

Clark County, Nevada
Species Account
Manual



Hermi Hiatt and Jim Boone, editors

Department of Comprehensive Planning
November 2003

Clark County, Nevada

**SPECIES ACCOUNT
MANUAL**

November 2003

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Cover photo - Western Burrowing Owl: Aaron Ambos

INTRODUCTION

This *Species Account Manual* serves as a companion document to the Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement (MSHCP), which covers a wide variety of species and their habitats in Clark County, Nevada. The *Species Account Manual* informs about the species of concern covered within the MSHCP. It provides an individual species account describing the appearance of each species, identifying features, the kind of habitat in which a given species might be found, and the range of that species. Additional comments on the sensitivity of the species are also included.

While this manual is informative as a companion document and can be carried in the field, it is not intended as a true field guide. It does not contain a key for identification. Species are listed in alphabetical order, and not as presented in the MSHCP. To facilitate finding a species, animal species are grouped alphabetically by common name. However, alphabetical listing of vascular and non-vascular plants is by scientific names since many plants have the same genus name. Also, MSHCP species are grouped as Covered Species, Evaluation Species, and Watch List Species. **Covered Species** are those for which sufficient information is known and for which adequate management prescriptions exist to help protect them. **Evaluation Species** are those for which additional information is required and management plans need to be developed. Evaluation Species are further prioritized as high, medium, or low priority based upon the degree of threat likely to occur in the future. **Watch List Species**, not described in this manual, are those with inadequate information to assess population range, status, and conservation potential or risk of extinction.

The idea for the *Species Account Manual* originated with the Public Information Education (PIE) Working Group of the Implementation and Monitoring Committee of the MSHCP which wanted a document that provides descriptive and visual information about the species covered under the MSHCP.

This document contains the best available information at the time of printing. However, the overall condition of individual species, individual species names, the status of habitats, and other conditions pertaining to the MSHCP may change over time. As changes occur, they will be listed in the Clark County website at: www.accessclarkcounty.com or www.co.clark.nv.us/comprehensive_planning/Environmental.htm.

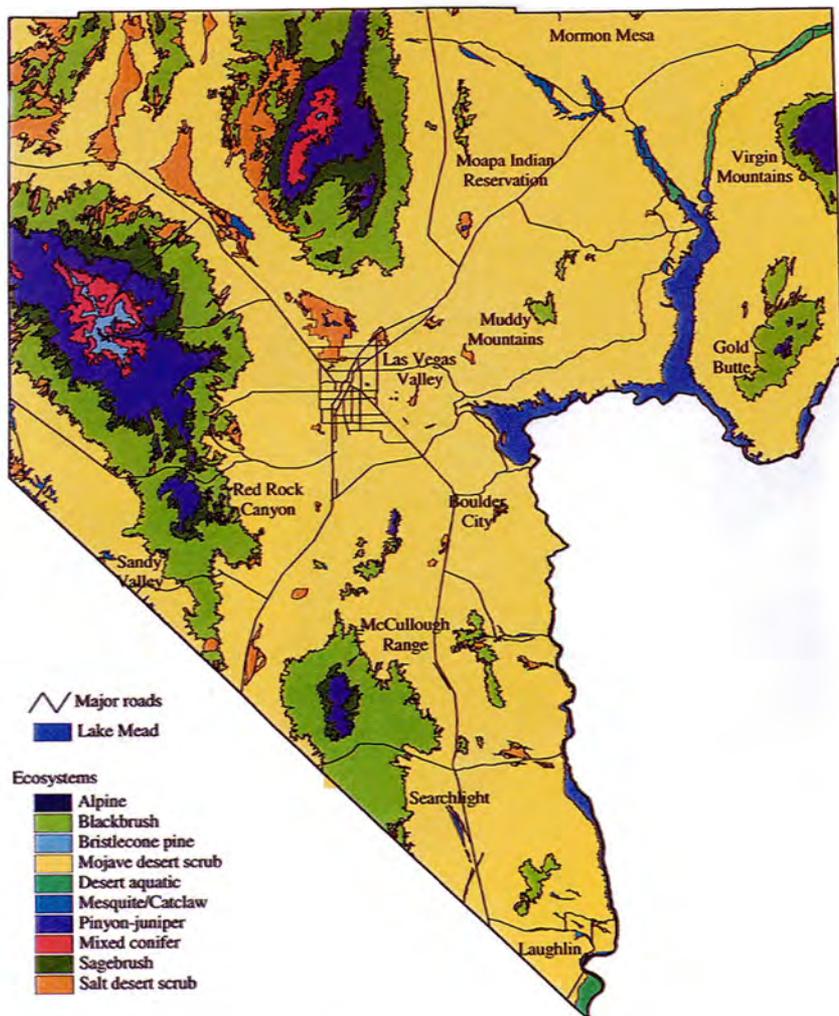
DISCLAIMER

This guide was prepared by the Clark County Desert Conservation Program Public Information and Education subcommittee for use by participants of the program. These participants include federal and state agency representatives, interest group representatives, and members of the public.

The completion of this document is a result of contributions from many photographers, biologists, and other specialists.

Clark County spent over five years collecting, compiling, and editing information for this document. Clark County and the editors of this book have made every effort to contact and receive input and comments from species specialists prior to finalization of this guide. If you believe any information provided here to be inaccurate, please contact the Clark County Desert Conservation Program at 455-4181 with your comments. This guide will be periodically updated and re-printed.

ECOSYSTEMS DISTRIBUTION MAP

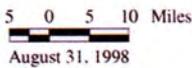
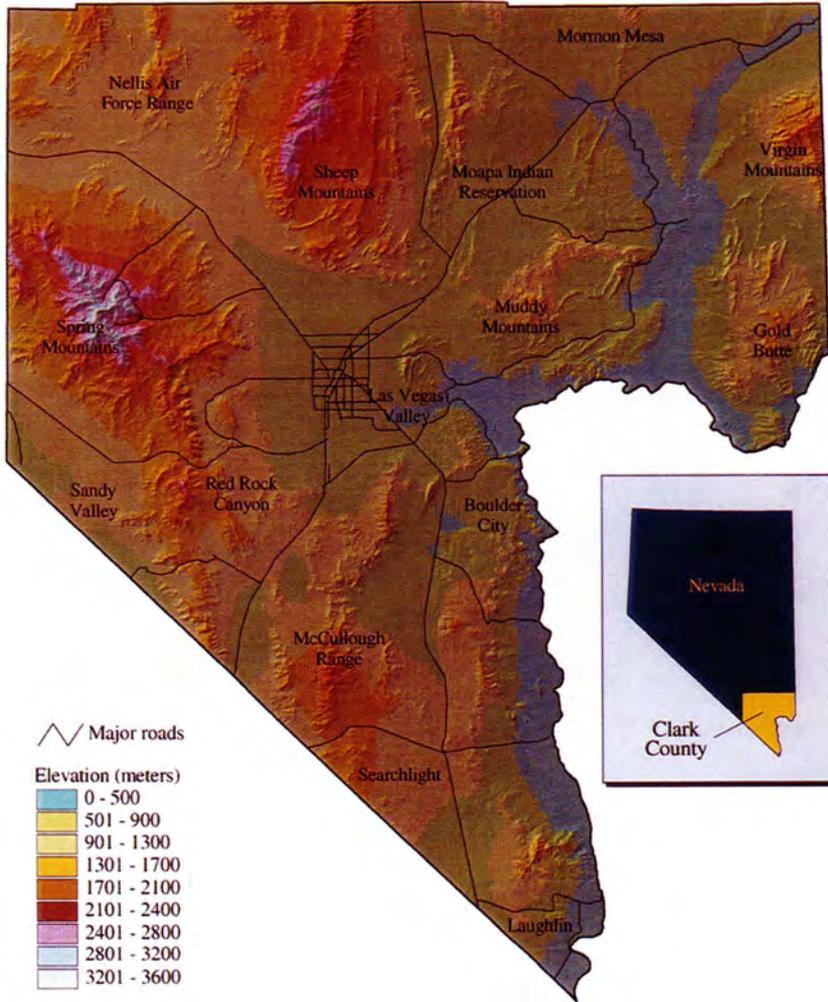


5 0 5 10 Miles
August 31, 1998



Distribution of Ecosystems in Plan Area

ELEVATION MAP



August 31, 1998



Project Setting

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Mammals

FRINGED MYOTIS

Myotis thysanodes

Mouse-eared Bat Family

Evaluation Species



Roger W. Barbour
© 2005

Description: A medium-sized (wingspread: 26-30 cm [10 - 12 in.]; mass: 5 - 7 g [0.18 - 0.25 oz]), buffy brown bat with relatively long black ears. A fringe of short hairs that project backward from the edge of the tail membrane is a diagnostic feature since this is the only species of bat in Nevada with a fringe of hairs on the tail membrane. Fringed myotis are colonial but male and female do so separately. Nursery colonies exceed several hundred individuals. A single offspring is born during June or July.

Diet: Forages in the early evening, flying slowly and feeding on a variety of insects including moths, caddis flies, and flies.

Habitat: Desert scrub, pinyon-juniper, and coniferous forest habitats, usually at elevations of 1,200 - 2,100 m (4,000 - 7,000 ft). Roosts in caves, mines, rock crevices, trees, and buildings.

Range: This species occurs across the southern half of Canada and southward through most of the United States. In Clark County, Nevada, this species occurs predominantly at higher elevations but is found at low elevations during spring and fall migration. Probably migrates south for the winter.

LONG-EARED MYOTIS

Myotis evotis

Mouse-eared Bat Family

Covered Species



J.G. Hall/American Society of Mammalogists

Description: A medium-sized (wingspread: 27 cm [11 in.]; mass: 5 - 8 g [0.18 - 0.28 oz]), pale brown bat with long, thick glossy fur. Ears dark, usually black, and longer than in any other species of *Myotis* (if laid forward, ears extend about 5 - 6 mm [0.25 in.] beyond the tip of the nose). Ears with a medium-length, pointed tragus. Compared to the closely related Fringed Myotis (*Myotis thysanodes*), this species has measurably longer ears and lacks the fringe of hairs lining the tail membrane. Males of the long-eared myotis are solitary; females form small groups in maternity colonies, with less than 40 individuals. Offspring born in late June and July.

Diet: A late-night forager over water (lakes and ponds), also forages among trees in forested areas. Feeds primarily on moths; also eats beetles, flies, flying ants, wasps, and other flying insects.

Habitat: In Southern Nevada primarily found in mixed conifer habitat with ponderosa pine, or at higher elevations. In Northern Nevada common in pinyon-juniper and above, but also found in sagebrush and salt desert scrub habitats. Forages along rivers and streams, riparian areas, and agricultural areas associated with springs and rivers. Day roosts include dead trees, buildings, mines, caves, crevices, and beneath bark. Night roosts include caves, mines, and under bridges.

Range: Occurs throughout western North America. Thought to be fairly common throughout Nevada except in southern Nevada where severe population declines have occurred.

LONG-LEGGED MYOTIS

Myotis volans

Covered Species

Mouse-eared Bat Family



Ross Haley

Description: A medium-sized (wingspread: 25 - 27 cm [10 - 11 in.]; mass: 7 - 9 g [0.25 - 0.32 oz]) bat with tawny, dark reddish, or nearly black fur above; grayish to pale buff below. Ears short and rounded. Underside of membranes furred to a line between the elbow and the knee. Other bats with a similar appearance and likely to be found in southern Nevada have the underside of wing membrane naked to the elbow. Long-legged myotis mate in fall; one offspring born during June to July. Females form maternity colonies of up to several hundred individuals. Lifespan up to 21 years.

Diet: Small moths and other small beetles, flies, and termites.

Habitat: Primarily mixed conifer and pinyon-juniper habitats above 1,220 m (4,000 ft.) elevation. Found in low numbers in virtually all areas of Clark County, Nevada. Day roosts include hollow trees (especially large snags), under bark, rock crevices, mines, and buildings. Night roosts include caves and mines. Depends on constant sources of water, especially rivers and springs. Hibernates in caves and mines other than roost sites.

Range: Occurs throughout western North America from southern Alaska to northern Mexico. Found throughout Nevada, it may be less abundant in the southern portion and only found at higher elevations in the Spring Mountains. May be a permanent resident in Nevada, but winter behavior is poorly understood.

PALE TOWNSEND'S BIG-EARED BAT

Corynorhinus townsendii pallescens

Evaluation Species

Mouse-eared Bat Family



Ross Haley

Description: A large (wingspread: 30 - 32 cm [12 - 13 in.]; mass: 9 - 11 g [0.32 - 0.39 oz]) big-eared bat with pale gray or brown fur above and buff fur below. Ears enormous, more than 2.5 cm (1 in.) long, joined across the top of the head, and without lobes (lappets) on the inner edge near the base. Nose has two large glandular lumps in front of the eyes. Wing membranes are naked. Mates during fall and winter; one offspring is born during late spring or early summer. Up to 200 females congregate in caves, mines, or buildings to form maternity colonies. Colonial in nurseries and during hibernation; may be solitary during part of the year. Other species of big-eared bats likely to be found in southern Nevada may be difficult to separate, but this species is unique with its conspicuous bumps on the nose that are not found on any other species.

Diet: Feeds on small moths and other small flying insects.

Habitat: Highly associated with caves and mines. Found from low desert to high mountain habitats at elevations between 210 - 3,500 m (to over 11,000 ft.). Day roosts include mines, caves, and occasionally cliffs, cracks, or crevices. Night roosts include abandoned buildings.

Range: The subspecies occurs throughout much of the western United States including southern and eastern Nevada. In Clark County, this bat has been documented in the Spring and Newberry mountains, at the eastern portion of Lake Mead, and along the Muddy River. It is suspected to occur elsewhere in suitable habitat.

SILVER-HAIRED BAT

Lasionycteris noctivagans

Covered Species

Mouse-eared Bat Family



R.W. Van Devender/American Society of Mammalogists

Description: A medium-sized bat (wingspread: 30 cm [12 in.]; mass: 7 - 11 g [0.25 - 0.40 oz]), nearly black with silver-tipped hairs on the dorsum giving it a frosted appearance. Tail membrane with fairly thick fur on dorsal surface. Ears short, rounded, and naked. Flies fairly high, slow, and straight. No other species of bat likely to be found in southern Nevada has black fur with silver-tipped hairs. Silver-haired bats may be solitary or occur in small groups. Uses multiple roost sites and switch frequently. Mates in the fall; usually two offspring born in early summer.

Diet: Forages above open forest, streams, ponds, and open brushy areas in the early evening. Feeds on moths and other soft-bodied insects.

Habitat: In summer, found in mixed conifer, pinyon-juniper, and high elevation riparian habitats below 2,750 m (9,000 ft); during spring and fall found at the lower elevations of its habitat. Roosts in hollow trees, dead trees, and under bark. Females may use abandoned woodpecker holes for maternity roosts. During winter, roosts in rock crevices, caves, and buildings; probably migrates south.

Range: Occurs throughout southern Canada, the U.S., and northern Mexico. Widely distributed and locally common in Nevada. Migrates northward in the spring and is a summer resident in mountain forests.

SMALL-FOOTED MYOTIS

Myotis ciliolabrum

Mouse-eared Bat Family

Evaluation Species



Merlin D. Tuttle/Batcon

Description: A small (wingspread: 21 - 25 cm [8 - 10 in.]; mass: 6 - 9 g [0.21 - 0.32 oz]) bat with long, silky light-yellowish fur above, and a distinct black mask across the eyes and ears. The ears and wing membranes are also black. The tip of the tail extends roughly 0.4 cm (0.16 in.) beyond the edge of the tail membrane but can easily be overlooked. Other species of bats likely to be found in southern Nevada generally lack the distinct black mask and have tails that either are entirely contained within the tail membrane or extend far beyond the tail membrane (i.e., freetail bats). This species gives birth to one offspring in late spring or early summer. Roosts alone or in groups in caves, mines, and trees.

Diet: Forages early in the evening, feeding on small insects such as moths and beetles. Flies low among trees and over shrubs.

Habitat: Occurs in deserts, chaparral, riparian zones, and conifer forests. Most common in forested areas at elevations above the pinyon-juniper zone. Elevations: 862 - 2,585 m (2,830 - 8,480 ft.).

Range: Occurs throughout Clark County, Nevada, and in western North America from southern Canada to Mexico.

Comments: Older texts refer to this species as *Myotis leibii* and *Myotis subulatus*. This species is quite easily confused morphologically with *Myotis californicus*. Few bat experts can distinguish between them in the hand. However, they are easily identified acoustically.

KIT FOX

Vulpes macrotis arsipus

Dog Family

Evaluation Species



D. Bradford Hardenbrook

Description: The smallest fox (head and body: 40 - 50 cm [15 - 20 in.], approx. 3 - 5 lbs.) in Nevada with notably large ears relative to the head and a long, cylindrical bushy tail. Fur is pale gray dorsally, tawny to slightly orange-red on the sides, and undersides whitish. Only the tail tip is black. Compared to the kit fox, the larger gray fox (*Urocyon argenteus*) has smaller ears, its coat dorsally steel gray with orange-red sides, whitish belly and tail grayish, thickly furred, triangular in cross section with a black dorsal "mane" running the length to the black tip. The only other similar looking wild dog is the much larger coyote (*Canis latrans*). Kit foxes generally attain adulthood by their second year, mate for life, and breed from January to February; 3 - 5 pups are born during March and April. Kit foxes are dependent on a series of dens (usually earthen) throughout the year to survive harsh desert extremes and predators, and to rear young.

Diet: Primarily rabbits, rodents, birds, reptiles, eggs, scorpions, and crickets.

Habitat: Uses a variety of habitats. In Nevada, primarily inhabits Mojave desert scrub, salt desert scrub, blackbrush, mesquite, and lowland riparian; may also frequent sagebrush and agricultural lands below 5,000 feet elevation.

Range: Kit foxes are associated with the arid southwest of North America.

Comments: Although not widely accepted, fairly recent studies indicate that the swift foxes (*V. velox*) of the Great Plains and kit foxes do not warrant nominal species distinction. However, swift and kit foxes are distinct subspecies, hence the suggested nominal subspecies of *V. v. velox* and *V. v. macrotis*, respectively.

NUTTALL'S COTTONTAIL

Sylvilagus nuttallii

Rabbit Family

Evaluation Species



David Sahmes

Description: A small (head and body: 30 - 36 cm [12 - 14 in.]) brownish rabbit with a reddish nape and a short, white tail (i.e., a typical cottontail bunny). For a rabbit, the ears are relatively short (6 cm [2.4 in.]). The short, white tail and ears distinguish cottontails from jackrabbits. Nuttall's cottontail occurs at higher elevations, which separates this species from the lower-elevation, longer-eared (8 - 10 cm [3 - 4 in.]) desert cottontail. Primarily active during crepuscular and night hours, cottontails are often seen along roadways. Litters of 4 - 6 blind and naked offspring born from April to July.

Diet: Grasses, mesquite, cactus, twigs, and bark.

Habitat: Mountains, at higher elevations; sagebrush, forest, and brushy areas up to timberline.

Range: Southernmost Canada and western U.S. except southwestern deserts. In Nevada, this species occurs in northern and central areas, but an isolated population occurs in the Spring Mountains.

Comments: Nuttall's cottontail is also called the mountain cottontail.

BUSHY TAIL WOODRAT

Neotoma cinerea lucida

Evaluation Species

Rodent Family



C.D. Grandahl/American Society of Mammologists

Description: A medium-sized rodent (head and body: 18 - 25 cm [7-10 in.]; tail: 13 - 19 cm [5 - 7 in.]) with a fairly bushy, squirrel-like tail. The dorsal coloration varies from pale gray to black, but often it is light brownish and peppered with black hairs. The ventral coloration is whitish. There are no stripes or other marks, and the overall appearance is uniformly smooth. The only other species of rodent in southern Nevada that could be confused with this species is the rock squirrel (*Spermophilus variegatus*). However, the woodrat is smaller than the rock squirrel, has a less bushy tail, has a uniformly smooth appearance (rather than mottling), occurs at higher elevations, and is nocturnal. This woodrat nests high in trees and probably produces 1 - 2 litters of 2 - 6 offspring during spring and summer.

Diet: Green vegetation, twigs, nuts, seeds, mushrooms; also animal matter often in the form of carrion. Collects and stores food.

Habitat: Higher elevation coniferous forests, rocky areas, and rimrock.

Range: Western North America from southern Alaska south to southern Nevada, northern Arizona, and northwestern New Mexico. This subspecies occurs across northern and eastern Nevada, and south to the Sheep Mountains. A separate population occurs in the Spring Mountains from Mt. Charleston to Mt. Potosi.

Comments: Also referred to as packrat or trade rat. Packrats are attracted to small shiny objects, which they will collect and deposit on the surface of their nests.

CHISEL-TOOTHED KANGAROO RAT

Dipodomys microps occidentalis

Evaluation Species

Rodent Family



Ron Allig

Description: Kangaroo rats are recognized by their kangaroo-like appearance: large hind legs and feet, small front feet, and long tufted tails. They hop on their hind legs. The Chisel-toothed kangaroo rat is medium sized (head and body: 10 - 13 cm [4 - 5 in.]; tail: 15 - 18 cm [6 - 7 in.]) and has coloration that is fairly dark buff above, whitish below. The tail has light side stripes that are narrower than dark dorsal and ventral stripes. The hind foot has five toes and enough hair to give it a snowshoe appearance. The incisors are flat on the anterior surface. In southern Nevada, the five toes, hairy feet, flat incisors, and its range distinguish this species from others. Offspring (1 - 4) born during May and June.

Diet: Green vegetation and seeds.

Habitat: Desert floors and rocky desert slopes with sandy or gravelly soils below the pinyon-juniper belt. Found in association with sagebrush, shadscale, and greasewood.

Range: The species occurs throughout the Great Basin; this subspecies occurs throughout Nevada in most mid- and lower-elevation areas except along the Muddy River drainage and eastern Clark County.

Comments: Also called the Great Basin kangaroo rat.

DESERT KANGAROO RAT

Dipodomys deserti

Rodent Family

Evaluation Species



T.L. Best/American Society of Mammalogists

Description: Kangaroo rats are recognized by their kangaroo-like appearance: small front feet, large hind feet and muscular legs on which they hop, and long tufted tails that help balance when rapidly hopping. The desert kangaroo rat is the largest member (head and body: 16 cm [6.5 in.]; tail: 18 - 22 cm [7 - 8.5 in.]) found in Nevada. Overall color is a pale buffy yellow, with a prominent tuft of long white hairs on the tip of the tail and four toes on the hind feet. Except for the possible presence of a dark ring on the tail anterior to the tuft of white hairs, this species is entirely pale. Other species of kangaroo rats in southern Nevada are smaller, darker, and lack the prominent white-tufted tail tip. Desert kangaroo rats are nocturnal and solitary. When excited, they kick sand and drum the ground with their hindfeet, or leap straight into the air. Produces 1 - 2 litters of 1 - 6 offspring per year that are born from January to July.

Diet: Seeds, root crowns of perennial grasses, and some green vegetation.

Habitat: Areas with fairly deep (at least 50 cm [20 in.]) wind-blown sand, in hopsage, blackbrush, Mojave mixed scrub, creosote-bursage, and salt desert scrub habitats.

Range: Southwestern desert endemic; western and southern Nevada, southeastern California, western Arizona, and western Mexico. In Nevada, this species is found in lower-elevation desert areas as far north as Humboldt County. Common throughout Clark County in the appropriate habitats.

DESERT POCKET MOUSE

Chaetodipus penicillatus sobrinus

Evaluation Species

Rodent Family



A.L. Roess/American Society of Mammalogists

Description: Pocket mice are difficult to recognize from other kinds of small mouse-like mammals unless they are captured. Pocket mice have cheek pouches with openings near the mouth, but these pouches are outside the mouth. Other species of small mammals (especially squirrels) can pack food materials into the mouth and push out the cheeks. Pocket mice, often difficult to tell apart, can be recognized by its small size (head and body: 7 - 10 cm [3 - 4 in.]), coarse fur, and long crested tail with a tuft of long hairs on the tip. The dorsal color is yellowish brown to yellowish gray, and interspersed with black hairs. Ventral surfaces of the body and tail are white. Pocket mice are active above ground during nocturnal hours. One litter of 2 - 8 offspring born each year.

Diet: Feeds on seeds, including those of forbs, grasses, mesquite, and creosote bush.

Habitat: Open sandy desert floors with mesquite and catclaw, Mojave desert scrub, or salt desert scrub associated with deep (>50 cm [20 in.] wind-blown sand).

Range: Southwestern desert endemic. This subspecies occurs along the Colorado, Muddy, and Virgin rivers in Nevada, Arizona, and Utah, and south to Davis, Arizona. Also found in the Las Vegas Valley.

Comments: Older texts use *Perognathus* for the genus name.

PANAMINT KANGAROO RAT

Dipodomys panamintinus caudatus

Evaluation Species

Rodent Family



T.L. Best/American Society of Mammalogists

Description: Kangaroo rats are recognized by their kangaroo-like appearance; small feet, large hind feet, and muscular legs on which they hop. They also have long tails that help with balance when rapidly hopping. The Panamint species is relatively large (head and body: 13 cm [5 in.]; tail: 18 cm [7 in.]), is overall grayish-brown above, cinnamon on the sides, and white below. The tail is slightly crested and has pale dusky stripes on the dorsal and ventral surfaces. Hind feet have five toes. The lower incisors are round in cross-section. Produces four offspring per year. Kangaroo rats are inactive above ground during the day. They do not hibernate, but are inactive during cold weather. They drum feet, squeal, and growl when excited. Within the range of this subspecies, other kangaroo rats have four toes on the hind feet. In addition, the large size, dark marks, five toes, and round incisors serve to separate this species from others.

Diet: Seeds.

Habitat: Desert areas with sandy or gravelly soils and widely scattered creosote bush, Joshua trees, juniper, sagebrush, and scattered pinyon. In southern Nevada, found in areas of extensive yucca.

Range: Extreme western Nevada, southward in a narrow band through scattered areas to southern California. This subspecies occurs as an isolated population in southern Nevada near Searchlight and in the Providence Mountains of southeastern California.

INYO SHREW

Sorex tenellus

Shrew Family

Evaluation Species

Dale & Marian Zimmerman (photo of a *Notiosorex crowfordii*)



Description: Shrews are small, mouse-like mammals with long, pointed noses, lots of sharp teeth, short velvet-like fur, and tiny, beady eyes. This species is small (head and body: 6 cm [2.5 in.]; tail: 4 cm [1.5 in.]) and has short fur that is grayish-brown above and lighter below. Because of its rapid metabolism, as in other shrews, the dwarf shrew is continuously active day and night and has a voracious appetite. This is the only species of shrew known to occur in southern Nevada.

Diet: Feeds on soft-bodied invertebrates.

Habitat: Mountainous areas. Shaded damp situations near decaying logs and along the bases of cliffs in the bottom of canyons, not farther than 300 m (900 ft) from running water.

Range: Occurs on a few high mountain peaks in southwestern Nevada and east-central California. In Clark County, Nevada, known only from the Mt. Charleston area.

Comments: Little is known about this species, and it was last recorded on Mt. Charleston in 1939. Also known as the Dwarf Shrew. This probably is the smallest mammal in Nevada. The above species is Desert shrew (*Notiosorex crowfordii*), not the Inyo shrew (*Sorex tenellus*).

GOLDEN-MANTLED GROUND SQUIRREL

Spermophilus lateralis certus

Evaluation Species

Squirrel Family



J.T. Brunson/American Society of Mammalogists

Description: A medium-sized ground squirrel (head and body: 14 - 20 cm [6 - 8 in.]) with reddish fur on the head and shoulders (i.e., a golden mantle) and one white stripe bordered by black on each side of the body. Above the stripes, the back is brownish; the belly is white. This species resembles a large chipmunk, but it is distinguished by a white eye-ring on a solid-colored, reddish face (chipmunks have black and white stripes on a brownish face). Golden-mantled ground squirrels yearly produce one litter of 4 - 6 offspring in the early summer. They hibernate in burrows during the winter.

Diet: Seeds, nuts, fruits supplemented by green vegetation, insects, and fungi.

Habitat: Mountainous areas, generally moist coniferous and mixed forests from middle elevations (yellow pine belt) to above timberline. Sometimes found in pinyon-juniper and sagebrush habitats. Logs and rocks provide cover.

Range: The species occurs throughout western North America from southern Canada to southern Arizona and New Mexico, and from the Pacific coast eastward to central Colorado. In Clark County, Nevada, the nominal subspecies occurs only in the Spring Mountains.

Comments: Also called the golden-mantled squirrel. Older texts use *Citellus* as the genus name.

HIDDEN FOREST UINTA CHIPMUNK

Tamias umbrinus nevadensis

Evaluation Species

Squirrel Family



Ann & Rob Simpson/www.agpix.com/srphotos, (Tamias umbrinus)

Description: Chipmunks are small squirrels with distinctive black and white stripes on the face. Other small squirrels may have eye rings, but not eye stripes. This species is small (head and body: 11 - 13 cm [4.5 - 5 in.]) with distinct dark and light stripes on the back and face, which is a diagnostic feature. Primarily are a tree dwelling species. One litter of five offspring born in late June or early July. Two species of chipmunk occur in the Sheep Mountains. The Hidden Forest Uinta chipmunk is recognized by the features described above. The other species, the Cliff Chipmunk (*Tamias dorsalis*), has poorly contrasting, indistinct stripes on the back.

Diet: Feeds on seeds, nuts, fruit, and berries.

Habitat: Mountainous areas, primarily in yellow pine and higher-elevation coniferous forests, mixed woodlands, and open areas.

