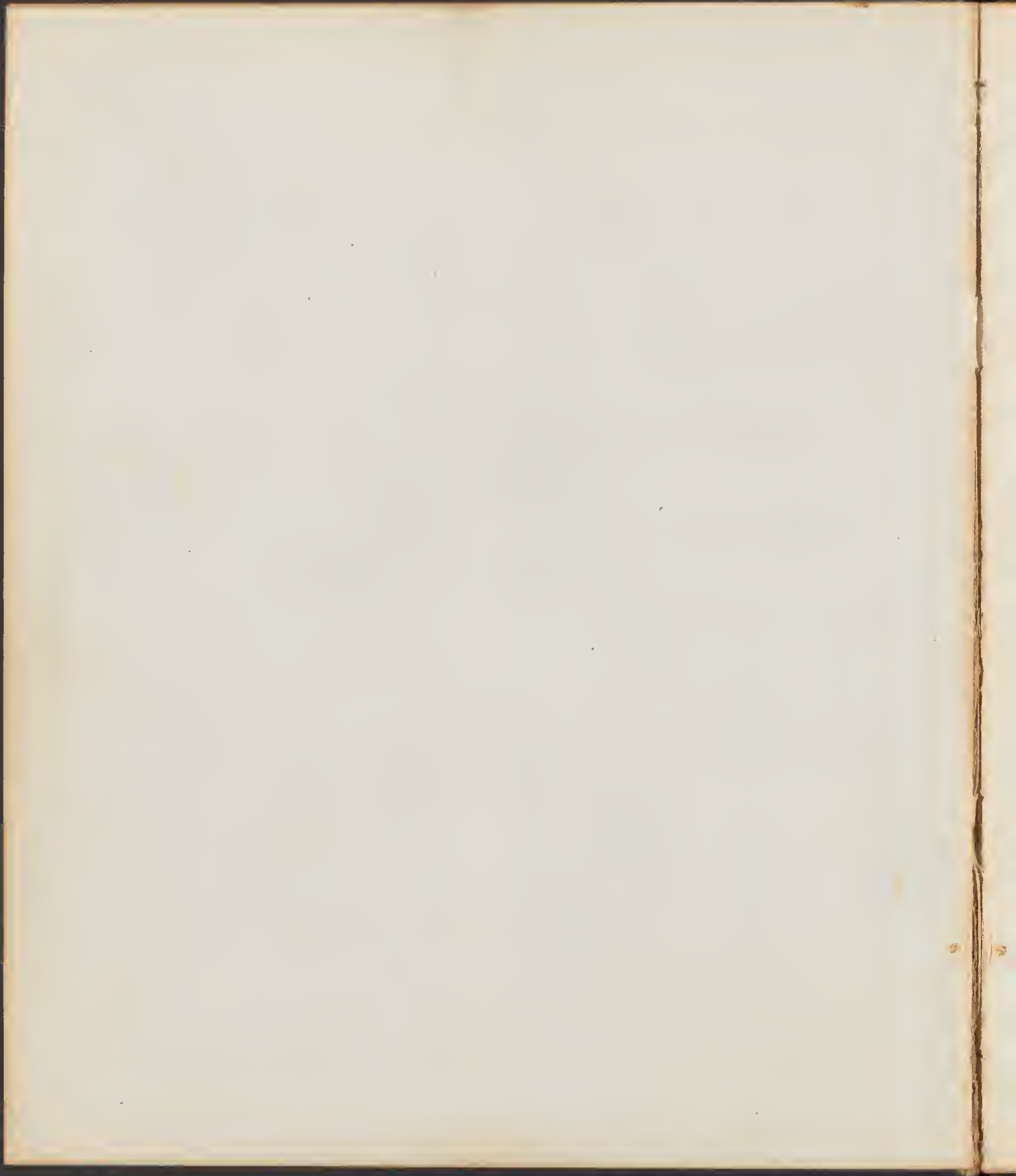
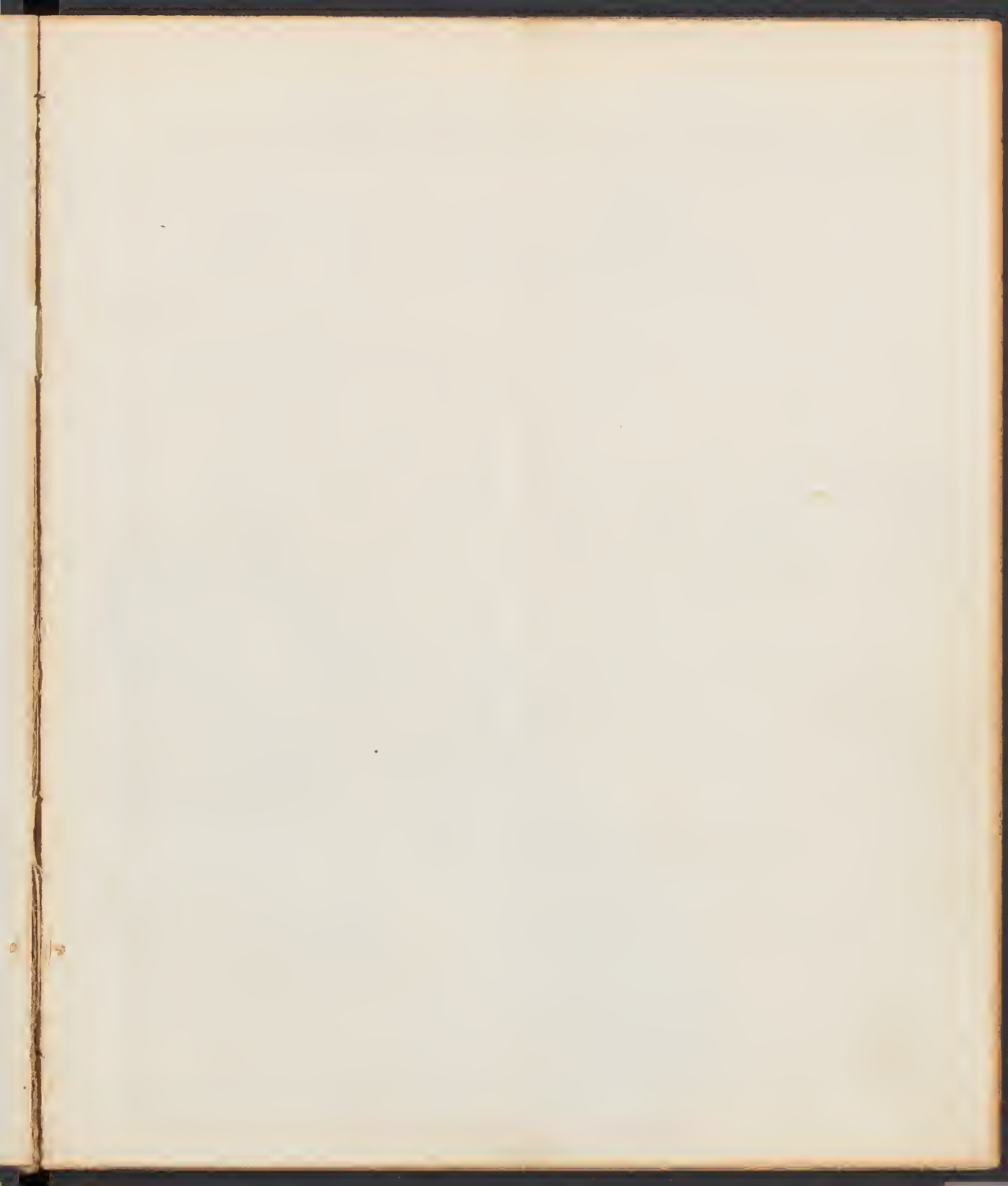


Watson
N-①

FRANCIS & LOUTREL,
STATIONERS,
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AND
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45 MAIDEN LANE, N. Y.

Botany of
United States Geological Exploration
40th Parallel.
William Whitman Bailey





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Glen Dale, Nevada

Camp at Stone's Gate Nevada on the Truckee River.
Camp 10.

July 16th 1867.

No 1 Carex - In sandy soil - near the river -

" 2 Vicia - Common in the meadows - These specimens were from near a sluice.

" 3 Sandy soil - common -

" 4 Sandy soil - Myosotis

5 Sandy soil

6 All through the meadows -

7 Very minute - Only secured one specimen after ^{pressed in an} much search _{envelope.}

8 Oenothera - Very common throughout the meadows

9. In Solanaceae. Color much resembling that of Datura stramonium. Sandy bank near the river. Flowers close during most of the day. Opening in the evening. Nicotiana rustica.

+ 10 Ranunculus ^{agrostalis} Camps 10 and 11. Common in the sluices

11 Common in the sage brush Stephanomeria

12 In the sage brush - Bigelovia (?) | *Bigelovia* *Bigelovia*

13 " " " " Chaenactis

14 Equisetum

15 ^{Saxifraga} Aster - Along the margin of sluices. Milky juice. Plant 4 or 5 feet in height.

16 ^{Sida} ~~Aster~~ - growing from amidst tufts of rose bushes and other plants. Color, a lilac purple.

17 - Aster. In hay fields

18 - Sandy soil -

19 - Very common in Sacramento, Cal. Much less frequent along the Truckee

20 Urtica, very stinging. Common.

21-

22 Achillea - common

23 Polygonum. Very common in ditches, Rooting by long, thick stems

24,

25, Mentha - strong odour of Peppery Royal

26. Trifolium - meadows

27. Common on the Sierra - Rather uncommon after entering Nevada. Found
but one specimen about the camp, Gilia pulchella

28. Senecio

29 Epilobium

30. Grass - near the river - clammy to the touch - or rather viscid. sandy soil.

31. Common in roads and sandy places - in fields

32,

33. Vicia - overhanging the river - entwined about other plants

34. Chenopodium. Va axillaris - Very common in the meadows

35 Polygonum -

36 ~~Potalia~~ ^{Lelium (?)}, Common in sandy places - wide-spreading like the
P. oleracea at the East.

37 Lobelia (?) Common also in Sacramento

38 Geum - in meadows

39. Erigeron - In hay fields

40 In ~~claves~~ - Houghs - Alisma

41-

42 Grass

43 In sand.

44. Near a road - border of a ~~claves~~ Hough

45 Helianthus ~~leucocarpus~~

46 Geum (?)

47 Myosotis

Camp No 11 - Near Colicks on the Truckee

No 48 - Called Buffalo berry. Very acid to the taste, *Shepherdia argentea*

No 49 Euphorbia - Brought in by Mr. Watson

No 50 In sluices

No 51 - Grass from Camp 10 -

No 52 - Carex - Camp 11

No 53 - Common in sand all along the Truckee

No 54 -

No 55 - Grass - { Camp 12 - Beyond the Big Bend of the Truckee, July 26th '67.

