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Peter H. Raven Stanford University

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GEORGE BARCLAY AND THE "CALIFORNIA" PORTION OF THE BOTANY OF THE SULPHUR

PETER H. RAVEN

Stanford University, Stanford, California

One of the first expeditions of botanical importance that visited what is now southern California and Baja California was that of *H. M. S. Sulphur* under the command of Captain Edward Belcher, which visited these areas from October 19 to December 6, 1837, and again from September 20 to November 21, 1839. A certain amount of confusion has surrounded accounts of the botanical results of this voyage, and this has resulted in erroneous interpretations of the type material of some species. A brief general account of Barclay's role in the expedition has been given by John Smith (*Gard. Chron.* 17: 305–306, 1882).

In her account of the voyage, McKelvey (Botanical Exploration of the Trans-Mississippi West 1790–1850, 1955, p. 636–658) tells that there were two collectors on board, Richard Brinsley Hinds and a "Mr. Barclay." She calls Hinds a "Surgeon-naturalist" but has very little to say of Barclay. This is understandable since Hinds was editor of The botany of the ... Surphur (1844), for which comments on the plants collected and descriptions of the new species were prepared by George Bentham. In addition, Hinds wrote an essay on "The regions of vegetation . . ." (in Belcher's Narrative . . ., p. 232–460. 1843). Barclay, on the other hand, apparently wrote nothing.

George Barclay, however, was the official collector sent out by the Royal Botanic Gardens, Kew, whereas Hinds was Surgeon on the expedition, and obtained his botanical collections as an avocation. Considerable information about Barclay can be gleaned from a manuscript volume of letters and notes in the "Kew Collectors" series, kept at the Royal Botanic Gardens, Kew, and additional information in a manuscript diary kept in the Department of Botany, British Museum (Natural History). It is evident from the copy of Barclay's instructions in his book in the Kew Collectors series that he was to be concerned primarily with gathering seeds for propagation and secondarily with obtaining herbarium specimens. All materials were to be sent to W. T. Aiton at Kew.

Barclay's first letter to Aiton (Kew Collectors—Barclay, p. 18), dated December 6, 1835, was sent from the ship while it was still in harbor in Portsmouth, and expressed a dissatisfaction with conditions that was to pervade all of his subsequent letters and his diary. Since Hinds and Sinclair, as surgeons, were of higher social rank than he, they enjoyed much greater privileges on board and as regards going on shore. Barclay, for his part, was apparently very much concerned with retaining his position as a collector for the Royal Botanic Gardens and so became intensely jealous of Hinds. It is also evident that the bad feeling became mutual, for in a letter to Bentham, dated July 4, 1845, and sent from Perth, Australia, Hinds writes as follows: "With regard to the preface, I must confess I was totally at a loss, and now that the work is most probably concluded I hasten to make my confessions. It often occupied my thoughts, and I believe it was your wish that we should speak favorably of the services rendered by Dr. Sinclair and Mr. Barclay. For myself I am totally at a loss to know what these services were that they have not been amply repaid for. Barclay was the hired collector for Kew and received a good salary. He had his 'quid pro

quo.' I deny any claim that he had as a man of science, and I never discovered that he had any sentiments which belong to such . . ." Bentham did however mention both Barclay and Sinclair, as noted by McKelvey (op. cit., p. 637). Although Hinds probably ignored Barclay for the most part, the latter apparently looked upon the situation as directly competitive.

In his diary Barclay gives some details of his collecting activities which are of interest. The shore itinerary of Hinds is relatively well known and with a few significant exceptions is paralleled by that of Barclay. Barclay's itinerary on shore in the region under consideration may be summarized as follows:

