The underlined numbers are in Bentham's set.

1.

Numbers corresponding to labels on the plants. Commencing with the first plant gathered in California. Valley of the San Joaquin &c.

No 1. River Merced; Dec. 17. 1845. River bottom, sandy soil.

" 2. " " " "

" 3. erodium cicut: " " " "

4. Stanislaus river, Dec. 16th. " river bottom; a species of white oak, going certainly to six feet diameter, think I have seen it eleven.

Camp in the great Sierra; Dec. 24–25. (on a small fork of the Tulare lake fork.

No 5. The long-leaved pine, resembling oak in its general figure – forks sometimes near the ground, making two trunks. At camp, having made its appearance in the course of this short day's journey. (from the lake fork in the valley to a stream among ridges or foot hills of the Sierra – elevation of camp 24–25 = 2200 feet above the sea) The tree appears to be very resinous; the bark of a red color, and the furrows not deep.

(6). Dec. 21. 1845. Moss from an ash; on a dry fork of the San Joaquin river – rolling hills.

"(7) Dec. 16. 1845. Stanislaus river; a large oak, occupying the bottom in open groves.

" 8. 2. lobate From the oaks occupying bottoms of the Lake fork, Dec. 22. 1845. There are here varieties of oaks, or rather different species.

" 9 En route, among foot hills of the Sierra between the Auxúmnè and forks of the respective San Joaquin.

"(10) Same locality as No 9.

"(11) Same " as " 9.

" 12. From a tree in the meadow at camp of 20–21 Dec. '45. foot hills of the Sierra. This tree grew in the water of a little creek.

" 13 Low bottoms of the river Merced; Dec. 17. 1845.

" 14 2. lobate oaks Bottoms of the Cós – um – nè river; Dec 14. 1845.

Note. No 14 appears repeated in the journal.

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page 1.

No. 14.— Dec. 14. 1845. Among the rugged spurs and hollows of the Sierra Nevada. The shrub with the chocolate coloured bark; that of which Dr. Torrey was so anxious to have the flower and fruit. It is common to the Sierra from near the summit to termination of the foot hills of the mountains.

" 15. a species of holly or live oak; very frequent along the streams of the valley (San Joaquin). Dec. 17th, near the Stanislaus river.

2. aquifol.

" 16. From a tree 25 feet high; at camp of Dec. 24–25, in foot hills of Sierra Nevada — elevation 2200 feet above the sea,

" 17. From a small branch among the hills of the lake fork where it enters the valley (of San Joaquin). (a pretty, red flower, abundant in the Rocky Mtns.) Dec. 23d 1845.

" 18. Bottoms of lake fork, a little above its entrance into the valley. Dec. 23d 1845

" 19 Helianth — same locale and date as 18.

D" 20 Arctostaphylos Chocolate col.d shrub — Dec. 23. 1845.

" 21. Lake fork, in the valley, Dec. 22d 1845. Tree 25 feet high & 18 inches diameter. Grows on a large bank.

" 22. One of the live oaks; camp of Dec. 24 — 25. 1845.

HORNBLOWER COLLECTION OF THE BOTANICAL LIBRARY COLUMBIA UNIVERSITY

" 23. From an oak three feet diameter. Dry fork near the lake fork; Dec. 23. 1845.

" 24. River's brink, San Joaquin river. Dec. 21. 1845.

Myrica Californica

" 24 (repeated) Same locality & date as above. There were many in mass in the water.

" 25. Camp of 24–25 Dec. A very abundant shrub of the Great Sierra; here 12 — 20 feet high.

" 26. "Bois noir". Flowers early in March — March.

Cercis occidentalis

The large tree has been destroyed by fire, and this specimen is from the shoots around the root. Camp of 24–25, Decem.

page 2.

No. 27. — Amidst large rocks — taken for roots. of a main branch of

Camp of Dec. 26 — 27. 1845. at head of the Tulare Lake fork, elevation 6570 feet above the sea — near central ridge of the Sierra Nevada.

no 28. on the ridge; thickly covering hill side at camp of 26th — 27th Dec.

" 29. On a high granite (white) ridge. (9400 feet above the sea) a ever-green oak, 7 — 8 feet high. Dec. 26. 1845.

" 30 Same locale & date as 29. a very large pine — one of the large-cored (P. Lambertiana?)

" 31. Same place and date as 29. a lofty pine — 2½ feet diameter (a handsome tree)

" 32 Same kind of tree, in same situation.

" 33 This tree a little thicker than the other. Dec. 26; a little east of locality of 29, and on bottom land of a fork.

" 34 The same as 33.

35 The same place & date as 29. Dec. 26. (The same number (35) goes with the fruit.

Quercus dentiflora Hook & Arn

Camp of Dec. 29 — 30. 1845; at junction of two head streams of the Tulare lake fork, among the rocky eminences of the Sierra Nevada. Elevation = 8200 feet above sea.

No 36. Summit of the sierra Nevada, on a rocky spur immediately below the naked peaks of the central ridge — elevation = 10450 feet above the sea — Dec. 28. (white pine?)

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" 37 Same tree &c, as No. 36.

" 38 nearly same locality as 36, but less exposed.

" 39 Same tree as 38.

" 40 & " 41 Runs along the rocks; abundant on the flat rocks. Dec. 29. 1845

" 42 A common pine of these mountains — large, tall trees.

Page 3.

No 43. On a rocky point overlooking cañon of the river; camp. Dec: 29 — 30. 1845

" 44 Same locality as 43 — I noticed but the one plant.