56 - From the sage brush districts. Very woody at the base

57 - " " " " "

58 - " " " " "

59 - " " " " "

} Brought in by
G. Sullivan -

60. Panicum - along the moist banks of sluices -

61. Dry, sandy soil -

62. From 6-7 feet high, ^{10-12 ft} stem bored here and there by a peculiar and handsome little fly - whose nests full of the dead insect - were found within. Appeared first at Camp 11 and was very common among the low willows and shrubbery at Camp 12.

63. In a ~~sluice~~ at Camp 11 -

Found by Watson

64. " through " " "

" " " " "

65. " " " " "

" " " " "

66 Polygonum -

67. Sandy soil -

68. Very common

69 ~~Achillea~~. All through the fields - *Franseria*

70. Sagittaria - in sluices and moist places.

71. Shrub - Very common - Terrace just above the river.

72. Among bushes - in the meadows.

73. Exceedingly ^{franseria} ~~sandy~~ ^{common} throughout the sandy meadows,
74. In meadows
- 75 Chenopodium - common.
76. Common in the meadows
77. Malva - Quite common by the road-sides
- 78 Asclepias - Not very common; among the willows near the river
- 79 Very common - Meadows.
- 80.
81. Grass - common in particula spots. Specimens all found together on dry ground on the bank of a sluice.
82. Rosa - in fruit - Common near the river.
- 83 ^{condens-} Caigeron - Among shrubs in the meadows - July 2^{9th}
- 84.
- 85 From camp 11 - by Watson from across the river
- 86 A grass. 6
- 87 Myosotis - Quite common on sandy banks near the river 4
- 88 Chenopodium 8
- 89 " " " " 1
- 90 Castilleja - Very common in moist grassy places
- 91 - From the dry meadows above the camp.
- 92 " " " " 2
- 93 " " " " 1
- 94 - Bank of the river in coarse sand
95. Common in wet places among tiles and rushes.
- 96 Ramex - in patches in moist ground
- 97 Mentzelia ^{californica} ~~aligospema~~ - In gravelly open spots in the meadow Aug 1st
- 98 Asclepias - Forming large isolated bunches. Mountain canons and valleys
- 99 Meadows.

100. *Salix*. River banks - very common.
 101 ~~Barx~~. Bed of dry stream - Mountain four miles west of camp. common.
 102 *Panicum* - Meadows
 103 *Aster* - Mountain canon - Aug 5th
 104 Grass - Meadows
 105 *Xanthium* - Borders of alvices and moist places - rather common.

All specimens up to this number, have been sent to Fort
 Churchill.

No 106.

From a mountain canon - or dry bed of a stream, five miles west of
 camp. Aug 5th

107. Grass from the same locality.

108. " " " " " *Leucosyris*

109 " " " " "

110. *Artemisia* - from dry sandy deserts - and also from the meadows.

111 " " " " " " " " "

112. Mountain canon, Aug 5th

113. Mountain canon. Very abundant in the gravelly bed of the dry stream. Aug 5th

114. Meadows. *Sonchus*

115. Very common through the meadows.

116. Rumex. Forming beds in moist soil - Meadows.

117. In mountain canon, Aug 5th

118. Chenopodium - Common in the meadows.

119. Sluice in the meadow near the camp. Very abundant.

120. In the water - From the river. Common. Aug 15th

121. Grass from the meadows near Miller's cañon. " "

122. Salix. Borders of the river. Common

x 123. ^{Satureja viminea, Beauv.} Grass. Border of small ditch in Miller's meadow, Aug 15th

124. Cyperus. Borders of sluice - Common, Aug 15th

125. Yucca ^{casadense!} - sandy shores of the Truckee. Aug 17th

126. Junco - river banks. Aug 17th

127. Sandy island in the river. Aug 17th

128. " " " " Aug 17th

129. " " " " Aug 17th

130. Grass - Meadows Aug 17th

- 131 Borders of sluices. Meadows near Miller's Rancho. Aug' 15th.
- 132 Aster. Meadows. Aug' 15th.
- 133 Gnaphalium. Borders of a sluice-Meadow. Aug' 15th.
- 134 Amaranthus. Common in the meadows. Aug' 15th.
- 135 Chenopodium. Exceedingly common throughout the meadows. Aug' 17th.
136. Island in the river. Aug' 17th.
- 137 " " " " "
138. Margin of the river. Aug' 17th. Equisetum
139. Common - sandy river banks - and in the meadow generally near where water had been. Aug' 17th.

Camp 15

Foot of Upper Humboldt Lake, near the Quartz Mill. Aug' 24th.

- 140- ^{Rovojanum} Common all over the sandy hill above the camp, Leaves all radical, long petioled - generally too withered for preservation. The petioles expand into sheaths which are imbricated about the foot of the stem. Blade of the leaf round, entire, Nerves strongly marked on the under side. Root a long, radish shaped tuber.
- 141 Potamogeton. Common in the river - and much encrusted with salt.
142. Salt Grass. Border of the river.

Camp 17. About 2 miles beyond Oreana, on the Humboldt River.

143. I suppose this to be parasitic from its general resemblance to *Epiphegus*. But have no direct proof of the fact. It was quite common on the borders of the sage brush district and the meadow proper. It removed the hard, caked earth from above it with much force - and seems to have partly blossomed before its entire exposure.

Camp 18. Canon in West Humboldt Range, 10 miles from Oreana.

144. *Epilobium*. Borders of streams and springs in high mountain canons. Sep 8th
paniculatum(?)

145. Common on the borders of the brook in the canon - especially at a great elevation - the same as No 27. Sep 4th

146. *Aquilegia formosa*
Common by the brook - in seed. Rather too late to procure a good flowering specimen. Sep 4th

147. *Epilobium* (*angustifolium*?) in seed. Border of brook - upper camp. Sep 4th

Gresia Newberryi (?)
148. *Potentilla* Interstices of high exposed granite peaks - common. Sep 4th 8000 ft

149. Summit of the mountains. common. Sep 4th

150. Common generally on the tops of the mountains. Sep 4th

151. *Brizolovii* (?) " " " " Sep 4th *allop. narvum*

152. *Solidago*. Moist banks in canons - common. Sep 4th

153. *Lupinus*. Common over the high mountain tops. Sep 8th

154. *Lambium* ^{genus}. High up the cañons. Often at a distance from the stream. Quite common.
Sep 7th
155. *Juniperus occidentalis*. Common every where on the mountains. either solitary or in groups. Affords the best fire wood of the region. Tree sometimes 20-25 ft in height - generally spreading from the base. Sep 8th
156. Grass. common in moist places. Sep 8th
157. *Cornus*. Common on the brook sides - especially in the lower part of the cañon. Sep 8th
- *158. *Clematis*. Common through the whole cañon near the stream with the Puñta of C. Virginia. Sep 4th
159. Common all over the mountains. color a very rich blue - an extremely beautiful species. Plants as a rule - quite low. Aster. Sep 4th
160. Aster. Common near water all through the cañon. Sep 4th
Camp 19 Boonville, Nevada.
161. *Portulaca oleracea*. Near houses in the upper town. October.
162. Upper town - in a wet ditch. October. *Sonchus*
163. Growing very abundantly in a wet ditch. But very little of it in flower. Upper town. October.
164. Canes from a high mountain cañon. Camp 18. September.
165. *Erigeron*. Camp 18. September.
166. Described and drawn in the other volume. *Spiraea calopitosa*
High portion of east side - W. Humboldt Range 7-8000 ft
167. *Lepidium* in seed. Camp 12 - Aug.

168. *Thymus vulgaris* - Around houses in the upper town of Unionville, Camp
19, October 1867,
169. *Ribes* - High up in Buena Vista cañon, Unionville Nev. Camp 19, Oct 1867.
170. *Ranunculus cymbalaria*, Camp 19, near a stream of clear mountain water, Oct 1867.
171. *Geranium*, Camp 19, October 1867.
172. *Aster*? Mt Humboldt Mts. eastern slope - Oct 1867.
173. Composite - Camp 19, Unionville Nev - Oct 1867
174. Camp 15, Quartz Mill, - Humboldt Lake - Aug 1867, *Stephanomeria*
175. *Scutellaria* - Unionville Nev - Oct 1867

67.

574 to 575

11 11 11 11 11

11

July 5th 1869. - Piroo River - at valley - 8,000 ft. 1 sp.

July 31st 1869. - Piroo River - at valley - 8,000 ft. 1 sp.

June 23rd 1869. - Piroo River - at valley - 8,000 ft. 2 sp.

July 29th 1869. - Piroo River - at valley - 8,000 ft. 3 sp.

July 7th 1869. - Piroo River - at valley - 4,000 ft. 1 sp.

July 10th 1869. - Piroo River - at valley - 4,000 ft. 5 "

July 24th 1869. - Head of Piroo River - 4,000 ft. 1 sp.

July 16th 1869. - Head of Piroo River - 7,000 ft. 6 "

June 2nd 1869. - Bank of Piroo River, near mouth - 4,000 ft. 3 sp. *

July 9th 1869. - Bank of Piroo River, at head of river - 4,000 ft. 2 "

Gramineae.

- * Polypogon montepelienensis, Desf. var. *B. minor*, Desv. - 1 spec.
 Oct. 10th 1867 - Bank of stream above Unionville, W. Humb. Mts. - a
 single specimen, low (3'), stems decumbent at base.
 Compared with Bolander's specimens of *P. montepelienensis*, Desf.
 but not with the var.
- * Phleum pratense, L. - 1 spec.
 July 28th 1864 - Meadow in Ruby valley - ? introduced - 6,000 ft.
- * Phleum alpinum, L. - 6 spec.
 Aug. 27th 1864 - shaded shore of mountain lake, E. Humb. Mts. - 5,000 ft.
- * Alopecurus aristulatus, Michx. - 12 spec.
 July 21st + Aug. 15th 1867 - Big Bend of the Truckee, river bank - 4,000 ft.
 Aug. 15th 1864 - Stream bank in Ruby valley - 6,000 ft.
- * Eatonia obtusata, Gr. - 4 spec.
 Aug. 6th 1864 - Stream bank mouth of cañon, west side of
 Humboldt Mts. - 6,000 ft.
- * Eriocoma cuspidatum, Nutt. - 6 spec.
 J. Aug. 16th 1867 - Geopline station II, (W. Tenmile Mts.) - 8,000 ft.
 Sept. 1867 - W. Humboldt Mts. - 4,500 ft.
 J. Oct. 2nd 1867 - Sierran Range - Geopline Peak cañon - 4,000 ft.
 J. June 14th 1868 - West Humboldt Mts. - 4,500 ft.
 J. July 7th 1868 - Monitor - Railway - (Shoshone plain) 5,000 ft.
 J. July 25th 1868 - E. Humboldt Mts. - 7,000 ft.
 J. Aug. 6th 1868 - E. Humboldt Mts. - 6,000 ft.
- * Baccharis sunciformis, Hook. - 4 spec.
 July 28th 1864 - Ruby valley, edge of stream - 6,000 ft.
 Sept. 25th 1864 - Tenmile E. Ruby valley, edge of stream - 6,000 ft.
- * Setaria viridis, Beauv. (var. *viridis*) - 3 spec.
 Aug. 15th 1867 - meadow - 4,000 ft.
- * Phalaris amabilis, L. - "Crazy grass." - 4 spec.
 Aug. 7th 1864 - E. Humboldt Mts, at mouth of cañon - west side - 6,000 ft.