Range: The species occurs in west-central California, Nevada, Utah, north-central Arizona, western Wyoming, and northwestern Colorado. This subspecies occurs only in the Sheep Mountains at elevations of 2,350 - 2,600 m (7,700 - 8,500 ft).

Comments: Older texts refer this species to the genus *Eutamias*.

PALMER'S CHIPMUNK

Tamias palmeri
Squirrel Family

Covered Species



Cris Tomlinson

Description: Chipmunks are really small squirrels distinguishable from other similar-sized mammals by the presence of alternating black and white facial stripes. Other small squirrels may have rings, but not eye stripes. Palmer's chipmunk (head and body: 13 cm [5 in.]) has distinct dark and light stripes on the back and on the face. Found at higher elevations in the Spring Mountains, in comparison to the Panamint Chipmunk (*T. panamintinus*) which occurs at lower elevations in the pinyon-juniper belt. Panamint chipmunk is slightly smaller and has more brightly colored flanks, yet has solid black and white stripes. It also has a more distinct gray rump. Where these two species overlap they are difficult to identify.

Diet: Mainly conifer seeds; also flowers, berries, green vegetation, insects.

Habitat: Bristlecone pine and mixed conifer habitats with rocky slopes or areas with free-flowing water at elevations of 2,100 - 3,050 m (7,000 - 10,000 ft). Found in deep, mesic canyons and canyon floors where fallen logs, rocks, small caves, and cliff crevices provide shelter. Also found in picnic areas.

Range: Endemic to the Spring Mountains. Known to occur in the Deer Creek, Mummy Springs, and Macks Canyon areas, and on the east side of Mt. Charleston.

Comments: Older texts use *Eutamias* for the genus name, and some older texts use Charleston Mountain Chipmunk for the common name. The most recent evidence suggests that *T. palmeri* is a subspecies of *T. umbrinus*.

LONG-TAILED WEASEL

Mustela frenata

Weasel Family

Evaluation Species

C.D. Grandahl/American Society of Mammalogists



Description: Weasels are small mammals with long slender bodies, long necks, and short legs. In this species, the head and body is 20 - 25 cm (8 - 10 in.) long, and the tail is 8 - 15 cm (3 - 6 in.) long. Males are larger than females. In summer, coloration is brown above and yellow-white below. The feet are brown, and the tip of the tail is black. In winter, coloration is all white except the black tip on the tail. Compared to the short-tailed weasel, this species is larger, has brown feet, and has a longer tail; may be difficult to distinguish species in winter. This is the most widespread carnivore in the Western Hemisphere. Produces 4 - 8 offspring during the spring.

Diet: Primarily small mammals to the size of a small rabbit; also birds, insects, and earthworms. Probably takes any small animal.

Habitat: Almost all habitats in the Western Hemisphere.

Range: This species occurs across southern Canada, most of the U.S. (except the southwestern deserts), and southward into South America. In Clark County, Nevada, this species occurs as an isolated population in the Spring Mountains and in the Muddy River and Virgin River areas.

SHORT-TAILED WEASEL

Mustela erminea

Weasel Family

Evaluation Species



J.A. Wazzen/American Society of Mammalogists

Description: Weasels are small mammals with long slender bodies, long necks, and short legs. In this species, the head and body is 13 - 23 cm (5 - 9 in.) long, and the tail is 5 - 10 cm (2 - 4 in.) long. Males are larger than females. In summer, coloration is brown above and white below. The feet are white, and the tip of the tail is black. In winter, coloration is all white except the black tip on the tail. Compared to the long-tailed weasel, this species is smaller, has white feet, and has a shorter tail; may be difficult to distinguish species in winter.

Diet: Feeds primarily on mice. Also eats other small animals including birds, lizards, snakes, frogs, and insects. Will take prey several times its own weight.

Habitat: A variety of habitats including open woodlands, brushy areas, grasslands, wetlands, and agricultural areas, usually near water.

Range: Most of Canada and Alaska, south to New England and northern tier of U.S. states; in the west, south to central California, Nevada, Utah, Colorado, and northern New Mexico. In Nevada, occurs at higher elevations and may occur in the Spring Mountains.

Comments: Also called an ermine.

WATCH LIST SPECIES

California leaf-nosed bat

Macrotus californicus

Spotted bat

Euderma maculatum

Allen's big-eared bat

Idionycteris phyllotis

Southwestern cave myotis

Myotis velifer brevis

Yuma myotis

Myotis yumanensis

Western mastiff bat

Eumops perotis

californicus

Big free-tailed bat

Nyctinomops macrotis

Spiny pocket mouse

Chaetodipus spinatus

spinatus

Desert bighorn sheep

Ovis canadensis nelsoni



Birds

AMERICAN PEREGRINE FALCON

Falco peregrinus anatum

Family Falconidae (Falcon Family)



Gerald & Bill Corsi/CalPhoto

Description: The American peregrine falcon is a medium-sized raptor, total length 41 - 51 cm (16 - 20 in.). Adults have a dark gray back and crown, dark bars or streaks on a pale chest and abdomen, and heavy malar (cheek) stripes on the face. Young birds, prior to first molt, are brownish above and underparts streaked vertically with brown. Nesting season from March to June; clutch size 3 - 4 eggs; incubation approximately 33 days; only 2 - 3 chicks hatch and fledge 42 days later.

Diet: Peregrines prey almost exclusively on medium-sized birds (pigeons, doves, ducks, swifts, and others), and occasionally on bats. It hunts for its food by diving after the prey and catching it mid-air.

Habitat: Peregrines inhabit mixed conifer, pinyon-juniper, sagebrush, lowland riparian, and grassland habitats, as well as agricultural and urban areas. Nests are shallow hollows in soil, rock ledges, small caves on high cliffs, old raptor nests, or tree cavities. These falcons also are known to nest on various man-made structures within the Las Vegas Valley.

Range: Known throughout the southern half of North America. In Clark County, Nevada, known from the Spring Mountains, Desert National Wildlife Range, Logandale, Overton State Wildlife Management Area, and Newberry Mountains. Known to nest in the Black Mountains, Lake Mead area, and within the Las Vegas Valley area.

Special Remarks: The American peregrine falcon was removed from the Federal list of endangered species on August 25, 1999; the species will be monitored for at least 13 years.

ARIZONA BELL'S VIREO

Vireo bellii arizonae

Covered Species

Family Vireonidae (Vireo Family)



Flick & Nora Bowers/Bowers Photo

Description: The Arizona Bell's vireo is one of four subspecies of Bell's vireo. It is a small, 12 cm (4.75 in.) long neotropical migrant. Its plumage is generally drab gray to green above, white to yellow below, with a clear breast (no stripes). Bell's vireo has a faint white eye ring and two pale wingbars, with the lower bar more prominent. Nesting season from April to July; clutch size 3 – 5 eggs; incubation 14 days; chicks fledged 12 days after hatching. Bell's vireo nests are parasitized by brown-headed cowbird (*Molothrus ater*); in some areas parasitism may be over 50 percent.

Diet: Primarily feeds on insects and fruit.

Habitat: Inhabits desert riparian communities where it requires low, dense riparian areas along water or intermittent streams. Typical vegetation of willow (*Salix* sp.), cottonwood (*Populus* sp.), *Baccharis*, salt cedar (*Tamarix* sp.), or mesquite (*Prosopis* sp.). Nests in thickets of willows or other low shrubs.

Range: Bell's vireo occurs throughout the central and southwestern United States. The Arizona subspecies occurs along the Colorado River and in riparian and mesic habitats in southern Arizona. In Clark County, Nevada, the Arizona subspecies is a locally rare and declining summer resident along the Colorado, Virgin, and Muddy rivers, as well as at isolated springs.

BENDIRE'S THRASHER

Toxostoma bendirei

Evaluation Species

Family Mimidae (Mockingbird Family)



Description: Drab desert thrasher with long tail, 25 cm (9.7 in.) long. Plumage olive brown above, smoke gray below with faint but distinct streaked, triangular spots pointed upwards on breast and flanks. Eyes clear yellow, without orange tint as in curve-billed thrashers. Bill shorter than other thrasher species, lower mandible almost straight. Often cocks tail wren-like over back when running on ground. Nesting season from February to August; clutch size 3 - 4 eggs; incubation and fledging time unknown.

Diet: Believed to feed on beetles, caterpillars, and other insects while foraging on the ground.

Habitat: In brushy desert habitat, especially where open ground meets tall bushes and cholla cactus (*Opuntia* sp.). May inhabit elevations up to 1,980 m (6,500 ft). Nests generally built high above ground in cacti, desert thorn (*Lycium* sp.), mesquite (*Prosopis* sp.), and catclaw (*Acacia greggii*).

Range: Deserts of the Southwest. Known from southern Nevada, California, Arizona, and Mexico.

BLUE GROSBEAK

Passerina caerulea

Covered Species

Family Emberizidae (Finch Family)



Monte Taylor

Description: The blue grosbeak is a large finch-like bird, 15 - 19 cm (6 - 7.5 in.) long. Male birds are almost entirely a deep, rich blue color with two rusty or tan wingbars, and with a thick conical bill. Females are warm brown in color with two tan wingbars, and occasionally blue feathers on its upperparts. Nesting season from May to August; clutch size 2 - 5 eggs; incubation 11 days; chicks fledge 13 days after hatching.

Diet: Opportunistic feeders; diet consists of insects (grasshoppers, cicadas, beetles) but also snails, grass seeds, and fruit. Blue grosbeaks tend to forage in openings adjacent to their habitat.

Habitat: Primarily found in riparian habitats, in thickets of willow (*Salix* sp.), young cottonwood (*Populus* sp.), arrow weed (*Pluchea sericea*), mesquite (*Prosopis* sp.), and salt cedar (*Tamarix* sp.); also along watercourses, grasslands, and croplands.

Range: Southern United States and into Mexico. In Clark County, Nevada, this species is found along the Virgin River, Muddy River, and Colorado River system, and the Las Vegas Wash. Nest in Southern Nevada.

Comments: Until recently this species was known as *Guiraca caerulea*.

CRISSAL THRASHER

Toxostoma crissale

Evaluation Species

Family Mimidae (Mockingbird Family)



Herbert Clarke/Cornell Lab of Ornithology

Description: The Crissal thrasher is large and slender, 29 cm (11.5 in.) long. Plumage olive brown above, smoke gray below, with distinctive reddish undertail patch and dark whisker streak; eyes straw colored, and bill greatly decurved. Nesting season from February to July; clutch size 2 - 4 eggs; incubation 14 days; chicks fledge 11 - 12 days after hatching. Distinguished from curve-billed thrashers by its unspotted breast and reddish undertail patch.

Diet: Berries, insects, and small lizards.

Habitat: Dense brush along desert streams and mesquite thickets, willow (*Salix*), saltbush (*Atriplex*), and chaparral of mountains up to 1,800 m (6,000 ft). Secretive, hides in underbrush. Nests in branches of willow close to trunk and in mesquite.

Range: Southeast California to southern Nevada, Utah, south to Texas and Mexico. Year-round resident in Clark County, Nevada.

Comments: Formerly known as *Toxostoma dorsale*.

GRAY VIREO

Vireo vicinior

Evaluation Species

Family Viroendae (Vireo Family)



Rick & Nora Bowers/Vireo

Description: The gray vireo is about 14 cm (5.5 in.) long. Plumage plain, with gray back and white below; has narrow white eye-ring, dull white lores, long tail, and only one faint wingbar (not two as in other vireos). This species is the only vireo that flicks its tail as it forages in undergrowth. Nesting season from April to June; clutch size 3 - 5 eggs; incubation and fledging time unknown. Gray vireo nests are parasitized by brown-headed cowbird (*Molothrus ater*).

Diet: Gray vireos feed mostly on insects.

Habitat: In dry brush of arid mountains and mesas, chaparral, pinyon-juniper, sagebrush, and mesquite communities, usually hidden in shrubs. Nests hang from twigs or forks of tree or brush.

Range: Southwestern United States to central Mexico. Summer resident and breeding in Clark County, Nevada.

LE CONTE'S THRASHER

Toxostoma lecontei

Evaluation Species

Family Mimidae (Mockingbird Family)

Monte Taylor



Description: The Le Conte's thrasher is a slim dull-colored bird, 28 cm (11 in.) long. It has the palest plumage of all the curve-billed thrashers. Upperparts light gray-brown except tail portion dusky or black; underparts very light gray to white, underside of tail yellowish buff; bill slender black and downcurved; eyes brown. Nesting season from February to June; clutch size 2 - 4 eggs; incubation and fledging time unknown.

Diet: Unknown, thought to feed on insects (arthropods).

Habitat: In dense growth of saltbush (*Atriplex* sp.), often in lowest and most barren desert plains. Runs across open desert or in sandy washes. Nests in densest thicket of cholla cactus (*Opuntia* sp.), also in saltbush, and other dense shrubs depending on the location.

Range: In desert plains of the Southwest, uncommon over most of its range. Occurs in California, Nevada, and Arizona. In Clark County, Nevada, this species is a year-round resident in suitable habitat.

LOGGERHEAD SHRIKE

Lanius ludovicianus

Evaluation Species

Family Laniidae (Shrike Family)



Description: The loggerhead shrike is 23 cm (9 in.) long. Head and back bluish gray, underparts white and very faintly barred (striped). Broad black mask extends above eye and thinly across top of the all-dark bill. Wings black with white patch; tail slim, black, with white outer tail feathers. Nesting season from March to June; clutch size 4 - 7 eggs; incubation 10 - 12 days; chicks fledge about 20 days after hatching. Loggerhead shrike is slightly smaller and darker in color than northern shrike (*Lanius excubitor*), which is a rare winter visitor in Southern Nevada.

Diet: Variety of foods depending on availability, from mice to birds and insects.

Habitat: Open country, washes, thinly wooded or shrubby lands, pastures, thickets, hedges, and barbed-wire fences along roads.

Range: Southern Canada to southern Mexico. Year-round resident in Clark County, Nevada.

PHAINOPEPLA

Phainopepla nitens

Covered Species

Family Ptilonotidae (Silky Flycatcher Family)



Monnie Taylor (male)

Description: The phainopepla is the only member of the silky flycatcher family in North America; its size is 18 - 19 cm (7 - 7.75 in.) long. The male is a glossy black color with bright white wing patches, long tail, prominent crest on the head, and red irises. The female is gray in color with off-white wing patches. Nesting season from February to July; clutch size 2, sometimes 3; incubation 14 days; chicks fledge 18 - 20 days after hatching.

Diet: Feeds primarily on fruit (frugivorous), specifically desert mistletoe (*Phoradendron californicum*) that parasitizes members of the legume family. During the breeding season, Phainopepla also feeds on insects such as grasshoppers, flies, and beetles.

Habitat: This species is highly dependent on mistletoe-infected mesquite and catclaw associations. Found in major riparian areas with mesquite (*Prosopis* sp.) and catclaw (*Acacia greggii*). Also in pinyon-juniper habitat infected with mistletoe. Populations have declined in the Las Vegas Valley with the loss of mesquite woodlands due to urbanization.

Range: Southwestern desert endemic. In Clark County, Nevada, known to occur in the Spring Mountains (Trout Canyon, Pine Creek), Lake Mead National Recreation Area, the Las Vegas Valley, and Meadow Valley Wash. Breeds in washes throughout Piute and Eldorado valleys in extreme southern Clark County, Nevada.

SOUTHWESTERN WILLOW FLYCATCHER

Empidonax traillii extimus

Covered Species

Family Tyrannidae (Tyrant Family)



Mike Hopick/Cornell Lab of Ornithology

Description: The southwestern willow flycatcher is a small neotropical migrant, about 15 cm (5.9 in.) in length. It is one of four subspecies of willow flycatchers, which are difficult to distinguish in the field. Colors of this species are grayish-green on the back and wings, whitish throat, light gray-olive breast, and pale yellowish belly. Two wingbars are visible; eye-ring faint or absent. Upper mandible dark, lower mandible light. Nesting season from May to July; clutch size 3 - 4 eggs; incubation 12 days; chicks fledge 13 days after hatching.

Diet: Insectivore; forages within and occasionally above dense riparian vegetation, taking insects on the wing or from leaves.

Habitat: Restricted to desert riparian habitats along rivers, streams, or wetlands. This species prefers areas with large willow (*Salix*), cottonwood (*Populus*), and *Baccharis*, but will use salt cedar (*Tamarix*) and arrow weed (*Pluchea sericea*). Breeds in thickets of trees and shrubs 4 - 7 m (to 23 ft.) tall with high percentage of canopy cover and dense foliage, near or adjacent to surface water.

Range: Southern Nevada, and other southwestern states. In Clark County, Nevada, known to occur in the Virgin River and Muddy River areas. Other riverine areas with potential habitat include Meadow Valley Wash, Las Vegas Wash, and the Colorado River mainstem.

Special Remarks: Federally listed as Endangered on February 27, 1995.

SUMMER TANAGER

Piranga rubra

Family Thraupidae (Tanager Family)

Covered Species



Bonnie Rannald

Description: Summer tanagers are large neotropical migratory songbirds 20 cm (7.75 in.) long. Adult male birds have red to red-orange plumage; female plumage is brownish to orange-yellow. Nesting season from May to August; clutch size 3 - 4 eggs; incubation about 12 days; chicks fledge 8 - 10 days after hatching. Nests are known to be susceptible to parasitism by brown-headed cowbirds (*Molothrus ater*).

Diet: Noted for its consumption of bees and wasps, but also eats a variety of other insects and fruit.

Habitat: Found in desert riparian habitat, particularly mature riparian habitat favoring cottonwood-willow associations along streams and springs.

Range: Known to occur throughout the southwestern deserts into Mexico. In Clark County, Nevada, this species is an uncommon summer resident at the edge of its range. Observed at Pine Creek (Red Rock Canyon National Conservation Area), Corn Creek Spring, Las Vegas Wash, and Wheeler Camp Spring near Blue Diamond. Also in Moapa Valley (Warm Springs area), and Meadow Valley Wash.

VERMILION FLYCATCHER

Pyrocephalus rubinus

Family Tyrannidae (Tyrant Family)

Covered Species



Description: A smaller flycatcher, about 15 cm (6 in.) long. Plumage of male birds dark dusky to black on upperparts and tail, and brilliant vermilion on underparts and crown. Females dusky on upperparts, white on breasts with dusky streaks, belly and undertail coverts salmon or pink. Nesting season from March or April through July; clutch size 2 - 4 eggs, usually three; incubation 14 - 15 days; chicks fledge 14 - 16 days after hatching. Fall migration begins in September; some birds overwinter in the Moapa Valley and Las Vegas Valley. Nest parasitism is thought to be rare throughout its range, but has commonly been observed at sites in southern Nevada (Longshore 2000, personal communication).

Diet: Vermilion flycatchers are insectivorous birds, darting out from a perch to snap up flying insects and bees, often near a water source.

Habitat: Desert riparian habitat consisting of cottonwood (*Populus* sp.), willows (*Salix* sp.), and other trees. May also be found in mesquite and catclaw habitats adjacent to irrigated fields, ditches, and pastures. Winter resident in desert scrub, summer resident in riparian areas.

Range: Southwestern deserts into Mexico. Breeds from southern California, southern Nevada, central Arizona, and central New Mexico south to South America. In Clark County, Nevada, known to occur along the Colorado River, Virgin River, Muddy River, and desert oases.

WESTERN BLUEBIRD

Sialia mexicana

Family Muscicapidae (Thrushes Family)

Evaluation Species



Description: Western bluebirds are 18 cm (7 in.) long. Upperparts and throat of males deep purple-blue; breast, sides, and flanks chestnut; belly and undertail coverts grayish. Females duller, brownish-gray above, breast and flanks tinged with chestnut brown, throat pale gray. Often darts into air from high perch to catch insects in flight or flutters from low perch. Nesting season from April to May; clutch size 3 - 8 eggs (common 4 - 6 eggs); incubation and fledging time unknown.

Diet: Mostly insects, ants, spiders, earthworms, snails, and mistletoe berries.

Habitat: In open woodlands and farmlands, in desert areas found in mesquite-mistletoe associations. Nests in natural cavity of trees and posts, in abandoned nests from woodpeckers, and also in nest boxes. Commonly observed in lower elevations during the winter, but probably breeds at higher elevations in summer.

Range: Known from Canada to Baja California. While not widely distributed, this species is a year-round resident in suitable habitat in Clark County, Nevada.

WESTERN BURROWING OWL

Athene cunicularia hypugea

Family Strigidae (Owl Family)

Evaluation Species



Aaron Ambos

Description: Small brown ground-dwelling owl, 23 - 28 cm (9 - 11 in.) long. Legs long, tail short and stubby, and chin with white stripe. Often seen in daytime standing next to burrow or perching on fence posts. Bobs up and down when agitated. Nesting season from March to July; clutch size 7 - 9 eggs; incubation 28 days; fledging time unknown.

Diet: Feeds mostly on insects and rodents, occasionally small birds and reptiles; hunts mostly in early evening.

Habitat: Yearlong resident in open, dry Mojave desert scrub, sagebrush, and open areas in pinyon-juniper and mixed conifer communities. Nesting often in colonies in abandoned burrows, which owls enlarge and modify. Also found in urbanized areas, but sightings have decreased in recent years. Many owls from northern areas winter in the Mojave Desert areas of Southern Nevada.

Range: Occurs throughout the State of Nevada, western and Midwestern United States, Central America, and South America.

Comments: Older texts use *Speotyto cunicularia hypugaea*.

YELLOW-BILLED CUCKOO

Coccyzus americanus

Covered Species

Family Cuculidae (Cuckoo Family)



J. Schumacher/Vireo

Description: The yellow-billed cuckoo is a neotropical migratory bird, 28 - 32 cm (11 - 12.5 in.) long. Tail slender and long; upperparts grayish brown, glossed with olive; underparts dull, white, shaded with pale bluish gray or buff; wing patches large and rufous; lower mandible yellow with a black tip. Six large white spots mark the underside of the long graduated tail. Females slightly larger than males, but essentially look the same. Nesting season from June to August; clutch size 1 - 5 eggs; incubation 9 - 11 days; chicks fledge 7 - 9 days after hatching.

Diet: Feeds on large insects such as grasshoppers, caterpillars, crickets, cicadas.

Habitat: Associated with desert riparian habitats in mature cottonwood/willow associations close to moving water courses. Inhabits densely foliated, deciduous riparian thickets and shrubs containing willow (*Salix*), but also mesquite (*Prosopis*).

Range: Occurs throughout much of the United States. In Clark County, Nevada, may be found along the Virgin, Muddy, and Colorado rivers, and in the Las Vegas Wash.

WATCH LIST SPECIES

Green heron	<i>Butorides viriscens</i>
Western least bittern	<i>Ixobrychus exilis hesperis</i>
White-faced ibis	<i>Plegadis chihi</i>
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>
Northern goshawk	<i>Accipiter gentilis</i>
Ferruginous hawk	<i>Buteo regalis</i>
Golden eagle	<i>Aquila chrysaetos</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Flammulated owl	<i>Otus flammeolus</i>
Northern saw-whet owl	<i>Aegolius acadicus</i>
Northern pygmy owl	<i>Glaucidium gnoma</i>
Western screech owl	<i>Megascops kennicottii</i>
Cactus wren	<i>Campylorhynchus brunneicapillus</i>
Canyon wren	<i>Catherpes mexicanus</i>
Scott's oriole	<i>Icterus parisorum</i>



Reptiles/Amphibians

DESERT TORTOISE

Gopherus agassizii

Covered Species

Tortoise Family



Bob Furek

Description: Terrestrial turtle with a moderately domed, tan to dark-brown shell that can exceed 35 cm (14 in.) in length. Hind legs and feet are elephant-like, front legs are flattened and covered with thick overlapping scales. It is the only living tortoise native to Nevada. Tortoises are solitary, but may share a large natural cavity for protection. It spends most of its life in burrows that it constructs to prevent overheating or freezing, and reduce moisture loss from skin and lungs. Tortoises hibernate from about October to March or April. An average of 4 - 6 eggs are laid per clutch between early May and mid July. Hatching occurs in late summer or early fall. Only 1 to 2 percent of hatchlings may survive to reproductive age (18 - 20 years old). Tortoises may live more than 50 years.

Diet: Annual wild flowers and grasses that germinate when there is sufficient winter rain. Also eat new growth of cactus, cactus flowers, parts of some shrubs, and perennial grasses. Water derived from plants and from the occasional rain puddle can pass through the bladder wall into the bloodstream and thus be used as needed. Tortoises may expel this water if disturbed or lifted and thus lose their safeguard against dehydration and death.

Habitat: Mojave desert scrub with creosote and bursage, and in blackbrush. Found on alluvial fans, bajadas, washes, and rocky hills up to 1,400 m (4,500 ft).

Range: Mojave Desert of southeastern California, southern Nevada, southwestern Utah, and northwestern Arizona; also in the Sonoran Desert and its subdivisions south of the Grand Canyon, and in western Mexico.

Special Remarks: The Mojave Desert populations west and north of the Colorado River are federally listed as Threatened, and are a State of Nevada protected species. Tortoises may not be disturbed, injured, or taken from the wild without a special permit from the U.S. Fish and Wildlife Service. Tortoises can be obtained as pets from the proper authorities.

BANDED GECKO

Coleonyx variegatus

Gecko Family

Covered Species



D. Bradford Hardenbrook

Description: Geckos are recognized by their soft, pliable skin, fine scales, large eyes, and vertical pupils. A medium-sized (total length: 8 - 13 cm [3 - 5 in.]) lizard with protruding eyes, elliptical pupils, and movable eyelids. Dorsal coloration is cream or pinkish with brown cross bands; skin on the ventral surface is translucent, some internal organs may be visible, scales are uniformly granular and smooth. Toes are slender without toe pads as seen in other species of gecko. The tail is banded, sometimes swollen, and breaks easily. Primarily nocturnal. May vocalize by squeaking when caught. This is the only gecko native to Nevada. An introduced species, the Mediterranean gecko (*Hemidactylus turcicus*), is common around homes and yards in the Las Vegas Valley and can be recognized by the presence of white tubercles (warts) on the dorsum.

Diet: Feeds at night on arthropods, mainly insects and spiders.

Habitat: Mojave desert scrub, and mesquite/catclaw habitats. Less common in pinyon-juniper, sagebrush, blackbrush, and desert riparian habitats. Rocks, crevices, yucca stumps, litter, and rubbish piles provide shelter. Elevation: up to 1,500 m (5,000 ft.).

Range: Found throughout the southwestern deserts from southern Nevada southward to western Mexico. Two subspecies occur in Clark County: the Desert banded gecko (*Coleonyx variegatus variegatus*) illustrated above, which occurs in western and southern Clark County, while the Utah banded gecko (*Coleonyx variegatus utahensis*) occurs in northeastern Clark County. In the Desert banded gecko, the dark bands are equal to or narrower than the interspaces, while in the Utah banded gecko, the dark bands are wider than the interspaces.

BANDED GILA MONSTER

Heloderma suspectum cinctum
Beaded Lizard Family

Evaluation Species



D. Bradford Hardenbrook

Description: A large (total length: 45 - 60 cm [18 - 24 in.]), heavy-bodied lizard with black, orange, pink, and yellow spots with 5 chain-like cross bands occurring on the dorsum from the neck to tail base. Scales on the dorsum are large, round, and bead-like. The tail is short, sausage-shaped, and banded. The tongue is black and forked, and is flicked in and out to taste the air as do snakes. These lizards move on short legs with an awkward, lumbering gait. While chuckwallas are sometimes confused with Gila monsters, no other lizard in our area has black and orange/pink bead-like scales. Mating occurs during the summer and 3 - 5 eggs are laid in the fall and winter. The tail serves as a fat-storage organ. Can eat up to 30 to 50 percent of its body weight in a single meal.

Diet: Eggs of birds and tortoises; also small mammals and lizards.

Habitat: Mojave desert scrub, mesquite/catclaw, blackbrush, oak, juniper, and desert riparian habitats. Found on the lower slopes of rocky canyons, mesic flats, washes, and flats with grassland or succulents. Uses rocks and burrows of other animals for cover.

Range: Occurs in the Mojave, Colorado, and Sonoran deserts. This subspecies occurs in the northern portion of the species range and in western Arizona. While it may be widespread in Clark County, Nevada, few observation records exist to document distribution and abundance.

Comments: This is the only venomous lizard in Nevada. Although appearing slow and awkward, this species can bite quickly and inflict a painful bite. They secrete venom via grooved teeth into their saliva, and then use their powerful jaws to grind the saliva into the bite.

Special Remarks: The Gila monster is a State of Nevada protected species.

DESERT IGUANA

Dipsosaurus dorsalis
Iguana Family

Covered Species



D. Bradford Hardenbrook

Description: A large (total length: 30 - 40 cm [12 - 16 in.]), pale, round-bodied lizard with a long tail and a relatively small head. The overall body color is light: cream colored with a brownish net-like pattern and gray or whitish spots on the head and neck. In addition to the overall coloration, a line of slightly enlarged scales in the midline of the back runs the length of the body. This species can be recognized from other species of large lizards in southern Nevada by the light coloration (other species would be dark colored or would have dark markings) and the enlarged mid-dorsal scales. Tolerant of hot weather, these lizards can remain active above ground well after other species have sought cooler temperatures underground.

Diet: Primarily eats creosote bush flowers, sand verbena flowers, other shrub flowers, and fruit. Also eats carrion and insects.

Habitat: Mojave desert scrub, mesquite, and salt desert scrub habitats; in rocky stream beds, bajadas, sandy hummocks, and gravelly hills below 1,525 m (5,000 ft) elevation.

Range: Southwestern deserts from southern Nevada southward into western Mexico. In Clark County, Nevada, the range of this species is similar to that of its principal food and habitat.

Comment: Desert iguanas, western chuckwallas, and desert tortoises are the only herbivorous reptiles native to Nevada.

