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Philip A. Munz Rancho Santa Ana Botanic Garden

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### ALISO

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## CALIFORNIA MISCELLANY-VII

## PHILIP A. MUNZ

## Rancho Santa Ana Botanic Garden Claremont, California

The publication of the "Supplement to a California Flora" by Philip A. Munz (University of California Press, pp. 1–224. 1968) warrants a few notes largely on material that came in too late to be included in that book.

#### AMARANTHACEAE

AMARANTHUS TAMARISCINUS Nutt. [Acnida tamariscina Wood.] This annual weed native in the central United States, has been collected in California, growing 6–15 dm tall, scattered along a roadside at Pala, San Diego Co., Aug. 2, 1968, by *Robert W. Townsend*. The flowers are dioecious, the  $\varphi$  without a calyx. The leaves are oblong to lanceolate, to 1 dm long; the terminal green spikes are mostly naked, very slender, stiff and straight, 2–4 dm long. Mr. J. T. Howell informs me that this species was collected in Santa Barbara Co. by *Pollard* in 1957.

#### ASTERACEAE

CARDUUS PYCNOCEPHALUS L. On page 166 of the Supplement, Fuller Co. should be Placer Co.

MACHAERANTHERA CANESCENS (Pursh) Gray subsp. ziegleri subsp. nov. With habit and vegetative characters of M. canescens subsp. canescens, but more stipitate-glandular in the upper parts; the involucre 14–15 mm high instead of the usual 10–12 mm; all except the uppermost tegules strongly squarrose and very glandular; ligules mostly deep purplish-blue, 20–22 mm long.

*M. canescens* subsp. *canescens* similis, sed supra magis stipitato-glandulosa; involucrum 14–15 mm altum; tegulae praeter superiores valde squarrosae, valde glandulosae; ligulae plerumque purpureo-cyaneae, 20–22 mm longae.

*Type.*—From north side of Santa Rosa Mt., Riverside Co., at 6500–7500 ft, *Louis B. Ziegler Sept. 30, 1968* (RSA, isotype CAS).

Additional collections.-All from the Santa Rosa Mts., Riverside Co.: (1) Summit of mts. at 8100 ft, in Yellow Pine Forest, E. C. Jaeger July 25, 1949 (RSA); (2) Yellow Pine Forest on road from Vandeventer Flat to Santa Rosa Mts., Aug. 21, 1952, at 6800

ft, P. A. Munz & E. K. Balls 17985 (RSA) and plants grown from seed of this collection, seedlings by G. R. Campbell 18727 and mature plants, July 15, 1955, E. K. Balls 20968; and (3) frequent on dry ridge near Santa Rosa Peak, Aug. 13, 1938, at 7600 ft, P. A. Munz 15332 (RSA).

SCOLYMUS HISPANICA L. Growing to 2–3 m tall. A heavy infestation on south and west facing slopes of the Mission Hills, Decoto district, Union City, Alameda Co., T. C. Fuller 16709 (RSA).

SYNTRICHOPAPPUS LEMMONII (Gray) Gray can be reported from 4500 ft, Hemet Valley, south side of San Jacinto Mts., Riverside Co., Louis B. Ziegler, April 16, 1968, and May 15, 1968. Mr. Ziegler's plants have well developed white pappus on the akenes and represent a notable extension of range from the southern edge of the Mojave Desert. The literature seemed quite definite about the Mojave Desert plants being epappose and at first the new find seemed worthy of nomenclatorial recognition. However, Peirson 4244 from Little Rock Creek of the San Gabriel Mts. and Axelrod 276 from Deep Creek, San Bernardino Mts. also have a well developed pappus. The discovery of this Syntrichopappus adds another species to the rather remarkable list of plants found by Mr. Ziegler along the south front of the San Jacinto Mts. and previously known from the Mojave Desert, especially along the north base of the San Gabriel and San Bernardino ranges. I refer to species like Allium davisiae Greene, Artemisia arbuscula subsp. nova (A. Nels.) Ward, Dyssodia thurberi (Gray) A. Nels., Lewisia rediviva Pursh var. minor (Rydb.) Munz, and Oxybaphus pumilus (Standl.) Standl.

