waste places, and washes throughout the state. It's often in open ground. Elevation range up to 7,500 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties. Facultative upland species.

Similar Species: *Sporobolus airoides* can look similar, but *S. cryptandrus* has flag blades almost perpendicular to the stem and mostly appressed pedicels while *S. airoides* has ascending flag blades and somewhat spreading pedicels. *S. cryptandrus* is similar to *S. flexuosus* but *S. cryptandrus* has generally persistent panicle branches, and even if they break, they don't leave a spine-remnant.

General: Tufted perennial, not rhizomatous; 30-120 cm (0.9-3.9 ft) tall; stems 1-3.5 mm thick.

Leaves: Sheath margins sometimes ciliate, the apices with conspicuous tufts of long, thin, white hairs 2-4 mm long; leaf blade upper surfaces and margins slightly rough to the touch; flag blades nearly perpendicular to the stem; ligules 0.5-1 mm long.

Flowers and Fruits: Panicles erect, 15-40 cm long, 2-14 cm wide, open in age but often spike-like when young, the branches ascending to reflexed, not entangled; secondary branchlets and spikelets generally appressed along the primary branches; spikelets 1.5-2.7 mm long and brownish-, lead-colored, or purplish-tinged; glumes unequal; lemmas 1.4-2.7 mm long; no awns. Flowers May to September.

Graminoids | Cattail Family | Typhaceae

Typha latifolia



Photos by Radha Veach

Common Names: broadleaf cattail, common cattail, cattail, espadilla, cola de gato, plumillo, maza de agua

Code: TYLA

Habitat: Found growing in wet areas, including freshwater to slightly brackish marshes, ponds, ditches, swales, arroyos, and slow moving river sites. Elevation range up to 8,000 ft. In Bernalillo, Sandoval, Valencia, Socorro, Cibola and Rio Arriba counties. Obligate wetland species.

Similar Species: *T. latifolia* can be distinguished from other *Typha* species by the connecting or only very slightly separated pistillate and staminate parts of the inflorescence.

General: Perennial herb with extensively creeping rhizomes; plants 1.5-3 m (4-9.8 ft) tall;; stems erect, cylindric, and pithy.

Leaves: Leaves alternate, with sheathing bases; 12-16 leaves per stem; sheaths cylindric and open to the base; leaf blades thick and spongy,



light green, 6-23 mm wide, about as long as the stems or slightly shorter and nearly flat.

Flowers and Fruits: Staminate and pistillate portions of the spike usually contiguous to each other or sometimes separated 1-4 cm, the pistillate portion 2.5-3.5 cm thick in fruit. Flowers May to July.

Note: All *Typha* species in New Mexico known to hybridize.

Forbs | Amaranth Family | Amaranthaceae | Exotic

Bassia scoparia

Photo by Craig Martin

Common Names: kochia, burningbush, summer cypress

Code: BASC5

Habitat: Found in open, unshaded areas on disturbed ground, roadsides, saline and/or alkaline soils, fields, pastures, rangelands, piñon-juniper woodlands/grasslands/shrublands, desert scrub, and sagebrush. Elevation range 2,000 to 9,000 ft. In Sandoval, Rio Arriba, Santa Fe, Socorro, Valencia, Bernalillo, Cibola, and Tarrant counties. Facultative species for Arid West and Western Mtns, Valleys, and Coast regions; facultative upland species for Great Plains region.

Similar Species: *Bassia hyssopifolia* looks similar but is hairier and has a 5-hooked structure on the seeds.

General: Annual herb; dark green when younger and often red in autumn; herbage often covered with long, soft, scattered hairs; stems erect, up to 1.5 m (4.9 ft) tall, much-branched.



Photo by Rod



Photo by Cecelia Alexander

Leaves: Leaves alternate, linear to narrowly lanceolate or oblanceolate, 1-10 cm long; margins entire and fringed with hairs, leaf faces slightly hairy to smooth, lower surface usually hairier.

Flowers and Fruits: Inflorescences of solitary flowers or interrupted spikes, both terminal and in the leaf axils; flowers are inconspicuous; seeds are wedge-shaped, brown, and slightly ribbed; young plants have 3-veined leaves densely covered in long, soft, weak hairs. Flowers June to October.

Note: Summer cypress is a narrow-leaved form sold by nurseries.

Forbs | Amaranth Family | Amaranthaceae | Exotic

Salsola tragus



Photo by Brandt Magic

Common Names: prickly Russian thistle, Russian thistle, tumbleweed

Code: SATR12

Habitat: Found throughout the state in a wide variety of disturbed habitat. Can be found in alkaline and/or saline soils but not soils that are saturated for extended periods of time. Generally grows at elevations up to 8,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties. Facultative upland species.

General: Annual herb, usually up to 1 m (3.3 ft) tall; rounded, bushy, many-branched stems, branches spreading; stems usually red or purple striped; herbage hairless to somewhat hairy. The leaves, as well as the young plant (up to ~6 in tall) can be eaten.

Leaves: Leaves alternate, stalkless, thread-like, and sharp-tipped; stems and leaves succulent when young and harden with age.



Photo by Sam Kieschnick



Photo by dfoehring



Photo by Erik Danielsen

Flowers and Fruits: Solitary flowers located in leaf axils, pink to white, with spiny bracts; mature plant breaks off at ground level and are pushed around by wind; fades to tan to brown. Flowers June to early October.