" 45 & " 46 One of the largest forest trees here — bark yellow and cracked, but not deeply furrowed — as are the pines. a sapin? Dec. 27. 1845.

" 47. The cones of No: 36. — Dec. 28. 1845

" 48. In a valley of the lower ridges — an abundant tree — (live oak?)

Quercus agrifol. (B.?)

" 49 Fruit of No: 48.

Camp on road from San José to Santa Cruz; Summit parts of Coast Mountain (between Francisco & Monterey bays)

February 23. 1846.

No: 100 The red wood. This specimen from the lower branches of the tree — at this camp.

" 101. Same as 100.

" 102 The red wood. This specimen from the very summit of the tree, where this tree appears to bear its flowers. This camp.

" 103. Same as 102.

" 104. The red wood. This specimen from about midway the tree. at this camp. I have not yet measured the altitude of any of these trees, but we travelled about over the mountain between this and the preceding camp (say 4 miles), searching for the largest trees. 9 — 10 feet was a frequent diameter, none going beyond eleven except in a single instance in which the tree measured 14 feet. The bark is very thick; in some of the "large trees being upwards of 16 inches, very deeply furrowed. The trees very straight. The thickness of bark here may be in some measure peculiar to the locality.

Taxodium sempervirens

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(Note a few days afterward, I measured a tree (in the forest belonging to Mr. Graham, near Santa Cruz and in the low grounds near the coast) which was 275 feet high and 15 feet diameter 3 feet above the ground. There were other taller trees in the forest, but I saw none so thick. In the forests of the Sierra Nevada, lat 40° — 41°, I afterwards saw finer trees, of great height, carrying their bulk better, with clear, solid stems and thinner and smoother bark. Among these seven feet was a common diameter,

page 4.

105. In open ground at camp — Feb. 23. — sandy soil, among small round rocks.

106 ? Gilia: same locality & situation

107 On trail near camp of 21 – 23 Feb.° cuesta de los gatos (wild cat ridge) — rather wet ground on side of a small creek, in thick timber.

108 Same as 107.

109 Same as 107.

110 Open prairie — near mountain summit; Feb. 22. 1846

111 Open prairie among foot hills of the mountain; Feby 21.

112 Same situation as 111.

113 Camp of 20 – 21 Feb. — its first appearance. I saw it frequently yesterday on hill sides in the mountain — both on open spots and among the red woods.

114. Camp of Feb. 20 – 21, valley at foot of the cuesta de ~~las~~ gatos. A bush 2 – 5 feet high. Saw it also ~~near~~ on the sandy shore near Monterey in flower about the last of Jan.y (flower yellow)

115 Same plant as 114 & same locality. The contrast of white organs with blue petals (and sometimes petals of other colors) makes this a pretty flower.

116 Solanum umbellif.? Same camp as 114 — a blue-flowering shrub, here 2 – 3 feet high.

117 Hill side among the red woods. Feb.y 22.d same plant as 113.

118 The Madrono. A very handsome tree. on the upper part of the mountain I measured some nearly four feet in diameter and about sixty feet high. It is found in the mountains. I ~~never~~ saw none on the plain or among the foot hills. When dry the wood is said to be red and sometimes of several colors. It is very heavy, hard and

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close grained, and I am told is susceptible of a beautiful polish and is valuable for furniture.

119. Same locality.

120. Arctostaphylos Camp at the Laguna, (Valley of San José, opening on San Francisco Bay). Hills in the rear, bordering the valley. The manzanita.

121 Same as 120

122 Same as 120

123 Oreodaphne Same camp at the Laguna. In the creek near the water, a very sweet-scented laurel (?). I have ~~m~~ marked (and tried it on others) that ~~the~~ smelling the fragrant leaves of this tree produces quicky pain ~~in~~ unpleasant sensations in the head. ~~Fruit is fully formed by the middle of September~~. I saw trees near San Luis Obispo (lat 35° 20') having the fruit fully formed in the middle of September.

124. Hills in rear of the Laguna; Feb. 18.

~~125~~. Camp at western foot of Coast mountain, near Santa Cruz. Feb 24 ~~&~~ 25.

125 (Torrey! (1845?) cf. T. Spathul. Nutt.) At Nutt. Oenothera (Primulopsis) ovata) camp on wet bottom; open prairie.

126. a shrub 7 – 8 feet high; broken, brushy, hills; afternoon of Feb. 24. on road from summit of mountain to Santa Cruz. Soil a hard sand and clay. Flower white.

127 Oreodaphne The sweet scented laurel; camp of Feb 23 – 24; summit of coast mountain.

128. Camps of Feb. 21 – 23 & 23 – 24, and abundant on this mountain. The hickory oak. Until I had found the acorns, I had believed this tree to be a hickory, which it very much resembles in its general shape, and in the whitish color & smoothness of its bark and in its leaf. It is hard and close grained, an evergreen. I saw it on the north hill sides, (which it seems to prefer) nearly one hundred feet high and nearly four feet in diameter.

1846.

Schaeuerbaum

129 Summit of ridge between camps of Feb. 21 & 23 & 23 & 24 (cuesta de los gatos)

130 Cymopterus Camp of Feb. 23 – 24.

131 } Rolling hills at western foot of coast mountain –
132 } Feb 21.

133 A shrub frequent along ridge leading from summit of the cuesta de los gatos towards Santa Cruz; very brushy and broken hills; soil a hard sandy clay. Feb. 24.