Oct. 20-24, 1837	Yerba Buena and vicinity, by foot
Oct. 25	Yerba Buena via Mission Dolores to Rancho de las Pulgas
Oct. 26	to Mission Santa Clara and San Jose
Oct. 29	return to Mission Dolores
Oct. 30	back to the ship at Yerba Buena
Nov. 1–5	Yerba Buena and vicinity, by foot
Nov. 7–15	Barclay attached to and making short trips from the Sulphur's companion
	ship, the Starling, anchored between Carquines Straits and the mouth of the
	Sacramento River.
Nov. 19–21	Yerba Buena Island and Angel Island; later Sausalito, then to the vicinity
	of Pinole on the east shore of the Bay.
Nov. 22–26	Yerba Buena and vicinity, day trips
Dec. 2	Monterey. Landed with Sinclair near the remains of the fort, then through
	the town to the Carmel Mission.
Dec. 3	Monterey—near the town.
Sept. 22, 1839	Yerba Buena
Sept. 25	"Bodegas"—present Bodega Bay, Sonoma County, California.
Sept. 30	Yerba Buena
Oct. 4	Monterey
Oct. 13	San Pedro, and climbed to the top of the San Pedro Hills.
Oct. 17	San Diego-land near the Fort, then to the Presidio and the Mission.
_	Several other short excursions until the 21st (22nd?).
Oct. 29	San Bartolomé (30 minutes on shore)
Nov. 2–9, 11–13	Bahía Magdalena, including the islands.
Nov. 21	Cabo San Lucas (8 hours on shore).

It will be noted that Barclay was not allowed to accompany the well known expedition up the Sacramento River (Oct. 31–Nov. 18, 1837), on which Hinds collected a number of interesting plants, nor was he permitted to land in some of the other places where botanical collections were made, such as San Quintín.

Some of Barclay's comments in his diary on the areas he visited are of botanical interest. As an example may be quoted a few of his remarks on what is now San Francisco, written in October, 1837: "The road [from Yerba Buena to the Mission Dolores] led us through a kind of coppice-Wood—chiefly evergreen oaks—Arbutus—and Rhus lobata . . . 'Yerba Oso' or bears herb is a handsome shrub abundant upon the arenulous range between the Presidio and the Mission of San Francisco. It is perhaps worthy of remark that this sandy ridge lying between the Mission and Presidio is the only wooded part of the country near San Francisco . . ." In general, however, Barclay's comments are inferior in accuracy and literary quality to the published writings of Belcher and Hinds dealing with many of the same subjects. As suggested by Smith (Gard. Chron. 17: 306. 1882) Barclay probably died in the late 1840's in Buenos Aires, having returned to South America in private employ as a horticultural collector following the conclusion of the voyage of the Sulphur. His date of birth is apparently not recorded, but he died a relatively young man.

Much of the difference in the subsequent treatment given Hinds and Barclay was due to the disposition of their collections, Hinds giving his to Bentham, whereas Barclay's went to Kew and then apparently through the instrumentality of W. T. Aiton to Robert Brown at the British Museum. Only 405 specimens collected by Barclay, however, are recorded at the British Museum as having been received from Aiton in 1839 (thus before Barclay's second visit to California). In fact there are approximately 4,000 Barclay specimens at the British Museum. When and from whom they were received cannot now be traced in either the British Museum's or Kew's records or correspondence. At some point, however, Sir William Jackson Hooker obtained a partial set of Barclay's plants, and he made these available to his friend Bentham. His set, however, was not accompanied by the rather full field notes of Barclay, who in accord with the terms of his instructions kept a consecutively numbered field record of his collections. As far as we can judge, Hinds's plants never had associated with them more than the name of the locality where they were collected and his gatherings are in general less full than Barclay's. The third collector, Dr. Sinclair, also obtained a few plants in California on this voyage and perhaps gave them directly to Hooker, as will be seen below.