DESERT NIGHT LIZARD

Xantusia vigilis
Night Lizard Family

Evaluation Species



Phil Medica

Description: A small (total length: 10 - 13 cm [4 - 5 in.]), slim lizard with vertical pupils but no eyelids. The body color is light olive, yellow, brown, or orange, usually with small dark spots on the back that tend to form lines. The skin is soft. The head scales are large and symmetrical, the dorsal scales are small and granular, and the ventral scales large, square, and smooth. In southern Nevada, this species can be recognized by the small size, lidless eyes, and vertical pupils. Offspring are born alive during September and October. These lizards are often thought to be nocturnal; but they are diurnally active under cover and primarily active during crepuscular hours although they may be nocturnal during the heat of summer.

Diet: Feeds on termites, ants, beetles, scorpions, centipedes, and flies.

Habitat: Mojave desert scrub, mesquite/catclaw and blackbrush habitats; also pinyon-juniper and sagebrush habitats. Associated with Joshua tree, yucca, pinyon pine, and juniper. Secretive and dependent upon cover, this species primarily lives beneath and among fallen leaves and branches of yucca, agave, Joshua trees, and other debris.

Range: This species is widely distributed throughout the Mojave and Colorado deserts in southern California, southern Nevada, southwestern Utah, and southward into Baja California and northwestern Mexico. It is widely distributed throughout Clark County, Nevada, in the appropriate habitat.

GREAT BASIN COLLARED LIZARD

Crotaphytus insularis bicinctores
Collared and Leopard Lizard Family

Covered Species



D. Bradford Hardenbrook

Description: A moderately large (total length: 23 - 28 cm [9 - 11 in.]) lizard with a stocky body and a relatively large head. The body color is dark with contrasting light spots and bars, while the color of the tail and limbs is light with contrasting dark spots. This species can be recognized from other species of large lizards by the presence of a white or yellow neckband, bordered by black, that forms a distinct collar. The background color varies, and it can be green during the breeding season in the spring. Some other species of lizards in southern Nevada (e.g., the desert spiny lizard, *Sceloporus magister*) have dark marks on the neck, but none of these other species have the complete neck band seen in the collared lizard.

Diet: These lizards are voracious predators that can run on their hind legs to capture prey or escape other predators. They feed on insects, lizards, small rodents, berries, and leaves.

Habitat: Found in Mojave desert scrub, salt desert scrub, mesquite/catclaw, desert riparian, blackbrush, sagebrush, and pinyon-juniper habitats in rocky terrain, arroyos, hill slopes, and washes with sparse vegetative cover up to an elevation of 2,300 m (7,500 ft).

Range: The species occurs throughout the Mojave, Great Basin, and other southwestern deserts southward to California, Baja California, and northwestern Mexico.

Comments: The taxonomy of this species is in flux, and some texts refer to this species as *Crotaphytus bicinctores*, the Mojave black collared lizard.

LARGE-SPOTTED LEOPARD LIZARD

Gambelia wislizenii wislizenii

Covered Species

Collared and Leopard Lizard Family



D. Bradford Hardenbrook

Description: A moderately large (total length: 30 - 40 cm [12 - 15 in.]) lizard with a large head, and long tapered tail. The dorsal coloration is cream or tan with large, dark, gray-brown blotches (leopard spots), and the chin has rows of gray stripes. Females are generally larger than males. During the breeding season, females develop orange-red spots and bars on the body and tail. These lizards are fast and can run on their hind legs to capture prey or escape predators.

Diet: Omnivorous. Feeds on lizards, rodents, crickets, grasshoppers, other insects, and plants (e.g., *Lycium* berries, small leaves, and flowers).

Habitat: Primarily Mojave desert scrub and salt desert scrub; also found in blackbrush, sagebrush, and pinyon-juniper habitats. Found on hardpan, gravelly, or sandy open ground below 1,800 m (6,000 ft) elevation where vegetation is sparse or in small clumps.

Range: As a species, the long-nosed leopard lizard (*G. wislizenii*) is widely distributed throughout the southwestern U.S. from Oregon to Texas and south into Mexico. Our subspecies occurs throughout most of this geographic range except for the Central Valley of California where the endangered blunt-nosed leopard lizard (*G. silus*) occurs, and where the small-spotted leopard lizard (*G. w. punctatus*) occurs in southeastern Utah, north-northeastern Arizona, and the northwestern corner of New Mexico.

SOUTHERN DESERT HORNED LIZARD

Phrynosoma platyrhinos calidiarum
Horned Lizard Family

Evaluation Species



Ross Haley

Description: A small (total length: 5 - 10 cm [2 - 4 in.]) flattened lizard with spikes on the back of the head, sharp-pointed scales on the dorsum, and a fringe of pointed scales on the sides of the body. The dorsal coloration generally is a pattern and color that resembles the background, and can range from cream to tan with black, orange, and yellow chevron-like markings. The ventral coloration is cream. This is the only species of horned lizard in Clark County, Nevada.

Diet: Primarily eats ants, especially harvester ants; will also eat insects, spiders, and fruits.

Habitat: Most low-desert habitats, especially Mojave desert scrub. Typically found among woody shrubs, cacti, and yucca on sandy flats, alluvial fans, washes, and dunes below an elevation of 2,000 m (6,500 ft). Also found in mesquite/catclaw, salt desert scrub, blackbrush, sagebrush, and pinyon-juniper habitats.

Range: The species occurs from eastern Oregon and southern Idaho southward throughout the deserts into northwestern Mexico. This subspecies occurs from southern Nevada southward.

Comments: Often called "horny toads," these lizards are favored as pets. However, they often do not survive in captivity because of difficulties in adequately providing their specialized diet of ants.

SOUTHERN PLATEAU LIZARD

Sceloporus undulatus tristichus

Evaluation Species

Horned Lizard Family



Description: Small (total length: 8 - 15 cm [3 - 6 in.]) gray or brown lizards with rough scales, light longitudinal stripes, and a blue belly. This is one of several species of blue-belly lizards in southern Nevada. Males have a longitudinal patch of blue on each side of the belly and a small blue patch on each side of the throat. Females may be marked like males or they may lack the blue. Other species of lizards in southern Nevada (e.g., the Desert spiny lizard, *Sceloporus magister*) also have blue bellies and blue throat patches, but in this species, the blue on the throat forms two small, distinct patches rather than one large patch.

Diet: Feeds on insects and arthropods.

Habitat: Occurs in a variety of habitats, including pinyon-juniper woodlands and rocky hillsides to an elevation of 3,000 m (10,000 ft). Often seen along fences or on fence posts.

Range: The species occurs throughout the eastern and central U.S. from Pennsylvania and South Dakota southward into Mexico. This subspecies occurs south of the Colorado River in Arizona and New Mexico. In Clark County, Nevada, it occurs in the Virgin Mountains.

Comments: Also called the eastern fence lizard or simply the blue-bellies.

WESTERN CHUCKWALLA

Sauromalus obesus obesus

Iguana Family

Evaluation Species



D. Bradford Handenbrook

Description: A large (total length: 40 - 55 cm [16 - 22 in.]), heavy-bodied lizard with loose folds of skin around the head and neck. In males, the body color generally is blackish with rust or reddish while the tail is unmarked and light-colored. Females and young adults are blackish with light cross bands on the body and tail. Hatchlings and juveniles often have a brightly colored tail of alternating black and orange cross bands. Chuckwallas often are misidentified as Gila monsters. These two species can be separated by the presence of large black and orange scales on the Gila monster. To escape predators, chuckwallas will enter a rock crevice, gulp air, inflate its body, and wedge itself into the crack. They also use their stout tail to slap an approaching predator.

Diet: Primarily eats green leaves, flowers, fruit, and selected shrubs. Young may eat insects and insect larvae.

Habitat: Mojave desert scrub, blackbrush, salt desert scrub, and mesquite/catclaw habitats. Typically found on rocky flats, rocky slopes, and boulder outcrops. Requires shady, well-drained soil for nests.

Range: The species occurs throughout the southwestern deserts: southern Nevada, southern Utah, and northwestern Mexico. This subspecies occurs in southeastern California, southern Nevada, southeastern Utah, and western Arizona. In Clark County, Nevada, this species occurs on virtually all undisturbed rocky hillsides up to about 1,500 m (4,920 ft) in elevation.

Comments: Chuckwallas were historically used as food by local native peoples.

Special Remarks: Previously a candidate for protection under the Endangered Species Act. Was proposed as Covered Species but then changed to Evaluation Species in the Clark County permit.

WESTERN RED-TAILED SKINK

Eumeces gilberti rubricaudatus

Covered Species

Skink Family



Description: Skinks are recognized by a cylindrical body shape with smooth, shiny, round scales, and relatively short legs. Scales on the body are fairly uniform in size, but those on the head are large and variable in size and shape. This species is medium-sized (total length: 15 - 23 cm [6 - 9 in.]). Adult coloration is brownish overall with varied amounts of dark spotting, but virtually no stripes. Young skinks are dark with light longitudinal stripes and a tail that is pink or blue. As the animal matures, the tail becomes reddish, as does the underside of the jaw and neck. Another skink, the Western skink (*Eumeces skiltonianus*), also occurs in southern Nevada. The Western skink is smaller and resembles an immature Western red-tailed skink, except that the Western skink has dark lateral stripes that extend far onto the tail while those of the Western red-tailed skink end at the base of the tail. The tail color in the Western skink is always blue.

Diet: Primarily insects and spiders, including beetles and grasshoppers. When close to springs, probably eats aquatic invertebrates.

Habitat: Primarily pinyon-juniper and riparian habitats. Less common in mixed conifer, sagebrush, blackbrush and mesquite/catclaw habitats. Found in rocky areas or in areas with logs or leaf cover near permanent or intermittent streams.

Range: The species (Gilbert skink) occurs in isolated populations in southern Nevada, southern and central California, central Arizona, and northern Baja California. This subspecies, Western red-tailed skink, occurs in two isolated populations: the first is located in mountain ranges in southwestern Nevada and southeastern California, and the second occurs in central and southern California. In Clark County, Nevada, known from the Spring, Sheep, and Newberry mountains.

CALIFORNIA [COMMON] KINGSSNAKE

Lampropeltis getulus californiae
Colubrid Family

Covered Species



Bob McKeever

Description: A moderately large (total length: 60 - 150 cm [2 - 5 ft]) snake with a striking pattern of black and white bands that may be brown and yellowish and encircle the body. The scales are smooth and shiny. This is the only black-and-white banded snake in southern Nevada; other species of banded snakes also have red bands or the bands do not encircle the entire body. This species is usually active in the morning and evening, but will assume a nocturnal habit during the heat of summer.

Diet: Feeds on other snakes including rattlesnakes, lizards, small mammals, birds, bird eggs, and frogs. Prey killed by constriction.

Habitat: Wide ranging, most commonly found in Mojave desert scrub and salt desert scrub habitats in the vicinity of rock outcrops or clumps of vegetation up to 2,100 m (7,000 ft) in elevation.

Range: The species occurs throughout the southern and western U.S. This subspecies occurs in southern Nevada, southwestern Utah, northwestern Arizona, most of California, northern Baja California, and northwestern Mexico.

GLOSSY SNAKE

Arizona elegans

Colubrid Family

Covered Species



Description: A medium-sized (total length: 50 - 90 cm [20 - 36 in.]), light cream- to tan-colored snake with small blotches (tan or gray with dark edges) down the center of the dorsum. The head is narrow. The ventral surface is plain white or buff and unmarked. The scales are smooth and shiny, but the colors generally have the appearance of being faded. This species resembles a slender, faded gopher snake (*Pituophis melanoleucus*), but the scales of the gopher snake are keeled (i.e., not smooth). Glossy snakes are primarily nocturnal.

Diet: Feeds on small mammals, lizards, and possibly birds, all of which are killed by constriction prior to eating.

Habitat: Mojave desert scrub and salt desert scrub habitats with open sandy surfaces, scattered brush, and rocky areas, extending into Joshua tree and grassland habitats up to about 1,500 m (5,000 ft) in elevation.

Range: Southwestern U.S. from California to Texas, and from Nebraska to Mexico. The subspecies present in Clark County, Nevada, is the Desert glossy snake (*Arizona elegans eburnata*). It occurs in southern Nevada and southeastern California.

Comments: Also known as the "Faded Snake" due to its faded appearance.

MOJAVE GREEN RATTLESNAKE

Crotalus scutulatus scutulatus
Pit Viper Family

Covered Species



D. Bradford Hardenbrook

Description: A medium-sized (total length: 120 cm [4 ft]) rattlesnake with a wide, triangular-shaped head. The body's base color is greenish or olive-green with well-defined, darker diamonds offset by yellowish edges sequentially arranged down the center of the dorsum. The tail is banded with alternating black and white rings, the white rings nearly twice the width of the black rings. A dark stripe, also edged in light yellow, runs backward and down diagonally from the rear of the eye to the rear of the jaw-line. Other species of rattlesnake lack the overall greenish cast or have less distinct markings, but definite identification, particularly in juveniles, may require inspection of the shape, arrangement and number of head scales (not recommended except by an expert).

Diet: Feeds on rodents, snakes, lizards, birds, and eggs.

Habitat: Mojave desert scrub and blackbrush habitats and up to lower mountain slopes; mostly on flats, broad valleys, and rolling hills.

Range: The species occurs from southeastern California to southwestern Texas, south through Mexico. This subspecies is the one that occurs in the U.S., and it probably is widespread in Clark County, Nevada, in the appropriate habitat.

Comments: Also called the Mohave rattlesnake or green rattlesnake. Venomous; the venom is highly toxic and could become a serious health risk.

REGAL RINGNECK SNAKE

Diadophis punctatus regalis

Evaluation Species

Colubrid Family



D. Bradford Hardenbrook

Description: A small (total length: 20 - 60 cm [8 - 24 in.]), slender snake with a dorsal color that generally is slate-gray or gray-blue. The ventral surface is entirely red or red-orange with black spots, and the ventral surface of the tail is bright red-orange. The head is darker than the body, and usually it is set off from the body by a conspicuous yellow or orange neck ring. However, in the Regal subspecies the ring is often faint or absent. Similar appearing black-headed snakes may have light-colored neck rings, but these rings are not red, and the ventral surface of these other species is not entirely red with black spots. When alarmed, these snakes will coil and shake their tail while displaying the red ventral surface.

Diet: Feeds on earthworms, slugs, frogs, and lizards. Mildly venomous to its small prey.

Habitat: Usually found in moist areas. In the arid West, this species occurs in mountains near permanent water or in riparian areas from 730 m (2,400 ft) elevation up to the aspen-fir belt (about 2,700 m [9,000 ft]).

Range: Widely distributed throughout much of the U.S. except the upper Midwest. This subspecies occurs in eastern Nevada and western Arizona in isolated mountain ranges.

Comments: While mildly venomous to its small prey, this species is harmless to humans.

SIDEWINDER

Crotalus cerastes
Pit Viper Family

Covered Species



Description: A small (total length: 45 - 75 cm [18 - 30 in.]) rattlesnake with a wide, triangular-shaped head. This is the only rattlesnake with horn-like projections over its eyes; these are really enlarged, erect scales. The body color harmonizes with that of the background substrate, but is usually light cream or tan with darker tan to brown blotches on the dorsum. A blackish stripe angling back and downward from the eye to the rear of the jaw is noticeable. Sidewinders move in signature sideways motion, often leaving J-shaped or S-shaped lines in soft sand. Although difficult to see, this species sometimes can be found coiled and partially buried in the sand.

Diet: Feeds on small mammals and lizards which are subdued with its venomous bite.

Habitat: Mojave desert scrub, mesquite/catclaw, and salt desert scrub habitats in stream beds, bajadas, hardpan, and barren dune areas below 1,675 m (5,500 ft) in elevation.

Range: This species occurs in southeastern California, southern Nevada, southwestern Utah, western Arizona, and southward into northwestern Mexico. The subspecies in Nevada is the Mojave Desert sidewinder (*Crotalus cerastes cerastes*); other subspecies occur in the Colorado and Sonoran deserts.

Comments: Venomous; an unavoids encounter may become a serious health risk.

SONORAN LYRE SNAKE

Trimorphodon biscutatus lambda

Covered Species

Colubrid Family



Phil Medina

Description: A medium-sized (total length: 45 - 70 cm [18 - 28 in.]) snake with a wide head, narrow neck, and cat-like (vertical) pupils. The body color is gray or tan, and there are brown, saddle-shaped markings on the dorsum. A V-shaped patch is present on the head that resembles a lyre. Other similarly marked species lack the lyre mark and have round pupils. This species is secretive. It is a good climber and can climb rocks and trees. It is venomous, and has fangs that are located in the upper jaw at the back of the mouth (a rear-fanged species). The venom is capable of immobilizing its small prey.

Diet: Feeds on lizards, small mammals, birds, bats, and other species that inhabit rocky habitats and cliffs.

Habitat: Rocky canyons and hillsides in Mojave desert scrub, pinyon-juniper, and mixed conifer habitat in lowlands, mesas, and lower mountain slopes up to 2,250 m (7,400 ft) in elevation.

Range: The species occurs across the southwestern desert from California to Texas, and southward into northern Mexico. This subspecies occurs in southeastern California, southern Nevada, southwestern Utah, western and southern Arizona, and northern Mexico. Although infrequently observed in Clark County, Nevada, lyre snakes are probably widespread in the appropriate habitat.

Comments: Venomous. Venom effect on humans is not well documented.

SONORAN MOUNTAIN KINGSNAKE

Lampropeltis pyromelana
Colubrid Family

Evaluation Species



Description: A medium-sized (total length: 60 - 120 cm [2 - 4 ft]) snake with distinctive red, black, and white bands that encircle the body. The black bands separate the red and white bands, and the white bands are uniformly narrow. The red bands may be complete across the back or may be confined to the sides forming wedges of red within the black bands. The snout generally is white or cream colored. This species can be confused with the venomous Western coral snake (*Micruroides euryxanthus*), but Western coral snakes do not naturally occur in Nevada. Other black, red, and white-banded snakes can be distinguished from the Sonoran Mountain Kingsnake by having wider white bands on the sides and belly than on the back.

Diet: Feeds on lizards, snakes, and small mammals.

Habitat: Mountains, ranging from pinyon-juniper woodland up to pine-fir habitats. Found in shrublands and conifer forests, often near streams or springs and in or around rotting logs or rocks.

Range: The species occurs from eastern Nevada, central and southwestern Utah, southward through central and southeastern Arizona, and into north-central Mexico. In Nevada, these kingsnakes are found in isolated mountain ranges such as the Shell Creek, Egan, and Snake ranges in White Pine County. May be present in mountain ranges in Clark County; a single locality is documented from the Virgin Mountains.

SPECKLED RATTLESNAKE

Crotalus mitchellii pyrrhus

Covered Species

Pit Viper Family



D. Bradford Hardenbrook

Description: A medium-sized (total length: 120 cm [4 ft]), heavy-bodied rattlesnake with a wide, triangular-shaped head. Dorsal color harmonizes with the local habitat, varying from nearly patternless light colors to broad bands of rust with gray. Scales are keeled and often flecked with black and white, giving a rough or blurred, speckled effect. The sides of the head are usually gray and contrast with the brown top of the head. The tail is banded with rust and tan or cream rings near the rattle's base. While other species of rattlesnakes in southern Nevada tend to have more distinct markings on the dorsal pattern, less speckling, and diagonal eye-stripes, definite identification may require close inspection by an expert of the number, arrangement, and size of head scales. Venomous snake.

Diet: Primarily rodents, but large individuals may take small rabbits, whereas young individuals may feed on lizards until large enough to take rodents. Prey is subdued with a venomous bite.

Habitat: Pinyon-juniper, sagebrush, Mojave desert scrub, and blackbrush habitats; in rocky terrain on outcrops and boulders, also on loose soil and sand.

Range: The species occurs in southeastern California, southern Nevada, southwestern Arizona, and northwestern New Mexico from sea level to 2,450 m (8,000 ft) in elevation. Two subspecies occur in Clark County, Nevada. The Southwestern Speckled Rattlesnake (*C. m. pyrrhus*), illustrated above, is a lighter form; it occurs in the central and eastern portions; Panamint Rattlesnake (*C. m. stephensi*), a darker form, occurs in the western portion.

Comments: Venomous; an encounter may become a serious health risk.

WESTERN DIAMONDBACK

Crotalus atrox
Pit Viper Family

Evaluation Species



Description: A large (total length: 75-150 cm [3-5 ft], maximum to 225 cm [7.5 ft]), heavy-bodied rattlesnake with a wide, triangular-shaped head. The dorsal color generally is grayish (color may harmonize with habitat) with darker diamond-shaped marks set off by white borders. The scales are flecked with black, giving it a speckled appearance. The overall color is dull, with a faded appearance. The tail is banded with black and white rings; the black rings are as wide or wider than the white rings. There are two distinct, light-colored diagonal stripes on the side of the head, with the rear line extending from behind the eye to the corner of the mouth. This species may be identified from other species of rattlesnakes in southern Nevada by the presence of black and white rings on the tail that are approximately equal in width, and by the eye-line that ends at the corner of the mouth. Generally crepuscular and nocturnal, but sometimes diurnal.

Diet: Feeds on rodents and small rabbits; smaller individuals may eat lizards.

Habitat: This species occurs in a variety of habitats, especially in open Mojave desert scrub habitat and rocky foothills up to 2,100 m (7,000 ft) in elevation; also woodlands and sandy mesquite dune habitats.

Range: This species occurs throughout the southwestern U.S. (California to Oklahoma) and northern Mexico. In Nevada, it is restricted to the southern tip of the state and along the Colorado River.

Comments: This species is the largest of the western rattlesnakes. Also called the Coon-tail rattlesnake. It is a venomous snake.

WESTERN LEAF-NOSED SNAKE

Phyllorhynchus decurtatus
Colubrid Family

Covered Species



Description: A small snake (total length: 38 - 50 cm [15 - 20 in.]). The dorsal color is gray to tan with scattered dark blotches, and the ventral surface is white and unmarked. A greatly enlarged scale (the leaf) is present on the tip of the snout. In southern Nevada, another snake with an enlarged scale on the tip of its snout is called the Western patch-nosed snake (*Salvadora hexalepis*), and the dorsum is striped, not blotched. Also, the habit of the Western leaf-nosed snake is nocturnal, whereas the Western patch-nosed snake is diurnal.

Diet: Feeds on geckos, and probably other lizards, that it encounters in rodent burrows.

Habitat: Mojave desert scrub and salt desert scrub habitats in sandy flats.

Range: This species occurs in the Mojave and Sonoran deserts, southward into Mexico. The subspecies in Nevada (the Western leaf-nosed snake, *Phyllorhynchus decurtatus perkinsi*) occurs in southeastern California, southern Nevada, southwestern Arizona, and northwestern Mexico. In Clark County, Nevada, this species probably is widely distributed in the appropriate habitat.

WESTERN LONG-NOSED SNAKE

Rhinocheilus lecontei lecontei

Covered Species

Colubrid Family



Phil Medina

Description: A medium-sized (total length: 60 - 90 cm [24 - 36 in.]) snake with alternating red, black, and yellow bands on the dorsum. The ventral surface is pale with dark spots. The dark dorsal bands are flecked with cream, and the red and cream bands are flecked with black. Sometimes the red flecking is very faint. The snout is pointed, and the head is long and only slightly wider than the neck. In southern Nevada, other species of red, black, and light banded snakes do not have the black and white flecking as seen in this species. Western long-nosed snakes are primarily crepuscular in habit, but will assume nocturnal activity in hot weather.

Diet: Feeds on lizards and small mammals, all of which are killed by constriction.

Habitat: Mojave desert scrub and salt desert scrub habitats with open sandy surfaces and scattered brush; also found in rocky areas below 1,525 m (5,000 ft) in elevation.

Range: The species occurs from Nebraska to Idaho to California, and southward into central Mexico. This subspecies occurs in the Great Basin, central California, and southern Arizona, and is widely distributed in Clark County, Nevada, in the appropriate habitat.

RELICT LEOPARD FROG

Rana onca

True Frog Family

Covered Species



Ross Haley

Description: A small-sized (4 - 9 cm [1.6 - 3.5 in.]), brown, grey, or green frog with a few light-edged dark spots on the dorsum. A light-colored ridge on each side of the body extends from the head to the groin, and a light-colored stripe exists on the upper jaw. The eardrum has a light spot. In this species, the spots and their light-colored edges are faint, irregular, and indistinct relative to other leopard frogs. The Relict leopard frogs breed during March through June. Egg masses are attached to submerged vegetation or laid on the bottom. Primarily nocturnal.

Diet: Aquatic and flying insects.

Habitat: Desert riparian habitats along permanent streams, springs, and water impoundments up to 760 m (2,500 ft) elevation.

Range: Endemic to eastern Clark County, Nevada, and the Virgin River. Found in isolated populations near the Virgin and Colorado rivers in Nevada and Arizona.

Special Remarks: Species of Concern.

SOUTHWESTERN TOAD

Bufo microscaphus

True Toad Family

Evaluation Species



Description: A small to medium-sized toad (head and body: 5 - 7 cm [2 - 3 in.]). The dorsal color is olive to reddish-brown, and harmonizes with the habitat. Lighter colored patches may be present on the head (including the eyelids and portions of the oval parotoid glands), and on the top (sacral humps) of the back. Ventral color is uniformly light with usually no spots in adults and no dusky color on the throat of males. Bony ridges (cranial crests) on the head are absent or small. The skin is rough, but warts are small and are usually not distinctively colored. Other species of toads in southern Nevada have prominent cranial crests (*B. woodhousii*) or round parotoid glands (*B. punctatus*). Breeding occurs in streams from March to July. Eggs are laid in 1 - 3 rowed strings of up to 4,000 eggs and deposited on the bottom of shallow, quiet waters among gravel, leaves, sticks, mud, or clean sand. Larvae are dark with variable amounts of gold. Adults are primarily nocturnal, except during breeding season.

Diet: Larvae eat algae, organic debris, and plant tissue. Adults consume a variety of insects and snails, and may cannibalize newly metamorphosed juveniles.

Habitat: Inhabits arroyos, streams, washes and adjacent upland pinyon-juniper habitat. Also found along irrigation ditches, reservoirs, and in flooded fields near streams. It burrows into loose sandy soil. Elevations: up to 1,830 m (6,000 feet), and up to 150 m (500 ft) from water. Most common in tributaries of flowing streams.

Range: This species has been found in scattered locations in southeastern Nevada, southwestern Utah, northwestern and central Arizona, western New Mexico, and western Mexico. In Clark County, Nevada, it may be found in Meadow Valley Wash, and along the Virgin River and the Colorado River to Hoover Dam.

Comments: The Southwestern toad (*B. microscaphus*) is now considered to be separate from its geographically disjunct sister species, the Federally Endangered Arroyo toad (*B. californicus*). It is likely to hybridize with woodhouse toads.

RED SPOTTED TOAD

Bufo punctatus

True Toad Family

Evaluation Species



Description: A small (head and body: 4 - 8 cm [1.5 to 3 in.]) flat toad. The dorsal surface is grayish-brown with reddish warts, and the ventral surface whitish to buff with or without spotting. The parotoid glands are round, and the parietal ridges are small or absent. Other species of toads in southern Nevada have prominent cranial crests or oval parotoid glands. Breeds from April to September after rain. This is the only North American toad that lays eggs one at a time on the bottom of pools. Active at twilight and well into the night.

Diet: Insects.

Habitat: Deserts, rocky areas, and agricultural areas, usually near natural or manmade sources of permanent water.

Range: Southwestern U.S. from California to Texas, and from Utah and Kansas south into central Mexico. This species occurs throughout Clark County, Nevada, in the appropriate habitat.

WATCH LIST SPECIES

Common zebra-tailed lizard

Callisaurus draconoides
draconoides

Pacific tree frog

Hyla regilla

Plains toad

Bufo cognatus

Woodhouse toad

Bufo woodhousii

Fish

DESERT SUCKER

Catostomus clarkii utahensis

Evaluation Species

Sucker Family (Catostomidae)



Description: A medium-sized (maximum length of 33 cm [13 in.]) fish with a round, sucker-shaped mouth located on the ventral surface of the head. The dorsal color is brown, while the coloration is lighter ventrally. The caudal fin is forked. The eyes are located high on the head.

Diet: Omnivorous. Feeds on the substrate by scraping algae, detritus, and small invertebrates from stones and other submerged objects.

Habitat: Small to moderately large streams with pools and riffles, mainly over a bottom of gravel with sandy silt. Adults remain in the deeper pools during the day, then move to riffles to feed at night or when the water is turbid. Young tend to stay in lower velocity water along banks.

Range: The species occurs throughout the lower Colorado River drainage system in Nevada, Utah, and Arizona. This subspecies occurs in the Virgin River.

Comments: Three subspecies of the Desert Sucker occur in Nevada: *Catostomus clarkii intermedius* (White River Desert Sucker) occurs in the pluvial White River, *C. c. utahensis* (Virgin River Desert Sucker) occurs in the Virgin River watershed, and an unnamed subspecies (Meadow Valley Desert Sucker) occurs in Meadow Valley Wash and Clover Creek. Also referred to as *Pantosteus clarki*.

FLANNELMOUTH SUCKER

Catostomus latipinnis
Sucker Family (Catostomidae)

Evaluation Species



Description: A large (maximum length of 56 cm [22 in.]) fish with a round, sucker-shaped mouth located on the ventral surface of the head. The lower lip is unusually large and has a long, deep cleft on the midline. The overall color is silvery, the dorsum has olive shading, the ventral surface is light, and the fins have red-orange coloration during spawning. The caudal peduncle is long and narrow, and the caudal fin is forked. The eyes are small and located high on the head. Migrates upstream to spawn in riffles, usually over a substrate of coarse gravel. The young generally are found in water shallower than that used by adults.

