

Island Specialists: Shared Flora of the Alta and Baja California Pacific Islands

Authors: Ratay, Sarah E., Vanderplank, Sula E., and Wilder, Benjamin T.

Source: Monographs of the Western North American Naturalist, 7(1) : 161-220

Published By: Monte L. Bean Life Science Museum, Brigham Young University

URL: <https://doi.org/10.3398/042.007.0116>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

ISLAND SPECIALISTS: SHARED FLORA OF THE ALTA AND BAJA CALIFORNIA PACIFIC ISLANDS

Sarah E. Ratay¹, Sula E. Vanderplank², and Benjamin T. Wilder³

ABSTRACT.—The floristic connection between the mediterranean region of Baja California and the Pacific islands of Alta and Baja California provides insight into the history and origin of the California Floristic Province. We present updated species lists for all California Floristic Province islands and demonstrate the disjunct distributions of 26 taxa between the Baja California and the California Channel Islands. These 26 plant taxa are found among the 16 Pacific islands without occurring on the intervening mainland of Alta California. Separate species lists for each island group (8 California Channel Islands and 8 Baja California Islands) were compiled. These lists were compared to the mainland California flora to identify species that occur on the California Islands and either the Baja California Pacific Islands or the mediterranean region of the Baja California Peninsula, but not the mainland of Alta California. This first compilation of the flora of the Baja California Islands and nomenclatural updates for the Channel Islands provide a platform for future research and conservation planning.

RESUMEN.—El grado de conexión florística entre la región mediterránea de Baja California y las Islas del Pacífico de Alta y Baja California proporciona un entendimiento de la historia y el origen de la Provincia Florística de California. Presentamos listados actualizados de especies de todas las islas de la Provincia Florística de California y mostramos la distribución aislada de veintiséis taxones entre la Baja California y las Islas del Canal de California. Identificamos aquellas especies de plantas que se pueden encontrar dentro de las dieciséis islas del Pacífico, pero no se encuentran en la península de Alta California. Con este objetivo, recopilamos listados separados de las especies que habitan en cada grupo de islas (las ocho Islas del Canal de California y las ocho islas de Baja California). Estos listados se compararon con la flora existente en la península de California con el fin de identificar aquellas especies que se encuentran en las islas de California, y tanto en las Islas del Pacífico de Baja California como en la región mediterránea de la Península de Baja California, pero *no* en la península de Alta California. La primera recopilación de flora de las Islas de Baja California y actualizaciones nomenclaturales en las Islas del Canal, proporcionan una plataforma para futuras investigaciones y planes de conservación.

The islands of the California Floristic Province (CFP) are an important component of one of the world's great biodiversity hotspots (Myers et al. 2000). The CFP has commonly been referred to as an environmental island due to its regionally unique mediterranean-type climate, isolation (via oceanic and orographic boundaries), and corresponding globally significant levels of endemism. The plant community has had ample time to evolve since the emergence of wet winters and dry summers at least 5–10 Mya (Axelrod 1973) and perhaps earlier (Ackerly 2009, Keeley et al. 2011). The remarkable diversity and endemism of the CFP has been attributed to relative climatic stability during glacial-interglacial transitions of the Pleistocene (Lancaster and Kay 2012, Sniderman et al. 2013). The antiquity and distinctiveness of the California flora are

well-recognized attributes that are accentuated on the islands of the Californias.

The degree of floristic similarity of 16 offshore islands, and their apparent role as refugia for species once present on the mainland, has been a persistent biogeographical puzzle. The CFP includes 16 islands from the adjacent coast of Alta and Baja California and extends south to the 28th parallel, including the CFP vegetation found on Cedros and Guadalupe Islands (Raven and Axelrod 1978, Moran 1996, Oberbauer 2002a). The CFP has an increasing gradient of aridity from north to south, but vegetation distributions are heavily influenced by fog presence; this fog provides additional moisture and reduces radiant loadings, significantly changing conditions for plants (Dawson 1998, Fischer et al. 2008, Vanderplank 2013). Physical data suggest that ocean currents have

¹University of California, Los Angeles, Department of Ecology and Evolutionary Biology, 612 Charles E. Young Drive East, Box 957246, Los Angeles, CA 90095. E-mail: sratay@ucla.edu

²Botanical Research Institute of Texas, 1700 University Dr., Fort Worth, TX 76107.

³University of California, Riverside, Department of Botany and Plant Sciences, 900 University Avenue, Riverside, CA 92507.

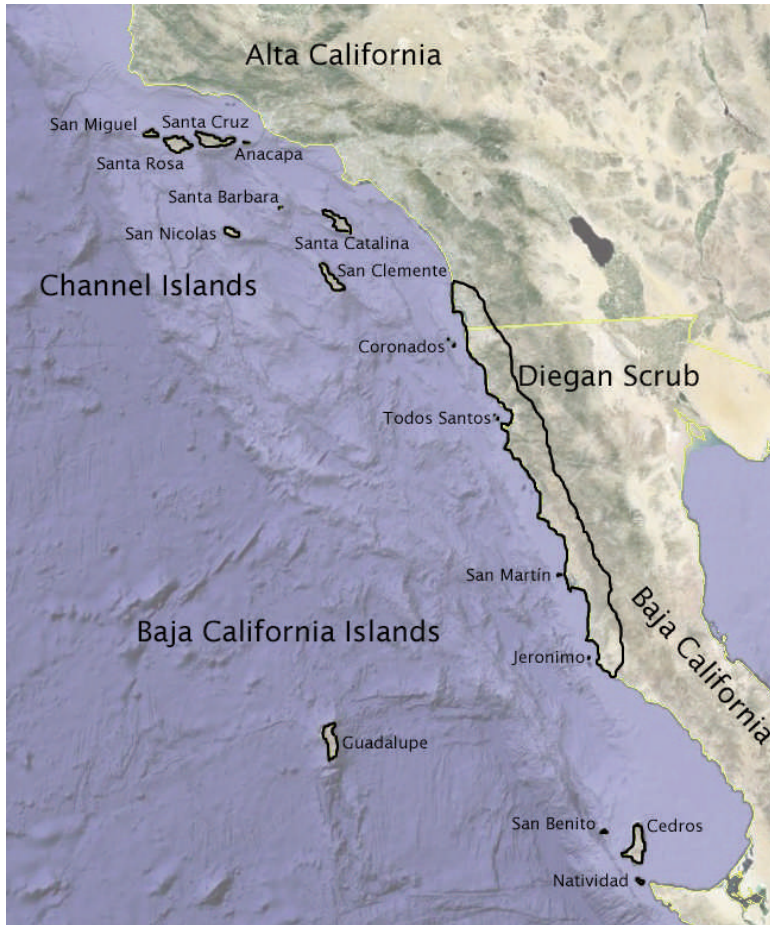


Fig. 1. California Channel and Baja California Pacific Islands with Diegan Scrub as defined by Axelrod (1978). Map by B.T. Wilder, adapted from Google Earth™ imagery.

been stable for millions of years (Jacobs et al. 2004), which indicates the presence of fog during the development of the CFP.

Within the large number of plant species on the CFP islands and the mainland of Alta and Baja California is the occurrence of disjunct Baja California taxa on the California Channel Islands. These species are seen today only on the CFP islands and a distinct portion of the California mainland termed the Diegan Scrub, the San Diego region southward into coastal northwestern Baja California (Fig. 1; Axelrod 1978). However, the number and identity of this group of disjunct species has remained unknown.

To identify the species that define this pattern, we present (1) the first compiled checklist of the 8 CFP Baja California Islands, (2)

nomenclatural updates to the flora of the 8 California Channel Islands, and (3) the plants that occur on the California Channel Islands and in the Diegan Scrub but *not* the rest of mainland California, hereafter referred to as “exemplar taxa.”

METHODS

Development of Checklists

We assembled all existing species checklists for the 2 island groups (Alta California and Baja California) into 2 lists, then compared those lists with the flora of the California Floristic Province for both mainland Alta and Baja California to generate the list of exemplar taxa. The nomenclatural updates presented here are based on our best understanding of the

island floras at the date of publication and follow the models of the sources indicated below for the 2 lists. Species now thought to be extirpated from the islands are denoted by an ampersand (&). Unvouchered taxa (including reports, photo vouchers, and personal communications) are indicated by a question mark (?). Nonnative species are indicated by an asterisk (*). When a subspecies was not recorded for all the islands and some ambiguity remains, the taxon is recorded at the species level only. Exotic species that were planted or are not naturalized (e.g., *Nerium oleander*) were deleted from checklists.

Baja California Islands Checklist

The most recent species lists for each of the 8 Baja California Islands (Appendix 1; Coronados, Todos Santos, San Martín, Jeronimo, Guadalupe, San Benito, Cedros, and Natividad) were compiled from the following data sources:

- Coronados—Oberbauer 2002b
- Todos Santos—Junak and Philbrick 1994a
- San Martín—Junak and Philbrick 1994b
- Guadalupe—Moran 1996, Rebman 2006, Rebman et al. 2007
- San Benito—Junak and Philbrick 2002b, Rebman 2007a
- Cedros—Oberbauer 1987, Rebman 2007b
- Natividad—Junak and Philbrick 2002a

The list of Jeronimo island flora, consisting of 8 taxa, was provided via personal communication from Steve Junak. We verified mainland Baja California flora distributions with the unpublished data of Jon Rebman and Bart O'Brien (personal communication 2013). Several taxa were added to the checklists based on recent collections, herbarium specimens recently encountered, and recent reports by Sula Vanderplank, Jon Rebman, and Steve Junak; these taxa are indicated by footnotes. The taxonomy for this checklist follows the Checklist of Baja California Plants in preparation by Jon Rebman.

California Channel Islands Checklist

The updated flora of the 8 California Channel Islands (Appendix 2; San Clemente, San Nicolas, Santa Catalina, Santa Barbara, Santa Rosa, Santa Cruz, Anacapa, and San Miguel) is based on the master checklist compiled by Gary Wallace (1985). We included published updates to individual island floras found in the

National Park Service checklist from Junak et al. (1997) for San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara islands. For San Clemente Island we included updates from Ross et al. (1996) and for San Nicholas Island updates from Junak (2008). Additional taxa and island records are included based on recent collections on Santa Catalina Island by Sarah Ratay, observations and collections on San Clemente Island by Emily Howe (Soil Ecology and Restoration Group, SDSU), and herbarium specimens found in the Consortium of California Herbaria (CCH 2014), which are listed in footnotes. The nomenclatural revision of this checklist is consistent with taxonomy of the new Jepson Manual (Baldwin et al. 2012) through the use of the dynamic concordance tool provided on the Jepson e-flora website (Jepson Flora Project 2013). This checklist was developed to identify distribution patterns in the flora, and though the nomenclature has been updated, we have not confirmed identifications of questionable herbarium specimens, nor have we diligently pursued the lowest taxonomic rank beyond the published sources. We are also aware of additional updates to the flora of many of the Channel Islands in process by Steve Junak, including publication of the flora of Catalina Island; Junak's updates are not included here.

Exemplar Taxa

The identification of exemplar taxa was generated through a comparison of the 2 newly generated island checklists (Appendixes 1, 2) with the Jepson Manual (Baldwin et al. 2012) and the inventory of rare and endemic plants of CFP Baja California (O'Brien et al. 2014). A large number of species from CFP Baja California extend just slightly into southern California and are considered near-endemic to Baja California (O'Brien et al. 2014). As such, we include the near-endemic species of CFP Baja California as 'absent' in the mainland of Alta California (with the exception of *Crossosoma californicum*, which occurs on the Palos Verde Peninsula, and *Euphorbia misera*, which occurs in the South Coast region of California and beyond; Baldwin et al. 2012). These few species are consistent with the concept of Diegan Scrub as proposed by Axelrod (1978). Diegan Scrub is named for its occurrence in southern San Diego County and south into Baja California. It is a coastal scrub, rich in

TABLE 1. The 26 exemplar taxa as they occur on 8 Baja California Pacific Islands and the 8 Channel California Islands.^a CRPR column provides the California Rare Plant List ranking, and the BC column provides the State of Baja California

Family	Exemplar taxa	Habit	NAT	CED	BEN	GUA	JER	MAR
Apiaceae	<i>Lomatium insulare</i>	Herb				GUA		
Asteraceae	<i>Hazardia cana</i>	Shrub				GUA		
Asteraceae	<i>Senecio lyonii</i>	Shrub			BEN			MAR
Boraginaceae	<i>Phacelia floribunda</i>	Herb				GUA		
Cactaceae	<i>Berberocactus emoryi</i>	Succulent						MAR
Convolvulaceae	<i>Calystegia macrostegia</i> subsp. <i>macrostegia</i>	Vine				GUA		MAR
Crossosomataceae	<i>Crossosoma californicum</i>	Shrub				GUA		
Euphorbiaceae	<i>Euphorbia misera</i>	Shrub	NAT	CED	BEN	GUA		MAR
Fabaceae	<i>Acmispon argophyllus</i> subsp. <i>argenteus</i>	Shrub				GUA		
Fabaceae	<i>Lupinus guadalupensis</i>	Herb				GUA		
Fabaceae	<i>Trifolium palmeri</i>	Herb				GUA		
Fagaceae	<i>Quercus tomentella</i>	Tree				GUA		
Grossulariaceae	<i>Ribes viburnifolium</i>	Shrub		CED				
Lamiaceae	<i>Salvia brandegeei</i>	Shrub						
Papaveraceae	<i>Eschscholzia ramosa</i>	Herb	NAT	CED	BEN	GUA		MAR
Phmyraceae	<i>Mimulus latifolius</i>	Herb				GUA		
Plantaginaceae	<i>Gambelia speciosa</i>	Shrub				GUA		
Poaceae	<i>Dissanthelium californicum</i>	Herb				GUA		
Polemoniaceae	<i>Gilia nevini</i>	Herb				GUA		
Polemoniaceae	<i>Leptosiphon pygmaeus</i> subsp. <i>pygmaeus</i>	Herb				GUA		
Rhamnaceae	<i>Ceanothus arboreus</i>	Shrub				GUA		
Rhamnaceae	<i>Rhamnus pirifolia</i>	Shrub				GUA		
Rosaceae	<i>Prunus ilicifolia</i> subsp. <i>lyonii</i>	Tree						
Saxifragaceae	<i>Jepsonia malvifolia</i>	Herb				GUA		
Scrophulariaceae	<i>Scrophularia villosa</i>	Shrub				GUA		
Solanaceae	<i>Solanum wallacei</i>	Shrub				GUA		
NUMBER OF SPECIES			2	3	3	21	0	5

^aNatividad [NAT], Cedros [CED], San Benito [BEN], Guadalupe [GUA], Jeronimo [JER], San Martín [MAR], Todos Santos [TOS], Coronados [COR], San Clemente

succulents, that includes many endemic and near-endemic species from CFP Baja; it also includes the coastal succulent scrub and coastal sage scrub ecoregions (González-Abraham et al. 2010).

RESULTS

The California Pacific Islands in total contain 1239 unique taxa. The California Islands separately contain 976 taxa and the Baja California Islands 535 taxa. Twenty-six of these taxa have a disjunct occurrence between the Baja California Pacific Islands and the California Channel Islands, absent from Alta California outside the Diegan Scrub (Table 1). These exemplar taxa represent 16 families and 26 unique genera. No one growth form predominates; of the 26 taxa, there are 12 shrubs, 10 herbaceous annuals, 2 trees, 1 vine, and 1 xerophytic succulent (Table 1). Fabaceae is the largest family with 3 species on the exemplar taxa list.

These 26 taxa fall into 6 biogeographic sub-patterns:

- (1) multiple California Channel Islands and Guadalupe Island, 13 taxa
- (2) Guadalupe Island–San Clemente Island only, 4 taxa (*Hazardia cana*, *Leptosiphon pygmaeus* ssp. *pygmaeus*, *Lupinus guadalupensis*, *Phacelia floribunda*)
- (3) Diegan Scrub and the Channel Islands only, 2 taxa (*Prunus ilicifolia* ssp. *lyonii* and *Salvia brandegeei*)
- (4) widespread, 1 taxon (*Eschscholzia ramosa*) occurs on 14 of 16 islands
- (5) certain Channel and Baja California Islands and Diegan Scrub, 4 taxa (*Berberocactus emoryi*, *Crossosoma californicum*, *Euphorbia misera*, *Ribes viburnifolium*)
- (6) certain Channel and Baja California Islands, 2 taxa (*Calystegia macrostegia* ssp. *macrostegia* and *Senecio lyonii*)

DISCUSSION

The complex biogeography of the California Floristic Province can be explained in part

Islands are listed left to right by increasing latitude. The Mainland column indicates continental occurrences. The protected rankings.

TOS	COR	Mainland	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG	# ISL	CRPR	BC
		No	CLE	NIC							3	1B.2	1b
		No	CLE								2	1B.2	1b
		Baja only	CLE		CAT						4		2a
		No	CLE								2	1B.2	1b
TOS	COR	Baja & CA	CLE		CAT						5	2.2	4
		No			CAT		ROS	CRU	ANA	MIG	7		2a
		CA only	CLE		CAT						3	1B.2	1b
TOS	COR	Baja & CA	CLE		CAT			CRU			10	2.2	
		No	CLE	NIC	CAT						4		2a
		No	CLE								2	1B.2	1b
		No	CLE	NIC	CAT	BAR			ANA		5	4.2	2a
		No	CLE		CAT		ROS	CRU	ANA		6	4.2	2a
		Baja & CA			CAT						2	1B.2	4
		Baja only					ROS				1	1B.2	1b
TOS	COR	No	CLE	NIC	CAT	BAR	ROS	CRU			13	4.3	2a
		No			CAT			CRU			3	1A	1b
		No	CLE		CAT	BAR					4	1B.2	1b
		No	CLE		CAT						3	1B.2	1a
		No	CLE	NIC	CAT	BAR	ROS	CRU	ANA		8	4.3	2a
		No	CLE								2	1B.2	1b
		No			CAT		ROS	CRU			4		2a
		No	CLE		CAT		ROS	CRU		MIG	6	4.2	2a
		Baja only	CLE		CAT		ROS	CRU	ANA		5		
		No	CLE	NIC	CAT		ROS	CRU			6	4.2	2a
		No	CLE		CAT						3	1B.2	1b
		No			CAT		ROS	CRU			4	1B.1	1b
3	3		20	6	20	4	10	11	5	2		21	24

[CLE], San Nicolas [NIC], Santa Catalina [CAT], Santa Barbara [BAR], Santa Rosa [ROS], Santa Cruz [CRU], Anacapa [ANA], and San Miguel [MIG].

by analyzing unusual floristic patterns seen on the California Pacific Islands. The 26 taxa shared by the Baja California and Channel Islands indicate a clear connection between these isolated and disjunct regions. What precludes these taxa from occurring on the Alta California mainland, and what does this suggest for the past extent of the CFP? Did these taxa evolve locally and then migrate, or does this pattern instead reflect a distant legacy?

Three current hypotheses attempt to explain the presence of these disjunct populations on the California Pacific Islands: (1) these species have the ability to disperse long distances yet for some reason have failed to establish on the California mainland; (2) these species were historically more widespread, connected by former geologic linkages, and have been unable to persist on the Alta California mainland, remaining in refugia on the islands and in Baja California; or (3) the Channel Islands originally occurred farther south near San Diego (Atwater 1998) and as they

moved north, fog-moderated climates retained species native to that region.

A number of the exemplar taxa have distributions on the Channel Islands and farther south in Baja California, suggestive of the refugium hypothesis (i.e., these species were once more widespread). Epling and Lewis (1942) proposed that the diverse Diegan Scrub has many taxa derived from Miocene vegetation that came from the north Mexican plateau. Axelrod (1978) states that Diegan Scrub was more restricted in the Pleistocene and expanded in the Holocene as arid-adapted taxa moved northward into the southern Channel Islands. Many CFP species are found in disjunct occurrences, scattered across Arizona and Mexico, not unlike the presence of these 26 species on the islands (Valiente-Banuet et al. 1998, Bhaskar et al. 2007). Small-scale topographic niches and facilitation by other species often support these occurrences. Axelrod (1978) also points out that the most important conditions for Diegan Scrub vegetation

appear to be the absence of frost and the presence of a degree of summer moisture (in the form of fog). The cold California current and dense fog banks suggest that similarities in climate may help to explain the similarities in the floras (Fischer et al. 2008).

On the other hand, a number of the exemplar taxa are perhaps better explained as having evolved on the islands. This is especially true of many island *Lotus* species (Acmispon; McGlaughlin et al. 2011, McGlaughlin personal communication), *Eschscholzia ramosa* (Still and Potter 2013), and *Crossosoma californicum* (Wallace and Helenurm 2009), among others (Baldwin, 2007). For this pattern, we hypothesize local evolution and subsequent dispersal to similar niches on the CFP Baja Islands.

Guadalupe Island poses a particularly interesting study system. As the most isolated island, located roughly 270 km offshore, Guadalupe is a true oceanic island never connected to the Baja California Peninsula. Understanding the colonization of Guadalupe may contribute to understanding the dispersal patterns that we see today. Of 26 exemplar taxa, 21 of them occur on Guadalupe. Floristic similarities to the Channel Islands flora (at least 400 km north) may be due to the California current moving species from the California islands southward. Guadalupe Island has been above water for millions of years, and its current flora could represent the accumulation of species from the possible sources over this time.

In addition to a better understanding of the origin and evolution of the CFP, these species lists allow for improved conservation planning. Twenty-one of the 26 species are listed by the California Rare Plant Ranking (CNPS 2013) yet currently have no protection with the Mexican government. Twenty-five of the 26 species are listed in the rare plant ranking for Baja California (O'Brien et al. in press). These rankings are utilized in conservation planning in California and would be useful for land planning in Baja California. These combined islands species lists provide important information about the level of invasive species in the regions. Of the 535 taxa on the Baja California Islands, roughly 14% (74) are introduced species (excluding planted species, which were not included in our analyses). In comparison, of the 976 species on the California Channel Islands, roughly 28% (278) are introduced species. Presumably, the lower

proportion of invasive species on the Baja California Islands is due to less human use and fewer impacts to date.

The exemplar taxa identified by this process can now serve as the focal point of research to better understand the region's historical biogeography. Such research can incorporate phylogenetic relationships and their importance in community assembly (Webb et al. 2008). Functional trait analyses would help determine if these taxonomically diverse species share inherent traits that explain their disjunct distributions. Comparative phylogeographic studies of these shared taxa would test the specific hypothesis discussed above, among others, and offer a glimpse into the past. Additionally, the knowledge of patterns and modes of dispersal would provide valuable natural history information. Further genetic work to resolve the origin of these island specialist species would help to elucidate questions of timing, and definitively separate neo- and paleo-endemics in the exemplar list.

Conservation activity in Baja California has recently expanded, yet knowledge of plant distributions and ecology remains limited. We hope that these updated checklists of the California Pacific Islands will facilitate species status and distribution updates on both sides of the border, and foster well-informed conservation decisions that promote expanded science and management for the transborder ecoregion.

ACKNOWLEDGMENTS

This work is based on the legacy of botanists who have explored and documented the floristic diversity of California and the Pacific Islands. In particular, we thank the following individuals who have directly aided this paper. Steve Junak's expertise has been invaluable; we are most grateful for his personal communications and guidance. His dedication and role as an information clearinghouse for the island floras is vital for island-focused plant work. We are extremely grateful to Jon Rebman of the San Diego Natural History Museum (SD) for his assistance with the Baja California Island checklist, as well as his additional data, nomenclatural reference works, and taxonomic assistance. Karen Rich and Judy Gibson at SD also provided information. Bart O'Brien and coauthors kindly gave us access to a great deal of informative data

in their in-press manuscript. Two anonymous reviewers contributed greatly to the quality of this manuscript.