May 21 1867 - Edge of ... above ...
June 23 1867 ...

- * Trisetum arvense, Beauv. - var. molle, Gr.
 - Aug. 29th 1864. - E. Humb. Mts. High mountain slope - 9,000 ft 3 spec
 - Sept. 10th 1864. - Crown Mts. summit 12,000 ft 1 "
- ~~Stipa~~
- ~~Stipa~~
- * Hordium jubatum, L. - frequent in valleys on the foot hills.
 - July 16th 1864. (W.W. Bailey) - Truckee meadow at Nevada - 1,500 ft 5 spec
 - Sept. 10th 1864. - Humboldt River meadow, at Nevada 4,000 ft 10 "
 - July 24th 1864. - Ruby valley, meadow - 6,000 ft 1 "
- * Hordium pratense, Huds.
 - July 9th 1864. - Diamond valley, - alkaline meadow - 8,000 ft 2 spec
 - July 24th 1864. - Ruby valley, in standing water. Tall, lateral grasses - abundant - approaching H. jubatum, L. - 6,000 ft 5 "
- * Phragmites communis, Trin.
 - July 20th 1864. (W.W. Bailey) - banks of Truckee, near Big Horn 6 spec
 - Aug. 5th 1864. - Shores of Soda Lake - 4,000 ft 1 "
 - Sept. 10th 1864. - E. Humb. Mts. - spring on East base - 4,000 ft 2 "
 - Sept. 20th 1864. - Mts. at head of Humboldt River, says same - 6,000 ft 2 "
- * Stipa virginica, Trin.
 - Sept. 1864. - Proximaly from the base - Humb. Mts. - No description - but acc. to my note with Boscovich's specimens - 7 spec
 - Aug. 11th 1864. - E. Humb. Mts. - Peak on the Stage pass - 6,000 ft 10 spec
- * Stipa occidentalis, Thurb. & D.
 - June 20th 1864. - Simpson's meadow - 5,000 ft 3 spec
 - Described in Proc. Acad. Nat. Sci. Philad. 1834.
- * Stipa capillaris, L.
 - May 14th 1864. - Feet of hills, high rippled range, near the bottom - 4,000 ft 2 spec
- Stipa
 - July 2nd 1864. - Near Nevada - 5,000 ft 3
 - May 25th 1864. - E. Humb. Mts. - 5,000 ft 3

Aug. 16th 1869. Walnut Mt. cañon, near Kimball's. - 1 sp.

x	<i>Hieronyma gracilis</i> , Trin. - fid. Hall & Harton's no. 639 - but compare description - very near <i>S. yucca</i> .		
	Jan. 11 th 1867. - Salt meadow in Unionville valley - 4,500 ft. -	6 spec	
	June 22 nd 1868. - Near Hot Springs in Grass Valley, E. of Dayton Wb. -	2 "	
	Aug. 12 th 1868. - Rocky valley - border of Lake. -	1 "	
x	<i>Bromus ciliatus</i> , L. -		
	Sept. 4 th 1868. - E. Humboldt Mts. - mouth of cañon, E. side. -	6,000 ft. -	4 spec.
	<i>Bromus</i> perhaps a naked var. of <i>B. Kalmii</i> , Gr.		
1 sp.	July 10 th 1868. - Diamond Spring pass. -	6,500 ft. -	6 spec
	July 27 th 1868. - E. Humboldt Mts. - Dry cañon, E. side. -	6,500 ft. -	2 "
	Sept. 12 th 1868. - Mountains at head of Humboldt Riv. -	7,000 ft. -	1 "
	<i>Bromus Kalmii</i>		
	Aug. 16 th 1867. - Geodetic Station II. - Mountain side. -	6,000 ft. -	3 spec
	<i>Pringlea spicatum</i> , Hook. - var. <i>abichum</i> . Same as H & H. 640 - rigid		
	throughout - spikes somewhat loosely pinnate, pistillate ones closer & usually shorter. - A salt pass.		
	July 16 th 1867. - (W. side of) Humboldt Mts. - at Clear Lake -	4,500 ft. -	5 spec
	July 26 th 1867. - (W. side of) Humboldt Mts. -	4,000 ft. -	5 "
	Aug. 24 th 1868. - (W. side of) Humboldt Mts. - near Clear Lake -	4,000 ft. -	10 "
	Aug. 25 th 1868. - Soda Lake. -	4,000 ft. -	2 "
	Aug. 6 th 1867. - Humboldt Mts. -	4,000 ft. -	(most small) 1 "
	Aug. 10 th 1867. - Humboldt Mts. -	4,500 ft. -	5 "
	Aug. 17 th 1867. - Humboldt Mts. -	4,000 ft. -	5 "
	July 1 st 1868. - Humboldt Mts. -	4,000 ft. -	5 "
	Aug. 1 st 1868. - Humboldt Mts. -	6,000 ft. -	1 "
x	<i>Eragrostis pectinoides</i> , Beauv. - var. <i>megastachya</i> .		
	Oct. 8 th 1867. - Salt Lake Valley near Brigham City -	4,000 ft. -	2 spec
x	<i>Eragrostis Pennellii</i> , B. & P.		
	Aug. 1 st 1867. - Humboldt Mts. -	4,000 ft. -	1 spec
	July 24 th 1867. - Same locality -		1 "

af

June 15th 1869 Carrington Island. - 1000 ft.

Aug. 11th 1869. - In a valley, between hills - 5,000 ft. - 12 sp.
a very fine, with the same species as above.

June 11th 1869 Blue Hill, a sand of salt lake - 4000 ft. 5 sp.

* *Sporobolus cryptanthus*, Gr. (reported by Walpura to S. apur, Kth.)

July 7th 1868. Thousand Valley - Humboldt Mts. - 5,000 ft. 1 spec

* *Vilfa depauperata*, Torr. - var. *filiformis*, Thurber. - Aquous plant of wet in
habit with specimens of *Balanites* - No doubt it is the same

July 24th 1868 - Meadows in Thousand Valley - 6,000 ft. 3 spec

Aug. 20th 1868 - Meadow in Humboldt Valley - densely shaded - 6,000 ft. 6 spec

Sept. 2nd 1868 - E. Humboldt Mts. - stream bed in high canyon - 7,000 ft. 5 spec
Dwarf plant - pale green, but not a weed.

* *Artemisia fabra*, L.

Sept. 2nd 1868 - Cultivated in garden, Humboldt Valley - fruiting - 4,500 ft. 4 spec

* *Artemisia sativa*, L. ?

Aug. 5th 1868 - Sierra of 8,000 ft. base. No perfect specimens, sativa 6 spec
grasses - 1 spec. Possibly some of the same species were seen 10 spec

* *Triticum repens*, L. - *somehow* - var. *variale*.

Sept. 1868 - W. Humboldt Mts. + Longview Range - Various local -
4-6,000 ft. 10 spec

July 20th 1868 - Meadows in Humboldt Valley - 6,000 ft. 1 spec

Aug. 2nd 1868 - East Humboldt Mts. - High divide - 8,000 ft. 1 spec

Sept. 2nd 1868 - " " High divide - 8,000 ft. 1 spec

* *Triticum caninum*, L.

Sept. 1868 - Humboldt Mts. - 8,000 ft. 2 spec

* *Triticum arctolopoides*, Turcz.

July 25th 1868 - E. Humboldt Mts. - dry canyon - 7,000 ft. 1 spec

Aug. 4th 1868 - " " below Stage Pass - 6,500 ft. 2 spec

" " " Peak " " 8,500 ft. 5 spec

Aug. 6th 1868 - " " High divide - 7,000 ft. 1 spec

Sept. 2nd 1868 - " " High divide - 9,000 ft. 4 spec

* *Elymus canadensis*, Presl. - Very variable in the number of spikes
flours - none so compact as Bolander's California species

July 16th 1868 - (W. Valley) - Humboldt - 4,500 ft. 5 spec

Aug. 5th 1868 - Humboldt Station - Humboldt - 7,000 ft. 4 spec

Ep -

- Sept. 10th 1867. - E. Humboldt Mts. - 11,500 ft. - 2 spec
 Oct. 11th 1867. - Unionville valley - meadow - low wet places - 4,000 ft. 7 "
 July 2nd 1868. - Reese Valley - Bush Branch - 8900 4,500 ft. 1 "
 Aug. 6th 1868. - E. Humboldt Mts. High divide. - 8,000 ft. - 1 "
 * Sitanion slymbois, Raf. - Low, near by Nuttall's farm.
 Sept. 15th 1867. - W. Humboldt Mts. - near Indian Peak 9,000 ft. 3 sp.
 Aug. 11th 1868. - E. Humb. Mts. - Peak south of Stage Pass. - 9,000 ft. - 1 "
 Aug. 22nd 1868. - " " Peak near camp. - 8,500 ft. - 5 "
 Sept. 10th 1868. - Clow Mts. - Peak. - 12,000 ft. - 4 "
 = June 15th 1869. - Carrington Island. - 4,000 ft. - 2 "
 a taller - 5 shortawned forms.
 * Trisetida purpurea, Nutt. - In same loc H+H, 652, but not compared with description.
 May 21st 1869. - Foothills abv. - Salt Lake City - 4,000 ft. 5 sp.
 June 7th 1869. - Antelope Island - Foothills - 4,000 ft. 2 "
 * Critto arizonicus, E. Meyer. - Introduced.
 June 7th 1869. - Antelope Island, in field of barley - 4,000 ft. - 6 sp.
 * Festuca brevifolia, R. Br. -
 Sept. 10th 1868. - Clow Mts - summit 12,000 ft. 1 sp.
 * Festuca tenella, Willd. -
 May 30th 1868. - Trinity Mts. near Orin a. - with others - 4,000 ft. 1 sp.
 May 21st 1869. - Salt Lake Valley, above S.L. City. - dry slope - 4,000 ft. 5 "
 June 3rd 1869. - Antelope Island - 4,000 ft. 2 "
 June 6th 1869. - " " same place 4,000 ft. 1 "
 * Festuca microcaechys, Nutt. - But specimens are mostly sterile, + julian + rostrata
 only a few, not abundant - agree with H+H, 26 + 44.
 May 30th 1868. - with F. tenella above, in same place 10 sp.
 June 20th 1868. - Douglas Mts. Spout on N. side - 5,000 ft. 6 "
 " " " " " " " " 4,500 ft. - 1 "
 May 31st 1869. - The same, near Salt Lake City - 4,000 ft. 1 sp.