Note: The diploid species, *S. australis*, may be concealed within our tumbleweed population; they look very similar, and only recently has work been done to shed light on the distinction between the two.

Forbs | Aster Family | Asteraceae

Helianthus annuus

Common Names: common sunflower, Kansas sunflower, mirasol, Hopi sunflower, annual sunflower, sunflower, wild sunflower, girasol, flor de sol

Code: HEAN3

Habitat: Found on open and/or disturbed areas like roadsides, floodplains, yards and gardens, fields, and old homesites. Can grow in dry or moist soil, and is drought-tolerant; prefers full sun but can tolerate semi-shaded locations. Generally found below 10,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties. Facultative upland species.

Similar Species: Is similar to other *Helianthus* species, especially *H. petiolaris*, which is smaller and more slender in all respects, has lanceolate phyllaries, and usually lacks ciliate margins.

General: Annual forb; stems 1-3 m (3.3-9.8 ft) tall, coarse and hispid, simple or branched; when dead, the plant turns to a pale green and eventually tan to brown; the stalk becomes more prickly; the styrofoam-like pith can persist for months after dying.

Leaves: Leaves alternate except for lowermost leaves which may be opposite; petiolate; petioles 2-20 cm (0.8-7.9 in) long; leaf blades ovate to lanceolate-ovate, 10-40 cm (0.3-1.3 ft) long and 5-40 cm (0.1-1.3 ft) wide; margins serrate to coarsely toothed (rarely almost entire); surfaces hispid.

Flowers and Fruits: Flower heads large, showy, and radiate; yellow (rarely reddish or pinkish) ray florets with brown to purplish brown (sometimes yellow) center disk florets, solitary or few at the ends of stems and branches; heads peduncles 2-20 cm (0.8-7.9 in) long; phyllaries 20-30 mm, ovate to lanceolate-ovate, more or less pubescent, margins usually ciliate, apex a narrow tip; achenes glabrous or finely pubescent; pappus of 2 or more awns or scales. Flowers bloom from March to October, in NM most bloom in August.



Photos by Taryn Schlosser



Note: A highly variable species that hybridizes with other *Helianthus* species, including backcrossing between wild and cultivated individuals, which can make it difficult to assign to species. The heads and seeds of cultivated forms are very large. The species has a long history of cultivation. Flowers change color under UV light.

Forbs | Aster Family | Asteraceae | Exotic

Lactuca serriola



Photo by pinkspoonbill

Common Names: prickly lettuce, wild lettuce, compass plant, China lettuce

Code: LASE

Habitat: Found in fields, gardens, waste places, disturbed areas, and roadsides. Widespread throughout the state in nearly all terrestrial habitats, from desert to high mountainous elevations. Generally found below 9,000 ft. In Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Tarrant, Socorro, and Valencia counties. Facultative upland species for Arid West and Western Mtns, Valleys, and Coast regions; facultative species for Great Plains region.

General: Annual herb; stems 30-150 cm (0.9-4.9 ft) tall, hairless for most of the length but prickly at the bottom; leaves on lower $\frac{3}{4}$ of stems; produces milky sap.

Leaves: Leaves are twisted at the base to lie in a vertical plane; leaves alternate, stemless, and clasping the stem with two angled or earlike

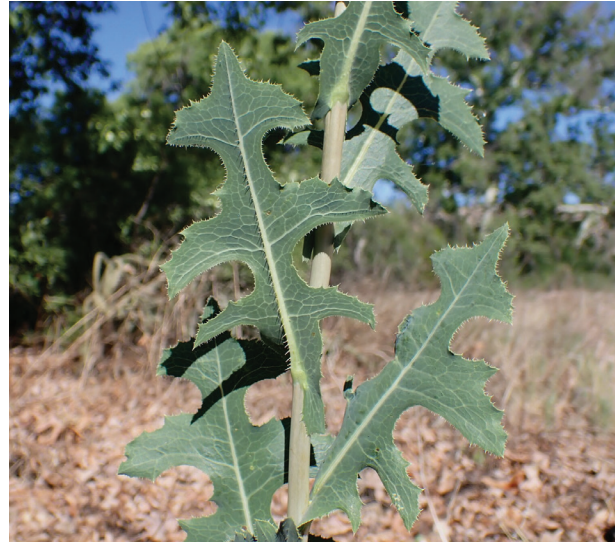


Photo by Radha Veach



Photo by Cecelia Alexander

lobes; leaf blades with large prickles on the underside of the midrib and prickly on the pinnately lobed to lobeless margins; undivided cauline leaves oblong to lanceolate.

Flowers and Fruits: Flower heads are yellow, often drying blueish; ray florets only; each flowering head has 6-30 flattened fruits with 5-7 parallel ridges on each side; the fruit is bristly near the top. Flowers from July to September.

Note: A variant spelling is *Lactuca scariola*. Is known to hybridize with garden lettuce. Is edible.

Forbs | Morning Glory Family | Convolvulaceae | Exotic

Convolvulus arvensis

Photo by Rod

Common Names: field bindweed, creeping jenny, European bindweed, morningglory, perennial morningglory, correhuela

Code: COAR4

Habitat: Primarily an agricultural weed. Tolerates a wide range of habitats and grows well on disturbed sites such as roadsides, along railways, fields, pastures, gardens, and orchards. Found in riparian corridors and irrigated areas on tracts once used for agriculture. Generally grows below 9,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Tarrant, and Socorro counties.

Similar Species: Similar to *C. equitans*, which has narrower leaves with longer, narrower lobes at the base.