Diet: Omnivorous. Feeds on the substrate by scraping algae, detritus, and small invertebrates from stones and other submerged objects.

Habitat: Deep, swift-water channels in moderate to large rivers and tributaries; also found in riffles, pools, and backwater. Found occasionally in small creeks, but generally absent from impoundments.

Range: This species occurs in the Colorado River and Gila River drainage basins. In Clark County, Nevada, these fish occur in the Virgin River, but they are found infrequently in Lake Mead and the Colorado River below Davis Dam.

MOAPA DACE

Moapa coriacea
Minnow Family (Cyprinidae)

Evaluation Species



Description: A small (maximum length of 12 cm [4.7 in.]) fish with a short head, a terminal mouth, and thick lips. The dorsal fin starts above or slightly behind the insertion (i.e., the front edge) of the pelvic fins, and the caudal fin is forked. The dorsal surface is brownish, the sides are brownish with light golden areas, and the ventral surface is light. There is a dark spot on the tail and a dark line on each side of the body. The scales are small and deeply embedded, and the skin has a leathery appearance. While some species of dace have a small maxillary barbel, this species does not. Breeds all year, but mostly during the spring. Spawning thought to occur in shallow, sandy bottom areas of spring outflows where water temperatures are 30 - 32° C (86 - 90° F).

Diet: Omnivorous. Feeds on invertebrates, detritus, and algae in the water column and on substrate (branches, roots, rocks).

Habitat: Spring pools, outflows, and the main stem of the Muddy River where the water is clear and warm (28 - 32° C [82 - 90 ° F]). Habitat use varies with age. Juveniles tend to occur in spring pools and outflows where water velocities are slower and temperatures are warmer. Adults tend to occur in outflows and in the Muddy River, where water velocities are faster and temperatures are slightly cooler.

Range: Endemic to Clark County, Nevada. This species occurs only in the warm springs and 9.5 km (5.9 mi.) of stream and spring outflows along the upper Muddy River. Cool water temperatures limit the downstream distribution.

Special Remarks: Federally Endangered.

MOAPA SPECKLED DACE

Rhinichthys osculus moapae
Minnow Family (Cyprinidae)

Evaluation Species



John N. Pinner/Desert Fishes Council

Description: A small (maximum length of 11 cm [4.3 in.]), fusiform fish with a pointed snout, subterminal mouth, and dark but vague speckling on the sides and dorsal surface. The dorsum is olive-colored with small, diffuse dark spots that may coalesce into a black line on the side, occasionally forming a black spot on the caudal peduncle. The ventral surface is light cream-colored or yellow. There is one dorsal fin, and the tail is deeply forked. During the breeding season, males develop red-orange colors on the fins and around the face (mouth and gill covers). A small maxillary barbel is present at the corner of the mouth.

Diet: Omnivorous. Primarily feeds on the surface of substrate or on food items drifting within the water column. Diet includes algae, invertebrates, fish eggs, and detritus.

Habitat: Stream bottoms in shallow cobble riffles. These fish occur in low-velocity areas behind rocks. Spawning habitat consists of small patches of bare rocks and pebbles that the males clear of debris.

Range: The species occurs throughout the western United States from the Columbia River southward to the Colorado River. This subspecies is endemic to Clark County, Nevada, and is found only in the middle Muddy River north of Interstate 15.

Comments: Muddy River fishes are more plain, with little or no mottling.

MOAPA WHITE RIVER SPRINGFISH

Crenichthys baileyi moapae

Evaluation Species

Splitfin Family (Goodeidae)



Description: A small (maximum length of 7 cm [2.75 in.]), deep-bodied fish with a large head; a small terminal mouth; dorsal and anal fins that are set far back on the body (almost on the tail); and no pelvic fins. The dorsal surface is dark olive to dusky, the sides are tan with two rows of dark spots (that may form lines), and the ventral surface is yellowish to whitish. The tail is square, rather than forked. During breeding season, males develop brighter coloration. Tolerant of warm water temperatures and low oxygen concentrations.

Diet: Omnivorous. Feeds on filamentous algae and small aquatic invertebrates.

Habitat: Primarily in spring pools, pools and their outflows, and rarely in the upper Muddy River.

Range: Five subspecies occur throughout the pluvial White River drainage system in southeastern Nevada. This subspecies, Moapa White River springfish, is endemic to Clark County and occurs only in and around five warm-water springs in the upper Muddy River.

VIRGIN RIVER CHUB

Gila seminuda (Muddy River population) Evaluation Species
Minnow Family (Cyprinidae)



Description: A medium-sized (length up to 43 cm [to 18 in.]) fish with a slender body, a slight hump on the dorsal surface behind the head, and small and deeply embedded scales (that may be absent). The caudal peduncle is long and narrow, and the tail fin is fairly long and deeply forked. The overall coloration is silvery with olive shading on the dorsum, and the mouth and fins may have yellow-orange coloration. The mouth is relatively large.

Diet: Omnivorous. Feeds on invertebrates and algae. Larger individuals also eat other fish.

Habitat: Deep runs and pools with slow to moderate velocities and sand, large rocks, cover in the form of overhanging banks and tree roots.

Range: Found only in the Muddy River between the Warm Springs area and the Wells Siding diversion to Bowman Reservoir.

Comments: Formerly referred to as an unnamed subspecies of the Roundtail Chub (*Gila robusta* spp.).

Special Remarks: Species of Concern. Due to recent DNA studies, the Muddy River population may be the same as the Virgin River population.

VIRGIN RIVER CHUB

Gila seminuda (Virgin River population) Evaluation Species
Minnow Family (Cyprinidae)



Description: A medium-sized (maximum length of 46 cm [18 in.]) fish with a slender body, a slight hump on the dorsal surface behind the head, and small and deeply embedded scales (that may be absent). The caudal peduncle is long and narrow, and the tail fin is fairly long and deeply forked. The overall coloration is silvery with olive shading on the dorsum, and the mouth and fins may have yellow-orange coloration. The mouth is relatively large and trout-like.

Diet: Omnivorous. Feeds on invertebrates and algae. Larger individuals also eat other fish.

Habitat: Creeks to large rivers. Deep runs and pools with slow to moderate velocities, sandy bottoms, and in-stream cover.

Range: Found only in the Virgin River from Pah Tempe Springs (just above LaVerkin, Utah) south to the confluence with Halfway Wash.

Comments: Formerly referred to as a subspecies of the Roundtail Chub (*Gila robusta seminuda*).

Special Remarks: Federally Listed as Endangered.

WOUNDFIN

Plagopterus argentissimus

Minnnow Family (Cyprinidae)

Evaluation Species



John Rime/Desert Fishes Council

Description: A small (maximum length of 7.5 cm [3.0 in.]) fish with a slender, fusiform body, and a flattened head and belly. The overall color is silvery. The mouth is large, subterminal, and there is a small maxillary barbel at the corner of the mouth. These fish have no scales. The caudal fin is large and deeply forked. The name of this species refers to the two bony rays that extend into the anterior tip of the dorsal fin and form a sharp spine.

Diet: Omnivorous. Feeds in the water column and on the bottom consuming small invertebrates, algae, and detritus.

Habitat: Most often found in or adjacent to swift, turbid, shallow channels with sandy substrates, or in waters adjacent to riffles. Young stay at the edge of streams in shallow backwater areas.

Range: This species formerly was widespread throughout the larger rivers and streams in the lower Colorado River Basin (i.e., the Colorado, Verde, Salt, Gila, and Virgin rivers). Now occurs only in the Virgin River from Halfway Wash below Riverside, Nevada, to Pah Tempe Spring (just above LaVerkin, Utah).

Special Remarks: Federally Listed as Endangered.

WATCH LIST SPECIES

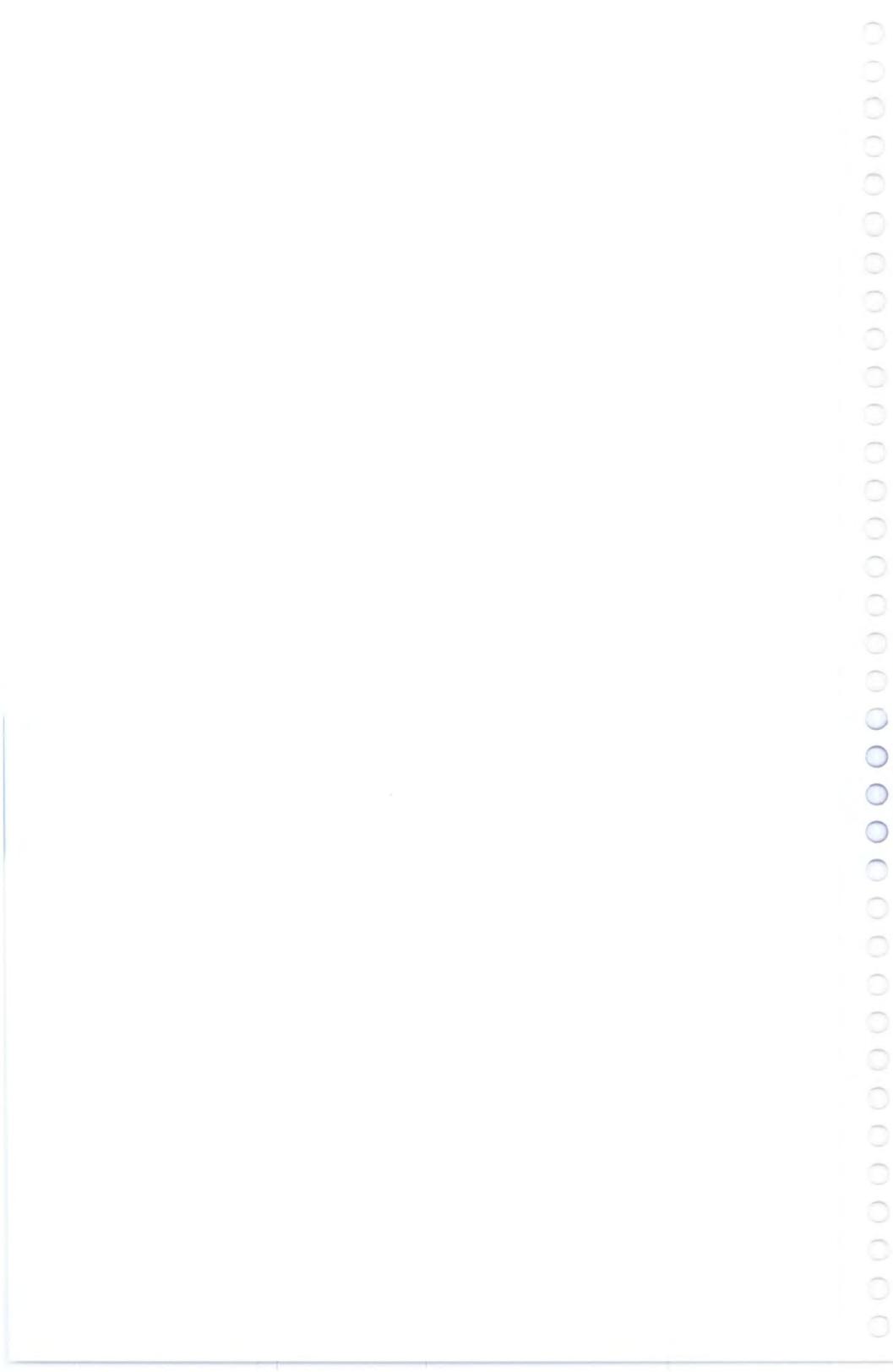
Virgin spinedace

Lepidomeda mollispinis mollispinis





Invertebrates



[BRET'S] BLUE BUTTERFLY

Euphilotes bernardino inyomontana

Evaluation Species

Family Lycaenidae



John Lane, (*Euphilotes bernardino*)

Description: Wings delicate, 9.5 - 12 mm (to 0.47 in.) wingspan. Males light cyanic blue with a narrow black wing border and weak checkered fringe. Females dark brown on upper side, extending to a bold terminal line; hindwings have a broad orange aurora. Underside of both sexes light gray to white, lacking the distinct black spots of other blues. Larval host plants include various buckwheats (*Eriogonum* sp.). Flight season from February to late August.

Diet: Buckwheat (*Eriogonum* sp.) is thought to be nectar source.

Habitat: Montane communities with buckwheat associations.

Range: Kern and Inyo counties, California; range probably extends into Esmeralda, Eureka, Mineral, Nye, and White Pine counties, Nevada. This subspecies of blues may accidentally occur in the Spring Mountains, Clark County, Nevada.

Comments: The species *Euphilotes battoides*, as listed in the MSHCP, is part of a complex of five species. The single specimen of blues found in the Spring Mountains, Clark County Nevada, was thought to be a new species. However, it was later identified as *Euphilotes bernardino inyomontana*.

CAROLE'S SILVERSPOT BUTTERFLY

Speyeria carolae

Family Nymphalidae

Covered Species



George T. Austin, Nevada State Museum

Description: Wings tawny-red to brown with variable black pattern, 53 - 69 mm (2.1 - 2.7 in.) wingspan. Body with greatly reduced front legs; underside color ranges from brown-purple to pale yellow-brown. Larval host plant is believed to be the endemic Charleston violet (*Viola purpurea* var. *charlestonensis*). Flight season from June to October, with peak activity in July.

Diet: Nectar species observed include thistle (*Cirsium* sp.), desert wallflower (*Erysimum asperum*), spreading dogbane (*Apocynum androsaemifolium*), mountain rose (*Rosa woodsii*), Charleston Mountain angelica (*Angelica scabrida*), pincushion (*Chaenactis* sp.), and lupine (*Lupinus* sp.).

Habitat: Bristlecone pine community, also in mixed conifer, pinyon-juniper, and sagebrush communities. Elevations: 2,000 - 3,200 m (6,560 - 10,500 ft), but typically below 2,300 m (7,500 ft).

Range: Endemic to the Spring Mountains. Kyle Canyon; also known from Mount Stirling, Mount Potosi, and Lovell Wash.

Comments: The MSHCP lists this species as *Speyeria zerene carolae*. Currently known as *Speyeria carolae*; it is the only full taxonomic species of butterfly endemic to the Spring Mountains.

DARK BLUE BUTTERFLY

Euphilotes ancilla purpura

Covered Species

Family Lycaenidae



Rick Cech (*Euphilotes enoptes*)

Description: Wings delicate, 19 - 28 mm (0.75 - 1.10 in.) wingspan. Males blue in color with checkered wing fringes; females typically brown, may be spotted. Adults found in the vicinity of the host plant, sulphur flower buckwheat (*Eriogonum umbellatum*), which is also the larval host plant. Flight season from June to late July, males appearing one month before females; this variety appears to have two flights per year coinciding with flowering of its host plant.

Diet: Adult food consists of nectar of sulphur flower buckwheat; larvae (caterpillars) eat flowers and fruit of the same host plant. Male dark blue butterfly may be found near springs to obtain dissolved nutrients from mud.

Habitat: Stream banks, springs, and seeps, primarily in mixed conifer and pinyon-juniper communities; also uses sagebrush and wet areas near high elevation springs. Elevations: 1,500 - 2,500 m (4,920 - 8,200 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known only from few areas, including Willow Creek and Cold Creek, Kyle Canyon, Carpenter Canyon, Mount Stirling, Coal Springs, and Lovell Canyon.

Comments: The MSHCP lists the old nomenclature, *Euphilotes enoptes purpurea*. Also, the common name more often used is Spring Mountains Dark Blue.

MACNEILL'S DESERT SOOTYWING

Hesperopsis graciellae

Family HesperIIDae

Evaluation Species



David Powell



David Powell

Description: Wingspan 20 - 32 mm (0.8 - 1.3 in.), forewing mottled gray pattern with short row of dark bars near outer margin; wing fringes checkered. Hindwing may have pale spots. Underside and upperside black. Larval host plants include quailbush (*Atriplex lentiformis*), and other members of the goosefoot family. Flight season from April to September.

Diet: Known nectar species are saltcedar (*Tamarix* sp.), seaside heliotrope (*Heliotropium curassavicum*), and alfalfa (*Medicago sativa*).

Habitat: Desert riparian areas with flat deep soils where its larval host, quailbush (*Atriplex lentiformis*), is present; also in desert washes and alkali flats. Elevations: 411 - 609 m (1,350 - 2,000 ft).

Range: Endemic to the Colorado River drainage from southwestern Utah to northern Baja California, Mexico. The Nevada populations are the northernmost of its range, occurring in scattered colonies along the Muddy River.

MORAND'S CHECKERSPOT BUTTERFLY

Euphydryas anicia morandi

Covered Species

Family Nymphalidae



George T. Austin, Nevada State Museum

Description: Wings orange with dark “checkerspots,” 31 - 44 mm (1.22 - 1.74 in.) wingspan. Body with greatly reduced front legs. Coloration of this subspecies varies between colonies, from yellow-orange to orange to a very dark orange. Larval host plants include Indian paintbrush (*Castilleja linariifolia*) and Clokey wavyleaf paintbrush (*Castilleja martinii* var. *clokeyi*). Flight season from May through July.

Diet: Nectar sources observed include desert wallflower (*Erysimum asperum*) and dandelion (*Taraxacum officinale*).

Habitat: Meadows and avalanche chutes, within the alpine zone, bristlecone pine, mixed conifer forest, and pinyon-juniper communities. Elevations: 2,100 - 3,200 m (6,890 - 10,500 ft).

Range: Endemic to the Spring Mountains. Small populations occur above the Lee Canyon ski area and its ridges and above Kyle Canyon up to Charleston Peak. Also known from Griffith Peak to Upper Carpenter Canyon, and Harris Mountain.

Comments: This subspecies has three unique phenotypic expressions, ranging from nearly black to light orange; the larvae can also extend diapause for up to several years, enhancing survival rate.

MOUNT CHARLESTON BLUE

Icaricia shasta charlestonensis

Covered Species

Family Lycaenidae



George T. Austin, Nevada State Museum

Description: Wings delicate, 22 - 28 mm (0.86 - 1.10 in.) wingspan. Males lilac blue with a brownish border, females similar but darker in color. Larval host plant Torrey milkvetch (*Astragalus calycosus*). Flight season from July to August; with peak activity late July.

Diet: Nectar sources include Torrey milkvetch, aster (*Aster* sp.), fleabane (*Erigeron*), and goldflower (*Hymenoxys*).

Habitat: Open areas such as ridge lines, ski runs, and avalanche paths in bristlecone woodlands or mixed conifer forests that support the larval host plant, Torrey milkvetch. Elevations: above 2,000 m (6,560 ft).

Range: Endemic to the Spring Mountains. Known from the ski area in Lee Canyon; new observations include Bonanza Trail, main crest between Griffith Peak and Upper Carpenter Canyon, and North Loop Trail.

NEVADA ADMIRAL

Limenitis weidemeyerii nevadae

Covered Species

Family Nymphalidae



Jan Nachlinger

Description: Wings black with white-yellow bands, 56 - 78 mm (2.5 - 3.5 in.) wingspan. Body black with greatly reduced front legs. Larval host plants are principally willow (*Salix* sp.) and aspen (*Populus tremuloides*), but serviceberry (*Amelanchier utahensis*) is also used sometimes. Flight season from May to August; with peak activity late June to early July.

Diet: Variety of plant species, observations include mountain balm (*Eriodictyon angustifolium*), thistle (*Cirsium* sp.), western Virgin bower (*Clematis ligusticifolia*), and common hoarhound (*Marrubium vulgare*).

Habitat: Riparian habitats, bristlecone pine, mixed conifer forest, and pinyon-juniper communities. Elevations: 1,500 - 2,800 m (4,920 - 9,200 ft).

Range: Southern Nevada endemic. Known from the Spring Mountains (Mount Potosi, Mount Stirling), and the Sheep Range.

Comments: The correct spelling of the genus name is *Limenitis*.

SPRING MOUNTAINS ACASTUS CHECKERSPOT

Chlosyne acastus robusta

Covered Species

Family Nymphalidae

George T. Austin, Nevada State Museum



Description: Wings checkered dull orange to bright orange with black lines and smudges, 28 - 42 mm (1.1 - 1.65 in.) wingspan. Body with greatly reduced front legs. Although the larval host plant has not been determined, current research indicates rabbitbrush (*Chrysothamnus* spp.) may be used. Flight season from May to July.

Diet: Nectar host plants observed include Nevada sunflower (*Heliomeris [Viguiera] multiflora*).

Habitat: Primarily found in riparian areas, mixed conifer and pinyon-juniper habitat, also found in sagebrush. Its habitat requirements are poorly understood. Elevation: 1,780 - 3,050 m (5,840 - 10,000 ft).

Range: Endemic to the Spring Mountains. Primarily known from Kyle Canyon and Deer Creek; also the north side of Mount Stirling and north side of Mount Potosi.

Comments: This species was previously known as *Charidryas acastus robustus*.

SPRING MOUNTAINS COMMA SKIPPER

Hesperia colorado mojavensis

Covered Species

Family HesperIIDae

George T. Austin, Nevada State Museum



Description: Wings mottled and short, 28 - 31 mm (1.1 - 1.2 in.) wingspan. Body smooth; male a tawny (light brown) color with a dark wing border; females brownish with a darker border than males. Larval host plants of this subspecies have not been determined, but members of the species use various grasses and sedges. Flight season from May to September, with peak activity late June to early July.

Diet: The preferred nectar host plants are species of thistle (*Cirsium* sp.). Other nectar host plants include rabbitbrush (*Chrysothamnus* sp.), dandelion (*Taraxacum officinale*), and Palmer penstemon (*Penstemon palmeri*).

Habitat: Riparian areas in mixed conifer forests and pinyon-juniper communities. Males tend to congregate at sites with surface water or standing mud several weeks before the females appear. Elevations: 1,500 - 3,000 m (4,930 - 9,840 ft).

Range: Endemic to the Spring Mountains. Found throughout the range at mid-elevations, and in lesser abundance as high as 3,000 meters.

Comments: This species was formerly known as *Hesperia comma mojavensis*.

SPRING MOUNTAINS ICARIOIDES BLUE

Icaricia icarioides austinorum

Covered Species

Family Lycaenidae



George T. Austin, Nevada State Museum

Description: Wings delicate, 28 - 34 mm (1.10 - 1.34 in.) wingspan. Males light blue in color with lilac reflections, females from dark blue to brown. Host plants predominantly lupines (*Lupinus* sp.), including the principal larval host, silver lupine (*Lupinus argentus*). Flight season from May to September, with peak activity late June to early July.

Diet: Nectar host plants include sulphur flower buckwheat (*Eriogonum umbellatum*), Douglas pincushion (*Chaenactis douglasii*), cinquefoil (*Potentilla* sp.), and silver lupine. Larvae also feed on silver lupine. Species dependent on wet sites and standing mud to obtain moisture, minerals, and nutrients before the desired host plants are in bloom.

Habitat: Open stands and meadows, in bristlecone pine woodlands and mixed conifer forest habitats. Also in pinyon-juniper and sagebrush communities, and wet areas near springs. Elevations: 1,800 - 3,000 m (5,900 - 9,850 ft)

Range: Endemic to the Spring Mountains, Clark County, Nevada. The largest concentration of this species is located in the central portion of the range, particularly in Kyle Canyon. Predicted distribution is nearly everywhere in the Spring Mountains where lupines grow.

SPRING MOUNTAINS SPRINGSNAIL

Pyrgulopsis deaconi

Covered Species

Family Hydrobiidae



Jan Nachlinger

Description: A member of the aquatic snail family, 1.5 - 1.9 mm (to 0.07 in.) in length, and 1.3 - 1.7 mm (to 0.07 in.) in width. Shell sub-globose, filament of medium length, lobe short. Penial ornament a small terminal gland with a large penial gland. Ventral gland is also large. This springsnail completes its life cycle in one year.

Diet: Feeds on algae.

Habitat: Spring ecosystems with permanent flow of highly oxygenated water. The water must also be highly mineralized but relatively unpolluted.

Range: Southern Nevada endemic. Known from the Spring Mountains in Red Spring and Kiup Spring. Previously known from Willow Spring, Clark County, and from southern Nye County, now presumed extirpated.

Comments: The MSHCP includes two Evaluation Species, the Moapa pebblesnail (*Pyrgulopsis avernalis*) and the Moapa turban snail (*Pyrgulopsis carinifera*).

SOUTHEAST NEVADA SPRINGSNAIL

Pyrgulopsis turbatrix

Family Hydrobiidae

Covered Species



Glenn Clemmer

Description: A member of the aquatic snail family, medium-sized, 2.1 - 3.6 mm (to 0.14 in.) in length and 1.5 - 2.2 mm (to 0.09 in.) in width. Shell narrow-conic to turriform, filament and lobe of medium length. Penial ornament a small terminal gland with a very small (sometimes absent) penial gland. This springsnail completes its life cycle in one year.

Diet: Feeds on algae.

Habitat: Spring ecosystems with permanent flow of highly oxygenated water. The water must also be highly mineralized but relatively unpolluted.

Range: Endemic to the Spring Mountains. First collected in 1995 from Horseshutem Spring in Nye County, Nevada. In Clark County, Nevada, known to occur in Lost Creek, Willow Creek, Cold Creek, Grapevine Springs, and La Madre Spring.

Comments: The MSHCP includes two Evaluation Species of the same genus: the Moapa pebblesnail (*Pyrgulopsis avernalis*) and the Moapa turban snail (*Pyrgulopsis carinifera*).

MOJAVE GYPSUM BEE

Andrena balsamorhizae

Family Andrenidae

Evaluation Species



Jeff Knight, Nevada Division of Agriculture

Description: Individual bee species can be distinguished from each other by the hairiness of their body, by the first segment (tarsus) of the hind leg which is generally enlarged and flattened, and their wings. Length of female Mojave gypsum bee 11 - 13 mm (to 0.5 in.), wing length 4 mm (0.16 in.). Specific diagnostic features for females are red abdomen, short dense body hairs, and high vertex (top of head between eyes). Length of male bee 9 - 12 mm (to 0.47 in.), wing length 4 mm (0.16 in.), vertex high, and yellow spot in the eye. Wing membranes of both sexes are hyaline (transparent, colorless) with dark-red to reddish brown veins. Outer coverings mostly black except features described above. Flight period of Mojave gypsum bee is from March to early May.

Diet: Mojave gypsum bee collects pollen from a single plant species, the sunray (*Enceliopsis argophylla*), which is also the sole source of pollen for its offspring.

Habitat: Bees occur in various habitats, and nest on the ground (a characteristic of the Andrenidae family), or in various natural cavities. Mojave gypsum bees are restricted to the habitat of its host plant, sunray.

Range: Endemic to Clark County, Nevada, and the Arizona side of Lake Mead. Occurs in areas around Lake Mead and the Las Vegas basin where it is restricted to the gypsum soils associated with its host plant.

Comments: Mojave gypsum bee is considered a High Priority Evaluation Species. It is one of over 30 rare bee species in Clark County, Nevada, and of over 600 bee species in the Mojave Desert.

MOJAVE POPPY BEE

Perdita meconis

Family Andrenidae

Evaluation Species



Jeff Knight, Nevada Division of Agriculture

Description: Individual bee species can be distinguished from each other by the hairiness of their body, by the first segment (tarsus) of the hind legs, and their wings. Length of male bee 5 mm (0.2 in.), forewing 4 mm (0.16 in.) long. Head and part of thorax (body region which bears legs and wings) dark green, front of head pale yellow, legs black with some pale yellow stripes. Wings hyaline (transparent, colorless), veins milky white except brown subcosta (one of longitudinal veins). Terga (plates of dorsal surface on abdomen) from dark green to brown to amber-yellow. Diagnostic feature of males: apical lobes of T7 (tergum 7) thickened. Length of female bee 6.5 - 7 mm (0.27 in.), forewing to 5 mm (0.2 in.) long; coloration as in male except smaller areas of pale-yellow markings on head. Flight period from mid-April to early June.

Diet: Floral preference of the Mojave poppy bee appears to be large-flowered plants of the poppy family, *Arctomecon* and *Argemone*.

Habitat: Mojave poppy bees are restricted to the habitat of its associated plant species.

Range: Known to occur in the eastern Mojave Desert from Kelso, California, to near St. George, Utah; this species is rare and very patchily distributed.

Comments: Mojave poppy bee is considered a High Priority Evaluation Species. Medium Priority Evaluation Species of bees are listed on the following page. The photo above is a native Bee species.

BEE SPECIES LIST

Evaluation Species

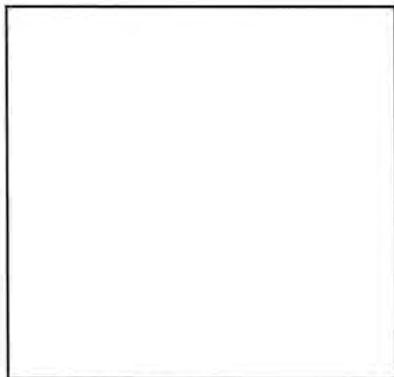
- Dalea blister bee**, *Ancylandrena koebelei*
Red-legged beardtongue bee, *Atoposmia rufifemur*
Virgin River globemallow bee, *Diadasia proridens*
Red-tailed blazing star bee, *Megandrena mentzeliae*
Two-tone perdita (bee), *Perdita bipicta*
Mojave twilight bee, *Perdita celadona*
Big-headed perdita (bee), *Perdita cephalotes*
Las Vegas perdita (bee), *Perdita cracens*
Virgin River perdita (bee), *Perdita crotonis caerulea*
Spurge-loving perdita (bee), *Perdita euphorbiana*
Tiquilia perdita, *Perdita exusta*
Apache plume perdita (bee), *Perdita fallugiae*
Yellow-headed perdita (bee), *Perdita flaviceps*
Moapa perdita (bee), *Perdita fulvescens*
Unadorned perdita (bee), *Perdita inornata*
Valley of Fire perdita (bee), *Perdita nevadiana*
Virgin River twilight bee, *Perdita vespertina*
Mojave Mountain perdita, *Perdita vicina*
Desert-loving perdita, *Perdita xerophila discrepans*

CRAWLING WATER BEETLE

Haliplus eremicus

Family Haliplidae

Evaluation Species



No photo available at this time

Description: The crawling water beetle family is a group of inconspicuous water dwelling insects. This species is small, 3.1 - 3.6 mm (to 0.14 in.) long. Body broadly oval, head a darker yellow (vitelline), front wing (elytra) cinnamon to yellow, leathery, thickened. Hind coxal plates extremely enlarged and concealing the basal leg segment.