#### BRASSICACEAE

ALYSSUM MINUS (L.) Rothm. var. MICRANTHUM (A. Meyer) Dudley. Dr. T. C. Fuller has kindly called my attention to a misidentification reported to me earlier as A. alyssoides L. from Warner Mts., Modoc Co. (see p. 26 in my recent Supplement). It and I. L. and D. Wiggins 16468 from east side of Goose Lake (see Rhodora 70:299. 1968) are referable to A. minus var. micranthum. It is distinguishable by the silicle having only monomorphic stellate hairs and by the sepals being promptly deciduous.

#### EUPHORBIACEAE

EUPHORBIA OBLONGATA Griseb. A 20 by 30 feet infestation, roadside at base of levee of the Sacramento River, Andrus Island Road, 3.5 miles south of Walnut Grove, Sacramento Co., May 3, 1968, by John Golden and Roy Anderson. Specimen at RSA from Dr. T. C. Fuller.

#### FABACEAE

Lupinus dedeckerae Munz & Dunn sp. nov. Plants perennial, erect to suberect, 6–8 dm tall (possibly  $10^+$  dm), one or more stems at ground level, branching above; primary stems 4–7 mm diam., with a solid central pith, surface with abundant spreading, pilose hairs 1–2.5 mm long, a thick undercoat of kinky canescent hairs 0.3–1.0 mm long, densest above and on

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the leaflets; petioles all short, 2.0–3.5 cm long, pubescence as on stems; stipules subulate, 3–5 mm, densely spreading-pilose dorsally, glabrous ventrally, tardily deciduous; leaflets of largest leaves 7–8, linear-elliptic, conduplicate, densely pubescent on both surfaces, the same as on the stems, largest leaflets 3.8–4.5 cm long, 4–5 mm wide at the midpoint, tips acute; peduncles 3–4 cm long, on later branches shorter; racemes 12–20 cm long at maturity, on later branches shorter, verticils or subverticils 12–15 mm distant at maturity; bracts slender-caudate, 6.7–8.2 mm long, densely spreading-pilose, as in stipules, caducous; pedicels 2.4–3.0 mm long, densely hispidulose, to 3.5 mm in fruit; calyx densely canescent dorsally, glabrous ventrally except a few hairs near the tips of the lobes, upper-lip 5.3–6.5 mm long, triangular, the notch only 0.5–1.5 mm deep, lower-lip 6.2–8.3 mm long, lanceolate, the tip truncate-erose, the lips connate laterally 1.7–1.8 mm, bracteoles filiform, 1–1.8 mm long, attached near the lip of the lateral sinus; corolla creamy-white; banner oval, the tip mucronate, 11–11.5 mm long,



Fig. 1. Representative parts of *Lupinus dedeckerae.*—B–Banner. Dorsal view; flattened; pubescence shown on right half.—Br-Bract.—C-Calyx cut at left lateral sinus and flattened so that the inside (ventral) is exposed to view.—F-Left side of intact flower.—K-Right-side view of keel showing the average number of ovules.—L.—Conduplicate, average, largest leaflet; opening cut to show top surface.—S-Stem segment illustrating two kinds of pubescence and the solid pith.—W-Left wing petal. (All drawings made to show mean measurements and typical shape.)

8.8–9.4 mm wide, pubescent dorsally in the central area, reflexed slightly below the midpoint, reflexed portion 5.6–6.2 mm, appressed portion 5–5.4 mm (R/A ratio 1.04–1.15), the banner angle 123–127°; wings oblong, 11.8–12.8 mm long, 5.5–6 mm wide, claw 2.3–2.8 mm; keel 3.7–4.1 mm wide at the middle, glabrous, the acumen yellow-green, the angle 104-110°, bent in the middle; ovules 4–6; pods densely sericeous, 1.5–2.5 cm long, 6.5 mm wide, usually only 2–3 seeds developing; seeds white faced, a few black marks on margin,  $4.2 \times 3.4$  mm.