LITERATURE CITED

- ACKERLY, D.D. 2009. Evolution, origin and age of lineages in the Californian and Mediterranean floras. *Journal of Biogeography* 36:1221–1233.
- ATWATER, T. 1998. Plate tectonic history of Southern California with emphasis on the Western Transverse Ranges and Santa Rosa Island. Pages 1–8 in P.W. Weigand, editor, *Contributions to the geology of the Northern Channel Islands, Southern California*. American Association of Petroleum Geologists, Pacific Section, MP 45.
- AXELROD, D.I. 1973. History of the mediterranean ecosystem in California. Pages 225–305 in F. di Castri and H.A. Mooney, editors, *Mediterranean type ecosystems*. Springer-Verlag, Berlin.
- _____. 1978. The origin of coastal sage vegetation, Alta and Baja California. *American Journal of Botany* 65:1117–1131.
- BALDWIN, B.G. 2007. Adaptive radiation of shrubby tarweeds (*Deinandra*) in the California Islands parallels diversification of the Hawaiian silversword alliance (Compositae–Madiinae). *American Journal of Botany* 94:237–248.
- BALDWIN, B.G., D.H. GOLDMAN, D.J. KEIL, R. PATTERSON, AND T.J. ROSATTI. 2012. *The Jepson manual: vascular plants of California*. 2nd edition. University of California Press, Berkeley, CA.
- BHASKAR, R., A. VALIENTE-BANUET, AND D.D. ACKERLY. 2007. Evolution of hydraulic traits in closely related species pairs from mediterranean and nonmediterranean environments of North America. *New Phytologist* 176:718–726.
- [CNPS] CALIFORNIA NATIVE PLANT SOCIETY. 2013. Inventory of rare and endangered plants. California Native Plant Society, Sacramento, CA; [accessed 8 April 2013]. Available from: <http://www.rareplants.cnps.org>
- [CCH] CONSORTIUM OF CALIFORNIA HERBARIA. 2014. Data provided by participants of CCH. [Accessed 24 April 2014]. Available from: <http://ucjeps.berkeley.edu/consortium/>
- DAWSON, T.E. 1998. Fog in the California Redwood Forest: ecosystem inputs and use by plants. *Oecologia* 117: 476–485.
- EPLING, C., AND H. LEWIS. 1942. The centers of distribution of the chaparral and coastal sage associations. *American Midland Naturalist* 27:445–462.
- FISCHER, D.T., C.J. STILL, AND A.P. WILLIAMS. 2008. Significance of summer fog and overcast for drought stress and ecological functioning of coastal California endemic plant species. *Journal of Biogeography* 36: 783–799.
- GONZÁLEZ-ABRAHAM, C.E., P.P. GARCILLÁN, E. EZCURRA, ET AL. 2010. Ecorregiones de la Península de Baja California: una síntesis. *Boletín de la Sociedad Botánica de México* 87:69–82.
- JACOBS, D.K., T.A. HANEY, AND K.D. LOUIE. 2004. Genes, diversity, and geologic process on the Pacific Coast. *Annual Review of Earth and Planetary Sciences* 32: 601–652.
- JEPSON FLORA PROJECT, EDITORS. 2013. Jepson eFlora [online]. Regents of the University of California, Berkeley, CA; [accessed 24 April 2014]. Available from: <http://ucjeps.berkeley.edu/IJM.html>
- JUNAK, S. 2008. A flora of San Nicolas Island, California. Santa Barbara Botanic Garden, Santa Barbara, CA.
- JUNAK, S., AND R. PHILBRICK. 1994a. The vascular plants of Todos Santos Island, Baja California, Mexico. Pages 407–428 in W. Halvorson and G. Maender, editors, *Proceedings of the Fourth California Islands Symposium: update on the state of resources*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- _____. 1994b. The flowering plants of San Martin Island, Baja California, Mexico. Pages 429–447 in W. Halvorsen and G. Maender, editors, *Proceedings of the Fourth California Islands Symposium: update on the state of resources*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- _____. 2002a. Flowering plants of Natividad Island, Baja California, México. Pages 224–234 in H.W. Chaney, K.L. Mitchel, and D.R. Browne, editors, *Proceedings of the Fifth California Islands Symposium: 29 March to 1 April 1999*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- _____. 2002b. Flowering plants of the San Benito Islands, Baja California, Mexico. Pages 235–246 in H.W. Chaney, K.L. Mitchel, and D.R. Browne, editors, *Proceedings of the Fifth California Islands Symposium: 29 March to 1 April 1999*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- JUNAK, S., R. PHILBRICK, S. CHANEY, AND R. CLARK. 1997. A checklist of vascular plants of Channel Islands National Park. 2nd edition. Southwest Parks and Monuments Association, Tucson, AZ.
- KEELEY, J.E., W.J. BOND, R.A. BRADSTOCK, J.G. PAUSAS, AND P.W. RUNDEL. 2011. *Fire in mediterranean ecosystems*. Cambridge University Press, Cambridge.
- LANCASTER, L.T., AND K.M. KAY. 2012. Origin and diversification of the California flora: re-examining classic hypotheses with molecular phylogenies. *Evolution* 67:1041–1054.
- MCGLAUGHLIN, M.E., L. RILEY, L.E. WALLACE, AND K. HELENURM. 2011. Isolation of microsatellite loci from endangered members of *Lotus* (Fabaceae) subgenus *Syrmatium*. *Conservation Genetics Resources* 3:117–121.
- MORAN, R.V. 1996. The flora of Guadalupe Island, Mexico. *Memoirs of the California Academy of Science* 19: 1–190.
- MYERS, N., R.A. MITTERMEIER, C.G. MITTERMEIER, G.A.B. DA-FONSECA, AND J. KENT. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403:853–858.
- OSBERBAUER, T.A. 1987. Floristic analysis of vegetation communities on Isla de Cedros, Baja California, Mexico. Pages 115–131 in F.G. Hochberg, editor, *Third California Islands Symposium: recent advances in research on the California Islands*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- _____. 2002a. Analysis of vascular plant species diversity of the Pacific Coast islands of Alta and Baja California. Pages 201–211 in H.W. Chaney, K.L. Mitchel, and D.R. Browne, editors, *Proceedings of the Fifth California Islands Symposium: 29 March to 1 April 1999*. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- _____. 2002b. Vegetation and flora of Islas Los Coronados, Baja California, México. Pages 212–223 in H.W.

- Chaney, K.L. Mitchel, and D.R. Browne, editors. Proceedings of the Fifth California Islands Symposium: 29 March to 1 April 1999. Santa Barbara Museum of Natural History, Santa Barbara, CA.
- O'BRIEN, B., J. DELGADILLO-RODRÍGUEZ, S.A. JUNAK, T.A. OBERBAUER, J.P. REBMAN, H. RIEMANN, AND S.E. VANDERPLANK. In press. The rare, endangered and endemic plants of the California Floristic Province portion of Baja California, Mexico. *Aliso*.
- RAVEN, P.H., AND D.I. AXELROD. 1978. Origin and relationships of the California flora. *University of California Publications in Botany* 72:1–134.
- REBMAN, J.P. 2006. The flora of Guadalupe Island, Mexico. [Accessed 26 April 2013]. Available from: <http://baja.flora.org/floras/GuadalupeEndemics1.htm>
- _____. 2007a. The flora of San Benitos Island, Mexico. [Accessed 26 April 2013]. Available from: <http://baja.flora.org/Floras/SanBenitosIsland.htm>
- _____. 2007b. The flora of Cedros Island, Mexico. [Accessed 26 April 2013]. Available from: <http://baja.flora.org/Floras/CedrosIsland.htm>
- REBMAN, J.P., T.A. OBERBAUER, AND J.L. LEÓN DE LA LUZ. 2007. La flora de Isla Guadalupe y sus islotes adyacentes, Baja California, México. [Accessed 26 April 2013]. Available from: <http://www2.ine.gob.mx/publicaciones/libros/477/cap5.html>
- ROSS, T.S., S. BOYD, AND S. JUNAK. 1996. Additions to the vascular flora of San Clemente Island, Los Angeles County, California, with notes on clarifications and deletions. *Aliso* 15(1):27–40.
- SNIDERMAN, J.M.K., G.J. JORDAN, AND R.M. COWLING. 2013. Fossil evidence for a hyperdiverse sclerophyll flora under a non-Mediterranean-type climate. *PNAS* 110:3423–3428.
- STILL, S.M., AND D. POTTER. 2013. California poppy conundrums: insights into relationships within tribe Eschscholtzieae (Papaveraceae). *Systematic Botany* 38:104–117.
- VALIENTE-BANUET, A., N. FLORES-HERNÁNDEZ, M. VERDÚ, AND P. DÁVILA. 1998. The chaparral vegetation of Mexico under nonmediterranean climate: the convergence and Madrean–Tethyan hypotheses reconsidered. *American Journal of Botany* 85:1398–1408.
- VANDERPLANK, S. 2013. Endemism in an ecotone: from chaparral to desert in Baja California, Mexico. *In*: C. Hobbom, editor, *Vascular plant endemism*. Springer-Verlag, Dresden.
- WALLACE, G.D. 1985. Vascular plants of the Channel Islands of southern California and Guadalupe Island, Baja California, México. *Contributions in Science* 365, Natural History Museum of Los Angeles County.
- WALLACE, L.E., AND K. HELENURM. 2009. Has herbivory negatively impacted genetic variability in the flora of the California Channel Islands? Insights from *Crossosoma californicum* (Crossosomataceae). *International Journal of Plant Sciences* 170:311–322.
- WEBB, C.O., D.D. ACKERLY, AND S.W. KEMBEL. 2008. Phylocom: software for the analysis of phylogenetic community structure and trait evolution. *Bioinformatics* 24:2098–2100.

Received 27 April 2013

Accepted 27 May 2014

Early online 25 September 2014

Appendix 1 on page 169.

Appendix 2 on page 188.

APPENDIX 1. Plant species checklist for the 8 Baja California islands (Cedros [CED], Coronados [COR], Jeronimo [JER], Guadalupe [GUA], Natividad [NAT], San Benito [BEN], San Martín [MAR], and Todos Santos [TOS]). An ampersand (&) indicates an extirpated species; a question mark (?) indicates an unvouchered taxon; and an asterisk (*) indicates a nonnative species.

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
FERNS									
Dryopteridaceae									
<i>Polystichum minimum</i> (Kaulf.) C. Presl						GUA			
Polypodiaceae									
<i>Polypodium californicum</i> Kaulf.		COR	TOS			GUA			
<i>Polypodium scouleri</i> Hook. & Grev.						GUA			
Pteridaceae									
<i>Adiantum capillus-veneris</i> L.								GED	
<i>Cheilanthes brandegeei</i> D.C. Eaton								GED	
Pteridiaceae									
<i>Cheilanthes neuberryi</i> Domin						GUA			
<i>Notholaena californica</i> D.C. Eaton	ssp. <i>californica</i>					GUA		GED	
<i>Notholaena californica</i> D.C. Eaton	ssp. <i>leucophylla</i> Windham							GED	
<i>Pellaea andromedifolia</i> (Kaulf.) Fee		COR						GED	
<i>Pellaea mucronata</i> D.C. Eaton	var. <i>mucronata</i>					GUA			
<i>Pentagramma triangularis</i> (Kaulf.) Yatskiévych et al.	ssp. <i>triangularis</i>	COR				GUA		GED	
<i>Pentagramma triangularis</i> (Kaulf.) Yatskiévych et al.	ssp. <i>maxonii</i> (Weath.) Yatsk., Windham & E. Wollenw.					GUA		GED?	
<i>Pentagramma triangularis</i> (Kaulf.) Yatskiévych et al.	ssp. <i>viscosa</i> (D.C. Eaton) Yatsk., Windham, & E. Wollenw.					GUA			
<i>Pentagramma triangularis</i> (Kaulf.) Yatskiévych et al.	ssp. <i>senipallida</i> (J.T. Howell) Yatsk., Windham & E. Wollenw.					GUA			
GYMNOSPERMS									
Cupressaceae									
<i>Hesperocyparis guadalupensis</i> (S. Watson) Bartel ¹						GUA			
<i>Juniperus californica</i> Carrière						GUA		GED	
Ephedraceae									
<i>Ephedra aspera</i> S. Watson								GED	
Pinaceae									
<i>Pinus radiata</i> D. Don	var. <i>binata</i> (Engelm.) Lemmon					GUA			
<i>Pinus radiata</i> D. Don	var. <i>cedrosensis</i> (J.T. Howell) Axelrod							GED	
MONOCOTS									
Arecaceae									
<i>Brahea edulis</i> H. Wendl. ex S. Watson						GUA			

¹Synonym: *Cupressus guadalupensis* S. Watson

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
Agavaceae									
<i>Agave bastianiana</i> Greene									
<i>Agave shawii</i> Englem.									
<i>Yucca valida</i> Brandegee			TOS				BEN	CED	NAT
Cyperaceae								CED	
<i>Carex spissa</i> L. H. Bailey								CED?	
<i>Eleocharis geniculata</i> (L.) Roemer & Schultes								CED	
<i>Schoenoplectus californicus</i> (C.A. Mey) Sofak								CED?	
Juncaceae									
<i>Juncus acutus</i> L. ²	ssp. <i>leopoldii</i>							CED	
<i>Juncus bufonius</i> L. ³	var. <i>bufonius</i>					GUA			
<i>Juncus bufonius</i> L. ⁴	var. <i>congestus</i> Wahlenb					GUA			
Liliaceae									
<i>Calochortus splendens</i> Dougl.		COR							
Orchidaceae									
<i>Piperia cooperi</i> (S. Watson) Rydb		COR	TOS						
Poaceae									
<i>Agrostis pallens</i> Trin.		COR							
<i>Aristida adscensionis</i> L.									
<i>Arundo donax</i> L. ⁵						GUA		CED	
<i>Avena barbata</i> Brot. ⁶								CED	
<i>Avena fatua</i> L. ⁶		COR	TOS			GUA		CED	
<i>Bromus berteroi</i> Colla		COR	TOS	MAR		GUA		CED	
<i>Bromus carinatus</i> Hook. & Arn.				MAR		GUA		CED	
<i>Bromus diandrus</i> Roth. ⁶		COR	TOS	MAR		GUA		CED	
<i>Bromus hordeaceus</i> L. ⁶		COR	TOS	MAR		GUA		CED	
<i>Bromus madritensis</i> L. ⁶		COR	TOS	MAR		GUA		CED	
<i>Bromus tectorum</i> L. ⁶						GUA			
<i>Cynodon dactylon</i> (L.) Pers. ⁶		COR						CED?	
<i>Distichlis spicata</i> (L.) Greene		COR		MAR				CED	
<i>Distichlis littoralis</i> (Engelm.) H.L. Bell & Columbus ⁵				MAR					
<i>Elymus condensatus</i> J. Presl ⁶									
<i>Eragrostis pectinacea</i> (Michx.) Nees		COR	TOS						NAT
<i>Festuca bromioides</i> L. ^{7*}	var. <i>pectinacea</i>					GUA			

²Report confirmed, herbarium specimen @ SD³New record; herbarium specimen @ RSA, SD⁴New record; herbarium specimen @ RSA, SD⁵Synonym: *Monanthochloe littoralis* Engelm.⁶Synonym: *Leymus condensatus* (J. Presl) A. Löve⁷Synonym: *Vulpia bromioides* (L.) Gray

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
<i>Festuca microstachys</i> Nutt. ⁸									
<i>Festuca myuros</i> L. ^{9*}	var. <i>pauciflora</i> Scribn.			MAR		GUA		GED	
<i>Festuca octoflora</i> Walt. ¹⁰	var. <i>octoflora</i>	COR	TOS	MAR		GUA		GED	
<i>Hordeum murinum</i> L. [*]	ssp. <i>glaucum</i> (Steud.) Tzvelev.	COR	TOS	MAR		GUA		GED	
<i>Hordeum murinum</i> L. [*]	ssp. <i>leporinum</i> (Link) Arcang.	COR	TOS	MAR		GUA		GED	
<i>Lamarckia aurea</i> (L.) Moench [*]		COR	TOS	MAR		GUA		GED	
<i>Melica frutescens</i> Scribn.									
<i>Melica imperfecta</i> Trin.		COR	TOS	MAR		GUA		GED	
<i>Muhlenbergia microsperma</i> (DC.) Kunth		COR	TOS	MAR		GUA		GED	
<i>Phalaris caroliniana</i> Walt.									
<i>Phalaris minor</i> Retz. [*]			TOS			GUA		GED	NAT
<i>Pytochaetium pringlei</i> (Beal) Parodi									
<i>Poa annua</i> L. [*]						GUA		GED	
<i>Poa secunda</i> J.S. Presl			TOS ¹¹			GUA		GED	
<i>Poa thomasi</i> Refulio ¹²	ssp. <i>secunda</i>					GUA			
<i>Polygogon viridis</i> (Gouan) Breistr. ^{13*}								GED	
<i>Polygogon monspeliensis</i> * (L.) Desf.			TOS			GUA		GED	
<i>Schismus barbatus</i> (L.) Thell. [*]						GUA		GED	
<i>Sorghum bicolor</i> (L.) Moench [*]								GED	
<i>Stipa speciosa</i> Trin. & Rupr. ¹⁴								GED	
<i>Stipa lepidota</i> A. Hitchc. ¹⁵			TOS			GUA		GED?	
<i>Stipa diegoensis</i> Swallen									
<i>Stipa pulchra</i> Hitchc.									
<i>Triticum aestivum</i> L. [*]		COR		MAR		GUA		GED?	
<i>Zea mays</i> L. [*]									
Themidaceae									
<i>Dichelostemma capitatum</i> Alph. Wood									
<i>Trileta guadalupensis</i> L.W. Lenz									
<i>Triteleopsis palmieri</i> (S.Watson) Hoover									
Typhaceae									
<i>Typha latifolia</i> L.								GED?	
Zosteraceae									
<i>Phyllospadix scouleri</i> Hook.		COR		MAR	JER			GED	NAT

⁸Synonym: *Vulpia microstachys* (Nutt.) Munro⁹Synonym: *Vulpia myuros* (L.) C.C. Gmel.¹⁰Synonym: *Vulpia octoflora* (Walter) Rydb. var. *octoflora* and V. o. var. *hirtella* (Piper) Henrard¹¹New record; herbarium specimen @ SD (Thorne 53921)¹²Synonym: *Stenochloa californica* Nutt.¹³Synonym: *Agrostis semiverticillata* (Forssk.) C. Chr.¹⁴Synonym: *Achnatherum speciosum* (Trin. & Rupr.) Barkworth¹⁵Synonym: *Nassella lepidota* (Hitchc.) Barkworth

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Phyllospadix torreyi</i> S. Watson			TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Zostera marina</i> L.			TOS	MAR	JER	GUA	BEN	CED	NAT
BASAL DICOTS									
Saururaceae									
<i>Anemopsis californica</i> (Nutt.) H. & A.								CED?	
EUDICOTS									
Aizoaceae									
<i>Carpobrotus chilensis</i> (Molina) N.E. Br.*		COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Mesembryanthemum crystallinum</i> L.*		COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Mesembryanthemum nodiflorum</i> L.*		COR	TOS	MAR	JER	GUA	BEN	CED?	NAT
Anacardiaceae									
<i>Malosma laurina</i> (Nutt. in T. & G.) Nutt. ex Abrams			TOS			GUA		CED	
<i>Pachycormus discolor</i> (Benth.) Cov.			TOS			GUA		CED	NAT
<i>Rhus integrifolia</i> (Nutt.) Brewer & S. Watson			TOS			GUA		CED	
<i>Rhus integrifolia</i> × <i>lentii</i>								CED	
<i>Rhus lentii</i> Kell.								CED	
Apiaceae									
<i>Cortandrum sativum</i> L.*								CED?	
<i>Foeniculum vulgare</i> Mill.*								CED	
<i>Apiastrum angustifolium</i> Nutt. in Torrey & A. Gray		COR	TOS					CED	
<i>Bowlesia incana</i> Ruiz & Pav.			TOS			GUA		CED?	
<i>Daucus pusillus</i> Michaux		COR	TOS			GUA		CED	
<i>Lomatium insulare</i> (Eastw.) Munz.			TOS			GUA		CED	
<i>Yabea microcarpa</i> (Hook. & Arn.) Koso-Pol. ¹⁶						GUA		CED	
Apocynaceae									
<i>Asclepias subulata</i> Decne. in A. DC.						GUA		CED	
<i>Nerium oleander</i> L.*									
Araliaceae									
<i>Hydrocotyle umbellata</i> ¹⁷								CED	
Asteraceae									
<i>Agoseris heterophylla</i> (Nutt.) Greene						GUA			
<i>Anaauria rotundifolia</i> Benth.									
<i>Amblyopappus pusillus</i> Hook. & Arn.		COR	TOS	MAR	MAR	GUA	BEN	CED	NAT
<i>Ambrosia camphorata</i> (Greene) Payne				MAR?		GUA		CED	
<i>Ambrosia chamissonis</i> (Less.) Greene				MAR				CED?	
<i>Ambrosia chenopodiifolia</i> (Benth.) Payne			TOS					CED	NAT
<i>Ambrosia magdalenae</i> (Brandege) Payne								CED	

¹⁶New record; herbarium specimen @ RSA, SD¹⁷New record; herbarium specimen @ SD (166694, Amadeo Bea 1568, 22 Feb 1988)

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
<i>Artemisia californica</i> Less.									
<i>Baccharis sarothroides</i> A. Gray		COR	TOS			GUA		GED	
<i>Baeropsis guadalupensis</i> J.T. Howell		COR						GED	
<i>Bahopsis laciniata</i> A. Gray ¹⁸			TOS			GUA			
<i>Bebbia juncea</i> (Benth.) Greene	var. <i>juncea</i>							GED	NAT
<i>Brickellia microphylla</i> (Nutt.) A. Gray								GED?	
<i>Centaurea melitensis</i> L.*			TOS			GUA		GED	
<i>Chaenactis glabriuscula</i> DC. ¹⁹		COR							
<i>Chaenactis lacera</i> Greene ²⁰	var. <i>glabriuscula</i>								NAT
<i>Coreocarpus involutus</i> Greene									NAT
<i>Deinandra fasciculata</i> (DC.) Greene			TOS					GED	
<i>Deinandra frutescens</i> (A. Gray) B.G. Baldwin						GUA			
<i>Deinandra greeneana</i> (Rose) B.G. Baldwin						GUA			
<i>Deinandra palmeri</i> (Rose) B.G. Baldwin						GUA			
<i>Deinandra palmeri</i> × <i>D. greeneana</i>						GUA			
<i>Deinandra peninsularis</i> (Moran)			TOS						
B.G. Baldwin ²¹									
<i>Deinandra strecksii</i> (A. Gray) B.G. Baldwin							BEN		
<i>Encelia asperifolia</i> (S.F. Blake) Clark & Kyhos							BEN		
<i>Encelia californica</i> Nutt.		COR ²²	TOS	MAR				GED	
<i>Encelia palmeri</i> Vasey & Rose									NAT
<i>Encelia stenophylla</i> Greene								GED	
<i>Ericameria brachylepis</i> (A. Gray) Hall								GED	
<i>Erigeron sumatrensis</i> Retz. ^{23*}						GUA			
<i>Eriophyllum confertiflorum</i> (DC.) A. Gray								GED	
<i>Eriophyllum lanatum</i> (Pursh) J. Forbes		COR							
<i>Glebionis coronarium</i> (L.) Cass. ex Spach ^{24*}			TOS			GUA			
<i>Greenella ramulosa</i> Greene								GED?	
<i>Gutierrezia sarothrae</i> (Pursh) Britt. & Rusby								GED	
<i>Hazardia berberidis</i> (A. Gray) Greene		COR	TOS						
<i>Hazardia cana</i> (A. Gray) Greene						GUA			
<i>Hazardia ocuttii</i> (A. Gray) Greene ²⁵		COR							
<i>Hypochoeris glabra</i> L.*			TOS			GUA		GED?	

