

A CHECK LIST

PLANTS
of
JOSHUA TREE
NATIONAL MONUMENT

by CHARLES F. ADAMS



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OF
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By

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Park Ranger

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Preface

This checklist of plants of the Joshua Tree National Monument has been compiled from data and information gathered from the following sources: plant specimens collected by James E. Cole in 1941, while Superintendent of Joshua Tree National Monument; an accumulated list of plants seen by Mrs. Sara Schenck over a period of years from 1930 to 1956; lichens that were collected and identified by Professor Frank Sipe, University of Oregon; and observations and identifications made by local members of the park personnel and the author.

At the present time this checklist consists of 569 different species of plants representing 74 families. The nomenclature throughout the checklist conforms to Standardized Plant Names, second edition, 1942. Numerals in the text which are enclosed in parenthesis are the catalog numbers of the specimens in the Joshua Tree National Monument Herbarium. The months of blooming are sometimes indicated parenthetically.

There is considerably more botanizing to be done during years when there is an abundance of rainfall in The Coxcomb, Eagle, and Pinto Mountains. It is believed that the grass, fungus, and moss families also have an extensive number of specimens to be found and identified. When the above areas are covered thoroughly and the majority of the different plants are found and identified, this checklist may contain close to 700 different species.

Charles F. Adams

Ascomyceteae (Lichens)

<u>Acarospora thamnina</u>	Collected near Black Rock Spring	2/17/57
<u>Acarospora strigata</u>	Collected near Black Rock Spring	2/17/57
<u>Acarospora radicata</u>	Collected near Black Rock Spring	2/17/57
<u>Acarospora flava</u>	Collected near Ivanpah Tank attached to Metamorphic Rock (J.T.N.M.#1)	6/4/56
<u>Acarospora oxytona</u>	Collected near Black Rock Spring	2/17/57
<u>Caloplaca cinnabarina</u>	Collected near Ivanpah Tank attached to Metamorphic Rock (J.T.N.M.#2)	6/4/56
<u>Caloplaca elegans</u>	Collected near Black Rock Spring attached to Metamorphic Rock (J.T.N.M.#3)	6/5/56
<u>Candelariella spraguei</u>	Collected near Black Rock Spring	2/17/57
<u>Candelariella vittelina</u>	Collected near Ivanpah Tank attached to Metamorphic Rock (J.T.N.M.#5)	6/4/56
<u>Collema tenax</u>	Collected near Black Rock Spring	2/17/57
<u>Dermatocarpon acarosporoides</u>	Collected near Black Rock Spring	2/17/57
<u>Dermatocarpon minutum</u>	Collected near Black Rock Spring attached to Metamorphic Rock (J.T.N.M.#6)	6/5/56
<u>Dermatocarpon rufescens</u>	Collected near Black Rock Spring	2/17/57
<u>Lecanora gibbosula</u>	Collected near Black Rock Spring	2/17/57
<u>Lecanora badia</u>	Collected near Black Rock Spring	2/17/57
<u>Lecidea diducens</u>	Collected near Black Rock Spring	2/17/57
<u>Lepraria specie?</u>	Collected near Black Rock Spring attached to Granite Rock (J.T.N.M.#7)	6/5/56
<u>Parmelia olivacea</u>	Collected near Black Rock Spring	2/17/57
<u>Parmelia reducta</u>	Collected near Black Rock Spring attached to Metamorphic Rock (J.T.N.M.#8)	6/5/56

<u>Physcia melops</u>	Collected near Black Rock Spring	2/17/57
<u>Psora globifera</u>	Collected near Black Rock Spring	2/17/57
<u>Sarcogyne privigna</u>	Collected north of Jumbo Rock Campground attached to Pigmatite Dyke material (J.T.N.M.#9)	6/4/56
<u>Umbilicaria phaea</u>	Collected near Black Rock Spring attached to Metamorphic Rock (J.T.N.M.#10)	6/5/56
<u>Umbilicaria torrefacta</u>	Collected near Black Rock Spring attached to Metamorphic Rock (J.T.N.M.#4)	6/5/56

FERN AND FERN ALLIES

Polypodiaceae (Fern Family)

- Adiantum capillus-veneris Southern Maidenhair. Can be found at Fortynine Palms Oasis, Eagle Mountains, and Rattlesnake Wash near the Waterfall.
- Cheilanthes covillei Maxon. Coville Lipfern. Found near road 1 mile north of Lost Horse Well.
- Cheilanthes viscida Davenp. Lipfern. At Conejo Wells.
- Dryopteris arguta (Kaulf.) Watt. Coast Woodfern. Found NW of Malapi and also near Pine Cistern.
- Notholaena parryi DC. Eaton. Parry Cloak Fern. The Little San Bernardino and Eagle Mountains and most other areas in upper elevations.
- Pellaea mucronata DC. Eaton. Birdsfoot Cliffbrake. At Pine City and North of Hidden Valley and most other rock areas in west end of Monument.
- Pellaea mucronata californica (Lemmon) Munz & Jtn. Birdsfoot Cliffbrake. In the Cottonwood Mountains.
- Pteridium aquilinum pubescens (L., Kuhn) Underw. Western Bracken. Can be found near rocks 1/4 mile west of Lost Horse Wells.

Selaginellaceae (Selaginella Family)

- Selaginella eremophila Maxon. At various moist areas throughout the Monument.

Equisetaceae (Horsetail Family)

- Equisetum funstoni A. A. Eaton. Horsetail, At Fortynine Palms Oasis.

SEED PLANTS

Pinaceae (Pine Family)

- Juniperus californica Carr. California Juniper. Sheep Pass, Juniper Flat, Eagle Mountains, and most of the areas within the Upper Sonoran Zone. (April, May, June).
- Pinus cembroides monophylla (Torr. & Frem.) Voss. Single-leaf Pinyon Pine. At Hidden Valley, Juniper Flat, Salton View, and most of the areas within the Upper Sonoran Zone. (April, May).

Gnetaceae (Ephedra Family)

- Ephedra californica Wats. California Ephedra. Distributed throughout Monument. (April, May).
- Ephedra nevadensis Wats. Nevada Ephedra. Near summit of Fargo Pass. (April).
- Ephedra viridis Coville. Green Ephedra. Collected in Lost Horse Valley. Grows in Pinyon and Juniper belt. Collected at Twin Tanks, elevation 3800. (April, May). (509).

Typhaceae (Cattail Family)

- Typha angustifolia L. Narrowleaf Cattail. At Fortynine Palms Oasis and Willow Hole.

Naiadaceae (Pondweed Family)

- Potamogeton foliosus Raf. Leafy Pondweed. At Stubby Spring and Willow Hole.

Gramineae (Grass Family)

- Aristida californica Thurb. Mohave Threeawn. Collected in north edge of T1S, R10E, elevation 1700 feet. (734)
- Aristida fendleriana Stend. Fendler Threeawn. At Indian Cove.
- Bouteloua aristidoides (H.B.K.) Griseb. Needle Grass. Throughout the Monument. (May, June, July, August).
- Bromus rubens L. Foxtail Brome. At Ivanpah Tank. (May, June)
- Distichlis stricta (Torr.) Rydb. Inland Saltgrass. Moist places at east end of Pinto Basin and parts of west end of Monument. Collected in Willow Hole

- Area, elevation 4200 feet. (869).
Festuca octoflora Walt. Sixweeks Fescue. In Queen Valley near Squaw Tank Junction. Collected in Section 16, SW Quarter, T1S, R9E, elevation 3600 feet. (July, August). (652).
Phragmites communis Trin. Common Reed. At the Twentynine Palms Oasis. (August, September).
Polypogon monspeliensis (L.) Desf. Rabbitfoot Polypogon. Collected along Willow Hole Wash, Elevation 4200 feet. (874).
Stipa speciosa Trin. & Rupr. Desert Needlegrass. Throughout the Monument. Collected in Queen Valley. (May, June). (950).
Triodia pulchella H.B.K. Fluffgrass. Collected in Fortynine Palms Canyon, elevation 2000 feet. (626). Also west of Wonderland of Rocks. (June).
Oryzopsis hymenoides (R. & S.) Ricker. Indian Ricegrass. Collected along the Pine City Road. (982).

Cyperaceae (Sedge Family)

- Carex alma Bailey. Sedge. The Willow Hole area and upper Rattlesnake Canyon.
Cyperus esculentus L. Chufa Flatsedge. At Willow Hole.
Eleocharis parishii Britton. Parish's Spikesedge. Collected at Barker Dam. (810).
Eleocharis palustris (L.) R. & S. Common Spikesedge. Collected at Lost Palms Canyon. (811).

Palmaceae (Palm Family)

- Washingtonia filifera (Linden) Wendl. California Washingtonpalm. Found at Twentynine Palms Oasis, Fortynine Palms Canyon, Lost Palms Canyon, and Cottonwood Spring.

Juncaceae (Rush Family)

- Juncus bufonius L. Toad Rush. Collected at Pearl Spring, elevation 4500 feet. (859).
Juncus macrophyllus Cov. Rush. Collected in Smithwater Canyon at Lower Spring. (938).

Liliaceae (Lily Family)

- Allium cristatum Wats. Onion. In Split Rock Area. (May).
Allium fimbriatum Wats. Onion. Collected at end of the

- Stubby Spring Road, elevation 4700 feet. (April, May). (822).
Allium parishii Wats. Onion. Little San Bernardino Mountains. (May). Collected in southwest quarter Section 16, T1S, R9E, elevation 3300 feet. (643).
Brodiaea capitata pauciflora Benth. Torr. Bluedicks Brodiaea. Western end of Monument. Collected in southeast quarter, Section 8, T1S, R9E, SBM, elevation 3800 feet. (April, May). (665).
Calochortus kennedyi Porter. Desert Mariposa. At Salton View, Lost Horse Valley, and Sheep Pass. (May). Collected in Pine Spring area, elevation 4400 feet. (801).
Calochortus palmeri Wats. Palmers Mariposa. Collected in Willow Hole Area, elevation 4200 feet. (May). (881).
Hesperocallis undulata Gray. Desertlily. Along highway in Pinto Basin area. (April, May).
Nolina bigelovi (Torr.) Wats. Bigelow Nolina. East of Belle Campground, east of Split Rock, and in Eagle Mountain Area. (May, June).
Nolina parryi Wats. Parry Nolina. Western portion of Monument. (May, June). Collected at Pine Spring, elevation 4500 feet. (808).
Nolina parryi wolfei (Wats.) Munz. Parry Nolina. In the Optimist Mine area. (May, June).
Yucca brevifolia Engelm. Joshua tree Yucca. Quite abundant in Queen and Lost Horse Valleys, Pinto Wye area and Juniper Flat. (March, April).
Yucca schidigera Sarg. Mohave Yucca. Throughout Monument. (March, April). Collected at Indian Cove. (538).
Zygadenus brevibracteatus (Jones) Deathcamas. Near Joshua Tree entrance. (May).

Orchidaceae (Orchid Family)

- Epipactis gigantea Dougl. Stream Epipactis. At Cottonwood Spring and Fortynine Palms Oasis. (May).