134. Camp at Santa Cruz; wet soil of springs – open a yellow flower. Feb. 26.

135 Camp at Santa Cruz. In a grove of red oaks and in a thicket. This was growing on a small oak. This is the plant which two years ago was pointed out to me as the "yerba buena". It is not so. In January (1846), on the Lake fork of the San Joaquin, we gathered the fruit of last year. Flowers white, and difficult to preserve. (?)

136. Camp at Santa Cruz, Feb. 26. In shape of the leaf and in ~~the~~ having hairs on on the branches this ~~fo~~ differs from the specimens observed in the mountains of the Sierra.

137. At the Laguna, valley of San Jose.

138 San Joaquin river; Feb. 7. 1846.

139 Pencil. At the Laguna.

140 Along the hills near mission of San José.
? Ranunculus ~~difficulus~~ Californicus 2nd ver. of Whipple Rep.
Feb. 10. 1846

D 141. Gilia In oak grove at camp near Santa Cruz. The bush about four feet high.

142. The same.

143. The same

144. From an oak which is abundant on the uplands bordering the Mokelumne river, Joaquin valley – an evergreen. Dec. 16. 1845

UNIVERSITY

1846

144. Acorns of 144. Dec. 16, 1845

D 145. Same as 141,

146. Same tree and same locality as 128. The hickory oak.

147. Camp at western foot of coast mountain (cuesta de los gatos) Feb. 25 1846. In rich soil, among small oaks and near red woods. Its height was only 6 or 7 feet. Appears to be marked by some peculiar differences.

148. From the same bush.

149. a yellow-flowering legume, common in the Rocky Mtns on the waters of the Uintah and Grand rivers. Here it is more luxuriant, being about three feet or more in height, with larger leaves. Camp at Santa Cruz.
Thermopsis montana

150 a blue- or purple-flowering shrub, having the organs yellow.
Solanum Californicum?

151 Near camp on summit of coast mountain, Feb. 23d in deep woods; likes a rich, moist soil; and is one of the few flowers in bloom that are somewhat frequent.

152. The same as 149.

153. The same as 149,
Thermopsis

154 The same as 151.
Cardamine angulata?

155. The same plant and same locality as No. 115, (P. Im
Saxifraga peltata = 1740 Kellogg Calif.
Camp on the rio del Pajaro (Bird river). March 2.

156. On road, March 2, near a small laguna; between the mountain and the bay of Monterey.
Lonic. arctopirica

157 Camp at Santa Cruz. Feb 28. 1846. (note. the label of this number has wrong date). In oak woods, brushy
Heliantho

158. and among rocks,

158. Same locality as above, but near the stream.

No. 159. Uva maron (wild grape); a tree or large shrub; some of them measured fifteen feet in height. The Spaniards tell me that the fruit is very good — ~~perhaps this is~~. a beautiful shrub at this time. March 1st, in wood of a little stream near northern shore of Monterey bay. Very abundant in places in the sierra near this camp. (Bird)

Ribes sanguineum Dougl.

D 160. at camp on the Pajaro, river (tributary to north shore of Monterey bay, and about 7 miles from the Bay) in the bottoms of this river, among timber, and in gravelly soil. March 2d

Calycanthus menziesii

161 Eschscholtzia California; rich soil of flat plain bordering the Pajaro river; March 2d

162. Near road between camps of 1st & 2d March. A small, delicate flower, of sky blue color, and one of the earliest to bloom in this country. I found it very abundant on the American fork 2 yrs ago.

163. Camp on right bank of the ~~Lamalumne~~ Auxumne river (San Joaquin valley); March 14.

163. On a sunny hill slope to the river bottom, open; many and luxuriant flowers here. This one abundant.

164. River bottom, open. This plant grows here in an unbroken field, in full bloom. Among it erodium cicutarium, in bloom, occupies the place of the grass.

165 Erodium cicutarium. This is in rich soil, and as in all such cases, much larger than the plant generally.

166. a very small white flower. this camp

167. Dosachia manzanita " yellow " " " "

168. a new (not seen before); this camp,

169. very abundant over all this country.

(For 170 see farther on) Burrelia gracilis Dc.

171 Frequent throughout this valley.

Amsinckia (Eutoca) Douglasii.

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Rudb. Sullivantii but more subcrenate

172. a new (not before seen) yellow. This camp.

173 Brodiaea grandiflora an onion. This camp.

174 a plume shaped flower. Made its first appearance yesterday. This camp.

175 Salvia A legume, white flower; its first appearance.

176 Layia platyglossa var. Very abundant over all this valley; a common plant to this country and now in full bloom.

D 177 Layia elegans Very abundant over all this valley; a whitish flower; there is also a yellow color, more abundant.

178. Occasional; a beautiful purple plant, ~~leaves~~ petals delicately fringed. This camp.

179 ~~abundant in the~~ Frequent in this valley.

180 Frequent in this valley — rare here.

186 River bottom under the oaks. This camp. (note. The ~~plant~~ labels do not always follow regularly, as a considerable number were usually made at once, and the first which came to hand affixed to the plant.)

Camp on the river Tuwalumné ~~river~~; March 15th.

181 Cuni occidentalis In the timber along the river here, and in the bottom. Ten feet high; saw but one bunch or bush.

170. An oak on the uplands bordering the river here. The oaks in the bottom; which appear to be of a different kind, are not yet in flower.

185. Bottom under the oaks. It appears to be now going to seed.

Claytonia ~~perfoliata~~ perfoliata with unusually large pods?

(note. Erodium cicutarium is here 16 inches long in places and on all the uplands here about makes the sward of the country; with it is interspersed other grasses, principally a bunch grass. No 178 was frequent to day; no. 173 frequent; Nos. 164, 176. & 177 as usual, abundant.