General: Perennial herb/vine from deeply set creeping rootstocks; exudes a milky sap; stems slender and branching, prostrate or twining, to about 1 m (3.3 ft) long; often forms large patches; herbage glabrous to pubescent.



Photo by Rod



Photo by Robert Eberhardt

Leaves: Leaves alternate along the stem on petioles 3-40 mm long; leaf shape variable; the blades 2-5 cm (0.8-2 in) long, to nearly 4 cm (1.6 in) wide, mostly arrowhead shaped but can be broadly lanceolate, oblong, to broadly ovate in outline, the lobes divergent or not, rounded, angled, to pointed.

Flowers and Fruits: Flowers white to pink, sometimes bicolored, in leaf axils, usually 1-3 flowers per node on long peduncles, calyx 3-5 mm long, corolla of 5 petals fully fused into a funnel shape. Flowers May to September.

Forbs | Legume Family | Fabaceae | Exotic

Medicago sativa



Photo by Dustin Chavez-Davis



Photo by eneeenm

Common Name: alfalfa

Code: MESA

Habitat: Cultivated as a crop nearly everywhere irrigation is available. Found in old fields, along roadsides, fields, trails, yards, and waste areas. Alfalfa is intolerant of waterlogged soils but requires a lot of irrigation as a crop. Generally found below 10,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Tarrant, and Socorro counties. Obligate upland species.

Similar Species: Other *Medicago* spp. and other clovers, but the purple flowers are fairly distinctive.

General: Perennial (sometimes annual) herb, the herbage obscurely pubescent; stems erect to ascending, very branched, 20-100 cm (0.6-3.3 ft) tall/long; roots deep.

Leaves: Leaves alternate, pinnately trifoliate; leaflets oblong to obovate, 10-25 mm long,



Photo by Ellen Hildebrandt

toothed towards the apex; stipules entire or dentate proximally.

Flowers and Fruits: Flowers small, greenish-yellow or violet to deep purple, often varicolored with blue, green, yellow; in oval clusters arising from leaf axils; pods unarmed, generally coiled, also nearly straight to hooked, glabrous, indehiscent. Flowers April to October.

Note: Not all individuals produce seeds.

Forbs | Loosestrife Family | Lythraceae | Exotic

Lythrum salicaria



Photo by Michael Burns



This photo and below by A.M.

Common Names: purple loosestrife, spiked loosestrife

Code: LYSA2

Habitat: Found in disturbed wet places, seeps, springs, roadside ditches, and marshes. Grows best in unshaded, newly-exposed, moist soils. Occasionally grown in gardens and escaping. Its range in NM follows the Rio Grande. Elevation range 3,000 to 9,000 ft. In Bernalillo, Sandoval, and Rio Arriba counties. Obligate wetland species.

Similar Species: Similar to other *Lythrum* spp., but other species have 1-2 flowers per bract pair, while *L. salicaria* has many. Looks similar to *Verbena hastata*, but there is very little overlap between ranges.

General: Perennial herbs from creeping rhi-



zomes; the stems 70-300 cm (2.3-9.8 ft) tall, with coarse hairs, especially near the branching inflorescence.

Leaves: Leaves mainly opposite or in whorls of three; stalkless, sometimes with a stalkless base lanceolate to ovate, to 10 cm (3.9 in) long and 2 cm (0.8 inches) wide, pubescent.

Flowers and Fruits: Inflorescence terminal and spike-like, 10-40 cm (0.3-1.3 ft) long, with

numerous crowded flowers in the axils of two pointed, hairy bracts, at least two, usually more, flowers per bract axil; flowers heterostylous, bright purple-red, stalkless, with sepals and petals fused together (hypanthium); hypanthium tube 5-8 mm long, coarsely hairy; petals 5-12 mm long. Blooms July to October.

Forbs | Buttercup Family | Ranunculaceae

Clematis ligusticifolia



Photo by Spencer Hurt

Common Names: western white clematis, hierba de chivo, yerba de chiva, old-man's-beard, virgin's-bower, traveler's joy, leatherflower

Code: CLLI2

Habitat: Widespread in somewhat moist sites across NM including forest edges, woods, riparian deciduous woodlands, moist wooded draws, secondary sites derived from these, and clearings and pastures, usually near streams or on moist slopes. Does best in deep soils with good water holding capacity is semi-shade tolerant but grows well in full sun. Elevation range 3,000 to 10,000 ft. In Socorro, Sandoval, Rio Arriba, Bernalillo, Cibola, Torrance, and Santa Fe counties. Facultative species for Arid West and Western Mtns, Valleys, and Coast regions; facultative upland species for Great Plains region.

Similar Species: Similar to other *Clematis* species. Differs from *C. columbiana* by being dioecious.



Photo by Craig Martin



Photo by Christopher Rustay

General: Perennial, deciduous vine; usually herbaceous from a woody base; the stems clambering to climbing or trailing, up to 6 m (19.7 ft) long.

Leaves: Leaves opposite, on long petioles; leaves pinnately compound with 5-7 stalked leaflets; leaflets lanceolate to broadly ovate, lobed or unlobed, 2-9 cm (0.8-3.5 in) long; hairless to sparsely hairy on the under-side; margins entire or toothed.