Saururaceae (Lizard-tail Family)

- Anemopsis californica Hook. Yerba Mansa. In moist places at Twentynine Palms Oasis. (June, July).

Salicaceae (Willow Family)

- Populus fremonti Wats. Fremont Poplar. At Twentynine

- Palms Oasis, Cottonwood Spring, and Smithwater Canyon. (March, April).
- Salix exigua Nutt. Coyote Willow. At Cottonwood Spring and Sparrow Spring. (April). Collected in Fortynine Palms Canyon, elevation 2000 feet. (470).
- Salix gooddingi Ball. Goodding Willow. At Twentynine Palms Oasis, Stuby Spring, and Willow Hole. Collected at Barker Dam, elevation 4300 feet. (March, April). (795).

Fagaceae (Beech Family)

- Quercus chrysolepis Liebm. Canyon Live Oak. Found in large wash at Juniper Flat. (April, May).
- Quercus dumosa turbinella Nutt. (Greene) Jeps. California Scrub Oak. Predominant oak throughout western part of the Monument. Collected in Covington Flat Canyon and along Optimist Mine Road in Lost Horse Valley. (April, May). (728, 934).
- Quercus palmeri Engelm. Palmer Oak. Black Rock Spring area. (May).

Ulmaceae (Elm Family)

- Celtis douglasi Planch. Douglas Hackberry. Along trail to Willow Hole. (April, May).

Urticaceae (Nettle Family)

- Parietaria floridana Nutt. Pellitory. In Fortynine Palms Canyon area. (March, April).

Loranthaceae (Mistletoe Family)

- Arceuthobium divaricatum Engelm. Dwarfmistletoe. In Pinyon Pines south of Black Rock Spring.
- Phoradendron californicum Nutt. Mesquite American-Mistletoe. Found on Mesquite and some other legumes (January).
- Phoradendron californicum leucocarpum (Trel.) Jeps. Mesquite American-Mistletoe. On Mesquite at Twentynine Palms Oasis. (January, February).
- Phoradendron densum Torr. Cypress American-Mistletoe. On California Junipers at Juniper Flat and Lost Horse Valley. (December, January, and February).
- Phoradendron villosum Nutt. Pacific American-Mistletoe. On Oak in Stubby Spring area and Hidden Valley Campground. (December, January).

Polygonaceae (Buckwheat Family)

- Chorizanthe brevicornu Torr. Chorizanthe. Collected near Twentynine Palms entrance. (March). (576).
- Chorizanthe rigida (Torr.) T. & G. Chorizanthe. In the Eagle Mountains. (March).
- Chorizanthe thurberi Wats. Chorizanthe. Collected near Twentynine Palms entrance. (April). (711).
- Eriogonum angulosum maculatum Benth (Heller) Jeps. Collected in Pine Spring Area, elevation 4400 feet. (May). (805).
- Eriogonum baileyi Wats. In Stubby Spring area. (May).
- Eriogonum deflexum Torr. In Upper Covington Flat area.
- Eriogonum fasciculatum flavoviride Benth. Munz & Jtn. Flat top Eriogonum. Throughout western portion of Monument. Collected at mouth of Fortynine Palms Canyon, elevation 2000 feet. (May, June). (622).
- Eriogonum fasciculatum polifolium (Benth) T. & G. Flat Top Eriogonum. Collected at Covington Flat Canyon, elevation 4500 feet. (May, June). (715).
- Eriogonum gracillimum Wats. Along northern boundary of Monument. (May).
- Eriogonum heermanni Dur. & Hilg. Mohave Eriogonum. In Rattlesnake Canyon. (September, October).
- Eriogonum heermanni Dur. & Hilg. var. floccosum Munz. Mohave Eriogonum. Near Barker Dam and in Little San Bernardino Mountains. (September, October).
- Eriogonum inflatum Torr. & Frem. Deserttrumpet Eriogonum. Found throughout the Monument. Collected in northwest quarter, Section 4, T1S, R9E, SBM. (April, May, June). (686).
- Eriogonum inflatum Torr. & Frem. var. deflatum Jtn. Deserttrumpet Eriogonum. Found mostly on Colorado desert portion of the Monument. (April, May, June).
- Eriogonum molestum Wats. var. dauidsoni (Greene) Jeps. Collected at Barker Dam, elevation 4300 feet. (May). (796).
- Eriogonum nidularium Cov. White Tanks and Black Rock Spring areas. Collected at Pine Spring, elevation 4300 feet. (April, May). (806).
- Eriogonum nodosum Small. Sonoran Eriogonum. Indian Cove area. (January).
- Eriogonum nudum Dougl. Var. pauciflorum Wats. Barestem Eriogonum. Found near Twentynine Palms entrance to Monument. (April).
- Eriogonum plumatella Dur. & Hilg. Yucca Eriogonum. Found in Little San Bernardino Mountains. Collected along Optimist Mine Road, Lost Horse Valley, eleva-

- tion 4300 feet. (July, August, September). (930).
Eriogonum plumatella Dur. & Hilg. var. jaegeri (Munz & Jtn.) Stokes. Yucca Eriogonum. In Little San Bernardino Mountains. (July, August, September).
Eriogonum pusillum T. & G. In Cottonwood and Quail Spring washes. (March, April).
Eriogonum reniforme Torr. & Frem. Found from White Tanks area east along road to Pinto Basin. Collected at north edge of T1S, R10E, SBM, elevation 1700 feet. (April, May). (738).
Eriogonum saxatile Wats. Hoary Eriogonum. In Little San Bernardino Mountains. Collected on Quail Mountain, elevation 4900 feet. (April, May, June). (825).
Eriogonum thomasi Torr. Collected at Indian Cove, elevation 3100 feet. (519).
Eriogonum trichopes Torr. Near Black Rock Spring boundary. (April, May).
Eriogonum wrighti Torr. Wright Eriogonum. Found in Jumbo Rocks area. (April, May, June).
Eriogonum wrighti Torr. var. membranaceum Stokes. Wright Eriogonum. In Little San Bernardino Mountains. (April, May, June).
Oxytheca trilobata Gray. Oxytheca. In Upper and Lower Covington Flat areas. (May, June). (901).
Pterostegia drymarioides F. & M. Pterostegia. In Washington Canyon and Eagle Mountains areas. (April).
Rumex crispus L. Curly Dock. Collected along road near Quail Spring. (April, May). (793).
Rumex hymenosepalus Torr. Canaigre Dock. Along entrance road to Black Rock Spring. (April, May).

Chenopodiaceae (Pigweed Family)

- Atriplex canescens (Pursh.) Nutt. Fourwing Saltbush. At Cottonwood Spring. Collected along Optimist Mine Road. Lost Horse Valley, elevation 4300 feet. (May, June). (933).
Atriplex canescens (Pursh) Nutt. linearis (Wats.) Munz. Fourwing Saltbush. Along Colorado Desert slopes in the Monument. (May).
Atriplex hymenelytra (Torr.) Wats. Desertholly Saltbush. Along the lava flow area in southeast end of Pinto Basin. Collected in Pinto Pass, .5 mile north of Meek's Cabin. (March). (570).
Atriplex polycarpa (Torr.) Wats. Cattle Saltbush. At Twentynine Palms Oasis. (March, April, May).
Atriplex serenana Nels. Found in lower elevations of Monument on the Mojave Desert side. (May).

- Chenopodium incanum (Wats.) Heller. Collected in Live Oak Tank while dry, elevation 4000 feet. (918).
Chenopodium californicum Wats. Collected at Stubby Spring area, elevation 4500 feet. (855).
Grayia spinosa (Hook.) Mog. Spiny Hopsage. In Fortynine Palms Canyon and Queen Valley area. Collected at Indian Cove, elevation 3100 feet. (April, May). (462).
Suaeda torreyana Wats. var. ramosissima (Standl.) Munz. Bush Seepweed. Throughout Twentynine Palms Oasis area. (March, April).

Amaranthaceae (Amaranth Family)

- Amaranthus fimbriatus (Torr.) Benth. Amaranthus. At White Tanks, Jumbo Rocks, and Quail Spring. (July, August, September).
Tidestromia oblongifolia (Wats.) Standl. Honeysweet Tidestromia. At Twentynine Palms Oasis. (July, August, September).

Nyctaginaceae (Four-o'clock Family)

- Abronia pogonantha Heimerl. Bearded Sandverbena. In Juniper Flat and Queen Valley areas. (May, June).
Abronia villosa Wats. Desert Sandverbena. Lower elevations, Pinto Basin, and Colorado Desert portion of Monument. Collected at Old Dale, elevation 1300 feet. (April, May). (541).
Allionia incarnata L. var. nudata (Standl.) Munz. Trailing Allionia. Found at White Tanks and Fortynine Palms entrance. (April and May).
Allionia incarnata L. var. villosa (Standl.) Munz. Allionia. Collected in southwest quarter, section 16, T1S, R9E, elevation 3600 feet. (April, May). (656).
Boerhaavia caribaea Jacq. Spiderling. Along northern boundary of Monument and south of Twentynine Palms.
Boerhaavia intermedia Jones. Spiderling. Found at Indian Cove Campground. (July, August).
Boerhaavia spicata Choisy var. torreyana Wats. Spiderling. In Little San Bernardino Mountains. Collected in northwest quarter, section 4, T1S, R9E, SBM, elevation 2000 feet. (April, May, July, August). (688).
Mirabilis bigelovi Gray. Four-o'clock. Found near Gold Coin Mine. Collected in Fortynine Palms Canyon, elevation 2000 feet. (March, April, May). (606).
Mirabilis bigelovi Gray var. aspera (Greene) Munz. In Wilson Canyon. (April, May).

Mirabilis bigelovi Gray var. retrorsa (Heller) Munz.
Wishboneplants. In White Tanks and Stirrup Tank
areas. (March, April, May).

Aizoaceae (Carpent-weed Family)

Trianthema portulacastrum L. Desert Horse-purslane.
Found growing at Twentynine Palms Oasis. (May, June,
July).

Portulacaceae (Purslane Family)

Calyptridium monandrum Nutt. Found throughout Monument.
Collected at Fortynine Palms Canyon, elevation 2000
feet. (March, April, May). (607).

Calandrinia ambigua (Wats.) Howell. Rockpurslane. Near
the Twentynine Palms entrance. (March).

Claytonia perfoliata (Donn.) Howell. Minerslettuce.
Along Willow Hole Wash. (May, June).

Portulaca oleracea L. Common Purslane. In Keys Wash.
(August).

Caryophyllaceae (Pink Family)

Arenaria macradenia Wats. Arenarea. At Black Rock
Spring and Covington Flat. Collected in Black Rock
Spring Wash, elevation 4000 feet. (May, June). (910).

Arenaria macradenia Wats. var. parishiorum Robins. At
Pine City area. Collected in Lost Horse Pass, ele-
vation 4500 feet. (May, June). (854).

Achyronychia cooperi T. & G. At Twentynine Palms Oasis
and Pinto Basin. Collected on north edge of T1S,
R10E, SBM, elevation 1700 feet. (March, April, May)
(741).