= *Vaseya comata*, Thunb.

Agnes better with description of *A. microphylla* than with that of *A. palifolia*,
though apparently the same as Blandin's specimens (Nos 31, 32, 5461, referred
to *A. palifolia*, as well as his specimens (nos 5, 30, 6070, 6079) referred to *A. exarata*.
Lower palat usually absent - sometimes present in various degrees of develop^t.

Lower palat usually absent. - It is not thin as numbers go on up the side. -

x *Feetaria* ovina, L.

July 25th 1864. - W. Hamb^d Wts. - Dry middle cañon. - 7,000 ft. 6 sp.
 Aug. 6th 1864. - " " high dry divide - 8,000 ft. 2 "

Plantaphis javensis, Torr.

July 7th 1864. - Monitor Valley - basaltic hillsides, & there and - 6,000 ft. - 6 sp.
 June 15th 1869. - Carrington Island. - 4,000 ft. -

x *Muhlenbergia* glomerata, Trin.

Sept. 4th 1868. - E. Hamb^d Wts. - Mouth of cañon near Huerfano - 6,000 ft. - 3 sp.
 Sept. 30th 1868. - Goose Creek Valley - spring bank. - 6,000 ft. - 3 "

x *Muhlenbergia* sylvatica, T & G.

Sept. 20th 1868. - Huerfano Pass, near west spring - 6,000 ft. - 1 sp.
 ? Aug. 20th 1868. - Huntington valley - creek bank. - 6,000 ft. - 1 sp.

The latter specimens vary in the more narrowly lanceolate glumes & panicle, (which are also more delicate) & in the long dense hairs at base of flowers.

↓ *Agrostis* microphylla, St. Aud.

July 24th 1867. - Truckee meadows at Truckee Landing. - 4,000 ft. - 6 sp.
 Aug. 5th 1867. - (W. W. Bailey) - Same locality - 1 "
 Aug. 15th 1867. - " " - 5 "
~~Sept. 10th 1867. - W. Hamb^d Wts. - Stream bank at Wolf Lake. - 8,000 ft. - 2 "~~
 Sept. 1867. - W. Hamb^d Wts. - 1 "
 Nov. 20th 1867. - Mts. between Pyramid & Min^a Lakes, East cañon - 4,500 ft. - 5 "
~~Sept. 8th 1867. - Same locality, on west side of Pyramid cañon. - 5 "~~

↓ *Agrostis* exarata, Trin. - Leaves not retrogradely acabrous, lower part not greenish.

Sept. 1867. - (W. W. Bailey) W. Hamb^d Wts. - 6 sp.
 Sept. 10th 1867. - Same locality - 2 "
 Aug. 6th 1868. - E. Hamb^d Wts. - Above bank, west base - 2 "

x *Agrostis* canina, L. - Alpine form = *A. rubra*, L. & *A. canina*, var. *alpinensis*, Gray.

Sept. 12th 1868. - Clover Mts, near summit - 10,000 ft. - 5 sp.

Spikeweed 11-6 flowered & near *P. aquatica*, but more *P. aquatica* & not
prominent.

- x *Sporobolus asperifolius*, Nees & Meyer. - Description? -
 Aug. 5th 1867. - Shore of Soda Lake. - alkaline - 4,000 ft. 5 sp.
 Oct. 11th 1867. - Unionville Valley, E. of E. Humboldt, Wis. - ^{alkaline} - 4,000 ft. 12 "
 Aug. 1st 1868. - Ruby Valley - meadow. 6,000 ft. 2 "
 Sept. 4th 1868. - " " Hot Springs - alkaline - 6,000 ft. 1 "
- Sporobolus ramulosus*, Kth. Qu? - but in H. & H. 613, as named by
 Thurb. - nearer in than to any other of Kunth's species.
 July 24th 1867. - meadow near the Big Bend. - 4,000 ft. 7 sp.
- x *Catabrosa aquatica*, Beauv.
 June 26th 1869. - near Park Park canyon - Salt Spring - 5 sp.
 June 29th 1869. - Same locality - 7,000 ft. "
 Aug. 14th 1869. - Bear river valley - Spring near ... - 7,500 ft. 1 "
- x *Calamagrostis pyralica*, B.C.
 Aug. 28th 1868. - E. Humboldt, Wis. - summit. - 11,000 ft. - 1 sp.
- x *Calamagrostis Canadensis*, Beauv.
 July 10th 1869. - Bear river Spring, - bank - 6,000 ft. - 1 sp.
 Aug. 6th 1868. - E. Humboldt, Wis. - Stream bank in cañon, 6,000 ft. - 2 "
- x *Calamagrostis stricta*, Trin.
 Sept. 1867. - W. Humboldt, Wis. - slender form. - 5,000 ft. - 2 sp.
 July 26th 1869. - Bear river bottom, near Evanston - 5,000 ft. - 5 "
 June 21st 1869. - Salt Lake valley - stream bank near Vermilion ^{4,000 ft.} 1 "
- x *Koeleria cristata*, Pers.
 June 7th 1869. - Antelope Island - Spring bank. - 4,500 ft. - 2 sp.
- x *Glyceria aquatica*, Smith.
 July 26th 1868. - Ruby Valley - in water - 6,000 ft. 4 sp.
 Aug. 7th 1868. - Humboldt valley - stream bank of ... - 6,000 ft. 3 "
 Sept. 8th 1868. - Clear Lake - stream bank, lower cañon - 6,000 ft. 3 "
 June 21st 1869. - Salt Lake valley - stream bank near Vermilion - 4,000 ft. 2 "
- x *Glyceria pauciflora*, Presl.?
 Aug. 11th 1869. - Bear river cañon, stream bank - 5 sp.

low (6'-10'), spikely succid, nodding - peduncles bristly & hairy
above - leaves pubescent on upper surface.

Stems 5-nerved - ^{long} palea 7-nerved, upper part 2-nerved, margins
inflexed & nerves ciliate, about half the length of the inner palea.

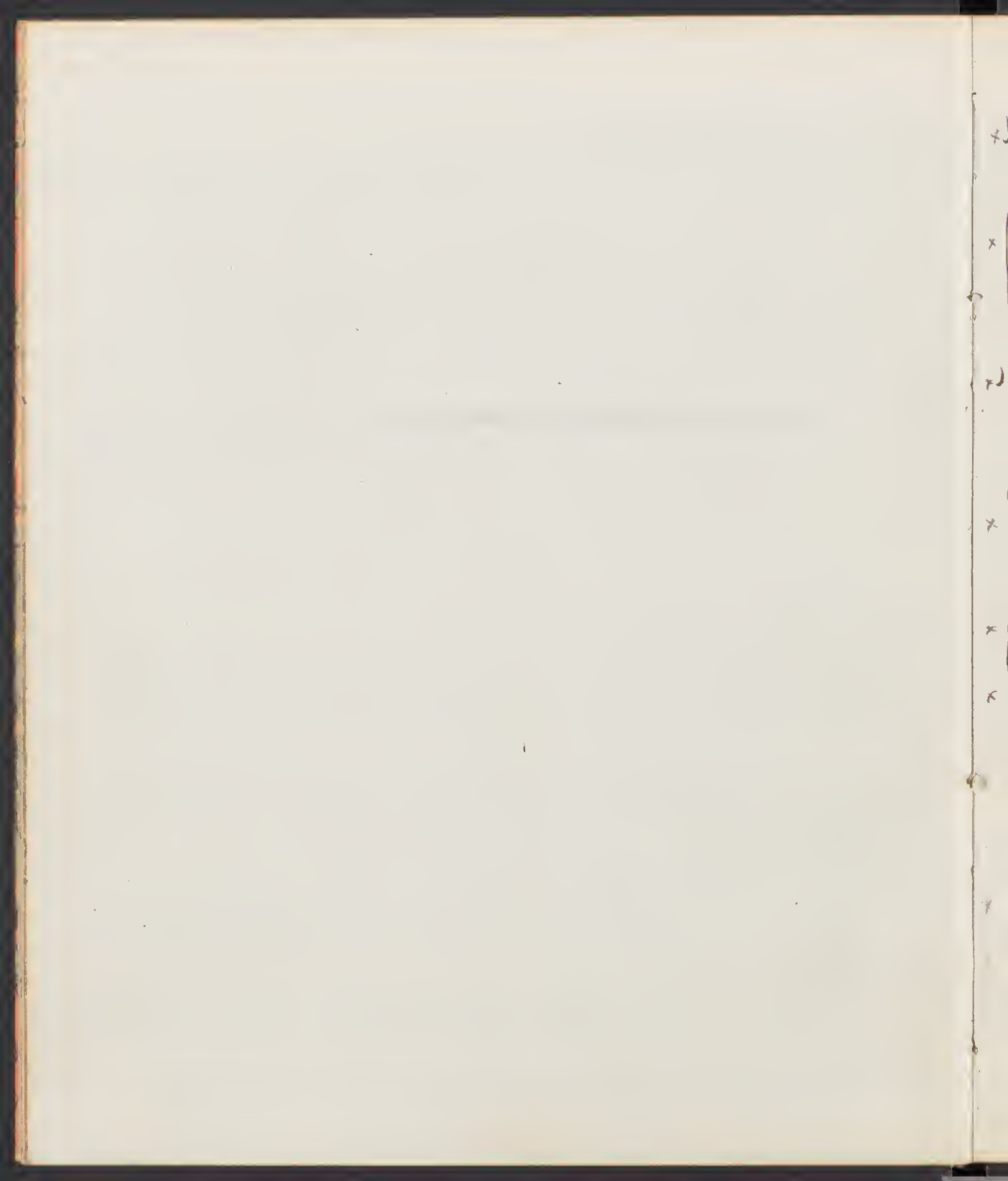
Taller (2-3'), erect, spikely, not & less irregularly accumbent -
peduncles often straggling & with the leaves, not hairy. - Other like
the same.

Aug. 19th 1869 - Wahsatch Mts. - from canyon - approx. 4000 ft. -

1500

Ex, The same apparently as Bolander's No. 4. "P. thermale, Bol."