Plantae perennes, erectae vel suberectae, 6–8 dm altae; caules 4–7 mm crassi, medulla centrale solida, pagina cum multis pilis patentibus 1–2.5 mm longis et canescens cum pilis crispis brevibus, 0.3–1.0 mm longis; petala

2–3.5 cm longa; foliola foliorum majorius 7–8, lineare-elliptica, conduplicata, in superficiebus ambis dense pubescentia, 3.8–4.5 cm longa, 4–5 mm lata, acuta; pedunculi 3–4 cm longi; racemi 12–20 cm longi, verticillis 12–15 mm distantibus; bracteae tenue-caudatae, 6.7–8.2 mm longae; calyx dorso dense canescens, ventraliter glaber, labium superiore 5.3–6.5 mm longum, triangulare, incisura 0.5–1.5 mm profunda; labium inferiore 6.2–8.3 mm longum, lanceolatum; labia base connata 1.7–1.8 mm; bracteolae filiformes, 1–1.8 mm longae; corolla cremea-alba; vexillum ovale, mucronatum, 11–11.5 mm longum, 8.8–9.4 mm latum, dordo centrale pubescente, reflexum 5.6–6.2 mm; alae oblongae, 11.8–12.8 mm longa, 5.5–6 mm lata; carina 3.7–4.1 mm lata, glabra, angula 104–110°; ovula 4–6; legumina dense sericea, 1.5–2.5 cm longa, 6.5 mm lata; semina 4.2 mm  $\times$  3.4 mm, superficiebus albis et paucis notis nigris marginalibus.

*Type.–Mary DeDecker* 1969 (RSA), west fork of Coyote Creek, 9600 ft, Inyo Co., California, July, 1968.

Isotype.-A branch of the type (UMO). Paratype.-Mary DeDecker 725, north fork of Big Pine Creek, 8400 ft, Inyo Co., California, July, 1957 (RSA).

This species is found on the east side of the Sierra Nevada in Big Pine Creek and Coyote Creek from 8400–9600 ft elevation. The habitat is in sparse, arid, montane forests among scattered sagebrush in sandy clearings. The soil is primarily decomposing granite.

The closest relative of this taxon is *L. albicaulis* Dougl. ex Hook. of the western side of the Sierra Nevada and north into Oregon. There is no known or apparent contact with *L. albicaulis*. It is suggested that seeds of *L. albicaulis* must have been introduced into the area, with subsequent hybridization with other taxa. The entity has stabilized to a large degree and increased to a sizeable population involving different canyons. It has been collected over a ten year period so it cannot be regarded as an isolated hybrid plant. Some of the characteristics derived from *L. albicaulis* include the height, solid stems, white color, glabrous keel, spreading villi and the pointed banner. The canescent undercoat, flower size, angle of the keel, linear leaflets, conduplicate leaflets, dorsal pubescence of the banner, and the genetic traits for the ecology of the area, are all traits derived from other sources.

The partial seed set in the pods may indicate that there are still meiotic conflicts in a fair percentage of the meiotic divisions, however, partial seed set is a common occurrence among perennial species of lupines requiring insect aid in pollination. Pollen stainability tests on the two cited populations (90 & 96%) indicate that most of the meiotic conflicts have been reduced to a minimum. Thus all of the indications are that the taxon is recently derived.

#### MYOPORACEAE

MYOPORUM LAETUM Forst. f. occasionally occurs spontaneously as an escape from cultivation. An example is on a Southern Pacific R.R. fill over Prince Barranca facing Pierpont Inn, Ventura Co., H. M. Pollard, April 25,

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1968 and October 31, 1968. It occurs there as a shrub ca. 3 m high, with *Ricinus communis* and *Nicotiana glauca*. This species has lanceolate or obovate-lanceolate leaves 5–10 cm long, finely serrate above the middle, acute or acuminate, bright green, shining, almost fleshy; flowers 2–6 in a fascicle, white spotted purple, 1–2 cm wide, the rounded lobes hairy inside; the fruit an oblong drupe about 8 mm long, reddish-purple. It is native to New Zealand.

#### PAPAVERACEAE

PAPAVER HYBRIDUM L. Ernest Twisselmann writes that after further study he has concluded that the plants of his region (Kern Co.) are all this species and not *P. apullum* var. *micranthum* (Boreau) Fedde.

#### POACEAE

DACTYLOCTENIUM AEGYPTIUM (L.) Beauv. reported in the Supplement, p. 195, from Bonsall, San Diego Co. has been taken also at Calexico, Imperial Co., Nov. 20, 1968, R. A. Flock; specimen given me by Dr. Fuller.