Ranunculaceae (Crowfoot Family)

Clematis pauciflora Nutt. Clematis. At Indian Cove and
some areas in Lost Horse Valley. Collected at Mes-
quite Cove, Indian Cove, elevation 2900 feet. (April
May). (697).

Delphinium parishii Gray. Parish Larkspur. At Indian
Cove, Queen and Lost Horse Valley. Collected at
mouth of Fortynine Palms Canyon, elevation 2000 ft.
(April, May). (625).

Myosurus cupulatus Wats. Mousetail. In Wonderland of
Rocks area and Little San Bernardino Mountains.
(April, May).

Papaveraceae (Poppy Family)

Argemone intermedia Sweet var. corymbosa (Greene) Eastw.
Pricklepoppy. In wash south of Lost Palms Oasis.
(March, April).

Argemone platyceras Link & Otto. Crested Pricklepoppy.
Found in Ivanpah Tank and Dale Regions. Collected
near Pinto Pass Summit. (March, April.) (434).

Eschscholtzia glyptosperma Greene. Desert Goldpoppy. In
Quail Spring area. Collected at Indian Cove, eleva-
tion 3100 feet. (April, May). (443).

Eschscholtzia minutiflora Wats. Little Goldpoppy. In
Queen Valley, Willow Hole area, and Cottonwood Wash.
Collected at Fortynine Palms Canyon, elevation 2000
feet. (April, May). (485).

Eschscholtzia minutiflora Wats. Var. parishi (Greene)
Jeps. Goldpoppy. In Bernard Canyon. (April, May).

Platystemon californicus Benth. var. crinitus Greene.
Creamcups Platystemon. At Salton View Wye, and Hid-
den Valley. Collected in Lost Horse Valley, eleva-
tion 4300 feet. (April, May). (670).

Cruciferae (Mustard Family)

Arabis glaucovalvula M.E. Jones. At Jumbo Rocks Camp-
ground. Collected in southeast quarter of section 8
T1S, R9E, SBM, elevation 3000-4000 feet. (April,
May). (663).

Arabis perennans Wats. Along Washington Canyon Wash.
Collected in southwest quarter, section 16, T1S, R9E
elevation 3900 feet. (April). (646).

Arabis pulchra M.E. Jones. Jumbo Rocks Campground. Col-
lected at Twin Tanks. (April, May) (516).

Arabis pulchra M.E. Jones var. gracilis Jones. In Salton
View area. (April, May).

Camelina sativa (L.) Grantz. Bigseed Falseflax. In
Little San Bernardino Mountains.

Caulanthus cooperi (Wats.) Payson. Eagle Mts. and Hid-
den Valley areas. Location where collected unknown.
(March, April, May). (507).

Caulanthus hallii Payson. Little San Bernardino Mountain
in the Stubby Spring Area. (April, May).

Descurainia brachycarpon (Richardson) O. E. Schultz.
Tansymustard. At White Tank area. (March, April,
May).

Descurainia pinnata (Walt.) Britton. Pinnate Tansy-
mustard. Quite common throughout entire Monument.
Collected at Indian Cove, elevation 3000 feet.

- (March, April, May). (520).
Dithyrea californica Harv. California Spectaclepod.
 Found in Fried Liver Wash area. Collected in Pinto Basin, elevation 1500 feet. (March, April). (449).
Erysimum asperum (Nutt.) D.C. Plains Erysimum. Grows throughout west end of Monument under Pinyon Pine and Juniper. Collected at Black Rock Spring Wash, elevation 4200 feet. (March, April, May). (897).
Lepidium fremonti Wats. Desert Pepperweed. Quite common throughout Lower Sonoran Zone in the Monument. Collected in Indian Cove, elevation 3000 feet. (March, April, May, June). (511,847).
Lepidium flavum Torr. Pepperweed. Found blooming at Upper Covington Flat. (May).
Lepidium lasiocarpum Nutt. Collected at Feldspar Point, Indian Cove. (535).
Lesquerella palmeri Wats. Bladder-pod. Along highway between Smoke Tree Wash and Cottonwood Junction. (April).
Sisymbrium altissimum L. Tumblemustard. Collected along Lost Horse Mine Road, elevation 4800 feet. (March, April). (843).
Sisymbrium diffusum Gray var. jaegeri Munz. Found blooming at Pinyon Wells. (March).
Stanleya pinnata (Pursh) Britton. Desert Princesplume. Found near Hidden Valley and Cottonwood Spring area. Collected at Cottonwood Spring Wash, elevation 3000 feet. (April, May). (756).
Streptanthella longirostris (Wats.) Rydb. At Twenty-nine Palms Oasis. Collected in southwest quarter, section 16, T1S, R9E, elevation 3500 feet. (March, April). (657).
Thelypodium affine Greene. Thelypody. At Stirrup Wye area. (April).
Thelypodium lasiophyllum (H. & A.) Greene. Thelypody. Collected in the Twin Tank area. (April). (518).
Thysanocarpus curvipes Hook var. eradiatus Jeps. Lace-pod. At Live Oak Tank. Collected one mile above Piñon Well, elevation 4900 feet. (April, May) (598).
Thysanocarpus laciniatus Nutt. Lace-pod. Near Optimist Mine Road. (April, May).
Tropedocarpum gracile Hook. Along Rattlesnake Wash. (April, May).

Capparidaceae (Caper Family)

- Cleomella obrusifolia Torr. & Frem. Stinkweed. At Twentynine Palms Oasis. (June, July, August).

- Isomeris arborea Nutt. var. angustata Parish. Very common in the Lower Sonoran Zone. Collected at Indian Cove, elevation 3100 feet. (All year). (440).

Resedaceae (Mignonette Family)

- Oligomeris linifolia (Vahl.) Macbr. Cambess. At Ruby Lee Millsite. Collected north of Dale Dry Lake. (May) (574).

Crassulaceae (Stone-crop Family)

- Echeveria saxosa (Jones) Nelson & Macbr. Echeveria. In scattered clumps throughout Little San Bernardino, Hexie, and Black Mountains. Collected in the Dale area along Cottonwood road, elevation 3000 feet. (April, May) (759).

Crossosomataceae (Crossosoma Family)

- Crossosoma bigelovi Wats. Bigelow Crossosoma. In Coxcomb Mountains and extreme west end of Monument. (March, April).

Rosaceae (Rose Family)

- Cercocarpus betuloides Nutt. Birchleaf Mountainmahogany. At Upper Covington Flat and Black Rock Spring. Collected in Smith Water Canyon at lower spring. (April, May). (939).
Coleogyne ramosissima Torr. Blackbrush. Found in most of Upper Sonoran Zone of the Monument. Collected east of Quail Spring. (April, May). (840).
Potentilla saxosa Lemmon. Cinquefoil. In Little San Bernardino Mountains and Cottonwood Spring area. Collected in Rattlesnake Canyon, elevation 3200 feet (April, May) (784).
Prunus fasciculata (Torr.) Gray. Desert Peachbrush. Found throughout west end of Monument. Collected in Rattlesnake Canyon, elevation 3200 feet. (April, May). (780).
Prunus ilicifolia Walp. Hollyleaf Cherry. Along wash on road to Upper Covington Flat. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April May). (487).
Prunus eriogyna S. C. Mason. Along wash about one half mile north of Black Rock Spring. (May, June).
Purshia glandulosa Curran. Desert Bitterbrush. At

Upper and Lower Covington Flat, Stubby Spring, and Juniper Flat. Collected along west Stubby Spring Road, elevation 4700 feet. (April, May). (838).

Leguminosae (Pea Family)

- Acacia greggi Gray. Catclaw Acacia. Found in nearly every wash in the Monument. (June).
- Astragalus agninus Jepson. Astragalus. Quail Spring Area. (May).
- Astragalus bernardinus Jones. Astragalus. Throughout Little San Bernardino Mountains. (April, May).
- Astragalus coccineus (Parry) Brandg. Astragalus. Near Nolina Cove, Optimist Mine, and Desert Queen Mine. Collected in south Lower Covington Flat. (April, May). (496).
- Astragalus dispermus Gray. Astragalus. Collected in Lost Horse Valley, elevation 4300 feet. (April, May). (694).
- Astragalus geyeri Gray. Astragalus. On Juniper Flat and hill north of Fortynine Palms Oasis. (April).
- Astragalus layneae Greene. Astragalus. Collected in Indian Cove area, elevation 3000 feet. (March, April, May). (512).
- Astragalus lentiginosus Dougl. var. fremonti (Gray) Wats. Specklepod Loco. Quail Spring and Lost Horse Valley. Collected in Lost Horse Valley, elevation 4300 feet. (March, April, May). (671).
- Astragalus lentiginosus Dougl. var. nigricalycis Jones. Specklepod Loco. At Jumbo Rocks. (April, May).
- Astragalus nuttallianus DC var. trichocarpus T. & G. Collected in southwest quarter, section 16, T1S, R9E elevation 3600 feet. (April, May). (651).
- Astragalus nutans M.E. Jones. Lost Horse Valley. (March April).
- Astragalus vaseyi Wats. The Pine Spring area. (April, May).
- Astragalus vaseyi Wats. var. johnstoni Munz and McBurney. Little San Bernardino Mountains. Collected in the Split Rock area, elevation 4000 feet. (April, May). (502).
- Cassia armata Wats. Desert Senna. From Twentynine Palms boundary on through to Lost Horse Valley. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April, May). (623).
- Cercidium floridum Benth. Blue Paloverde. South of Cottonwood Spring on Colorado Desert exposure. Collected in the Cottonwood Spring area, .25 mile below

- spring, elevation 3000 feet. (April, May). (864).
- Dalea californica Wats. California Dalea. From Twentynine Palms entrance to White Tanks area. Collected in Black Rock Spring Wash, elevation 3900 feet. (April, May). (900).
- Dalea emoryi Gray. Emory Dalea. On north slopes of the Coxcomb Mountains. (April, May).
- Dalea mollis Benth. var. mollissima (Rydb.) Munz. Hairy Dalea. At lower elevations of the Mohave Desert. Collected in Pinto Pass, .5 miles north of Meek's Cabin, elevation 2000 feet. (April, May). (591).
- Dalea Parryi T. & G. Parry Dalea. East Pinto Basin. Collected in north edge of T1S, R10E, SBM, elevation 1700 feet. (March, April). (745).
- Dalea polyadenia (Torr.) Hel. Nevada Dalea. South of Pinto Pass. Collected at Ruby Lee Millsite, elevation 3000 feet. (May).
- Dalea schottii Torr. Mesa Dalea. At Pinto Basin, Cottonwood Spring, and Cottonwood Canyon. Collected at southern edge of Cottonwood Canyon. (April, May). (602).
- Dalea spinosa Gray. Smokethorn Dalea. In many washes on eastern half of Monument. (May, June).
- Glycyrrhiza lepidota (Nutt.) Pursh. American Licorice. Along nature trail at Twentynine Palms Oasis. (May, June).
- Hoffmannseggia microphylla Torr. Littleleaf Rushpea. Found growing near South Boundary. Collected along southern edge of Monument near Berdue Canyon. (April, May). (604).
- Hoffmannseggia falcaria Cav. Rushpea. On Pleasant Valley Dry Lake. (April, May).
- Krameria grayi Rose and Painter. Grays Krameria. At Indian Cove, Twentynine Palms entrance, Belle, White Tanks, and scattered throughout west end of Monument Collected at Ruby Lee Mill Site, elevation 3000 feet (May). (768).
- Krameria parvifolia Benth. var. imparata Macbr. Littleleaf Krameria. In Stirrup Wye area. Collected along Cottonwood Spring Road, elevation 3000 feet. (April May). (760).
- Lotus americanus (Nutt) Bisch. Spanishclover Deervetch. Collected in Willow Hole area, elevation 4200 feet. (May). (880).
- Lotus humistratus Greene. Foothill Deervetch. At Cottonwood Spring. (March, April).
- Lotus leucophyllus Greene. White Leafed Deervetch. On Juniper and Covington Flats. Collected in Black