Diet: Algae or other plant materials.

Habitat: In or near freshwater ponds, in masses of vegetation on or near the surface of the water.

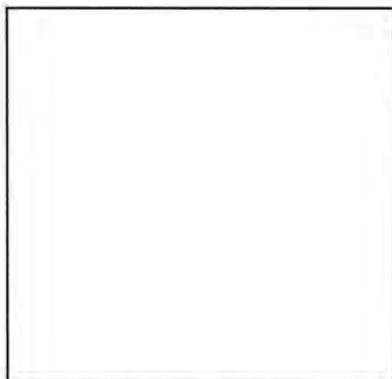
Range: Warm Springs area, Moapa, Clark County, Nevada.

GRATED TRYONIA

Tryonia clathrata

Family Hydrobiidae

Evaluation Species



No photo available at this time.

Description: Grated Tryonia, a member of the Hydrobiid family, are very minute aquatic prosobranch snails. These snails are typically less than 5 mm (0.2 in.) in length, cone-shaped, and with prominent ridges running the length of the shell.

Diet: Unknown.

Habitat: Freshwater spring systems, typically occur on or in algae and detritus substrates and slow current.

Range: Known to occur in the Cardy Lamb and Muddy Spring systems; likely to occur in the Warm Springs area, all in Clark County, Nevada. May also occur in the Pahranaagat and White River valleys to the north.

Comments: The MSHCP lists other species of *Tryonia*, but little is known about them.

List of Tryonia Species

Dry Lake Bed species, *Tryonia* sp.

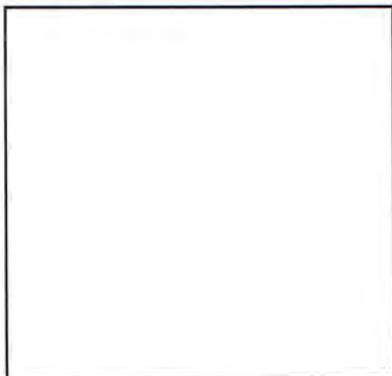
Undescribed tryonia, *Tryonia* sp.

MOAPA WARM SPRING RIFFLE BEETLE

Stenelmis moapa

Evaluation Species

Family Elmidae (Riffle beetles)



No photo available at this time

Description: Slender beetle, 3.5 mm (0.14 in.) long, 1.0 mm (0.04 in.) wide, cylindrical in shape. Head round, minutely tuberculate (wart-like), with dark stripe down the middle of the head. Back various shades of reddish-brown, legs a greenish tint. Wings undeveloped, non-functional.

Diet: Feed on aquatic plants and algae.

Habitat: Outflow streams from warm temperature springs to 31.7°C (89° F), occur in swift, shallow water on pebble, algae-covered rocks within sand-pebble areas, in aquatic vegetation and bare tree roots.

Range: Endemic to the Warm Springs area in Moapa, Clark County, Nevada.

Comments: *Stenelmis moapa* is a High Priority Evaluation Species. The Medium Priority Moapa riffle beetle (*Microcyloepus moapus moapus*) occupies similar habitat in the Warm Springs area but at shallower water depth and higher velocity water.

MOAPA WATER STRIDER

Rhagovelia becki

Evaluation Species

Family Veliidae (Broad shouldered water striders)



Description: Small water strider, 4 mm (0.16 in.) in length, with broad shoulders, dark brown to black in color. Adults have shorter legs, and are usually wingless. Members of this genus have one-segmented tarsi (one segment at the tip of the leg) with tufts of hair that enables them to move about without breaking the surface of the water. They are gregarious and often found in large numbers.

Diet: Feed on various small insects.

Habitat: On the water surface, inhabit swift riffle reaches of the upper Muddy River and its tributaries.

Range: Endemic to the Moapa area, Clark County, Nevada.

Comments: This species is also known as Moapa Skater.

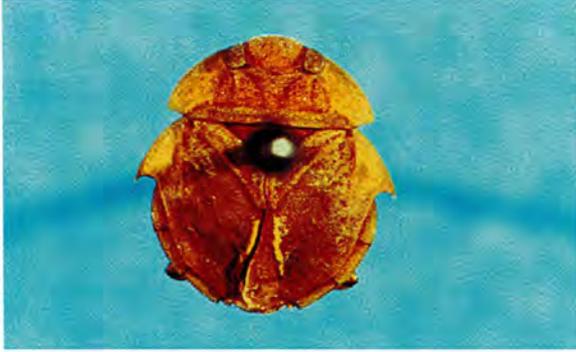
NAUCORID

Usingerina moapensis

Family Naucoridae

Evaluation Species

Jeff Knight, Nevada Division of Agriculture



Description: Naucorids are true bugs, 5 - 6 mm (0.24 in.) long, commonly called creeping water bugs. This species is brownish in color, body shape broadly oval and somewhat flattened. Diagnostic features include the greatly thickened front femora (femur of front leg) and front wing membranes without veins. Naucorids bite quite readily and painfully when picked up.

Diet: Small aquatic invertebrates.

Habitat: Quiet waters or stream outlets; found in pebble beds of stream habitat with water temperatures between 23.9 - 31.7° C (75 - 89° F).

Range: Endemic to the Warm Springs area, Clark County, Nevada.

Comments: This species is a High Priority Evaluation Species. Amargosa naucorid (*Pelocoris shoshone shoshone*), a Medium Priority species, also occurs in the Warm Springs area.

SPRING MOUNTAINS ANT

Lasius nevadensis

Evaluation Species

Family Formicidae



Jeff Knight, Nevada Division of Agriculture

Description: Small ant; total length of some members of this genus reach 4.5 mm (0.18 in.). Diagnostic features of this species include: head length of worker ants 0.9 mm (0.035 in.), female head length 1.2 mm (0.047 in.), and male head length 0.73 mm (0.028 in.). Head and posterior portion of gaster (enlarged part of abdomen behind the pedicel in ants) yellowish brown, thorax and anterior portion of gaster dull yellow. Ants generally nest in colonies; each colony consists of one or more queens (lay all the eggs), workers, and males. Mating usually occurs in a mating flight; flight season of this species was observed in July 1956.

Diet: Unknown; diet of some members of this genus is said to be honeydew from root aphids and mealybugs.

Habitat: Subterranean nests, without cover or beneath large stones. In 1956, nests were found in an unshaded area in coniferous forest. Elevation: 2,348 m (7,700 ft).

Range: Kyle Canyon in the Spring Mountains, Clark County, Nevada.

Comments: This species has only been reported in 1956. The photo above is not *L. nevadensis* but a closely related species.

WATCH LIST SPECIES

Red-legged lava bee	<i>Ashmeadiella picticus</i> sp. nov.
Flat-faced cactus bee	<i>Lithurge listrota</i>
Beck's perdita (bee)	<i>Perdita becki</i>
Rock nettle perdita (bee)	<i>Perdita eucnides eucnides</i>
Banded perdita (bee)	<i>Perdita vittata conformis</i>
Koso phacelia bee	<i>Protodufourea koso</i>
Michener's phacelia bee	<i>Xeroheriades michener</i>
Corn Creek springsnail	<i>Pyrgulopsis</i> sp.
Blue Point springsnail	<i>Pyrgulopsis</i> sp.
Undescribed Blue Point tryonia	<i>Tryonia</i> sp.



Vascular Plants

ROUGH ANGELICA

Angelica scabrida

Carrot Family

Covered Species



Jan Nachlinger



Description: Perennial plant growing to 1.5 m (60 in.) tall. Stems rough, pubescent. Leaves large, basal leaves to 1 m (39 in.) in diameter, stem leaves to 40 cm (15.7 in.); all leaves pinnate with 9 leaflets arranged in groups of three; leaflets 8 - 16 cm (3 - 6 in.) long. Inflorescence in umbels (umbrella-like), with up to 40 flowers on stalks 2 - 12 mm (to 0.5 in.) long. Flower sepals 5, petals 5, white. Fruit a capsule, flattened, 8 - 14 mm (to 0.6 in.) long, narrow wings which are either rough or smooth at maturity. Time of flowering: July to August.

Habitat: Occurs in mixed conifer and aspen forest communities, near springs, gravelly washes, ephemeral streams, gullies, montane slopes, shady crevices, and avalanche chutes. Elevations: 2,000 - 2,800 m (6,600 - 9,200 ft).

Range: Endemic to the Spring Mountains. Occurs in Kyle Canyon in the Spring Mountains National Recreation Area, and in the Red Rock Canyon National Conservation Area.

Comments: Pedicels and major stalks are rough to the touch, hence the specific name *scabrida*.

CHARLESTON PUSSYTOES

Antennaria soliceps

Sunflower Family

Covered Species



Janet Blair

Description: Perennial plant forming mats to 45 cm (18 in.) wide. Stems short, to 3 cm (1.2 in.) tall, with creeping growth habit. Leaves basal, spatula-shaped, covered with dense white hairs (pubescent), younger leaves sparsely pubescent. Inflorescence a solitary flower head on each stalk, to 10 mm (0.4 in.) high. Flower head discoid, with up to 60 white florets (flowers). Fruit an achene, 6 mm (0.2 in.), with white pappus at tip. Time of flowering: July to August.

Habitat: Found in mountain meadows, scree slopes, open ridges, and north-facing cliffs, in alpine and bristlecone pine habitats, and in mountain riparian areas. Elevations: 2,650 - 3,535 m (8,700 - 11,600 ft).

Range: Endemic to the Spring Mountains; occurs at higher elevations along and below the ridgeline from Mummy Mountain to Griffith Peak.

Comments: The most distinguishing feature separating this species from other *Antennaria* is the large solitary flower head on each stalk.

STICKY RINGSTEM

Anulocaulis leiosolenus

Covered Species

Four-o'clock Family



Gayle Marrs-Smith

Description: Perennial herb to 100 cm (3.3 ft) tall. Leaves opposite, in 1-3 pairs in the lower portion of the plant, petioles (leaf stalks) to 10 cm (4 in.) long, blades round to 15 cm (6 in.) wide and long, leathery and rough textured. Inflorescence widely paniculate; flower stalks 60 - 100 cm (2 - 3.3 ft) high, comprising the upper three-quarters of the plant, internodes with sticky glutinous bands. Flowers pink to white, trumpet-shaped, about 3 cm (1.2 in.) long, and scattered about the widely branched top. Seeds conspicuously winged. Time of flowering: July to August.

Habitat: Found on gypsum soils on rolling hills and terraces in Mojave desert scrub and salt desert scrub. Frequently associated with Las Vegas bearpoppy. Elevations: 610 - 1,340 m (2,000 - 4,400 ft).

Range: Southwestern endemic of Nevada, Arizona, New Mexico, and Texas, with patchy distribution in southern Nevada. Known primarily east of Las Vegas, Frenchman Mountain, Muddy Mountains, and Gold Butte.

Comments: Sticky ringstem derives its name from the sticky glandular rings encircling the stem; plants are ungainly and spindly with large, fleshy leaves near the base.

LAS VEGAS BEARPOPPY

Arctomecon californica

Poppy Family

Covered Species



Description: Mound-forming perennial with a thick woody taproot. Leaves gray-green, in 10 cm (4 in.) high rosettes, wedge-shaped, tips three-toothed, covered with 1 cm (0.4 in.) white hairs. Inflorescence with several flowers on top; flowering stems may reach a height of 40 cm (16 in.). Flower petals 6, yellow, 2.5 - 4 cm (1 - 1.6 in.) long; stamens and styles united. Seed capsules 1.5 cm (0.6 in.) in length, opening by valves that appear lattice-like. Time of flowering: April to May.

Habitat: Found within Mojave desert scrub and salt desert scrub habitats on gypsum soils. Distribution is patchy, across low "badland" hills, on ridges and benches. Elevations: 400 - 820 m (1,300 - 2,700 ft)

Range: Endemic to the eastern Mojave Desert in southeastern Nevada and northwestern Arizona. The majority of populations occur in Clark County, Nevada, specifically in the Las Vegas Valley and on gypsum soils associated with the Colorado River drainage. Populations are also known to occur in northeastern Arizona.

Comments: This species has several yellow flowers per stem, and smaller seed capsules (1.5 cm) in comparison to white bearpoppy.

Special Remarks: This is a State of Nevada Critically Endangered Species. So far, attempts to transplant entire plants or grow plants from seeds to maturity have not been successful.

WHITE BEARPOPPY

Arctomecon merriamii

Poppy Family

Covered Species



WESTEC Services

Description: Perennial herb atop a stout taproot. Leaves basal, wedge-shaped with 3 - 5 apical lobes, 2.5 - 7.5 cm (1 - 2.9 in.) long, covered with long spreading hairs. Inflorescence with a solitary flower head; flowering stems several, to 35 cm (14 in.) in height. Flower petals 6, white, to 4 cm (1.6 in.) long. Fruit a capsule, to 3.5 cm (1.4 in.) long, opening by valves that appear lattice-like. Time of flowering: April to June.

Habitat: Found in salt desert scrub and Mojave desert scrub habitats. Populations are scattered, often growing in limestone and dolomite soils. Found on ridges, rocky slopes, gravelly canyon washes, and on old lakebeds derived from carbonate rock. Elevations: 610 - 1,890 m (2,000 - 6,200 ft).

Range: Mojave Desert endemic. In Nevada this species occurs in Clark County, extreme southwest corner of Lincoln County, and southern tip of Nye County. Also in Inyo County, California.

Comments: This species can be distinguished from Las Vegas bearpoppy by a single white flower on each stalk, and by the longer (3.5 cm) capsule.

ROSY KING SANDWORT

Arenaria kingii ssp. *rosea*

Covered Species

Pink Family



Description: Perennial herb from a woody rootstock, 10 - 20 cm (4 - 8 in.) high. Leaves needle-shaped, mostly basal, entire, 1 - 2 cm (to 0.8 in.) long. Inflorescence with several flowers on top, flowering stems few. Flower sepals 5, pubescent (hairy), with broad translucent margins; petals 5, pink, 4 - 7 mm (to 0.3 in.) long. Fruit a compressed capsule, 4 - 7 mm (to 0.3 in.) long. Time of flowering: June to early August.

Habitat: Occurs in bristlecone pine and mixed conifer forest habitats. Found on dry rocky hillsides on wooded slopes, on limestone ridges, and on carbonate-derived substrates. Elevations: 1,800 - 3,000 m (5,900 - 9,500 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Found on the east side of the range in Lee Canyon and Deer Creek.

Comments: When in flower, this species can be easily distinguished from other sandworts by its pink petals and the typically fewer stems.

MEADOW VALLEY SANDWORT

Arenaria stenomeris

Pink Family

Evaluation Species



Wesley Niles

Description: Densely clumped perennial, 10 - 20 cm (4 - 8 in.) tall. Stems smooth, lower nodes each bearing 3 leaves. Leaves 2 - 2.5 cm (0.8 - 1.0 in.) long, stiff, hairless, linear, with tips gradually tapered to a sharp point. Inflorescence a cyme, bears many small flowers. Flower sepals acute and taper-pointed, longer than mature fruit. Petals white, linear, about 1 mm wide. Fruit a capsule, 4 mm (0.16 in.) long. Time of flowering: May.

Habitat: Barren limestone cliffs, ledges, canyon walls, and steep rocky slopes on all aspects, above the creosote bush community. Elevations: 884 - 1,097 m (2,900 - 3,600 ft)

Range: Nevada endemic. Known from Clark County (Meadow Valley Range) and Lincoln County.

Comments: Distinguished from related forms by the taper-pointed sepals, linear petals, and capsule shorter than sepals.

ACKERMAN MILKVETCH

Astragalus ackermanii

Pea Family

Evaluation Species



Frank Smith

Description: Perennial herb, 10 - 15 cm (4 - 5.9 in.) high, tufted with woody base. Stems erect and ascending, simple or once branched. Leaves 5 - 12 cm (2 - 4.7 in.) long; leaflets 4 - 7 pairs, 2.5 - 7 mm (to 0.3 in.) long. Inflorescence loosely 2 - 5 flowered. Flowers bilateral (pea-like); sepals 6.3 - 7.5 mm (to 0.3 in.) long; petals reddish purple, turning bluish when drying, 12 - 14 mm (to 0.5 in.) long. Fruit a pod, erect and stipitate, with stipe 1 - 1.5 mm long. Time of flowering: late April to early June.

Habitat: Steep limestone cliffs, ledges, and crevices in canyons and washes. Found in mixed shrub, sagebrush and juniper woodland habitats. Elevations: 1,220 - 1,890 m (4,000 - 6,200 ft).

Range: Endemic to the Desert National Wildlife Range and Nellis Air Force Range in Clark and Lincoln counties, Nevada. Known from the Sheep and Pintwater ranges.

Comments: Distinguished from closely related milkvetches by its short stipe (1.5 mm versus 3 mm) on the pod.

CLOKEY MILKVETCH

Astragalus aequalis

Covered Species

Pea Family



WESTEC Services

Description: Herbaceous perennial, erect, to 70 cm (28 in.) high. Stems marked with fine longitudinal lines, covered with stiff hairs. Leaves alternate, 6 - 12 cm (2.4 - 4.8 in.) long, usually with 11 widely spaced leaflets, almost linear, blunt-tipped, and covered with hairs. Inflorescence simple, elongate, extending above leaves, with 6 to 12 bilateral (pea-like) flowers, 1 cm (0.4 in.) long. Flower petals yellow, lavender tinged, banner longer than wings, banner 12 mm (0.5 in.). Fruit a pod (legume), sessile, inflated, 3.5 - 4 cm (1.4 - 1.6 in.) long, straw or pinkish color, and speckled with purplish-brown. Time of flowering: May to June.

Habitat: In pinyon-juniper and mixed conifer habitats. This species occurs on flat to gently sloping areas, open ridges, gravelly hillsides, and limestone areas. Elevations: 1,830 - 2,560 m (6,000 - 8,400 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from Kyle and Lee canyons, Deer Creek, Harris Mountain, and other areas in the Spring Mountains.

Comments: Distinguishing features of this species are the long stem spacing between leaflets combined with the speckled, inflated pods.

SHEEP MOUNTAIN MILKVETCH

Astragalus amphioxys
var. *musimonum*

Evaluation Species

Pea Family



Frank Smith

Description: Low tufted perennial herb, to 2 cm (0.8 in.) tall, densely pubescent throughout with pick-shaped silvery hairs up to 1.2 mm long. Stems prostrate, very short, to 2 cm (0.8 in.) or exceptionally long to 7 cm (2.8 in.); internodes also short. Leaves 4 - 7 cm (1.6 - 2.8 in.) long; leaflets 11 - 17, to 7 mm (0.3 in.) long. Inflorescence a raceme with 5 - 9 flowers, flowering stalks 4 - 8 cm (1.6 - 3.2 in.) long. Flowers bilateral (pea-like); sepals fused, with white and some black hairs; petals pink-purple, with a large upper petal 10 - 13 mm (0.5 in.) long. Fruit a pod, ascending or incurved-ascending, 1.5 - 2 cm (0.6 - 0.8 in.) long, compressed, with a central ridge on the lower surface that is situated in a double groove. Valves of pod densely pubescent with appressed hairs, leathery and brownish. Time of flowering: April to June.

Habitat: Found on alluvial gravels, gentle slopes, roadsides, and disturbed areas in sagebrush, pinyon-juniper, blackbrush, and salt desert scrub communities. Elevations: 1,341 - 1,829 m (4,400 - 6,000 ft).

Range: Clark and Lincoln counties, Nevada. Known to occur in the Sheep, Las Vegas, Desert and East Desert ranges. Also known from Mohave County, Arizona.

Comments: Separated from other milkvech species by the shape of the pods. Formerly known as *Astragalus musimonum*.

BLACK WOOLYPOD

Astragalus funereus

Pea Family

Evaluation Species



Susan Cochran

Description: Herbaceous perennial plant with a woody rootstock. Stems prostrate (spreading), to 10 cm (4 in.) long. Plant stems and leaves covered with dense, white wooly hairs. Leaves pinnate, 2 - 6 cm (0.8-2.4 in.) long, with 7 - 17 ovate leaflets. Inflorescence 5 - 10 flowered, peduncle stout. Flowers bilateral (pea-like); sepals 5, fused, covered with prominent black hairs; petals pink-purple, banner 22 - 29 mm (0.8 - 1.2 in.) long, keel 21 - 28 mm (to 1.1 in.) long. Fruit a legume (pod), sessile, inflated, and covered with white long silken hairs. Time of flowering: March to May.

Habitat: Unstable, usually steep, gravelly slopes of volcanic tuff, or occasionally limestone screes. Elevations: 980 - 2,290 m (3,200 - 7,500 ft).

Range: In Clark County, Nevada, known from two occurrences in Kyle Canyon and Wheeler Pass in the Spring Mountains. Also known from Nye County, Nevada, and Inyo County, California.

Comments: Distinguished from other *Astragalus* species in the range by the presence of prominent black hairs on the fused sepals.

THREECORNER MILKVETCH

Astragalus geyeri var. *triquetrus*
Pea Family

Covered Species



Gayle Marrs-Smith

Description: Annual plant, with somewhat flexuous (zigzag) stems 10 - 20 cm (4 - 8 in.) long. Leaves and stems are covered with a fine ashy pubescence (hairy). Leaves 3 - 5 cm (1.2 - 2 in.) long, leaflets 9, elliptical, 4 - 15 mm (to 0.6 in.) long. Inflorescence with bilateral (pea-like) flowers; petals white, to 5 mm (0.2 in.) long. Fruit a pod, curved, oblong, triangular in cross section, 1 mm or less wide, somewhat flattened. Time of flowering: April to May.

Habitat: Found in Mojave desert scrub communities, in open, deep sandy soils of washes or dunes, and in sandy soils formed from sedimentary formations adjacent to Lake Mead and its tributary valleys; in Nevada dependent on sand dunes or deep sand. Plants occur in low numbers at most locations, and may not germinate every year depending on rainfall. Elevations: 460 - 670 m (1,500 - 2,200 ft).

Range: Endemic to the southeastern Mojave Desert. Known in Clark County, Nevada, in the Dry Lake Valley, Overton Arm, Sandy Cove, and vicinity of Glendale and Riverside. Also found in Lincoln County, Nevada, and Mohave County, Arizona.

Comments: Germination appears to be dependent on above-average rainfall. This species is very rare and difficult to protect because it only germinates during favorable years. Range of this species somewhat overlaps with sticky buckwheat (*Eriogonum viscidulum*).

Special Remarks: This is a State of Nevada Critically Endangered Species.

CURVE-PODDED MOJAVE MILKVETCH

Astragalus mohavensis
var. *hemigyus*

Evaluation Species

Pea Family



Patrick Leary

Description: Herbaceous annual or short-lived perennial to 40 cm (15.7 in.) tall. Stems numerous, ascending or horizontal. Leaves 2 - 10 cm (0.8 - 4.0 in.) long, with silvery pubescence, one-pinnate; leaflets 5 to 11, to 15 mm (0.6 in.) long, elliptic and either blunt or somewhat indented at apex. Inflorescence longer than leaves, with up to 10 flowers. Flowers bilateral (pea-like); sepals fused, 5, pubescent with white and black hairs; petals purple, 6 - 8 mm (to 0.3 in.) long. Fruit a pod (legume), curved into a half-circle, to 3 cm (1.2 in.) long, with short beak, leathery, and strongly veined. Time of flowering: April to June.

Habitat: Occurs in carbonate gravels and derivative soils on terraced hills and ledges, open slopes, and along washes in creosote-bursage, blackbrush, and mixed scrub communities. Elevations: 914 - 1,707 m (3,000 - 5,600 ft).

Range: Nevada endemic; known from Clark, Lincoln, and Nye counties.

Comments: Curve-podded Mojave milkvetch, more commonly called halfring milkvetch, is similar to var. *mohavensis* but has slightly smaller flowers, and shorter, strongly curved or coiled pods.

Special Remarks: This is a State of Nevada Critically Endangered Species.

MOKIAK MILKVETCH

Astragalus mokiacensis

Pea Family

Evaluation Species



Gayle Marrs-Smith

Description: Perennial herb, 10 - 40 cm (4 - 15.7 in.) tall. Stems erect and ascending. Leaves 5 - 15 cm (2 - 5.9 in.) long; leaflets 11 to 19, obovate, 5 - 20 mm (0.8 in.) long. Inflorescence a very open raceme, with 10 - 25 flowers from near or above middle of peduncle. Flowers bilateral (pea-like); sepals fused, 6 - 9 mm (to 0.3 in.); petals pink-purple with banner 14 - 18 mm (to 0.7 in.) long. Fruit a pod, 5 - 6 mm (to 0.2 in.) in diameter, sessile, ascending, and narrowly ellipsoid, straight or gently curved. Time of flowering: April to June.

Habitat: Sandy soils. On bluffs, cliff terraces, gullied badlands, disturbed areas along streams. Elevations: 750 - 1,530 m (2,460 - 5,020 ft).

Range: Clark County, Nevada. Known to occur in the Gold Butte area: Grapevine Spring, north of Jumbo Peak, and Virgin Mountains. Also known from Arizona and Utah.

Comments: Flowering stage and pod maturation essential for correct identification since species is closely related to *A. preussii*.

CLOKEY EGGVETCH

Astragalus oophorus var. *clokeyanus*

Covered Species

Pea Family



Jan Nachlinger

Description: Low slender perennial herb, rarely hairy. Stems to 10 cm (4 in.) long and spreading. Leaves 4 - 14 cm (1.5 - 5.5 in.) long with 9 - 19 elliptical-shaped leaflets less than 1 cm (0.4 in.) long. Inflorescence loosely arranged with 4 - 10 small flowers on a stalk. Flowers bilateral (pea-like); sepals 5, fused, bell shaped, hairless; petals bright purplish with whitish eyespot and wingtips, upper petals 5 mm (0.2 in.) wide. Fruit a papery pod, strongly inflated, 1 - 2 cm (0.8 in.) wide, splitting into two papery halves when mature. Time of flowering: late May to June.

Habitat: Found in pinyon-juniper and mixed conifer communities on ridges and open slopes, in washes and gravelly limestone soils. Elevations: 2,075 - 2,775 m (6,800 - 9,100 ft).

Range: Southern Nevada endemic, in Clark and Nye counties. Considered endemic to the Spring Mountains until recent discoveries on the Nellis Air Force Range. Known from the Spring Mountains (Lee Canyon, Carpenter Canyon, Wheeler Pass, and Cold Creek areas), and the Belted Range.

Comments: The stems and leaves are smooth in comparison to the hairy stems and leaves of other eggvetch species.

SPRING MOUNTAINS MILKVETCH

Astragalus remotus

Pea Family

Covered Species



Gayle Marrs-Smith

Description: Erect perennial, to 50 cm (20 in.) high. Stems with appressed hairs. Leaves 5 - 15 cm (2 - 6 in.) long, with 11 - 17 widely spaced leaflets 2 - 12 mm (to 0.5 in.) long. Inflorescence extending beyond leaves, with 4 - 8 flowers per stalk, ascending. Flowers bilateral (pea-like); sepals with black or black-white hairs; petals white with purple tips, 10 - 13 mm (to 0.5 in.). Pods erect, flattened, triangular shaped, 1.5 - 3 cm (0.6 - 1.2 in.) long. Time of flowering: April to early June.

Habitat: Found in juniper, sagebrush, blackbrush, and Mojave desert scrub communities. Occurs in gravelly soils, rocky hillsides, and active washes. Elevations: 900 - 1,700 m (2,950 - 5,550 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from the southeastern slopes of the Spring Mountains in the Red Rock Canyon National Conservation Area, from Rocky Gap Road in Red Rock Canyon to Goodsprings.

Comments: Distinguished from other milkvech species by its white flowers and widely spaced leaflets.

TRIANGULAR - LOBED MOONWORT

Botrychium ascendens

Evaluation Species

Adder's Tongue Family



Jan Nachlinger

Description: Small perennial fern to 10 cm (4 in.) tall. Stem divided into two segments, a single sterile frond (fern leaf), and a fertile sporophore (grape cluster). Frond bright yellow-green, once pinnatifid, up to six pairs of strongly ascending, narrowly triangular pinnae (leaflets) with deeply lacerated margins. Sporophore (sterile segment) longer than frond, branched, bears grape-like sporangia. Fertile late spring to summer.

Habitat: In Nevada this species is most commonly found in moist ground in deep shaded spring areas. Elevations: 2,710-3,400 m (8,890 - 11,155 ft).

Range: Clark County, Nevada. Known so far only from the Spring Mountains. Also known from British Columbia, Ontario, Yukon, Alaska, California, Montana, Oregon, and Wyoming.

Comments: Commonly referred to as upswept moonwort. Distinguished from other *Botrychium* species by its strongly ascending pinnae (45-90°) with lacerated margins and yellow-green color.

Special Remarks: Recent collections from the Spring Mountains reveal that there are at least six species of moonworts in the area, including *B. lineare*, a candidate species for federal listing.