#### POLYGONACEAE

POLYCONUM CUSPIDATUM Sieb. & Zucc. Dr. T. C. Fuller reports that the specimen of *Polygonum* which he had identified from Siskiyou Co. as *P. sachalinense* (cf. page 73 in the Supplement) should be referred to *P. cuspidatum*. He has now given me a collection with "arching stems to 7 ft tall, n.e. corner of Siskiyou Ave. and Interstate 5 freeway at the n. limits of Dunsmuir, Siskiyou Co., *Fuller* 17452, Aug. 1, 1968."

#### RANUNCULACEAE

Delphinium kinkiense Munz, sp. nov. Perennial, 4–5 dm tall, from a woody branching root, the stem 2.5–3 mm thick, pubescent, the upper parts  $\pm$  spreading-pilose, with ca. 7–9 internodes; lower leaves trifid almost to base, the main divisions  $\pm$  palmately lobed into ultimate segments 5–10 mm wide, rounded at apex to mucronulate, other leaves only gradually reduced up the stem, the main division 3–4 cm long, 2.5–5 mm wide, often subfalcate, mucronulate-acute, the blades 5–8 cm wide, loosely pilose on both surfaces; petioles slender, 2–14 cm long, mostly spreading-pilose; inflorescence a raceme or few-branched panicle, pilose, the main axis 8–10–flowered; bracts lance-linear, 2–3.5 cm long; pedicels 1.5–3 cm long; sepals whitish to pale violet, 16–18 mm long, 8–11 mm wide, oblong to subovate, pilose, subtruncate at apex; spur straight, spreading, 12–14 mm long; upper petals whitish, the dolabriform blades 10–12 mm long, glabrous; blades of lower petals rounded,  $\pm$  bluish, 6–8 mm in diameter, deeply cleft, bearded near the base and near the margin, the claw ca. 5–6 mm long; filaments broad; anthers dark; follicles 3, hairy; seed not seen.

Planta perennis, 4–5 dm alta, ex radice lignosa; caulis 2.5–3 mm crassus, pubescens, supra  $\pm$  patente-pilosus, cum 7–9 internodiis; folia inferiora

profunde trifida, divisionibus principalibus  $\pm$  palmatim lobatis, segmentibus ultimis 5–10 mm latis, apice rotundatis vel mucronulatis; laminae foliorum altorum 5–8 cm latae, divisionibus principalibus 3–4 cm longis, 2.5–5 mm latis, saepe falcatis, pilosis; petiola tenua, 2–14 cm longa, plerumque patente-pilosa, axe principale cum 6–10 floribus; bracteae lanceo-lineares, 2.5–3 cm longae; pedicelli 1.5–3 cm longi; sepala subalba usque pallidoviolacea, 16–18 mm longa, 8–11 mm lata, oblonga usque subovata, pilosa, apice subtruncata; calcar rectum, 12–14 mm longum; petala superiora albida, laminis dolabriformibus, 10–12 mm longis, glabris; laminae petalorum inferiorium subrotundae,  $\pm$  azureae, 6–8 mm longae, profunde fissae, basi et margine hirsutae, ungue 5–6 mm longo; filamenta lata; antherae fuscatae; follicula 3, pubescentia.

Type.-Grassy slope at 800 feet elevation, canyon north of Nanny, San Clemente Island, Los Angeles Co., March 18, 1967, R. Mitchel Beauchamp 290 (RSA 194021); isotype (SD). A second collection from high grassy benches, Mosquito-Pyramid Trail, April 6, 1939, M. B. Dunkle 7322 (LAM) has more deeply colored flowers and broader sepals than the type.

The above cited specimens have previously been identified as D. variegatum T. & G., a species referred by Lewis and Epling (Brittonia 8:1–22. 1954) to central California from San Luis Obispo and Kern counties north. Using their table on pages 1–2, it agrees with that species in its spreading pubescence, flower-size, rotate sepals, etc., but has seven to nine instead of four internodes, eight to ten flowers in a raceme instead of ca. five, pale rather than royal-purple or blue-purple flowers. For the most part the leaf segments are fewer and longer and more curving.

In assembling the few collections that seem to have been made of *Delphinium* on San Clemente Island, it seems evident that there are two distinct plants involved. The taller one with much larger leaves, paler flowers, oblong to subovate sepals, more elongate subfalcate leaf-lobes is what I here designate as *D. kinkiense*, a name taken from "kinki," the Gabrielino Indian name for San Clemente Island (Niehaus, T. F. Madroño 18:235. 1966). The other species is lower, hairier, with smaller leaves having shorter stubbier lobes, more elliptic darker colored sepals and seems to me related to *D. variegatum*.

