

# **BRASSICALES** (Brassids)

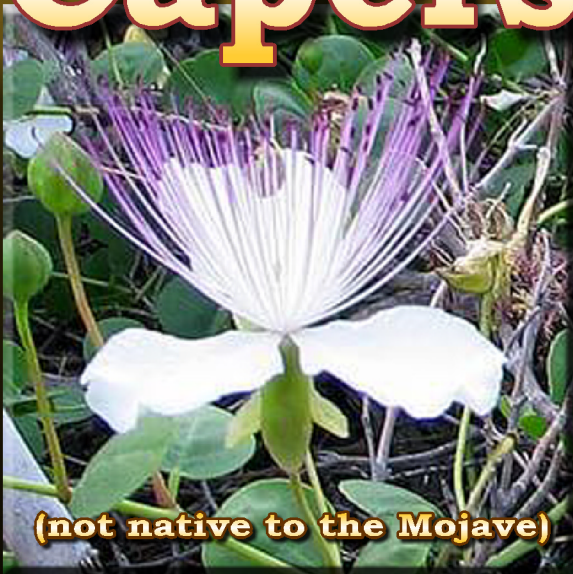
## **Mustards**



## **Spider Plants**



## **Capers**



(not native to the Mojave)

## **Batacids**



(not native to the Mojave)

**(17 Families Worldwide)**



# Family **BRASSICACEAE** (Mustards)

## **Tansy Mustard** (*Descurainia pinnata*)



Dolan Springs, AZ



Dolan Springs, AZ



Mile Marker 11; Pierce Ferry Rd; Dolan Springs, AZ



Dolan Springs, AZ



Dolan Springs, AZ

- Flowers:** cuplike; terminal clusters; 4 petals, 4 sepals; **yellow**; .25"
- Stems:** erect; singular to numerous; branched; pubescent; **brownish green**; to 24"
- Leaves:** narrow linear; pinnately lobed; alternate; **green**; to 2"
- Blooms:** April to June
- Range:** throughout North America
- Habitat:** sandy to gravelly; dry to riparian disturbed areas; Lower to Upper Sonoran Life Zones

### Notes:

common; forb or herbaceous annual/biennial; grows to 2' in various habitats throughout NA at elevations of up to 7,000'; long, linear, green (fresh) to brown (mature) 1" **siliqua** fruit on thin **pedicel**; aka **Western Tansymustard**, **Green Tansymustard**, **Pinnate Tansymustard**, etc.; 10 subspecies; toxic to livestock and other grazers, but flowers visited by insects (particularly butterflies); indigenous people ground seeds as a spice and to treat stomach issues, and used plant to make poultice to treat toothaches

### Comments:

This mustard is a rather scraggly, inconspicuous plant that can be easily overlooked or misidentified when growing amongst other more noticable spring bloomers, especially other mustards. Note the characteristic slender, up-pointing silique fruit on thin pedicels, as seen on this specimen growing near Dolan Springs, AZ, in April, 2023.



# Family **BRASSICACEAE** (Mustards)

## **Oriental Mustard** (*Sisymbrium orientale*)



**tubular flowers**

Red Rock Cyn NCA; NV



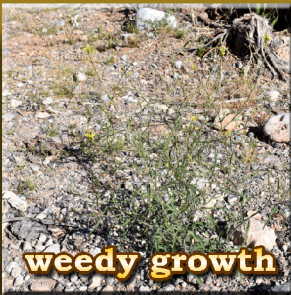
**April**

Red Rock Canyon NCA; Southern Nevada



**long, linear leaves**

Red Rock Cyn NCA; NV



**weedy growth**

Red Rock Cyn NCA; NV



**purple-green stems**

Red Rock Cyn NCA; NV

- Flowers:** tubular; radial symmetry; terminal inflor.; 4 spatulate petals, 4 oblong sepals; **pale yellow**; .25"
- Stems:** erect; usually singular; highly branched; pubescent; **brownish to purplish**; 24 - 36"
- Leaves:** broad, deeply lobed (basal), lanceolate/linear (upper); sub-entire; alternate; **green**; 2 - 5"
- Blooms:** March to June
- Range:** western US; native to North Africa, Asia, Europe; invasive/introduced elsewhere
- Habitat:** dry, gravelly; disturbed areas (roadsides, fields, pastures, etc.); Lower Sonoran Life Zone

### Notes:

common; herbaceous annual; grows to 3' in the w US (OR/CA southeastward to TX) and elsewhere worldwide at elevations of up to 3,500'; linear, 4" **siliqua** fruit; aka **Eastern Rocket**, **Wild Mustard**, **Indian Hedge Mustard**, etc.; leaves (though bitter) and seeds are edible

Mojave presence: naturalized

### Comments:

Though common in some areas, such as California, this mustard is not as prolific in the dry heat of the Mojave. The only locations I have thus far identified this plant are the ones shown here at the visitor center and near the overlook off Route 159 at the **Red Rock Canyon National Conservation Area** in April and May of 2018.



