NOTEWORTHY COLLECTIONS

Arizona

AQUILEGIA TRITERNATA Payson × A. CHRYSANTHA A. Gray (RANUNCULACEAE).—Coconino Co., Mogollon Rim, Dane Spring Canyon, at the base of a damp, shaded, sandstone cliff face, T13N R11E S35, 7 Jul 1987, *Schaack 2115 and Goodwin* (ASC).

Significance. The first known report of natural hybridization between *A. chrysantha* [*A. caerulea* group] with erect, yellow, long spurred [(40–)45–70 mm] flowers and *A. triternata* [*A. canadensis* group] with nodding, primarily red, short spurred [(12–)16–22 mm] flowers. Miller (Southw. Naturalist 30(1):69–76, 1985) did not see evidence of this hybridization during his research in the mountains of southern Arizona and indicated that the degree of genetic isolation between these species, due to habitat and pollination system, has not been studied. Flowers of the vouchered hybrid were intermediate in flower coloration (a curious mix of red and yellow) and spur length (32–35 mm). Hybrid flowers drooped on their peduncle ends. Two putative F_1 hybrids were the only hybridization products noticed at this site. The vouchered hybrid was rooted 0.46 m above ground level in a recess on a sheer, shaded, damp sandstone cliff face that housed the red flowered parent, *A. triternata,* above. The other hybrid was discovered growing in the understory, at streamside, among *A. chrysantha* just down canyon from the cliff face that held *A. triternata.* Although apparently a new *Aquilegia* hybridization report, this is but one in a series of known hybridizations, either artificial [Cockerell, Bot. Gaz. (Crawfordsville) 62:413–414, 1916; Anderson and Schafer, Ann. Bot. (London) 45:639–646, 1931; and Taylor, Brittonia 19:374–390, 1967] or natural (Grant, Aliso 2:341–360, 1952; and Miller, Amer. J. Bot. 65: 406–414, 1978) between members of the *A. canadensis* and *A. caerulea* species groups. Seed was collected from the vouchered F_1 later in 1987. Future research will include observation of pollinator activity between the parents and among parents and the putative reciprocal F_1's and a search for the factors that apparently limit the establishment of backcross progeny at the Dane Spring Canyon population.—CLARK G. SCHAACK, Department of Botany, University of Wisconsin, Madison 53706 and GREGORY A. GOODWIN, Coconino National Forest, 2323 E. Greenlaw Lane, Flagstaff, AZ 86004.

STYLOCLINE SONORENSIS Wiggins (ASTERACEAE).—Representative collections: Graham Co.: Hawk Hollow, 26 Apr 1935, *Maguire s.n.* (ARIZ, det. as *Evax multicaulis* DC. or *Stylocline gnaphaloides* Nutt.; NY, mixed with and det. as *Filago californica* Nutt.). Pima Co.: Tucson, Desert Research Laboratory, sandy plain w. of Tumamoc Hill, 26 Apr 1968, *Turner 68-146 and Mason* (ARIZ, mixed with *Filago depressa* A. Gray; det. as *Stylocline micropoides* A. Gray); mesas near Camp Lowell, 15 Apr 1881, *Pringle s.n.* (F, MICH, both mixed with *S. gnaphaloides* and *S. micropoides* and det. as the latter). Pinal Co.: Big Wash 0.5 mi [0.8 km] nw. of Oracle Junction on route 89, 29 Apr 1965, *Hermann 19770* (RM, det. as *S. micropoides*). Santa Cruz Co.: ca. 16 mi [26 km] n. of Nogales along Hwy. 89, 27 Mar 1970, *Higgins 2813* (BRY, mixed with *Filago californica*; det. as *F. depressa* A. Gray). Also known from ca. 10 other collections in the above counties. Morefield thanks the curators of the herbaria above for loans of material in their care.

Previous knowledge. See CA Noteworthy Collections, below.

Significance. First reports for the United States.—JAMES D. MOREFIELD, see note below.

California

Stylocline sonorensis Wiggins (Asteraceae).—Riverside Co.: Hayfields, n. of Chuckwalla Mts., Colorado Desert, 2 Apr 1930, *M. E. Jones 25845* (POM, originally determined as *Evax multicaulis* DC., then as *S. micropoides* A. Gray).

Previous knowledge. Based only on the holotype (Mexico, n. Sonora, "One mile north of Cumeral, on road to Nogales", 9 Apr 1932, *Abrams 13199,* DS!) and on the original description (Contrib. Dudley Herb. 4:26, 1950).

Significance. First report for the United States. The species is an inconspicuous gray-woolly spring annual, and probably is more widespread in the Colorado Desert of CA than the single extant CA specimen would indicate. It should be considered rare and endangered in CA, however, until more sites can be located. The Hayfields population may well have been extirpated after 1930 by development activities. The species is more widespread in s. AZ (see AZ Noteworthy Collections, this issue).—James D. Morefield, Rancho Santa Ana Botanic Garden, 1500 N. College Ave., Claremont, CA 91711-3101.

Aspidotis densa (Brackenr. in Wilkes) Lellinger (Sinopteridaceae).—San Diego Co., Cuyamaca Ranco State Park (CRSP), n. slope of Cherry Flat near Conejos Hiking Trail, 32°57′34″N, 116°36′35″W, 1800 m, moist rocky areas in gabbro outcrops, 8 Jul 1987, *Hirshberg s.n.* (SD).

Significance. A range extension of ca. 350 km s. from the Greenhorn Mts., Kern Co. Known previously from BC, Canada, s. to San Luis Obispo and Kern cos., CA, e. to ID, MT, and UT, always on serpentine-derived soils (Smith, Madroño 23:15, 1974; Lellinger, Field Manual of Ferns and Fern-Allies of U.S. and Canada, p. 149, 1985). Gabbro is an ultramafic rock chemically similar to serpentine.