¹⁸Synonym: *Viguiera laciniata* A. Gray¹⁹New record; herbarium specimen @ SD²⁰New record; herbarium specimen @ SD²¹Synonym: *Hemizonia greeneana* Rose ssp. *peninsularis* (Moran) B.L. Turner²²New record; herbarium specimens @ SD²³Synonym: *Conyza floribunda* Kunth²⁴Synonym: *Chrysanthemum coronarium* L.²⁵New record; herbarium specimen @ SD (5248, Ralph Summer, s.n. 1920-specimen recently identified)

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
<i>Isooma menziesii</i> (Hook. & Arn.) G.L. Nesom	ssp. <i>menziesii</i>		TOS					GED	
<i>Iva hayesiana</i> A. Gray								GED	
<i>Lasthenia coronaria</i> (Nutt.) Ornduff		COR	TOS			GUA			
<i>Lasthenia gracilis</i> (DC.) Greene		COR	TOS			GUA		GED?	
<i>Lajtia platyglossa</i> (Fisch. & Mey.) A. Gray						GUA			
<i>Leptosyme gigantea</i> Kellogg ²⁶						GUA			
<i>Leptosyme maritima</i> (Nutt.) A. Gray ²⁷		COR	TOS	MAR					
<i>Logfia arizonica</i> (A. Gray) Holub ²⁸						GUA		GED?	
<i>Logfia flaginoides</i> (Hook. & Arn.) Morefield ²⁹			TOS			GUA		GED	
<i>Malacothrix cleavelandii</i> A. Gray						GUA			
<i>Malacothrix foliosa</i> A. Gray		COR							
<i>Malacothrix insularis</i> Greene		COR							
<i>Malacothrix similis</i> Davis & Raven		COR	TOS					GED	
<i>Matricaria occidentalis</i> Greene ^{30*}						GUA			
<i>Micropus californicus</i> Fisch. & C.A. Mey.						GUA			
<i>Perityle californica</i> Benth.									
<i>Perityle emoryi</i> Torrey									
<i>Perityle incana</i> A. Gray		COR	TOS	MAR		GUA	BEN	GED	NAT
<i>Pluchea odorata</i> (L.) Cass.	var. <i>odorata</i>					GUA		GED	
<i>Porophyllum gracile</i> Benth.								GED	
<i>Pseudognaphalium beneolens</i> Davidson			TOS			GUA ³¹			
<i>Pseudognaphalium biolettii</i> Anderberg			TOS	MAR		GUA		GED	
<i>Pseudognaphalium luteoalbum</i> (L.) Hilliard & B.L. Burt		COR				GUA ³²			
<i>Pseudognaphalium microcephalum</i> Nutt.		COR							
<i>Pseudognaphalium ramosissimum</i> Nutt.		COR							
<i>Pseudognaphalium</i> sp. nov. ³³									
<i>Pseudognaphalium stramineum</i> (Kunth) Anderberg						GUA		GED	
<i>Rafinesquia californica</i> Nutt.									
<i>Senecio aphanactis</i> Greene		COR	TOS	MAR				GED	
<i>Senecio crotosensis</i> Greene							BEN	GED	

²⁶Synonym: *Coreopsis gigantea* (Kellogg) H.M. Hall²⁷Synonym: *Coreopsis maritima* (Nutt.) Hook. f.²⁸Synonym: *Filago arizonica* A. Gray²⁹Synonym: *Filago arizonica* A. Gray³⁰Synonym: *Filago californica* Nutt.³¹New record; herbarium specimen @ RSA, SD³²New record; herbarium specimen @ RSA, SD³³New record; herbarium specimen @ RSA, SD (description pending)

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Senecio lgonii</i> A. Gray				MAR			BEN		
<i>Senecio palmeri</i> A. Gray						GUA			
<i>Senecio sylvaticus</i> L.*		COR	TOS	MAR		GUA		CED?	NAT
<i>Sonchus oleraceus</i> L.*		COR	TOS	MAR		GUA	BEN	CED	NAT
<i>Sonchus tenerrimus</i> L.*						GUA			
<i>Stephanoseris heterocarpa</i> (Nutt.) Chambers		COR	TOS						
<i>Stephanomeria diegensis</i> Gottlieb						GUA			
<i>Stephanomeria guadalupensis</i> Brandegee									
<i>Trixis californica</i> Kell.	var. <i>californica</i>	COR	TOS	MAR		GUA	BEN&	CED	
<i>Uropappus lindleyi</i> (DC.) Nutt.									
<i>Verbesina dissita</i> A. Gray			TOS						
<i>Verbesina hastata</i> Kell.								CED	
<i>Viguiera lanata</i> (Kell) A. Gray							BEN&	CED	NAT
<i>Xylothamia diffusa</i> (Benth.) Nesom									
Borragiaceae									
<i>Amisackia inepta</i> J.F. Macbr.									
<i>Amisackia menziesii</i> (Lehm.) Nels. & Macbr.			TOS	MAR		GUA		CED	
<i>Cryptantha barbigeri</i>	var. <i>barbigeri</i> (A. Gray) Greene		TOS					CED	
<i>Cryptantha cleveandii</i> Greene			TOS			GUA			
<i>Cryptantha foliosa</i> Reiche									
<i>Cryptantha graji</i> (V. & R.) Macr.	var. <i>cryptochaeta</i> I.M. Johnston								
<i>Cryptantha intermedia</i> (A. Gray) Greene		COR	TOS	MAR				CED	
<i>Cryptantha maritima</i> (Greene)	var. <i>cedrosensis</i> (Greene) Jtn.								
<i>Cryptantha maritima</i> (Greene)	var. <i>maritima</i> Greene	COR				GUA	BEN	CED	NAT
<i>Cryptantha patula</i> Greene							BEN		
<i>Emmenanthe penduliflora</i> Benth.						GUA			
<i>Eucrypta chrysanthemifolia</i> (Benth.) Greene						GUA		CED?	
<i>Eucrypta chrysanthemifolia</i> (Benth.) Greene	var. <i>bipinnatifida</i> (Torr.) Constance					GUA	BEN		
<i>Harpagonella palmeri</i> A. Gray	var. <i>chrysanthemifolia</i>	COR	TOS			GUA			
<i>Heliotropium curassavicum</i> L.									
<i>Johnstonella angelica</i> (I.M. Johnston) Hasenstab & M.G. Simpson ³⁴				MAR				CED	
<i>Pectocarya linearis</i> DC									
<i>Pectocarya recurvata</i> I.M. Johnst.	ssp. <i>ferocula</i> I.M. Johnst.					GUA		CED?	
<i>Phacelia cedrosensis</i> Rose						GUA		CED	NAT
<i>Phacelia cicutaria</i> Greene									
<i>Phacelia crenulata</i> Torr.									
<i>Phacelia distans</i> Benth.									
<i>Phacelia floribunda</i> Greene									
	var. <i>hispida</i> (A. Gray) J. Howell		TOS						
		COR	TOS						
						GUA			

³⁴Synonym: *Cryptantha angelica* I. M. Johnston; herbarium specimen @ SD (Moran 25430)

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Phacelia hirtuosa</i> A. Gray			TOS	MAR					
<i>Phacelia ivodes</i> Kell.		COR	TOS	MAR			BEN	CED	NAT
<i>Phacelia parryi</i> Torr.				MAR					
<i>Phacelia phyllomanica</i> A. Gray						GUA			
<i>Pholistoma auritum</i> (Lindl.) Lilja		COR	TOS						
<i>Pholistoma racemosum</i> (Nutt.) Const.		COR	TOS	MAR		GUA		CED	NAT
<i>Plagiobothrys acanthocarpus</i> (Piper) I.M. Johnston.						GUA			
<i>Plagiobothrys collinus</i> (Philbr.) I.M. Johnston.	var. <i>californicus</i>					GUA			
<i>Plagiobothrys collinus</i> (Philbr.) I.M. Johnston.	var. <i>gracilis</i> Jtn.					GUA ³⁵		CED	
Brassicaceae									
<i>Athyrium pusillus</i> (Hook.) Greene								CED?	
<i>Brassica nigra</i> (L.) W.D.J. Koch*						GUA		CED	
<i>Brassica rapa</i> L.*								CED	
<i>Brassica tournefortii</i> Gouan*								CED	
<i>Cakile maritima</i> Scop.*			TOS	MAR			BEN	CED	NAT
<i>Capsella bursa-pastoris</i> (L.) Medik.*						GUA		CED	
<i>Caulanthus heterophyllus</i> Payson	var. <i>heterophyllus</i>		TOS			GUA		CED	NAT
<i>Caulanthus lasiophyllus</i> (Hook. & Arn.) Payson ³⁶			TOS			GUA		CED	NAT
<i>Caulanthus lasiophyllus</i> (Hook. & Arn.) Payson ³⁶	var. <i>brachycarpa</i> (Richardson) Detling							CED	
<i>Descurainia pinnata</i> (Walt.) Britt.	ssp. <i>glabra</i> (Woot. & Standl.) Dedl.	COR						CED	
<i>Descurainia pinnata</i> (Cockerell) Dedling	ssp. <i>halictorum</i> (Cockerell) Detling			MAR				CED	
<i>Descurainia pinnata</i> (Cockerell) Detling	ssp. <i>menziesii</i> (DC.) Detling		TOS			GUA		CED	
<i>Draba cuneifolia</i> S. Watson	var. <i>integrifolia</i>							CED	
<i>Eruca vesicaria</i> (L.) Cav. ³⁷	ssp. <i>sativa</i>							CED	
<i>Erysimum moranii</i> Rollins						GUA			
<i>Hornungia procumbens</i> (L.) Hayek ^{38*}						GUA			
<i>Lepidium lasiocarpum</i> Nutt.	var. <i>latifolium</i>			MAR?		GUA	BEN?		NAT
<i>Lepidium nitidum</i> Torrey & A. Gray			TOS			GUA			
<i>Lepidium oblongum</i> Small	var. <i>insulare</i> C.L. Hitchc.		TOS	MAR		GUA	BEN	CED	NAT
<i>Raphanus sativus</i> L.*						GUA			
<i>Silene angulorum</i> (S. Watson) Greene			TOS			GUA		CED	
<i>Sisymbrium irio</i> L.*		COR	TOS			GUA		CED	NAT
<i>Sisymbrium orientale</i> L.*			TOS			GUA		CED	
<i>Thysanocarpus erectus</i> S. Watson						GUA		CED	
<i>Thysanocarpus laciniatus</i> Nuttall						GUA		CED	

³⁵New record; herbarium specimen @ RSA, SD³⁶Synonym: *Gaillonia lasiophylla* (Hook. & Arn.) Greene³⁷New record; herbarium specimen @ SD (John Brown, s.n., April 4 1983)³⁸Synonym: *Hutchinsia procumbens* (L.) Desv.

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
Cactaceae									
<i>Bergencactus emoryi</i> (Engelm.) Br. & R.									
<i>Cochemiea ponda</i> Walton		COR	TOS	MAR				GED	NAT
<i>Cylindropuntia alcahes</i> (F.A.C. Weber) F.M. Knuth	var. <i>alcahes</i>							GED	
<i>Cylindropuntia cholla</i> (F.A.C. Weber) F.M. Knuth								NAT	
<i>Cylindropuntia prolifera</i> (Engelm.) F.M. Knuth		COR	TOS	MAR?		GUA		GED?	
<i>Cylindropuntia</i> sp. nova ³⁹								GED	NAT?
<i>Echinocereus maritimus</i> (M.E. Jones) K. Schum.	var. <i>maritimus</i>			MAR			BEN	GED?	NAT
<i>Echinocereus chryscanthus</i> (Orcutt) Britt. & Rose								GED?	NAT
<i>Ferocactus fendii</i> (Orcutt) Britt. & Rose	var. <i>grandiflorus</i> G.E. Linds.			MAR				GED	
<i>Lophocereus schottii</i> (Engelm.) Br. & R.	var. <i>schottii</i>			MAR ⁴⁰			BEN	GED	
<i>Mammillaria blossfeldiana</i> Boedeker	var. <i>shurtiana</i> Gates					GUA		GED	
<i>Mammillaria dioica</i> M.K. Brandegee		COR	TOS	MAR				GED	
<i>Mammillaria goodridgei</i> Scheer	var. <i>rectispina</i> E.Y. Dawson							GED	
<i>Mammillaria goodridgei</i> Scheer	var. <i>goodridgei</i>							GED	NAT
<i>Mammillaria hutchinsoniana</i> (Gates) Boed.								GED	
<i>Mammillaria louisae</i> G.E. Linds				MAR ⁴¹				GED	
<i>Mammillaria neopalmari</i> R.T. Craig							BEN?		
<i>Myrtillocactus cochal</i> (Orcutt) Britt. & Rose									
<i>Opuntia ficus-indica</i> (L.) Miller			TOS	MAR					
<i>Opuntia littoralis</i> (Engelm.) Cockerell		COR	TOS	MAR ⁴² aff.				GED?	
<i>Opuntia oricola</i> Philbrick		COR	TOS	MAR ⁴³				GED?	NAT
<i>Pachycereus pringlei</i> (S. Watson) Britton & Rose								GED	
<i>Stenocereus gummosus</i> (Engelm.) A.C.				MAR				GED	
Gibson & K.E. Horak									
Cappariaceae									
<i>Githopsis diffusa</i> A. Gray	var. <i>guadalupensis</i> (Morin) Lammers					GUA			
<i>Triodanis biflora</i> (Ruiz & Pav.) Greene						GUA			
Cannabaceae									
<i>Celtis laevigata</i> ⁴⁴	var. <i>reticulata</i> (Torr.) Benson							GED?	
Capparidaceae									
<i>Peritoma arborea</i> (Nutt.) Iltis ⁴⁵	var. <i>angustata</i> (Parish) Iltis							GED	
<i>Peritoma arborea</i> (Nutt.) Iltis ⁴⁶	var. <i>globosa</i> (Coville) Iltis	COR							

³⁹New record; pers. comm. Jon Rehman, SD (includes *Cylindropuntia californensis* Rehman)⁴⁰New record; herbarium specimen @ RSA, SD⁴¹Re-identification, changed from *M. hutchinsoniana*⁴²New record; herbarium specimen @ RSA⁴³New record; herbarium specimen @ RSA⁴⁴Synonym; *Celtis douglasii* Planch.⁴⁵Synonym; *Isomeris arborea* Nutt. ssp. *angustata* Parish⁴⁶New record; herbarium specimen @ SD Rehman 6230

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
Caprifoliaceae									
<i>Lonicera hispidula</i> Dougl. ⁴⁷						GUA			
<i>Lonicera subspicata</i> Hook. & Arn.	var. <i>denudata</i> Rehder							CED	
Caryophyllaceae									
<i>Achyroxychia cooperi</i> Torrey & A. Gray									CED
<i>Cerastium glomeratum</i> Thuill.*						GUA			
<i>Drymaria holosteoides</i> Benth.	var. <i>holosteoides</i>							CED	
<i>Herniaria hirsuta</i> L.	var. <i>cinerea</i> (DC.) Coutinho		TOS					CED	
<i>Polycarpon depressum</i> Nutt.			TOS						
<i>Silene antirrhina</i> L.			TOS			GUA			
<i>Silene gallica</i> L.*		COR				GUA		CED?	
<i>Silene laciniata</i> Cav. ⁴⁸		COR							
<i>Spergularia bocconii</i> (Scheele) Merino*						GUA			
<i>Spergularia macrotheca</i>	var. <i>leucantha</i> (Greene) B. L. Rob.					GUA			
	(Hornem. ex Cham. & Schltdl.) Heynh. ⁴⁹								
<i>Spergularia macrotheca</i>	var. <i>talinum</i> (Greene) Jeps.					GUA			
	(Hornem. ex Cham. & Schltdl.) Heynh.								
<i>Spergularia marina</i> J. & K. Presl				MAR ⁵⁰		GUA			
<i>Spergularia villosa</i> (Pers.) Camb.*		COR							
<i>Stellaria media</i> (L.) Vill.*		COR							
<i>Stellaria pallida</i> (Dumort.) Crép*		COR							
<i>Stellaria nitens</i> Nutt.						GUA			CED
<i>Allenrolfya occidentalis</i> (S. Watson) Kuntze									
Chenopodiaceae									
<i>Aphanisma blitoides</i> Nutt.		COR	TOS	MAR		GUA	BEN	CED	NAT
<i>Arthrocnemum subterminale</i> (Pursh) Standl. ⁵¹				MAR					
<i>Atriplex barclayana</i> (Benth.) Dietr.						GUA	BEN	CED?	NAT
<i>Atriplex californica</i> Moq.		COR	TOS			GUA		CED	
<i>Atriplex canescens</i> (Pursh) Nutt.		COR							
<i>Atriplex coulteri</i> (Moq.) D. Dietr.	ssp. <i>canescens</i>						BEN	CED?	NAT?
<i>Atriplex julacea</i> S. Watson			TOS	MAR				CED	NAT
<i>Atriplex leucophylla</i> (Moq. in DC.) D. Dietr.				MAR				CED	NAT
<i>Atriplex pacifica</i> Nels.		COR		MAR				CED	NAT
<i>Atriplex semibaccata</i> R. Br.*		COR	TOS	MAR				CED	
<i>Atriplex serenana</i> A. Nelson ex Abrams	var. <i>dauidsonii</i> (Standl.) Munz	COR		MAR ⁵² aff.		GUA			NAT × aff.

⁴⁷Synonym: *Lonicera hispidula* (Lindl.) Douglas ex Torr. & A. Gray var. *racillans* A. Gray

⁴⁸Synonym: *Silene laciniata* Cav. ssp. *major* C. L. Hitch. & Maguire

⁴⁹New record; herbarium specimen @ RSA, SD

⁵⁰New record; herbarium specimen @ RSA, SBBC

⁵¹Synonym: *Salsola salicoides* Parish

⁵²New record; herbarium specimen @ RSA, potentially new species

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Atriplex suberecta</i> Verdoorn		COR ⁵³				GUA			
<i>Atriplex watsonii</i> A. Nelson				MAR					
<i>Chenopodium album</i> L.								CED?	
<i>Chenopodium californicum</i> (S. Watson) S. Watson		COR	TOS						
<i>Chenopodium flabellifolium</i> Standl.				MAR					
<i>Chenopodium murale</i> L.*		COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Salicornia pacifica</i> Standl. ⁵⁴				MAR					
<i>Salsola australis</i> R.Br.*		COR	TOS					CED	
<i>Suaeda nigra</i> (Rafinesque) J.F. Macbride							BEN		NAT
<i>Suaeda taxifolia</i> (Standl.) Standl.		COR		MAR	JER ⁵⁵	GUA	BEN	CED	
Convolvulaceae									
<i>Calystegia macrostegia</i> (Greene) Brummitt			TOS						
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>intermedia</i>	COR ⁵⁶		MAR		GUA			
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>macrostegia</i>			MAR		GUA			
<i>Cuscuta californica</i> Hook. & Arn.				MAR					NAT
<i>Cuscuta corymbosa</i> Ruiz & Pavon						GUA			
<i>Cuscuta salina</i> Engelm. ⁵⁷	ssp. <i>salina</i>						BEN		
<i>Dichondra occidentalis</i> House		COR	TOS						
Crassulaceae									
<i>Crassula connata</i> (Ruiz Lopez & Pavon)		COR	TOS	MAR		GUA	BEN?	CED	
A. Berger									
<i>Dudleya acuminata</i> Rose								CED	
<i>Dudleya albiflora</i> Rose							BEN?	CED	NAT
<i>Dudleya anomala</i> (Davidson) Moran		COR	TOS						
<i>Dudleya anthonyi</i> Rose				MAR					
<i>Dudleya anthonyi</i> × <i>D. cultrata</i> Rose				MAR					
<i>Dudleya attenuata</i> (S. Watson) Moran		COR	TOS						
<i>Dudleya brittonii</i> D.A. Johans.			TOS						
<i>Dudleya candida</i> Britton		COR							
<i>Dudleya cedrosensis</i> Moran								CED	
<i>Dudleya cultrata</i> Rose				MAR					
<i>Dudleya guadalupensis</i> Moran						GUA			
<i>Dudleya ingens</i> Rose									
<i>Dudleya lanceolata</i> (Nutt.) Britton & Rose								CED?	aff
<i>Dudleya linearis</i> (Greene) Britt. & Rose		COR							
<i>Dudleya pachyphyllum</i> Moran & Benedict							BEN?		CED

⁵³New record; pers. comm. Jon Rehman⁵⁴Synonym; *Salicornia virginica* L.⁵⁵New record; herbarium specimen @ SD⁵⁶New record; pers. comm. Jon Rehman⁵⁷New record; herbarium specimen @ RSA, SD Moran 20315

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Dudleya virens</i> (Rose) Moran									
<i>Dudleya × semiteres</i> (Rose) Moran									
Crossosomataceae									
<i>Crossosoma californicum</i> Nutt.		COR	TOS			GUA			
Cucurbitaceae									
<i>Echinopepon minimum</i> (Kell.) S. Watson	var. <i>minimum</i>							CED	NAT
<i>Marah guadalupensis</i> Greene									
<i>Marah macrocarpus</i> (Greene) Greene		COR	TOS	MAR		GUA		CED	
Ericaceae									
<i>Arctostaphylos</i> sp.									
<i>Xylococcus bicolor</i> Nutt.						GUA		CED	
Euphorbiaceae									
<i>Acalypha californica</i> Benth.								CED	
<i>Andrachne ciliato-glandulosa</i> (Millsp.) Croizat								CED	
<i>Euphorbia albomarginata</i> Torr. & A. Gray*								CED?	
<i>Euphorbia bartolomaei</i> Greene								CED	NAT
<i>Euphorbia crenulata</i> Engelm.									
<i>Euphorbia misera</i> Benth.		COR	TOS	MAR		GUA	BEN	CED	NAT
<i>Euphorbia polycarpa</i> Benth.			TOS	MAR				CED	NAT
<i>Euphorbia pondii</i> Millsp. ⁵⁸						GUA			
Fabaceae									
<i>Acmispon argophyllus</i> (A. Gray) Brouillet ⁵⁹	ssp. <i>argenteus</i> (Dunkle)					GUA		CED	
<i>Acmispon flexuosus</i> (Greene) Brouillet ⁶⁰									
<i>Acmispon glaber</i> (Vogel) Brouillet ⁶¹		COR?							
<i>Acmispon grandiflorus</i> (Benth.) Brouillet ⁶²	var. <i>grandiflorus</i>					GUA			
<i>Acmispon maritimus</i> (Nutt.) D.D. Sokoloff ⁶³	ssp. <i>brevitaxillus</i> (Ottley) Brouillet						BEN	CED	NAT
<i>Acmispon nudatus</i> (Greene) Brouillet ⁶⁴								CED	
<i>Acmispon rigidus</i> (Benth.) Brouillet ⁶⁵								CED	
<i>Acmispon strigosus</i> (Nutt.) Brouillet ⁶⁶			TOS	MAR				CED	
<i>Astragalus</i> aff. <i>gambelianus</i> E. Sheld.									
<i>Astragalus fastidius</i> (Kell.) M.E. Jones								CED	NAT
<i>Astragalus insularis</i> Kell.	var. <i>insularis</i>							CED	

⁵⁸Synonymy: *Chamaesyce pondii* (Millsp.) Millsp.⁵⁹Synonymy & per Jon Rehnman may be recognized as: *Lotus argophyllus* (A. Gray) Greene ssp. *ornithopus* (Greene) P.H. Raven⁶⁰Synonymy: *Lotus cedrosensis* Greene⁶¹Synonymy: *Lotus scoparius* (Torr. & A. Gray) Ottley⁶²Synonymy: *Lotus grandiflorus* (Benth.) Greene⁶³Synonymy: *Lotus subsignosus* Greene ssp. *brevitaxillus* Ottley⁶⁴Synonymy: *Lotus nudatus* (Greene) Greene⁶⁵Synonymy: *Lotus rigidus* (Benth.) Greene⁶⁶Synonymy: *Lotus strigosus* (Nutt.) Greene

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Astragalus magdalenae</i> Greene	var. <i>magdalenae</i>								NAT
<i>Astragalus nuttallianus</i> DC.	var. <i>cedrosensis</i> M.E. Jones							CED	NAT
<i>Astragalus trichopodus</i> A. Gray	var. <i>lonchus</i> (M.E. Jones) Barneby	COR	TOS					CED?	
<i>Dalea mollis</i> Benth.									NAT
<i>Ebenopsis confinis</i> (Standl.) Britton & Rose ⁶⁷									
<i>Errazurizia benthamii</i> (Brandege) I.M. Johnst.							BEN?	CED	
<i>Lapinus concinnus</i> Agardh.	ssp. <i>concinus</i>					GUA		CED	
<i>Lapinus guadalupensis</i> Greene						GUA			
<i>Lapinus niveus</i> S. Watson									
<i>Lapinus sparsiflorus</i> Benth.	var. <i>pondii</i> (Greene) C. P. Smith			MAR				CED	
<i>Lapinus succulentus</i> Dougl.		COR	TOS						
<i>Lapinus truncatus</i> Hook. & Arn.									
<i>Medicago polymorpha</i> L.*		COR				GUA			
<i>Melilotus indicus</i> (L.) All.*						GUA	BEN	CED	
<i>Phaseolus filiformis</i> Benth.							BEN?	CED	NAT
<i>Syrmatium watsonii</i> (Vasey & Rose) Brand ⁶⁸				MAR					
<i>Trifolium depauperatum</i> Desv.	var. <i>truncatum</i> (Greene) Martin ex Isely		TOS			GUA, ⁶⁹			
<i>Trifolium gracilentum</i> Torr. & A. Gray		COR ⁷⁰	TOS			GUA			
<i>Trifolium microcephalum</i> Pursh						GUA			
<i>Trifolium palmieri</i> S. Watson						GUA			
<i>Trifolium willdenovii</i> Sprengel		COR	TOS						
<i>Viola hassettii</i> S. Watson			TOS						
<i>Viola ludoviciana</i> Nutt.	ssp. <i>ludoviciana</i>					GUA			
<i>Vachellia farnesiana</i> (L.) Wight & Arn. ^{71*}	var. <i>minuta</i> (M.E. Jones) Seigler & Elbinger							CED	
<i>Quercus cedrosensis</i> C.H. Müll.								CED	
<i>Quercus tomentella</i> Engelm.						GUA			
Frankeniaceae									
<i>Frankenia palmieri</i> S. Watson							BEN	CED	NAT
<i>Frankenia salina</i> (Molina) I.M. Johnst.			TOS			GUA			
Garryaceae									
<i>Garrya veitchii</i> Kell.								CED	
Gentianeaceae									
<i>Zeltnera ventusta</i> (A. Gray) G. Mans. ⁷²								CED	

⁶⁷Synonym: *Pithecellobium confine* Standl.⁶⁸Synonym: *Lotus watsonii* (Vasey & Rose) Greene⁶⁹New record; pers. comm. Jon Rehman⁷⁰New record; herbarium specimen @ SD⁷¹New record; pers. comm. Jon Rehman, photovoucher @ SD; synonym: *Acacia farnesiana* var. *minuta*⁷²Synonym: *Centaurium venustum* (A. Gray) B.L. Rob.