Thus in working up the plants from the voyage of the Sulphur, Bentham had available not only all of Hinds's plants but also Hooker's set of Barclay's plants and probably, through Hooker, all of Sinclair's also. All of this material is now brought together in the general herbarium of the Royal Botanic Gardens, Kew. In a letter to Bentham, dated February 10, 1843, Hinds asks, "Are all Barclay's plants accessible to you? My own collection is entirely in your hands. Sir Wm. Hooker has a few from Dr. Sinclair. These are whole [sic] that were collected, and your materials" (Bentham correspondence, Royal Botanic Gardens, Kew). Hooker sent the Barclay and Sinclair specimens to Bentham on January 25, 1842, and they were received the following day, according to correspondence at Kew. Bentham had the Hinds specimens by December 17, 1841 (Hinds to Bentham, letter, December 17, 1841). It is important to note that all of this material was available to Bentham throughout the time he was conducting his studies, and hence all of it is equally important for purposes of typification. Furthermore, nearly every sheet, whether from his own or from Hooker's herbarium, bears a label in the hand of Bentham. The explanation for this is to be found in a letter from Hooker to Bentham, dated January 25, 1842 (Hooker-Bentham, p. 299), in which Hooker says, "If you please, when you are writing the names on a ticket for my specimens, let said ticket be rather neatly cut at the edge. I value your autographs of that kind and fasten them down in the Herbm." These were in nearly every case the only labels retained by Hooker. In the same letter, Hooker offers any duplicates present in the collection for Bentham's herbarium, and a number of the latter were taken as Bentham worked through the plants. In a later letter (Hooker-Bentham, p. 327, October 31, 1842) he asks Bentham for duplicates of Hinds's material "not in Barclays . . . Of course, I mean such as are new or rare." This request was acceded to and the Hooker Herbarium, incorporated in the general collections at Kew, contains a number of duplicates of Hinds specimens. On the labels in his own collection Bentham indicated the date when he incorporated each in his herbarium (and presumably finished studying it). It is important to realize that such dates are not dates of collection, since this point has caused some confusion from time to time; and the same applies to most sheets from the Bentham Herbarium.

In the light of this material, I will now present in the order and with the numbers given by Bentham a list of the original material of the new species described by him in the "California" portion of the Botany of the Sulphur (Parts 1, 2, and a portion of Part 3; p. 1–57, pl. 1–26). I have attempted whenever feasible to indicate in parentheses the current names for the plants originally described in this book by Bentham. In the following list, first the collections at Kew (K) from the sources given above are cited, thus including all material available to Bentham in preparing the descriptions of his new species. "B" indicates specimens which came to Kew from Bentham's herbarium, "H" those from Hooker's. If

only one collection was available to Bentham, the name is preceded by an asterisk. All of the labels are written in Bentham's hand unless otherwise indicated. If Bentham had some Barclay material at hand, a second paragraph is added, giving the particulars of Barclay's more extensive field notes from his specimens at the British Museum (BM), starting with his field number. Barclay material has been located at the British Museum in nearly every case in which it exists at Kew, and in every case is considered to belong to the same collection. According to the provisions of the Code, all duplicates of such collections are to be considered isotypes, but the lectotype must be selected from the material Bentham actually worked with at Kew, if he had more than one specimen, and if he had only one, it should be considered the type. There are numerous additional collections made by Barclay at the British Museum, some of them belonging to species described by Bentham, but for which he had no Barclay material. These are not mentioned here. Through the kindness of Mr. J. E. Dandy, Keeper of Botany, British Museum (Natural History), seventy-one duplicate specimens of Barclay collections have been deposited in the herbarium, Rancho Santa Ana Botanic Garden, Claremont, California (RSA), and, if isotypes, they are indicated here.

It has not been possible to examine all the pertinent literature concerning these plants to determine if a lectotype may have been chosen by subsequent authors. Some such cases are, however, commented upon below. It is hoped that in the future this list may offer some guidance in the selection of lectotypes for the species described from California and Baja California in this work, and the same principles will be found to apply for all collections obtained on the voyage and studied by Bentham.

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LIST OF SPECIES

Krameria parvifolia, p. 6
 K: Magdalena Bay, Hinds (B), Barclay (H).
 BM: Barclay 3088, shrub 3 feet tall. Sandy loam.

*4. Ionidium fruticulosum, p. 7 K: Cape San Lucas, Hinds (B).

6. Hibiscus denudatus, p. 7

K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3085, shrub 2 feet high. Flowers light blue. Ravines. *8. Abutilon californicum, p. 8

*8. Abutiton californicum, p. 8
K: Magdalena Bay, Hinds (B).

11. Janusia californica, p. 8

K: Magdalena Bay, *Hinds* (B), *Barclay* (H). BM: *Barclay 3133*, a twiner. Loamy soil.

*12. Galphimia angustifolia, p. 9 [= Thyrallis angustifolia (Benth.) Kuntze]. K: Cape San Lucas, Hinds (B).