- Rock Spring Wash, elevation 4400 feet. (May, June).
(907).
- Lotus rigidus (Benth.) Greene. Shrubby Deervetch.
Occurs practically throughout western part of Monument. Collected in Indian Cove, elevation 3100 feet (March, April, May). (442).
- Lotus salsuginosus Greene var. brevivexillus Ottley.
Deervetch. Collected in southwest quarter, section 16, T1S, R9E, elevation 3600 feet. (650).
- Lotus scoparius (Nutt.) Ottley. var. brevialatus Ottley
Broom Deervetch. Juniper Flat and Stubby Spring area. Collected in Covington Flat Canyon, elevation 4500 feet. (March, April). (713).
- Lotus strigosus (Nutt.) Greene. Deervetch. Northwest part of Monument. Collected in Lost Horse Valley, elevation 4300 feet. (March, April, May). (693).
- Lotus tomentellus Greene. Desert Deervetch. In Pinto Basin. (March, April, May).
- Lupinus andersoni Wats. Lupine. Collected in Covington Flat, elevation 5200 feet. (May). (723).
- Lupine bicolor Lindl. var. microphyllus (Wats.) C. P. Smith Bicolor Lupine. At Mexican Mine. (March, April).
- Lupinus brevicaulis Wats. Shortstem Lupine. Along edge of Queen Valley Dry Lake. (April, May).
- Lupinus concinnus Agardh. Bajada Lupine. At Black Rock Spring. Collected south of summit in Stubby Spring Pass, elevation 4700 feet. (April, May). (861).
- Lupinus excubitus Jones. Inyo Lupine. Collected in Covington Flat Canyon, elevation 4600 feet. (May). (720).
- Lupinus formosus Greene. Lunara Lupine. Black Rock Spring. (April, May).
- Lupinus formosus Greene var. hyacinthinus (Greene) C. P. Smith. Lunara Lupine. Collected in Covington Flat Canyon, elevation 4500 feet. (April, May). (718).
- Lupinus odoratus Heller. Mohave Lupine. Near Optimist Mine Road. (April).
- Lupinus shockleyi Wats. Desert Lupine. Along northern boundaries of Monument at low elevations. (March, April).
- Lupinus sparsiflorus Benth. Coulter Lupine. At Indian Cove. (March, April).
- Lupinus sparsiflorus Benth. var. arizonicus (Wats.) C.P. Smith. Coulter Lupine. At Pinto Basin and Cottonwood Wash. Collected in north edge of T1S, R10E, SBM, elevation 1700 feet. (March, April, May). (736).
- Olneya tesota Gray. Tesota. Mouth of Cottonwood Canyon

- on to south boundary. Only on the Colorado Desert exposure. (May, June).
- Prosopis juliflora (Swartz) D. C. var. torreyana Munz.
Common Mesquite. Around all springs and areas where water is apparently close to surface. Collected in Rattlesnake Canyon, elevation 3200 feet. (April, May). (790).
- Strombocarpus odorata Benth. Fremont Screwbean. At Twentynine Palms Oasis. (April, May).
- Trifolium microcephalum Pursh. Littlehead Clover. Collected in the Willow Hole area, elevation 4200 feet. (May, June). (877).
- Trifolium variegatum Nutt. Whitetip Clover. Collected in the Willow Hole area, elevation 4200 feet. (May, June). (875).

Geraniaceae (Geranium Family)

- Erodium texanum Gray. Texas Heronbill. At South Boundary and along road through Pinto Basin. (March, April).
- Erodium cicutarium (L.) L'Her. Alfileria. Common throughout Monument. (March, April, May).

Zygophyllaceae (Caltrops Family)

- Fagonia chilensis H. & A. var. glutinosa (Vail) Johnston.
Fagonia. In Pleasant Valley and Fried Liver Wash. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April). (474).
- Larrea divaricata Cav. Spreading Creosotebush. Lower Sonoran Zone of Monument. Collected at the Cholla Patch, elevation 2100 feet. (March, April, May). (700).
- Tribulus terrestris L. Puncturevine. In most of the campgrounds. Introduced quite recently, probably by tires on automobiles of park visitors. (March, April, May, June).

Rutaceae (Rue Family)

- Thamnosma montana Torr. & Frem. Mohave Desert rue.
Found from Twentynine Palms entrance along main road to Salton View. Collected at Twin Tanks, elevation 3800 feet. (March, April, May). (508).

Simarubaceae (Ailanthus Family)

Holacantha emoryi Gray. Crucifixion Thorn. East of
Lost Palms. (May, June).

Polygalaceae (Milkwort Family)

Polygala acanthoclada Gray. Thorn Polygala. In Cotton-
wood Spring area. (May).

Euphorbiaceae (Spurge Family)

Bernardia myricaefolia (Scheele) Wats. Southwest Ber-
nardia. Pinyon Wells and throughout Eagle Mountains
(May, June).

Croton californicus Mull. Arg. var. mohavensis Ferg.
California Croton. At Twentynine Palms and Indian
Cove entrances. Collected in Lost Horse Valley and
Black Rock Spring Wash. (April, May). (823, 894)

Ditaxis californica (Brandg.) Pax. & Hoffm. Ditaxis.
In Eagle Mountains. (March, April).

Ditaxis lanceolata (Benth.) Pax. & Hoffm. Ditaxis.
Eagle Mountains and mouth of Fortynine Palms Canyon.
(March, April, May).

Ditaxis serrata (Torr.) Heller. Ditaxis. Along dike
at south boundary and in Eagle Mountains. (March,
April).

Euphorbia albomarginata T. & G. Whitemargin Euphorbia.
Collected in Cottonwood Pass. (603).

Euphorbia eriantha Benth. At Split Rock, South of Jumbo
Rocks Campground, and in Eagle Mountains. (March,
April).

Euphorbia fendleri T. & G. Fendler Euphorbia. Little
San Bernardino Mountains. (May, June).

Euphorbia glyptosperma Engelm. Ridgeseed Euphorbia.
Along Stirrup Tank Road. (May).

Euphorbia polycarpa Benth. Near Twentynine Palms en-
trance. Collected .5 mile north of Meek's Cabin,
elevation 2000 feet. (March, April). (573).

Euphorbia polycarpa Benth. var. hirtella Boiss. In
Wilson Canyon. Collected at north edge of T1S, R10E
SBM, elevation 1700 feet. (March, April). (746).

Euphorbia setiloba Engelm. Yuma Euphorbia. Cottonwood
Spring area. (April, May).

Euphorbia vallis-mortae (Millsp.) J. T. Willow Hole
area. (April, May, June).

Halliophytum halli (Grandg.) Johnston. Hals Chucka-
wallabush. Cottonwood Spring area. Collected in

Wilson Canyon, elevation 2000 feet. (May). (635).
Stillingia linearifolia Wats. Desert Stillingia. Col-
lected at Ruby Lee Mill Site, elevation 3000 feet.
Also found at Twentynine Palms entrance and Pinto
Basin. (April, May). (772).

Stillingia paucidentata Wats. Stillingia. Pinto Basin.
(March, April).

Stillingia spinulosa Torr. Stillingia. Can be found
growing near Twentynine Palms entrance. Collected
north of Dale Dry Lake. (March, April, May). (575).

Buxaceae (Box Family)

Simmondsia chinensis (Link) Schneider. California
Jojoba. Can be found growing in Little San Bernar-
dino Mountains, Rattlesnake Canyon, and throughout
Pinto Basin. Collected in Rattlesnake Canyon, ele-
vation 3200 feet. (April, May). (781).

Anacardiaceae (Sumac Family)

Rhus trilobata Nutt. var. anisophylla (Greene) Jepson.
Skunkbush Sumac. Rocky areas in Lost Horse Valley
and Jumbo Rocks Campground. Collected in Split Rock
area, elevation 4200 feet. (March, April, May).
(775).

Rhamnaceae (Buckthorn Family)

Ceanothus perplexans Trelease. Ceanothus. Little San
Bernardino Mountains. (April).

Colubrina californica Johnston. California Colubrina.
Eagle Mountains. Collected near Ruby Lee Mill Site,
elevation 3000 feet. (May, June). (773).

Condalia lycioides (Gray) Weberbauer var. canescens
(Gray) Trel. Desert Southwestern Condalia. Collec-
ted at Cottonwood Spring area, elevation 3000 feet.
(May, June) (862, 433).

Condalia parryi (Torr.) Weberb. Parry Condalia. At
Cottonwood Spring. Collected at Black Rock Spring
Wash, elevation 3900 feet. (May, June). (899).

Rhamnus crocea Nutt. var. illicifolia (Kell.) Greene.
Hollyleaf Redberry Buckthorn. Around rocks in Lost
Horse Valley. Collected in Rattlesnake Canyon, ele-
vation 3200 feet. (May). (785a).

Malvaceae (Mallow Family)

- Hibiscus denudatus Benth. Paleface Rosemallow. Eagle Mountains, and in Cottonwood Canyon. (March, April).
Malvastrum exile Gray. Falsemallow. Pleasant Valley Dry Lake. Collected at Old Dale, elevation 1300 feet. (April, May). (546).
Malvastrum rotundifolium Gray. Falsemallow. In Cottonwood Wash. Collected .5 mile north of Meek's Cabin, Pinto Pass, elevation 2000 feet. (March, April). (583).
Sidalcea neomexicana Gray var. parviflora (Greene) Roush. Small New Mexican Checkermallow. Twentynine Palms Oasis. (April).
Sphaeralcea ambigua Gray. Desert Globemallow. Cottonwood Wash, Jumbo Rocks, and Lost Horse Valley. Collected in Pinto Pass, .5 mile north of Meek's Cabin, elevation 2000 feet. (March, April, May). (578).
Sphaeralcea ambigua Gray. var. kecki Munz. East Pinto Basin and east end of Eagle Mountains. (April, May)
Sphaeralcea emoryi Torr. Globemallow. Pleasant Valley Dry Lake. (April, May).

Sterculiaceae (Cacao Family)

- Ayenia compacta Rose. Ayenia. Eagle Mountains. (May).