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
Geraniaceae									
<i>Erodium botrys</i> (Cav.) Bertol.*		COR							
<i>Erodium brachycarpum</i> (Godr.) Thell.*						GUA			
<i>Erodium cicutarium</i> (L.) L'Her. ex Ait.*		COR	TOS	MAR		GUA		CED?	
<i>Erodium moschatum</i> (L.) L'Her. ex Ait.*		COR	TOS	MAR		GUA	BEN?	CED?	
<i>Erodium texanum</i> A. Gray			TOS						NAT
<i>Pelargonium × hortorum</i> L. H. Bailey*									
Grossulariaceae									
<i>Ribes tortuosum</i> Benth.			TOS					CED	
<i>Ribes viburnifolium</i> A. Gray			TOS					CED	
Lamiaceae									
<i>Clinopodium palmeri</i> (A. Gray) Kuntze ⁷³						GUA			
<i>Marrubium vulgare</i> L.*			TOS						
<i>Monardella thymifolia</i> Greene								CED	
<i>Pogogyne tenuiflora</i> A. Gray						GUA			
<i>Salvia cedrosensis</i> Greene								CED	
<i>Salvia columbariae</i> Benth.								CED	
<i>Teucrium glandulosum</i> Kell.								CED	
Loasaceae									
<i>Eucnide cordata</i> Kell.								CED	
<i>Mentzelia adhaerens</i> Bentham								CED	
<i>Mentzelia hirsutissima</i> S. Watson							BEN	CED?	NAT
<i>Mentzelia micrantha</i> (Hook. & Arn.) Torr. & A. Gray	var. <i>nesiotis</i>					GUA			
<i>Petalonyx linearis</i> Greene							BEN	CED	
Malvaceae									
<i>Abutilon californicum</i> Benth.								CED?	NAT?
<i>Eremalche exilis</i> (A. Gray) Greene			TOS				BEN?		NAT
<i>Malva assurgentiflora</i> (Kellogg) M.F. Ray ^{74*}			TOS						
<i>Malva lindsayi</i> (Moran) M.F. Ray ⁷⁵	ssp. <i>assurgentiflora</i>					GUA			
<i>Malva pacifica</i> M.F. Ray ⁷⁶					JER		BEN	CED?	NAT
<i>Malva parviflora</i> L.*						GUA	BEN?	CED?	NAT
<i>Malva occidentalis</i> (S. Watson) M.F. Ray ⁷⁷						GUA		CED?	NAT
<i>Sphaeralcea fulva</i> Greene		COR	TOS?	MAR					
<i>Sphaeralcea palmeri</i> Jeps.		COR							
<i>Sphaeralcea sulphurea</i> S. Watson						GUA		CED	NAT
						GUA			

⁷³Synonym: *Satureja palmeri* (A. Gray) Briq.⁷⁴Synonym: *Lacatera lindsayi* Moran⁷⁵Synonym: *Lacatera occidentalis* S. Watson⁷⁶Synonym: *Lacatera venosa* S. Watson⁷⁷Synonym: *Lacatera assurgentiflora* Kellogg

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
Montiaceae									
<i>Calandrinia ciliata</i> (Ruiz Lopez & Pavon) DC.									
<i>Cistanthe guadalupensis</i> (Dudley)			TOS	MAR		GUA			
Carolin ex Hershk.						GUA			
<i>Cistanthe maritima</i> (Nutt.) ⁷⁸		COR	TOS	MAR		GUA	BEN	GED	NAT
Carolin ex Hershkovitz									
<i>Claytonia parviflora</i> Dougl. ex Hook. ⁷⁹	ssp. <i>parviflora</i>					GUA			
<i>Claytonia perfoliata</i> Willd. & Chambers	ssp. <i>mexicana</i> (Rydberg) Miller (Chambers)	COR	TOS	MAR		GUA		GED	
<i>Claytonia spatulata</i> Douglas								GED?	
Myrsinaceae									
<i>Anagallis arvensis</i> L.*						GUA			
Nyctaginaceae									
<i>Abronia maritima</i> Nutt. ex S. Watson				MAR				GED?	NAT
<i>Mirabilis laevis</i> (Benth.) Curran	var. <i>crassifolia</i> (Choisy) Spellenb.	COR	TOS	MAR		GUA	BEN?	GED?	NAT
Oleaceae									
<i>Hesperaloe palmeri</i> A. Gray						GUA			
Onagraceae									
<i>Camissoniopsis cheiranthifolia</i> (Hornem. ex Spreng.) W.L. Wagner & Hoch ⁸⁰	ssp. <i>suffruticosa</i> (S. Watson) W.L. Wagner & Hoch			MAR					
<i>Camissoniopsis guadalupensis</i> (S. Watson) W.L. Wagner & Hoch ⁸¹	ssp. <i>guadalupensis</i>					GUA			
<i>Camissoniopsis robusta</i> (P.H. Raven) W.L. Wagner & Hoch ⁸²						GUA			
<i>Chylisma cardiophylla</i> (Torr.) Small ⁸³	ssp. <i>cedrosensis</i> (Greene) W.L. Wagner & Hoch							GED	
<i>Eriolobus californica</i> Nutt. ex Torr. & A. Gray ⁸⁴			TOS	MAR					
<i>Eriolobus crassifolius</i> (Greene) W.L. Wagner & Hoch ⁸⁵								GED?	NAT
<i>Epilobium foliosum</i> (Torr. & A. Gray) Suksdorf						GUA			
<i>Xylougra arborea</i> (Kell.) Domm.-Smith & Rose	ssp. <i>arborea</i>							GED	
<i>Xylougra arborea</i> (Kell.) Domm.-Smith & Rose	ssp. <i>weigginii</i>							GED	
Orobanchaceae									
<i>Castilleja attenuata</i> (A. Gray) Chuang & Heckard						GUA			

⁷⁸Synonymy: *Calandrinia maritima* Nutt.⁷⁹New record; herbarium specimen @ RSA, SD⁸⁰Synonymy: *Camissonia cheiranthifolia* (Hornem. ex Spreng.) Raim. ssp. *suffruticosa* (S. Watson) P.H. Raven⁸¹Synonymy: *Camissonia guadalupensis* S. Watson) P.H. Raven ssp. *guadalupensis*⁸²Synonymy: *Camissonia robusta* P.H. Raven⁸³Synonymy: *Camissonia cardiophylla* (Torr.) P.H. Raven ssp. *cedrosensis* (Greene) P.H. Raven⁸⁴Synonymy: *Camissonia californica* (Nutt. ex Torr. & A. Gray) P.H. Raven⁸⁵Synonymy: *Camissonia crassifolia* (Greene) P.H. Raven

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
<i>Castilleja exserta</i> (A. Heller) Chuang & Heckard	ssp. <i>exserta</i>		TOS			GUA			
<i>Castilleja fruticosa</i> Moran						GUA			
<i>Castilleja guadalupensis</i> Brandegee						GUA			
<i>Castilleja subinclusa</i> Greene	ssp. <i>subinclusa</i>		TOS						
Papaveraceae									
<i>Eschscholzia californica</i> Cham.		COR	TOS			GUA			
<i>Eschscholzia elegans</i> Greene.						GUA			
<i>Eschscholzia palmeri</i> Rose						GUA			
<i>Eschscholzia ramosa</i> Greene		COR	TOS	MAR		GUA	BEN	GED	NAT
<i>Platystemon californicus</i> Benth.						GUA			
<i>Papaver heterophyllum</i> A. Gray, ⁸⁶		COR	TOS	MAR					
Phrymaceae									
<i>Diplacus × australis</i> (McMinn ex Munz) Tuttle ⁸⁷			TOS?					GED	
<i>Diplacus brandegeei</i> (Pennell) G.L. Nesom ⁸⁸						GUA			
<i>Erythranthe cardinalis</i> ⁸⁹								GED	
Plantaginaceae									
<i>Antirrhinum nuttallianum</i> Benth.								GED	
<i>Antirrhinum watsonii</i> Vasey & Rose	ssp. <i>subsessile</i> (A. Gray) D.M. Thomps.	COR	TOS	MAR		GUA	BEN	GED	NAT
<i>Collinsia heterophylla</i> Buist.	var. <i>heterophylla</i>	COR						GED	
<i>Gambelia juncea</i> (Benth.) D.A. Sutton ⁹⁰						GUA		GED?	
<i>Gambelia speciosa</i> Nutt. ⁹¹						GUA		GED?	
<i>Nuttallanthus texanus</i> (Scheele) D.A. Sutton ⁹²		COR	TOS					GED	
<i>Penstemon cedrosensis</i> Kell.								GED	
<i>Plantago ovata</i> Forssk.	ssp. <i>insularis</i>					GUA	BEN?	GED?	NAT
Polemoniaceae									
<i>Allophylum giliioides</i> (Benth.) A. & V. Grant									
<i>Gilia engelensis</i> V.E. Grant						GUA			
<i>Gilia capitata</i> Sims									
<i>Gilia nevinii</i> A. Gray									
<i>Leptosiphon pygmaeus</i> (Brand) J.T. Howell ⁹³	ssp. <i>pygmaeus</i>					GUA			
<i>Linanthus dianthiflorus</i> (Benth.) Greene		COR				GUA			

⁸⁶Synonymy: *Stylomecon heterophylla* (Benth.) G. Taylor⁸⁷Synonymy: *Minidius aurantiacus* Curtis var. *aurantiacus*⁸⁸Synonymy: *Minidius latifolius* A. Gray, *Diplacus latifolius* (A. Gray) G.L. Nesom (Douglas ex Benth.) Spach⁸⁹Synonymy: *Minidius cardinalis* Douglas ex Benth.⁹⁰Synonymy: *Galvezia juncea* (Benth.) Ball⁹¹Synonymy: *Galvezia speciosa* (Nutt.) A. Gray⁹²Synonymy: *Linaria texana* Scheele and *Linaria canadensis* (L.) Dum. Cours.⁹³Synonymy: *Linanthus pygmaeus* (Brand) J.T. Howell ssp. *pygmaeus*

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CEJ	NAT
<i>Linanthus uncialis</i> (Brandege) Moran								CEJ?	
<i>Linanthus veitchii</i> (C. Parry) J.M. Porter & L.A. Johnson	<i>Microsteris gracilis</i> (Hook.) Greene							CEJ	CEJ?
Polygonaceae								CEJ?	
<i>Eriogonum fasciculatum</i> Benth.		COR	TOS					CEJ	
<i>Eriogonum grande</i> Greene	var. <i>testudinum</i> Reveal		TOS					CEJ	
<i>Eriogonum intricatum</i> Benth.								CEJ	
<i>Eriogonum molle</i> Greene								CEJ	NAT
<i>Eriogonum pondii</i> Greene Torrey ex Benth.						GUA		CEJ	NAT
<i>Eriogonum zapatoense</i> Moran								CEJ	
<i>Eriogonum virgatum</i>	var. <i>taxifolium</i> (Greene) Parish							CEJ	
<i>Harfordia macroptera</i> (Benth.) Greene & Parry	var. <i>fruticosa</i> (Greene) Reveal							CEJ	
<i>Lastarriata coriacea</i> (Goodman) Hoover ⁹⁴								CEJ?	
<i>Pterostegia drymaroides</i> F. & M.		COR	TOS	MAR		GUA		CEJ	
Portulacaceae								CEJ	
<i>Portulaca oleracea</i> L.*								CEJ	NAT
Primulaceae								CEJ	
<i>Dodecatheon cleveandii</i> Greene	ssp. <i>insulare</i> (H.J. Thoms.) Reveal					GUA		CEJ	
Ranunculaceae								CEJ	
<i>Clematis pauciflora</i> Nutt.		COR	TOS					CEJ?	
<i>Delphinium cardinale</i> Hook.								CEJ?	
<i>Delphinium parryi</i> A. Gray		COR	TOS					CEJ?	
<i>Mjosurus minimus</i> L.						GUA		CEJ?	
<i>Ranunculus hebecarpus</i> H. & A.						GUA		CEJ?	
Resedaceae								CEJ	
<i>Oligomeris limifolia</i> (Vahl.) Macbr.		COR	TOS			GUA	BEN	CEJ	NAT
Rhamnaceae								CEJ	
<i>Ceanothus arborescens</i> Greene						GUA		CEJ	
<i>Ceanothus crassifolius</i> Torr.						GUA		CEJ	
<i>Ceanothus cuneatus</i> (Hook.) Nutt.						GUA		CEJ	
<i>Ceanothus perplexans</i> Trel. ⁹⁵						GUA		CEJ	
<i>Ceanothus terrucosus</i> Nutt.						GUA		CEJ?	
<i>Rhamnus insula</i> Kellogg						GUA		CEJ?	
<i>Rhamnus pirifolia</i> Greene						GUA		CEJ?	
<i>Ziziphus parryi</i> Torr.	ssp. <i>microphylla</i>							CEJ?	
Rosaceae								CEJ?	
<i>Adenostoma fasciculatum</i> Hook. & Arn.	var. <i>obtusifolium</i> S. Wats.							CEJ?	

⁹⁴Synonym: *Chorizanthe corticea* Goodman⁹⁵New record; herbarium specimen @ RSA, SD, SBBC; synonym: *Ceanothus greggi* A. Gray var. *perplexans* (Trel.) Jeps.

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	GED	NAT
<i>Aphanes occidentalis</i> Rydberg									
<i>Heteromeles arbutifolia</i> (Lindl.) M. Roem.		COR	TOS			GUA		GED?	
Rubiaceae									
<i>Galium angulosum</i> A. Gray						GUA			
<i>Galium angustifolium</i> Nutt.	ssp. <i>angustifolium</i>	COR							
<i>Galium aparine</i> L.		COR ⁹⁶		MAR		GUA		GED?	
<i>Galium coronadoense</i> Dempster		COR							
<i>Galium stellatum</i> Kellogg	var. <i>eremiticum</i> Hilend & J. Howell							GED	
Rutaceae									
<i>Ruta chalepensis</i> L.						GUA			
Sapindaceae									
<i>Aesculus parryi</i> A. Gray		COR							
Saxifragaceae									
<i>Jepsonia multifolia</i> (Greene) Small						GUA			
Saxifragaceae									
<i>Jepsonia parryi</i> (Torr.) Small.		COR							
Scrophulariaceae									
<i>Myoporum laetum</i> Forst. f. Ngato.*		COR							
<i>Scrophularia villosa</i> Pennell						GUA			
Simmondsiaceae									
<i>Simmondsia chinensis</i> (Link) C. Schneider						GUA		GED	NAT
Solanaceae									
<i>Datura discolor</i> Bernh.									NAT
<i>Datura wrightii</i> Regel									NAT
<i>Lycium andersonii</i> A. Gray				MAR					
<i>Lycium brevipes</i> Benth.				MAR					
<i>Lycium californicum</i> Nutt.	var. <i>brevipes</i>			MAR	JER				
<i>Lycium exsertum</i> A. Gray		COR	TOS	MAR		GUA	BEN?	GED?	NAT
<i>Lycium fremontii</i> A. Gray			TOS	MAR			BEN?	GED?	NAT
<i>Lycopersicon esculentum</i> L.*		COR	TOS			GUA			
<i>Nicotiana attenuata</i> Torr.									
<i>Nicotiana clevelandii</i> A. Gray		COR	TOS	MAR		GUA		GED	NAT
<i>Nicotiana glauca</i> Grah.*						GUA			
<i>Physalis crassifolia</i> Benth.	var. <i>crassifolia</i>		TOS						
<i>Solanum americanum</i> Miller*			TOS	MAR		GUA		GED	
<i>Solanum douglasii</i> Dunal						GUA			
<i>Solanum hindistanum</i> Benth.									
<i>Solanum nodiflorum</i> Jacq.*		COR							GED

⁹⁶New record; herbarium specimen @ SD.

APPENDIX I. Continued

Family/species	ssp./var. and infraname	COR	TOS	MAR	JER	GUA	BEN	CED	NAT
<i>Solanum palmieri</i> Vasey & Rose			TOS	MAR					
<i>Solanum wallacei</i> (A. Gray) Parish						GUA			
Tamaricaceae	<i>ssp. clokeji</i>							CED	
<i>Tamarix ramosissima</i> Ledeb.*									
Urticaceae									
<i>Hesperocnide tenella</i> Torrey			TOS	MAR		GUA			
<i>Parietaria hespera</i> B.D. Hinton		COR	TOS			GUA		CED?	
<i>Urtica urens</i> L.*		COR							
Verbenaceae									
<i>Glandularia lilacina</i> (Greene) Umber. ⁹⁷								CED	
Viscaceae									
<i>Phoradendron densum</i> Torr. ex Trel.						GUA			
Zygophyllaceae									
<i>Fagonia laevis</i> Standl.								CED	NAT
<i>Viscainoa geniculata</i> (Kellogg) Greene	var. <i>geniculata</i>							CED	
NUMBER OF SPECIES		129	145	107	8	232	57	266	79

⁹⁷Synonym: *Verbena lilacina* Greene

APPENDIX 2. Plant species checklist for the 8 California Channel Islands (Anacapa [ANA], San Clemente [CLE], San Miguel [MIG], San Nicolas [NIC], Santa Barbara [BAR], Santa Catalina [CAT], Santa Cruz [CRU], and Santa Rosa [ROS]). An ampersand (&) indicates an extirpated species; a question mark (?) indicates an unvouchered taxon; and an asterisk (*) indicates a nonnative species.

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
FERNS									
Azollaceae									
<i>Azolla filiculoides</i> Lam.				CAT					
Blechnaceae									
<i>Woodwardia fimbriata</i> Sm.		CLE? ¹		CAT ²		ROS	CRU		
Demnstaedtiaceae									
<i>Pteridium aquilinum</i> (L.) Kuhn	var. <i>pubescens</i> Underw.			CAT		ROS	CRU		
Dryopteridaceae									
<i>Dryopteris arguta</i> (Kaulf.) Maxon		CLE		CAT		ROS	CRU	ANA	MIG
<i>Polystichum munithum</i> (Kaulf.) C. Presl						ROS	CRU		
Equisetaceae									
<i>Equisetum hyemale</i> L.						ROS	CRU		
	ssp. <i>affine</i> (Engelm.) Calder & Roy L. Taylor					ROS	CRU		
<i>Equisetum laevigatum</i> A. Braun				CAT		ROS	CRU		
<i>Equisetum telmateia</i> Ehrh.	ssp. <i>braunii</i> (J. Milde) Hauke			CAT		ROS	CRU		
Polypodiaceae									
<i>Polypodium californicum</i> Kaulf.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Polypodium scolopendri</i> Hook. & Grev.						ROS	CRU		
Pteridaceae									
<i>Adiantum aleuticum</i> (Rupr.) C.A. Paris						ROS	CRU	ANA	
<i>Adiantum capillus-veneris</i> L.				CAT		ROS	CRU	ANA	
<i>Adiantum jordanae</i> Müll. Hal.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Aspidotis californica</i> (Hook.) Copel.				CAT		ROS	CRU		
<i>Cheilanthes cleavelandii</i> D.C. Eaton						ROS	CRU		
<i>Cheilanthes cooperae</i> D.C. Eaton						ROS	CRU		
<i>Cheilanthes neuberryi</i> (D.C. Eaton) Domin		CLE					CRU		
<i>Pellaea andromedifolia</i> (Kaulf.) Fée		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Pellaea mucronata</i> (D.C. Eaton)	var. <i>mucronata</i>	CLE? ³		CAT		ROS	CRU		
D.C. Eaton						ROS	CRU	ANA	MIG
<i>Pentagramma triangularis</i> (Kaulf.) Yatsk., Windham, & E. Wollenw.	ssp. <i>triangularis</i>	CLE	NIC	CAT		ROS	CRU	ANA	
<i>Pentagramma triangularis</i> (Kaulf.) Yatsk., Windham, & E. Wollenw.	ssp. <i>ciscosa</i> (D.C. Eaton) Yatsk. et al.	CLE		CAT		ROS	CRU		
Selaginellaceae									
<i>Selaginella bigelovii</i> Underw.		CLE		CAT		ROS	CRU	ANA	

¹Pers. com. E. Howe

²S. Ratay collection

³Pers. com. E. Howe

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Woodsiaceae									
<i>Athyrium filix-femina</i> (L.) Roth						ROS	CRU		
<i>Cystopteris fragilis</i> (L.) Bernh.	var. <i>cyclosorum</i> Rupr.						CRU		
GYMNOSPERMS									
Cupressaceae									
<i>Hesperocyparis macrocarpa</i> (Hartw.) Bartel*				CAT		ROS	CRU	ANA	
Pinaceae									
<i>Pinus muricata</i> D. Don	var. <i>muricata</i>					ROS	CRU		
<i>Pinus pinea</i> L.*							CRU		
<i>Pinus radiata</i> D. Don*									MIG
<i>Pinus torreyana</i> Parry ex Carrière	ssp. <i>insularis</i> J.R. Haller					ROS			
MONOCOTS									
Agavaceae									
<i>Agave americana</i> L.*							CRU		
Agavaceae									
<i>Chlorogalum pomeridianum</i> (DC.) Kunth				CAT		ROS			
Alliaceae									
<i>Allium lacunosum</i> S. Watson	var. <i>lacunosum</i>					ROS	CRU		
<i>Allium praecox</i> Brandegee		CLE		CAT		ROS	CRU		MIG
Amaryllidaceae									
<i>Amaryllis belladonna</i> L.*								ANA	MIG
<i>Narcissus tazetta</i> L.*							CRU		
Araceae									
<i>Lemna minor</i> L.									MIG
<i>Zantedeschia aethiopica</i> (L.) Spreng.*									MIG
Arecaceae									
<i>Washingtonia filifera</i> (André) de Bary							CRU		MIG
Asparagaceae									
<i>Asparagus asparagoides</i> (L.) Druce*			NIC						
<i>Asparagus officinalis</i> L.*				CAT					
Asphodelaceae									
<i>Asphodelus fistulosus</i> L.*		CLE ⁴							
Cyperaceae									
<i>Bolboschoenus maritimus</i> (L.) Palla	ssp. <i>paludosus</i> (A. Nelson) T. Koyama						CRU		MIG
<i>Carex barbarae</i> Dewey							CRU		
<i>Carex globosa</i> Boott				CAT		ROS	CRU		
<i>Carex gracilior</i> Mack.						ROS			
<i>Carex harfordii</i> Mack.						ROS	CRU		

⁴NY: T.S. Ross, 6137, 04.13.1992

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Carex pansa</i> L. H. Bailey						ROS			MIG
<i>Carex praegracilis</i> W. Boott				CAT		ROS			MIG
<i>Carex senta</i> Boott							CRU		
<i>Carex subbracteata</i> Mack.						ROS	CRU		
<i>Carex triquetra</i> Boott				CAT					
<i>Carex tumulicola</i> Mack.		CLE				ROS	CRU		
<i>Cyperus eragrostis</i> Lam.				CAT ⁵					
<i>Cyperus esculentus</i> L.		CLE		CAT			CRU		
<i>Cyperus involucreatus</i> Rottb.*									
<i>Cyperus odoratus</i> L.*				CAT ⁶			CRU		
<i>Eleocharis macrostachya</i> Britton						ROS			
<i>Isolepis cernua</i> (Vahl) Roem. & Schult.		CLE	NIC	CAT		ROS			MIG
<i>Schoenoplectus americanus</i> (Pers.) Schinz & R. Keller			NIC	CAT ⁷		ROS			
<i>Schoenoplectus californicus</i> (C.A. Mey.) Soják						ROS	CRU		
<i>Schoenoplectus pungens</i> (Vahl) Palla						ROS	CRU		
Iridaceae									
<i>Sisyrinchium bellum</i> S. Watson						ROS	CRU		MIG
Juncaceae									
<i>Juncus acutus</i> L.				CAT					
<i>Juncus balticus</i> Willd.				CAT		ROS			MIG
<i>Juncus bufonius</i> L.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Juncus effusus</i> L.						ROS			
	ssp. <i>pacificus</i> (Fernald & Weigand) Piper & Beattie								
<i>Juncus mexicanus</i> Willd.				CAT		ROS	CRU		MIG
<i>Juncus patens</i> E. Mey.						ROS	CRU		MIG
<i>Juncus phaeocephalus</i> Engelm.						ROS			
<i>Juncus texilis</i> Buchenau				CAT					
<i>Juncus xiphioides</i> E. Mey.				CAT			CRU		
<i>Luzula subsessilis</i> (S. Watson) Buchenau ⁵						ROS	CRU		
Liliaceae									
<i>Calochortus albus</i> (Benth.) Benth.		CLE				ROS	CRU		
<i>Calochortus catalinae</i> S. Watson				CAT		ROS	CRU		
<i>Calochortus luteus</i> Lindl.				CAT			CRU		
<i>Calochortus splendens</i> Benth.									
<i>Lilium humboldtii</i> Duch.				CAT		ROS	CRU	ANA	
	ssp. <i>ocellatum</i> (Kellogg) Thorne								

⁵RSA: Mark Hoefs, Steven A. Junak, Janet Takara, M. Gay, 2384, Jul 14 1995⁶SBBG: M.L. Hoefs, R.F. Thorne, 2458, Jul 26 1995⁷RSA: Mark Hoefs, R.F. Thorne, Janet Takara Jul 26 1995 2462⁸Synonym: *Luzula comosa* E. Mey.; taxonomic issues

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Melanthiaceae									
<i>Toxicoscordion fremontii</i> (Torr.) Rydb.						ROS	CRU	ANA	MIG
Orchidaceae									
<i>Epipactis gigantea</i> Hook.		CLE? ⁹		CAT			CRU		
<i>Piperia cooperi</i> (S. Watson) Rydb.				CAT ¹⁰		ROS	CRU		
<i>Piperia elongata</i> Rydb.							CRU		
<i>Piperia michaelii</i> (Greene) Rydb.									
Poaceae									
<i>Aegilops cylindrica</i> Host*							CRU		
<i>Agrostis exarata</i> Trin.				CAT		ROS	CRU		
<i>Agrostis pallens</i> Trin.		CLE		CAT		ROS	CRU	ANA	
<i>Agrostis stolonifera</i> * L.				CAT					
<i>Amnophila arenaria</i> (L.) Link*			NIC						
<i>Andropogon glomeratus</i> (Walter) Britton et al.	var. <i>scabriflumis</i> C.S. Campb.						CRU		
<i>Aristida adscensionis</i> L.		CLE		CAT		ROS	CRU		
<i>Aristida temipes</i> Cav.							CRU		
<i>Arundo donax</i> L.*	var. <i>gentilis</i> (Hemard) Allred		NIC			ROS	CRU		MIG
<i>Avena barbata</i> Link*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Avena fatua</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Avena sativa</i> L.*		CLE	NIC	CAT		ROS	CRU		
<i>Bothriochloa barbinoadis</i> (Lag.) Herter				CAT					
<i>Brachypodium distachyon</i> (L.) P. Beauv.*		CLE? ¹¹	NIC	CAT			CRU		
<i>Briza minor</i> L.*								ANA	
<i>Bromus arizonicus</i> (Shear) Stebbins		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Bromus berteroaenus</i> Colla ¹²		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Bromus carinatus</i> Hook. & Arn.		CLE?	NIC	CAT		ROS	CRU	ANA	MIG
<i>Bromus maritimus</i> (Piper) Hitchc.	var. <i>carinatus</i>					ROS	CRU	ANA	MIG
<i>Bromus catharticus</i> Vahl*		CLE ¹³	NIC				CRU		
* <i>Bromus diandrus</i> Roth*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Bromus hordeaceus</i> L.* ¹⁴		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Bromus laevipes</i> Shear*				CAT		ROS	CRU		
<i>Bromus madritensis</i> L.*				CAT		ROS	CRU		
<i>Bromus vulgaris</i> (Hook.) Shear ^{15*}		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Calamagrostis rubescens</i> Buckley				CAT					
							CRU		

⁹Pers. com. E. Howe¹⁰SBBC; S.A. Jumaik Apr. 30 1998 SCa-568¹¹Pers. com. E. Howe¹²Synonym: *Bromus tritii* Desv.; Per Jepson Interchange: molecular evidence needed to resolve question of nativity¹³SBBC; T.S. Ross, E. Kellogg Apr 11 1982 6122¹⁴Synonym: *Bromus nudis* L.¹⁵UCSB; Dian Hancock 03/30/1961 146