* <i>Glyceria airoides</i> , (Thurb.) Nutt.	May 31 st 1869, Salt meadows, near Salt Lake City -	4,000 ft.	2 sp.
	June 3 rd 1869, " near mouth of Jordan -	4,000 ft.	1 sp.
* <i>Melica stricta</i> , Nutt.	Sept. 18 th 1863, W. Humboldt Mts. - Star Peak -	10,000 ft.	8 sp.
	May 29 th 1864, Trinity Mts., Summit west of Orma -	6,000 ft.	2 "
	June 23 rd 1864, Simpson range, mountain side near Spaulding Pass -	5,000 ft.	4 "
	Aug. 4 th 1864, E. Humboldt Mts. Peak south of Stage Pass -	9,000 ft.	3 "
<i>Melica proserpidis</i> , Nutt.	Sept. 18 th 1863, W. Humboldt Mts. - Star Peak -	10,000 ft.	4 sp.
	Sept. 1863, " " "	"	2 "
	July 27 th 1864, E. Humboldt Mts. - Dry mill race canyon -	7,000 ft.	1 "
	Aug. 6 th 1864, " " Peak south of Stage Pass -	9,000 ft.	2 "
	July 15 th 1869, Wahsatch Mts. - Summit near Cottonwood -	10,000 ft.	4 "
* <i>Panicum crus-galli</i> , L. (Introduced)	Aug. 15 th 1867, (C. W. Bailey) meadow meadows, at the Big Bend -	4,000 ft.	6 sp.
	Sept. 18 th 1868, Station near mouth of Bear River -	4,000 ft.	3 "
	July 12 th 1869, Salt Lake Valley - mouth of Willow Creek canyon -	4,000 ft.	1 "
* <i>Panicum capillare</i> , L.	July 24 th 1867, meadow meadows, at the Big Bend -	"	6 sp.
	July 26 th 1867, same locality (1st locality)	"	6 "
	Aug. 15 th 1867, " " "	"	4 "
	Oct. 11 th 1867, Unionville valley - alkaline meadow -	4,000 ft.	3 "
	Sept. 4 th 1868, Ruby Valley - bottom of Hot Springs - alkaline -	6,000 ft.	6 "
* <i>Panicum dichotomum</i> , L.	Sept. 4 th 1868, Ruby Valley - edge of Hot Springs - alkaline -	6,000 ft.	10 sp.
* <i>Aira caespitosa</i> , L.	July 20 th 1867, Ruby Valley - Spring lawn -	6,000 ft.	4 sp.
	Aug. 7 th 1868, Humboldt Valley - stream bank -	6,000 ft.	3 "
	Sept. 1 st 1868, Ruby Valley - stream bank in meadow -	6,000 ft.	1 "



x) *Danthonia dentata* (Trin.)

May 17th 1869. Mountain side - near Salt Lake City - 4,000 ft. - 1 sp.

June 3rd 1869. - Salt Lake City - Jordan meadow - 4,000 ft. - 3 "

x) *Danthonia Californica*, B.S.P.

June 26th 1869. - Wahsatch Mts. - Cañon north of Panguitch - 7,000 ft. - 12 sp.

" " - Near same locality - small form - 6 "

Still somewhat distinct

x) *Agrostis scabra*, Willd.

Sept. 1869. - W. Humboldt Mts. - Stream bank - 4,000 ft. - 3 sp.

Aug. 1st 1869. - Riley valley - meadow - 6,000 ft. - 1 "

Aug. 21st 1869. - E. Humboldt Mts. - Fremont's Pass - 7,000 ft. - 2 "

x) *Spizobolus cuneatus*, Trin.

Aug. 1st 1869. - W. Humboldt Mts. - meadow, on the edge of the - 4,000 ft. - 6 sp.

June 15th 1869. - Cassin's Island - 2 "

x) *Poa annua*, L.

May, 19th 1869. - Wahsatch Mts. - City Creek Cañon, stream bank - 4,000 ft. - 2 sp.

x) *Poa arctica*, R. Br. - = canina

Aug. 10th 1869. - Uintah Mts. - Peak west of Upper Cañon - 11,000 ft. - 4 sp.

Poa flexuosa, Link. ? - Possibly a very tall form of the last, but flowers not visible at base, lower pedicels scarcely semi-cylindrical on the back.

May 28th 1869. - Wahsatch Mts. - City Creek Cañon - 4,500 ft. - 2 sp.

x) *Poa nemoralis*, L. - Apparently the same as H + H, No. 672, called by Thurber "P. serotina, Kunz." and Godt's "P. Hallii", (unpublished) - maybe a large form of *P. caesia*, Sm. (which Hornem. refers to "P. serotina" Steud., to *P. nemoralis* L.)

Aug. 15th 1869. - Bear River bottom, mouth of Cañon, Uintah Mts. - 6,000 ft. - 1 sp.

xP

731

xP

xJ

xJ

- 7312
- * *Poa alpina*, L. - various forms.
- | | | | |
|------------------------------|--|------------|-------|
| Sept. 14 th 1867. | W. Humboldt Mts. - Comet Peak. | 10,000 ft. | 3 sp. |
| " " | Same locality - narrow leaved form | | 5 " |
| Sept. 1867. | W. Humboldt Mts. - important | | 3 " |
| June 29 th 1868. | " " Head of Echo cañon | 8,000 ft. | 3 " |
| Aug. 4 th 1868. | E. Humboldt Mts. - Peak south of Stage pass. | 8,500 ft. | 2 " |
| Sept. 10 th 1868. | Clover Mts. - North peak. | 11,000 ft. | 1 " |
- * *Poa andina*, Nutt. - vide Thunberg, H & H, no. 669 & 670. - But many in not be an *A. tropica*? - A "bunch grass". - No description.
- | | | | |
|------------------------------|-------------------------------------|------------|-------|
| Sept. 1867. | W. Humboldt Mts. - High slopes | 9,000 ft. | 2 sp. |
| May 18 th 1868. | Trinity Mts. - Lower cañon | 4,500 ft. | 1 " |
| July 25 th 1868. | E. Humboldt Mts. - Ft. Ruby Peak. | 9,000 ft. | 2 " |
| July 30 th 1868. | " " Sawmill Peak. | 9,000 ft. | 1 " |
| Aug. 4 th 1868. | " " Peak south of Pass | 8,500 ft. | 1 " |
| Sept. 10 th 1868. | Clover Mts. - North Peak. - 2 forms | 11,000 ft. | 2 " |
- Poa* ? - affinis *P. alpina*, L.
- | | | | |
|-----------------------------|---|------------|-------|
| July 20 th 1868. | E. Humboldt Mts. - Mid cañon S. of Ruby Camp. | 7,000 ft. | 5 sp. |
| July 25 th 1868. | " " Ft. Ruby Peak. | 9,000 ft. | 2 " |
| Aug. 6 th 1868. | " " High divide, near Ruby Camp. | 8,000 ft. | 3 " |
| Sept. 3 rd 1868 | " " Hummerman's peak. | 10,000 ft. | 5 " |
- * ~~*Atripis distans*, Zinnig.~~
- | | | | |
|----------------------------|-------------------------|-----------|-------|
| Aug. 6 th 1868. | Humboldt - Lower Slope. | 4,000 ft. | 2 sp. |
|----------------------------|-------------------------|-----------|-------|
- * *Atripis Californica*, Mun. - vide Thunberg, = several doubtful forms.
- | | | | |
|-----------------------------|---|-----------|-------|
| Aug. 5 th 1867. | Soda Lake, Carson Desert. | 4,000 ft. | 3 sp. |
| Aug. 16 th 1867. | W. Truckee Mts. - High slopes - ^{multiple specimens} | 7,000 ft. | 3 " |
| Oct. 11 th 1867. | Unionville valley - salt meadow. | 4,000 ft. | 3 " |
| Sept. 1867. | W. Humboldt Mts. | | 3 " |
| June 23 rd 1867. | English Range - Spalding's Pass, east side. | 4,500 ft. | 3 " |
| June 10 th 1867. | Siamese Mts. - Stream bed in pass. | 6,500 ft. | 5 " |
| July 25 th 1867. | E. Humboldt Mts. - Cañon S. of Ruby Camp. | 8,000 ft. | 1 " |



Aug. 4th 1868. - E. Humboldt Mts. - Cerros S. of Stage Pass - 7,000 ft. - 1 sp.

" " " Peak S. of Stage pass 8,000 ft. 1 "

Aug. 6th 1868. - " High divide near Camp Riley - 8,000 ft. - 3 "

June 3rd 1869. Antelope Island - meadow. - 4,000 ft. 1 "

June 26th 1869. - Wahatche Mts. - Spring near Salt Lake, Park, Utah. - 5,500 ft. - 3 "

* Hesperochloa borealis, Gr.

Aug. 7th 1869. - Uintah Mts. - head of Bear River - 7,500 ft. - 1 sp.

Hesperochloa trifurcata - new form?

May 16th 1868. - Trinity Mts. - Dry foot hills 4,000 ft. 7 sp.

Cenchrus tribuloides, L. | no specimens gathered. Determined.

Aug. 25th 1869. - Jordan Valley, below Salt Lake City ^{Utah} - 5,000 ft.

3 41 genera

75 78 species.

Theropod - glandularis

Theropod

Theropod

Theropod

Cenchrus

x = var. andinum

x glaberrimum

Eriogonaeae (less spec^d to Gray & Kunz)

1. *E. caespitosum*, Nutt. (including *E. andinum*, Nutt.)
 - x a) Apr. 23, 1868. Washoe Mts., near Carson City - 6,000 ft. 3 sp.
 - b) May 27, " Trinity Mts., " above Camp in willow cañon 6,000 ft. 2 "
 - c) " 30, " " " near same locy " 2 "
 - x d) June 25 " Emery's Range, mountain side near Granite Pass - 4 "
 - e) July 9, " Limestone ridge near Robert's Creek - 6,000 ft. 1 "
 - x f) Sept. 4, " Ruby Valley, near Hot Springs 6,000 (-1) 2 "
2. *E. spinescens*, Dougl. var. *5*, Gray.
 - a) June 24, 1868. - foothills above Ryan's Valley - 5,500 ft. 1 sp.
 - b) " 27, " Ryan's Valley - " in large patches - 5,000 ft. 2 "
3. *E. heracleoides*, Nutt.
 - a) July 24, 1868. E. Humboldt Mts., Cañon above Camp 7,000 ft. 2 sp.
 - b) Aug. 6, " " " W. Cañon 9,000 ft. 5 "
 - c) " 19, " " Fremont's Pass 7,000 ft. ~~4~~ 4 "
 - d) June 26, 1869. Washoe Mts., Utah. Ruby's Park 6,000 ft. 1 "
4. *E. luculentum*, Nutt. - var. *minus*, Bth.
 - a) July 20, 1868. E. Humboldt Mts., Cañon below Camp. 7,000 1 sp.
 - b) Aug. 24, " " " Peaks above Carleton Cañon - 10,000 ft. 5 "
5. *E. umbellatum*, Boiss.
 - x a) Sept. 3, 1867. with Humboldt Mts. 9,000 ft. 4 9 sp.
 - b) June 23, 1868. - Emery's Range, side of Granite Pass. 5,000 ft. 2 "
 - c) July 7, " Trinity Mts., " Granite foothills in cañon " 1 "
 - d) " 9, " Limestone ridge near Robert's Creek, " 6,000 ft. 1 "
 - e) " 24, " E. Humboldt Mts., Ridge above Camp, " 7,000 ft. 2 "
 - f) Aug. 4, " Ruby Valley " 6,000 ft. 2 "
 - g) " 18, " E. Humboldt Mts., Cañon above Granite Pass 10,000 ft. 1 "
 - h) " 19, " " Fremont's Pass 7,000 ft. 5 "
 - i) June 10, 1869. Black Mountain Station, Snake Valley, Cañon - 6,000 ft. 2 "
 - j) July 21, " Washoe Mts., Utah - Peaks in Fremont's Pass 6,000 ft. 2 "
 - k) " 22, " " " " " " 2 "
 - l) Aug. 7, " Washoe Mts., near Ruby Cañon 6,000 ft. 2 "