Fouquieriaceae (Ocotillo Family)

- Fouquieria splendens Engelm. Ocotillo. Pinto Basin area, Cottonwood Canyon, and South Boundary. Collected in west end of Pinto Basin, elevation 1600 feet. (March, April). (762).

Loasaceae (Loasa Family)

- Mentzelia affinis Greene. Mentzelia. In Cottonwood Wash, Indian Cove, and Quail Spring. (March, April).
Mentzelia albicaulis Dougl. Whitestem Mentzelia. Cottonwood Wash. Collected in section 16, southwest quarter, T1S, R9E, elevation 3600 feet. (March, April). (653).
Mentzelia albicaulis Dougl. var. inaequiloba. Mentzelia. At Salton View Wye. (April, May).
Mentzelia gracilentata T. & G. Collected in Pleasant Valley area. (600).
Mentzelia involucreta Wats. Samija Mentzelia. In Cottonwood Wash and south of Twentynine Palms entrance.

- Collected in Fortynine Palms Canyon, elevation 2000 feet. (March, April). (494).
Mentzelia longiloba Darlington. Mentzelia. East of Lost Palms Canyon. (April, May).
Mentzelia nitens Greene. Mentzelia. At Cottonwood Spring Wye. Collected in Fortynine Palms Canyon, elevation 2000 feet. (March, April, May). (499).
Petalonyx linearis Greene. Narrowleaf Sandpaperplant. Rockhouse Canyon. (April, May).
Petalonyx thurberi Gray. Thurber Sandpaperplant. Found growing near Anaconda Mine. Collected at Ruby Lee Mill Site, elevation 3000 feet. (May, June). (771).

Cactaceae (Cactus Family)

- Coryphantha alversoni (Coulter) Zeissold. Alverson Coryphantha. Little San Bernardino and Eagle Mountains. Collected in Pine Spring area, elevation 4300 feet. (April, May). (809).
Echinocactus polycephalus Engelm. & Bigel. Cottontop Echinocactus. Cottonwood Spring and Stirrup Tank areas. (May, June).
Echinocereus engelmanni Parry. Engelmann Echinocereus. Found throughout entire Monument. Collected at Pine Spring, elevation 2750 feet. (April, May) (877).
Echinocereus mojaviensis Engelm. & Bigel. Mojave Echinocereus. In Queen and Lost Horse Valleys. Collected at Covington Flat Canyon, elevation 4500 feet. (April, May). (730).
Ferocactus acanthodes Lemaire. California Barrelcactus. At Indian Cove, Cottonwood Spring, and Willow Hole areas. (April, May)
Mammillaria deserti Engelm. Stirrup Tank area. (May, June).
Mammillaria phellosperma Britt. & Rose. At Cottonwood Spring and south of Twentynine Palms entrance. (May, June).
Opuntia acanthocarpa Engelm. & Bigel. Buckhorn Cholla. At Mexican Mine. Collected along Cottonwood Spring road, elevation 3000 feet. (April, May). (763).
Opuntia basilaris Engelm. & Bigel. Beavertail Pricklypear. Can be found through entire monument. (April, May).
Opuntia bigelovi Engelm. Arizona Jumping Pricklypear. In a large group along Pinto Basin Road. Collected at Cholla Garden, elevation 1600 feet. (May, June). (764).
Opuntia chlorotica Engelm. & Bigel. Dollarjoint

- Pricklypear. At Quail Spring, Pine City, and Conejo Well. Collected in Rattlesnake Canyon, elevation 3200 feet. (May, June). (786).
- Opuntia echinocarpa Engelm. & Bigel. Strawtop Pricklypear. Found through entire Monument. (April, May).
- Opuntia erinacea Engelm. Grizzlybear Pricklypear. Little San Bernardino Mountains, Juniper Flat, and north Queen Valley. Collected in Covington Flat Canyon, elevation 4500 feet. (May, June). (729)
- Opuntia mojavensis Engelm. & Bigel. Mohave Pricklypear. At Hidden Valley Campground, Willow Hole, and Lost Horse Wells. (April, May).
- Opuntia parishii Orcutt. Parish Cholla. At Pine City, Queen Valley, and along road in Lost Horse Valley. (April, May).
- Opuntia ramosissima Engelm. Holycross Cholla. Found through entire Monument. (May, June).

Onagraceae (Evening-Primrose Family)

- Oenothera bistorta Hook. var. hallii (Davidson) Jeps. Twisted Sundrop. Collected on Quail Mountain, elevation 4900 feet. (828).
- Oenothera brevipes Gray. Golden Eveningprimrose. In Cottonwood Wash. Collected at mouth of Fortynine Palms Canyon, elevation 2000 feet. (March, April). (610).
- Oenothera caespitosa Nutt. var. marginata (Nutt.) Munz. Tufted Eveningprimrose. In Queen Valley. (April, May).
- Oenothera californica Wats. Desert Eveningprimrose. At Juniper Flat. Collected in Black Rock Spring Wash, elevation 4400 feet. (April, May). (909).
- Oenothera cardiophylla Torr. Heartleaf Eveningprimrose. Near south boundary. Collected at Fortynine Palms Canyon, elevation 2000 feet. (April, May) (495).
- Oenothera contorta Dougl. var. flexuosa (Nels.) Munz. At Twentynine Palms Oasis. (March, April).
- Oenothera claviformis Torr. & Frem. Browneyed Eveningprimrose. From Twentynine Palms entrance to Pinto Wye. (March, April, May).
- Oenothera claviformis (Torr. & Frem.) var. aurantiaca (Wats.) Munz. Browneyed Eveningprimrose. Cottonwood Wash. Collected in Pinto Basin, elevation 2000 feet. (March, April, May) (452).
- Oenothera decorticans (H. & A.) Greene. var. condensata Munz. Near south entrance and east Pinto Basin. (March, April).

- Oenothera decorticans (H. & A.) Greene var. desertorum Munz. Near Anaconda Mine. (April, May).
- Oenothera decorticans (H. & A.) Greene var. rutila (Davidson) Munz. Black Rock Spring and Covington Flat areas. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April, May). (489).
- Oenothera deltoidea Torr. & Frem. In Pinto Basin. Collected in Old Dale area, elevation 1300 feet. (April May). (542).
- Oenothera dentata Cav. var. johnstoni Munz. Can be found growing at east end of Monument. (March, April).
- Oenothera dentata Cav. var. parishi (Abrams) Munz. In Lost Horse Valley. Collected in Pleasant Valley. (April, May). (596).
- Oenothera leptocarpa Greene. At Gold Coin Mine.
- Oenothera micrantha Hornem. var. exfoliata (Nels.) Munz. At Ivanpah Tank. Collected in Live Oak Tank, elevation 4000 feet. (March, April, May). (923).
- Oenothera primiveris Gray. At Twentynine Palms Oasis. (April).
- Oenothera refracta Wats. Pinto Basin and Cottonwood Wash. (March, April).
- Zauschneria latifolia (Hook.) Greene var. johnstoni Hilend. Broadleaf Firechalice. Live Oak Tank, Willow Hole, White Tanks, Rattlesnake Wash, and Stirrup Tank areas. (November, December).

Umbelliferae (Carrot Family)

- Ammoselinum occidentale Munz & Jtn. Found east of Lost Palms. (March, April).
- Cymopterus panamintensis C. & R. var. acutifolius (C. & R.) Munz. Eagle Mountains and Cottonwood Canyon. (March, April).
- Lomatium mohavense C. & R. Pine Spring area. Collected in T1S, R9E, SBM, southeast quarter, section 8, elevation 3000-4000 feet. (March, April). (662).

Lennoaceae (Lennoa Family)

- Pholisma arenarium Nutt. Indian Cove, Jumbo Rocks, and Stubby Spring. Collected in Indian Cove, elevation 3100 feet. (April, May). (779).

Ericaceae (Heath Family)

- Arctostaphylos canescens Eastw. Hoary Manzanita. Can be found growing at the extreme western edge of the

Monument. (April, May)
Arctostaphylos glauca Lindl. var. eremicola Jeps. Big-berry Manzanita. Stubby Spring trail, Hidden Valley Campground, and Manzanita Cove. Collected in Forty-nine Palms Canyon. (April, May) (498).

Oleaceae (Olive Family)

Forestiera neomexicana Gray. New Mexican Forestiera. At Lower Covington Spring. Collected at Barker Dam in the Wonderland of Rocks. (April, May). (458).

Fraxinus anomala Wats. Singleleaf Ash. One specimen found below waterfall in Rattlesnake Canyon. (April)

Fraxinus velutina Torr. var. coriacea (Wats.) Rehder. Leatherleaf Ash. In Wash south of Junco Spring and at Keys Ranch. Collected in Rattlesnake Canyon, elevation 3200 feet. (April). (789).

Menodora scabra (Engelm.) Gray var. laevis (Woot. & Standl.) Steyermark. Rough Menodora. At Twenty-nine Palms entrance.

Menodora scoparia Engelm. Broom Menodora. In Sheep Pass and at Live Oak Tank. Collected in Willow Hole area, elevation 4200 feet. (May, June). (870).

Menodora spinescens Gray. Spiny Menodora. Collected at Twentynine Palms entrance. (April). (636).

Apocynaceae (Dogbane Family)

Amsonia brevifolia Gray. Amsonia. At Quail Spring and along road in Queen Valley. Collected in Queen Valley area, elevation 4200 feet. (April, May). (702).

Amsonia brevifolia Gray. var. tomentosa (Torr.) Jeps. Amsonia. At Quail Spring and along road in Queen Valley. Collected in Queen Valley area, elevation 4200 feet. (April, May). (703).

Apocynum hypericifolium Ait. var. salignum (Greene) Beg. & Bel. At Twentynine Palms Oasis. (May).

Asclepiadaceae (Milkweed Family)

Asclepias albicans Wats. Milkweed. In Pinto and Eagle Mountains. (March, April).

Asclepias erosa Torr. Desert Milkweed. Upper Covington Wash. Collected in Black Rock Spring Wash, elevation 4200 feet. (May, June). (898).

Asclepias subulata Dec. Skeleton Milkweed. In Pinto Basin. (June, July).

Astephanus utahensis Engelm. Near county line on

Twentynine Palms Entrance Road. (May).
Philibertia heterophyllum (Engelm.) Standl. Collected in the Cholla Patch in Pinto Basin, elevation 2100 feet. (March, April) (699, 850).
Philibertia hirtellum (Gray) Scheechter. In Pinto Basin collected in Pinto Pass, .5 mile north of Meek's Cabin. (April, May). (585).
Vincetoxicum hastulatum (Gray) Heller. Cottonwood Spring area. (April, May).

Convolvulaceae (Morning-glory Family)

Cuscuta denticulata Engelm. Dodder. Collected in Quail Wash, elevation 3500 feet. (May). (890).

Cuscuta californica Choisy. Dodder. Willow Hole area. (May).

Polemoniaceae (Phlox Family)

Gilia aurea Nutt. Yellow Gilia. Throughout Lost Horse Valley. Collected at Indian Cove, elevation 3100 feet. (April, May). (466).