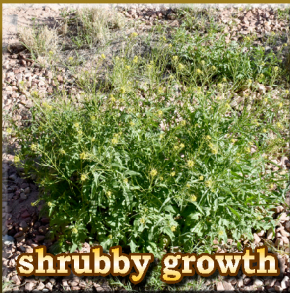
# Family **BRASSICACEAE** (Mustards)

## **London Rocket** (*Sisymbrium irio*)



cluster of tiny flowers

Las Vegas, Nevada



shubby growth

Las Vegas, Nevada



March

Las Vegas, Nevada



linear stem leaves

Las Vegas, Nevada



smooth, branched stems

Las Vegas, Nevada

- Flowers:** tubular; terminal inflorescence of many flowers; 4 petals and sepals; **pale yellow**; .25"
- Stems:** erect; numerous, shrubby; branched; open, slender, glabrous; **green**; 24 - 36"
- Leaves:** broad (basal), linear (upper); entire/clefted; petioled/sessile, nearly glabrous; gray green; 6"
- Blooms:** March to April
- Range:** southwest US; Baja, Mexico; Great Lakes; elsewhere worldwide (introduced from Europe)
- Habitat:** gravelly; disturbed/open areas (roadsides, fields, urban settings, etc.); Lower Sonoran Life Zone

### Notes:

common; herbaceous, weedy annual; grows to 3' in open, irrigated, disturbed areas at elevations below 4,500'; cylindrical, 3" **siliqua** fruit (young pods curve above flowers); aka **Rocket Mustard**, **Tumble Mustard**; leaves, seeds, flowers edible; numerous medicinal uses (e.g. treatment for arthritis, coughing, congestion, etc.)

**Mojave presence:** introduced/invasive

### Comments:

Though common as a plant in general, this mustard is not customarily found in remote "wild" areas of the Mojave. Instead, you will find it growing obnoxiously as a weed in well-irrigated urban settings. The plant shown here was among a stubborn batch that grew persistently in my Las Vegas backyard in March of 2019. Rather than fight a losing battle, I just let nature take its course. The heat of the desert summer eradicated the entire crop!



# Family **BRASSICACEAE** (Mustards)

## **Alkali Crucifer** (*Thelypodium integrifolium*)



Corn Creek; DNWR; NV



Corn Creek; Desert National Wildlife Refuge; NV



Ash Meadows NWR; NV



Corn Creek; DNWR; NV



Corn Creek; DNWR; NV

- Flowers:** spatulate; short, raceme inflorescence; 4 petals, sepals; glabrous, waxy; lavender to white; .5"  
**Stems:** erect, rigid, ribbed; singular; branched near top; glabrous, waxy; yellowish green; 60 - 108"  
**Leaves:** elliptical (basal), linear (cauline; sessile); entire; alternate; waxy; green; 2 - 12"  
**Blooms:** June to October  
**Range:** western US  
**Habitat:** sandy to alkaline; desert playas, oases, scrublands, etc.; Lower Sonoran Life Zone

### Notes:

uncommon; herbaceous biennial; grows to 9' in various alkaline, arid to semi-arid habitats of w US at elevations below 3,000'; cylindrical, upturned, maroon to green, 2" silique fruit; 5 subspecies; aka **Entire-Leaved Thelypody**, **Foxtail Thelypodium**, **Telescoping Mustard**; some medicinal properties

Mojave presence: native

### Comments:

Though rather common through most of its range (such as in California), this mustard is relatively rare in the Mojave. I have only photographed it growing at the **Ash Meadows National Wildlife Refuge** in September of 2018 (top right) and Corn Creek in the **Desert National Wildlife Refuge** in October, 2020, and September, 2018. Its tall, open style of growth is conspicuous and unmistakable once you learn to recognize it!