13. Cardiospermum tortuosum, p. 9

K: Magdalena Bay, Hinds (B; 2 sheets), Barclay (B, H).

BM: Barclay 3078, shrub to 3 feet high. Gravelly soil. Hills.

*15. Vitex (sic! = Vitis) californica, p. 10

K: Sacramento River, Hinds (B).

16. Fagonia californica, p. 10 α hindsiana [= F. c. subsp. californica]

K: Magdalena Bay, Hinds (B).

β barclayana [= F. barclayana (Benth.) Rydb.J. K: Magdalena Bay, Barclay (H).

Not found at the British Museum.

Elaphrium rhoifolium, p. 10 [= Bursera hindsiana (Benth.) Engler].

K: Magdalena Bay, Hinds (B).

- *21. Elaphrium hindsianum, p. 10 [= Bursera hindsiana (Benth.) Engler]. K: Magdalena Bay, Hinds (B).
- *22. Schinus? discolor, p. 11 [= Pachycormus discolor (Benth.) Coville]. K: Magdalena Bay, Hinds (B).

28. Dalea ramosissima, p. 11 [= D. brandegei (Rose) Bullock]. K: Magdalena Bay, Hinds (B; 2 sheets), Sinclair (H), Hinds & Barclay (sic! H). BM: Barclay 3122 (also RSA).

Dalea divaricata, p. 12

K: Magdalena Bay, Hinds (B), Barclay (H; 3 sheets, 1 labelled by Bentham and 2 by Planchon, Hooker's secretary).

BM: Barclay 3099, prostrate shrub. Blue & white flowd. Soil sandy.

*30. Dalea canescens, p. 12 [= D. peninsularis (Rose) Bullock].

K: Magdalena Bay, Barclay (B).

BM: Barclay 3121.

32. Phaca candidissima, p. 13 [= Astragalus magdalenae Greene]. K: Magdalena Bay, Hinds (B), Barclay (H).

Not found at the British Museum.

*33. Phaca vestita, p. 13 [= Astragalus anemophilus Greene].

K: San Quintín and Magdalena Bay, Hinds (B, H).

According to Mr. Rupert C. Barneby (pers. comm.) this species is endemic to a short section of the Baja California coast from a little north of San Quintín to El Rosario, so the Magdalena Bay notation on this label and in the protologue is very probably in error.

34. Phaseolus filiformis, p. 13

K: Magdalena Bay, Hinds (B, H), Barclay (H). BM: Barclay 3119, twiner. Flowers pink. Hills.

36. Calliandra californica, p. 14

K: Magdalena Bay, Hinds (B; 2 sheets), Barclay (H).

BM: Barclay 3102, shrub 4 feet high. Sandy soil. Flowers red (also RSA).

47. Gaura? fruticulosa, p. 15 [= Burragea fruticulosa (Benth.) Donnell Smith & Rose]. K: Magdalena Bay, Hinds (B, H), Barclay (H, B), the latter gathering the hairy form.

BM: Barclay 3145, shrub about 3 feet high. Flowers rose. Valleys (also RSA).

Barclay 3146, shrub 3 feet high. Flowers pure white. Valleys. "This seems to be a variety of no. 3145." (also RSA).

Munz (Aliso 4: 501–502. 1960) considered the Hinds material in the Bentham herbarium at Kew to be the type because he thought Hinds was the "official collector"; although this was not a valid reason, his choice can stand as lectotype. The confusion about the date 1843 on one of the labels is explained above.

48. Mentzelia adhaerens, p. 15

K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3081, flowers yellow. Hills.

*51. Drymaria holosteoides, p. 16

K: Magdalena Bay, Hinds (B, H).

*52. Drymaria crassifolia, p. 16 [= D. holosteoides var. crassifolia (Benth.) Duke]. K: Cape San Lucas, Hinds (B)

54. Stegnosperma halimifolium, p. 17

K: Cape San Lucas, Hinds (B); Magdalena Bay, Barclay (H).

BM: Barclay 3141, straggling shrub 6 to 8 feet high. Flowers white and very odoriferous. Sandy loam. Hills. Magdalena (also RSA).