Flowers and Fruits: Dioecious; inflorescence an axillary long-peduncled cyme, mostly 7-20-or more-flowered; four thin, petal-like sepals widely spreading, white to cream, 6-10 mm long; petals absent; male flowers with many stamens, lacking staminodes; female flowers with staminodes, pistils numerous; styles of female flowers elongate into an achene about 3 mm long, the beaks about 3 cm long; seeds hairy. Flowers from May to August.

Forbs | Lizard's Tail Family | Saururaceae

Anemopsis californica

Photos by deekyn

Common Names: yerba mansa, lizard tail, bear root

Code: ANCA10

Habitat: Found in wet, usually alkaline to saline soils, along streams, in wet meadows, in marshlands, and floodplains. Can tolerate shade. Often forms large colonies. Grows up to 8,000 ft. In Socorro, Valencia, Bernalillo, Sandoval, Rio Arriba, Santa Fe, and Tarrant county. Obligate wetland species for Arid West and Western Mtns, Valleys, and Coast regions; facultative wetland species for Great Plains region.

General: Perennial herb/forb; rhizomatous; plants 10-80 cm (0.3-2.6 ft) tall; stems simple, densely pubescent to nearly glabrous, stoloniferous.

Leaves: Leaves large, leathery; basal leaves are elliptic-oblong; blades 1-25 cm (0.4-9.8 inches) long; margins entire, petioles 2-40 cm (0.8-15.8 in) long; stem leaves are located at the single

node on each stem and include one sessile, clasping leaf, and 1-3 petioled leaves emerging from the axil of the sessile leaf.

Flowers and Fruits: Flower a fragrant, densely packed, conic spike, 1-4 cm (0.4-1.6 in) long, subtended by white to reddish petal-like bracts, 5-35 mm long; each individual flower in the spike is subtended by a small, round, white bract 3-6 mm long with a narrow claw; as the plant matures, reddish purple blotches appear on the leaves and stems. Blooming from March to September.

Note: Does not contain true petals or sepals and instead contains bracts imitating a perianth.

Forbs | Nightshade Family | Solanaceae

Solanum elaeagnifolium



Photo by Craig Martin



Photo by Jill DeVito

Common Names: silverleaf nightshade, trompillo, whiteweed, white horsenettle, bull nettle, tomato weed, white nightshade, tomatito de buena mujer

Code: SOEL

Habitat: Usually on disturbed ground and roadsides, along or in sidewalks, on or in sandy plains, arroyos, outwash slopes, and overgrazed fields, but not deep sands. Is shade tolerant and drought tolerant. Generally grows below 8,000 ft. In Socorro, Bernalillo, Sandoval, Rio Arriba, Santa Fe, Valencia, Torrance, and Cibola counties.

Similar Species: Can resemble *Croton* species, but *Croton* is never armed and is very shade intolerant.

General: Perennial rhizomatous herb/forb; often armed with stout prickles, but nearly unarmed individuals can be found in wetter sites; 15-100 cm (0.5-3.3 ft) tall, the herbage silvery to

grayish-white, densely pubescent with appressed stellate hairs with the rays fused at the center.

Leaves: Leaves alternate, simple, narrowly lanceolate to oblong; to 15 cm (5.9 in) long and 3 cm (1.2 inches) wide; margins entire to undulate or sinuate, sometimes shallowly lobed; the lower surface densely covered in stellate hairs; petioles and leaf midribs prickly with yellowish spines.

Flowers and Fruits: Flowers showy and purple, occasionally white; corolla 5-lobed and flat and roundish; stamens bright yellow; berries round, green with pale green to greenish gray markings when immature, yellow to orange to brownish when mature; fruits containing brown, lens shaped seeds. Flowers March to October.

Note: Roots can grow to 3 m deep, sometimes more depending on the soil. Can spread by root fragmentation.

Shrubs | Aster Family | Asteraceae

Baccharis salicina

Photos by Cecelia Alexander

Common Names: seepwillow, willow baccharis, false willow, Great Plains false willow

Code: BASA

Habitat: Common on stream banks, flood plains, gypsum flats, moist roadsides, along arroyos and streams, and in alkali meadows. Is heat and drought tolerant, shade intolerant, and usually grows in disturbed soils, often in moist or dry, sandy, subsaline soils. Generally found up to 8,000 ft. In Socorro, Valencia, Bernalillo, Sandoval, Rio Arriba, and Santa Fe counties. Facultative wetland species for Arid West region; facultative species for Western Mtns, Valleys, and Coast and Great Plains region.

Similar Species: Similar to *B. salicifolia*, which is more willow-like, sticky, has evenly and finely serrate leaf margins, and the pappus on the achene is shorter. The two often co-occur.

General: Perennial shrub, dioecious; branched from the base, stems erect, 1-3 m (3.3-9.8 ft) tall,

glabrous and resinous; branches striate with 5 ridges or nerves; twigs green, strongly striate-angled.

Leaves: Leaves alternate and short-petiolate, well-developed, persistent; blades oblong to oblanceolate; 2.5-7 cm (1-2.8 in) long and 5-10 mm wide; 3-nerved; lower leaf margins coarsely few-toothed, uppermost leaves narrower and often entire; apices acute or obtuse; glabrous and finely gland-dotted.

Flowers and Fruits: Heads in large paniculiform arrays, only disk flowers; involucre cone- or bell-shaped; phyllaries lanceolate, gland-dotted and glabrous, midribs green or reddish, scarious margins, apices greenish or purplish; female florets 25-30, the corolla hidden by long, white hairlike bristles; male florets 20-25, short bristles that extend barely above the involucre, corolla yellow; fruit glabrous, finely but distinctly ribbed, pappus 8-12 mm long. Flowers May to September-November.