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Chloris virgata</i> Sw.*		CLE ¹⁶							
<i>Cortaderia seloana</i> (Schult. & Schult. f.) Asch. & Graebn.*		CLE? ¹⁷	NIC	CAT			CRU		MIG
<i>Crypsis vaginiflora</i> (Forssk.) Opiz*				CAT ¹⁸					
<i>Crypsis alopecuroides</i> (Piller & Mitterp.) Schrad.*		CLE? ¹⁹							
<i>Cynodon dactylon</i> (L.) Pers.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Dactylis glomerata</i> L.*		CLE		CAT			CRU		
<i>Danthonia californica</i> Bol.						ROS			
<i>Deschampsia danthonioides</i> (Trin.) Munro									
<i>Desmazeria rigida</i> (L.) Tutin*				CAT ²⁰					
<i>Digitaria sanguinalis</i> (L.) Scop.*				CAT ²¹					
<i>Dissantheium californicum</i> (Nutt.) Benth.				CAT					
<i>Distichlis spicata</i> (L.) Greene		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Distichlis littoralis</i> (Engelm.) H.L.				CAT		ROS			
Bell & Columbus									
<i>Echinochloa crus-galli</i> (L.) P. Beauv.*		CLE		CAT					
<i>Ehrharta calycina</i> * Sm.		CLE		CAT					
<i>Ehrharta erecta</i> Lam.*				CAT ²²			CRU		
<i>Elymus glaucus</i> Buckley				CAT		ROS	CRU		
<i>Elymus repens</i> (L.) Gould*									MIG
<i>Elymus condensatus</i> J. Presl		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Elymus pacificus</i> Gould			NIC			ROS			MIG
<i>Elymus triticoides</i> Buckley			NIC	CAT		ROS	CRU	ANA	MIG
<i>Festuca arundinacea</i> Schreb.*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Festuca perennis</i> (L.) Columbus & J.P. Sm.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Festuca temulenta</i> (L.) Columbus & J.P. Sm.*		CLE		CAT		ROS	CRU		
<i>Festuca bromoides</i> L.*		CLE		CAT		ROS	CRU	ANA	MIG
<i>Festuca microstachys</i> Nutt.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Festuca myuros</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Festuca octoflora</i> Walter		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Gastridium phleoides</i> (Nees & Meyen) C.E. Hubb.*		CLE		CAT		ROS	CRU		
<i>Hainardia cylindrica</i> (Willd.) Greuter*		CLE ²³		CAT ²⁴		ROS	CRU		MIG

¹⁶CAS: Steven A. Jumaik 9 Nov 1990 SCI-143¹⁷Pers. com. E. Howe¹⁸RSA: Mark Hoefs, R.F. Thorne, Janet Takara, M. Cay Jul 27 1995 2491¹⁹Pers. com. E. Howe²⁰CAS: Peter H. Raven 22 May 1962 17826²¹UCD: Beecher Crumpton 05 10 1968 S322²²SSBG: S.A. Jumaik Jun 13 1998 SCa-743²³SBBG: S.A. Jumaik May 14 1985 SCI-71²⁴SBBG: S.A. Jumaik, M. L. Hoefs Jun 4 1997 SCa-421

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Hordeum brachyantherum</i> Nevski	ssp. <i>californicum</i> (Covas & Stebbins) Bothmer et al.		NIC	CAT ²⁵		ROS	CRU	ANA	MIG
<i>Hordeum depressum</i> (Scribn. & J.G. Sm.) Rydb.							CRU		
<i>Hordeum intercedens</i> Nevski		CLE ²⁶	NIC	CAT ²⁷	BAR	ROS	CRU	ANA	MIG
<i>Hordeum marinum</i> Huds.*	ssp. <i>gissoneanum</i> (Parl.) Thell.	CLE ²⁸	NIC			ROS	CRU		
<i>Hordeum murinum</i> L.*	ssp. <i>glaucom</i> (Steud.) Tzvelev	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Hordeum murinum</i> L.*	ssp. <i>leporinum</i> (Link) Arcang.	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Hordeum vulgare</i> L.*		CLE	NIC	CAT		ROS	CRU		
<i>Koeleria macrantha</i> (Ledeb.) Schult.							CRU		
<i>Koeleria gerardii</i> (Vill.) Shimmers*							CRU		
<i>Lamarckia aurea</i> (L.) Moench*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Melica imperfecta</i> Trin.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Muhlenbergia appressa</i> C.O. Goodd.		CLE							
<i>Muhlenbergia microsperma</i> (DC.) Kunth		CLE ²⁹							
<i>Parapholis incurva</i> (L.) C.E. Hubb.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Paspalum dilatatum</i> Poir.*		CLE		CAT		ROS	CRU	ANA	MIG
<i>Paspalum distichum</i> L.							CRU		
<i>Pennisetum clandestinum</i> Chiov.*			NIC			ROS	CRU	ANA	MIG
<i>Pennisetum setaceum</i> (Forssk.) Chiov.*		CLE		CAT ³⁰					
<i>Phalaris aquatica</i> L.*			NIC	CAT			CRU	ANA	
<i>Phalaris canariensis</i> L.				CAT					
<i>Phalaris caroliniana</i> Walter*		CLE	NIC	CAT	BAR		CRU		
<i>Phalaris lemmonii</i> Vasey		CLE		CAT		ROS			
<i>Phalaris minor</i> Retz.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Phalaris paradoxae</i> * L.		CLE	NIC	CAT ³¹			CRU	ANA	
<i>Poa annua</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Poa palustris</i> L.*							CRU		
<i>Poa howellii</i> Vasey & Scribn.									
<i>Poa douglasii</i> Nees									
<i>Poa secunda</i> J. Presl		CLE ³²	NIC	CAT ³³		ROS	CRU	ANA	MIG
<i>Polygonum viridis</i> (Gouan) Breistr.*				CAT	BAR	ROS	CRU	ANA	MIG
<i>Polygonum interruptus</i> Kunth*		CLE		CAT		ROS	CRU		MIG

25SBBG: L.W. Nuttall May 12 1920 190

26POM: F.A. Munz Apr 8 1923 6613

27SBBG: S.A. Jumaik May 3 2001 SCA-1464

28SBBG: P.H. Raven May 10 1962 17738

29CAS: E.R. Bickley 7 Dec. 1963 6327

30S: Ratay collection

31SBBG: S.A. Jumaik, M.L. Hoels Jun 5 1997 SCA-427

32UC: Peter H. Raven Apr 12 1962 17332

33UC: F.R. Fosberg Mar 20 1931 54310

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Polygomon monspeliensis</i> (L.) Desf.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Schismus arabicus</i> Nees*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Schismus barbatus</i> (L.) Thell.*		CLE ³⁴	NIC	CAT ³⁵	BAR	ROS	CRU	ANA	MIG
<i>Stenotaphrum secundatum</i> (Walter) Kuntze*			NIC	CAT			CRU		
<i>Stipa diegoensis</i> Swallen			NIC			ROS	CRU	ANA	MIG
<i>Stipa ceruua</i> Stebbins & Love		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Stipa lepida</i> Hitchc.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Stipa pulchra</i> Hitchc.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Stipa miliacea</i> (L.) Hoover*	var. <i>miliacea</i>	CLE	NIC	CAT ³⁶		ROS	CRU	ANA	MIG
<i>Triticum aestivum</i> L.*		CLE	NIC			ROS	CRU	ANA	MIG
Potamogetonaceae									
<i>Potamogeton crispus</i> L.*				CAT					
<i>Stuckenia pectinata</i> (L.) Börner		CLE ^{2,37}		CAT		ROS	CRU		
Ruppiaceae									
<i>Ruppia maritima</i> L.		CLE	NIC	CAT		ROS	CRU		
Themiaceae									
<i>Bloomeria crocea</i> (Torr.) Coville				CAT		ROS	CRU		
<i>Brodiaea jolonensis</i> Eastw.				CAT		ROS	CRU		MIG
<i>Brodiaea kinkiensis</i> T.F. Niehaus		CLE							
<i>Dichelostemma capitatum</i> (Benth.) Alph. Wood		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Friteleia clementina</i> Hoover		CLE					CRU		
<i>Friteleia hyacinthina</i> (Lindl.) Greene									
Typhaceae									
<i>Typha angustifolia</i> L. ³⁸ ?		CLE							
<i>Typha domingensis</i> Pers.		CLE ³⁹	NIC	CAT		ROS	CRU		MIG
<i>Typha latifolia</i> L.		CLE	NIC	CAT			CRU		
Zanichelliaceae									
<i>Zanichellia palustris</i> L.				CAT ⁴⁰			CRU		
Zosteraceae									
<i>Phyllospadix scouleri</i> Hook.		CLE	NIC	CAT	BAR		CRU	ANA	MIG
<i>Phyllospadix torreyi</i> S. Watson		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Zostera marina</i> L.		CLE ^{2,41}		CAT		ROS	CRU	ANA	MIG
<i>Zostera pacifica</i> S. Watson			NIC	CAT ⁴²		ROS	CRU	ANA ⁴³	

³⁴ RSA: E. Kellogg Jun 12 1962 s.n.
³⁵ SBBG: S.A. Junaak Mar 22 1998 SCA-512
³⁶ SD: Robert F. Thorne Sep 14, 1966 36643
³⁷ Pers. com. E. Howe
³⁸ Pers. com. E. Howe
³⁹ SBBG: P.H. Raven Jul 11 1962 18018
⁴⁰ UC: Carl B. Wolf May 12 1932
⁴¹ Pers. com. E. Howe
⁴² RSA: R.F. Thorne Sep 16 1966 36714

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
BASAL DICOTS									
Saururaceae									
<i>Anemopsis californica</i> (Nutt.) Hook. & Arn.		CLE	NIC	CAT			CRU		
EUDICOTS									
Adoxaceae									
<i>Sambucus nigra</i> L.	<i>ssp. caerulea</i> (Raf.) Bolla	CLE		CAT		ROS	CRU		
Aizoaceae									
<i>Carpobrotus chilensis</i> (Molina) N.E. Br.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Carpobrotus edulis</i> * (L.) N.E. Br.		CLE ⁴⁴	NIC	CAT ⁴⁵		ROS	CRU	ANA	
<i>Delosperma litorale</i> * (Kensit) L. Bolus		CLE ⁴⁶	NIC					ANA	
<i>Malephora crocea</i> * (Jacq.) Schwantes		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Mesembryanthemum crystallinum</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Mesembryanthemum nodiflorum</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Sesuvium verrucosum</i> Raf.		CLE							
<i>Tetragonia tetragonioides</i> (Pall.) Kuntze*			NIC			ROS	CRU	ANA	MIG
Amaranthaceae									
<i>Amaranthus albus</i> L.*				CAT		ROS	CRU	ANA	
<i>Amaranthus blitoides</i> S. Watson						ROS	CRU		
<i>Amaranthus deflexus</i> L.*				CAT			CRU		
<i>Amaranthus powellii</i> S. Watson							CRU	ANA	
<i>Malosma laurina</i> (Nutt.) Abrams		CLE		CAT					
<i>Rhus integrifolia</i> (Nutt.) Rothr.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Rhus ovata</i> S. Watson		CLE ^{47,48}		CAT			CRU		
<i>Schinus molle</i> L.*		CLE	NIC	CAT		ROS	CRU		
<i>Toxicodendron diversilobum</i> (Torr. & A. Gray) Greene		CLE	NIC	CAT		ROS	CRU	ANA	MIG
Apiaceae									
<i>Apiastrum angustifolium</i> Nutt.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Apium graveolens</i> L.*		CLE	NIC		BAR	ROS	CRU		
<i>Berula erecta</i> (Huds.) Coville			NIC				CRU		MIG
<i>Bowlesia incana</i> Ruiz & Pav.		CLE		CAT		ROS	CRU		
<i>Conium maculatum</i> L.*			NIC	CAT			CRU		
<i>Daucus carota</i> L.*			NIC						
<i>Daucus pusillus</i> Michx.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Foeniculum vulgare</i> Mill.*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Lomatium caruifolium</i> (Hook. & Arn.) J.M. Coult. & Rose						ROS	CRU		MIG

43RSA; M.B. Dunble Aug 20 1940 7671

44RSA; PH. Raven Jul 12 1962 18045

45POM; FR. Fishberg, 4732, Apr 29 1931

46SBBG; S.A. Jumaik Aug 26 1997 SCI-936

47Pers. com. E. Howe

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Lomatium insulare</i> (Eastw.) Munz		CLE	NIC						
<i>Sanicula arguta</i> J.M. Coult. & Rose		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Sanicula crassicaulis</i> DC.		CLE ^{2,48}		CAT		ROS	CRU		
<i>Sanicula hoffmannii</i> (Munz) R.H. Shan & Constance						ROS	CRU		
<i>Torilis arvensis</i> (Huds.) Link*							CRU		
<i>Torilis nodosa</i> (L.) Gaertn.*			NIC	CAT		ROS	CRU		MIG
<i>Yabea microcarpa</i> (Hook. & Arn.) Koso-Pol. Apocynaceae		CLE ⁴⁹		CAT ⁵⁰			CRU		
<i>Asclepias fascicularis</i> Decne.				CAT		ROS	CRU		
<i>Funastrum cynanchoides</i> (Decne.) Schltr.	var. <i>hartwegii</i> (Vail) Krings			CAT					
<i>Vinca major</i> L.*				CAT			CRU		
Asteraceae <i>Achillea millefolium</i> L.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Achyrochaena mollis</i> Schauer		CLE		CAT ⁵¹		ROS	CRU		
<i>Acaurtia microcephala</i> DC.				CAT		ROS	CRU		
<i>Agoseris apargioides</i> (Less.) Greene	var. <i>apargioides</i>					ROS			
<i>Agoseris grandiflora</i> (Nutt.) Greene						ROS	CRU		MIG
<i>Agoseris heterophylla</i> (Nutt.) Greene						ROS			
<i>Ambligopappus pusillus</i> Hook. & Arn.						ROS	CRU	ANA	MIG
<i>Ambrosia chamissonis</i> (Less.) Greene		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Ambrosia psilostachya</i> DC.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Anthemis cotula</i> L.*				CAT		ROS	CRU		
<i>Arctium minus</i> (Hill) Bernh.*				CAT		ROS			
<i>Argyranthemum frutescens</i> (L.) Sch. Bip.*						ROS			
<i>Artemisia californica</i> Less.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Artemisia douglasiana</i> Besser				CAT		ROS	CRU		
<i>Artemisia dracunculula</i> L.				CAT					
<i>Artemisia nesiotica</i> P.H. Raven		CLE	NIC		BAR				
<i>Baccharis glutinosa</i> Pers. ⁵²		CLE		CAT		ROS	CRU		MIG
<i>Baccharis salicina</i> Torr. & A. Gray		CLE ⁵³		CAT	BAR				
<i>Baccharis pilularis</i> DC.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Baccharis plummerae</i> A. Gray	ssp. <i>plummerae</i>						CRU	ANA	ANA

⁴⁸Pers. com. E. Howe

⁴⁹POM: PA. Munz Apr 9 1923 6652

⁵⁰UCD: Robert F. Thorne 04 28 1966 36224

⁵¹CAS: Tim Ross, J. Takara, Stacey Otte 24 April 1993 6946

⁵²Synonym: *Baccharis douglasii* DC.

⁵³DS: Ira L. Wiggins Feb. 22, 1949 11961

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Baccharis salicifolia</i> (Ruiz & Pav.) Pers.									
<i>Baccharis sarothroides</i> A. Gray		CLE ⁵⁴	NIC	CAT ⁵⁵		ROS	CRU	ANA	MIG
<i>Bahopsis laciniata</i> (A. Gray) E. E. Schilling & Panero ⁵⁶ ?		CLE		CAT					
<i>Blennosperma nanum</i> (Hook.) S.F. Blake	var. <i>nanum</i>						CRU		
<i>Brickellia californica</i> (Torr. & A. Gray) A. Gray		CLE ⁵⁷	NIC	CAT			CRU	ANA	
<i>Calceuthla officinalis</i> L.*									
<i>Carduus pycnocephalus</i> L.*				CAT ⁵⁸		ROS			MIG
<i>Centaurea melitensis</i> L.*		CLE	NIC	CAT	BAR ⁵⁹	ROS	CRU	ANA	MIG
<i>Centaurea solstitialis</i> L.*			NIC	CAT			CRU		
<i>Centaurea benedicta</i> (L.) L.*							CRU		
<i>Centromadia pungens</i> (Hook. & Arn.) Greene				CAT ⁶⁰					
<i>Centromadia fitchii</i> (A. Gray) Greene						ROS	CRU		
<i>Chaenactis glabruscula</i>	var. <i>lanosa</i> (DC.) H.M. Hall								
<i>Cichorium intybus</i> L.*							CRU		
<i>Cirsium brevistylum</i> Cronquist							CRU		
<i>Cirsium occidentale</i> (Nutt.) Jeps.	var. <i>californicum</i> (A. Gray) D.J. Keil & C.E. Fumer			CAT ⁶¹		ROS	CRU		
<i>Cirsium occidentale</i> (Nutt.) Jeps.	var. <i>coulteri</i>	CLE ⁶²							
<i>Cirsium occidentale</i> (Nutt.) Jeps.	var. <i>occidentale</i>	CLE ⁶³	NIC	CAT ⁶⁴		ROS	CRU		MIG
<i>Cirsium occidentale</i> (Nutt.) Jeps.	var. <i>venustum</i> (Greene)					ROS			
<i>Cirsium ochrocentrum</i> A. Gray*						ROS			
<i>Cirsium vulgare</i> (Savi) Ten.*				CAT		ROS	CRU		MIG
<i>Constancea nevini</i> (A. Gray) B.G. Baldwin				CAT	BAR				
<i>Corethrogyne filaginifolia</i> (Hook. & Arn.) Nutt.				CAT ⁶⁵		ROS	CRU	ANA	MIG
<i>Cotula australis</i> (Spreng.) Hook. f.*		CLE ⁶⁶		CAT	BAR	ROS	CRU	ANA	
<i>Cotula coronopifolia</i> L.*			NIC	CAT		ROS	CRU	ANA	MIG
<i>Cymara cardunculus</i> L.*		CLE ^{67,67}	NIC	CAT ⁶⁸			CRU	ANA	

54SD: Peter H. Raven May 08, 1962 17629

55HSC: James Heinrichson Jan 1973 8113

56Pers. com. E. Howe

57CAS: Steven A. Junak 2 Oct 1996 SCI-703

58SBBG: S.A. Junak, M.L. Hoefs, R.N. Phalbrick, SCA-1532, May 18 2001

59RSA: R.F.Thorne, 37492, Apr 28 1968, suspected incorrect georeferencing

60RSA:Mark Hoefs, 309, Jun 4 1973

61SD: Robert F. Thorne, F. Everett Jun 23, 1965 35015

62SBBG: T. Ross, O. Mistretta, M. Hammit May 20 1991 5325

63UCR: Steve Boyd, T.S. Ross, Laurel Arnselth Apr 7 1990 4271

64UCR: FR. Fosberg Apr 29 1931 S-4709

65SBBG: E.R. Bladley Sep 23 1961 4740

66SBBG: S.A. Junak Feb 25 1997 SCI-724

67Pers. com. E. Howe

68SBBG: S.A. Junak, M.L. Hoefs, K. Kirkland

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Deinandra clementina</i> (Brandege) B.G. Baldwin		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Deinandra fasciculata</i> (DC.) Greene		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Deinandra increscens</i> (D.D. Keck) B.G. Baldwin	ssp. <i>increscens</i>				BAR	ROS	CRU	ANA	
<i>Delairea odorata</i> Lem.*						ROS		ANA	
<i>Encelia californica</i> Nutt.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Ericameria ericoides</i> (Less.) Jeps.						ROS	CRU	ANA	
<i>Ericameria palmieri</i> (A. Gray) H.M. Hall	var. <i>pachylepis</i> (H.M. Hall) G.L. Nesom			CAT					
<i>Erigeron bonariensis</i> L.*		CLE ⁶⁹	NIC	CAT ⁷⁰	BAR	ROS	CRU	ANA	MIG
<i>Erigeron canadensis</i> L.		CLE ⁷¹	NIC	CAT ⁷²	BAR	ROS	CRU	ANA	MIG
<i>Erigeron foliosus</i> Nutt.	var. <i>foliosus</i>			CAT		ROS	CRU	ANA	MIG
<i>Erigeron glaucus</i> Ker Gawl.						ROS	CRU	ANA	MIG
<i>Erigeron sanctarum</i> S. Watson						ROS	CRU	ANA	MIG
<i>Eriophyllum confertiflorum</i> (DC.) A. Gray	var. <i>confertiflorum</i>	CLE		CAT ⁷³		ROS	CRU	ANA	MIG
<i>Eriophyllum staechadifolium</i> Lag.						ROS	CRU	ANA	MIG
<i>Eurybia radulina</i> (A. Gray) G.L. Nesom						ROS	CRU	ANA	
<i>Euthamia occidentalis</i> Nutt.								ANA	
<i>Gnaphaeta ustulata</i> (Nutt.) Holub		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Glebionis coronaria</i> (L.) Spach* ⁷⁴		CLE	NIC	CAT			CRU		
<i>Gnaphalium palustre</i> Nutt.							CRU		
<i>Grindelia camporum</i> Greene				CAT		ROS	CRU	ANA	
<i>Grindelia hirsutula</i> Hook. & Arn.			NIC ⁷⁵			ROS			
<i>Grindelia stricta</i> DC.						ROS	CRU	ANA	MIG?
<i>Hazardia cana</i> (A. Gray) Greene	var. <i>platyphylla</i> (Greene) M.A. Lane	CLE				ROS			
<i>Hazardia detonsa</i> (Greene) Greene						ROS	CRU	ANA	
<i>Hazardia squarrosa</i> (Hook. & Arn.) Greene	var. <i>grindelioides</i> (DC.) W.D. Clark			CAT	BAR	ROS	CRU	ANA	MIG
<i>Hedynotis cretica</i> (L.) Dum. Cours.*		CLE ⁷⁶							
<i>Helianthus puberulum</i> DC.				CAT ⁷⁷					
<i>Helianthus annuus</i> L.*		CLE ⁷⁸	NIC	CAT ⁷⁹			CRU	ANA	
<i>Helminthotheca echioides</i> (L.) Holub*			NIC	CAT			CRU		
<i>Hesperetax sparsiflora</i> (A. Gray) Greene		CLE ⁸⁰				ROS			

⁶⁹SBBC: S.A. Jumaik, SCL-681, Sep 29 1996⁷⁰POM: ER. Fosberg, 5364, Jul 10 1931⁷¹SBBC: S.A. Jumaik Oct 28 1997 SCL-981⁷²SBBC: S.A. Jumaik, K. Kirkland, M. Boshman Oct 21 1998 SCA-813⁷³BSA: Mark Hoefs, D. Probst Mar 14 1973 119⁷⁴Synonym: *Chrysanthemum coronarium* L.⁷⁵UC: R.M. Beauchamp and H.A. Wier Jun 29 1978⁷⁶CAS: Steven A. Jumaik 16 May 1996 SCL-470⁷⁷DS: A.J. McClatchie Sept. 1893 s.n.⁷⁸SBBC: H.L. Ferguson, R.M. Beauchamp Sep 15 1979 14⁷⁹POM: L.W. Nuttall, s.n., May 22 1920⁸⁰SBBC: S.A. Jumaik Mar 13 1997 SCL-784

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Heterotheca grandiflora</i> Nutt.		CLE	NIC	CAT		ROS	CRU		MIG
<i>Hieracium argutum</i> Nutt.		CLE	NIC	CAT		ROS	CRU		MIG
<i>Hypochaeris glabra</i> L.*		CLE		CAT		ROS	CRU	ANA	
<i>Hypochaeris radicata</i> L.*		CLE	NIC						
<i>Isoetes menziesii</i> (Hook. & Arn.) G.L. Nesom	var. <i>decumbens</i> (Greene) G.L. Nesom	CLE		CAT ⁸¹					MIG
<i>Isoetes menziesii</i> (Hook. & Arn.) G.L. Nesom	var. <i>menziesii</i>	CLE ⁸²	NIC	CAT ⁸³					MIG
<i>Isoetes menziesii</i> (Hook. & Arn.) G.L. Nesom	var. <i>sedoides</i> (Greene) G.L. Nesom	CLE	NIC	CAT ⁸⁴		ROS	CRU	ANA	MIG
<i>Isoetes menziesii</i> (Hook. & Arn.) G.L. Nesom	var. <i>vernonioides</i> (Nutt.) G.L. Nesom	CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Jaumea carnosa</i> (Less.) A. Gray				CAT		ROS	CRU		MIG
<i>Lactuca saligna</i> L.*				CAT ⁸⁵		ROS	CRU		MIG
<i>Lactuca serriola</i> L.*		CLE ⁸⁶	NIC	CAT		ROS	CRU	ANA	MIG
<i>Laennecia coulteri</i> (A. Gray) G.L. Nesom		CLE ⁸⁷		CAT	BAR				MIG
<i>Lasthenia californica</i> Lindl.		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Lasthenia glabrata</i> Lindl.				CAT	BAR	ROS	CRU		MIG
<i>Lasthenia gracilis</i> (DC.) Greene	ssp. <i>coulteri</i> (A. Gray) Ornduff		NIC	CAT					MIG
<i>Lajita platyglossa</i> (Fisch. & C.A. Mey.) A. Gray		CLE		CAT		ROS	CRU		MIG
<i>Lepidospartum squamatum</i> (A. Gray) A. Gray				CAT			CRU		
<i>Leptosyne gigantea</i> Kellogg		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Logfia arizonica</i> (A. Gray) Holub		CLE		CAT	BAR				
<i>Logfia flaginoides</i> (Hook. & Arn.) Morefield		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Logfia gallica</i> (L.) Coss. & Germ.*		CLE ⁸⁸		CAT		ROS	CRU		MIG
<i>Madia exigua</i> (Sm.) A. Gray				CAT			CRU		
<i>Madia gracilis</i> (Sm.) Applegate				CAT			CRU		
<i>Madia sativa</i> Molina*		CLE		CAT			CRU		
<i>Malacothrix clevelandii</i> A. Gray				CAT		ROS			
<i>Malacothrix coulteri</i> Harv. & A. Gray						ROS	CRU		
<i>Malacothrix foliosa</i> A. Gray	ssp. <i>crispifolia</i> W.S. Davis							ANA	
<i>Malacothrix foliosa</i> A. Gray	ssp. <i>foliosa</i>	CLE							
<i>Malacothrix foliosa</i> A. Gray	ssp. <i>philbrickii</i> W.S. Davis				BAR				
<i>Malacothrix foliosa</i> A. Gray	ssp. <i>polyccephala</i> W.S. Davis		NIC						
<i>Malacothrix incana</i> (Nutt.) Torr. & A. Gray		CLE	NIC			ROS	CRU		MIG
<i>Malacothrix incanora</i> Greene						ROS	CRU		MIG
<i>Malacothrix junakii</i> W.S. Davis								ANA	