Spec^s are with 2. brownish var, + brownish var. of the same

6. *E. umbellatum*, Torr. var. *monocephalum*, Gr.
- a. Aug. 20, 1868. - E. Humboldt Mts. - Peaks above Orland Ranch 10,000 ft. 2 1/2
- b. (Sept. 7), " Clear Mts., Nev. - South Peak " " 5 "
- c. Aug. 2, 1869. Humboldt Mts., Nev. - Bear River Cañon 9,000 ft. (1) 2 "
- d. " 10, " " " Ridge above " " 10,000 ft. (2) 3 "
7. *E. acule*, Nutt. -
- Sept. 20, 1868. Dry ridge near Head of Holmes Creek, Nevada 6,000 ft. 11 1/2
8. *E. ovalifolium*, Nutt. var.
- a) May 16, 1868. Trinity Mts., - Dry Cañon 6,000 ft. (1-2) 2 1/2
- b) " 30, " " " " " 5,000 ft. 12 6 "
- c) June 3, " W. Humboldt Mts. - Foot hills " " " 9 "
- d) " 20, " Douglas Range " " " 1 "
- x) July 30, " E. Humboldt Mts. Peak above Camp Ruby 10,000 ft. (1-2) 2 "
- x) Aug. 14, " " " Peak above Summit 10,000 ft. (1-2) 2 "
- y) May 21, 1869. Foot hills near Salt Lake City 1 "
- z) " 29, " Mead's Ridge near " " 5,000 ft. (1-2) 1 "
- ii) June 4, " Antelope Island, Utah - Foot hills (1-2) 1 "
- jj) " 15, " Starving Indian " Shore 1 "
9. *E. ovalifolium*, Nutt. - var. leaves oblong, long petioled.
- June 12 + 20, 1868. Gross Valley, Nevada 8 1/2
10. *E. ovalifolium*, Nutt. - var. *torreyi*
- Sept. 21, 1868. Dry ridge, Humboldt Mts., Nevada 15 1/2
11. *E. acule*, Torr. N.S.
- a) July 25, 1868. E. Humboldt Mts. - High Divide 9,500 ft. 3 1/2
- b) " 25, " " South Peak " " 2 1/2
- c) Aug. 20, " " " " " " " "
- d) Sept. 10, " Clear Mts. - " " 11,000 ft. +2 2 "
- e) " 10, " Star Peak 10,000 ft. -2 4 "
12. *E. Kingii*, Gr. - var. *taxiifolium* -
- June 13, 1869. Starving Indian Is. - Dry ridge 5,000 ft. (1-2) 2
- Aug. 20, 1869. Humboldt Mts. - Peak above " " " " +4 8

13

14

15

16

17

18

19

20

13. *E. elatum*, Dougl.

- a) Aug. 16, 1867. - W. Tucker Mts. - 10,000 ft. 1
 b) Sept. 4, " W. Humboldt Mts. - Lewis & Clark cat. - (W.W. Bailey) 1

14. *E. microthecum*, Nutt.

- Aug. 11, 1868. - W. Tucker Mts. - mid slope
 a) Sept. 3, 1867. - W. Humboldt Mts. - Star Peak - 8,000 ft. - 2 Gsp.
 b) " 4, " " " Lewis & Clark cat. (W.W. Bailey) 7,000 8
 c) " 10, " " " Star Peak 9,000 ft. - 1 2
 d) July 26, 1867. - E. Humboldt Mts. - Ridge above Camp Perry 7,000 ft. 2
 e) Aug. 1, " " " " " " 6,000 ft. 1
 f) " 14, " " " " " " ~~7,000 ft.~~ 2
 g) " 22, " " " " " " 6,000 ft. 1
 h) Oct. 6, " " " " " " 7,000 ft. (2) 4
 i) July 2, 1869. - Wahsatch Mts. - Echo Canon, Haying meadow - 6,000 ft. 4

15. *E. microthecum*, Nutt. - alpine form.

- a) Aug. 14, 1867. - E. Humboldt Mts. - Peak above saw mill 10,000 ft. 1
 b) " 24, " " " " above saw mill " 425

16. *E. microthecum*, Nutt. - between a. & B. - *E. elatum*

- Aug. 19, 1869. - Wahsatch Mts, Utah. - Co Howard Canon, 6,000 ft. (1) 4 sp.
 " 24, " " " " " " " " " 1

17. *E. microthecum*, Nutt. - var.

- June 13, 1868. - Drybank of creek in Grand Valley, Nev. 52

18. *E. boricoides*, Nutt.

- May 15, 1869. - Beacon ridge, near Salt Lake City - 7,000 ft. 1
 June 22, " Wahsatch Mts., Polley's Canon " 3
 July 10, " " " " " " 6,000 ft. (-) 1
 " 11, " " " " " " 5,000 ft. (-) 2
 " 20, " " " " " " 7,000 ft. (-) 3

19. *E. boricoides*, Nutt. - var.

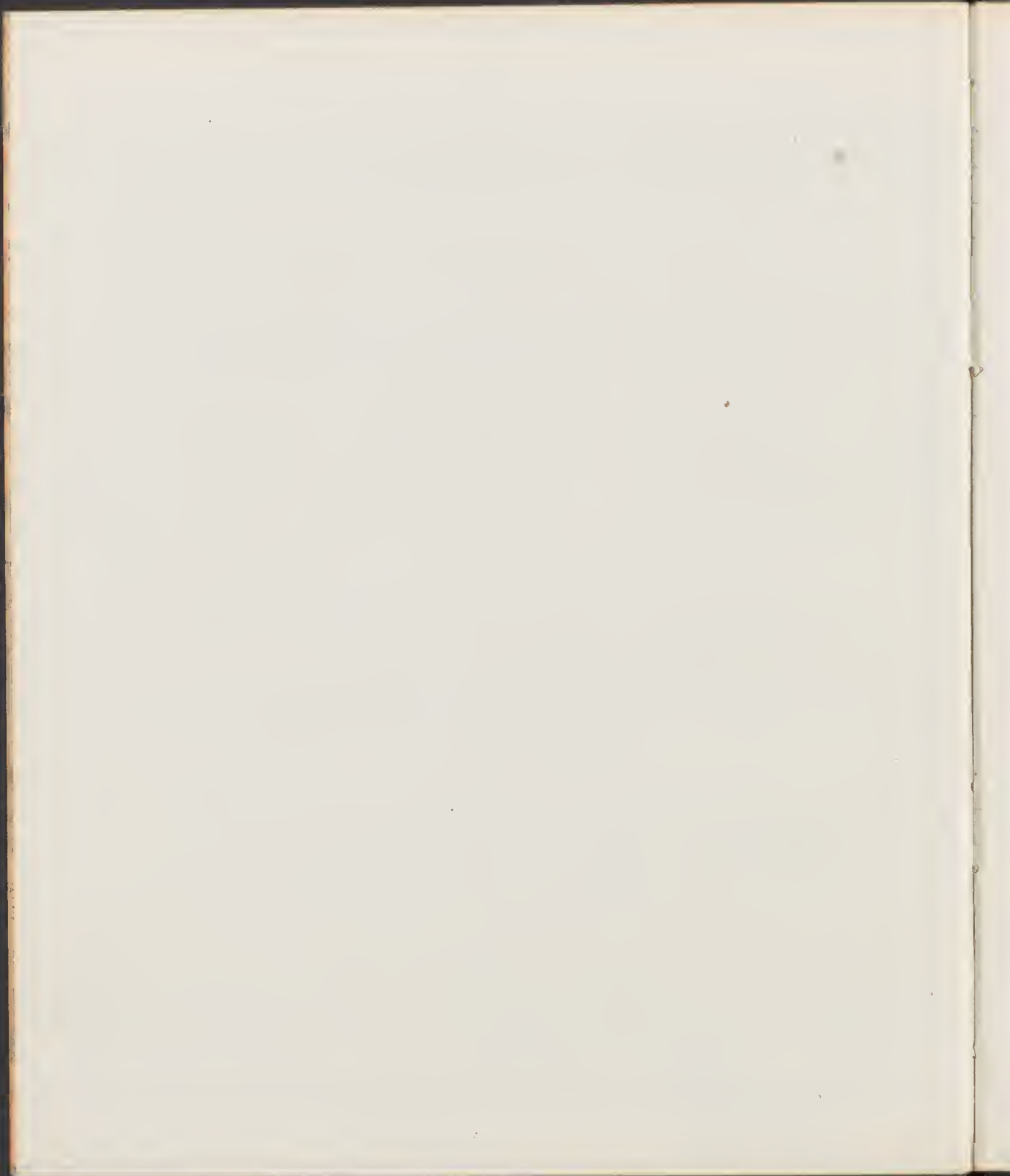
- June 15, 1869. - Starvation Peak - 7,000 ft. (-) 2
 " 20, " " " " " " 6,000 ft. (+) 4