DAINTY MOONWORT

Botrychium crenulatum
Adder's Tongue Family

Evaluation Species



Steve Wirt

Description: Perennial fern less than 10 cm (4 in.) tall. The single yellow green frond (fern leaf) is divided into an elongated fertile (spore-bearing) segment and a short sterile (vegetative) segment, both arising from a common stalk about half the length of the entire frond. Sterile segment once pinnatifid with broadly fan-shaped leaflets, distinct veins and crenulate margins. Fertile segment longer than sterile one, branched once to twice-pinnate, with grape-like sporangia. Fertile June to August.

Habitat: Wetland-dependent, commonly found in marsh and spring areas. Elevations: 2,500 - 3,399 m (8,200 - 11,150 ft).

Range: Known in the Spring Mountains from several springs. Also known to occur in Arizona, California, Idaho, Montana, Oregon, Utah, Washington, and Wyoming.

Comments: Distinguishing features include broadly fan-shaped leaflets with crenulate margins and prominent veins.

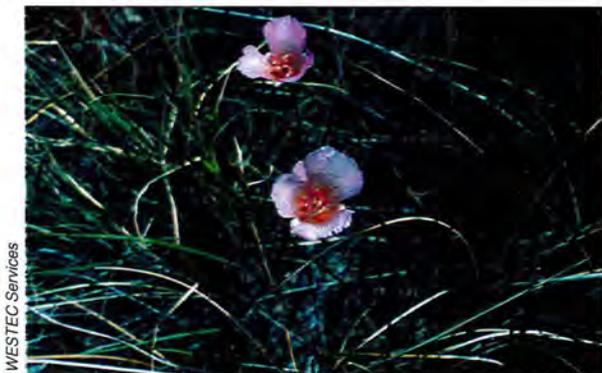
Special Remarks: Recent collections from the Spring Mountains reveal that there are at least six species of moonworts in the area, including *B. lineare*, a candidate species for federal listing.

ALKALI MARIPOSA LILY

Calochortus striatus

Covered Species

Lily Family



WESTEC Services

Description: Perennial herb arising from a small underground storage bulb. Stems 2 - 3, slender, erect, to 30 cm (12 in.) in height. Leaves linear, as long as stems. Inflorescence in clusters with 2-8 flowers. Flower petals light purple, 20 - 30 mm (0.8 - 1.2 in.), striated with darker purple veins; lower half of petal sparsely hairy, with triangular gland at base. Fruit a capsule, 4 - 5 cm (1.8-2 in.) long, angled. Time of flowering: April to June.

Habitat: Riparian communities; in Nevada, restricted to alkaline meadows or seep areas. Elevations: 640 - 1,128 m (2,100 - 3,700 ft).

Range: Endemic to the Mojave Desert in California and Nevada. In Clark County, known only from two locations in the Red Rock Canyon National Conservation Area and Ash Meadows.

Comments: The conspicuously purple-lined petals and the triangular-shaped glands separate this species from any other in Clark County.

Special Remarks: Alkali mariposa lily has been rarely collected in Nevada, and population trends are unknown.

CLOKEY PAINTBRUSH

Castilleja martinii var. *clokeyi*

Covered Species

Figwort Family



Jan Nachlinger

Description: Perennial plant to 50 cm (20 in.) tall. Stems erect, unbranched, with glandular pubescence. Leaves alternate, sessile, glandular pubescent, 1 - 4 cm (0.4 - 1.6 in.) long; upper leaves with 3 - 5 broad lobes and wavy margins. Inflorescence showy due to the orange-red bracts below the flowers that resemble leaves. Flower sepals may be colored as bracts; petals greenish, 2.5 - 3.6 cm (1.0 - 1.4 in.), twice as long as sepals. Fruit a capsule, to 14 mm (0.5 in.) long. Time of flowering: May to August.

Habitat: In bristlecone pine, mixed conifer, and pinyon-juniper habitats, on dry gravelly slopes. Elevations: 1,980 - 3,120 m (6,500 - 10,250 ft).

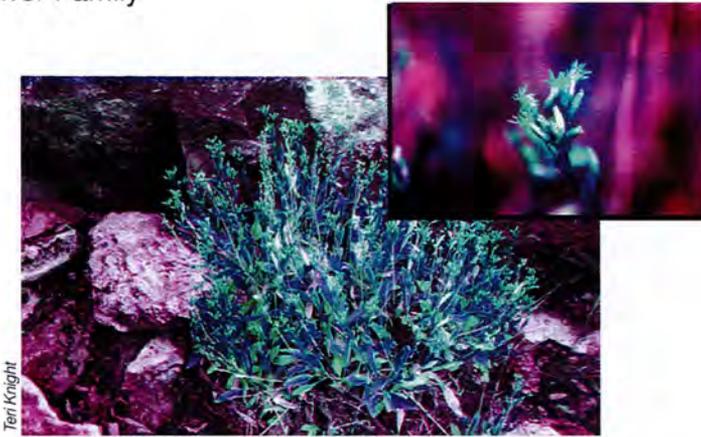
Range: Mountain ranges of southern Nevada. In Clark County, known from the Spring Mountains (Deer Creek, Macks, Kyle, Lee, and Clark canyons), and the Sheep Range. Also known from Nye County, Nevada, and Inyo County, California.

Comments: Can be distinguished from other *Castilleja* by its broader lobed leaves, glandular pubescence (glandular hairs), and petals being twice as long as sepals.

REMOTE RABBITBRUSH

Chrysothamnus eremobius
Sunflower Family

Evaluation Species



Teri Knight

Description: Low perennial shrub, to 30 cm (11.8 in.) tall, much branched from a woody caudex. Stems leafy, glabrous, dying back each year. Leaves 4 - 8 cm (1.6 - 3.1 in.) long, 10 - 25 mm (0.4 - 1.0 in.) wide, oblanceolate, entire, and nearly glabrous. Inflorescence congested with few discoid flower heads, to 8 mm (0.3 in.) tall. Phyllaries (bracts) 20 - 24, with green spots at tip. Ray florets absent; disk florets 5 - 6, yellow. Seed (achene) 3 mm (0.1 in.) long, covered with hairs. Time of flowering: August to September.

Habitat: Crevices or rubble of steep north-facing carbonate rock cliffs, in and just below the pinyon-juniper community. Elevations: 1,478 - 1,951 m (4,850 - 6,400 ft).

Range: Nevada endemic. Known only from the Sheep and Pintwater ranges, Clark and Lincoln counties, Nevada.

Comments: Similar to Charleston rabbitbrush (*C. gramineous*) in leaf and stems, but smaller flower heads (to 8 mm versus 17.5 mm), and keeled rather than unkeeled phyllaries. Leaves not resinous punctate.

CLOKEY THISTLE

Cirsium clokeyi
Sunflower Family

Covered Species



Description: Biennial or perennial herb, 1 - 2 m (3.3 - 6.6 ft) tall. Stems striated, erect, and glabrous (without hair). Basal leaves spiny, to 29 cm (11.4 in.) long, crowded into whorls and sparsely hairy; stem leaves alternate and sessile. Inflorescence a discoid head, subtended by spiny bracts 2 - 3.5 cm (0.8 - 1.4 in.) long; ray florets absent, disk florets pale, rosy purple. Fruit an achene, 6.5 mm (0.26in.) long, with whitish pappus bristles. Time of flowering: July to August.

Habitat: Known to occur in alpine, bristlecone pine, and mixed conifer communities, on gravelly slopes, dry ridges, avalanche chutes, scree slopes, and around springs. Elevations: 2,774 - 3,350 m (9,100 - 11,000 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Found in Deer Creek, Lee Canyon, Kyle Canyon, and on high elevation ridges from Griffith Peak to Mummy Mountain.

Comments: Distinguished from other thistles in the Spring Mountains by the long spines equaling or surpassing flower heads. Said to be one of the most heavily armed thistles.

VIRGIN RIVER THISTLE

Cirsium virginense
Sunflower Family

Evaluation Species



Description: Spiny perennial herb, 6 - 20 dm (23.6 - 78 in.) tall, from taproot. Stems up to 15 dm (59 in.) tall with soft white wooly hairs. Leaves pubescent; basal leaves in rosettes, to 35 cm (13.8 in.) long, to 5 cm (2 in.) wide, unlobed, with spines 4 mm (0.16 in.) long; stem leaves to 15 cm (6 in.) long, decurrent (extending down) at base, dentate to pinnatifid. Inflorescence a cluster of discoid heads, to 2 cm (0.8 in.) tall, 1.2 - 3.2 cm (1.3 in.) wide. Phyllaries brownish to straw colored, ovate-lanceolate to narrower, spines up to 6 mm (0.2 in.) long. Ray florets absent; disk florets pink to lavender. Fruit an achene, light to dark brown, 4 mm (0.16 in.) long. Time of flowering: June to September.

Habitat: Open, moist, alkaline clay soils of seep and spring areas, and gypsum knolls; dependent on wetland habitats. Elevations: 380 - 660 m (1,246 - 2,165 ft).

Range: Virgin River drainage, Clark County, Nevada; also in Arizona and Utah.

Comments: Perennial habit, small flower head and long decurrent leaf bases are diagnostic for this species. *C. mohavense*, a close relative, is a biennial species which does not occur in Clark County, Nevada.

UNUSUAL CATSEYE

Cryptantha insolita
Forget-me-not Family

Evaluation Species



Description: Biennial or short-lived perennial herb, to 40 cm (15.7 in.) tall. Stems 1 to 2, with appressed hairs and bristles. Leaves mostly basal, to 3 cm (1.2 in) long, spatula-shaped, covered with appressed spreading bristles. Inflorescence elongate, open, weakly bristly, crowded with flowers. Flower sepals to 9 mm (0.3 in.) long; petals white, with a corolla tube 3 - 4 mm (0.16 in.) long. Fruit 1 - 4 nutlets (one-seeded segments), 4 mm (0.16 in.) long, distinctly keeled on the outer face, with short tubercles (wart-like projections). Time of flowering: April to June.

Habitat: Presumed to occur on light-colored alkaline clay flats and low hills in creosote bush community. Elevations: 579 - 610 m (1,900 - 2,000 ft).

Range: Clark County, Nevada. Known only from the Las Vegas Valley.

Comments: This species is likely extirpated due to urban expansion in the Las Vegas Valley. Last known collection was in 1942. Requires mature fruit for identification.

Special Remarks: This is a State of Nevada Critically Endangered Species.

RIPLEY'S [SANICLE] BISCUITROOT

Cymopterus ripleyi var. *saniculoides*

Evaluation Species

Carrot Family



Description: Stemless perennial herb, to 15 cm (6 in.) tall. Leaves borne directly from the woody base. Leaf blades up to 5 cm (2 in.) long, palmately dissected into three lobes, each lobed once or twice more. Petioles (leaf stalks) to 10 cm (4 in.) long, purple-black in color. Inflorescence longer than leaf stalk, bearing a single globose umbel 5 - 9 mm (to 0.3 in.) in diameter. Flowers numerous and densely congested; sepals triangular; petals 5, purple. Fruit dry, to 7 mm (0.3 in.), wedge-shaped to obovate, hairy. Time of flowering: April to May.

Habitat: Found in desert washes and disturbed areas, in loose sandy, gravelly and somewhat alkaline soils; found in blackbrush, shadscale, and mixed scrub communities. Elevations: 960 - 2,048 m (3,150 - 6,720 ft).

Range: Nevada endemic. Known from Lincoln and Nye counties, Nevada.

Comments: This species has not been found in Clark County, but occurs close to the northern County line.

JAEGER WHITLOWGRASS

Draba jaegeri
Mustard Family

Covered Species



Janet Bair

Description: Low spreading, tufted perennial, to 6 cm (2.4 in.). Basal leaves whorled, narrow, egg-shaped, grayish cast, 4 - 6 mm (1.6 - 2.4 in.) long, 3 - 4 mm (1.2 - 1.6 in.) wide, covered with stellate hairs. Inflorescence a leafless stalk with clusters of flowers on top. Flower sepals 4, purplish; petals 4, white to yellowish, 5 - 6 mm (to 0.2 in.) long. Style conspicuously long, 3 - 5 mm (to 0.2 in.). Fruit a silicle, flattened, with round outline, 4 - 6 mm (to 0.2 in.) long, densely covered with stellate hairs. Time of flowering: June to August.

Habitat: Occurs in alpine and bristlecone pine communities between 2,940 and 3,410 m (9,650 and 11,200 ft) elevations, in alpine fell fields, talus rubble, rock crevices, and near or at timberline.

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from along and below the ridgeline between Griffith Peak and Mummy Mountain. Also occurs in upper Lee Canyon, Deer Creek, and Kyle Canyon.

Comments: Distinguished from other *Draba* by the leafless stalk of the inflorescence, stellate hairs, white flower petals, and by the long style.

CHARLESTON DRABA

Draba paucifructa
Mustard Family

Covered Species



Description: Low perennial herb, 4 - 12 cm (1.6 - 4.7 in.) tall. Stems 1 - 4, glabrous. Leaves mostly basal rosettes, leaves egg-shaped, faintly toothed, 3 - 5 mm (0.2 in.) long, covered with dense stellate hairs; stem leaves sparse. Inflorescence a raceme, 3-12 flowered. Flower sepals 4; petals 4, light yellow, turning white when older; style less than 1 mm long. Fruit flattened (silique), 5- 11 mm (to 0.4 in.) long. Time of flowering: June to July.

Habitat: Occurs in alpine and bristlecone pine communities, at and above timberline, on rock ledges and in moist areas such as seeps, avalanche chutes, and late-lying snow drifts. Elevations: 2,500 - 3,475 m (8,200 - 11,400 ft).

Range: Endemic to the Spring Mountains with all known populations in the Spring Mountains National Recreation Area, along Charleston Peak ridgeline, upper Kyle Canyon, and upper Lee Canyon.

Comments: Distinguished from *Draba jaegeri* by the yellow flower petals and the shorter than 2 mm style; also occurs in moist places. This species resembles *Draba brachistylis* which occurs at lower elevations.

SILVERLEAF SUNRAY

Enceliopsis argophylla
Sunflower Family

Evaluation Species



Gayle Marrs-Smith

Description: Long-lived perennial with woody taproot, cluster of leaves, and flower stalks, to 45 cm (18 in.) tall. Leaves basal, 4 - 10 cm (1.5 - 4 in.) long, 2 - 7 cm (to 2.6 in.) wide, oblong-ovate to rhombic-ovate, covered with silvery fine down. Inflorescence with a solitary flower head on a leafless flower stalks. Flower heads radiate, to 10 cm (4 in.) across; ray florets 34 - 40, yellow, 2 cm (0.8 in.) long; disk florets yellow. Fruit an achene, small, dry, thin-walled, covered with silky hairs 2 mm (0.08 in.) long, bears two awns. Time of flowering: April to May.

Habitat: Dry, relatively barren areas of gypsum badlands, and in partially eroded soils containing gypsum. Elevations: 355 - 725 m (1,165 - 2,380 ft).

Range: In Clark County, Nevada, restricted to the Lake Mead area along the North Shore Road from Las Vegas Wash to Overton. Also known to occur in Utah and Arizona.

Comments: Silverleaf sunray is one of the most impressive members of the sunflower family to be found in the desert. Differs from Panamint daisy (*E. nudicaulis*) by its numerous and shorter ray florets of 2 cm (vs. 4 cm), wider flower head, and longer leaf blade of 10 cm (vs. 6 cm).

NEVADA WILLOWHERB

Epilobium nevadense
Evening-primrose Family

Evaluation Species



Description: Low shrubby perennial with woody rootstock, 12 - 25 cm (4.7 - 9.8 in.) tall. Stems prostrate, woody at base with dark brown exfoliating bark; herbaceous above, slender, straw colored, often purple tinged. Leaves nearly hairless, somewhat glaucous, green or purplish, with small teeth and tipped with a stout rigid gland; lower leaves opposite, obtuse, to 1.5 cm (0.6 in.) long, and to 3 mm (0.12 in.) wide; upper leaves alternate, narrower, and reduced. Inflorescence a loose raceme. Flowers sessile or on short glandular stalks; sepals glandular, reddish tinged, with teeth turned backwards when flowers open; petals rosy-purple, 6 - 7 mm (0.3 in.) long, notched at the tip; style 10 mm (0.4 in.) long, bearing four lobes. Fruit a capsule, glandular pubescent. Seeds small, brown, with a tuft of white hairs 5 mm (0.2 in.) long. Time of flowering: July to September.

Habitat: Limestone slopes with outcrops or talus. Elevations: 1,830 - 2,800 m (6,000 - 9,200 ft).

Range: Clark, Eureka, and Lincoln counties, Nevada. Known from Kyle and Fletcher canyons in the Spring Mountains. Also found in Washington County, Utah.

Comments: Distinguished from other *Epilobium* in the area by having a minute corolla tube, rosy-purple (not red) petals, and style with four lobes.

SHEEP FLEABANE

Erigeron ovinus
Sunflower Family

Evaluation Species



Gayle Marrs-Smith

Description: Perennial herb from a taproot and stout branching woody base, 5 - 15 cm (2 - 6 in.) tall. Stems densely pubescent (hairy). Leaves densely hairy like stems. Basal leaves obovate, to 7 cm (2.8 in.) long, 13 mm (0.5 in.) wide; stem leaves reduced, narrower, oblanceolate to linear. Inflorescence with strictly discoid flower heads, solitary, sometimes two. Ray florets absent; disk florets 4 - 6 mm (0.2 in.) long, pappus 15 - 25 firm bristles. Fruit an achene. Time of flowering: June to July, sometimes October after late summer rains.

Habitat: Found on limestone rock outcrops, and in crevices of north-facing cliffs, in pinyon-juniper and mixed conifer forest communities. Elevations: 1,890 - 2,560 m (6,200 - 8,400 ft).

Range: Nevada endemic. Known from the Sheep Range in Clark County, and Groom Range and Mount Irish in Lincoln County, Nevada.

Comments: Distinguished from *E. caespitosus* by the densely glandular flower heads, by longer hairs on stems and leaves, and by the lack of ray florets.

INCH HIGH FLEABANE

Erigeron uncialis var. *conjugans*

Covered Species

Sunflower Family



Jan Nachlinger

Description: Small herbaceous perennial, to 5 cm (2.0 in.) tall with a slender taproot. Leaves basal, whorled, elliptic to circular, to 4 cm (1.6 in.) long; leaf stalk with appressed hairs, often much longer than leaf. Inflorescence with solitary radiate flower head; peduncles (flower stalks) leafless, hairy. Flower heads bear 15 - 40 ray florets, white to light rose, 4 - 6 mm (to 0.2 in.) long; disk florets yellow, less than 4 mm (0.15 in.) long. Fruit an achene, short hairy and 2-nerved, to 10 mm (0.4 in.) long; pappus of many bristles. Time of flowering: June to July.

Habitat: Occurs in bristlecone pine, mixed conifer, pinyon-juniper, and sagebrush communities; restricted to crevices in faces of limestone cliffs and large boulders. Elevations: 2,225 - 3,500 m (7,300 - 11,500 ft).

Range: Southern Nevada endemic. Known from Clark, White Pine, and Nye counties. In Clark County known to occur in the Spring Mountains (Kyle, Lee, and Carpenter canyons and Deer Creek), and in the Sheep Range.

Comments: Distinguished from other *Erigeron* species by its appressed hairs on leaf stalk and lower part of flowering stalk. In the MSHCP this species is listed as ssp. *conjugans*.

FORKED [PAHRUMP VALLEY] BUCKWHEAT

Eriogonum bifurcatum
Buckwheat Family

Covered Species



Gayle Mars-Smith

Description: Low spreading annual plant, to 40 cm (16 in.) high and 30 - 150 cm (12 - 60 in.) across. Main flowering stem is short. Basal leaves round, blades to 3 cm (1.2 in.) long and wide, with dense white pubescence underneath. Inflorescence of forked branches, spreading widely, forming a flat-topped crown. Flowers with involucre (bracts); flowers 10 - 20, white with greenish to reddish midribs. Fruit a three-sided achene. Time of flowering: mid-May to mid-June.

Habitat: Salt desert scrub community with mostly barren, saline, heavy clay or silty hardpan soils; occurs on or near dry lakebeds, stabilized sand dunes, and associated mesquite woodlands. Elevations: 700 - 850 m (2,290 - 2,800 ft).

Range: Endemic to the Mojave Desert, along the border of Nevada and California. Occurs within limited areas in Pahrump Valley and Sandy Valley, Nevada, and in Steward Valley, California.

Comments: This is a short-lived (ephemeral) species, germinating only after above average precipitation events. The specific name refers to the forked branches of the inflorescence.

LAS VEGAS VALLEY BUCKWHEAT

Eriogonum corymbosum var.
glutinosa

Buckwheat Family

Evaluation Species



Gina Glenn

Description: Perennial large shrub, round, compact, to 120 cm (47 in.) tall. Stems and branches smooth, not angled. Leaves tomentose, rounded at apex, blade 5 - 15 mm (to 0.6 in.) wide. Inflorescence cymose (broad and flat-topped) throughout with involucre (bracts) dichotomously arranged, tomentose to floccose, flowers bright to pale yellow and showy. Time of flowering: October to November.

Habitat: Fine-textured gypsum soils, occasional sandy or sandy clay soils. These habitat features apply specifically to the Las Vegas populations. Elevations: 579 - 1,170 m (1,900 - 3,839 ft).

Range: Clark County, Nevada, and in Arizona and Utah. In Clark County, this species is largely confined to the Las Vegas Valley area where it is disjunct from the remainder of its range.

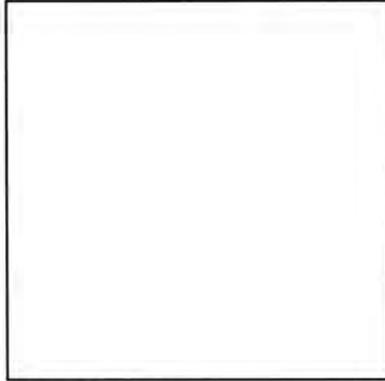
Comments: *E. corymbosum* var. *aureum*, as listed in the MSHCP, is a misapplied name for the Nevada geographic area; the current variety name is *glutinosa*. However, recent studies show that the Las Vegas population may be part of the variety *nilesii*. Las Vegas Valley buckwheat populations have greatly declined due to urban development.

CLOKEY BUCKWHEAT

Eriogonum heermannii var. *clokeyi*

Evaluation Species

Buckwheat Family



No photo available at this time.

Description: Perennial shrub, densely branched, 10 - 60 cm (to 23.6 in.) tall. Stems smooth, glabrous, swollen at nodes. Leaves alternate, round to spatula shaped, to 17 mm (0.7 in.) long, hairy on one or both sides. Inflorescence a raceme, cushion-like and open. Flower sepals 1.5 mm long, white; petals lacking. Fruit an achene, 2.5 mm (0.1 in.) long. Time of flowering: June to September.

Habitat: Limestone outcrops, talus, scree, and gravelly washes and banks, in creosote, saltbush, and blackbrush communities. Elevations: 1,219 - 1,829 m (4,000 - 6,000 ft).

Range: Southern Nevada endemic, in Clark and Nye counties. Known from the Spring Mountains and Sheep Range.

Comments: Diagnostic features for var. *clokeyi* include a racemose inflorescence versus dichotomously branched (forked inflorescence); also lower flowers bloom first versus the terminal flowers first.

STICKY BUCKWHEAT

Eriogonum viscidulum
Buckwheat Family

Covered Species



Description: Tall erect, diffusely branched annual plant reaching 40 cm (16 in.) in height. Stems and branches finely glandular, sticky, and are often covered with adhering sand particles. Leaves basal, kidney-shaped. Inflorescence open and diffuse, peduncles slender, to 2.5 cm (1 in.) long. Individual flowers yellow, 2 mm (0.08 in.) long, smooth to sparsely hairy. Time of flowering: April to May.

Habitat: Occurs in low dunes, washes, beaches, and areas of aeolian accumulation, in loose sandy soils, at 460 - 760 m (1,500 - 2,500 ft) elevations within Mojave desert scrub community.

Range: Rare eastern Mojave endemic, known from Bunkerville and Riverside, in the Virgin River drainage from Sand Hollow Wash to confluence of the Colorado River at Middle Point, along Muddy River from Weiser Wash to confluence with the Virgin River. Range of *E. viscidulum* somewhat overlaps with *Astragalus geyeri* var. *triquetrus* because of similar habitat features.

Comments: The viscid (sticky) stems distinguish this species from other related annual buckwheat species.

Special Remarks: This is a State of Nevada Critically Endangered Species.

CLOKEY GREASEBUSH

Glossopetalon clokeyi
Crossosoma Family

Covered Species



Jan Nachlinger

Description: Perennial shrub, 15 - 20 cm (5.9 - 7.9 in.) high. Stems intricately branched, woody, branches dark green, angled, and spiny. Leaves oblong, alternate, 5 - 6 mm (0.2 in.) long, with continuous margins (entire), lack spiny tips. Inflorescence axillary with single flowers along stems. Flower sepals 5; petals 5, white, 3 mm (0.1 in.) long. Fruit a follicle that splits open to release seeds. Time of flowering: May to June.

Habitat: Mixed conifer community, in cracks and crevices on the northern side of vertical or near-vertical limestone cliffs. Elevations: 2,100 - 2,800 m (7,000 - 9,200 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from few sites in Kyle Canyon, and also in Carpenter Canyon and Robbers Roost.

Comments: Clokey greasebush can be distinguished from pungent greasebush (*G. pungens*) by its lack of spine-tipped leaves. This species was formerly known as *Forsellesia clokeyi*.

SMOOTH PUNGENT GREASEBUSH

Glossopetalon pungens var. *glabrum*

Covered Species

Crossosoma Family



Jan Nachlinger

Description: Perennial shrub, matted, 5 - 20 cm (2 - 7.9 in.) high. Stems low, glabrous (not hairy), diffusely branched. Leaves narrow, 7 - 8 mm (0.3 in.) long, glabrous, elliptical, tapered at the tip and terminating into a 1-mm spine. Inflorescence with solitary flowers, terminal (rather than axillary). Flower sepals 5, petals 5, white, 7 - 8 mm (0.3 in.) long. Fruit a brown leathery follicle with one seed. Time of flowering: April to June.

Habitat: Pinyon-juniper and sagebrush communities, in limestone and sandstone cliffs, and rocky slopes between 1,930 - 2,130 m (6,000 - 7,000 ft) elevations.

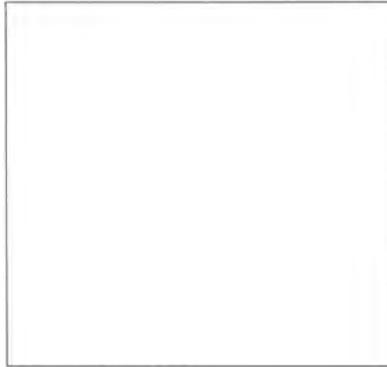
Range: Endemic to three mountain ranges in the eastern Mojave Desert. Known in Clark County from the Spring Mountains (Mount Potosi, Bridge Mountain) and the Sheep Range. Also known from Clark Mountain in San Bernardino County, California.

Comments: The name smooth dwarf greasebush is more commonly used. Distinguished from var. *pungens* by the absence of hairs on stems and leaves. This species was formerly known as *Forsellesia pungens* var. *glabra*.

PUNGENT DWARF GREASEBUSH

Glossopetalon pungens var. *pungens* Covered Species

Crossosoma Family



No Photo available at this time

Description: Low perennial shrub, matted, 5 - 20 cm (2 - 7.9 in.) high. Stems diffusely branched, scabrous-pubescent (hairy), but not spiny. Leaves narrow, 7 - 8 mm (0.3 in.) long, scabrous-pubescent, elliptical, tapered at the tip, and terminating into a 1-mm spine. Inflorescence with solitary flowers, terminal (rather than axillary). Flower sepals 5; petals 5, white, 7 - 8 mm (0.3 in.) long. Fruit a brown leathery follicle. Time of flowering: April to June.

Habitat: Pinyon-juniper and sagebrush communities, in limestone cliffs and rocky slopes between 1,830 - 2,130 m (6,000 - 7,000 ft) elevations.

Range: Known from the Sheep Range and Mount Sterling area in the Spring Mountains, Clark County, Nevada.

Comments: The name rough dwarf greasebush is more commonly used. Distinguished from var. *glabrum* by the presence of scabrous hairs on stems and leaves.

RED ROCK CANYON ASTER

Ionactis caelestis
Sunflower Family

Covered Species



Patrick Leary

Description: Herbaceous perennial with woody taproot. Stems ascending, green, slender, 12 - 25 cm (4.7 - 9.8 in.) tall, and covered with orange-yellow resin droplets. Leaves oblong, alternate, sessile, with orange-yellow resin droplets; lower leaves 4 - 6 mm (0.2 in.) long, upper ones small and bract-like. Inflorescence a radiate head. Ray florets 7 - 8, blue or blue-violet; disk florets 15 - 20, yellow. Fruit an achene. Time of flowering: July to August.

Habitat: Open mixed conifer forest. Potential habitat includes a large area of Aztec sandstone in the Red Rock escarpment. Known to occur in crevices of sandstone outcrops with ponderosa pine. Elevations: 1,800 - 1,950 m (6,000 - 6,500 ft).

Range: Endemic to the Red Rock Canyon area in the Spring Mountains, Clark County, Nevada. Known from a single population in the Red Rock Canyon National Recreation Area.

Comments: The species name *caelestis* means belonging to or coming from heaven.