Shrubs | Olive Family | Oleaceae

Forestiera pubescens var. *pubescens*



Photo by Dustin Chavez-Davis

Common Names: New Mexico olive, stretchberry, desert olive

Code: FOPUP, FOPU2

Habitat: It grows along stream courses, moist valleys, hillsides, and mesas. Widespread throughout the state. Elevation range 2,000 to 8,000 ft. In Socorro, Valencia, Bernalillo, Sandoval, Rio Arriba, Cibola, and Santa Fe counties. Facultative upland species.

General: Deciduous shrubs to 2-5 m (6.6-16.4 ft) tall; the young twigs hairy.

Leaves: Leaves opposite, commonly clustered on short shoots, elliptic to oblanceolate, glabrous to pubescent, with minute dark pits on the bottom surface, veins somewhat translucent; the margins commonly crenulate to serrulate, rarely entire.

Flowers and Fruits: Flowers inconspicuous and clustered; fruits elliptic, green when immature,



Photo by Ihenrynm

bluish black when mature. Flowers late March to April before new leaves appear.

For Winter: Terminal buds ovoid, acute 2-3 mm long; lateral buds smaller; bud scales opposite, in 5-7 pairs, the lowermost gray-brown; margin ciliate, otherwise glabrous; uppermost bud scale honey-yellow to ochre-colored; surface partly with dead, gray-white lifting epidermis; twigs very slender, below the terminal bud <1 mm diameter, gray to gray-brown, with few pale dot-shaped lenticels; more mature bark has shallow rhomboid-furrows.

Note: The recognition of *Forestiera pubescens* var. *pubescens* is not universal, and both varieties recognized by the USDA occur in NM.

Shrubs | Willow Family | Salicaceae

Salix exigua

Photos by Cecelia Alexander

Common Names: coyote willow, narrowleaf willow, sandbar willow

Code: SAEX

Habitat: Found in thickets along creeks, stream-sides, lake shores, sandbars, drainages, arroyos, and roads where there's the right micro-climate. Widespread throughout the state. Elevation range 1,500 to 10,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Tarrant, and Socorro counties. Facultative wetland species.

Similar Species: Young Gooding's willow, but Gooding's willow has more toothed/serrated leaf margins and usually has yellowish young branches and stems.

General: Deciduous, clonal, thicket-forming shrubs (or small trees) to 8 m (26.25 ft) tall, the branches ascending to spreading, gray, red, to yellow-brown, the bark thin and smooth,



Photo by Craig Martin

becoming shallowly fissured in age; the twigs red, gray, to yellow brown, glabrous to finely hairy to silky-hairy with usually spreading hairs; stipules mostly absent to rudimentary, sometimes leaf-like on later growth.

Leaves: Leaf blades narrowly ligulate; 3-14 cm (1.1-5.5 in) long, to 1 cm wide, somewhat glaucous and slightly hairy to glabrous on the top, silvery gray and silky-hairy on the bottom, margins entire or with widely spaced tiny teeth, slightly rolled under towards the midrib.

Flowers and Fruits: Male catkins 2-6 cm long, female catkins 2-7 cm long, the bracts deciduous after flowering; capsules 4-8 mm long, mostly glabrous. Flowers from March to June, with catkins appearing before or during leaf emergence.

Note: Dense thickets have a certain smell.

Shrubs | Nightshade Family | Solanaceae

Lycium pallidum

Common Names: pale wolfberry, pale desert-thorn, rabbit thorn, boxthorn, desert thorn

Code: LYPA

Habitat: Widespread throughout the state in a variety of habitats, often associated with past disturbance; our most common species, probably present in every county. Found on desert grassland, riparian areas, mesas, rocky slopes of canyons, hills, and mountains, piñon-juniper woodland, plains, along washes and arroyos; commonly grows on sandy or rocky soil. Is tolerant of saline soil. Elevation range 2,000 to 9,000 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties.

Similar Species: Similar to *Lycium torreyi*, but *L. pallidum* has a waxy glaucous coating on its herbage, calyx lobes 5-8 mm long, and corollas usually 15-20 mm long.

General: Perennial shrub with tough, fibrous roots; drought deciduous; zig-zagging branching pattern, spreading, 1-2 m (3.3-6.6 ft) tall; glabrous to finely pubescent; has sharp slender thorns, 5-10 mm long, bark yellowish, gray, or red to dark purple; branches glabrous to sparsely pubescent, often somewhat flexuous.

Leaves: Leaves short-petioled and in small clusters; clusters alternate; blades ovate to broadly elliptic to spatulate; 1-4 cm (0.4-1.6 in) long, 3-15 mm wide; apex acute or sometimes rounded; base tapering into a short petiole; surfaces glaucous green, and glabrous or nearly so; mid-vein and primary lateral veins usually visible.

Flowers and Fruits: Flowers pendulous on slender pedicels 6-12 mm long; solitary or in groups of 2-3; calyces bell-shaped, 5-8 mm long; calyx lobes the same length or exceeding the



Photo by JD McCoy



Photo by Cecelia Alexander



Photo by Craig Martin

calyx tube; lobes glabrous or blue-glaucous; corollas tubular-funnelform, whitish-greenish and tinged with purple veins, mostly 15-20 mm long, sometimes shorter, glabrous; berries 8-10 mm in diameter, bright red at maturity, sometimes blue-tinged due to glaucescence, edible. Flowers (March-) May to June.