*57. Ribes tortuosum, p. 17

K: San Quintín, Hinds (B).

*59. Cornus glabrata, p. 18

K: San Francisco to Sacramento River, Hinds (B).

*63. Hedyotis asperuloides, p. 19

K: Cape San Lucas, Hinds (B, H),

*64. Hedyotis mucronata, p. 19

K: Magdalena Bay, Barclay (H, B).

BM: Barclay 3093, shrub 3 feet high, Sandy soil, Flowers white. Hills (also RSA).

Mitracarpium lineare, p. 20 [also spelled Mitracarpum and Mitracarpus]. K: Cape San Lucas, Hinds (B).

*66. Pectis multiseta, p. 20

K: Cape San Lucas, Hinds (B).

67. Heleogyne fasciculata, p. 20 [= Hofmeistera fasciculata (Benth.) Walp.] K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3158, one-half to 2/3 feet high. Flowers lilac. Loamy bank. *68. Carphephorus junceus, p. 21 [= Bebbia juncea (Benth.) Greene]. K: Magdalena Bay, Hinds (B, H).

*69. Brickellia hastata, p. 21

K: Magdalena Bay, Barclay (H, B).

BM: Barclay 3149, loose shrub 6 feet high. Sandy loam. Hills (also RSA).

*70. Corethrogyne obovata, p. 22

K: Bodega Bay, Hinds (B, H). Locality is in Sonoma County, California. *71. Corethrogyne virgata, p. 23 [= C. filaginifolia (H. & A.) Nutt. var. virgata (Benth.) A. Gray].

K: San Pedro, Hinds (B, H). *74. Perityle californica, p. 23

K: Magdalena Bay, Hinds (B).

76. Ericameria diffusa, p. 23 [= Haplopappus sonoriensis (A. Gray) Blake].

K: Magdalena Bay, Barclay (H. B); Clarion Island, Barclay (H.) BM: Barclay 3151, Magdalena Bay. Shrub 2 feet high. Sandy loam.

A second collection at the British Museum is Barclay 3184, labelled "Shrub 3 ft. high. Soil.— Sandy loam, Hab. woods, Cape San Lucas.'

77. Aplopappus baccharoides, p. 24 [= Solidago occidentalis (Nutt.) T. & G.]. K: Santa Clara, Sinclair (H, in Planchon's hand; B); San Francisco, Barclay (H).

No specimen found at the British Museum.

*78 Aplopappus arenarius, p. 24 [= Haplopappus arenarius].

K: Cape San Lucas, Hinds (B).

*80. Heterotheca floribunda, p. 24 [= H. grandiflora Nutt.].

K: San Pedro and San Quintín, Hinds (B).

*81. Chrysopsis echioides, p. 25 [= C. villosa (Pursh) Nutt. var. echoides (Benth.) A. Gray]. K: Bodega Bay, Hinds (B).

*86. Franseria hispida, p. 25

K: Magdalena Bay, Barclay (H).

BM: Barclay 3147, in rocky places on the hills.

*87. Franseria chenopodiifolia, p. 26 K: Magdalena Bay, Barclay (H).

BM: Barclay 3096, shrub 5 feet high. Hills.

*88. Encelia conspersa, p. 26

K: Magdalena Bay, Hinds (B).

*89. Encelia nivea, p. 27 [= Helianthus niveus (Benth.) Brandegee]. K: San Quintín, Hinds (B).

*90. Viguiera subincisa, p. 27

K: Magdalena Bay, Barclay (H). BM: Barclay 3155, herbaceous plants 2 feet high. Hills (also RSA).

*92. Helianthus scaberrimus, p. 28 [= H. bolanderi A. Gray]. K: Bodega Bay, Hinds (B).

93. Coreocarpus parthenioides, p. 28

K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3154 (BM), herbaceous plant 11/2 feet high.

As indicated by S. F. Blake on the labels, the Barclay gathering is near var. heterocarpus (A. Gray) Blake and does not agree with the illustration in the Botany of the Sulphur (Pl. 16); therefore the Hinds gathering is to be taken as the lectotype of the species. *94. Acoma dissectum, p. 29 [= Coreocarpus dissectus (Benth.) Blake].