⁸¹ Collections of this taxa have been made on Catalina, but there are taxonomic issues

⁸² UC: T.S. Brandegee Aug 25 1894

⁸³ SD: E.R. Blakey Sep 24, 1961 4781

⁸⁴ UC: E.R. Fosberg Apr 29 1931 S4707

⁸⁶ RSA: Steven A. Junak Jul 17 1998 SCA-777

⁸⁷ SBBG: S.A. Junak Sep 28 1996 SCL-673

⁸⁸ SBBG: S.A. Junak May 15 1985 SCL-74

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Malacothrix saxatilis</i> (Nutt.) Torr. & A. Gray									
<i>Malacothrix saxatilis</i> (Nutt.) Torr. & A. Gray*	var. <i>implicata</i> (Eastw.) H.M. Hall		NIC			ROS	CRU	ANA	MIG
<i>Malacothrix similis</i> W.S. Davis & P.H. Raven	var. <i>tenifolia</i> (Nutt.) A. Gray	CLE ⁸⁹	NIC	CAT			CRU	ANA	MIG
<i>Malacothrix squalida</i> Greene							CRU	ANA	
<i>Matricaria occidentalis</i> Greene				CAT ⁹⁰					
<i>Matricaria discoides</i> DC.*				CAT ⁹¹		ROS	CRU	ANA	
<i>Micropus californicus</i> Fisch. & C.A. Mey.	var. <i>californicus</i>			CAT ⁹²		ROS	CRU		
<i>Microseris douglasii</i> (DC.) Sch. Bip.	ssp. <i>douglasii</i>	CLE	NIC						
<i>Microseris douglasii</i> (DC.) Sch. Bip.	ssp. <i>tenella</i> (A. Gray)		NIC			ROS	CRU		MIG
	K.L. Chambers								
<i>Microseris douglasii</i> (DC.) Sch. Bip.	ssp. <i>platycarpa</i> (A. Gray)	CLE		CAT					
	K.L. Chambers								
<i>Microseris elegans</i> A. Gray		CLE	NIC				CRU		MIG
<i>Munzothamnus blairii</i> (Munz & I.M. Johnston) P.H. Raven		CLE							
<i>Pentachaeta lyonii</i> A. Gray				CAT					
<i>Perityle emoryi</i> Torr.		CLE		CAT	BAR	ROS	CRU	ANA	
<i>Pluchea odorata</i> (L.) Cass.				CAT			CRU		
<i>Pluchea sericea</i> (Nutt.) Coville				CAT					
<i>Pseudognaphalium biolettii</i> Anderb.		CLE	NIC	CAT	BAR ⁹³	ROS	CRU	ANA	MIG
<i>Pseudognaphalium californicum</i> (DC.) Anderb.		CLE ⁹⁴	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Pseudognaphalium beneolens</i> (Davidson) Anderb.		CLE	NIC	CAT		ROS	CRU		MIG
<i>Pseudognaphalium microcephalum</i> (Nutt.) Anderb.		CLE ⁹⁵		CAT	BAR	ROS	CRU	ANA	
<i>Pseudognaphalium luteoalbum</i> (L.) Hilliard & B.L. Burtt*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Pseudognaphalium ramosissimum</i> (Nutt.) Anderb.				CAT			CRU		
<i>Pseudognaphalium stramineum</i> (Kunth) Anderb.			NIC	CAT		ROS	CRU	ANA	MIG
<i>Psilocarphus brevissimus</i> Nutt.	var. <i>brevissimus</i>	CLE ⁹⁶							
<i>Psilocarphus tenellus</i> Nutt.		CLE		CAT		ROS	CRU		
<i>Rafinesquia californica</i> Nutt.		CLE		CAT	BAR	ROS	CRU	ANA	
<i>Senecio glomeratus</i> Poir.*				CAT			CRU		
<i>Senecio aphanactis</i> Greene				CAT		ROS	CRU	ANA	MIG
<i>Senecio flaccidus</i> Less.				CAT			CRU		
<i>Senecio lyonii</i>	var. <i>douglasii</i> (DC.) B.L. Turner & T.M. Barkley A. Gray	CLE		CAT			CRU		
		CLE		CAT					

89RSA: Steven A. Junak, Mary C. Hochberg, H.L. Ferguson Jul 28 1981 scl13

90SD: Robert F. Thorne Apr 29, 1966 36278

91SBBG: R.F. Thorne Apr 29 1966 36290

92RSA: Tim Ross, Janet Takara, S. Otte Apr 24 1993 6957

93NPS Park flora checklist

94UC: Tim Ross Apr 16 1992 6207

95SDSU: R. M. Beauchamp March 19, 1967 315

96RSA: Tim Ross, Orlando Mistretta, Mike Hammitt May 18 1991 5184

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Senecio vulgaris</i> L.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Silybum maritimum</i> (L.) Gaerth.*		CLE	NIC	CAT	BAR ⁹⁷	ROS	CRU	ANA	MIG
<i>Solidago velutina</i> DC.	ssp. <i>californica</i> (Nutt.) Semple	CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Sonchus asper</i> (L.) Hill*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Sonchus oleraceus</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Sonchus tenerrimus</i> L.*		CLE	NIC	CAT	BAR				
<i>Stebbinsoseris heterocarpa</i> (Nutt.) K.L. Chambers ⁹⁸		CLE	NIC	CAT		ROS	CRU	ANA	
<i>Stephanomeria cichoriacea</i> A. Gray		CLE	NIC	CAT		ROS	CRU		
<i>Stephanomeria diegensis</i> Gottlieb		CLE		CAT		ROS	CRU		
<i>Stephanomeria exigua</i> Benth.	ssp. <i>coronaria</i> (Greene) Gottlieb			CAT ⁹⁹		ROS	CRU		MIG
<i>Stephanomeria virgata</i> Benth.	ssp. <i>virgata</i>	CLE		CAT		ROS	CRU		
<i>Stylocline gnaphaloides</i> Nutt.		CLE ¹⁰⁰		CAT		ROS	CRU		
<i>Symphytotrichum chilense</i> (Nees) G.L. Nesom				CAT		ROS	CRU		
<i>Symphytotrichum subulatum</i> (Michx.) G.L. Nesom		CLE		CAT		ROS	CRU		
<i>Taraxacum erythrospermum</i> Besser*				CAT ¹⁰¹			CRU ¹⁰²		
<i>Taraxacum officinale</i> F.H. Wigg.*			NIC	CAT ¹⁰³		ROS	CRU		
<i>Thelesperma megapotamicum</i> (Spreng.) Kuntze*				CAT					
<i>Tragopogon porrifolius</i> L.*		CLE	NIC			ROS	CRU	ANA	MIG
<i>Uropappus lindleyi</i> (DC.) Nutt. ¹⁰⁴		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Venegasia carpesioides</i> DC.				CAT		ROS	CRU		
<i>Xanthium spinosum</i> L. ¹⁰⁵				CAT	BAR&	ROS	CRU		MIG
<i>Xanthium strumarium</i> L. ¹⁰⁶			NIC	CAT			CRU		
Bataceae									
<i>Batis maritima</i> L.		CLE							
Berberidaceae									
<i>Berberis pinnata</i> Lag.	ssp. <i>insularis</i> Munz					ROS	CRU	ANA	
Boraginaceae									
<i>Ansinckia intermedia</i> Fisch. & C.A. Mey.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Ansinckia menziesii</i> (Lehm.) A. Nelson & J.F. Macbr.		CLE ¹⁰⁷		CAT			CRU	ANA	MIG
<i>Ansinckia spectabilis</i> Fisch. & C.A. Mey.	var. <i>spectabilis</i>	CLE	NIC		BAR	ROS	CRU	ANA	MIG
<i>Cryptantha intermedia</i> (A. Gray) Greene	var. <i>intermedia</i>	CLE		CAT			CRU	ANA	MIG

⁹⁷SBBG: R.N. Phalbrick Mar 18 1968 B68-20
⁹⁸Synonym: *Microseris heterocarpa* (Nutt.) K.L. Chambers
⁹⁹RSA: FR. Fosberg. 4460. Apr. 3 1931
¹⁰⁰BSA: Orlando Mistretta. Apr. 5 1982 206
¹⁰¹SD: Robert F. Thorne Sep 15, 1966 36698
¹⁰²SD: Robert F. Thorne, P. Everett, 36823. Apr 18, 1967
¹⁰³SBBG: M.L. Hoels, R.F. Thorne Apr 6 1996 2665
¹⁰⁴Synonym: *Microseris linearifolia* (DC.) Sch. Bip.
¹⁰⁵Native status on islands unknown
¹⁰⁶Native status on islands unknown
¹⁰⁷UCR: J.R. Ekhoif May 16 2001 s.n.

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Cryptantha cleveandii</i> Greene		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Cryptantha leiocarpa</i> (Fisch. & C.A. Mey.) Greene		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Cryptantha maritima</i> (Greene) Greene		CLE	NIC	CAT ¹⁰⁸	BAR	ROS	CRU		MIG
<i>Cryptantha micromeres</i> (A. Gray) Greene		CLE		CAT		ROS	CRU		
<i>Cryptantha microstachyis</i> (A. Gray) Greene		CLE		CAT		ROS	CRU		
<i>Cryptantha muricata</i> (Hook. & Arn.) A. Nelson & J.F. Macbr.		CLE	NIC	CAT ¹⁰⁹ CAT ¹¹⁰			CRU		
<i>Cryptantha traskiae</i> I.M. Johnst.		CLE		CAT			CRU		
<i>Cryptantha wigginii</i> I.M. Johnst.		CLE		CAT			CRU		
<i>Emmenanthe penduliflora</i> Benth.	var. <i>penduliflora</i>	CLE		CAT			CRU		
<i>Eriodictyon traskiae</i> Eastw.	ssp. <i>traskiae</i>	CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Eucryphia chrysanthemifolia</i> (Benth.) Greene	var. <i>chrysanthemifolia</i>	CLE		CAT			CRU		
<i>Harpagonella palmieri</i> A. Gray		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Heliotropium curassavicum</i> L.	var. <i>oculatum</i> (A. Heller) I.M. Johnst. ex Tidestr.	CLE		CAT		ROS	CRU	ANA	MIG
<i>Nama stenocarpum</i> A. Gray		CLE ¹¹¹		CAT					
<i>Nemophila menziesii</i> Hook. & Arn.			NIC	CAT		ROS	CRU		MIG
<i>Nemophila pedunculata</i> Benth.			NIC	CAT		ROS	CRU	ANA	
<i>Pectocarya linearis</i> (Ruiz & Pav.) DC.	ssp. <i>ferocitula</i> (I.M. Johnst.) Thorne	CLE ¹¹²	NIC	CAT		ROS	CRU	ANA	
<i>Pectocarya pentacillata</i> (Hook. & Arn.) A. DC.				CAT			CRU		
<i>Phacelia cicutaria</i> Greene	var. <i>hispida</i> J.T. Howell	CLE		CAT		ROS	CRU	ANA	
<i>Phacelia hubbiji</i> (J.F. Macbr.) L.M. Garrison ¹¹³				CAT		ROS	CRU	ANA	
<i>Phacelia distans</i> Benth.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Phacelia floribunda</i> Greene		CLE		CAT		ROS	CRU	ANA	
<i>Phacelia grandiflora</i> (Benth.) A. Gray				CAT		ROS	CRU ¹¹⁴		MIG
<i>Phacelia insularis</i> Munz	var. <i>insularis</i>			CAT		ROS			
<i>Phacelia lyonii</i> A. Gray		CLE		CAT		ROS	CRU	ANA	MIG
<i>Phacelia ramosissima</i> Douglas ex Lehm.				CAT		ROS	CRU	ANA	MIG
<i>Phacelia viscida</i> (Lindl.) Torr.				CAT		ROS	CRU	ANA	MIG
<i>Pholistoma auritum</i> (Lindl.) Lilja	var. <i>auritum</i>	CLE?		CAT	BAR	ROS	CRU		
<i>Pholistoma racemosum</i> (A. Gray) Constance		CLE		CAT	BAR	ROS	CRU	ANA	
<i>Plagiobothrys acanthocarpus</i> (Piper) I.M. Johnst.		CLE		CAT ¹¹⁵			CRU		
<i>Plagiobothrys canescens</i> Benth.		CLE		CAT		ROS	CRU	ANA	

¹⁰⁸UC: T.S. Brandegee May 20 1890¹⁰⁹SD: R. Mitchell Beauchamp, M. Douglas Mar. 24. 1973: 3222¹¹⁰UC: Michael G. Simpson, Lori L. Simpson April 21 2012: 3682¹¹¹RSA: E. Kellogg Jun 28 1992: s.n.¹¹²BBG: S.A. Junak Mar 7 1987: SCI-732¹¹³Synonym: *Phacelia cicutaria* Greene var. *hubbiji* (J.F. Macbr.) J.T. Howell¹¹⁴In Wallace 1985 but not NPS list¹¹⁵UCR: T.S. Ross Apr 22 1983: 6895

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Plagiobothrys collinus</i> (Phil.) I.M. Johnston		CLE		CAT			CRU	ANA	MIG
<i>Plagiobothrys collinus</i> (Phil.) I.M. Johnston	var. <i>gracilis</i> (I.M. Johnston) Higgins	CLE ¹¹⁶		CAT ¹¹⁷			CRU ¹¹⁸	ANA	MIG
<i>Plagiobothrys collinus</i> (Phil.) I.M. Johnston	var. <i>californicus</i> (A. Gray) Higgins								
Brassicaceae									
<i>Athyisanus pusillus</i> (Hook.) Greene		CLE		CAT			CRU		
<i>Boechera hoffmannii</i> (Munz) Al-Shehbaz						ROS	CRU		
<i>Brassica nigra</i> (L.) W.D.J. Koch*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Brassica tournefortii</i> Gouan*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Brassica rapa</i> L.*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Cakile edentula</i> (Bigelow) Hook.*						ROS			
<i>Cakile maritima</i> Scop.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Capsella bursa-pastoris</i> (L.) Medik.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Cardamine californica</i> (Nutt.) Greene		CLE		CAT		ROS	CRU	ANA	MIG
<i>Cardamine oligosperma</i> Nutt.						ROS	CRU	ANA	MIG
<i>Cardanthus lasiophyllus</i> (Hook. & Arn.) Payson ¹¹⁹		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Descurainia pinnata</i> (Walter) Britton		CLE		CAT		ROS	CRU	ANA	MIG
<i>Dithyrea maritima</i> (Davidson) Davidson			NIC	CAT ¹²⁰					
<i>Draba cuneifolia</i> Nutt. ex Torr. & A. Gray		CLE	NIC	CAT			CRU		MIG
<i>Erysimum amnophitum</i> A. Heller						ROS			
<i>Erysimum cheiri</i> (L.) Crantz.*									
<i>Erysimum insulare</i> Greene						ROS	CRU	ANA	MIG
<i>Hirschfeldia incana</i> (L.) Lagr.-Fossat ¹²¹ *		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Hornungia procumbens</i> (L.) Hayek		CLE ¹²²	NIC		BAR	ROS	CRU	ANA	MIG
<i>Lepidium draba</i> L.*		CLE		CAT		ROS	CRU		
<i>Lepidium lasiocarpum</i> Nutt.		CLE	NIC	CAT					
<i>Lepidium latipes</i> Hook.		CLE		CAT			CRU		
<i>Lepidium nitidum</i> Nutt.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Lepidium oblongum</i> Small		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Lepidium strictum</i> (S. Watson) Rattan*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Lepidium virginicum</i> L. ¹²⁴ *		CLE		CAT ¹²³					
<i>Lobularia maritima</i> (L.) Desv.*	ssp. <i>menziesii</i> (DC.) Thell.	CLE	NIC	CAT			CRU		MIG
<i>Nasturtium officinale</i> W.T. Aiton ¹²⁶		CLE ¹²⁵	NIC	CAT			CRU		MIG

¹¹⁹POM: P.A. Munz Apr 10 1923 6705
¹¹⁷TRSA: R.F. Thorne, R.C. Rollins, D. Propst, R. Carolin, 36761, Mar 19 1967
¹¹⁸UC: T.S. Brandegee, Apr 1888
¹¹⁹S: synonym: *Gaultheria lasiophylla* (Hook. & Arn.) Greene
¹²⁰N: No specimens in CCH; extirpated from Catalina? per: <http://www.rareplants.cmpa.org/detail/571.html>
¹²¹S: synonym: *Brassica genticulata* (Desf.) Benth.
¹²²Pers. com. E. Howe
¹²³S:BBG: S.A. Junak, M.L. Hoeft, J. Takara Mar 28 1997 SCA-388
¹²⁴S: synonym: *Lepidium virginicum* var. *pubescens* (Greene) Thell.; *Lepidium virginicum* var. *robinsonii* (Thell.) C.L. Hitchc.
¹²⁵S:BBG: S.A. Junak, M.C. Hochberg, H. Ferguson Jul 28 1981 SCI-17
¹²⁶N: Native status on islands unknown, doubtful

APPENDIX 2. Continued

Family/species	ssp./var. and infraname									
	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG		
<i>Raphanus raphanistrum</i> L.*	CLE		CAT		ROS	CRU				
<i>Raphanus sativus</i> L.*	CLE	NIC	CAT		ROS	CRU				MIG
<i>Sibara filifolia</i> (Greene) Greene	CLE ¹²⁷		CAT			CRU				
<i>Sinapis arvensis</i> L. ^{125*}	CLE ^{2,129}		CAT			CRU				
<i>Sisymbrium altissimum</i> L.*										
<i>Sisymbrium irio</i> L.*	CLE	NIC	CAT				ANA			
<i>Sisymbrium officinale</i> (L.) Scop.*			CAT			CRU				MIG
<i>Sisymbrium orientale</i> L.*	CLE ¹³⁰	NIC	CAT				ANA			
<i>Thysanocarpus conchuliferus</i> Greene						CRU				
<i>Thysanocarpus curvipes</i> Hook.	CLE ¹³¹		CAT			CRU				
<i>Thysanocarpus laciniatus</i> Nutt.	CLE		CAT		ROS	CRU				
<i>Tropidocarpum gracile</i> Hook.	CLE		CAT							
<i>Turritis glabra</i> L.						CRU				
Cactaceae										
<i>Bergencactus emoryi</i> (Engelm.) Britton & Rose	CLE		CAT							
<i>Cylindropuntia prolifera</i> (Engelm.) F.M. Knuth	CLE	NIC	CAT	BAR	ROS	CRU	ANA			
<i>Opuntia ficus-indica</i> (L.) Mill.*	CLE	NIC	CAT			CRU	ANA			
<i>Opuntia littoralis</i> (Engelm.) Cockerell	CLE	NIC	CAT	BAR	ROS	CRU	ANA			MIG
<i>Opuntia oricola</i> Philbrick	CLE	NIC	CAT	BAR	ROS	CRU	ANA			MIG
Campanulaceae										
<i>Cithopsis diffusa</i> A. Gray						CRU				
<i>Triodanis biflora</i> (Ruiz & Pav.) Greene			CAT		ROS	CRU				
Caprifoliaceae										
<i>Lonicera hispidula</i> (Lindl.) Torr. & A. Gray					ROS	CRU				
<i>Lonicera interrupta</i> Benth.	CLE		CAT			CRU				
<i>Lonicera subspicata</i> Hook. & Arn.					ROS	CRU				
<i>Symphoricarpos mollis</i> Nutt.			CAT		ROS	CRU				
Caryophyllaceae										
<i>Cardionema ramosissimum</i> (Weinm.) A. Nelson & J.F. Macbr.					ROS	CRU				MIG
<i>Cerastium glomeratum</i> Thuill.*										
<i>Herniaria hirsuta</i> L.*	CLE		CAT		ROS	CRU	ANA			MIG
<i>Loeflingia squarrosa</i> Nutt.	CLE	NIC	CAT ¹³²	BAR	ROS					MIG
<i>Mniuraria douglasii</i> (Torr. & A. Gray) Mattf.	CLE	NIC	CAT		ROS	CRU				
<i>Polycarpon depressum</i> Nutt.	CLE		CAT		ROS	CRU				MIG

¹²⁷TRSA: Orlando Mistretta Apr 5 1992 142¹²⁸Synonym: *Brassica kabrer* (DC.) L.C. Wheeler¹²⁹Pers. comm. E. Howe¹³⁰SBBG: S.A. Junak May 29 1996 SCI-545¹³¹UC: Tim Ross Apr 14 1992 6153¹³²SBBG: S.A. Junak Mar 27 1997 SCA-346

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Polycarpon tetraphyllum</i> (L.) L.*				CAT		ROS	CRU	ANA	MIG
<i>Sagina apetala</i> Ard.			NIC			ROS	CRU	ANA	MIG
<i>Sagina decumbens</i> (Elliott) Torr. & A. Gray	ssp. <i>occidentalis</i> (S. Watson) G.E. Crow			CAT		ROS	CRU	ANA	MIG
<i>Silene antirrhina</i> L.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Silene gallica</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Silene laciniata</i> Cav.	ssp. <i>laciniata</i>	CLE		CAT		ROS	CRU	ANA	MIG
<i>Silene coniflora</i> Oth.				CAT			CRU		
<i>Spergularia arvensis</i> L.*				CAT		ROS			
<i>Spergularia bocconi</i> (Scheele) Graebn.*		CLE	NIC	CAT	BAR		CRU	ANA	
<i>Spergularia macrotheca</i> (Cham. & Schltdl.) Heynh.	ssp. <i>macrotheca</i>	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Spergularia marina</i> (L.) Besser		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Spergularia villosa</i> (Pers.) Cambess.*		CLE		CAT		ROS	CRU		
<i>Stellaria media</i> (L.) Vill.*		CLE		CAT		ROS	CRU	ANA	MIG
<i>Stellaria nitens</i> Nutt.				CAT		ROS	CRU		
<i>Aphanisma blitoides</i> Moq.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Arthrocnemum subterminale</i> (Parish) Standl.		CLE		CAT		ROS	CRU		MIG
<i>Atriplex argentea</i> Nutt.	ssp. <i>expansa</i> (S. Watson) S.L. Welsh & Reveal	CLE	NIC	CAT		ROS	CRU		
<i>Atriplex californica</i> Moq.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Atriplex canescens</i> (Pursh) Nutt.*	var. <i>canescens</i>		NIC						
<i>Atriplex coulteri</i> (Moq.) D. Dietr.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Atriplex lentiformis</i> (Torr.) S. Watson	(S. Watson) H.M. Hall & Clem.	CLE	NIC	CAT			CRU	ANA	
<i>Atriplex leucophylla</i> (Moq.) D. Dietr.		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Atriplex pacifica</i> A. Nelson		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Atriplex semibaccata</i> R. Br.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Atriplex serenana</i> Abrams	var. <i>davidsonii</i> (Standl.) Munz			CAT ¹³³		ROS	CRU		
<i>Atriplex serenana</i> Abrams	var. <i>serenana</i>			CAT					
<i>Atriplex prostrata</i> DC.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Atriplex watsonii</i> Abrams		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Bassia hyssopifolia</i> (Pall.) Kuntze*		CLE	NIC	CAT					
<i>Beta vulgaris</i> L.*		CLE		CAT		ROS	CRU	ANA	MIG
<i>Chenopodium berlandieri</i> Moq.			NIC			ROS	CRU	ANA	
<i>Chenopodium californicum</i> (S. Watson) S. Watson		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Chenopodium murale</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants*			NIC	CAT		ROS	CRU		
<i>Dysphania multifida</i> (L.) Mosyakin & Clemants*		CLE				ROS	CRU		MIG
<i>Monolepis nuttalliana</i> (Schult.) Greene		CLE			BAR	ROS	CRU		MIG
<i>Salicornia depressa</i> Standl.			NIC			ROS	CRU	ANA	MIG
<i>Salicornia pacifica</i> Standl.		CLE		CAT		ROS	CRU	ANA	MIG

133RSA: Blanche Trask Mar 1901 s.n.