Shrubs | Nightshade Family | Solanaceae

Lycium torreyi

Photo by Brandt Magic



Photo by Craig Martin



Photo by Ilja Fescenko

Common Names: Torrey wolfberry, desert thorn, boxthorn

Code: LYTO

Habitat: Found in alluvial flats and river bottoms, floodplains, washes, arroyos along the Rio Grande and its tributaries, as well as other watercourses. Commonly grows in dry, silty, sandy, and alluvial soils, and often occupies saline or alkali sites. Generally grows up to 7,000 ft. In Socorro, Cibola, Sandoval, Valencia, Bernalillo, and Santa Fe counties. Facultative species for Arid West and Great Plains regions; facultative upland species for Western Mtns, Valleys, and Coast region.

Similar Species: Similar to *Lycium pallidum*, but *L. torreyi* has no glaucous waxy coating, calyx lobes less than ½ as long as the tube, and corollas 7-13 mm long.

General: Perennial shrub with tough, fibrous roots; drought deciduous; much-branched,

spreading to erect, 1-3 m (3.3-9.8 ft) tall, generally glabrous; unarmed or with a few big spines 5-10 mm long; bark yellowish-tan to brown; branches leafy and glabrate.

Leaves: Leaves short-petioled and in clusters of a few; clusters alternate along the stem; blades elliptic to spatulate; 1-5 cm (0.4-2 inches) long, 3-15 mm wide; acute or obtuse at the apex; base tapering to a short petiole; light green and glabrous.

Flowers and Fruits: Flowers 1-3 in the axils; calyces 3-5 mm long and lobed mostly less than ½ the total length; lobes with small fine hairs; corolla, whitish, greenish, purplish, tubular-funnelform, 7-13 mm long; corolla lobes with small fine hairs; berries 6-10 mm in diameter, bright red and juicy at maturity, edible. Flowers (April-)May to June.

Trees | Cypress Family | Cupressaceae

Juniperus monosperma



Photo by Paul Mitter



Photo by Craig Martin

Common Names: one-seed juniper

Code: JUMO

Habitat: Widespread and common in canyons, on plains, foothills, dry mountain slopes, dry hills and mesas, merging into grasslands at lower elevations and forests at upper elevations. Can be found in drier areas in the old floodplain of the bosque. Elevation range 3,000 to 7,500 ft. In Valencia, Cibola, Sandoval, Santa Fe, Rio Arriba, Bernalillo, Torrance, and Socorro counties.

Similar Species: Other *Juniperus* species.

General: Evergreen shrub or tree, 3-8 m (9.8-26.3 ft) or more tall; usually branching from the base with a shrub-like growth form; bark gray to brown to red-brown, peeling off in thin strips.

Leaves: Leaves scale-like; green to dark green; usually with a resin gland on the back.

Flowers and Fruits: Male and female cones on separate plants; pollen (male) cones located at



Photo by David Jeffrey Ringer

branch tips, can make the whole tree look yellowish when blooming; seed (female) cones located at branch tips, berry-like, can be resinous, green with a waxy bloom when immature, reddish blue to brownish blue when mature; 1 (sometimes up to 3) seed per cone. Pollen shedding February to April, sometimes later.

Trees | Oleaster Family | Elaeagnaceae | Exotic

Elaeagnus angustifolia



Photo by CK2AZ

Common Names: Russian olive

Code: ELAN

Habitat: Found near human disturbance, often around springs, seeps, irrigation ditches, and riparian zones throughout the state. Plant is salt tolerant. Planted as an ornamental and frequently escapes. Elevation range generally 3,000 to 8,000 ft. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, Valencia, and Torrance counties. Facultative species for Arid West and Western Mtns, Valleys, and Coast regions; facultative upland for Great Plains region.

General: Deciduous shrubs or small trees to 12 m tall; sometimes thorny; 1 to several-trunked; the bark dark brown, smooth when young, becoming fissured and shredding; older stems turn reddish brown; buds are grayish brown, tiny, rounded to oblong, with silvery scales.

Leaves: Leaves alternate; dark green with silvery scales on both sides, but less so on the top side



Photo by Mark G



Photo by Craig Martin

(two-toned leaves); 2-10 cm long, to 4 cm wide; lance-shaped/oblong; margins entire.

Flowers and Fruits: Flowers solitary or in clusters of two-three near leaf axils; flower tubular, silvery outside and yellow inside; fruit ellipsoid, fleshy with an achene in the center, short-stalked, 1-2 cm long, silvery to finally brown. Flowers from May to June.

Trees | Willow Family | Salicaceae

Populus deltoides ssp. *wislizeni*



Photo by Roland Wirth

Common Names: Rio Grande cottonwood

Code: PODEW

Habitat: Widespread throughout the state except the northeast plains. Common in bosques, floodplains, river drainages, town plazas and parks, pueblos, and playgrounds. Elevation range 1,500 to 8,000 ft. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, Valencia, and Torrance counties. Facultative species.

General: Fast-growing trees to 40 m tall; the trunk slender to massive, to 3.5 m (11.5 ft) diam; the bark reddish to grayish when young, becoming thick and furrowed; twigs glabrous to densely yellowish hairy; buds densely hairy.

Leaves: Petioles 1-9 cm long, ½ to equaling the blade length, flattened near the blade; blades ovate-rhombic to broadly deltoid; 3-12 cm long, about as wide; the bases broadly cuneate, truncate, rounded, to cordate; margins blunt-toothed; bright to pale green.