K: Magdalena Bay, Hinds (B, H).
*95. Dysodia anthemidifolia, p. 29 [= Dyssodia anthemidifolia]. K: Magdalena Bay, Barclay (H, B).
BM: Barclay 3157, herbaceous, ½ to 1 foot tall. Loamy banks (also RSA).

*96. Porophyllum gracile, p. 29

K: Magdalena Bay, Hinds (B). *97. Porophyllum tridentatum, p. 30

K: Magdalena Bay, Hinds (B).

*98. Bahia latifolia, p. 30 [= Eriophyllum lanatum (Pursh) Forbes var. arachnoideum (Fisch. & Avé.-Lall.) Jeps.].
K: Bodega Bay, Hinds (B).

100. Hemizonia ramosissima, p. 30

K: San Pedro-San Diego, Hinds (B); San Diego, Barclay (H).

BM: Barclay 3059, ravines.

*102. Hemizonia rudis, p. 31 [= H. luzulifolia DC. subsp. rudis (Benth.) Keck]. K: Santa Clara, Sinclair (H, B).

*104. Amauria rotundifolia, p. 31

K: San Quintín, Hinds (B).

*111. Stephanomeria virgata, p. 32 K: San Pedro, Hinds (B, H).

*113. Fraxinus latifolia, p. 33

K: San Francisco, Hinds (B).

115. Metastelma californicum, p. 33

K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3127, a twiner. Flowers greenish. Hills.

*116. Sarcostemma arenarium Decaisne, in Benth., p. 34

K: Magdalena Bay, Hinds (B).

Holm (Ann. Missouri Botan. Gard. 37: 533. 1950) has cited this collection erroneously as Hinds 1841, the 1841 as usual being the date the label was written by Bentham. Decaisne evidently supplied Bentham with the diagnosis for this species and is therefore its author.

*119. Jacquemontia abutiloides, p. 34

K: Magdalena Bay, Hinds (B).

120. Cuscuta patens, p. 35 [= C. corymbosa R. & P. var. grandiflora Engelm.]. K: Magdalena Bay, Hinds (B), Barclay (H). Not found at the British Museum.

*121. Eriodictyon crassifolium, p. 35

K: San Diego, Barclay (H). The genus was described at this time; on this specimen (Hooker's), Bentham wrote, "Eriodictyon crassifolium. To this genus belongs your Wigandia californica, San Diego, California. Barclay.

BM: Barclay 3054, shrub 6 feet high. Sandy loam. Hills.

*123. Phacelia distans, p. 36

K: Bodega Bay, Hinds (B).

*127. Martynia altheifolia, p. 37

K: Magdalena Bay, Hinds (B; 2 sheets)

*128. Beloperone californica, p. 38 K: Cape San Lucas, Hinds (B).

Solanum hindsianum, p. 39

K: Magdalena Bay, Hinds (B). *131. Physalis glabra, p. 39

*129.

K: Cape San Lucas, Hinds (B).

*132. Physalis crassifolia, p. 40

K: Magdalena Bay, Hinds (B).

133. Lycium brevipes, p. 40

K: Magdalena Bay, Hinds (B), Barclay (H).

BM: Barclay 3131, shrub 3 to 5 feet high. Flowers lilac. Seaside (also RSA).

*135. Antirrhinum cyathiferum, p. 40

K: Magdalena Bay, Hinds (B).

*136. Maurandia juncea, p. 41 [= Galvezia juncea (Benth.) Ball].

K: from San Diego to Magdalena Bay, Hinds (B, 2 sheets).

- *139. Hyptis laniflora, p. 42 K: Cape San Lucas, Hinds (B, H).
- *140. Monardella villosa, p. 42 K: Bodega Bay, Hinds (B).

*149. Abronia gracilis, p. 44

K: Magdalena Bay, Barclay (H).

Not found at the British Museum.

*150. Oxybaphus laevis, p. 44 K: Magdalena Bay, Hinds (B).

*151. Allionia malacoides, p. 44 [= A. incarnata L.].

K: Magdalena Bay, Barclay (H, B). Not found at the British Museum.