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Salsola australis</i> R. Br. ^{134*}		CLE	NIC	CAT		ROS	CRU		
<i>Suaeda calceoliformis</i> (Hook.) Moq.		CLE	NIC	CAT ¹³⁵		ROS	CRU	ANA	MIG
<i>Suaeda taxifolia</i> (Standl.) Standl.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Cistaceae									
<i>Helianthemum greenii</i> B.L. Rob.		CLE	NIC	CAT		ROS	CRU		MIG &
<i>Helianthemum scoparium</i> Nutt.		CLE? ¹³⁶		CAT		ROS	CRU		
Cleomeaceae									
<i>Peritoma arborea</i> (Nutt.) H.H. Iltis		CLE		CAT		ROS			
Convolvulaceae									
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>amplissima</i> Brummitt	CLE	NIC	CAT	BAR				
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>cyclostegia</i> (House) Brummitt			CAT					
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>intermedia</i> (Abrams) Brummitt			CAT		ROS	CRU	ANA	MIG
<i>Calystegia macrostegia</i> (Greene) Brummitt	ssp. <i>macrostegia</i>		NIC &	CAT					
<i>Calystegia malacophylla</i> (Greene) Munz*	ssp. <i>pedicellata</i> (Eps.) Munz			CAT		ROS	CRU		MIG
<i>Calystegia soldanella</i> (L.) R. Br.*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Convolvulus arvensis</i> L.*			NIC	CAT		ROS	CRU		
<i>Convolvulus simulans</i> L. M. Perry		CLE		CAT		ROS	CRU		
<i>Cressa truxillensis</i> Kunth		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Cuscuta californica</i> Hook. & Arn.		CLE		CAT		ROS	CRU ¹³⁷		
<i>Cuscuta campestris</i> Yünek.				CAT ¹³⁸					
<i>Cuscuta occidentalis</i> Millsp.				CAT					
<i>Cuscuta pacifica</i> Costea & M. Wright	var. <i>pacifica</i>			CAT		ROS	CRU	ANA	
<i>Dichondra occidentalis</i> House				CAT		ROS	CRU		MIG
<i>Ipomoea cairica</i> (L.) Sweet*				CAT					
Cornaceae									
<i>Cornus glabrata</i> Benth.				CAT					
Crassulaceae									
<i>Crassula aquatica</i> (L.) Schönl.				CAT					
<i>Crassula connata</i> (Ruiz & Pav.) A. Berger		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Crassula ovata</i> (Mill.) Druce*		CLE		CAT					
<i>Dudleya blochmaniae</i> (Eastw.) Moran	ssp. <i>blochmaniae</i>						CRU		
<i>Dudleya blochmaniae</i> (Eastw.) Moran	ssp. <i>insularis</i> (Moran) Moran					ROS		ANA	
<i>Dudleya caespitosa</i> (Haw.) Britton & Rose						ROS	CRU		MIG
<i>Dudleya candelabrum</i> Rose						ROS	CRU		MIG
<i>Dudleya greenii</i> Rose				CAT		ROS	CRU		MIG
<i>Dudleya gnoma</i> S. W. McCabe						ROS			

¹³⁴Synonym: *Salsola tragus* L.¹³⁵SBBG: S.A. Juncak Oct 22 1998 SCA-823¹³⁶pers. com. E. Howe¹³⁷SBBG: M.R. Benedict Sep 30 1969¹³⁸RSA: George B. Grant 4541

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Dudleya nesiotica</i> (Moran) Moran							CRU		
<i>Dudleya traskiae</i> (Rose) Moran					BAR				
<i>Dudleya vires</i> (Rose) Moran	ssp. <i>hassei</i> (Rose) Moran			CAT					
<i>Dudleya vires</i> (Rose) Moran	ssp. <i>insularis</i>		NIC	CAT					
<i>Dudleya vires</i> (Rose) Moran	ssp. <i>virens</i>	CLE							
Crossosomataceae									
<i>Crossosoma californicum</i> Nutt.		CLE	NIC	CAT					
Cucurbitaceae									
<i>Cucurbita foetidissima</i> Kunth							CRU		
<i>Marah fabacea</i> (Naudin) Greene		CLE ¹³⁹	NIC ¹⁴⁰	CAT ¹⁴¹			CRU		MIG ¹⁴²
<i>Marah macrocarpa</i> (Greene) Greene		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Ericaceae									
<i>Arbutus menziesii</i> Pursh				CAT			CRU		
<i>Arctostaphylos catalinae</i> P.V. Wells						ROS			
<i>Arctostaphylos confertiflora</i> Eastw.							CRU		
<i>Arctostaphylos insularis</i> Parry						ROS	CRU		
<i>Arctostaphylos crustacea</i> Eastw.	ssp. <i>insulicola</i> (P.V. Wells) V.T. Parker et al.					ROS	CRU		
<i>Arctostaphylos crustacea</i> Eastw.	ssp. <i>subcordata</i> (Eastw.) V.T. Parker et al.					ROS	CRU		
<i>Arctostaphylos viridissima</i> (Eastw.) McMinn							CRU		
<i>Comarostaphylos diversifolia</i> (Parry) Greene	ssp. <i>planifolia</i> (Jeps.) G.D. Wallace			CAT		ROS	CRU	ANA	
<i>Vaccinium ocatum</i> Pursh						ROS	CRU		
<i>Xylococcus bicolor</i> Nutt.				CAT					
Euphorbiaceae									
<i>Chamaesyce maculata</i> (L.) Small*		CLE ¹⁴³			BAR		CRU	ANA	
<i>Chamaesyce serpyllifolia</i> (Pers.) Small*		CLE							
<i>Chamaesyce serpyllifolia</i> (Pers.) Small				CAT					
<i>Croton setigerus</i> Hook.		CLE		CAT		ROS	CRU		
<i>Euphorbia crenulata</i> Engelm.				CAT					
<i>Euphorbia misera</i> Benth.		CLE		CAT			CRU		
<i>Euphorbia pepplus</i> L.*		CLE		CAT		ROS	CRU		
<i>Euphorbia spathulata</i> Lam.		CLE		CAT					
<i>Ricinus communis</i> L.*		CLE	NIC	CAT					
<i>Stillingia linearifolia</i> S. Watson							CRU		
Fabaceae									
<i>Acacia cyclops</i> C. Don*		CLE? ¹⁴⁴							

139)RSA: FH. Elmore Feb 19 1939 422

140)SBBG: M.B. Dunkle Jul 26 1939 8359

141)SD: Darley F. Howe Feb 24 1968 4486

142)SBBG: M.B. Dunkle Jul 31 1939 8402

143)RSA: Steven A. Junak Nov 9 1990 SC1144

144)Pers. com. E. Howe

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Acacia decurrens</i> Willd.*				CAT					
<i>Acacia dealbata</i> Link.*				CAT			CRU		
<i>Acacia melanoxylon</i> R. Br.*				CAT			CRU		
<i>Acemisanon americanus</i> (Nutt.) Rydb. ¹⁴⁵	var. <i>americanus</i>			CAT			CRU		
<i>Acemison argophyllus</i> (A. Gray) Brouillet	var. <i>adsurgens</i> (Dumkle)	CLE		CAT	BAR	ROS ¹⁴⁶	CRU		MIG ¹⁴⁷
<i>Acemison argophyllus</i> (A. Gray) Brouillet	var. <i>argenteus</i> (Dumkle)	CLE	NIC	CAT					
<i>Acemison argophyllus</i> (A. Gray) Brouillet	var. <i>niveus</i> (Greene)			CAT					
<i>Acemison brachycarpus</i> (Benth.) D.D. Sokoloff ¹⁴⁸		CLE		CAT		ROS	CRU	ANA	
<i>Acemison dendroideus</i> (Greene) Brouillet	var. <i>dendroideus</i>	CLE		CAT		ROS	CRU		
<i>Acemison dendroideus</i> (Greene) Brouillet	var. <i>veitchii</i> (Greene) Brouillet								
<i>Acemison dendroideus</i> (Greene) Brouillet	var. <i>traskiae</i> (Abrams) Brouillet	CLE		CAT		ROS	CRU		
<i>Acemison grandiflorus</i> (Benth.) Brouillet	var. <i>grandiflorus</i>			CAT		ROS			
<i>Acemison heermannii</i> (Durand & Hilg.) Brouillet				CAT		ROS	CRU	ANA	MIG
<i>Acemison maritimus</i> (Nutt.) D.D. Sokoloff ¹⁴⁹	var. <i>maritimus</i>		NIC	CAT		ROS	CRU	ANA	MIG
<i>Acemison micranthus</i> (Torr. & A. Gray) Brouillet ¹⁵⁰		CLE		CAT		ROS	CRU		
<i>Acemison parviflorus</i> (Benth.) D.D. Sokoloff ¹⁵¹							CRU		
<i>Acemison strigosus</i> (Nutt.) Brouillet		CLE		CAT		ROS	CRU	ANA	MIG
<i>Acemison vorangelianus</i> (Fisch. & C.A. Mey.) D.D. Sokoloff ¹⁵²		CLE		CAT		ROS	CRU	ANA	MIG
<i>Albizia lophantha</i> (Willd.) Benth.*							CRU		
<i>Astragalus curtipes</i> A. Gray						ROS			MIG
<i>Astragalus didymocarpus</i> Hook & Arn.	var. <i>didymocarpus</i>	CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Astragalus gambelians</i> E. Sheld.				CAT			CRU		
<i>Astragalus miguelensis</i> Greene		CLE				ROS	CRU	ANA	MIG
<i>Astragalus nevadii</i> A. Gray		CLE							
<i>Astragalus traskiae</i> Eastw.					BAR				
<i>Astragalus trichopodus</i> (Nutt.) A. Gray	var. <i>lonchus</i> (M.E. Jones) Barnely		NIC	CAT		ROS	CRU		ANA
<i>Astragalus trichopodus</i> (Nutt.) A. Gray	var. <i>trichopodus</i>			CAT					
<i>Caesalpinia spinosa</i> (Molina) Kuntze*				CAT ¹⁵³					
<i>Coronilla valentina</i> L.*				CAT					
<i>Genista linifolia</i> L.*				CAT					
<i>Genista monspessulana</i> (L.) L.A.S. Johnson*				CAT					

¹⁴⁵Synonym: *Lotus purshianus* Clem. & E.G. Clem.¹⁴⁶CAS: L.R. Abrams, L.L. Wiggins 30 June, 1931 239¹⁴⁷DS: E.R. Blakey 3 April 1962 5081¹⁴⁸Synonym: *Lotus humistratus* Greene; Wallace listed *L. humistratus* on Cruz, but NPS Park Flora did not¹⁴⁹Synonym: *Lotus submarginatus* Greene¹⁵⁰Synonym: *Lotus hamatus* Greene¹⁵¹Synonym: *Lotus micranthus* Benth.¹⁵²Synonym: *Lotus urangeliensis* Fisch. & C.A. Mey.; *Lotus subpinnatus* Lag. misappl.¹⁵³RSA: Tim Ross Apr 23, 1993 6934

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Lathyrus odoratus</i> L.*		CLE ¹⁵⁴							
<i>Lathyrus tingitanus</i> L.*				CAT					
<i>Lathyrus vestitus</i> Nutt.	var. <i>alefeldii</i> (T.C. White) Isley			CAT					
<i>Lathyrus vestitus</i> Nutt.	var. <i>vestitus</i>	CLE		CAT		ROS	CRU	ANA	
<i>Lotus corniculatus</i> L.*				CAT			CRU		
<i>Lupinus albus</i> Benth.	var. <i>douglasii</i> (J. Agardh) C.P. Sm.		NIC	CAT		ROS	CRU	ANA	MIG
<i>Lupinus arboreus</i> Sims				CAT		ROS	CRU		MIG
<i>Lupinus bicolor</i> Lindl.			NIC	CAT		ROS	CRU	ANA	MIG
<i>Lupinus chamissonis</i> Eschsch.				CAT		ROS			MIG
<i>Lupinus concinnus</i> J. Agardh		CLE ¹⁵⁵		CAT		ROS	CRU		
<i>Lupinus guadalupensis</i> Greene		CLE							
<i>Lupinus hirsutissimus</i> Benth.		CLE		CAT		ROS	CRU	ANA	
<i>Lupinus microcarpus</i> Sims				CAT		ROS	CRU		MIG
<i>Lupinus succulentus</i> K. Koch		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Lupinus truncatus</i> Nutt.		CLE		CAT		ROS	CRU	ANA	
<i>Lupinus varicolor</i> Steud.				CAT					MIG
<i>Medicago polymorpha</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Medicago sativa</i> L.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Melilotus albus</i> Medik.*		CLE	NIC	CAT			CRU	ANA	
<i>Melilotus indicus</i> (L.) All.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Pickeringia montana</i> Nutt.	var. <i>montana</i>						CRU		
<i>Pisum sativum</i> L.*			NIC				CRU		
<i>Robinia pseudoacacia</i> L.*			NIC				CRU		
<i>Spartium junceum</i> L.*			NIC	CAT			CRU		
<i>Trifolium albopurpureum</i> Torr. & A. Gray			NIC ¹⁵⁶	CAT		ROS	CRU		
<i>Trifolium barbigerum</i> Torr.						ROS			MIG
<i>Trifolium ciliolatum</i> Benth.				CAT		ROS	CRU		
<i>Trifolium depauperatum</i> Desv.	var. <i>amplectens</i> (Torr. & A. Gray) McDermott	CLE		CAT					
<i>Trifolium depauperatum</i> Desv.	var. <i>truncatum</i> (Greene) Isely	CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Trifolium fucatum</i> Lindl.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Trifolium gracilentum</i> Torr. & A. Gray		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Trifolium hirtum</i> All.		CLE							
<i>Trifolium macraei</i> Hook. & Arn.			NIC	CAT		ROS	CRU		MIG
<i>Trifolium microcephalum</i> Pursh		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Trifolium microdon</i> Hook. & Arn.			NIC	CAT					
<i>Trifolium palmieri</i> S. Watson		CLE	NIC	CAT	BAR			ANA	
<i>Trifolium repens</i> L.*			NIC	CAT					

¹⁵⁴SD: Steven A. Junak May 19, 1997 SCL877¹⁵⁵SBBC: M.R. Benedict Jun 26 1971¹⁵⁶JEPS93564 (SN-846).det. var. *dichotomum* in TJM2) by: Michael Vincent in 2005.

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Trifolium variegatum</i> Nutt.							CRU		
<i>Trifolium willdenovii</i> Spreng.	var. <i>major</i> Loja.	CLE ¹⁵⁷		CAT ¹⁵⁸	BAR	ROS	CRU	ANA	MIG
<i>Vicia americana</i> Willd.						ROS	CRU	ANA	MIG
<i>Vicia benghalensis</i> L.*				CAT ¹⁵⁹			CRU	ANA	
<i>Vicia hassei</i> S. Watson		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Vicia ludoviciana</i> Torr. & A. Gray	ssp. <i>ludoviciana</i>	CLE ¹⁶⁰		CAT ¹⁶¹		ROS	CRU	ANA	
<i>Vicia sativa</i> L.*	ssp. <i>nigra</i> (L.) Erhart		NIC			ROS			
<i>Vicia sativa</i> L.*	ssp. <i>sativa</i>		NIC			ROS	CRU	ANA	
<i>Vicia villosa</i> Roth	(Host) Corb.		NIC	CAT ¹⁶²					
<i>Quercus agrifolia</i> Née	var. <i>agrifolia</i>					ROS	CRU		
<i>Quercus chrysolepis</i> Liebm.		CLE		CAT		ROS	CRU	ANA	
<i>Quercus douglasii</i> Hook. & Arn.				CAT			CRU		
<i>Quercus engelmannii</i> Greene				CAT		ROS			
<i>Quercus kelloggii</i> Newb.							CRU		
<i>Quercus lobata</i> Née				CAT		ROS	CRU		
<i>Quercus macdonaldii</i> Greene				CAT		ROS	CRU		
<i>Quercus pacifica</i> Nixon & C.H. Mull.				CAT		ROS	CRU		
<i>Quercus parvula</i> Greene							CRU		
<i>Quercus tomentella</i> Engelm.	var. <i>parvula</i>	CLE		CAT		ROS	CRU	ANA	
Frankeniaceae									
<i>Frankenia salina</i> (Molina) I.M. Johnston		CLE	NIC	CAT		ROS	CRU	ANA	MIG
Garryaceae									
<i>Garrya veatchii</i> Kellogg							CRU		
Gentianaceae									
<i>Zelnera daruji</i> (Jeps.) G. Mans.		CLE	NIC	CAT		ROS	CRU		
<i>Zelnera venusta</i> (A. Gray) G. Mans.									
Geraniaceae									
<i>California macrophylla</i> (Hook. & Arn.) J.J. Aldasoroet				CAT ¹⁶³					
<i>Erodium botrys</i> (Cav.) Berol.*			NIC	CAT ¹⁶⁴		ROS	CRU		
<i>Erodium brachycarpum</i> (Godr.) Thell.*		CLE ¹⁶⁵		CAT ¹⁶⁶		ROS			
<i>Erodium cicutarium</i> (L.) Aiton*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Erodium moschatum</i> (L.) Aiton*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG

157B&A: PH. Raven May 8 1962 17614

1581C: FR. Fishberg Mar 25 1931 s4367

159&BBG: PH. Raven May 20 1962 17789

1601C&R: Steve Boyd, T.S. Ross, L. Arnsch. Apr 7 1990 4260

161&SBBG: R.F. Thorne Mar 7 1966 35954

162&SD: Robert F. Thorne, D. Propst May 29, 1968 37691

163&GH: W.A. Wallace

164&SBBG: S.A. Junak, K. Kirkland, L. Vorobik May 16 1998 SCA-697

165&BBG: T. Ross, O. Misreeta, M. Hannitt May 18 1991 5191

166&BBG: S.A. Junak, M.L. Hoefs, K. Kirkland Apr 5 1998 SCA-549

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Erodium texanum</i> A. Gray				CAT					
<i>Geranium carolinianum</i> L.				CAT		ROS	CRU		
<i>Geranium dissectum</i> L.*						ROS			
<i>Geranium molle</i> L.*							CRU		
<i>Pelargonium ×hortorum</i> L.H. Bailey*		CLE ¹⁶⁷	NIC	CAT		ROS	CRU		MIG ¹⁶⁸
<i>Pelargonium peltatum</i> (L.) L'Her.*			NIC						
Grossulariaceae									
<i>Ribes malvaceum</i> Sm.	var. <i>malvaceum</i>	CLE		CAT		ROS	CRU	ANA	
<i>Ribes viburnifolium</i> A. Gray									
<i>Ribes thacherianum</i> (Jepps.) Munz							CRU		
Juglandaceae									
<i>Juglans californica</i> S. Watson*				CAT			CRU		
<i>Juglans regia</i> L.*									
Lamiaceae									
<i>Clinopodium douglasii</i> (Benth.) Kuntze				CAT		ROS	CRU		
<i>Lamium amplexicaule</i> L.*							CRU		
<i>Lepechinia fragrans</i> (Greene) Epling				CAT		ROS	CRU		
<i>Marrubium vulgare</i> L.*		CLE	NIC	CAT		ROS	CRU		MIG
<i>Mentha aquatica</i> L.*				CAT					
<i>Mentha spicata</i> L.*				CAT			CRU		
<i>Nepeta cataria</i> L.*				CAT					
<i>Salvia apiana</i> Jepps.				CAT					
<i>Salvia brandegeei</i> Munz						ROS			
<i>Salvia columbariae</i> Benth.		CLE		CAT		ROS	CRU		
<i>Salvia leucophylla</i> Greene							CRU		
<i>Salvia mellifera</i> Greene		CLE? ¹⁶⁹		CAT		ROS	CRU	ANA	
<i>Scutellaria tuberosa</i> Benth.							CRU		
<i>Stachys ajugoides</i> Benth.						ROS			MIG
<i>Stachys bullata</i> Benth.						ROS	CRU	ANA	
<i>Trichostema lanceolatum</i> Benth.				CAT					
Linaceae									
<i>Hesperolinon micranthum</i> (A. Gray) Small				CAT					
Loasaceae									
<i>Mentzelia affinis</i> Greene		CLE	NIC	CAT		ROS	CRU		
<i>Mentzelia micrantha</i> (Hook. & Arn.) Torr. & A.		CLE		CAT			CRU		
Lythraceae									
<i>Ammannia robusta</i> Heer & Regel				CAT					

¹⁶⁷SBBG: T. Ross May 22 1991 5435¹⁶⁸SBBG: R.N. Philbrick Mar 25 1966 B66-91¹⁶⁹Pers. com. E. Howe

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Lycium californicum</i> Torr. & A. Gray							CRU		
<i>Lycium hyssopifolia</i> L.*		CLE	NIC	CAT ¹⁷⁰		ROS	CRU		
Malvaceae									
<i>Alcea rosea</i> L.*				CAT			CRU		
<i>Eremalche exilis</i> (A. Gray) Greene		CLE		CAT			CRU		
<i>Lavatera assurgentiflora</i>	ssp. <i>assurgentiflora</i>	CLE*	NIC*			ROS	CRU	ANA	MIG
<i>Lavatera assurgentiflora</i>	ssp. <i>glabra</i> (Munz & I.M. Johnston) Kearney	CLE		CAT			CRU*		
<i>Malacothamnus clementinus</i>	var. <i>catalhensis</i> (Eastw.) Kearney	CLE		CAT					
<i>Malacothamnus fasciculatus</i> (Torr. & A. Gray) Greene	var. <i>nesioficus</i> (B.L. Rob.) Kearney						CRU		
<i>Malva pseudolavatera</i> Webb & Berthel.*		CLE ¹⁷¹				ROS		ANA	
<i>Malva nicaeensis</i> All.*						ROS	CRU		
<i>Malva parviflora</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Malvella leprosa</i> (Ortega) Krapov.		CLE		CAT		ROS			
<i>Sidalcea malviflora</i> (DC.) A. Gray	ssp. <i>malviflora</i>					ROS	CRU		MIG
Montiaceae									
<i>Calandrinia breweri</i> S. Watson						ROS	CRU		
<i>Calandrinia ciliata</i> Fisch. & C.A. Mey.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Cistanthe maritima</i> (Nutt.) Hershk.		CLE		CAT	BAR	ROS	CRU	ANA	
<i>Claytonia parviflora</i> Hook.	ssp. <i>parviflora</i>		NIC	CAT ¹⁷²	BAR		CRU		MIG
<i>Claytonia perfoliata</i> Willd.	ssp. <i>mexicana</i> (Rydb.) John M. Mill. & K.L. Chambers	CLE ¹⁷³	NIC	CAT ¹⁷⁴	BAR	ROS	CRU	ANA	MIG
<i>Claytonia perfoliata</i> Willd.	ssp. <i>perfoliata</i>	CLE		CAT		ROS	CRU		
<i>Montia fontana</i> L.				CAT			CRU		
Moraceae									
<i>Ficus carica</i> L.*		CLE ¹⁷⁵		CAT			CRU		MIG
Myrsinaceae									
<i>Anagallis arvensis</i> L.*		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Anagallis minima</i> (L.) E.H.L. Krause						ROS			
Myrtales									
<i>Eucalyptus cannadulensis</i> Dehnh.*				CAT ¹⁷⁶		ROS	CRU		
<i>Eucalyptus cladocalyx</i> F. Muell.*				CAT ¹⁷⁷					
<i>Eucalyptus globulus</i> Labill.*		CLE		CAT	BAR	ROS	CRU	ANA	

¹⁷⁰RSA: Mark Hoefs, Steven A. Junak, Janet Takana, M. Gay Jul 14 1995 2401

¹⁷¹SD: Steven A. Junak Apr 23, 1997 SCI858

¹⁷²BBG: S.A. Junak, K. Kirkland Apr 13 2001 SCA-1421

¹⁷³BBG: Tim Ross, Orlando Mistretta, Mike Hammitt May 19 1991 5286

¹⁷⁴BBG: E.R. Blakley Apr 7 1963 5537

¹⁷⁵BBG: S.A. Junak May 20 1996

¹⁷⁶UCR: T.S. Ross Apr 23 1993 6926

¹⁷⁷UCR: O.F. Clarke Feb 25 1968 s.n.