Photo by Paul Asman



Photo by Jim Boone



Photo by Brandt Magic

Flowers and Fruits: Flowers from late March to early May, with flowers appearing before the leaves.

Trees | Willow Family | Salicaceae

Salix gooddingii

Photo by Devon Cox

Common Names: Goodding's willow

Code: SAGO

Habitat: Found along stream- and river-banks, arroyos, washes, in canyons, wet meadows, and marshy habitats. Grows in NM from the low plains and deserts up into the mountains. Widespread in the state except for the northeast corner. Elevation range 1,000 to 7,500 ft. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, Valencia, and Tarrant counties. Facultative wetland species.

Similar Species: Can look like coyote willow when young, but coyote willow has less toothed leaf margins and tends to have redder young branches and stems.

General: Deciduous trees 8-20 m (26.3-65.6 ft) tall, most commonly to 15 m (49.2 ft), the trunks to 100 cm (39.4 in) diameter; bark thick and gray, and split into many furrows and ridges; the twigs yellowish (sometimes reddish), generally hairy,



Photo by titus9



Photo by titus9

often brittle at the base; the bud scales overlapping;

Leaves: Leaves alternate along branchlets; leaf blades linear to broadly oblong; 7-13 cm (2.8-5.1 in) long, 1-2 cm wide; upper and lower surfaces green to yellowish-green and hairless; margins finely toothed to serrate.



Photo by titus9

Flowers and Fruits: Male and female catkins on separate trees; catkins yellowish; male catkins 3-8 cm long; female catkins 3-8 cm long; the bracts deciduous after flowering; capsules 6-7 mm long, generally hairy, the stalks 1-3 mm long. Flowers from March to June, with catkins emerging at the same time as or after leaves.

Trees | Quassia Family | Simaroubaceae | Exotic

Ailanthus altissima



Photo by osodad

Common Names: tree of heaven, ailanthus

Code: AIAL

Habitat: Widespread throughout the state. Found along irrigation ditches and floodplains, roadsides, backyards, occasionally at old homesteads, vacant lots, and any disturbed urban area, including cracks in sidewalks and pavements. Elevation range 2,000 to 8,000 ft. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, Valencia, and Tarrant counties. Facultative upland species.

General: Fast-growing, weedy, deciduous trees, often forming colonies; roots are shallow and widespread; up to 35 m (115 ft) tall, but usually up to 25 m (82 ft); the bark smooth, light-colored, with whitish lenticels; the twigs reddish or grayish brown, glabrate (becoming hairless), with large heart-shaped leaf scars.

Leaves: Leaves odd or evenly pinnately compound; 15-90 cm (0.5-2.95 ft) long, to 30 cm



Photo by Craig Martin



Photo by Laurel Ladwig

(1 ft) wide; the leaflets 2-15 cm (0.8-6 in) long, 4-7 cm (1.5-2.8 in) wide, lanceolate to broadly ovate; green and glabrous (hairless) on top, hairy and glabrate on bottom; the bases rounded, often with basal teeth; margins entire; petioles 2-15 cm (0.8-6 in) long; the axis of the leaf is reddish. Crushed up leaves smell like rotting peanut butter or something similarly unpleasant.

Flowers and Fruits: Petals 5, greenish yellow (sometimes pinkish), 2-3 mm long; stamens 10; pistils 5, separating in fruit; samaras 4-5 cm long and twisted at the tip. Flowers from June-July.

Trees | Tamarix Family | Tamaricaceae | Exotic

Tamarix chinensis

Common Names: salt-cedar, saltcedar, five-stamen tamarisk, tamarisk

Code: TACH2

Habitat: Found in waterways, ditch banks, arroyos, lakeshores, ephemeral water courses, wetlands, riparian drainages and floodplains, wet pastures, and springs. Disturbed sites, including burned areas, are favorable for establishment. Can grow well in arid, alkaline to saline habitats. Found at elevations up to 11,000 ft, but does not spread as rapidly at high elevations. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, and Valencia counties. Facultative species for Arid West and Western Mtns., Valleys, and Coast region; facultative wetland species for Great Plains region.

Similar Species: Other *Tamarix* species. *T. chinensis/ramosissima* are 5-merous, more common, and flowers from spring to fall. *T. parviflora* is 4-merous, not as widespread, and flowers in the spring only. *T. gallica* is not expected to be as widespread around NM.

General: Perennial shrub/tree, deciduous, usually glabrous throughout; to 8 (26.25 ft) m tall but often only 4-6 m (13.12-19.69 ft); branches slender and flexible; younger branches are reddish in color, older bark is brown.

Leaves: Scale-like, triangular-ovate, acute, 1.5-3.5 mm long.

Flowers and Fruits: Racemes 2-7 cm (0.79-2.76 in) long, 3-5 mm wide in flower (wider in fruit); flowers 5-merous, pinkish-white to pink; pedicels about 1 mm long; petals 1-2.3 mm long, persistent in fruit; sepal margins entire; filaments emerging from between the lobes of the nectary disc, which can vary in symmetry, shape, and filament insertion; pistils 2.5-4 mm long; capsule narrowly ovoid, 3-4 mm long, splits open to release numerous tiny seeds with apical tufts of hair for wind dispersal. Flowers April to November.



Photo by brando18



Photo by Rod



Photo by Ethan Wright-Magoon

Note: Use *Tamarix* and TAMAR2 if not confident on species ID.