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203. At camp of March 18–19. Abundant.

Trophidocarpum new. sch. perfect? (Camp on Butte river (of the Sacramento) latitude 39° 39'. March 28.

204. Many along the road to day. (Prairie between Feather

Delphin menziesii river and Butte creek.

205. Delphinum Along road yesterday, 27th (upland bordering Feather riv.

210. The sycamore of the country with strings of balls. On

D. Plat. Last creek (between Feather and Butte rivers.

209. } Is this the Lunas? Saw it in but one place where

Ann = 213. } it was abundant, — on the open plain. Intelliangs

215. A fine large oak 2½ feet diameter; a new species.

[213] Amblyopia v. Intelliens Oak uplands of Feather river, 27. March.

214. Quercus deinflora Same locality as 215. An evergreen.

212. One of the large deciduous oaks common to the bottoms of these streams. Same locality as 215

206. Another one of the large deciduous oaks. Same locality as 215.

211. Camellia ~~[illegible]~~ March. Abundant in thickets along the ~~[illegible]~~ and in full bloom.

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No. 208. Near Sacramento river, lat. 40° In the sand along the creek.

207. Same locality. Naked gravel. This is a new plant, the colour being white and the leaf different.

~~Linum Californicum~~ Benth.

Left bank of Sacramento river, about lat. 40°. 40'. Camp 8–9 April

Plants.

216. April 8. Large gravelly prairie. This is the beautiful contrasted flower (blue and white) of the Santa Cruz Mts.

217. Bank of the Sacramento; April 8.

Nemophila dumosa Fisch. & Mey

218. " " " gravelly and sandy,

219. " " " "

220 Tolton with uncommonly large leaf. Crossing of the Sacramento. April 8. Wood on low upland prairie bordering river bottom.

221. A blue lupinus 2-3 feet high growing near the Tollon.

222. ? Pencedanum Ferula macrocarpa Hy Ann? not Penced. macrocarpum Nutt
= 1751 Hartweg Calif. Same locality as 218.

223. Among the brush on bank (sometimes bed) of Cottonwood creek - April 8. A shrub resembling willow.

224. En route - April 8. le long de la rivière, dans les roches arose l'eau.

225. Barbacen vulgaris ornamento A new flower - en route dans le bois. in a thicket of a white flowering shrub.

226. Tollon with green fruit. April 7.

227. An evergreen oak, 2 feet diameter April 7.

228 Quercus Another oak - deciduous with small oval shaped leaves but slightly lobed.

229. Camp at Reils creek.

230. 25 March, road from Tanners to Keizars.

231. Bear creek, at Keizars.

232. High prairie, Bear sines. Collinsia grandiflora

233 Eschholtz. n. sp.? mimmuly luteiflorus " " "

234. Feather river uplands.

235 Clematis lasianthera Nutt " "

236. Flower? Il y en avait une quantité (there was much of it) April 7. in open oak woods.

237. Pencedanum utriculatum A common plant that bears one food of.

238. A kind of wild pea - bottom of the Sacraments.

239 Rubus/Fruticosus Coral creek near Hydes' ford of the Sacraments.

240. Aristolochia Same locality. The pitcher plant. A vine frequent on the bottoms of these creeks.

241. Gilia capitata A pretty little blue flower - fragrant - abundant on the prairies - April 5.

242. Lupinus grandis Same localities - abundant on the prairies.

243. D. Populus } Cottonwood in flower. Deer creek at Safford.
244. } The same in fruit, and same locality.

245. D Leptosiphon A new flower - under the shelter of shrubs in woodland & along a small creek. April 7.

246 Orthocarpus

246. Sur la fourche Sec. (Camp creek.) April 7.
a beautiful scarlet legume.

247. Quercus agrifolia Oak, deciduous — En route April 7.

248. Mimorhynchus helianthoides A new yellow flowering plant, often fragrance
on sp. Camps at Lassen's farm Sac.to valley. latitude 40°. April 12.

No. 249. Creek bottom among the oaks, occasionally
Dr Phlox menziesii shaded. A blue or purple legume; common in
this country. Near it Sec. Achillea millefolium;
250; 251; a round leaved clover, not in bloom; fea
vine &c.

250 Hemizonia pungens is generally found most flourishing under the
oaks. These oaks here are No. 253. They are
253 large fine looking trees — very gnarled.

252 Clayptonia perfoliata The wild buckwheat.

254. Same locality as 249, and common in the
Phacelia tanacetifolia bottoms.

255. A yellow flower, the blossoms involuted
Amsinckia like a worm. Common to all this valley.

256. A fula vine very abundant in this bottom.
It seems of fine large growth, several feet
in height.

257. Another prairie — in moister ground, nearer
the river. This appears to be a different species,
and I think and I think the leaves do not
attain a larger size than the specimens

258. Same locality as above, partially exposed to Sun.
Comandra This is the first time I remember to have seen the plant in
flower.

259. On the bottom without the oaks, a good,
Samolus bipunctatus dark soil. I have noticed this plant as
occasional throughout the valley above this.

260. A very frequent plant throughout the valley
above the American fork.

261. & 262. These two lupines are growing side
Lupinus ornatus by side, but they appear to be different species.

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(261 & 262 continued) They are very common in the valley, and so far as I have examined, are always found near streams. They are here in handsome tufts, about 3 feet high and in full bloom; open prairie — soil here, hard and a large gravel. beginning now to form the pods.