Gilia aurea Nutt. var. decora (Gray) Brand. Yellow Gilia Along road to Conejo Well. (April, May).

Gilia bigelovi Gray. Gilia. Collected at Indian Cove, elevation 3100 feet. (464).

Gilia densifolia Benth. var. austromontana Craig. Tube Gilia. Collected at Black Rock Spring Wash, elevation 4500 feet. (April, May). (911).

Gilia densifolia Benth. var. mohavensis Craig. Tube Gilia. Near Quail Spring and Upper Covington Flat Road. (April, May).

Gilia eremica (Jeps.) Craig. Gilia. At Black Rock Spring. Collected in Lost Horse Mine area, elevation 5000 feet. (April, May). (845).

Gilia filifolia Nutt. var. diffusa Gray. Gilia. Pinto Basin and Lost Horse Valley. (April, May).

Gilia filifolia Nutt. var. harwoodi Craig. Gilia. Eastern part of Monument. (April, May).

Gilia filifolia Nutt. var. sparsiflora (Eastw.) Macbr. Gilia. Little San Bernardino Mountains. (April, May).

Gilia filiformis Parry. Gilia. At Twentynine Palms Oasis. (April, May).

Gilia inconspicua (Smith) Dougl. Shy Gilia. At Anaconda Mine. (April).

Gilia inconspicua (Smith) Dougl. var. sinuata (Dougl.) Gray. Shy Gilia. Near Gold Coin Mine. (April).

- Gilia jaegeri Munz. *Gilia*. Collected along Stubby Spring Road, elevation 4700 feet. (May). (812).
- Gilia latiflora Gray. *Gilia*. Along Covington Flat Road (May, June).
- Gilia latiflora Gray var. carvifolia Abrams. Collected one mile above Pinon Well, elevation 4900 feet. (May, June). (597).
- Gilia latifolia Wats. *Gilia*. Collected at the north edge of T1S, R10E, SBM, elevation 1700 feet. (April, May). (743).
- Gilia leptomeria Gray. *Gilia*. Along north boundary of Monument. (March, April).
- Gilia maculata Parish. *Gilia*. At Joshua Tree entrance. (April).
- Gilia matthewsi Gray. *Gilia*. Near Anaconda Mine. Collected in Willow Hole area, elevation 4200 feet. (April, May). (867).
- Gilia parryae Gray. *Gilia*. Stirrup Tank area. (April)
- Gilia punctata (Gray) Munz. *Gilia*. Twentynine Palms Oasis and entrance. Collected Sec. 6, T1S, R8E, SBM. (May)
- Gilia pungens (Torr.) Benth. var. halli (Parish) Milliken. Granite *Gilia*. Pearl Spring area. (May, June).
- Gilia pungens (Torr.) Benth. var. tenuiloba (Parish) Milliken. Granite *Gilia*. Near "Inspiration" triangulation station. (May, June).
- Gilia schotti (Torr.) Wats. *Gilia*. Along road to Upper Covington Flat. (April).
- Gilia scopulorum M. E. Jones. *Gilia*. Along the Juniper Flat Road. (April, May).
- Gilia tenuiflora Benth. var. arenaria Brand. *Gilia*. Collected among rocks on mountainside in Pleasant Valley, elevation 2500 feet. (April). (595).

Hydrophyllaceae (Waterleaf Family)

- Ellisia torreyi Gray. *Ellisia*. At Belle, Pinyon Wells, and Hidden Valley. Collected in southwest quarter, section 16, T1S, R9E, elevation 3900 feet. (April, May). (648).
- Ellisia membranacea Benth. *Ellisia*. Near Twentynine Palms entrance. (March, April).
- Ellisia micrantha (Torr.) Brand. *Ellisia*. Along north boundary of Monument. (March, April).
- Emmenanthe penduliflora Benth. Yellow Whisperingbells. At Cottonwood Spring, Indian Cove, and west end of Monument. Collected at Fortynine Palms Canyon, elevation 2000 feet. (March, April). (492).

- Eriodictyon crassifolium Benth. Thickleaf Yerbasanta. Small colony in Rattlesnake Wash about one half mile above waterfall. (April). (696).
- Eriodictyon trichocalyx Heller var. lanatum (Brand.) Jeps. Hairy Yerbasanta. Rattlesnake Wash and Lower Covington Flat. Collected at mouth of Rattlesnake Canyon, Indian Cove, elevation 2900 feet. (April, May). (696).
- Nama demissum Gray. *Nama*. At Cottonwood Spring and throughout west end of Monument. Collected at Fortynine Palms Canyon, elevation 2000 feet. (April, May). (615).
- Nama hispidium Gray var. revolutum Jeps. East of Lost Palms Canyon. (March, April).
- Nama hispidium Gray var. spathulatum (Torr.) C. L. Hitchcock. East of Lost Palms Canyon. (March, April)
- Nemophila rotata Eastw. var. annulata (Brand.) Munz & West. *Nemophila*. West end of Monument. (April, May).
- Phacelia affinis Gray. *Phacelia*. Little San Bernardino Mountains in west end of Monument. (May).
- Phacelia bicolor Torr. *Phacelia*. Along Pine City Road (April, May).
- Phacelia complanularia Gray. Harebell *Phacelia*. Quite common through entire monument. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April, May) (479).
- Phacelia crenulata Torr. var. ambigua (Jones) Macbr. Near Twentynine Palms entrance. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April). (612).
- Phacelia cryptantha Greene. *Phacelia*. In hills south of Black Rock Spring. Collected in Willow Hole area elevation 4200 feet. (April). (872).
- Phacelia distans Benth. Along Cottonwood Wash. Collected in Fortynine Palms Canyon, elevation 2000 feet. (March, April, May). (490).
- Phacelia fremonti Torr. Throughout western portion of Monument. Collected in Lost Horse Valley, elevation 4300 feet. (April, May). (673).
- Phacelia halli Brand. In Little San Bernardino Mountain (April, May).
- Phacelia ivesiana Torr. In Black Rock Spring area. (March, April).
- Phacelia lemmoni Gray. Willow Hole and in Smithwater Canyon. (May).
- Phacelia pedicellata Gray. Little San Bernardino Mountains and Porcupine Wash. Collected at Feldspar

- Point, Indian Cove. (April). (524).
Phacelia tanacetifolia Benth. Tansy Phacelia. Found practically through entire Monument. Collected south of Old Dale. (March, April, May). (852).
Phacelia vallis-mortae J. Voss. Collected in Pinto Basin, elevation 2000 feet. (April). (451).

Boraginaceae (Borage Family)

- Amsinckia tessellata Gray. Fiddleneck. Quite common through entire Monument. Collected at Indian Cove, elevation 3100 feet. (March, April). (437).
Coldenia canescens D. C. var. subnuda Johnston. Spreading Coldenia. In Gold Park area and Eagle Mountains. Collected in southwest quarter, section 16, T1S, R9E, elevation 3600 feet. (March, April). (649).
Coldenia plicata (Torr.) Coville. Desertmat Coldenia. Collected in Pinto Pass, .5 mile north of Meek's Cabin. (March, April). (592).
Cryptantha barbiger (Gray) Greene. Cryptantha. Collected in Fortynine Palms Canyon, elevation 2000 feet. (March). (620).
Cryptantha circumscissa (H. & A.) Johnston. Cryptantha. Collected in Quail Spring Wash, elevation 3500 feet. (March, April). (888).
Cryptantha holoptera (Gray) Macbr. Cryptantha. At War Eagle Mine. (April).
Cryptantha maritima Greene. Cryptantha. Quail Spring area. (March, April).
Cryptantha micrantha (Torr.) Johnston. Cryptantha. Collected in Black Rock Spring Wash, elevation 4200 feet. (March, April). (905).
Cryptantha pterocarya (Torr.) Greene. Cryptantha. Near Twentynine Palms entrance. Collected in Pinto Pass, .5 mile north of Meek's Cabin. (March, April). (566).
Cryptantha pterocarya (Torr.) Greene var. cycloptera (Greene) Macbr. Cryptantha. Collected in Fortynine Palms Canyon, elevation 2000 feet. (March, April). (484).
Cryptantha racemosa (Wats.) Greene. Forgetmenot Cryptantha. Collected at Ruby Lee Mill Site. (April).
Cryptantha utahensis (Gray) Greene. Cryptantha. Collected at Rocky Point. (March, April). (444).
Pectocarya platycarpa Munz & Jtn. Combseed. Collected at mouth of Fortynine Palms Canyon, elevation 2000 feet. (May, June). (608).
Pectocarya penicillata (H. & A.) A.D.C. var. heterocarpa Jtn. Shortleaf Combseed. In Queen Valley.

(May, June).

- Pectocarya recurvata Johnston. Combseed. Collected in Cottonwood Mountains. (May, June). (446).

Verbenaceae (Verbena Family)

- Lippia wrighti Gray. Wright Lippia. At the Contact Mine. (April).

Labiatae (Mint Family)

- Hyptis emoryi Torr. Emory Bushmint. Pinto Basin and Cottonwood Canyon. Collected .5 mile north of Meek's Cabin in Pinto Pass. (March, April). (560).
Monardella linoides Gray. Narrowleaf Monardella. Collected in Stubby Spring area, elevation 4600 feet. (June, July). (857).
Monardella robinsoni Epling. San Bernardino Monardella. Rattlesnake Canyon and throughout Little San Bernardino Mountains. (June, July).
Salazaria mexicana Torr. Mexican Bladdersage. Collected in Lost Horse Valley. In most parts of Monument. Collected in Fortynine Palms Canyon, elevation 2000 feet. (April, May). (624).
Salvia apiana Jeps. var. compacta Munz. White Sage. Collected in Quail Wash, elevation 3500 feet. (May). (889).
Salvia carnosa Dougl. var. pilosa (Gray) Jeps. Desert Sage. Collected along Stubby Spring Road, elevation 4400 feet. (May, June). (821).
Salvia columbariae Benth. California Chia. Collected at Indian Cove, elevation 3100 feet. Throughout entire Monument. (April, May) (438).
Salvia eremostachya Jeps. Sand Sage. In Rockhouse Canyon and occasionally other nearby canyons on Colorado Desert exposure. (April, May).
Salvia mohavensis Greene. Mohave Sage. Collected in the John's Camp area. Throughout Little San Bernardino Mountains. (June). (835).
Salvia pachyphylla Epling. Thicket Sage. Black Rock Spring area and along road to Lower Covington Flat. Collected in Black Rock Spring Wash. (June). (912).
Salvia vaseyi (Porter) Parish. Vasey Sage. At Pearl Spring, east slopes of Quail Mountain, and Smithwater Canyon. (May, June).
Teucrium depressum Small. East of Lost Palms on Colorado Desert exposure.