DELPHINIUM VARIEGATUM Torr. & Gray subsp. thornei Munz, subsp. nov. Erect perennial from a slender simple subfusiform woody root, the stem slender,  $\pm$  spreading- or deflexed-pilose with white hairs to ca. 0.5 mm long, the stem 1–2.5 dm tall, varying from simple and 4–5–flowered to 7–10– flowered, sometimes forked near the summit, rather equably leafy throughout; cauline leaves mostly green at anthesis, basal withered, cauline internodes ca. 4–8, the midcauline leaves with blades mostly 1–2 cm broad, deeply palmatisect, then pinnatifid with 1–3 almost linear divisions 5–12 mm long, 1.5–2 mm wide, acute to subacute, densely pubescent with spreading hairs; midcauline petioles 1.5–4 cm long; bracts entire to trifid, subfoliose; pedicels divergent, finely short-hairy, 1–3.5 cm long; bracteoles ca. 1/3-1/4 the distance below the sepals, sublinear, pubescent, 4–5 mm long; sepals elliptic, violet, ca. 12 mm long, 6–7 mm wide, glabrous except near

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the acutish apex and ciliate margin; spur spreading, ca. 12 mm long; upper petals white, 9–10 mm long, glabrous, obliquely clavate; lower petals whitish violet, the claw 5–6 mm long, the somewhat hairy blade rounded, ca. 6 mm in diameter, the sinus ca. 2 mm deep, somewhat open; stamens glabrous; follicles 3, pubescent.

Planta perennis, erecta, ex radice lignosa tenue, simplice, fusiforme; caules tenues,  $\pm$  patente- vel retrorso-pubescentes, cum pilis usque 0.5 mm longis, 1–2.5 dm alti, simplices, 4–5–usque 8–10–floridi, vel interdum supra furcati; folia caulium in anthesi viridia, folia basis marcescentia; internodia ca. 4–8; laminae plerumque 1–2 cm latae, profunde palmatisectae, tum pinnatifidae, divisionibus sublinearibus, 5–12 mm longis, 1.5–2 mm latis, subacutis, dense patente-pubescentes; petiola medio-caulinis 1.5–4 cm longa; bracteae integrae vel trifidae, subfoliosae; flores ca. 5–10; pedicelli divergentes, 1–3.5 cm longi, breve-pubescentes; bracteolae infra sepala, ca. 1/3–1/4 distantes; sepala elliptica, violacea, ca. 12 mm longa, 6–7 mm lata, glabra praeter apicem acutum et marginem ciliatum; calcar patente, ca. 12 mm longum; petala superiora alba, 9–10 mm longa, glabra, oblique clavata; petala inferiora albido-violacea, ungue 5–6 mm longo, lamina  $\pm$  barbata, rotundata, ca. 6 mm lata, sino ca. 2 mm profundo; stamina glabra; carpella 3, pubescentia.

Type.-Grassland at 1600 feet elevation, near reservoirs on top of plateau between Boulder and Horton, northeast side of San Clemente Island, Los Angeles Co., April 17, 1966, Robert F. Thorne 36078 (RSA). A second collection is "near mesa summit and on south end of San Clemente Island, April, 1936, Nell Murbarger 49 (UC) and a third one "grassland at head of canyon just north of Gray at 1600 feet, May 9, 1962, Peter H. Raven 17700" (RSA).

The proposed subspecies is like subsp. *variegatum* of the Coast Ranges from San Luis Obispo Co. north in stature, pubescence, leaf size and shape, but with narrower, more elliptic sepals of lighter color, not royal purple. To the curators of herbaria that kindly loaned specimens cited above in connection with these two delphiniums I hereby express my thanks.

#### SOLANACEAE

LYCOPERSICUM PERUVIANUM Mill. with plants to 4 m across and from a perennial taproot occurs on the site of the old United States Dept. of Agriculture Experiment Station, where it has been spreading. This area is on the east side of Torrey Pines Road, 2 miles north of Miramar Road, north of La Jolla, San Diego County. A collection was made by *T. C. Fuller*, no. *16892*, May 9, 1968.