263. The Californian poppy. It is here of smaller growth than usual. It is everywhere forming the seed pods.

Drawn by Mr. Keene.

No 270 — an oak Q. Kindii (see his sketch in Herbarium

271. — "

272 — flower

Orthocarpus 273 — a very small fleshy plant with yellow flowers. Sedum spathulifolium sparsiflorum!

274 — yellow handsome flowers.

275 — a chamomile like plant.

300, 301, & 302 numbered in the Drawings but not yet in the plants).

276. purple & blue.

No. 264. Camp, Lassen's farm. Ap. 16. Plants gathered on the open prairie among oaks, but on open ground in river bottom — a good dark soil. Geranium cicutarium.

265. The bee sting plant. a remarkably shaped flower, Orthocarpus higher prairie; yellowish soil — gravelly.

266 a common clover. the leaves heart shaped. Trifolium just now beginning to flower. Same locality (albopurpureum) as 265.

267. A small fleshy leaved legume — flowers yellow — occasionally seen from this in Astragalus sufficiente the valley above to Low Creek. Same locality as 265.

269. Achyrachaena mollis.

268. A small new plant. Transparent, white petals, curved backward and downwards.
First seen at Neil's place, locality of 265.

269. ~~Arabis mollis~~ New plant. Same locality as 265.
Schizopetalum mollis

277. " " " "

278. A very common plant over all these valleys, growing in fields on open ground. The soil here is very hard. It is yellow small.
Burmelia (Baeria) chrysostoma
Seven petals enclosing a number of minute flowers (yellow.) These latter are star shaped, having five petals or lobes(?) and contain the organs of the plant. Same locality as 265.
Dichaetis fremontii

279. A new yellow flowering plant. The extremity of petals having 5 upright teeth. (Same local. as 265)
Mancorhynchus lebenopsylleus Nutt.

280. An occasional plant in this valley (Same local. as 265.)

281. A very small and very common plant. The flower rose colored and very small.

282. A new helianthus? The first specimen seen.
Balsamorhiza macrophylla Nutt.

283. New plant – Same locality as 265.

284. Alsine Douglasii Fenzl (Ar. trichoides Nutt.?) " "

D 285. A new plant, small pink flowers grouped. Locality a little higher than 265; soil hard, dark, and covered with scattered stones – a small pond near. This plant is much covered with hairs. The plant very small.
Limnanthes (n. sp. Buckl.)
Lin. (n. sp.) douglasii
D 285(a) Lab.

286. nearer the pond. soil hard, but black, & richer. a frequent plant this – here whitening in abundance the ground near the lake – a pretty delicate flower. It is now in flower and seed at once.
Limnanthes

287. Same locality as 286. Abundant here and common in the Sacramento valley.
~~Dicha~~ Dichaetis fremontii

288. Same circumstances exactly as 287.

289. Same locality as 288 – an abundant plant – flower yellow, and same character as 278, but a different species.
~~Dichaetis fremontii Torr~~
Dichaetis Fremontii.

TORREY BOTANICAL CLUB COLLECTION HERBARIUM COLUMBIA UNIVERSITY

The finest large have been cut to pieces.

A. B. Freeman.

300. Duncan appropriator — Imp have
Between Cow Creek & the Sacramento —

290
291 } Corresponding to Mr. Rose's drawings.
292
293 } Same plant as 265.
orthocarpus

April 17. Lassen's farm. Plants gathered in a walk on the open prairie south of this creek.

294. Solanum Californicum A Naked and very loose sand on borders of a water bed. Flowers is purple with yellow organs. First in descending the Lake fork and afterwards in Santa Cruz into more frequently.
Amauria?? bu? Jepsen Grinell-Jordt.

295. A beautiful plant. Have have seen it but twice. Grassy, flowery and dry coulée; surface covered with gravel and stones: Dark sandy soil.

296 Lupinus } Same locality as 295 and abundant.
297. " " " " bicolor rose.

298. Jepsen. Coulée side as above.
Ulm Gnaphalodes

299 Frequent. Same locality as 294.
Chenochr heterocarpha Lafg. sp. nov.

303 orthocarpus " "

D. 304 Platystigma lineare abundant "

305 Growing at foot of a conglomerate rock. on
Ercholtzia hypnoides sunny side. In flower and in seed.

306 Thysanocarpus elegans Same locality; frequent.

307 Same locality as 294. A frequent plant.

308. Clover. very stony ground immediately in
Trifol 3 Dentatum bed of coulée.

309. Same locality as 294 & frequent in & near creek beds.

310. Same locale as 294. A very abundant plant throughout the Joaquin and Sacramento valleys.

311. Same locale as 294. The color of this is
Orthocarpus white.

~~312. Same locale as 294.~~

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Nemophila insiflora Dougl. & Hey

312. The delicate blue. Abundant in the Joaquin Sacramento valleys. On side of coulée (south) soil richer and not stony.

313. Same locality as 312. Occurs solitary and rare.

314. Phacelia marginata A new plant. Same locale as 312.

315. Same coulée (or dry rivulet bed) but on south side and entirely and always shaded by a conglomerate rock overhanging it; and in a depression where water endures long tho' none now. This and the following are new plants.

316. Plectritis macrocera Same locality as 315.

317. " " " — first noticed in '44 on Dr Shedne's fork — very small white flower.

318. Layia (Calliachyron) Fremontii Open prairie, sandy soil — hard. a species of onion? white flowers. (318 & 319 transposed?!)