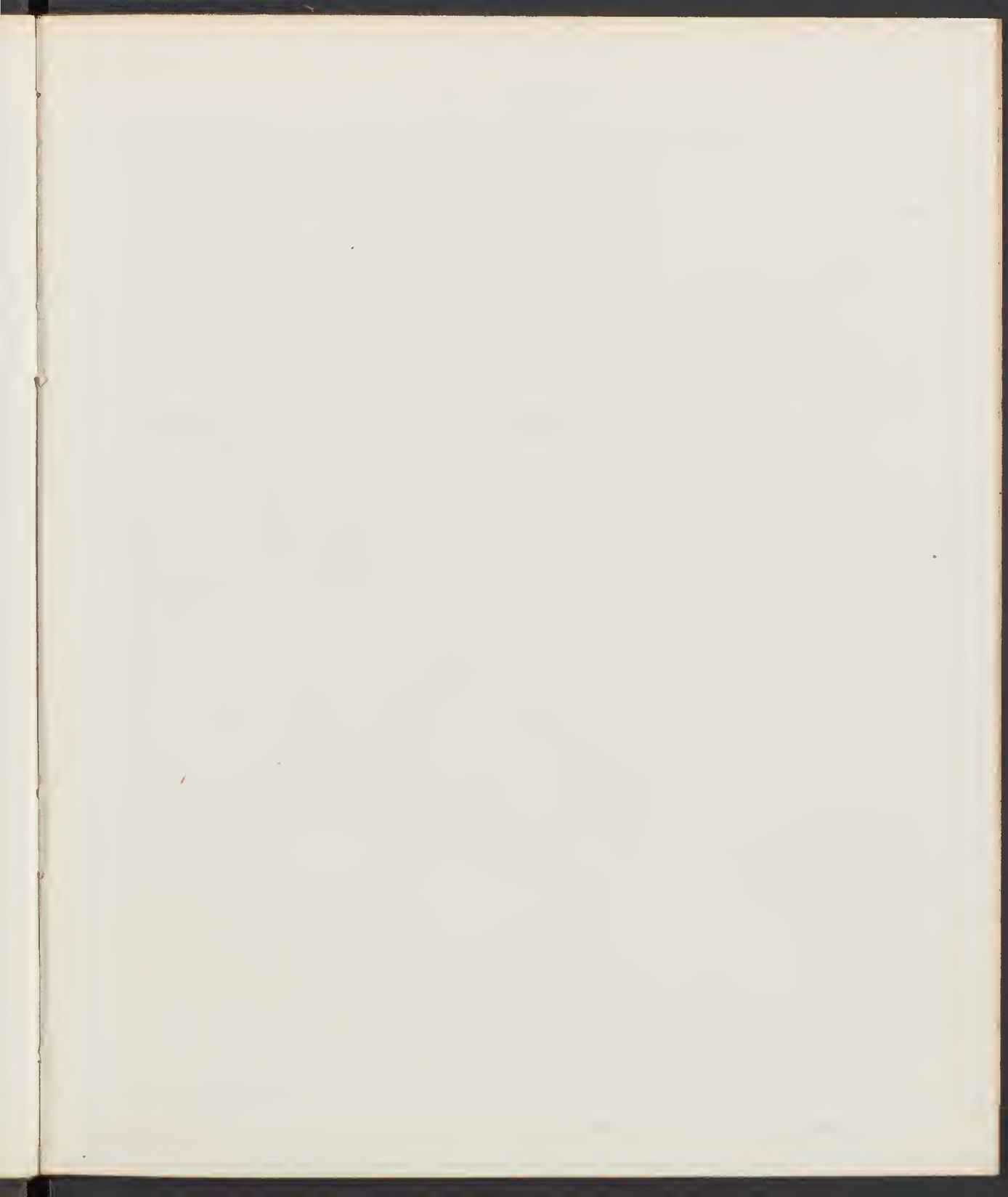
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20. *E. rufum*, Nutt. -
 Aug. 19, 1869. - Watauga Mts, N. C. - Eastwood cañon. 6,000 ft. (-3) 5 sp.
21. - *E. rufum*, Nutt. - var.
 a) July 22, 1869. - Watauga Mts., N. C. - Silver Creek cañon. 6,000 ft. 6 sp.
 22. - *E. rufum* " 26, " " " " " (-1) 5 sp.
22. - *E. rufum*, Nutt. -
 Aug. 16, 1869. - W. Tucker Mts. 6,000 ft. (-2) 6 sp.
23. - *E. gracile*, Bth. -
 a) July 6, 1869. - Tucker Valley, N. C. - W. Bailey. 1 sp.
 b) Sept. 23, " - Duglin range, N. C. near Duglin. 5,000 ft. - 3 sp.
 c) July 24, 1868. - E. Humboldt Mts., cañon above Camp Ruby. 5,000 ft. 2 sp.
24. - *E. plumbeum*, Dur. -
 a) July 31, 1869. - Tucker Valley, N. C. 5,000 ft. (-3) 5 sp.
 b) Sept. 20, " - W. Tucker Mts. Star cañon " (-1) 4 sp.
 c) June 22, 1868. " " Base of J. M. hills " (-2) 6 sp.
 d) July 5, " - Tucker Valley, N. C. " (-1) 5 sp.
25. - *E. reflexum*, Torr. -
 a) Aug. 16, 1869. - High cañon near Quail's Station N. C. 6,000 ft. (-1) 4 sp.
 b) Aug. 24, 1869. - W. Tucker Mts. Star cañon " (-1) 6 sp.
26. - *E. nutans*, Gray - N. C.
 a) June 10, 1868. - Duglin range - foot hills of Gray's range. 5 sp.
 b) " 18, 1868. - Unionville valley. 7 sp.
27. - *E. warrenii*, Gray - N. C.
 Sept. 19, 1868. - W. Tucker Mts. Star cañon 5,000 ft. (-1) 3 sp.
28. - *E. nutans*, Gray - N. C.
 a) July 27, 1868. - Duglin valley. 5 sp.
 b) Sept. 20, " - Base of Humboldt Pass. 1 sp.
 c) July 15, 1869. - Foot hills of Gray's range. (-1) 4 sp.
 d) " 12, " - Tucker Valley, N. C. 4 sp. (+2) 7 sp.
 e) " 27, " - W. Tucker Mts. Star cañon 5,500 ft. (-1) 2 sp.
 f) " 27, " - Tucker Valley, N. C. 1 sp.

29. *E. pusillum*, Gray n.s.
 May 15, 1868. - Humboldt Valley - Foot of Trinity Mts. - (-2) 4 sp.
- E. sericeum*, Torr.
 May 13, 1868. - Foot Hills in Truckee Pass. - 11,500 ft. - 4 sp.
31. *E. inflatum*, Torr.
 a) Aug. 24, 1868. - Foot of Humboldt Mts. (view of valley) 8 sp.
 b) May 16, 1868. - Trinity Mts., near base (-1) 4 "
32. *E. angulosum*, Britt.
 a) May 14, 1868. - Truckee Valley - border of forest 5 sp.
 b) June 15, 1869. - Carson Lake - island - Salt Lake 3 "
 c) Sept. 21, 1869. - Trinity Mts. - St. Clara Canon (-2) 8 "
 a) July 27, " - Truckee Valley - edge of forest 1 "
 b) " 29, " " (L. 1868) 1 "
 c) Aug. 2, " - Carson Desert - Havers Station 1 "
 f) July 2, 1868. - Truckee Valley - Foot Hills (-2) 3 "
 g) ") " - Monitor Valley, Dry Creek Station 1 "
33. *Oxytheca dendroidea*, Britt. var. (*O. pilosa*, Swt.)
 July 7, 1868. - Monitor Valley 5,500 ft. - 5 sp.
34. *O. dendroidea*, Britt. var. with small flowers
 a) Sept. 23, 1869. - Douglas Camp - near Virginia (-2) 16 sp.
 b) July 7, 1868. - Monitor Valley, 8,000 ft. (-2) 2 "
35. *O. watsoni*, Gray - n.s.
 July 7, 1868. - Monitor Valley, " (-2) 2 sp.
36. *O. perfoliata*, Gray. n.s. (W. W. B.)
 a) July 26, 1869. - Truckee Valley - border of forest 4,500 ft. 2 sp.
 b) May 14, 1868. - " " (-1) 1 "
 c) " 15-19 " - Humboldt Valley - small meadow like (-4) 1 "
 d) June 22, " - Truckee Valley - " (-1) 3 "

37. - *Chorizanthe crivicosana*, Torr. 1963
 May 14, 1888. - Truckee Valley, near Desert 105/1.
38. - *C. riparia*, Gr. -
 May 14, 1888 - same loc. 1 - 9/1
 " " Humboldt Valley, foothills near Lake 2-11 4 "
39. - *C. watsonii*, Gr. W.S.
 May 16. Nov. Trinity foothills near Humboldt Lake 20/1.
 June 12, " Grass Valley (42) 11 "
 " 14, " Hamiltonville Valley (4) 11 "
 July 3, " Yuba River Valley, near Clifton (6) 11 "







6.

7.

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11.

6. *G. citansa* Fries. - As has been ~~indicated~~ by Engelman & Gray, *G. citansa* differs but in its broader base and the two species ~~are~~ ^{are} ~~not~~ ^{not} ~~separated~~ ^{separated} into two species. ~~Final revision is the subject.~~ 6-10" high. Simple

- a) Aug. 18, 1868 - Ruby valley - Edge of Spring 6,000 ft. 4 sp.
 b, " 20, " Huntington valley - creek bank " " 5 "
 c) July 31, 1869, Near River canyon, near ... 6,000 ft. 11 "
 d) Aug. 11, " " " " " 9 "
 From Canada and the Lakes to the Arctic Ocean, and west to the Rocky Mts, Rocky Mts. of Colorado, (Hall's House), + the ... Country (Mexico) - ...

9. *G. rigidula*, Hooker. *G. alpestris*, Griseb. etc. Flowers more developed, but ... the same as 305 from the Rocky Mts. of Colorado.

Aug. 3, 1869. Winton Mts. - Peak above ... 11,000 ft. 5 sp.

10. *G. ...*; ... See ... Stem 1-flowered, or the ... on long pedicels, but the pedicels are often ... in length or the flowers are ... Calyx lobes very ... covering the lower side of the tube. Flowers varying much in size (10" - 2") ... capsule on a ... the calyx lobes ... variable, ... by ...

From the ... to ... and ...

Utah + Mexico.

- a) July 20, 1868 - Ruby Valley at ... 6,000 ft. 2 sp.
 b) Aug. 20, " Huntington Valley " " " " 4 "
 c) Sept. 1, " Ruby Valley, ... 10 "
 d) " 4, " " " " " 1 "
 e) " 30, " ... 5 "
 f) July 31, 1869 Winton Mts. - Peak above ... 6,000 ft. 4 "
 g) Aug 13, " " " " " " "



H. G. ... all ... lobes ... Rocky ...

- a) South ³, 1868 South Clear - Park 9:00 a.m. 550
- b) Aug. 6th, 1869 - ... 20,000 200
- c) " 5th, " " " " " 80
- d) " 9th, " " " " " 100

Erythraea longipes, - The same as *E. longipes*, Lewis R. ...
 ... also 29 ...
 ... the flowers upon long ...
 ...
 ...
 ...
 ...
 ...