# Family **BRASSICACEAE** (Mustards)

## Wright's Thelypody (*Thelypodium wrightii*)



Corn Creek; DNWR; NV



Corn Creek; Desert National Wildlife Refuge; NV



Corn Creek; DNWR; NV



Corn Creek; DNWR; NV



Corn Creek; DNWR; NV

- Flowers:** tubular; inflorescence; 4 petals and sepals, long stamens, purple anthers; white to lavender; .3"  
**Stems:** erect, slender; singular; branched near top; glabrous; green to blue-green; to 72'  
**Leaves:** lanceolate (basal), linear (upper); lobed to toothed; alternate; petioled to sessile; green; to 3"  
**Blooms:** March to November  
**Range:** south central to southwest US from Texas west to southern Nevada\*  
**Habitat:** sandy, gravelly; desert scrub to ponderosa woodlands; Lower Sonoran to Transition Life Zones

### Notes:

uncommon; herbaceous biennial/perennial; grows to 6' in arid to semi-arid habitats of the sw US at elevations of 2,500-7,000'; thick drooping collar of slender, curved, 2-3" silique fruit constricted between seeds; aka Wright Stanleyella; 2 subspecies; used by native peoples for food and topical treatment for various ailments

Mojave presence: native

### Comments:

The generally accepted range for this species extends from TX to AZ\*, but plants (and animals, for that matter) do not restrict themselves to man-made boundaries! They are often encountered outside established confines as they seek to modify their territories, adjusting to environmental changes and human encroachment. As such, the specimen above was photographed in October, 2018, at Corn Creek in the Desert National Wildlife Refuge in southern Nevada.



# Family **BRASSICACEAE** (Mustards)

## Gordon's Bladderpod (*Physaria gordonii*)



Dolan Springs, AZ



Dolan Springs, AZ



Mile Marker 8; Pierce Ferry Rd; Dolan Springs, AZ



Dolan Springs, AZ



Dolan Springs, AZ

- Flowers:** radial symmetry; raceme inflorescence; 4 petals and sepals; **yellow**; .24"
- Stems:** erect/prostrate/decumbent; singular to multiple, branched at base; pubescent; **green**; 18'
- Leaves:** linear to lanceolate; entire to lobed/toothed; alternate; petiolate/sessile; pubescent; **green**; 4"
- Blooms:** February to June
- Range:** central to southwest US from KS/TX west to Arizona, south into Mexico
- Habitat:** dry, sandy to gravelly; desert scrub to grasslands; Lower Sonoran Life Zone

### Notes:

common; annual or short-lived perennial; grows to 1.5' in arid to semi-arid habitats of the sw US at elevations up to 5,000'; .4" globose (round) **capsule** fruit on curved **pedicels**; aka **Bladderpod**; 2 subspecies; distinguished from other bladderpods by shallow taproot; valuable food source for livestock and wildlife (though apparently toxic to horses)

Mojave presence: native

### Comments:

There are many plants that appear in the Mojave during the spring season that present small yellow flowers, which can make identification a challenge--particularly among various members of the mustard family. The tiny 4-petaled flowers and **conspicuous round fruit** at the end of long pedicels is characteristic of this species, such as displayed by these specimens shown here near Dolan Springs, AZ, in April of 2023.



# Family BRASSICACEAE (Mustards)

## Desert Prince's Plume (*Stanleya pinnata*)



**raggedy flowers**

Potosi Mtn; Clark Co., NV



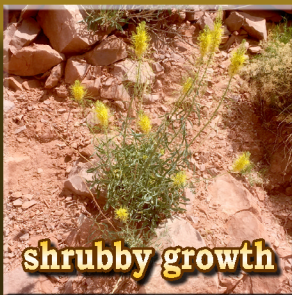
**June**

Clark Mountain Range; Mojave Natural Preserve; CA



**long basal leaves**

Clark Mountain; S.B. Co.; CA



**shrubby growth**

West Rim; Grand Cyn; AZ



**glabrous stems**

Potosi Mtn; Clark Co., NV

- Flowers:** tubular, ragged; 4 - 12" raceme inflorescence; 4 sepals and tapered petals; **yellow**; .75"
- Stems:** erect; woody base (several from base); shrubby, unbranched; glabrous, waxy; gray green; 60"
- Leaves:** linear; pinnately lobed (lower), entire (upper); alternate; petioled, glabrous; **blue-green**; 2 - 6"
- Blooms:** April to September
- Range:** western US
- Habitat:** alkaline, sandy to gravelly; scrub, chaparral, prairies, etc.; Lower Sonoran to Transition LZs

### Notes:

common; perennial; grows to 5' in the western US from the Great Plains west to CA at elevations of 1,000-7,500'; curved 3" **siliqua** fruit; used by native peoples for medicinal treatments, and food after extensive boiling to remove selenium content (otherwise toxic to humans and wildlife)

**Mojave presence:** native

### Comments:



These tall showy plants are easily recognizable during their long spring-through-summer blooming season in a variety of habitats throughout the Mojave. Note the large, conspicuous inflorescence of raggedy yellow flowers that tower above the main body of the plant, such as presented by this specimen (left) growing on Clark Mountain in the **Mojave Natural Preserve** in June of 2016.