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Eucalyptus polyanthemus</i> Schauer*				CAT ¹⁷⁸					
<i>Eucalyptus sideroxylon</i> Woolls*							CRU		
<i>Eucalyptus tereticornis</i> Sm.*						ROS	CRU		
Nyctaginaceae									
<i>Abronia latifolia</i> Eschsch.									MIG
<i>Abronia maritima</i> S. Watson		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Abronia umbellata</i> Lam.		CLE	NIC	CAT		ROS	CRU		MIG
<i>Mirabilis laevis</i> (Benth.) Curran	var. <i>crassifolia</i> (Choisy) Spellentb.	CLE		CAT	BAR	ROS	CRU	ANA	
Oleaceae									
<i>Olea europaea</i> L.*					BAR		CRU	ANA	
Onagraceae									
<i>Camissonia strigulosa</i> (Fisch. & C.A. Mey.) P.H. Raven						ROS			
<i>Camissoniopsis cheiranthifolia</i> (Spreng.) W.L. Wagner & Hoch	ssp. <i>cheiranthifolia</i>	CLE	NIC		BAR	ROS	CRU		MIG
<i>Camissoniopsis cheiranthifolia</i> (Spreng.) W.L. Wagner & Hoch	ssp. <i>suffruticosa</i> (S. Watson) W.L. Wagner & Hoch		NIC						
<i>Camissoniopsis guadalupensis</i> (S. Watson) W.L. Wagner & Hoch	ssp. <i>clementina</i> (P.H. Raven) W.L. Wagner & Hoch	CLE					CRU		
<i>Camissoniopsis hirtella</i> (Greene) W.L. Wagner & Hoch									
<i>Camissoniopsis ignota</i> (Jeps.) W.L. Wagner & Hoch						ROS	CRU		MIG
<i>Camissoniopsis intermedia</i> (P.H. Raven) W.L. Wagner & Hoch				CAT			CRU		
<i>Camissoniopsis micrantha</i> (Spreng.) W.L. Wagner & Hoch		CLE		CAT		ROS	CRU	ANA	MIG
<i>Camissoniopsis robusta</i> (P.H. Raven) W.L. Wagner & Hoch		CLE		CAT			CRU		MIG
<i>Clarkia davii</i> (Jeps.) H. Lewis & M. Lewis						ROS			
<i>Clarkia epilobioides</i> (Torr. & A. Gray) A. Nelson & J.F. Clarkia		CLE		CAT		ROS	CRU	ANA	
<i>Clarkia prostrata</i> H. Lewis & M. Lewis									
<i>Clarkia purpurea</i> (Curtis) A. Nelson & J.F. Macbr.	ssp. <i>quadrivulnera</i> (Lindl.) H. Lewis & M. Lewis			CAT		ROS	CRU		
<i>Clarkia unguiculata</i> Lindl.									
<i>Epilobium brachycarpum</i> C. Presl		CLE, ¹⁷⁹		CAT			CRU		
<i>Epilobium canum</i> (Greene) P.H. Raven ¹⁸⁰		CLE, ¹⁷⁹		CAT ¹⁸¹		ROS	CRU	ANA	MIG
<i>Epilobium canum</i> (Greene) P.H. Raven	ssp. <i>canum</i>	CLE		CAT			CRU	ANA	

178]CR: T.S. Ross, Janet Takara, Stacey Otte Apr 24 1993 6964

179]Pers. com. E. Howe

180]This taxa unresolved

181]SDSU: R.M. Beauchamp August 8, 1966 54

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Epilobium ciliatum</i> Raf.				CAT			CRU		MIG
<i>Eulobus californicus</i> Torr. & A. Gray				CAT		ROS	CRU		
<i>Ludwigia peploides</i> (Kunth) P.H. Raven							CRU		
<i>Oenothera xenogaura</i> W.L. Wagner & Hoch*							CRU		
<i>Oenothera sinuosa</i> W.L. Wagner & Hoch*				CAT					
<i>Oenothera elata</i> Kunth.	ssp. <i>hirsutissima</i> (S. Watson) W. Dietr.						CRU		
Orobanchaceae									
<i>Castilleja affinis</i> Hook. & Arn.	ssp. <i>affinis</i>			CAT		ROS	CRU	ANA	MIG
<i>Castilleja attenuata</i> (A. Gray) T.I. Chuang & Heckard							CRU		
<i>Castilleja densiflora</i> (Benth.) T.I. Chuang & Heckard			NIC			ROS	CRU		MIG
<i>Castilleja exserta</i> (A. Heller) T.I. Chuang & Heckard				CAT		ROS	CRU		MIG
<i>Castilleja foliolosa</i> Hook. & Arn.				CAT					
<i>Castilleja grisea</i> Dunkle		CLE				ROS	CRU	ANA	MIG
<i>Castilleja hololeuca</i> Greene									
<i>Castilleja mollis</i> Pennell						ROS	CRU	ANA	MIG
<i>Kopsipopsis strobilacea</i> (A. Gray) Beck						ROS			
<i>Orobanche bulbosa</i> Beck				CAT		ROS	CRU		
<i>Orobanche californica</i> Cham. & Schltdl.						ROS			
<i>Orobanche fasciculata</i> Nutt.	ssp. <i>grandis</i> Heckard					ROS	CRU	ANA	MIG
<i>Orobanche parishii</i> (Jeps.) Heckard	ssp. <i>brachyloba</i> Heckard		NIC	CAT		ROS	CRU		MIG
<i>Orobanche uniflora</i> L.		CLE? ¹⁸²					CRU		
Oxalidaceae									
<i>Oxalis articulata</i> Savigny*	ssp. <i>rubra</i> (A. St.-Hil.) Lourteig			CAT		ROS	CRU		
<i>Oxalis californica</i> (Abrams) R. Knuth				CAT		ROS	CRU		
<i>Oxalis corniculata</i> L.*		CLE ¹⁸³	NIC	CAT		ROS	CRU		
<i>Oxalis pes-caprae</i> L.*		CLE	NIC	CAT			CRU		
Papaveraceae									
<i>Dendromecon harfordii</i> Kellogg				CAT		ROS	CRU		
<i>Ehrendorferia ochroleuca</i> (Engelm.) Fukuhara							CRU		
<i>Eschscholzia californica</i> Cham.		CLE ¹⁸⁴	NIC	CAT		ROS	CRU		MIG
<i>Eschscholzia ramosa</i> (Greene) Greene		CLE	NIC	CAT	BAR	ROS	CRU		
<i>Meconella denticulata</i> Greene							CRU		
<i>Papaver californicum</i> A. Gray						ROS	CRU		
<i>Papaver heterophyllum</i> (Benth.) Greene		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Papaver somniferum</i> L.*				CAT			CRU		
<i>Platystemon californicus</i> Benth.			NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Ronmeja coulteri</i> Harv.*				CAT			CRU		

¹⁸²Pers. com. E. Howe¹⁸³FRSA: Steven A. Junak May 14 1985 SC11-56¹⁸⁴FRSA: M.B. Dunkle May 27 1928 1983

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Phymaceae									
<i>Mimulus aurantiacus</i> Curtis	var. <i>aurantiacus</i>			CAT ¹⁸⁵					
<i>Mimulus aurantiacus</i> Curtis	var. <i>parviflorus</i> (Greene) D.M. Thomps.	CLE				ROS	CRU	ANA	
<i>Mimulus aurantiacus</i> Curtis	var. <i>pubescens</i> (Torr.) D.M. Thomps.					ROS	CRU		
<i>Mimulus aurantiacus</i> Curtis	var. <i>purpureus</i> (Nutt.) D.M. Thomps.			CAT					
<i>Mimulus cardinalis</i> Benth.				CAT			CRU		
<i>Mimulus floribundus</i> Lindl.		CLE ¹⁸⁶		CAT		ROS			
<i>Mimulus guttatus</i> DC.		CLE		CAT		ROS	CRU		
<i>Mimulus latifolius</i> A. Gray				CAT ¹⁸⁷			CRU		
<i>Mimulus traskiae</i> A.L. Grant				CAT					
Pitosporeaceae									
<i>Pitiosporum undulatum</i> Vent.*				CAT ¹⁸⁸					
Plantaginaceae									
<i>Antirrhinum kelloggii</i> Greene				CAT			CRU		
<i>Antirrhinum multiflorum</i> Pennell							CRU		
<i>Antirrhinum nuttallianum</i> A. DC.	ssp. <i>subsessile</i> (A. Gray) D.M. Thomps.	CLE		CAT		ROS	CRU	ANA	MIG
<i>Callitriche marginata</i> Torr.		CLE		CAT					
<i>Collinsia heterophylla</i> Graham		CLE				ROS			
<i>Gambelia speciosa</i> Nutt.		CLE		CAT	BAR				
<i>Keckiella cordifolia</i> (Benth.) Straw		CLE		CAT		ROS	CRU	ANA	
<i>Kickxia elatine</i> (L.) Dumort.*				CAT ¹⁸⁹					
<i>Linaria bipartita</i> (Vent.) Willd.*				CAT					
<i>Nuttallanthus texanus</i> (Scheele)		CLE		CAT		ROS	CRU	ANA	MIG
D.A. Sutton									
<i>Veronica anagallis-aquatica</i> L.*							CRU		
<i>Plantago coronopus</i> L.*			NIC	CAT				ANA	MIG
<i>Plantago elongata</i> Pursh						ROS	CRU		MIG
<i>Plantago erecta</i> E. Morris		CLE		CAT		ROS	CRU	ANA	
<i>Plantago lanceolata</i> L.*		CLE		CAT ¹⁹⁰			CRU		MIG
<i>Plantago major</i> L.*			NIC	CAT			CRU		
<i>Plantago maritima</i> L.						ROS			
<i>Plantago ovata</i> Forssk.		CLE		CAT	BAR	ROS	CRU	ANA	MIG
<i>Plantago subnuda</i> Pilg.*	var. <i>insularis</i> (Eastw.) S.C. Meyers & A. Liston		NIC	CAT		ROS	CRU		MIG
Plantanaceae									
<i>Plantanus racemosa</i> Nutt.				CAT*			CRU		

¹⁸⁵OBE: John Knapp, Denise Knapp, 7, April 13, 2003

¹⁸⁶SBBG: S. Boyd, T. Ross, L. Amstedt, Apr 8 1990 4291

¹⁸⁷Dave M. Thompson 2012, *Mimulus*, in Jepson Flora Project (eds.) Jepson eFlora, accessed on May 7 2014

¹⁸⁸GH: R.F. Thorne & A.D. Probst 1974 09-12 45100

¹⁸⁹SBBG: M.L. Hoels, R.F. Thorne, J. Takara Jul 25 1995 2458

¹⁹⁰SBBG: M.L. Hoels, R.F. Thorne Apr 6 1996 2671

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
Plumbaginaceae									
<i>Armeria maritima</i> (Mill.) Willd.						ROS			
<i>Limonium californicum</i> (Boiss.) A. Heller*	ssp. <i>californica</i> (Boiss.) A.E. Porsild	CLE [?] 191							
<i>Limonium peresii</i> (Stapf) F.T. Hubb.*		CLE		CAT				ANA &	MIG &
<i>Limonium sinuatum</i> (L.) Mill.*		CLE		CAT					
Polemoniaceae									
<i>Allophylum glutinosum</i> (Benth.) A.D. Grant & V.E. Grant		CLE		CAT			CRU		
<i>Eriastrum filifolium</i> (Nutt.) Wooton & Standl.		CLE		CAT					
<i>Gilia achilleifolia</i> Benth.	ssp. <i>multicaulis</i> (Benth.) V.E. Grant & A.D. Grant	CLE		CAT		ROS	CRU		
<i>Gilia engelensis</i> V.E. Grant		CLE		CAT			CRU		
<i>Gilia capitata</i> Sims	ssp. <i>abrotanifolia</i> (Greene) V.E. Grant	CLE		CAT		ROS	CRU	ANA	MIG
<i>Gilia chlorum</i> (Jeps.) V.E. Grant		CLE	NIC	CAT	BAR	ROS	CRU	ANA	
<i>Gilia nevadensis</i> A. Gray	ssp. <i>hoffmannii</i> (Eastw.) A.D. Grant & V.E. Grant	CLE		CAT		ROS	CRU		MIG
<i>Gilia tenuiflora</i> Benth.		CLE		CAT					
<i>Leptosiphon bicolor</i> Nutt.		CLE		CAT					
<i>Leptosiphon parviflorus</i> Benth.		CLE		CAT		ROS	CRU		
<i>Leptosiphon pygmaeus</i> (Brand) J.M. Porter & L.A. Johnson	ssp. <i>pygmaeus</i>	CLE		CAT					
<i>Linanthus dianthiflorus</i> (Benth.) Greene		CLE		CAT			CRU		
<i>Navarretia atractylloides</i> (Benth.) Hook. & Arn.		CLE		CAT		ROS	CRU		
<i>Navarretia hamata</i> Greene	ssp. <i>leptantha</i> (Greene) H. Mason	CLE		CAT					
Polygalaceae									
<i>Polygala californica</i> Nutt.							CRU		
<i>Chorizanthe staticoides</i> Benth.				CAT					
<i>Chorizanthe wheeleri</i> S. Watson				CAT		ROS	CRU		
<i>Eriogonum arborescens</i> Greene						ROS	CRU	ANA	
<i>Eriogonum chieretum</i> Benth.			NIC ^{192*}			ROS			
<i>Eriogonum fasciculatum</i> Benth.*	var. <i>fasciculatum</i>			CAT ¹⁹³					
<i>Eriogonum fasciculatum</i> Benth.*	var. <i>polifolium</i> (Benth.) Torr. & A. Gray		NIC		BAR				
<i>Eriogonum giganteum</i> S. Watson	var. <i>compactum</i> Dunkle								
<i>Eriogonum giganteum</i> S. Watson	var. <i>formosum</i> K. Brandegee	CLE		CAT		ROS	CRU*		ANA
<i>Eriogonum giganteum</i> S. Watson	var. <i>giganteum</i>	CLE		CAT			CRU		
<i>Eriogonum grande</i> Greene	var. <i>grande</i>	CLE		CAT			CRU		

¹⁹¹Pers. com. E. Howe
¹⁹²S.BBC; S.A. Junak, T. Murphy; SN-432; Feb 21, 1990
¹⁹³HSC; R.F. Thorne, D. Propast, M. Haefels; Sep 12, 1974; 45110

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Eriogonum grande</i> Greene	ssp. <i>rubescens</i> (Greene) Munz					ROS	CRU	ANA	MIG
<i>Eriogonum grande</i> Greene	var. <i>tinorum</i> Reveal		NIC	CAT		ROS	CRU		
<i>Lastarratea coriacea</i> (Goodman) Hoover									
<i>Persicaria lapathifolia</i> (L.) Gray									
<i>Polygonum argyrocoleon</i> Kunze*		CLE	NIC	CAT			CRU		
<i>Polygonum aviculare</i> L.*	ssp. <i>depressum</i> (Meisn.) Arcang.	CLE	NIC	CAT		ROS	CRU	ANA	
<i>Pterostegia drymarioides</i>	Fisch. & C.A. Mey.	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Rumex acetosella</i> L.*						ROS	CRU		
<i>Rumex conglomeratus</i> Murray*		CLE ¹⁹⁴		CAT		ROS	CRU		
<i>Rumex crispus</i> L.*		CLE	NIC	CAT		ROS	CRU	ANA	MIG
<i>Rumex fueginus</i> Phil.									MIG
<i>Rumex obtusifolius</i> L.*			NIC	CAT					
<i>Rumex pulcher</i> L.*							CRU		
<i>Rumex salicifolius</i> Weimm.		CLE	NIC	CAT		ROS	CRU		MIG
Portulacaceae									
<i>Portulaca oleracea</i> L.*				CAT			CRU		
Primulaceae									
<i>Dodecatheon cleveandtii</i> Greene	ssp. <i>insulare</i> H.J. Thomps.	CLE	NIC	CAT		ROS	CRU	ANA	MIG
Ranunculaceae									
<i>Clematis lasiantha</i> Nutt.							CRU		
<i>Clematis ligusticifolia</i> Nutt.				CAT		ROS	CRU		
<i>Clematis pauciflora</i> Nutt.							CRU		
<i>Delphinium parryi</i> A. Gray	ssp. <i>maritimum</i> (Davidson) M.J. Warnock			CAT		ROS	CRU	ANA	MIG
<i>Delphinium parryi</i> A. Gray	ssp. <i>parryi</i>			CAT			CRU		
<i>Delphinium variegatum</i> Torr. & A. Gray	ssp. <i>kinakense</i> (Munz) M.J. Warnock	CLE							
<i>Delphinium variegatum</i> Torr. & A. Gray	ssp. <i>thornei</i> Munz	CLE							
<i>Ranunculus californicus</i> Benth.				CAT		ROS	CRU		MIG
<i>Ranunculus hebecarpus</i> Hook. & Arn.				CAT					
Resedaceae									
<i>Oligomeris limifolia</i> (Hornem.) J.F. Macbr.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Reseda odorata</i> L.*				CAT					
Rhamnaceae									
<i>Ceanothus arboreus</i> Greene				CAT		ROS	CRU		
<i>Ceanothus megacarpus</i> Nutt.	var. <i>insularis</i> (Eastw.) Munz	CLE		CAT		ROS	CRU	ANA	MIG&
<i>Ceanothus megacarpus</i> Nutt.	var. <i>megacarpus</i>	CLE		CAT			CRU		
<i>Frangula californica</i> (Eschsch.) A. Gray	ssp. <i>californica</i>	CLE		CAT		ROS	CRU		MIG&
<i>Rhamnus pirifolia</i> Greene							CRU		
Rosaceae									
<i>Adenostoma fasciculatum</i> Hook. & Arn.	var. <i>fasciculatum</i>	CLE		CAT		ROS	CRU		

¹⁹⁴SD: Steven A. Junak May 18, 1996 SCI488a

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Adenostoma fasciculatum</i> Hook. & Arn.	var. <i>prostratum</i> Dunkle			CAT		ROS	CRU		
<i>Aphanes occidentalis</i> (Nutt.) Rydb.		CLE		CAT		ROS	CRU		
<i>Cercocarpus betuloides</i> Nutt.	var. <i>betuloides</i>			CAT		ROS	CRU		
<i>Cercocarpus betuloides</i> Nutt.	var. <i>blancheae</i> (C.K. Schneid.) Little			CAT		ROS	CRU		
<i>Cercocarpus traskiae</i> Eastw.				CAT					
<i>Drymocalis glandulosa</i> (Lindl.) Rydb. ¹⁹⁵				CAT					
<i>Heteromeles arbutifolia</i> (Lindl.) M. Roem.		CLE		CAT		ROS	CRU	ANA	MIG
<i>Holodiscus discolor</i> (Pursh) Maxim.				CAT			CRU		
<i>Lynothamnus floribundus</i> A. Gray	ssp. <i>asplenifolius</i> (Greene) P.H. Raven	CLE		CAT		ROS	CRU		
<i>Lynothamnus floribundus</i> A. Gray	ssp. <i>floribundus</i>			CAT					
<i>Potentilla anserina</i> L.	ssp. <i>paeflora</i> (Howell) Rousi			CAT ¹⁹⁶			CRU		MIG
<i>Poterium sanguisorba</i> L.*				CAT			CRU	ANA	
<i>Prunus ilicifolia</i> (Hook. & Arn.) D. Dietr.	ssp. <i>lyonii</i> (Eastw.) P.H. Raven	CLE		CAT		ROS	CRU	ANA	
<i>Rosa californica</i> Cham. & Schltdl.				CAT		ROS	CRU		
<i>Rubus ursinus</i> Cham. & Schltdl.				CAT		ROS	CRU		MIG
Rubiaceae									
<i>Galium angustifolium</i> subsp.	ssp. <i>foliosum</i> (Hilend & J.T. Howell) Dempster & Stebbins					ROS	CRU	ANA	
<i>Galium angustifolium</i> A. Gray	ssp. <i>angustifolium</i>			CAT			CRU	ANA	MIG
<i>Galium aparine</i> L.		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Galium buxifolium</i> Greene							CRU		MIG
<i>Galium californicum</i> Hook. & Arn.	ssp. <i>flaccidum</i> (Greene) Dempster & Stebbins						CRU		
<i>Galium californicum</i> Hook. & Arn.	ssp. <i>miguelense</i> (Greene) Dempster & Stebbins					ROS			MIG
<i>Galium catalinense</i> A. Gray	ssp. <i>acrispum</i> Dempster	CLE							
<i>Galium catalinense</i> A. Gray	ssp. <i>catalinense</i>			CAT					
<i>Galium nuttallii</i> A. Gray	ssp. <i>insulare</i> Ferris			CAT		ROS	CRU		
<i>Galium parisiense</i> L.*				CAT ¹⁹⁷		ROS			
<i>Galium porrigens</i> Dempster	var. <i>porrigens</i>			CAT		ROS	CRU		
Rutaceae									
<i>Ruta chalepensis</i> L.*				CAT					
Salicaceae									
<i>Populus fremontii</i> S. Watson	ssp. <i>fremontii</i>			CAT			CRU		
<i>Populus trichocarpa</i> Hook.				CAT		ROS	CRU		
<i>Salix exigua</i> Nutt.			NIC				CRU		
<i>Salix gooddingii</i> C. R. Ball		CLE							
<i>Salix laevigata</i> Bebb				CAT			CRU		

¹⁹⁵Synonym: *Potentilla glandulosa* Lindl.¹⁹⁶[C; Tim Ross, 6923, Apr 22, 1993¹⁹⁷SBBG; S.A. Junak, M.L. Hoefs, K. Kirkland Jul 17, 1998 SCA-769

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Salix lasianдра</i> Benth.							CRU		
<i>Salix lasiolepis</i> Benth.	var. <i>lasianдра</i>	CLE? ¹⁹⁸	NIC	CAT		ROS	CRU	ANA	MIG
Sapindaceae									
<i>Acer macrophyllum</i> Pursh							CRU		
Saxifragaceae									
<i>Heuchera maxima</i> Greene		CLE	NIC	CAT		ROS	CRU	ANA	
<i>Jepsonia multifolia</i> (Greene) Small				CAT		ROS	CRU		
<i>Lithophragma affine</i> A. Gray				CAT		ROS			
<i>Lithophragma cymbalaria</i> Torr. & A. Gray						ROS	CRU		
<i>Lithophragma maximum</i> Baccig.									
<i>Micranthes californica</i> (Greene) Small ¹⁹⁹		CLE ²⁰⁰				ROS	CRU		
Scrophulariaceae									
<i>Myoporum laetum</i> G. Forst. *		CLE ²⁰¹	NIC			ROS	CRU &		
<i>Scrophularia californica</i>									
Cham. & Sehtld.									
<i>Scrophularia villosa</i> Pennell		CLE		CAT			CRU		
<i>Verbascum thapsus</i> L. *									
Solanaceae									
<i>Datura wrightii</i> Regel		CLE? ^{202*}		CAT		ROS	CRU		
<i>Lycium brevipes</i> Benth.									
<i>Lycium californicum</i> Nutt.		CLE	NIC	CAT &			CRU	ANA	MIG
<i>Lycium fremontii</i> A. Gray			NIC	CAT	BAR	ROS			
<i>Lycium verrucosum</i> Eastw.			NIC &						
<i>Lycopersicon esculentum</i> Mill. *		CLE? ²⁰³	NIC	CAT ²⁰⁴	BAR &		CRU	ANA &	MIG &
<i>Nicotiana cleveandtii</i> A. Gray									
<i>Nicotiana glauca</i> Graham *		CLE? ²⁰⁶	NIC	CAT ²⁰⁵	BAR		CRU	ANA	
<i>Nicotiana quadrivalvis</i> Pursh				CAT			CRU		
<i>Petunia parviflora</i> Juss.				CAT ²⁰⁷					
<i>Solanum americanum</i> Mill. *									
<i>Solanum douglasii</i> Dunal		CLE ²⁰⁸	NIC			ROS		ANA	
		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG

198Pers. com. E. Howe

199Synonym: *Stafifraga californica* Greene

200SBBG: S.A. Junak Mar 13 1997 SCI-770

201SBBG: S.A. Junak Jul 31 1981 SCI-53

202Pers. com. E. Howe

203Pers. com. E. Howe

204RSA: R.F. Thorne, 47381, Sep 4 1975

205RSA: Blanche Trask Mar 1901 s.n.

206Pers. com. E. Howe

207SD: Robert F. Thorne, P. Everett, 34883, Jun 22, 1965

208SBBG: H.L. Ferguson, R.M. Reuchamp Sep 15 1979

209SBBG: S.A. Junak Sep 23 1995 SR-896

APPENDIX 2. Continued

Family/species	ssp./var. and infraname	CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Solanum elaeagnifolium</i> Cav.*				CAT		ROS	CRU		
<i>Solanum wallacei</i> (A. Gray) Parish				CAT		ROS	CRU		
Tamaricaceae									
<i>Tamarix aphylla</i> (L.) H. Karst.*						ROS			
<i>Tamarix chinensis</i> Lour.*		CLE? ²¹⁰							
<i>Tamarix parviflora</i> DC.*			NIC	CAT ²¹¹		ROS	CRU	ANA	MIG
<i>Tamarix ramosissima</i> Ledeb.*		CLE							
Theophrastaceae									
<i>Samolus parviflorus</i> Raf.							CRU		
Tropaeolaceae									
<i>Tropaeolum majus</i> L.*		CLE ²¹²		CAT	BAR&				
Ulmaceae									
<i>Ulmus hollandica</i> Mill.*							CRU		
Urticaceae									
<i>Hesperocnide tenella</i> Torr.		CLE		CAT	BAR	ROS	CRU		
<i>Parietaria hespera</i> Hinton		CLE	NIC	CAT	BAR	ROS	CRU	ANA	MIG
<i>Soleirolia soleirolii</i> (Req.) Dandy*			NIC						
<i>Urtica dioica</i> L.				CAT		ROS	CRU	ANA	
<i>Urtica urens</i> L.	ssp. <i>holosericea</i> (Nutt.) Thorne			CAT		ROS	CRU		MIG
Valerianaceae									
<i>Centranthus ruber</i> (L.) DC.*				CAT			CRU		
<i>Plectritis ciliosa</i> (Greene) Jeps.							CRU		
Verbenaceae									
<i>Phyla nodiflora</i> (L.) Greene*		CLE ²¹³		CAT			CRU ²¹⁴		
<i>Verbena bracteata</i> Lag. & Rodr.		CLE ²¹⁵		CAT		ROS			
<i>Verbena lasiostachys</i> Link	var. <i>lasiostachys</i>	CLE	NIC	CAT					
<i>Verbena lasiostachys</i> Link	var. <i>scabrida</i> Moldenke			CAT		ROS	CRU		MIG
Violaceae									
<i>Viola pedunculata</i> Torr. & A. Gray		CLE		CAT		ROS	CRU		
Vitaceae									
<i>Vitis girdiana</i> Munson				CAT					
Zygophyllaceae									
<i>Tribulus terrestris</i> L.*		436	279	CAT ²¹⁶	150	519	662	271	296
NUMBER OF SPECIES									

²¹⁰Pers. com. E. Howe²¹¹RSA: R.E. Thorne, 45759, Mar 22 1975²¹²UCR: T.S. Ross, 5434, May 22 1991²¹³BBG: H.L. Ferguson Mar 12 1981 234²¹⁴BBG: S.A. Junak, R.N. Philbrick, M.C. Hochberg, SC-63, May 9 1979²¹⁵SA: E. Kellogg Jun 28 1992 s.n.²¹⁶BBG: S.A. Junak, K. Kirkland, M. Bushman Oct 21 1998 SCa-815