HIDDEN IVESIA

Ivesia cryptocaulis

Rose Family

Covered Species



Janet Blair

Description: Herbaceous perennial, mat-forming, to 3 cm (1.2 in.) high. Stems with creeping growth habit, threadlike, glandular pubescent, with ascending tips. Leaves glandular pubescent, to 2.5 cm (1 in.) long, with 5 - 10 pairs of leaflets. Inflorescence terminal (at the tip) and flat-topped. Flowers petals 5, yellow, narrow, 5 - 10 mm (0.4 in.) long. Time of flowering: June to August.

Habitat: Alpine community. Occurs on talus and scree slopes, and on rocky ridgelines. Elevations: 3,300 - 3,500 m (10,800 - 11,480 ft).

Range: Endemic to the Spring Mountains. Known from Charleston Peak and Mummy Mountain. Hidden ivesia is one of few species growing at the highest elevations in the Spring Mountains.

Comments: Distinguished from *Ivesia jaegeri* by its small stature and creeping nature.

JAEGER IVESIA

Ivesia jaegeri

Rose Family

Covered Species



Janet Bair

Description: Herbaceous perennial. Stems finely pubescent, glandular, weak, decumbent or drooping, 5 - 12 cm (2 - 4.7 in.) long. Leaves mostly basal, one-pinnate with 4 - 8 pairs of leaflets; leaflets sparsely pubescent. Inflorescence a terminal cyme (at the tip), up to 10 flowers. Flowers 5 - 10 mm (0.4 in.) wide; sepals 5; petals 5, yellow, 2 mm (0.08 in.) long. Fruit an achene, 2 mm long, slightly ridged. Time of flowering: May to July.

Habitat: Bristlecone pine and mixed conifer communities. Occurs on bedrock and crevices of vertical and near-vertical cliff faces of limestone, sandstone, and dolomite outcrops. Elevations: 1,500 - 3,500 m (5,200 - 11,200 ft).

Range: In Clark County, Nevada, known from the Spring Mountains in Lee, Kyle, and Carpenter canyons, Deer Creek, La Madre Mountain and Mount Potosi. Also known from Clark Mountain, San Bernardino County, California.

Comments: This plant may appear fernlike upon first glance. Distinguished from *Ivesia cryptocaulis* by its drooping stems hanging over cliff faces.

HITCHCOCK BLADDERPOD

Lesquerella hitchcockii
Mustard Family

Covered Species



Jan Nachlinger

Description: Small perennial with woody rootstock. Stems 1 - 4 cm (0.4 - 1.6 in.) long, with stellate hairs. Leaves simple, pubescent, spatulate or oblanceolate, to 1.2 cm (0.47 in.) long. Inflorescence a raceme, few-flowered. Flower sepals 4, petals 4, pale yellow, to 7 mm (0.3 in.) long. Fruit a capsule (silique), reddish in color, round and smooth, 3 - 4 mm (0.15 in.) long. Time of flowering: June to August.

Habitat: Alpine, bristlecone pine, and mixed conifer communities, on flat or sloping ground, talus slopes, dry ridges, and rocky hillsides. Elevations: 2,500 - 3,475 m (8,200 - 11,400 ft).

Range: Known from Clark, Nye, and White Pine counties, Nevada. In Clark County, known to occur in the Spring Mountains along the Charleston Peak Trail and South Loop Trail, Kyle and Lee canyons, and Mummy Mountain; also occurs in the Sheep Mountains.

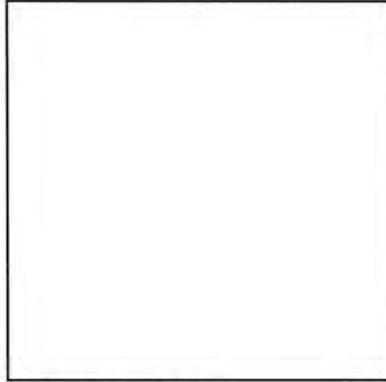
Comments: The round fruit and yellow, four-petaled flowers distinguish this plant from other similar-looking species.

DESERT [CLARK] PARSLEY

Lomatium graveolens var. *alpinum*

Evaluation Species

Carrot Family



No photo available at this time.

Description: Perennial herb with stout taproot, to 20 cm (8 in.) tall, bad-smelling. Stems ascending, well surpassing the leaves. Leaves basal, in clusters, with persistent old leaf bases, once pinnatifid; leaflets linear, less than 15 cm (6 in.). Inflorescence of compound umbels. Flower petals yellow or sometimes purple. Fruit oblong, 7 - 12 mm (to 0.5 in.) long, wings up to 1 mm wide. Time of flowering: late spring to summer.

Habitat: Open, rocky slopes at middle and upper elevations. Elevation recorded in Nevada: 2,400 m (7,875 ft).

Range: Known from the Sheep Range and Virgin Mountains, Clark County, Nevada; also in Utah.

Comments: In the MSHCP, this species is listed as *Lomatium graveolens* var. *clarkii*; however, the name var. *alpinum* is the accepted variety for the Nevada geographic area.

BLUE DIAMOND CHOLLA

Opuntia whipplei var. *multigeniculata*
Cactus Family

Covered Species



Glenn Clemmer

Description: Long-lived cactus, low shrub or mat forming, to 50 cm (20 in.) tall. Stems irregular, short, stout, with thick spiny joints. Covered with dense tan to yellow-pink spine clusters. Flowers greenish-yellow, developing into somewhat fleshy, more-or-less spineless yellow fruit. Time of flowering: May.

Habitat: Restricted to dry limestone hills, underlain by gypsum. This variety is known to occur mostly on north-facing slopes and on exposed ridges. It is part of a distinctive and unusual plant community of succulents, characterized by a wide diversity of cactus, yucca, and agave species. Elevations: 1,080 - 1,430 m (3,300 - 4,700 ft).

Range: This species was thought to be endemic to the Blue Diamond Hills of the Spring Mountains, Clark County, Nevada. Current inventory efforts and taxonomic studies may reveal a range extension in the future.

Comments: Can be distinguished from other varieties by its dense tan to yellow-pink spine clusters, which are much more whitish than other chollas.

Special Remarks: This rare variety is a State of Nevada Critically Endangered Species.

CHARLESTON PINEWOOD LOUSEWORT

Pedicularis semibarbata
var. *charlestonensis*

Covered Species

Figwort Family



Jan Nachlinger

Description: Herbaceous perennial, partial root parasite. Stems mostly underground, to 20 cm (7.9 in.). Leaves basal, pinnatifid and longer than flowering stems. Inflorescence a spikate raceme, densely woolly, 3 - 12 mm (0.5 in.) tall. Flower sepals to 1.0 cm (0.4 in.) long, ciliate; petals yellow, bilateral, and club-shaped, 2 - 2.5 cm (0.8 - 1.0 in.) long. Fruit a capsule, to 1.0 cm (0.4 in.) long. Time of flowering: May to June.

Habitat: Mixed conifer forest and bristlecone pine communities. Dry slopes and conifer woods. Elevations: 2,560 - 3,000 m (8,400 - 9,800 ft).

Range: Endemic to Clark County, Nevada. Known from various locations in the Sheep Range and in the Spring Mountains (Harris Springs, Lee, Kyle, Carpenter, and Fletcher canyons).

Comments: Plants red when emerging from ground but fading to a green color when mature. No similar species present within its range.

WHITE-MARGINED BEARDTONGUE

Penstemon albomarginatus

Covered Species

Figwort Family



Gayle Marrs-Smith

Description: Perennial herb, 15 - 30 cm (5.9 - 11.8 in.) tall, distinctively pale in color. Stem base generally buried in sand, stems glabrous. Leaves to 3 cm (1.2 in.) long, opposite, entire, spatulate to ovate shaped, with conspicuously callous-like white margins. Inflorescence a raceme with several flowers, glabrous. Flower sepal lobes with callous-like white margins; petals 1.2 - 1.8 cm (0.5 - 0.7 in.) long, lavender-pink with purple guidelines. Fruit a capsule. Time of flowering: March to May.

Habitat: Mojave Desert scrub, and to a lesser extent blackbrush community. Occurs on sand deposits on the leeward side of dry lakebeds, in flat wash bottoms of outwash canyons and occasionally on slopes above them. This species is dependent upon the maintenance of the sand transport system from dry lakebeds towards lower slopes. Elevations: 460 - 1,100 m (1,500 - 3,600 ft).

Range: East Mojave Desert endemic with one population in California, one in Arizona and in Nevada. In Clark County, known from Hidden Valley, Jean Lake, and Jean; also in Nye County.

Comments: This species is easily identified with its white-margined leaves and sepals.

YELLOW TWOTONE BEARDTONGUE

Penstemon bicolor ssp. *bicolor*

Evaluation Species

Figwort Family



Gayle Marrs-Smith

Description: Herbaceous short-lived perennial, to 120 cm (48 in.) tall. Stems thick. Leaves opposite, grayish, smooth, leathery, irregularly toothed; basal leaves petiolated; stem leaves sessile and clasping the stem. Inflorescence a raceme, strongly glandular pubescent. Flower sepals 5, fused; petals 5, bilateral, light creamy yellow, inflated above the basal portion. Sterile stamen longer than the petals, with long yellow hairs. Fruit a capsule with many black seeds. Time of flowering: April to June.

Habitat: Occurs in calcareous or carbonate soils in creosote-bursage, blackbrush, and mixed scrub communities. Found in active gravel washes, rock crevices, outcrops, or similar places receiving enhanced runoff. Elevations: 762 - 1,670 m (2,500 - 5,480 ft)

Range: Southern Nevada endemic. In Clark County, known from lower elevation areas in the Spring Mountains and the McCullough Range.

Comments: This species is similar to ssp. *roseus*, which has rosy petals rather than creamy yellow.

AMARGOSA [DEATH VALLEY] BEARDTONGUE

Penstemon fruticiformis
ssp. amargosae

Evaluation Species

Figwort Family



Gayle Marrs-Smith

Description: Perennial shrub, to 60 cm (24 in.) tall, many branched and wider than tall. Stems glabrous when young. Leaves thick, opposite, simple, generally entire, linear-lanceolate, 6 mm (0.2 in.) wide, with upward curled margins; lower leaves with winged petiole; stem leaves sessile. Inflorescence a raceme. Flowers to 2.7 cm (to 1.1 in.) long; sepals 5, fused; petals pale pink to whitish, inflated, with purplish nectar guides and lavender blue upper lobes; sterile stamen heavily bearded. Fruit a capsule with many seeds. Time of flowering: April to June.

Habitat: Quartzite and limestone soils, sandy or gravelly washes, in creosote, saltbush, and blackbrush communities. Elevations: 945 - 1,930 m (3,100 - 6,332 ft).

Range: Known from the Spring Mountains and Specter Range, Clark and Nye counties, Nevada. Also known from San Bernardino County, California.

Comments: This species is more commonly referred to as Death Valley Beardtongue.

CHARLESTON BEARDTONGUE

Penstemon leiophyllus var. *keckii*

Covered Species

Figwort Family



Janel Blair

Description: Herbaceous perennial with woody rootstock, 5 - 20 cm (2 - 7.9 in.) high. Stems branched, spreading upwards. Leaves opposite, entire, oblanceolate, upper ones sessile. Inflorescence a raceme (flowers on single stems). Flowers glandular, sepals 5, fused; petals light blue to violet, 1.8 - 2.3 cm (0.7 - 0.9 in.) long; staminode (non-functional stamen) strongly white bearded. Fruit a capsule, 7 - 11 mm (to 0.4 in.) long. Time of flowering: June to August.

Habitat: Bristlecone pine and mixed conifer forest communities at or near timberline, also with aspen. Known to occur on gravelly or rocky slopes, open meadows, and on ledges and talus slopes. Elevations: 2,130 - 3,400 m (7,000 - 11,200 ft).

Range: Endemic to the Spring Mountains. Known from upper Lee Canyon and Kyle Canyon, Mummy Mountain, Deer Creek, and high elevations along the Charleston ridgeline.

Comments: Distinguishable from other *Penstemon* species by its purple-blue colored flowers and its high elevation habitat.

JAEGER BEARDTONGUE

Penstemon thompsoniae ssp. *jaegeri*

Covered Species

Figwort Family



Jan Nachlinger

Description: Matted, semi-woody perennial, 5 - 15 cm (2 - 5.9 in.) tall. Stems spreading. Leaves elliptic, narrowing towards petiole, entire, ash-colored, with appressed hair, to 1.2 cm (0.5 in.) long. Inflorescence a raceme, leafy and glandular. Flower sepals 5, fused; petals dark blue to blue-violet, 1.2 - 1.4 cm (to 0.5 in.) long, glandular outside. Fruit a many-seeded capsule. Time of flowering: June to July.

Habitat: Mixed conifer forest and pinyon-juniper woodland communities. Gravelly limestone soils, banks and hillsides. Elevations: 1,920 - 2,830 m (6,300 - 9,300 ft).

Range: Endemic to Clark County, Nevada. Known to occur in the Spring Mountains: Mount Potosi, Deer and Trout creeks, and in Kyle, Lovell, Carpenter, and Lee canyons. Also known from the Sheep Range in Deadman Canyon.

Comments: Distinguishable from other *Penstemon* species by its blue-violet colored flowers, ash-colored leaves, and by the glandular pubescence.

PARISH PHACELIA

Phacelia parishii

Waterleaf Family

Covered Species



Description: Small annual plant. Stems low spreading, branched at or near base, with glandular pubescence, to 15 cm (5.9 in.) long. Leaves near base, elliptic or elliptic-ovate in shape, margins entire or few-toothed. Inflorescence a terminal cyme, tending to be well removed from the leafy base. Flower petals small and inconspicuous, only shortly extending the sepals, lavender above the pale yellow base. Seeds about 25 per capsule. Time of flowering: April to June.

Habitat: Found on mostly barren alkaline flats (valley floors) and playas (lakebeds) in heavy and cracked clay soils with excessive concentrations of soluble salts. Elevations: 760 - 1,700 m (2,500 - 5,600 ft).

Range: In Clark County, Nevada, known from Indian Springs Valley and Three Lakes Valley. Historic populations in the Las Vegas Valley are probably extirpated. Species also known to occur in Nye, Lincoln, and White Pine counties in Nevada, and in San Bernardino County, California.

Comments: Because this species is an annual, populations may fluctuate from year to year in response to rain events.

PYGMY PORELEAF

Porophyllum pygmaeum
Sunflower Family

Evaluation Species



Description: Perennial herb, 5 - 15 cm (2 - 6 in.) tall, strongly scented, with a slender woody rootstock. Stems one to many, simple or branched. Leaves linear, almost round in cross section, covered with conspicuous oil glands. Inflorescence terminal, with solitary discoid flower heads, 8 - 11 mm (0.43 in.). Phyllaries (bracts) 5-8, much longer than broad, and studded with oil glands. Ray florets absent; disk florets 25 - 75, pale yellow, often greenish or reddish tinged. Fruit an achene, narrowly cylindrical, 7 - 8 mm (0.3 in.) long, with 60 pappus bristles. Time of flowering: late April to May.

Habitat: Dry, open, relatively deep rocky limestone soils of alluvial fans and hillsides, often in slight depressions and other moisture-enhanced microsites, in blackbrush and mixed shrub communities. Elevations: 1,280 - 2,073 m (4,200 - 6,800 ft).

Range: Nevada endemic. Known to occur between Sheep and Desert ranges, in Clark and Nye counties, Nevada.

Comments: Distinguished from *P. gracile* by its smaller stature (15 cm tall versus 40 cm [15.7 in.]), and its smaller flower heads.

CLOKEY MOUNTAIN SAGE

Salvia dorrii var. *clokeyi*

Mint Family

Covered Species



Description: Low perennial fragrant shrub, 10 - 20 cm (4 - 7.9 in.) tall, mat forming and spreading. Stems often rooting at the nodes. Leaves opposite, silvery-gray in color, leaf blades entire, spatulate and gradually narrowing, 1.4 - 2.2 cm (0.5 - 0.9 in.) long. Inflorescence in clusters, subtended by conspicuous bracts, 0.5 - 1.2 cm (to 0.5 in.) long. Flower sepals 5, fused, purplish; petals 5, fused bilateral, purple-blue, 9 mm (0.3 in.) long. Stamens projecting beyond corolla lobes by 3 - 5 mm. Fruit a nutlet, gray to reddish brown. Time of flowering: May to July.

Habitat: Bristlecone pine, mixed conifer, and pinyon-juniper communities. This species is found typically on shallow gravelly soils derived from limestone, dolomite, and sandstone, along ridges and where bedrock outcrops occur, and in gravelly washes. Elevations: 2,130 - 3,050 m (7,000 - 10,000 ft).

Range: Southern Nevada endemic. Known to occur in the Spring Mountains and Sheep Range in Clark County, Nevada. Found in Macks, Lee, and Kyle canyons, Deer Creek area, Harris Saddle, and summit of Mount Wilson.

Comments: The woody nature, low-spreading and mat-forming habit make this plant easy to distinguish from other *Salvia* species.

CLOKEY CATCHFLY

Silene clokeyi

Pink Family

Covered Species



Janet Bair

Description: Perennial with several rhizomes from a taproot. Stems 1 - many, 5 - 12 cm (2 - 4.7 in.) tall, with swollen nodes, sparsely to moderately pubescent. Basal leaves narrowly oblanceolate; upper leaves opposite along the stem, almost linear, to 2.5 cm (1 in.) long. Inflorescence with a single flower head. Flower sepals 5, fused, somewhat inflated, with 10 green nerves, 1.2 - 1.5 cm (0.5 - 0.6 in.) long; petals 5, fused, pink to rose-purple, the upper petal blades expanded and bilobed. Fruit a many-seeded capsule. Time of flowering: July.

Habitat: Alpine and bristlecone pine communities. Known to occur on fellfields, steep eastern drop-offs on high ridgelines, and on limestone rocks. Elevations: 3,400 - 3,500 m (11,400 - 11,500 ft).

Range: Endemic to the Spring Mountains at high elevations. Known from several locations east of the Charleston Peak ridgeline and from Mummy Mountain.

Comments: Easy to distinguish when flowering with the pink to rose-purple flower petals, and solitary flowering heads.

CHARLESTON TANSY

Sphaeromeria compacta
Sunflower Family

Covered Species



Description: Densely tufted, silver-silky perennial with cushion-like growth habit. Stems 2 - 5 cm (to 2 in.) tall. Leaves fan-shaped, to 1.5 cm (0.6 in.) long, divided with 4 - 9 lobes. Inflorescence with a single flower head. Phyllaries generally white, hairy, with dark-brown midrib. Ray florets 5 - 10, pale-yellow, strap-shaped; disk florets tubular and straw-colored. Fruit an achene, smooth, with 5 awl-shaped scales. Time of flowering: July to August.

Habitat: Alpine and bristlecone pine communities. Known to occur on talus and scree slopes, rocky ridgeline, and rock outcrops. Elevations: 3,300 - 3,600 m (10,800 - 11,900 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from the Charleston Peak ridgeline, the North Loop Trail, South Loop Trail, Upper Lee Canyon and Mummy Mountains.

Comments: The silvery herbage, cushion-forming nature, and fan-shaped leaves make this species easy to separate from others at high elevations.

CHARLESTON KITTENTAILS

Synthyris ranunculina

Figwort Family

Covered Species



Janet Bair

Description: Perennial herb with a woody rootstock, 8 cm (3.2 in.) tall. Leaves basal, petioled, kidney-shaped, smooth, palmately dissected into 5 to 7 lobes, each with 3 triangular teeth. Inflorescence a raceme, often curved as fruit develops. Flower sepals 4, oblong to lanceolate; petals blue to violet, fused at base, divided into 4 linear lobes, 4 mm long. Fruit wide, somewhat flattened, heart-shaped capsule with many seeds. Time of flowering: late June to August.

Habitat: Alpine, bristlecone pine, and mixed conifer forest communities. Occurs in high elevation springs and seeps, snow melt run-off and permanently damp areas. Elevations: 2,590 - 3,300 m (8,500 - 11,800 ft).

Range: Endemic to the Spring Mountains, Clark County, Nevada. Known from several sites in the upper Lee and Kyle canyons, and in the vicinity of Griffith Peak, Charleston Peak, and Mummy Mountain.

Comments: Distinct species in a small genus; may be distinguished from red alumroot (*Heucheria rubescens*) by the lack of cilia (hairs) along the margins of the leaf, and from heucheria leaf teleseonix (*Telesonix jamesii*) by the darker green color and shine of the leaf.

CHARLESTON GROUNDDAISY

Townsendia jonesii var. *tumulosa*

Covered Species

Sunflower Family



Jan Nachlinger

Description: Herbaceous perennial with a woody base and rosette growth habit. Leaves basal, oblanceolate to spatulate, 2.5 cm (1 in.) long, and uniformly hairy. Inflorescence with solitary radiate flower heads. Ray florets 13 - 21, white, pink or violet, 1.2 cm (0.5 in.) long; disk florets often purplish at the tips. Fruit an achene, compressed, 2-3 ribbed, hairy, with up to 30 pappus bristles. Time of flowering: March to June.

Habitat: Bristlecone pine, mixed conifer, and pinyon-juniper communities. Known to occur in shallow gravelly soils along ridges, rocky outcrops, and slopes. Elevations: 2,000 - 2,950 m (6,600 - 9,700 ft).

Range: Endemic to southern Nevada. In Clark County, known from the Sheep Mountains and Spring Mountains (Bonanza Peak, Macks Canyon, Lee Canyon, Deer Creek, Kyle Canyon, Bridge Mountain, Mount Wilson, and Mount Potosi). Also occurring in Nye County.

Comments: Distinguished from related *Townsendia* species by shorter and wider leaves; could also be confused with Clokey fleabane (*Erigeron clokeyi*).

LIMESTONE [CHARLESTON] VIOLET

Viola purpurea var. *charlestonensis*

Covered Species

Violet Family



Jan Nachlinger

Description: Low herbaceous perennial with 1 - 8 stems, partially underground. Leaves thick with short dense white hairs, ashy above and purplish beneath, broadly ovate to narrower, blades 8 - 25 mm (to 1.0 in.) long. Inflorescence single stalk with solitary flower. Flower sepals 5, linear to spade shaped. Petals 5, unequal, yellow on the face; upper petals darkened on the back; lower petal with a short spur. Fruit a capsule, densely hairy, opening explosively and shooting seeds. Time of flowering: May to June.

Habitat: Mixed conifer forest and pinyon-juniper communities. Limestone hills, slopes, and dry washes. Elevations: 2,000 - 2,900 m (6,560 - 9,510 ft).

Range: Mojave Desert and Colorado Plateau endemic. In Clark County, Nevada, known to occur in the Spring Mountains in Lee Canyon, Kyle Canyon, Deer Creek, and Mud Springs.

Comment: The name Charleston violet is more commonly used. This species is the only yellow violet in the area.

WATCH LIST VASCULAR SPECIES

One-leaf Torrey milkvetch

Astragalus calycosus var.
monophyllidius

Pincushion

Coryphantha vivipara ssp. *rosea*
[*Escobaria vivipara* var. *rosea*]

Hoffman's cryptantha

Cryptantha hoffmannii

New York Mountains catseye

Cryptantha tumulosa

Chalk liveforever

Dudleya pulverulenta

Clokey fleabane

Erigeron clokeyi

Barrel cactus

Ferocactus acanthodes var.
leonti

[*Ferocactus cylindraceus* var.
lecontei]

Nevada greasebush

Glossopetalon nevadensis

Beaver Dam scurfpea (breadroot)

Pediomelum castoreum

Rosy twotone beardtongue

Penstemon bicolor ssp. *roseus*

Utah spikemoss

Selaginella utahensis





Non Vascular Plants

ANACOLIA MENZIESII

Anacolia menziesii
Family Bartramiaceae

Covered Species



Troy Wirth

Description: Robust, branched, usually prostrate moss, pleurocarpous, occurring in loose yellow-green, silky, clumps, 3 - 5 cm (to 2 in.) high, with dense, felt-like reddish-brown tomentum (fine densely matted hair) of rough rhizoids on the lower stems. At this time, Clark County, Nevada, populations are not known to reproduce sexually .

Habitat: Known to occur in pinyon-juniper and blackbrush communities. The Nevada populations are found only in deep, remote canyons with heavily shaded north-facing sandstone rock outcrops. Elevation: 1,463 m (4,800 ft).

Range: In Clark County, Nevada, known only from Red Rock Canyon National Conservation Area. Also known to occur in Utah. Otherwise, this moss is a Pacific Coast species.

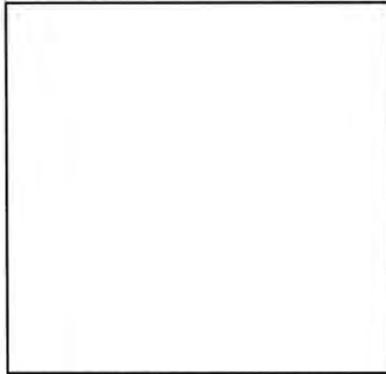
Comments: This is one of the more robust species of moss in Clark County.

CLAOPODIUM WHIPPLEANUM

Claopodium whippleanum

Covered Species

Family Thuidiaceae



No photo available at this time.

Description: Small, green to yellow-green, pleurocarpous moss, forming thin mats. Leaves catenulate (spreading from their bases and apically arch back across the stem, resembling links of a chain), muticous (without hair-points); median laminal cells strongly papillose, with each cell having a single, large papilla (small projection) on the surface. This moss is not known to reproduce sexually in Clark County, Nevada.

Habitat: Occurs in the pinyon-juniper community, in recessed cave-like sheltered areas that never receive direct sunlight. On soil or soil over rock, sometimes found on logs or roots. Elevation: 1,450 m (4,750 ft.).

Range: A common West Coast species, abundant in California. In Clark County, Nevada, known from the Red Rock Canyon National Conservation Area in the Spring Mountains.

Comments: *Claopodium* is one of the few local pleurocarpous mosses whose median laminal cells are strongly papillose, a feature recognizable in the field by the opaque appearance of the golden-green plant.

CROSSIDIUM MOSS

Crossidium seriatum

Family Pottiaceae

Evaluation Species



Lloyd Stark

Description: Extremely small herbaceous moss, forming dense, hoary tufts that rarely exceed 6 mm (0.24 in.) in height. Leaves piliferous (bearing hairs); and under a microscope, the upper leaf surface has distinctive costal (midrib) photosynthetic filaments which are partially fused into short lamellae, the terminal cell of these filaments being nearly globose. Additionally, the median cells of the leaf are mostly unipapillose with several C-shaped papillae. Capsules oblong-cylindrical, or oblong-elliptic, erect, straight or slightly curved, peristome (fringe of teeth) of 32 hair-like divisions. These “teeth” are nearly erect and spirally twisted. This species is bisexual, but does not normally produce fruit.

Habitat: Restricted to sandstone and gypsum soils within the creosote-bursage community; on bluffs, outcrops, rock piles, and in protected areas on north or east side of rocks or shrubs, or at bases of bluffs. Grows in clumps on exposed soils or in shadow of shrubs like Mormon tea (*Ephedra*). Elevations: 400 - 750 m (1,312 - 2,460 ft).

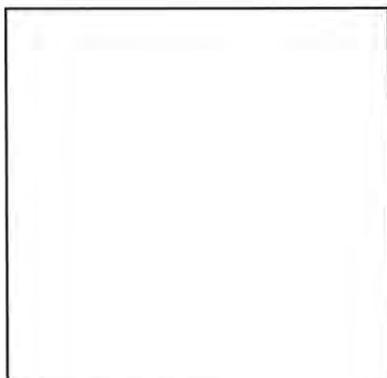
Range: Locally known from a few areas around Lake Mead, Clark County, Nevada. Also known from Arizona, California, Baja California (Mexico), and Spain. Globally rare, known from less than ten populations, with possibly the most numerous in Nevada.

DICRANOWEISIA CRISPULA

Dicranoweisia crispula

Covered Species

Family Dicranaceae



No photo available at this time.

Description: Erect, essentially unbranched, acrocarpous moss, in dense green clusters. Stems 1 - 4 cm (to 1.6 in.) high. Leaves very contorted, individually twisted in all directions when dry. Leaf margins not recurved; leaf cells with cuticular thickenings on the surface. Sporangium (fruiting structure) suberect to erect, with a peristome (fringe of teeth).

Habitat: On fallen tree logs, mostly along cracks of tree bark. The Lee Canyon population occurs in mixed conifer and pinyon-juniper habitats at 1,460 m (4,790 ft.) elevation.

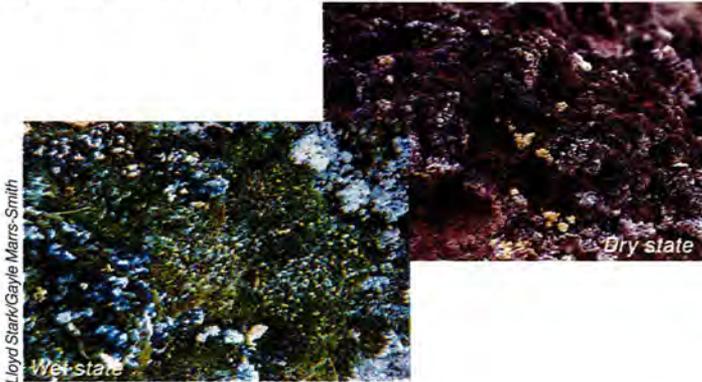
Range: Commonly known from the Pacific Northwest and Utah. In Clark County, Nevada, known from the Spring Mountains in Lee Canyon, and along the Griffith Peak and Charleston Peak ridgeline. These sites represent the southernmost populations of the species.

Comments: Distinguishing features of this erect and essentially unbranched moss are the very contorted leaves that are individually twisted in all directions when dry, and the suberect to erect sporangium that have a peristome.