319. Hesperoscordum lacteum a common and abundant plant in the Joaquin & Sacramento valleys. Same locality as 318.

324. (taken for seed.) a tree on Sawyer's creek. (seed) numbered 324. 1846.) 5 April 18. 1846. (Sutter's farm

321. Chlochortus luteus (Drawn by Mr. Resn.) This appears to be the tulip plant of the Arkansas &c. but here the color is yellow as the tulip? with the addition of a blood red spot on the inner side of each of the 3 petals. This specimen brought in by Tyson from near Sutter's farm.

322. An occasional plant — just now beginning to flower. North side of a dry coulée — dark soil, the surface gravelly and stony.

323. Same locality, common.

325. Gilia A small white, flowering plant growing very thickly on the stony bed of the creek very common in such localities

326. Senecio Eurycephalus Torr. & Gr. A weed behaviour? In the same coulée, nearer the main river, soil brown, sandy.

327. Castilleja On the open prairie, brown soil, a little sandy. This is the beautiful red of the Arkansas Divide. Frequent here.

328. Good rich soil, on bottom of Lassen's creek. a cabbage?

April 21. Lassen's farm.

329. A species of nettle of which the Sacramento indians make all their fishing nets, deer nets, ropes etc.

On Antelope creek, trib. to Sacramento. ~~near~~ above Lassens.

330 April 24. Camp at Meadows on creek bottom, at camp.

331 " " "

sheltered by timber. This is the fresh appearance of this plant. 330, 331, both drawn by Mr. Kern.

Camp 25–26 April.

D 332 (25 April) In crossing a very rocky ridge. The beautiful moss plant, but a still different species from any hitherto seen & very beautiful.

D 333. Batis maritima April 25. Frequent along the road.

334. Bed of a dry creek, (Jasmin les, fronces roches) April 25. This is a plant of which hitherto we have never been able to find the flower.

335. Blennosperma bakeri A vine running over broussaille. white flower. first appearance on Whitequail (Milk) creek. Abundant.

336. L'herbe à Dinde. Vine bottom among the oaks Camp 24–25 April.

337. Rocky ground – gravel – open. 25 April.

JOHN TOMLINSON PONDER HERBARIUM COLUMBIA UNIVERSITY

338. A new plant – stipular appearance – very fleshy – new – on rocky ground.
Gdwene

339. Timber of the creek at camp. A new flower (colour pink; heart shaped at base, cusping downwards, – dedecatheon dentatum.)
"Delphinium formosum"

Camp 25 – 26.

341. An oak from the uplands

342 } – Orthocarpus
343 } Drawn by Mr. Kern.

Plants at camp of 27-28 April. On a small head water of Cow Creek, Sierra of the Sacramento.

344. Hard to preserve. Blue with white organs

345. Ilex? The first place where I find it in flowers.

346. The rice root plant – scarlet bell flower. new.
D Berberis aquifol

347. A small yellow flower.
Saxifraga – or anv.?

348 Fritillaria

349 (Umbellif. – Gray don't know.)
Drawn by Mr. Kern

350 Calochortus
351

At Camp of April 27-28, 1846. Plants.
On small stream in head of Lower Valley and tributary to the Sacramento.

352 = 339 Vonza sinu. April 25.

353. Along road. " 27. A moss plant, red – the inside of petals entirely covered with moss like appearance of hairs – entirely red
Calochortus nitidus?
= 350.
This specimen yellow.

354. Dans l'eau même; in the water of a little creek. April 26. A yellow flowering water plant.
"Hippuris vulgaris or Hydrophyll." for mistake of No.!

355 Noon halt – April 26. A handsome water plant growing in the river where the water was six inches deep and current swift.
Sexes of Saltale

356. A new plant; resembling holly oak ... on open hill at camp of 26 – 27 April.

TORREY BOTANICAL CLUB COLUMBIA UNIVERSITY

+ (I put a cross to words I don't comprehend — B.)

Rec.d March 5th

[Collection of 1846]

357 — a blue flowering shrub — 2–5 feet high — in "talle" (~~tulle?~~) — growing abundantly on a + mtn crossed to day — (April 27.)

Ceanothus cordulatus

358 — a red plume plant, its first appearance. I saw it to day in no other situation but at the foot of pines. occasional.

Pedicularis densiflora

359 — a purple flowering shrub, growing very low in close spreading + talles. Its first appearance — on open mountain rocky.

360 — same plant as 353 but of a light purple colour. same localities.

361 — moon halt 26–27. ~~Hon~~ Collinsia parviflora

362 — April 27.

363 — moon halt April 26–27.

Sax. peltate

364 — live oak

365 — another evergreen oak (Drawn by Rose)

366 — the same as 358.

Camp on the upper Sacramento above the Plants. Great Cañon, April 29–30.

367 — Camp 28–29.

368 — mtn. of the Cañon range: April 28.

369 – same locality as 368. tolerably abundant
a new shrub four feet high in tallies.

370 – a cherry? a small shrub 2 & 3 feet high
Prunus subcordata Benth. occasional in these mountains and fresh flow
here.

371 Scattered about tolerably frequent in the pine
Hydrophy. capitatum woods. 28 & 29 April.

372 another new shrub – say 2 - 3 feet high near
the gap in summit of Sierra Nevada 28 April –
a blood red (dark) flower.

373 open prairie Apr 28. Viola pedunculata

374 a tree, say ten feet high – on a creek. no leaves yet.

375 – a foot or two high – abundant – on the higher
parts of the mountains.