**Br8**



# Family BRASSICACEAE (Mustards)

## Desert Alyssum (*Lepidium fremontii*)



typical habitat

Boss Mine; Goodsprings, NV



linear leaves

Red Rock Cyn NCA; NV



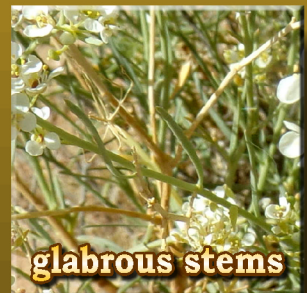
April

Valley of Fire State Park; Clark Co., NV



paddle petals

Boss Mine; Goodsprings, NV



glabrous stems

Red Rock Cyn NCA; NV

- Flowers:** cup-like; 4 obovate sepals, spatulate petals; raceme clusters; white with yellow centers; .25"
- Stems:** erect; numerous, sprawling; profusely branched; glabrous; gray green; to 36"
- Leaves:** narrow linear; entire; pinnate; glabrous; gray green; 3"
- Blooms:** March to June
- Range:** southwestern US (NV, s CA, nw AZ)
- Habitat:** sandy/gravelly soils; desert scrublands, slopes, etc.; Lower to Upper Sonoran Life Zone

### Notes:

uncommon; evergreen/perennial; grows to 3' in the desert sw US at elevations up to 6,500'; flattened, oblong .4" capsule fruit; aka **Fremont's Peppergrass**, **Desert Pepperweed**; pollinated by bees, butterflies, etc.

Mojave presence: native

### Comments:

This is a very non-descript, ordinary, virtually unidentifiable plant throughout most of the year--until spring bloom! Then the plant comes alive with abundant clusters of very distinct, characteristic flowers with paddle-shaped petals. In the Mojave, this alyssum is restricted to the far eastern region, particularly southern Nevada where it is fairly common in **Valley of Fire State Park**, such as at the "Cabins" area. The healthy specimen shown above center was in full bloom in April of 2018.



# Family **BRASSICACEAE** (Mustards)

## **Mesa Pepperweed** (*Lepidium alyssoides*)



**raceme flowers**

US 93 near Hoover Dam; AZ



**woody base stem**

US 93 near Hoover Dam; AZ



**April**

Red Rock Canyon National Conservation Area; NV



**silique fruit**

Red Spring; RRCNCA; NV



**upper stems**

Red Spring; RRCNCA; NV

- Flowers:** radially symmetric; raceme inflorescence; 4 spatulate petals in cross formation; white; .25-.5"
- Stems:** erect, woody base; single to a few; intricately branched, tangled; glabrous; gray green; 24"
- Leaves:** linear; entire; alternate; sessile; gray green; 5"
- Blooms:** March to September
- Range:** southwestern US, northern/northeastern Mexico
- Habitat:** sandy to gravelly; canyons, grasslands, etc.; Upper Sonoran to Transition Life Zones

### Notes:

uncommon; perennial herb; grows to 2' in the sw US from s NV east to TX, south into n MEX at elevations of 4,000-9,000'; 4 subspecies; aka **Southern Pepperwort**; round, flattened, .75" **silique** fruit with ovate seeds; flowers attract bees and other insects for nectar, and seeds foraged by birds and rodents

Mojave presence: native

### Comments:

This plant is easily confused with the closely related **Desert Alyssum** (page 7) with similar flowers and leaves. However, it can be distinguished by growing shorter and less densely than its cousin. Both present a rather cabbage-like scent when their leaves are crushed.



# Family **BRASSICACEAE** (Mustards)

## **Watercress** (*Nasturtium officinale*)



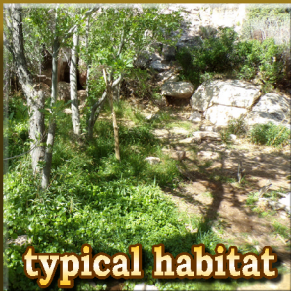
Red Spring; RRCNCA; NV



Red Spring; Calico Basin; Red Rock Canyon NCA; NV



Red Spring; RRCNCA; NV



Red Spring; RRCNCA; NV



Red Spring; RRCNCA; NV

- Flowers:** radially symmetric; inflorescent clusters; 4 petals; white; .38"
- Stems:** spreading; numerous; branched; hollow, glabrous; blue-green; 6+"
- Leaves:** oblong leaflets; entire/wavy; pinnately compound; blue-green; 4-6" (leaflets ~ 1.5")
- Blooms:** April to June
- Range:** cosmopolitan in temperate regions; native to Europe, central Asia
- Habitat:** wet, alkaline; springs, seeps in canyons, meadows, etc.; Upper Sonoran Life Zone