GOLD BUTTE MOSS

Didymodon nevadensis
Family Pottiaceae (Pottia Family)

Evaluation Species



Description: Long-lived wintergreen moss, forming a dense turf (mat-like), blackish-green above, reddish-brown below. Stems to 1 cm (0.4 in.) in length, branching occasionally. Stem leaves spirally twisted, appressed to weakly spreading when dry, 0.6 - 1.0 mm (0.04 in.) long, margins broadly recurved to revolute to the apex of the leaf. Leaf apex cucullate (shaped like a hood). Costa is percurrent (reaching to the apex but not beyond). Rhizoids few, arising from leaf axils. Asexual reproduction by rhizoidal tubers or axillary gemmae (vegetative diaspore that can germinate to form a new plant that is genetically identical to the parent plant). Male plants are unknown to science.

Habitat: Restricted to gypsum pockets and outcrops, on east to north facing slopes of loose soil, often associated with other moss species. Elevations: 400 - 706 m (1,312 - 2,316 ft).

Range: Known from vicinity of Gold Butte, Clark County, Nevada. Also known from British Columbia, Texas and Mexico. This species is scattered in distribution in gypsum pockets of southern Nevada and southern Utah, with one potential location in southern Colorado.

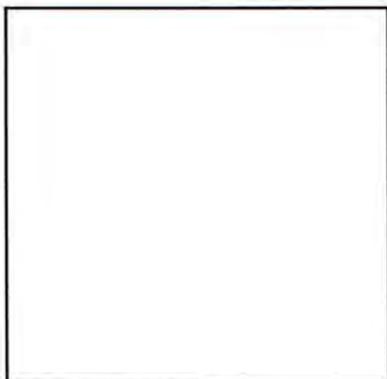
Comments: Type specimen collected by Gayle Marrs-Smith in 1994. This species can be identified by its twisted leaves when seen under a magnifying lens, along with the lime green coloration when wet, tan coloration when dry, and the distinct cucullate leaf apex.

DISTICHIMUM INCLINATUM

Distichium inclinatum

Evaluation Species

Family Ditrichaceae



No photo available at this time.

Description: This moss is 0.5 - 2 cm (to 0.8 in.) high. Stems dark green to brownish green. Leaves 2 - 3.5 mm (to 0.14 in.) long, filiform, stiffly erect from a sheathing base, distichus (two-ranked), appearing in two opposite rows along the stem. Capsule asymmetric, oblong, inclined (bending down), peristome with 16 irregularly divided teeth.

Habitat: Known to occur on damp stream banks or rotting logs, seepage areas, and in rock crevices along cliffs in the fir-spruce belt, about 2,600 m (8,530 ft.).

Range: Present in the Spring Mountains, Clark County, Nevada, possibly as the southernmost population of this species. This is a wide-ranging Pacific Coast species.

Comments: This species was last verified locally in the mid-1950s.

AMERICAN GRIMMIA

Grimmia americana

Evaluation Species

Family Grimmiaceae



Lloyd Stark

Description: Small moss, forming dense, dark-brown hoary (whitish) tufts, 5 - 8 mm (0.3 in.) high. Leaves appressed, with hyaline hair points. When moist, leaves erect or erect spreading, but not contorted when dry. Upper leaf cells bistratose (having cells in two layers). Sporophytes (fruit) with short setae of about 1 mm, deeply immersed, and with a hand lens appear like orange-brown dots among the leaves. Capsules with peristome (fringe of teeth).

Habitat: Occurs on north facing limestone rocks exposed to the sun in the creosote-bursage community. Elevation: 817 m (2,680 ft).

Range: Known from only three populations worldwide: one in west Texas, one in Arizona, and one from the Newberry Mountains, Clark County, Nevada.

Comments: The peristomate capsule distinguishes this species from one of the most common mosses in Nevada, the gymnostomous (lacking a peristome) *Grimmia anodon*.

PSEUDOCROSSIDIUM MOSS

Pseudocrossidium crinitum

Family Pottiaceae

Evaluation Species



Lloyd Stark

Description: This moss forms extensive mats, yellowish green to brown above, brown to reddish brown below. Stems to 1.5 cm (0.6 in.) tall. Leaves ovate to short-lanceolate, to 1.9 mm (0.07 in.), ending in a short or long awn, with densely papillose upper lamina (blade) cells. Distal laminal cells 13-15 microns, costa (midrib) with a single layer of guide cells, medial cells more papillose and thicker than the marginal cells. *Pseudocrossidium crinitum* only grows female plants, with male plants unknown in North America.

Habitat: Sandstone soil, elevation 700 m (3,000 ft).

Range: Common in the Chihuahuan Desert of southern New Mexico and west Texas, rare in the Mojave Desert. Originally collected in 1955 at the south end of Valley of Fire State Park, Clark County, Nevada. To date this population is the only known one from the State; it was revisited in 1999 and appears to be healthy.

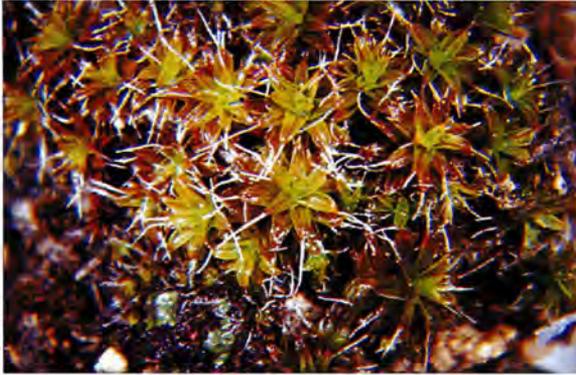
Comments: Distinguished from awned *Syntrichia* species by the ovate to short-lanceolate leaves with densely papillose upper lamina cells. Chemically, *P. crinitum* reacts deeply yellow in potassium hydroxide solution, whereas *Syntrichia* reacts red. Also, *P. crinitum* resembles Gold Butte moss (*Didymodon nevadensis*), but Gold Butte moss has a somewhat cucullate (hood-like) acute leaf apex, the costa is percurrent (reaches the apex but does not extend beyond), and tubers are occasionally present on rhizoids.

SYNTRICHIA PRINCEPS

Syntrichia princeps

Family Pottiaceae

Covered Species



Lloyd Stark

Description: Coarse moss, forming deep turf, green to yellowish-green in color, occasionally reddish, brownish or blackish. Stems 1 - 4 cm (to 1.6 in.) high. Leaves costate, the costa (midrib) being stout, rough, red, and conspicuous at the back, abruptly excurrent (extending out beyond the lamina of the leaf), with hyaline, spinulose hair point. Leaves twisted when dry. Whorls of enlarged leaves mark annual growth increments of the shoot and form an interrupted verticil (ring arranged around central axis). This species is bisexual, found often with capsules that have a white, corkscrew peristome that arises from a basal tube.

Habitat: In pinyon-juniper community, specifically in soil that is shaded by boulders.

Range: Fairly common along the coast of California, Oregon, and Washington. In Clark County, Nevada, currently known only from sites in the Red Rock Canyon National Conservation Area and the Virgin Mountains.

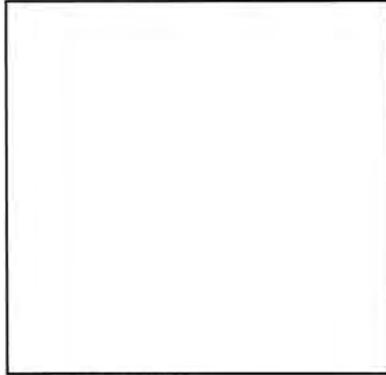
Comments: *S. princeps* was previously known as *Tortula princeps*. It is a bisexual species and often with capsules (spore-containing sac), whereas star moss (*Tortula ruralis*), a closely related species, is dioicous (male and female parts not on same moss), and without capsules.

TRICHOSTOMUM MOSS

Trichostomum sweetii

Evaluation Species

Family Pottiaceae



No photo available at this time.

Description: This moss appears green when wet or dry. Leaves are ligulate (tongue-like) with essentially parallel margins, and with a very slight incurvature of the leaf apex (appears like a hook). Capsule with a peristome (“trichostomum” is the Greek word for hairy mouth, referring to the fine, filiform teeth of the peristome in this genus).

Habitat: Known to occur in sandstone bluffs and sandstone-derived soil, often shaded by rocks, in creosote-bursage community. Elevations: 610-680 m (2,000-2,230 ft).

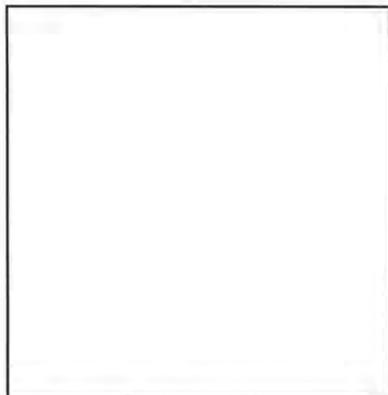
Range: Known globally from fewer than ten populations; this moss was first described from the Virgin Mountains (type locality) in Clark County, Nevada. However, recent attempts to relocate the type population in the Virgin Mountains proved unsuccessful. One large population was located on the ancient sand dune formations at the Red Stone Picnic Area within the Lake Mead National Recreation Area. Also known to occur in Arizona and California.

Comments: Distinguishing features of this *Trichostomum* include the very slight incurvature of the leaf apex, as opposed to the highly incurved leaf margins in *Weissia*, a closely related genus.

UNDESCRIBED TARGIONIA LIVERWORT

Targionia sp. nov.
Family Targioniaceae

Evaluation Species



No photo available at this time.

Description: *Targionia* is a genus of thalloid liverworts in the order Marchantiales. The thalloid gametophyte is generally seen as a ribbon of tissue, green if wet, and black if dry. This “ribbon” is robust, leathery, and opaque, with surfacial pores venting air chambers in the thick thallus. Epidermal pores are surrounded by specialized cells like the bulging trigones (triangular-shaped wall thickening in the corner of a cell where it abuts against two other cells). Presence, shape, and size of trigones are characteristic of some liverwort genera. Thallus is either male or female, each having specialized organs. Capsules mature on the underside of the thallus.

Habitat: Liverworts (about 8,500 species) are found throughout the world, from the arctic to the tropics. Known from dry places to aquatic habitats, with most adapted to moist habitats. This *Targionia* species occurs in deeply shaded habitats, often associated with ferns, specifically along north sides of boulders, or in deeply recessed cliff overhangs. Elevations: above 1,220 m (4,000 ft).

Range: This *Targionia* species appears to be a Mojave Desert endemic. In Clark County, Nevada, known from the Red Rock Canyon National Conservation Area near White Rock Spring, in the Newberry Mountains near Christmas Tree Pass, and in the Eldorado Mountains near the mouth of Keyhole Canyon.

Comments: This *Targionia* liverwort, a rare species, is a recent discovery. It will be described shortly by Dr. Alan Whittimore, Missouri Botanical Garden.

WATCH LIST NON-VASCULAR SPECIES

Fissidens sublimbatus

Splachnobryum obtusum

GLOSSARY

GLOSSARY

A

- Achene** Dry, single-seeded, indehiscent fruit, as in sunflower.
- Acrocarpous** Producing the spore-bearing structure at the apex of the main stem.
- Alternate** Located singly at a node, as leaves on a stem.
- Annual** Plants living for one season or year.
- Anterior** Situated before or toward the front.
- Appressed** Lying flat and closely pressed against surface.
- Aquatic** Growing or living in or frequenting water.
- Avian** Relating to birds.
- Awn** Substantial hair or bristle which terminates a plant part.
- Axillary** Located in, or arising from an axil (a point of where leaf and stem meet).

B

- Badland** Region marked by intricate erosional sculpturing and little vegetation.
- Bajada** Outwash slopes from alluvial fans with long straight apron of sediment.
- Banner** In legume flowers, single enlarged upper petal.

C

- Callous** Area of hardened and thickened tissue.
- Capsule** A dry, several to many seeded, dehiscent (splitting) fruit.

GLOSSARY

Carapace	Upper part of tortoise shell.
Carnivore	Meat eating.
Catenulate	Leaves spreading from their bases, with tips arched back across stem.
Caudal peduncle	Fleshy part of the tail of a fish, excluding tail fin.
Caudex	Woody stem of perennial plant, at or beneath ground level.
Cilia, ciliate	Hairs arising from the margins, as in eyelashes.
Clasping	More or less grasping a stem, as in a leaf base.
Colony	A group of the same kind of creature living together (e.g., bats)
Community	Group of plants sharing a common area, habitat, or environment.
Conservation	The act or process of protecting natural resources
Corolla tube	Tube-like portion of fused petals, more or less cylindrical.
Costa	A midrib or nerve in moss leaves.
Covered Species	Species which have sufficient information about them, and management plans exist that help to protect them.
Crenulate	Finely scalloped edge with rounded teeth.
Crepuscular	Active at twilight.
Cucullate	Hood-like, forming a pocket opening on one side.

GLOSSARY

Cyme, cymose Type of inflorescence, mostly broad and flat-topped.

D

Deciduous Falling off after completion of the normal function, such as leaves.

Decumbent Lying flat on the ground with ascending ends.

Detritus Generally dead plant material, or refers to any decomposing material.

Diapause Period of physiologically enforced dormancy.

Dichotomously Forked, in one or more pairs.

Diffusely Loosely spreading or branching.

Discoid head Having only disc florets in the flower head (sunflower family).

Disk floret Tubular flowers, in some members of the sunflower family.

Diurnal Active during the daytime rather than at night.

Dorsal, dorsum The top or back of an animal.

E

Echolocation Locating insects or avoiding objects by means of sound waves.

Ecosystem Biotic and abiotic factors of an ecological community considered together.

Elliptic Flattened circle with length about twice the diameter; both ends rounded.

Endangered Threatened with extinction.

GLOSSARY

Endemic	Native to a well defined geographic area.
Entire	With continuous margins, not toothed or otherwise cut.
Ephemeral	Short-lived; lasting a short time.
Evaluation Species	Species with little information about them but share habitat with Covered Species.
Extinct	No longer living anywhere; completely died out.
Extirpated	No longer surviving in the area being referred to.
F	
Fern	Spore-producing vascular plant.
Fledge	Period when birds acquire first true feathers and leave nest.
Floret	A minute flower, an individual flower of a cluster in the sunflower family.
Follicle	Dry fruit that splits open by a single suture to release seeds.
Forage	The act of searching for food.
Fron	Leaf of a fern; term sometimes used for foliage of palms.
Fused	Attached to other structures, such as tubular petals or sepals.
Fusiform	Refers to torpedo-shaped body.

G

Glabrous	Without pubescence; without hair.
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GLOSSARY

Gland	Structure secreting a sticky liquid substance, either on the surface or imbedded.
Glandular	Having glands at the end of a hair (glandular pubescent).
Glaucous	Covered with fine waxy, whitish or bluish powder that rubs off.
Gleaning	To gather food bit by bit.
Glutinous	Covered with a sticky substance.
Granivore	Eats grain or seeds.

H

Habitat	Place where plants or animals naturally live and grow.
Hatchlings	Young that hatched from eggs.
Herbaceous, herb	Annual or perennial plant with little or no wood, dies back to the ground each year.
Herbivore	Feeding on plants.
Herbivorous	Feeding solely on vegetable material.
Hibernate	To be in an inactive or dormant state, usually during winter.
Hyaline	Colorless, transparent, or clear.

I

Incisors	Teeth adapted for cutting.
Inflated	Puffed up, expanded, as if by air.
Inflorescence	The arrangement of flowers on the floral axis.

GLOSSARY

Internode	Stem segment between leaves.
Invertebrate	Animal lacking a spinal column.
Involucre	A circle of bracts subtending a flower, fruit, or inflorescence.
Iridescent	Display of colors producing rainbow effect, as in soap bubble.
J	
Juvenile	A young animal or bird that has not reached maturity.
K	
Keeled	Having a longitudinal ridge, like the keel of a boat.
L	
Laminal cells	Surface cells of mosses.
Lanceolate	Shaped like the head of an arrow.
Larvae	Immature wingless feeding form that hatches from eggs of insects.
Larval host	Food plant of a caterpillar.
Leaflet	One unit of a compound leaf, may appear as a leaf.
Leeward	Facing the direction toward which the wind is blowing.
Legume	Dry fruit that splits open into halves along two lines of sutures.
Litter	The offspring of one birth producing more than one animal.

GLOSSARY

Longitudinal Referring to lengthwise dimension.

M

Margin Edge either of a wing or a leaf.

Maternity roost Area where bats give birth and rear young.

Maxilla Upper lip; used in context of describing the location of a barbel (e.g., maxillary barbel).

Metabolize To undergo chemical changes and processes in living cells.

Metamorphosis Changes in morphology that an animal goes through during its life cycle.

Migration Moving from one location to another, seasonal and other times.

Montane Inhabiting mountain areas.

Morph Different morphologies or color variations.

Mottled Surface with spots or blotches of a different color.

Muticous Without hair points.

N

Nectar guides Visible or invisible lines attracting insects into the throat of a flower.

Nocturnal Active at night.

Nodes Place on a stem where leaves, flowers, or bracts are (or have been) attached.

Nutlet Small fruit, often triangular-shaped.

GLOSSARY

O

- Oasis** A fertile area with water in the desert.
- Oblanceolate** Wedge shaped, narrowest at base, attached at narrow portion.
- Oblong** Longer than broad, with sides more or less parallel.
- Obovate** Shaped like an egg, with broadest part towards tip.
- Obtuse** Blunt or rounded at the apex or base.
- Omnivorous** Feeding on both animal and vegetable substances.
- Opposite** Situated across from one another, as two leaves at node.
- Ovate** Egg shaped, with the broad end toward point attachment.

P

- Palmately** Radiating from a common point, like the fingers on a hand.
- Paniculate** Inflorescence much branched, lower flowers open before upper ones.
- Papilla** Minute wart-like projection.
- Papillose** With one or more small projection from cells.
- Pappus** Bristles, scales, hairs or crown at tip of achene, in sunflowers.
- Parotoid** One pair of large wart-like gland at the back of head of toads.

GLOSSARY

Pea-like	Flower petals in the form of banner, wings, and keel.
Pedicel	Stalk supporting a single flower.
Peduncle	Stalk supporting an inflorescence.
Penial ornament	Reproductive organ in snails.
Percurrent	Reaches the apex but does not extend beyond.
Perennial	A plant which lives two or more years.
Peristome	Fringe of teeth around the mouth of a capsule of mosses.
Petal	Individual member of the corolla, may be fused or not, often brightly colored.
Petiole	Stem or stalk of a leaf blade.
Phenotype	Variation of a character in a population.
Phyllary	Individual bract of an involucre (flower head). central midvein.
Pinnate	Featherlike; venation pattern of a leaf in which veins diverge from a single midvein.
Pinnatifid	Deeply cut in a pinnate fashion, but not divided to the central midvein.
Pistil	The female organ of a flower, ordinarily differentiated into ovary, style and stigma.
Plastron	Lower part of tortoise shell.
Pleurocarpous	Producing the spore-bearing structure on branches below the apex.
Plumage	Feathers of a bird.

GLOSSARY

Pod	Any kind of dehiscent (splitting) dry fruit.
Primaries	The outer most and longest flight feathers on a bird's wing
Prostrate	Lying flat along the ground.
Pubescent	Covered with soft, short hairs, downy.
R	
Raceme	Inflorescence of flowers on a single stem, blooming from the bottom up.
Radiate head	Having both disk and ray florets, in the sunflower family.
Range	Region throughout which a kind of organism naturally lives or occurs.
Raptors	Birds of prey.
Ray floret	The outer petal-like flower of some sunflowers.
Resinous	Bearing or producing a sticky substance.
Revolute	Rolled backward and under, as the margin of leaves.
Rhizoid	Thread-like structure, serves for absorption and anchorage in mosses and liverworts.
Rhizome	A creeping underground stem that bears scales and buds.
Riffles	Wave pattern in sand or gravel caused by water movement.
Riparian	Related to, living in, or located on the bank of a natural water course.

GLOSSARY

Roost	To settle down to rest or sleep.
Root parasite	Grows and feeds on the roots of a host plant.
Rootstock	Creeping underground stem.
Rosette	Cluster or circle of leaves, usually at or close to the ground.
Rufous	A reddish-brown color.
S	
Scabrous	Covered with scattered coarse hairs that have thick bases.
Scree slope	Accumulation of loose rock debris on a slope or base of a hill.
Scute	An external bony or horny plate, or a large scale.
Secondaries	The large flight feathers located in a series along the rear edge of the wing
Sedges	Family of tufted marsh plants , resembling grasses.
Seed	A fertilized and ripened plant ovule having an embryo that is capable of germinating.
Sensitive	Any species whose long-term viability has been identified as a concern.
Sepal	Leaf-like parts that form the calyx as the outermost layer of a flower.
Sessile	Without a stalk, attached directly by the base.
Shrub	A woody plant that has several main stems, and is often smaller than a tree.

GLOSSARY

Silicle	Fruit like a pod, not much longer than wide.
Siliqua	Elongated pod, longer than wide, the two valves usually separating at maturity.
Simple	Composed of a single part, as in single leaf.
Spatulate	Shaped like a spatula or spoon, and narrowly oblong.
Species	Classification of related individuals having common characteristics and share a single ecological niche.
Spicate	Inflorescence unbranched, flowers sessile.
Spinulose	With sharp points or small spines.
Sporangia	Sack-like spore producing fruiting structure.
Sporophore	A spore bearing structure especially in ferns and fungi.
Spur	Hollow, often conic projection or expansion.
Stalk	Stem or axis of a herbaceous plant.
Stamen	Pollen bearing organ of a flower, consisting of anther and filament.
Staminode	Modified stamen, does not produce pollen.
Stellate	Star-like; hairs that have several radiating arms, which originate from one point.
Stipe	Stalk arising from the receptacle and supporting the ovary or fruit.
Striate	Marked with fine, almost parallel lines.

GLOSSARY

Style	Stalk-like portion of pistil in female flowers.
Sub-globose	Having almost the shape of a globe.
Subshrub	Small, not quite shrub sized, somewhat woody.
Subspecies	More or less morphologically distinct variety of a species.
Subterminal	Before the end, used in the context of describing the condition in which the snout extends beyond mouth, and therefore the mouth is said to be subterminal.
Subterranean	Underground.

T

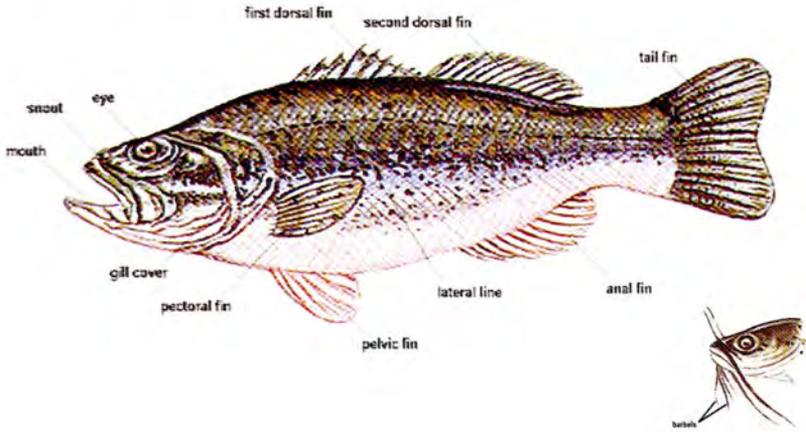
Tapered	Gradually becoming narrower at base or tip.
Taproot	The main root of some plants, usually more stout than the lateral roots.
Taxonomic	Classification of plants and animals to their presumed natural relationships.
Terminal	Growing or appearing at the tip of structure.
Terrestrial	Living or growing on the land.
Thalloid	Thalloid liverworts have a gametophyte as the dominant sexual generation, possess no leaves.
Thorax	The middle of three parts of an insect body, bearing legs and wings.
Torpor	State of mental and motor activity with partial or total loss of sensation or motion.

GLOSSARY

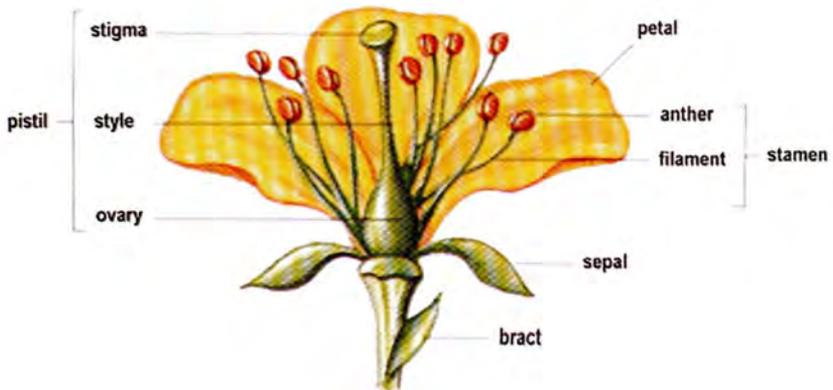
Tragus	Cartilaginous structure inside the ears of some species of bats that arises from the base of the ear and projects upward.
Translucent	Almost, but not quite see-through.
Tubercles	Wart-like projections.
Turriform	Shaped like a tower.
U	
Umbel	Flat topped or rounded inflorescence, umbrella-like.
V	
Valve	Segment into which a dehiscent capsule, silicle or silique separates after splitting.
Venomous	Secreting or transmitting venom (poison).
Ventral	The bottom or belly of an animal.
Verticil	Ring arranged around central axis.
Viscid	Sticky.
W	
Wash	The dry bed of a stream.
Watch List Species	Species who may be listed as sensitive unless measures are taken to assure its survival and recovery in the wild.
Whorled	Circular arrangement of three or more leaves or flowers at the same node of a stem.
Wing Bars	A conspicuous, crosswise wing mark.
Wing	Any membranous expansion of an organ or structure in animals and plants.

GLOSSARY

Diagram of a fish

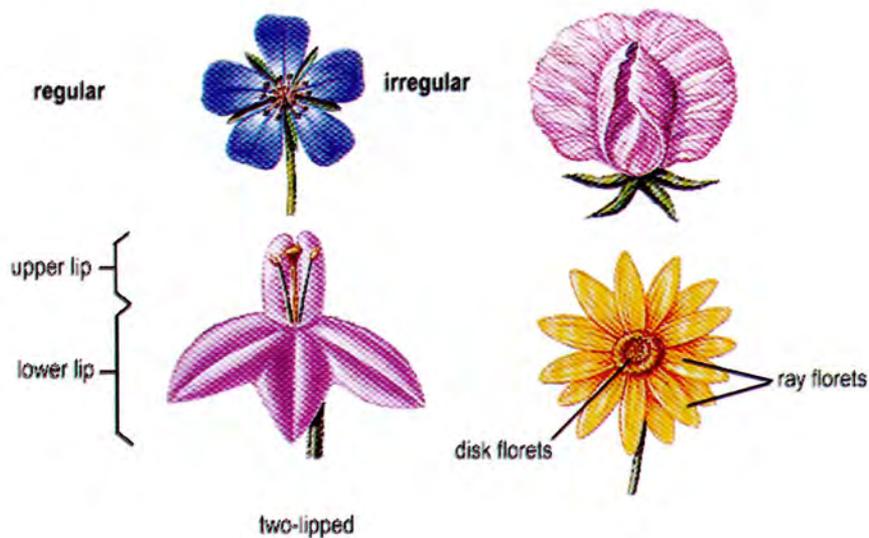


Parts of the flower



GLOSSARY

Flower Types



Flower Cluster Types



GLOSSARY

Leaf Arrangements



axil



opposite



whorled



basal



clasping

GLOSSARY

Leaf Shapes



oblong



lanceolate



oblanceolate



obovate



ovate



rounded



heart-shaped



arrowhead-shaped



elliptical



toothed



lobed



palmately lobed



pinnately lobed



palmately compound



pinnately compound



bipinnately compound

Leaf Arrangements



axillary



opposite



whorled



basal



pinnately compound
clasping



sheathing



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IMPORTANT CONTACTS

Desert Conservation Program Hotline	383-8678
Desert Conservation Program	455-4181
Bureau of Land Management	515-5000
National Park Service, Lake Mead	293-8907
Nevada Department of Wildlife	486-5127
U.S. Fish & Wildlife Service	515-5230
U.S. Forest Service	515-5400
Red Rock Visitor Center	383-1922
Nevada Division of Forestry	486-5123

IMPORTANT WEBSITES

Clark County	www.co.clark.nv.us
National Park Service	www.nps.gov
Nevada Division of Wildlife	ndow.org
Bureau of Land Management	www.nv.blm.gov
U.S. Fish & Wildlife Service	www.fws.gov
U.S. Forest Service	www.fs.fed.us/htnf
Las Vegas Wash Coordination Committee	www.lvwash.org
Red Rock Canyon	www.rrcanyon.blm.gov
Conservation District of Southern Nevada	www.cdsn.org
Nevada Heritage Program	heritage.nv.gov/index.htm
Biological Resources Research Center	www.brrc.unr.edu
Desert USA 2001	desertusa.com
America's National Wildlife Refuge	refuges.fws.gov
Northern Prairie USGS	www.npwrc.usgs.gov
Nature & Wildlife Field Guide	www.enature.com
American Society of Mammalogists (Mammal slide library)	www.emporia.edu/biosci/msl/ home.htm#catalog
Birds of North America	www.birdsofna.org
Butterflies of North America	www.npwrc.usgs.gov/resource/distr/ lepid/bflyusa/bflyusa.htm
Cornell Lab of Ornithology (birds)	www.birds.cornell.edu/closlides
National Audubon Society	www.audubon.org
Red Rock Audubon Society	communitylink.koz.com/lvrj/ redrockaudubon
The Nature Conservancy	nature.org
Vireo (birds)	data.acnatsci.org/vireo

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