Solanaceae (Potato Family)

- Datura discolor Bernh. *Datura*. Along south boundary. (April).
- Datura meteloides D. C. Sacred *Datura*. Collected in Pinto Basin. Also found in Indian Cove, Twentynine Palms Oasis, and Twentynine Palms entrance area. (April, May). (562).
- Lycium Andersoni Gray. Anderson Wolfberry. Collected at Indian Cove, elevation 3100 feet. Found throughout entire Monument. (April, May). (441).
- Lycium brevipes Benth. *Lycium*. At Cottonwood Spring. (March, April).
- Lycium cooperi Gray. Cooper Wolfberry. Collected in Covington Flat Canyon. Entire west portion of Monument. (April). (727).
- Lycium pallidum var. oligospermum C. L. Hitchcock. Pale Wolfberry. Along Stubby Spring Trail. (April).
- Nicotiana trigonophylla Dunal. Desert Tobacco. Collected at Feldspar Point, Indian Cove, also found throughout eastern half of Monument. (March, April). (532).
- Physalis crassifolia Benth. Groundcherry. In canyons surrounding Pinto Basin. (April).
- Physalis hederifolia Gray. Groundcherry. Collected on summit of Pinto Pass. (April). (593).
- Physalis pubescens L. Downy Groundcherry. In Rattlesnake Canyon. (April, May).
- Solanum nigrum L. Black Nightshade. In Willow Hole area, a short distance from water hold in wash. (May)

Scrophulariaceae (Figwort Family)

- Antirrhinum coulterianum Benth. Chaparral Snapdragon. Collected in flat east of Quail Mountain, elevation 4600 feet. (May). (833).
- Antirrhinum filipes Gray. Snapdragon. Twentynine Palms entrance. (April).
- Castilleja angustifolia (Nutt.) G. Don. Northwestern Paintedcup. Near White Tanks, Twin Tanks, and Live Oak Tank. (April, May).
- Castilleja chromosa Found south of Pleasant Valley by Dr. Munz 4/15/52.
- Castilleja foliolosa H. & A. Woolly Painted cup. Extreme west end of Monument. (April, May).
- Cordylanthus nevini Gray. Birdbeak. Throughout Wonderland of Rocks. (July, August).
- Maurandya petrophila Cov. & Morton. Rocklady maurandia.

- Willow Hole. (May).
- Mimetanthe pilosa (Benth.) Greene. Collected in Live Oak Tank, elevation 4000 feet. (May). (922).
- Mimulus bigelovi Gray. Monkeyflower. Collected in Pinto Basin, elevation 2000 feet. (March, April). (448).
- Mimulus guttatus D. C. var. nasutus (Greene) Jeps. Common Monkeyflower. Collected at Barker Dam, elevation 4300 feet. (May). (792).
- Mimulus longiflorus (Nutt.) Grant. Common Monkeyflower. Collected in Lost Horse Valley, elevation 4300 feet. (April, May). (672).
- Mimulus parishii Greene. Monkeyflower. In Little San Bernardino Mountains and around Quail Spring. (May).
- Mimulus rubellus Gray. Monkeyflower. Juniper areas in eastern end of Monument, along Lower Covington Flat Road, and Willow Hole area. (April, May).
- Mohavea confertiflora (Benth.) Heller. Mohavea. In washes on south slopes of Pinto Mountain. Collected .5 mile north of Meek's Cabin, Pinto Pass, elevation 2000 feet. (March). (577).
- Penstemon ambiguus var. thurberi (Torr.) Gray. Thurber Penstemon. Near Keys Ranch in Little San Bernardino Mountains. Collected in Lost Horse Valley, elevation 4300 feet. (May). (814).
- Penstemon antirrhinoides Benth. var. microphyllus (Gray) Munz & Johnston. Littleleaf Penstemon. Little San Bernardino Mountains. Collected along Stubby Spring Road, elevation 4700 feet. (May). (817).
- Penstemon centranthifolius Benth. Scarletbugler Penstemon. Collected in Upper Covington Flat, elevation 4600 feet. (April, May). (725).
- Penstemon clevelandi Gray. var. stephensi (Brandg.) Munz & Johnston. Penstemon. Collected in Rattlesnake Canyon, elevation 3200 feet. (April). (784).
- Penstemon eatoni Gray var. undousus Jones. Wavyleaf Eaton Penstemon. Little San Bernardino Mountains. Collected in Willow Hole Area, elevation 4200 feet. (May, June). (866).
- Penstemon fruticiformis Cov. var. incertus (Brandg.) Munz and Johnston. Argus Penstemon. Collected in Lost Horse Valley, elevation 4300 feet. (May). (916).

Bignoniaceae (Bignonia Family)

- Chilopsis linearis (Cav.) Sweet. Desertwillow. Collected on Old Dale Fan, 4 miles south of Old Dale, elevation 1600 feet. Found in most washes through-

out Monument. (May, June). (749).

Martyniaceae (Martynia Family)

Martynia altheaeifolia Benth. Martynia. In Twentynine Palms Oasis.

Orobanchaceae (Broomrape Family)

Orobanche fasciculata Nutt. var. franciscana Achey. Broomrape. Collected in Black Rock Spring Wash, elevation 4200 feet. (May). (902).

Orobanche bulbosa G. Beck. Broomrape. Collected in Smithwater Canyon at lower spring. (May). (937).

Acanthaceae (Acanthus Family)

Beloperone californica Benth. California Beloperone. From Cottonwood Canyon south to monument boundary. Collected in Cottonwood Spring Wash. (December, January, February, March). (455).

Plantaginaceae (Plantain Family)

Plantago insularis Eastw. var. fastigiata (Morris) Jeps. Desert Indianwheat. Collected in Fortynine Palms Canyon. (March). (487).

Rubiaceae (Madder Family)

Galium angustifolium Nutt. var. diffusum Hilend & Howell. Narrowleaf Bedstraw. Throughout Little San Bernardino Mountains. Collected at end of Stubby Spring road, elevation 4700 feet. (April, May). (818).

Galium munzi Hilend & Howell. Munz Bedstraw. Collected on Quail Mountain, elevation 5200 feet. (May) (829).

Galium stellatum Kell. var. eremicum Hilend & Howell. Bedstraw. Collected at Fortynine Palms Canyon, elevation 2000 feet. (May). (471).

Cucurbitaceae (Gourd Family)

Brandegea bigelovi (Wats.) Cogn. Brandegea. Near Twentynine Palms entrance. Collected on west end of Pinto Basin, elevation 2000 feet. (April). (638).

Cucurbita palmata Wats. Gourd. Throughout Monument at lower elevations. (April, May, June).

Cucurbita foetidissima H.B.K. Calabazilla. In Key's Wash along Route 3. (June).

Echinocystis macrocarpa Greene. Chilicothe Mockcucumber. Above Black Rock Spring along road. (May, June).

Lobeliaceae (Lobelia Family)

Nemacladus longiflorus Gray. Nemacladus. Wilson Canyon and Upper Covington Flat. (April, May).

Compositae (Sunflower Family)

Acamptopappus sphaerocephalus. (Harv. & Gray) Gray. Rayless Goldenhead. Collected at Covington Flat Canyon elevation 4000 feet. (April). (709, 948)

Acamptopappus sphaerocephalus (Harv. & Gray) Gray var. hirtellus Blake. Rayless Goldenhead. Indian Cove and Pinto Wye. (March, April).

Actinea biennis (Gray) Hall. Actinea. In Little San Bernardino Mountains. Collected on Quail Mountain Peak, elevation 4900 feet. (May). (830).

Anisocoma acaulis T. & G. Anisocoma. Collected on Quail Mountain, elevation 4900 feet. Quite common throughout west portion of Monument. (March, April, May). (834).

Aplopappus acradenius (Greene) Blake. Paleleaf Goldenweed. Throughout Twentynine Palms Oasis. (August, September).

Aplopappus cooperi (Gray) Hall. Copper Goldenweed. Collected at Split Rock area, Ivanpah Tank, elevation 4200 feet. Common throughout west portion of Monument. (March, April). (777).

Aplopappus cuneatus Gray var. spathulatus (Gray) Blake. Wedgeleaf Goldenweed. Collected along Optimist Mine Road, Lost Horse Valley, elevation 4300 feet. In rocky western portion of Monument. (October). (930).

Aplopappus linearifolius D. C. var. interior (Coville) Jones. Desert Goldenweed. Collected at Covington Flat Canyon, elevation 4400 feet. Common throughout west end of Monument. (March, April, May). (956, 716)

Artemisia albula Silverking Sagebrush. Along wash to Willow Hole and Nolina Cove. (May, June, July).

Artemisia dracunculoides Pursh. False tarragon Sagebrush. Near Jumbo Rocks.

Artemisia tridentata Nutt. Big Sagebrush. Near Jumbo Rocks. (June, July).

Aster abatus Blake. Mohave Aster. Collected in Fortynine Palms Canyon, elevation 2000 feet. (May, June) (472).

Atrichoseris platyphylla Gray. Atrichoseris. Can be found growing in the Cottonwood Canyon wash.

Collected in SW $\frac{1}{4}$, section 4, T1S, R9E, SBM. (April).
Baccharis brachyphylla Gray. Shortleaf Baccharis. At
Twentynine Palms entrance. (April, May).
Baccharis sergiloides Gray. Squaw Baccharis. In Lost
Palms Canyon. (April, May).
Beileya pauciradiata Harv. & Gray. Bailey. Collected
south of Dale Lake. (April, May). (571).
Baileya pleniradiata Harv. & Gray. Bailey. Collected
in Live Oak Tank, elevation 4000 feet. (April, May).
(921).
Beileya multiradiata Harv. & Gray. Pleasant Valley, on
edge of Dry Lake. (April, May).
Bebbia juncea (Benth.) Greene. var. aspera Greene.
Sweet Rush Bebbia. Collected in the NW $\frac{1}{4}$, section 4,
T1S, R9E, SBM. (April, May, June). (683).
Brickellia arguta Robinson. Pungent Brickellia. Cotton-
wood Wash and Twentynine Palms entrance. Collected
in Ruby Lee Wash, elevation 3000 feet. (April, May)
(959).
Brickellia arguta Robinson. var. odontolepis Robinson.
Sharptooth Brickellia. Collected in Split Rock area
elevation 4200 feet. (April, May). (776).
Brickellia desertorum Cov. Desert Brickellia. Found
through entire Monument. (June, July).
Brickellia incana Gray. White Brickellia. Collected in
Quail Spring Wash, elevation 3500 feet. (May) (855).
Brickellia oblongifolia Nutt. var. linifolia (D. C.
Eaton) Robinson. Mohave Brickellia. Along Juniper
Flat Road. (May).
Calycoseris parryi Gray. Calycoseris. In Washington
Canyon and the Optimist Mine. Collected in a sandy
wash on west end of Pinto Basin, elevation 2000 feet
(April, May). (641).
Chaenactis carphoclinia Gray. Chaenactis. Collected in
northwest quarter, section 4, T1S, R9E, SBM, eleva-
tion 2000 feet. (April). (691).
Chaenactis fremonti Gray. Chaenactis. Collected in
northwest quarter, section 4, T1S, R9E, elevation
2000 feet. (April, May). (692).
Chaenactis macrantha D. C. Eaton. Chaenactis. At
Indian Cove and Joshua Tree entrances. (April).
Chaenactis stevioides H. & A. Chaenactis. Collected
from sandy flats at Old Dale, elevation 1300 feet.
(April, May). (545).
Chaenactis stevioides H. & A. var. brachypappa Hall.
Chaenactis. Collected in Covington Flat Canyon,
elevation 4000 feet. (April, May). (708).
Chrysopsis hispida D. C. Rough Goldenaster. Throughout