376 Tolerably abundant: generally in open rocky
Penstemon ground April 28.

377 The star moss flower of the Columbia (Cattleranea
fall). In beautiful bouquets today.

378 near the lodge; camp 29 – 30 April.
Camassia

379 April 30 – prairie – edge pine woods.
Orthocarpus

380 Lomatium nuttallii villarsia pumilla
open ground – a little rocky – May 1st its fresh
380(a) Calyptridium appearance.

381 scarlet flower. In open pine wood, on
open hill, and on prairie. April 30. its
fresh appearance.

382 Hill side of Klamath lake, May 5 — a coniferæ - [Hill Dr Torrey please remember I am no botanist if I decipher latin names wrong. J.M.P.]

383 Peucedanum — A Kainote? a yampa? The root of this to be put in paper. It is large. May 5. frequent for some time back.

384 — May 4. its fresh appearance, generally in banks; among hills. parasite(?) absinthe.

385 — river bank at camp of 3-4 May — a neat artemisia?

386 — differing from the above and apparently from all the artemisias I have seen, in the form and color of the leaf & a large bush on plain of river bottom among other artemisias.

387 } Juniperus a cedar at camp 4-5 May

388 } a cedar at ford of Klamath outlet

389 a cedar at camp 5-6 May Klamath lake.

390 Geum triflorum Just beginning to flower — abundant here in the lodge; low lake bottom camp 5-6.

391 a small blue flowering legume - abundant here.

392 another legume

393 Betula fennica a common plant in the valley.

394 abundant: low stony ground.

395 very abundant in the valley Calypsora lutea Pr.

396 an onion? Allium cernuum

397 – same locality near Sacramento.
Fritillaria - Kaut.? / in fruit.
398 –
Melanth. in fruit " " "

Latitude 39°12'; in Sacramento valley,
Camp at the Buttes May 30 1846.
Labels to plants for seeds.
No 399 a handsomely colored thistle. occasionally
400 Erythronium plant bearing a small white flower. abundan
401 Eschholzia Californica
402 The blue worm plant. abundant in valley.
403. The large shrubby ~~plant~~ Lupine. common here.
404. il y en a beaucoup

Plants gathered in this month; labelled at this camp May 30 1846
405. May 22d. abundant in valley passes.
406. Found only at one place – there abundant – On entering the oaks of the valley from the Piney region of the Bruchy Pass in the Sierra Nevada May 22.
407. Noon halt 22 May. This changes its color which is originally a violet blue grows in talles.

Recd. march 20th (2d. Sheet of plants). 1846

408. Likes rocky or gravelly ground of the hills — May 22. a blue colored mass flower

409 — A shrubby tree — ft. 15 high — this was the only one seen. brought me by Kit

410 — A shrub 6–10 ft. high — straight growth — Noyah Cornutum intepennum river. Gottens creek of the Sacramento. Spike of flowers a lilac color and very fragrant.

411 — at the meadow coral in fork of the upper Fritillaria Sacramento — grows among the pines — occasional —

412 — Rocky East shore of Klamath Lake. abundant in thickets — 10 feet high — a pruner?

413 — Little tributaries of Upper Sacramento in pinery forest. Lithophragma

414 — near locality of 411. rare.

415 — Battle Ford — on the cañon of Sac^mto river en grosses ~~Gruppes~~ tailles, près de la terre. Glaire

416 — same locality as 411. Lathyrus

417 — Same locality as 413 — a ras de l'eau. Thlaspi cochleaeformis?

418 — noon halt, on a tributary of the Sacramento — day that we encamped at locale of 411. tolerably frequent there — stony bottom. Camassia sive Lindl.

419 — The beautiful moss-flower — color yellow (naples yellow) with an iris-like spot on each petal — a spot like those on peacock's feather — same localities as 408 which is another species. Cycloboothrus Calochortus

420 – On the upper Sacramento waters. May 20.
Peroxylleum on a large fork – abundant the mountain
French. Dried it has exactly the smell of
rhubarb (Rheum)
421 – a handsome yellow flower and greatly abundant
Phacelia
amidst fields of clover. May 28 plains of
Sacramento.

Seeds, (Latitude 39°. 12′)
Buttes Camp – May 31. 1846

422 – a kind of rose colored plum plant abundant
Oxytropis
throughout the Joaquin and Sacramento valley.
423 a blue larkspur; seed bitter.
424 another abundant plant.
425 not abundant
426 T. heterodoxa a clover, red – abundant.
427 – a kind of laburn vine with small white,
star-shaped flowers; melothrica? I formerly called it Yerba Buena – it is
Megarrhiza
not so. It bears a nut.

June 1. Buttes Camp, Sacramento valley.
5 h. 10′ P.M. The flowers of the amole (No. 439)
have just commenced bursting open. The
sky perfectly clear, and the sun hot, but
tempered by a fresh breeze. Yesterday

evening I did not observe it as having commenced until 6h. 10! The bud appears to be fresh, opening for the first time, and the petals open out or unfold themselves instantly with a sudden spring. They close in the course of the night: this morning at break of day there were none open. I think that when it closes the flower never again opens, having only an existence for a few hours of the night. It springs into life when other things seek repose, with the setting of the sun — but never lives to see him again.

2 new plants here.

June 2.d 8 a.m. Rutter's Camp.

Visited the année plants yesterday evening at 9h. and found the flowers already closed.

Plants.

428. A new plant with a purplish flower and having a fragrant perfume. In

COLUMBIA UNIVERSITY.

rocky ground. Leaves woolly and resembling malva.

429. A plant found only before with a bluish flower – ~~this~~ it is yellow. Abundant here in rocky ground among the hills.