 Pterostegia macroptera, p. 44 [= Harfordia macroptera (Benth.) Greene & Parry].
 K: Magdalena Bay, Hinds (B), Barclay (H). BM: Barclay 3083, prostrate shrub, Ravines.

*156. Eriogonum cinereum, p. 45

K: San Pedro, Barclay (H. B).

BM: Barclay 3051, twining shrub, Hills (also RSA).

157. Eriogonum elongatum, p. 45

K: San Pedro, Hinds (B), Barclay (H).

BM: Barclay s.n. (also RSA).

*158. Eriogonum gracile, p. 46 K: San Pedro, Hinds (B).

*159. Eriogonum intricatum, p. 46

K: San Bartolomé, Hinds (B, H).

*162. Obione barclayana, p. 48 [= Atriplex barclayana (Benth.) Dietr.]. K: Magdalena Bay, Barclay (H).

BM: Barclay 3087, sea beach.

*163. Obione microcarpa, p. 48 [= Atriplex pacifica A. Nels.]. K: San Diego, Barclay (H).

BM: Barclay 3057, shrub 1 foot tall. Stiff loam. Ravines.

*164. Obione tetraptera, p. 48 [= Atriplex canescens (Pursh) Nutt.]. K: California (San Diego?), Barclay (H, B).

BM: Barclay 3060, straggling shrub 7 to 9 feet high. Hills, San Diego.

The association of the parts of this collection definitely fixes the type locality as San Diego.

*166. Pedilanthus macrocarpus, p. 49

K: California, Hinds (B). In the protologue, the locality is given as Magdalena Bay, which is doubtless correct. Dressler (Contr. Gray Herb. 182: 119, 1957) erroneously cites Barclay 3114 (BM), from Magdalena Bay, as the type.

*167.

Euphorbia californica, p. 49 K: California, Hinds (B). As for the preceding, the type locality is Magdalena Bay and was given by Bentham.

*168. Euphorbia polycarpa, p. 50

K: Magdalena Bay, Hinds (B).

*170. Euphorbia leucophylla, p. 50 K: Cape San Lucas, Hinds (B).

171. Euphorbia magdalenae, p. 50

K: Magdalena Bav, Hinds (B), Barclay (H).

Not found at the British Museum,

*172. Euphorbia misera, p. 51 K: San Diego and San Quintín, Hinds (B).

*173. Euphorbia hindsiana, p. 51

K: Cape San Lucas, Hinds (B). 174. Euphorbia eriantha, p. 51

K: Magdalena Bay, Hinds (B), Barclay (H). BM: Barclay 3113.

Acalypha californica, p. 51

K: Magdalena Bay, Barclay (H).

BM: Barclay 3138, shrub 3 feet high. Loamy soil. Hills (also RSA). Mozinna canescens, p. 52 [= Jatropha cinerea (C. G. Ortega) Muell. Arg.]. *176. K: Magdalena Bay, Hinds (B).

*178. Serophyton lanceolatum, p. 52 [= Argythamnia lanceolata (Benth.) Muell. Arg.]. K: Magdalena Bay, Barclay (H). BM: Barclay 3111 (BM), twining shrub.

*181. Maytenus phyllanthoides, p. 54

- K: Magdalena Bay, Hinds (B).
- *187. Platanus californica, p. 54 [= P. racemosa Nutt.].

K: Sacramento River, Hinds (B).

- *193. Quercus hindsii, p. 55 [= Q. lobata Née]. K: San Francisco to Sacramento River, Hinds (B).
- *195. Panicum californicum, p. 55 [= Trichachne californica (Benth.) Chase].
- K: Magdalena Bay, Hinds (B). *196. Spartina leiantha, p. 56 [= S. foliosa Trin.]. K: Magdalena Bay, Barclay (H).
- BM: Barclay s.n. *198. Cenchrus pauciflorus, p. 56 [= C. incertus M. A. Curtis]. K: Magdalena Bay, Barclay (H, B).
- BM: Barclay s.n.

 200. Chondrosium polystachium, p. 56 [= Bouteloua barbata Lag.].

 K: Magdalena Bay, Hinds (B), Barclay (H). BM: Barclay 3159-62, four sp. of grass abound on sandy soil.