Trees | Elm Family | Ulmaceae | Exotic

Ulmus pumila



Photo by CK2AZ



Photo by lejones417

Common Names: Siberian elm

Code: ULPU

Habitat: Very common throughout the state. Found along roads, fences, streams and riparian areas, and in sandy soil in disturbed areas. Elevation range 2,000 to 8,000 ft. In Bernalillo, Sandoval, Santa Fe, Rio Arriba, Socorro, Cibola, Valencia, and Torrance counties. Obligate upland species.

Similar Species: Looks like American elm, but there are currently no confirmed reports of American elm (or any other elm in NM) in the wild.

General: Small to large deciduous trees 8-30 m (49-98 ft) tall; with open crowns; gray to brown bark that deeply furrows with age.

Leaves: Leaf blades 2-6 cm long, 2-3 cm wide; the bases rounded to slightly asymmetric; the margins mostly singly serrate; dark green and hairless to rough on the top and hairless on the bottom.



Photo by James N. Stuart



Photo by Fiana Shapiro

Flowers and Fruits: Samaras orbicular and hairless. Flowers March to April, with flowers appearing before the leaves.

For Winter: Leaf buds very small, dark brown, 1.5-2 mm long; flower buds red-brown, 3-4 mm long, and mostly in small groups; bud scales are densely shaggy-white ciliate at the margin; young twigs slender, only initially hairy and soon becoming hairless.

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VEGETATION

A2 GRGWA USDA PLANTS Code Cheat Sheet

Form	Scientific Name	USDA PLANTS Code	Common Name	Nativity
Graminoid	<i>Achnatherum hymenoides</i>	ACHY	Indian ricegrass, sand ricegrass, Indian millet, sandgrass	Native
	<i>Aristida purpurea</i>	ARPU9	purple threeawn	Native
	<i>Arundo donax</i>	ARDO4	giant reed	Exotic
	<i>Bromus inermis</i> ssp. <i>inermis</i>	BRINI	smooth brome	Exotic
	<i>Distichlis spicata</i>	DISP	saltgrass, inland saltgrass	Native
	<i>Elymus elymoides</i>	ELEL5	squirreltail	Native
	<i>Phragmites australis</i> ssp. <i>americanus</i>	PHAUA6	American common reed	Native
	<i>Phragmites australis</i> ssp. <i>australis</i>	PHAUA7	European common reed	Exotic
	<i>Phragmites australis</i> ssp. <i>berlandieri</i>	PHAUB2	subtropical common reed	Native
	<i>Saccharum ravennae</i>	SARA3	ravennagrass, elephant grass	Exotic
	<i>Sporobolus airoides</i>	SPAI	alkali sacaton	Native
	<i>Sporobolus cryptandrus</i>	SPCR	sand dropseed	Native
	<i>Typha latifolia</i>	TYLA	broadleaf cattail	Native
Forbs	<i>Anemopsis californica</i>	ANCA10	yerba mansa, lizard tail, bear root	Native
	<i>Bassia scoparia</i>	BASC5	kochia, burningbush, summer cypress	Exotic
	<i>Clematis ligusticifolia</i>	CLLI2	western white clematis, hierba de chivo, yerba de chiva, old-man's-beard, virgin's-bower, traveler's joy, leatherflower	Native

Form	Scientific Name	USDA PLANTS Code	Common Name	Nativity
Forbs	<i>Convolvulus arvensis</i>	COAR4	field bindweed	Exotic
	<i>Helianthus annuus</i>	HEAN3	common sunflower	Native
	<i>Lactuca serriola</i>	LASE	prickly lettuce, wild lettuce, false lettuce	Exotic
	<i>Lythrum salicaria</i>	LYSA2	purple loosestrife	Exotic
	<i>Medicago sativa</i>	MESA	alfalfa	Exotic
	<i>Salsola tragus</i>	SATR12	prickly Russian thistle, Russian thistle, tumbleweed	Exotic
	<i>Solanum elaeagnifolium</i>	SOEL	silverleaf nightshade, trompillo, whiteweed, white horsenettle	Native
Shrubs	<i>Baccharis salicina</i>	BASA	seepwillow, willow baccharis, false willow, Great Plains false willow	Native
	<i>Forestiera pubescens</i> var. <i>pubescens</i>	FOPUP	New Mexico olive, stretchberry, desert olive	Native
	<i>Lycium pallidum</i>	LYPA	pale wolfberry, pale desert-thorn, rabbit thorn boxthorn, desert thorn	Native
	<i>Lycium torreyi</i>	LYTO	Torrey wolfberry, desert thorn, boxthorn	Native
	<i>Salix exigua</i>	SAEX	coyote willow, narrowleaf willow, sandbar willow	Native
Trees	<i>Ailanthus altissima</i>	AIAL	tree of heaven, ailanthus	Exotic
	<i>Elaeagnus angustifolia</i>	ELAN	Russian olive	Exotic
	<i>Juniperus monosperma</i>	JUMO	oneseed juniper, one-seed juniper	Native
	<i>Populus deltoides</i> ssp. <i>wislizeni</i>	PODEW	Rio Grande cottonwood	Native
	<i>Salix gooddingii</i>	SAGO	Goodding's willow	Native
	<i>Tamarix chinensis</i>	TACH2	salt-cedar, saltcedar, five-stamen tamarisk, tamarisk	Exotic
	<i>Ulmus pumila</i>	ULPU	Siberian elm	Exotic