430. Eucharidium coccineum F. & Mey. A new plant with a dark rose colored flower. Grows in rocky ground and has only been seen on the hill slopes.

431. Hoitachia (Symmeria) junceum A leguminous shrub, 4 feet high and bearing a yellow flower – Its first appearance.

432. A purple colored flower. grows in bare places where there is no grass, amidst gravel and stones. Abundant – (On road from Neal's to the Buttes.)

433. another species of the moss flower – near Peter Lassen's, May 25th.

434. A new plant. at Camp on Dumming Bird creek, May 23d.

435. Anothium Lindleyi A new and beautiful plant of the lily kind – on Denny's creek upland, May 22d.

436. color white – this is an abundant plant. May 22d & Papum – I cannot preserve the flower – becomes yellow and dries up.

(3d sheet)

437 – Plains on flat valley of the Sacramento. May 28. very abundant and grows in fields.

438 – a species of clover, grows in low places which have been overflowed and whence water has withdrawn. Grows in fields.
Pogogyne

439. The amole plant – numerous here.
Chlorogalum

440. First found in the Sacramento valley, May 22d Not very abundant. Grows here as abundantly as I have noticed it at any place elsewhere.

441. Sacramento plains, abundant pastum – May 28.

442. a handsome flower. Among and generally under the oaks in the wier bottoms at Lassens. Grows in small fields or close patches. Some here.

443 – a species of clover, – plains between this & Neals.
Trif. variegatum
B. this spot not very abundant.

June 2d afternoon. Butte camp. latitude 39°. 12'. I have just noticed a bush of the Amole with two flowers open. This 4h. 23' P.M. this must be near about the earliest time at which it opens, as the neighboring bushes have none yet open.

444. Cuscuta? at the Buttes, May 31.

445 – Chorizanthe membranacea at Lassens. May 25. Dry en avait pas mal.

446. On Baume. Passport de la rivière. Lassens May 25.
Mimulus

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY

447. an abundant shrub in the volcanic ground near
Ribes cereum Lake Rett. May 16.
448. R. an abundant plant and very handsome.
Phlox Upper Sacramento highlands. This has lost its color.
449. A scarlet larkspur - Upper Sacramento.
Delphinium has lost its color.
450. Wild oats; Rio Chico, May 27; very abundant
Avena on Sacramento above Lassens and abundant
here at the Buttes - in fields as if sown.
451. Another grass, abundant in places.
452. Grinette des prairies (Grindelia o(ors) guarrosa.)
very abundant here.
453. = 443 a lupine, white: plains of the Sacramento;
Lupinus frequent, solitary, that is not in fields. pallidum
Since re-entering the lower Sacramento.
454. Wild oats; Lassens farm.
Avena
455. Last camp but one on Upper Sacramento.
456. This has last color of the flower which was blue
Color of flower in this spot is yellow.
in others blue - Sacramento plains - May
27.
457 abundant or rather frequent pallidum,
at Lassens farm. Achillea millifolium.
458. a handsomely colored thistle, occasional.
Camp 22 - 23d May.
459. Mountain Birch. Rhubarb tree.
Rhamnus Between last two camps on Sacramento - very abundant.
Porophyllum ramosissimum

Purshia 3-dent.

460. An abundant shrub. same locality and date as 459.

461. Southeast end Hamath Lake.

462. Lamp where Basil was killed.

463. May 15, on river of the two lakes an artemisia very abundant on plain near the river - in appearance the bush is altogether like artemisia tridentata.

464 Hamath Lake: abundant in thickets along the rocky eastern shore, two to ten feet high and in full bloom.

465. bears a beautiful spike of white flowers, with which it is covered and it presents a beautiful appearance. Above Lassen's on the stream of the valley and over all the west side of the Sierra up to the great piney region. (horse chesnut.)

466 Forks of Mozah river 22 May, in foot hills of the mountains

467 same locality as 466 - flower entirely lost color - 6-7 feet high

468 - a beautiful shrub, bearing a spike of lilac flowers. forks of Mozah river, Sierra

Ceanothus integerrimus = 410. chiotic - 4-8 high - very fragrant.

469. highland on South side of Mozah river 22d May. Allium acuminatum?

470. noon halt, May 22d. another new shrub, but in grosser taller forms. Hardy appearance - flower an ochre yellow color.

Fremontia Californica

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY.

June 4. Butter Camp –
(Plants of which we have the seeds.)

471 – a blue flower abundant in valley.

472. the white flowering worm-plant – abundant throughout the Sacramento and Joaquin valleys.

473 – a white-flowering legume – abundant
453 Lupinus ~~[illegible]~~ Dermatoxys
star-tacher.

474. A plant which I have generally called the
Cardley – beautiful red – frequent on the heads of the
See Bot Stor Platte – (Arkansas Divide) and common here.

Plants.

475. A plant with small white flowers in the
Linum Californicum little bar-fonds – at the foot of hills here.

476. white flowering – Sida? same place.

477. a milk plant – Asclepias? In flower and in seed. rivulet bottom among the hills at camp.

478. Hemizonia n. sp.? In the coulée here. Tout le terrain est

479 } comme ceci dans le camp – des gravoirs –
orthocarpus alb. pennicaudus } Abundant in small fields on the plain

480 – between this and Duttons (Neal's) May 28.
Along the river bank at Lassen's – seeds at the Buttes – May 27.

481 – At Lassen's – a species of tobacco which one of our Indians brought to Les jeunes gens to smoke, as they were out of tobacco.