### Notes:

common; perennial semi-aquatic forb; grows a few inches high, but widely spread in/near alkaline streams at elevations of 4,000-7,000'; visited by many insects; amongst the oldest known leafy green vegetables eaten by humans; stems, leaves, and fruit edible raw; used by native peoples as food, and as medical treatment for constipation and kidney problems

Mojave presence: rare; naturalized

### Comments:

While found within the borders of the Mojave region, watercress is not a desert plant, per say--you'll never see it growing in the open desert. Rather, it grows at higher elevations in canyons along seeps and springs, denoting it as a strictly riparian plant, such as shown here at Red Spring in the Calico Basin area of Red Rock Canyon NCA in April of 2017 and 2018.



# Family BRASSICACEAE (Mustards)

## Arugula (*Eruca vesicaria*)



Dolan Springs, AZ



Dolan Springs, AZ



Mile Marker 11; Pierce Ferry Road; Dolan Springs, AZ



Dolan Springs, AZ



Dolan Springs, AZ

- Flowers:** corymb inflorescence; 4 ovate petals, brown central vein, brown bracts; cream white; 1.25"  
**Stems:** erect; singular to numerous; branched from base; glabrous to hirsute; green; to 36"  
**Leaves:** oblanceolate to pinnate (basal), bladed (cauline); deeply lobed; alternate; sessile; green; 3"  
**Blooms:** March to September  
**Range:** throughout most of US, south to South America; introduced from Europe/Africa  
**Habitat:** dry, disturbed; roadsides, fields, grasslands, desert scrublands; Lower Sonoran Life Zone

### Notes:

common; forb or herbaceous annual; grows to 3' in various habitats throughout much of US at elevations up to 4,000'; flattened, cylindrical, 1" silique fruit; aka Salad Rocket, Colewort, Roquette, Eruca, etc.; flowers visited by numerous pollinators (bees, butterflies, hummingbirds, etc.), and plant provides food for moth larvae; naturalized and cultivated (introduced as a seed contaminant in 1898) as an edible leaf vegetable rich in vitamins and minerals

Mojave presence: rare (introduced)

### Comments:

While arugula is a generally common plant throughout much of its native/introduced range, it is considerably less so in the Mojave. Like I say when someone asks me how common something is: "Go out and find one!" The plants shown here in April of 2023 are the first--and so far only--representatives of the species I have encountered in the region. It was an opportunity to collect a bagful of leaves to add to salad and use dried as a pungent, peppery spice.





# Family **CLEOMACEAE** (Spider Plants)

## Rocky Mountain Beeplant (*Cleome serrulata*)



welcome to the park

South Rim; Grand Cyn NP



August

US Highway 93; south of Ely, Nevada



raceme inflorescence

South Rim; Grand Cyn NP



palmate leaves

US 93; Ely, Nevada



single erect stem

US 93; Ely, Nevada

- Flowers:** radial; raceme inflorescence of rounded clusters; 4 petals, 6 long pink stamens; **pink**; .75~1"
- Stems:** erect; singular to several; branched; glabrous; **brownish to green**; to 60"
- Leaves:** palmately compound with 3 lanceolate leaflets; toothed; alternate; **green**; 3"
- Blooms:** June to September
- Range:** across southern Canada south to west/central US
- Habitat:** sandy to gravelly; desert scrub, grasslands, foothills, etc.; Lower to Upper Sonoran Life Zones

### Notes:

common; herbaceous annual; grows to 5' in NA at elevations of 2,500-7,000'; dangling, 4" **capsule** fruit; aka **Skunk Weed**, **Stinking Clover**, etc.; attracts numerous pollinators (bees, butterflies, hummingbirds, etc.); traditionally used for food (seeds, leaves, flowers, etc.), dye (yellow-green), and medicine (poultices for various ailments)

**Mojave presence:** rare (transition zones)

### Comments:

This beautiful plant is not considered a resident of the Mojave Desert in the proper sense, but **does** occur rarely in the **transition zone** between the Mojave and Great Basin deserts, thus justifying its inclusion herein.