Holodiscus boursieri (Carrière) Rehder in Bailey (Rosaceae).—San Diego Co., CRSP, n. side of Cuyamaca Peak on rocky cliff above Cherry Flat, 32°56′49″N, 116°36′22″W, 1920 m, 28 Jul 1987, *Hirshberg s.n.* (SD, UC) (det. R. Lis).

Significance. A range extension of ca. 115 km se. from the Santa Ana Mts., Orange Co., CA. Known previously from Trinity Co. s. to Orange Co., CA, and e. to w. NV. This genus is currently under revision and species determination is necessarily tentative (R. Lis pers. comm.).—Jerilyn Hirshberg, P.O. Box 2, Julian, CA 92036 and Geoffrey A. Levin, see note below.

Astragalus pachypus E. Greene var. pachypus (Fabaceae).—San Diego Co., Anza-Borrego Desert State Park, Bighorn Cyn., T13S R6E n.½ S2, 730 m, 14 Feb 1987, *A. Morley s.n.* (SD); same, 26 Feb 1987, *Morley s.n.* (SD) (det. R. C. Barneby). Few plants in sandy wash.

Significance. A range extension of ca. 250 km se. from Antelope Valley, Los Angeles Co. Known previously from Santa Barbara and Kern cos. se. to Los Angeles Co., and in San Benito Co.—Geoffrey A. Levin, Botany Department, San Diego Natural History Museum, P.O. Box 1390, San Diego, CA 92112.

Carlowrightia arizonica A. Gray (Acanthaceae).—San Diego Co.: Anza Borrego Desert State Park, Borrego Palm Canyon Nature Trail ca. 2 km nw. of Borrego Springs, rocky slope in Sonoran desert scrub with *Larrea, Fouquieria, Justicia, Hyptis,* and *Encelia,* Borrego Palm Canyon 7.5′ ser. T10S R5E S26 se.¼, ca. 300 m, 27 Mar 1988, *M. Bourell 3509* (CAS).

Previous knowledge. Northwestern Baja California, central Arizona, and west Texas southward throughout dry regions of Mexico, Honduras, and Nicaragua to northwestern Costa Rica (Guanacaste).

Significance. First report for this genus in California, doubling the number of taxa

of Acanthaceae in the state. Range extension of 220 km nw. of the nearest Mexican locality (Baja California, 9.5 km s. of La Ventana, *Daniel 1545,* ASU, CAS) and 230 km w. of the nearest known locality in the United States (Arizona, Yuma Co.: Kofa Mountains, various collectons cited in Daniel, Fl. Neotrop. 34:1–116, 1983). The California population marks the western limit of the distribution of both species and genus. Of the numerous forms discussed by Daniel (ibid. and Desert Pl. 5:162–179, 1984) in this morphologically diverse species, *Bourell 3509* most closely resembles plants originally described as *C. californica* var. *pallida* I. M. Johnst. from Baja California, indicating a link with plants from that region rather than with those from Arizona.—MONA BOURELL and THOMAS F. DANIEL, Department of Botany, California Academy of Sciences, Golden Gate Park, San Francisco 94118.

BAJA CALIFORNIA SUR

QUERCUS OBLONGIFOLIA Torr. (FAGACEAE).—Mpio. de La Paz, Sierra de la Victoria, oak woodland community, road to San Antonio de la Sierra Ranch, 6 km se. of El Triunfo, 900 m, 23°43′N, 110°03′W; small population; *José L. León 1132* (CIB). Additional trees have been seen in exposed sites at middle elevations in the Sierra de la Laguna, where they are called "encino laurel". (Det. by comparison with specimens at CAS.)

Significance. A range extension of 420 km se. from the Sierra de la Giganta where it was reported by Carter (1955; "Observaciones sobre los encinos de Baja California", Bol. Soc. Bot. Mex. 18:39–42).

QUERCUS ARIZONICA Sargent (FAGACEAE).—Mpio. de La Paz, Sierra de la Laguna, oak-pine woodland community, 2 km n. of La Laguna meadow, 1790 m, 23°36′N, 109°58′W, *José L. León 1887, 2331* (CIB). A unique population of about 50 trees. Acorn production is uncertain in this area. (Det. by D. E. Breedlove.)

Significance. Known previously in mountains of Arizona, and in the Sierra Madre Occidental of Sonora and Chihuahua. Near the collection site is a deep brook where *Quercus reticulata* H. & B. grows; the main distribution of this species is also in the Sierra Madre Occidental.—JOSÉ LUIS LEÓN DE LA LUZ, Centro de Investigaciones Biológicas de Baja California Sur, Apdo. postal 128, La Paz, Baja California Sur, México.

REVIEW

Conservation and Management of Rare and Endangered Plants. Edited by THOMAS S. ELIAS. 630 pp. California Native Plant Society. Sacramento, CA. 1987. ISBN 0-943460-11-5 (cloth), $45.00, ISBN 0-943460-12-3 (paper), $24.95.

This significant volume is the proceedings of a well-attended conference on rare and endangered plants held under the auspices of the California Native Plant Society in November of 1986. The objective of the conference was to bring together persons interested in the biology, management, and preservation of rare plants for exchange of ideas and information. The editors also sought early publication of the proceedings, a goal which they achieved in good style. The resulting volume inlcudes 92 papers by 106 authors. Both the picture and typography on the cover are very attractive—suitable for display on the coffee table. The back cover, somewhat less striking, provides a picture key for the identification of the editor and conference coordinator (J. R. Nelson).