Little San Bernardino Mountains. (June, July, Au-
gust).
Chrysothamnus nauseosus (Pallas) Britton. var. mohaven-
sis (Greene) Hall. Rubber Rabbitbrush. Collected
along Optimist Mine Road, Lost Horse Valley, eleva-
tion 4300 feet. (September, October). (931).
Chrysothamnus paniculatus (Gray) Hall. Desert Rabbit-
brush. At Anaconda Mine. (August, September).
Chrysothamnus teretifolius (Dur. & Hilgard) Hall. Round-
leaf Rabbitbrush. Collected along Optimist Mine
Road in Lost Horse Valley, elevation 4300 feet.
(September, October).
Chrysothamnus viscidiflorus (Hook) Nutt. Douglas Rab-
bitbrush. West end of Monument. (August, September
October).
Cirsium mohavense (Greene) Jeps. Thistle. Salton View,
Cap Rock, Hidden Valley, and Willow Hole. (April,
May).
Coreopsis bigelovi (Gray) Hall. Bigelow Coreopsis.
Indian Cove and parts of Queen and Lost Horse Val-
ley. Collected on Twentynine Palms Far, elevation
2900 feet. (April, May). (945).
Dicoria canescens T. & G. Dicoria. Along north bound-
ary of Monument, south of Twentynine Palms.
(October).
Dyssodia cooperi Gray. Dogweed. Along Fortynine Palms
Canyon Trail. Collected in Section 35, T1S, R8E,
SBM., elevation 4500 feet. (April, May). (848, 966)
Dyssodia porophylloides Gray. Dogweed. Collected at
Pine Spring, elevation 4300 feet. (April, May).
(804).
Encelia farinosa Gray. White Brittlebush. Below Cot-
tonwood Canyon to south boundary. Collected at
Fortynine Palms Canyon, elevation 2000 feet. (April)
(613).
Encelia frutescens Gray. Bush Encelia. Twentynine
Palms Oasis. Collected at Black Rock Spring, ele-
vation 3750 feet. (April, May). (991)
Encelia frutescens Gray. var. actoni (Elmer) Blake.
Acton Encelia. Indian Cove, Split Rock, and along
road west of Hidden Valley. Collected in Lost Horse
Valley, elevation 4500 feet. (April, May). (852).
Erigeron concinnus (H. & A.) T. & G. Hairy Fleabane.
Lower and Upper Covington Flats. (May, June).
Erigeron foliosus Nutt. Leafy Fleabane. Collected at
Black Rock Spring Wash, elevation 4400 feet. (June).
(908).
Erigeron foliosus Nutt. var. covillei (Greene) Compton.

Fleabane. In the Sheep Pass area. (June).
Erigeron foliosus Nutt. var. stenophyllus (Nutt.) Gray.
 Fleabane. In Little San Bernardino Mountains. Col-
 lected in Quail Wash, elevation 3800 feet. (June).
 (893).

Eriophyllum confertiflorum (D.C.) Gray. Goldenarrow
 Eriophyllum. Collected at Upper Covington Flat
 Canyon, elevation 4300 feet. (April, May). (705).

Eriophyllum confertiflorum (D.C.) Gray var. laxiflorum
 Gray. Eriophyllum. Upper and Lower Covington Flats
 and Stubby Spring. (April, May).

Eriophyllum pringlei Gray. Eriophyllum. Above Quail
 Spring. (April).

Eriophyllum wallacei Gray. Wallace Eriophyllum. Col-
 lected in Black Rock Spring Wash, elevation 4200
 feet. Also quite common throughout western portion
 of Monument. (March, April, May). (903).

Filago arizonica Gray. Fluffweed. Collected at Forty-
 nine Palms Canyon, elevation 2000 feet. (April).
 (629).

Filago depressa Gray. Fluffweed. Along north bound-
 aries east of Twentynine Palms. (April).

Franseria dumosa Gray. White Bursage. Indian Cove,
 Pinto Basin, and Twentynine Palms entrance. Col-
 lected in Fortynine Palms Canyon, elevation 2000
 feet. (April, May, June). (476).

Geraea canescens T. & G. Desertgold. Found growing
 near Pinto Basin Borrow Pit. Collected at North
 edge T1S, R10E, SBM., elevation 1700 feet. (May).
 (747).

Geraea viscida (Gray) Blake. Desertgold. In upper
 Covington Flat Wash. (May).

Glyptopleura setulosa Gray. Throughout Little San Ber-
 nardino Mountains and Fried Liver Wash. (April,
 May).

Gnaphalium beneolens Davidson. Cudweed. Collected at
 Pine Spring, elevation 2750 feet. (May). (676).

Gutierrezia lucida Greene. Sticky Snakeweed. Collected
 along Optimist Mine Road, Lost Horse Valley, eleva-
 tion 4300 feet. Also common in Queen Valley.
 (August, September). (932).

Helianthus annuus L. Common Sunflower. Campground at
 Cottonwood Spring. A definite exotic -- probably
 brought in by park visitors. (May).

Helianthus canus (Britton) Woot. & Standl. Sunflower.
 In Pinto Basin. (May).

Hofmeisteria plurisetata Gray. Arrow-leaf. Collected in
 Rattlesnake Canyon area. Also grows in Porcupine

Wash. (April). (737).

Hulsea vestita Gray. Collected on Quail Mountain, ele-
 vation 4900 feet. (May). (831a).

Hulsea vestita Gray var. callicarpa Hall. On Quail
 Mountain. (May).

Hymenoclea salsola T. & G. White burrowbrush. Col-
 lected at Twentynine Palms Oasis. Also grows at
 Indian Cove and Split Rock area. (April, May).
 (457, 975).

Lasthenia glabrata Lindl. var. coulteri Gray. Can be
 found growing at Twentynine Palms Oasis. (May).

Layia glandulosa (Hook) H. & A. Whitedaisy Tidytips.
 Collected at Cottonwood Spring Wash, elevation 2500
 feet. (April). (455).

Lepidospartum squamatum Gray. California Scalybroom.
 Extreme southwestern part of Monument. (July,
 August).

Lygodesmia exigua Gray. Skeletonplant. At Cottonwood
 Spring Wye. (May).

Malacothrix californica D.C. Malacothrix. In Quail
 Spring Wash. (April, May).

Malacothrix californica D. C. var. glabrata Gray.
 Malacothrix. Collected near west end of Pinto Basin
 elevation 2000 feet. Found through entire Monument.
 (April, May) (640, 944).

Malacothrix sonchoides (Nutt.) T. & G. Found growing
 at Quail Spring. (May).

Monoptilon bellioides (Gray) Hall. Collected in Forty-
 nine Palms Canyon, elevation 2000 feet. Throughout
 entire Monument. (April). (483).

Nicolletia occidentalis Gray. Nicolletia. Collected in
 northwest end of Queen Valley, elevation 4300 feet.
 (April). (748, 979)

Palafoxia linearis (Cav.) Lag. Desert Palafoxia. Col-
 lected in north edge T1S, R10E, SBM., elevation 1700
 feet. (March, April). (737, 973).

Pectis papposa Gray. Pectis. White Tanks, Belle, Split
 Rock, and Indian Cove. (July, August, September).

Perityle emoryi Torr. Perityle. Collected at Feldspar
 Point in Indian Cove, elevation 2800 feet. (March).
 (533, 971).

Peucephyllum schottii Gray. Schotts Sprucebush. Col-
 lected at summit of Pinto Pass, elevation 2000 feet.
 Also found in Cottonwood Canyon and Rattlesnake Wash
 (March). (564, 838).

Pluchea sericea (Nutt.) Cov. Arrowweed Pluchea. At
 Twentynine Palms Oasis. (May).

Porophyllum gracile Benth. Slender Poreleaf. Collected

in Cottonwood Spring Wash, elevation 3000 feet. Also found on Quail Mountain and along trail to Fortynine Palms Canyon. (April, May). (757).

Psathyrotes ramosissima (Torr.) Gray. Psathyrotes. Collected .5 mile north of Meek's Cabin, Pinto Pass. Occurs on east slopes of Coxcomb Mountains. (April, May). (580).

Psilostrophe cooperi (Gray) Greene. Whitestem Paperflower. Collected in Cottonwood Spring Wash, elevation 3000 feet. (May). (752).

Rafinesquia neomexicana Gray. Rafinesquia. Collected in Lost Horse Mine, elevation 5000 feet. (March, April). (844).

Senecio douglasi D.C. Douglas Groundsel. Cottonwood Spring and Porcupine Wash. Collected at Black Rock Spring, elevation 3750 feet. (April, May). (995).

Senecio monoensis Greene. Groundsel. Collected at Cottonwood Spring Wash, elevation 3000 feet. Also found at Live Oak and Rattlesnake Washes. (April, May). (754).

Sonchus asper L. Prickley Sowthistle. Collected at Barker Dam, elevation 4300 feet. (May). (794).

Stephanomeria exigua Nutt. Wirelettuce. Collected in northwest quarter, section 4, T1S, R9E, SBM. Throughout entire Monument. (April, May). (681).

Stephanomeria exigua Nutt. var. pentachaeta (D.C.Eat.) Hall. Near Twentynine Palms entrance and Indian Cove entrance. (May).

Stephanomeria parryi Gray. Wirelettuce. Near Optimist Mine. (May).

Tetradymia spinosa H. & A. var. longispina Jones. Cottonthorn Horsebush. Collected in Covington Flat Canyon. Elevation 4500 feet. Also found in Queen and Lost Horse Valley. (May). (719).

Trichoptilium incisum Gray. Trichoptilium. Collected one-half mile north of Meek's Cabin, Pinto Pass. Elevation 2000 feet. (April). (581).

Trixis californica Kell. American trixis. Collected in Cottonwood Spring Wash, elevation 3000 feet. Also found at Cholla Patch and Twentynine Palms entrance. (May). (753).

Uropappus linearifolius Nutt. White Tanks Campground. (April, May).

Viguiera deltoidea Gray. var. parishi (Greene) Vasey & Rose. Parish Goldeneye. Collected at Indian Cove, elevation 2000 feet. Quite Common through entire Monument. (April). (525).

Xanthium italicum Moretti. Italian Cocklebur. Collected

at lower spring elevation of Smithwater Canyon. Also found at Willow Hole. (May).

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The National Park Service was established as an agency of the U. S. Department of the Interior in 1916 to preserve the marvels of nature's handiwork in just such areas as Joshua Tree National Monument. Yellowstone National Park, created in 1872, was the first national park in the world to be dedicated to the principle of preservation for the enjoyment and inspiration of all the people of this and future generations. This continues today to be the guiding principle of the National Park Service, which administers more than 180 areas set aside for their scenic, scientific, historic and archeologic values. The National Parks and Monuments have been called the "crown jewels of America" and they are yours to protect and treasure for Americans of the future.

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