- a) Oct. 11, 1871 W. Humboldt Valley - near ... 450
- b) Aug. 3rd, 1869 ... 100
- c) " 20th, " Humboldt Valley ... } "
- d) Sept. 4th, " Ruby Valley - ... 200

... .. Stem ... leaves ...
 ...
 ...
 ...
 ...

- + N. Mexico (New Mexico)
- a) July 10, 1868 ... 400
 - b) " 19, " ... 200
 - c) June 29, 1868 ... 200
- ...
 ...
 ...
 ...
 ...
 ...
 ...
 ...

- 1 Tabacum
- 2 Jussiaea
- 3 ...
- 10 ...
- 11 ...
- 12 ...
- 13 ...
- 14 ...
- 20 ...
- 21 ...
- 31 ...
- 32 ...
- 33 ...
- 34 ...
- 35 ...
- 36 ...
- 37 ...
- 38 ...
- 39 ...
- 40 ...
- 41 ...
- 42 ...
- 43 ...
- 44 ...
- 45 ...
- 46 ...
- 47 ...
- 48 ...
- 49 ...
- 50 ...
- 51 ...
- 52 ...
- 53 ...
- 54 ...
- 55 ...

H+H, and, for, [unclear], [unclear], [unclear] [unclear] [unclear] [unclear] [unclear]

1864-6

some as ^{very} common

Coronilla, ~~near~~ Lake Washon, ~~Franklin Co.,~~ near St. Joseph, and Vasey's single spec. from near St. Joseph, W. of Denver

July 16, 1867. near St. Joseph (Boiling) 24 ft

by Vasey, Unionville, California 2 "

July 27, 1864. near St. Joseph 1 "

It is distinct from many named spec. in Herb. Gray, N. Y. Herbarium, but similar corolla & calyx but the leaves are sessile & clasping at base & more oblong, the flowers in long raceme & racemose.

Anderson 264, from near Coronilla, 355 from near Clear Lake, Fremont 441, 1846, spec. raised by Hall from California seed are yet another form and the same as Vasey's *triflorata* f. *virgata* var.? (B. Gordon of Whipple's Report - differing from the last in the usually simple stem, more ^{simple} and ^{more} branched) more elongated calyx lobes, much longer corolla tube with longer & more dilated limb.

21. *Vithamnia?* a new sp.

July 14, 1864. gravelly foothill near Hickory 6 ft.

Evidently allied to *V. coronopus* but more certainly a congener. In Herbar.

imperfect. Cf. Vasey's Mex. 106.

22. *Lycium Andersonii*

June 17, 1864. Cassington Island, Salt Lake 12 "

Apocynaceae

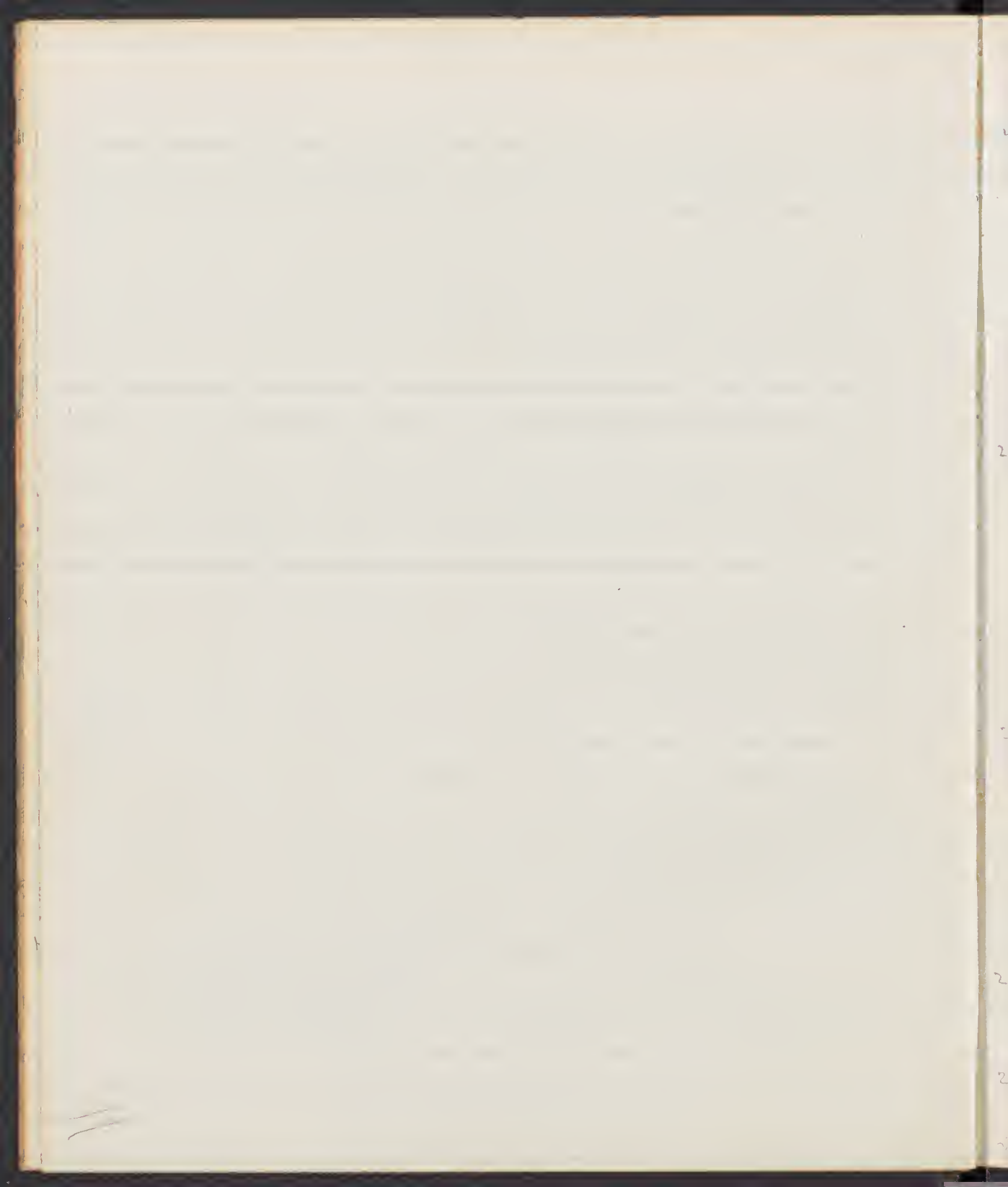
Aspyrum appressum folium, L. - Mostly, *latro* var. *triviale* in N. California & Hudson Bay & westward to Kansas ^{to Saskatchewan} & the Rocky Mts. & from west to the Sacramento river. 1-2' high. in sand, etc.

Aug. 25, 1864. E. Humboldt. Upper course 6 ft. 2 ft.

July 10, 1864. near St. Joseph 7 ft. 2 ft.

July 14, 1864. near St. Joseph 2 ft. 2 ft.

July 10, 1864. near St. Joseph 1 ft. 1 ft.



4. *A. caudatum*, L. ~~monstrum~~ 3-6" high on stream banks; usually
 the ridges as a substitute for being in moist soil &c, and in
 leaves 4 or more long and 2 broad, sessile and angustate - the ramet are much
 smaller & petioled. Glabrous. Florida to Canada
 The Rio Grande valley, and W. to New Mexico, Sonora, and California
 a) Sept. 19, 1867. Harbinger Co., Harro, Mo. frequent on Harro River 2 sp.
 b) June 11, 1869. Miller mead on Rio Grande valley 1 "

Asclepiadaceae

25. *A. speciosa*, Torr. from Washington D.C. to N. California to
 southeast to Colorado & New Mexico. Under & prostrate in the
 the forest & on the edge of the valley.
 a) July 26, 1867. Miller mead on Rio Grande (W. 13.) 2 sp.
 b) " 2), " same place long 1 "
 c) Sept. 20, 1867. Miller mead on Rio Grande, near the Pass 1 "
 d) July 10, 1869. Harro, Mo. - Harro River 1 "
 e) 20, 1869. Ruler valley 3 "
 f) Aug. 7, " Harro River valley 1 "
 26. *A. fasciculata*, Dec. 3-5" high, leaves 2-5" long, on no. 2, 2 1/2" long
 in the broadest part. Marginal leaves not revolute. Dipping
 2 or 3 times in its less pubescent, more densely flowered
 + stouter habit, but it rarely more than a variety
 a) Aug. 11, 1867. Valley & mountains in Indian Territory (W. 13.) 1 sp.
 b) Sept. 10, " Miller mead on Rio Grande 3 "
 Oregon to California
 27. *A. speciosa*, Torr. W. Texas & Arkansas to Oregon & Idaho
 a) June 14, 1869. Stoneburg, Idaho. 2 sp.
 b) Aug. 29, 1869. Jordan valley - Monte of California 3 "
 28. *A. speciosa*, Torr. (W. 13.) A single spec. from Harro
 a) May 23, 1867. Curran on Rio Grande 3 sp.

29
31.
3
A. Coux-Malbec, Kell. Trans. Calif. Acad. 2. 71. fig. 16. from Washon is
the same.

13

3
3
from ... (455) - N. Mex. or Arizona, Palmer 1892 - ... 1710 - ...

Amaranthaceae.

Amaranthus paniculatus, L.

Sept. 10, 1867 - Unionville - garden

2 sp

A. retroflexus, L.

Sept. 7, 1868 Roadside - below Anstey's Station

Aug. 19, 1869 Lower Cottonwood cañon

A. albus, L. - Aug. 15, 1867 - Truckee bottom at Big Bend

" 15, " same loc. woods

Sept. 19, " Unionville

July 9, 1868 - Diamond Valley

Sept. 7, " Roadside below Anstey's

" var. - two last localities
Paso de las Puercas

Paronychia pumilana, Gr.

Aug. 2, 1869, a Peak above Bear River cañon - 12000 ft.

7 sp

Cyperis occidentalis,

June 23, 1868 - Hot Springs of Carson Valley

5 sp

July 8, " Alkali mud flat near Grubbs Wells

4 "

Sept. 1, " meadow, w. of Grubbs Wells

5 "

Oxyria

Aug. 27, 1868 Lake shore -

9,000 ft

" 29, " " slope above lake

9,500 ft

" 31, " " Main Peak

10,000 ft

Sept. 7, " " S. Clow's Peak

same

July 15, 1867³⁰ Fern gulch

6,000 ft

" 15, " " Peak above Cottonwood cañon

9,500 ft

Aug 3, " " Mintakes Peak

11,000 ft

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300

Provo canion, Eaton

Provo Canion Eaton

39. *R. californicus*, Wimmer. N. England; Newfoundland;
 to Great Bear Lake & Alaska to Texas, N. Mex. & Calif. -
- a) Aug. 1, 1867 - Truckee meadows on the 2d, 2nd - (W.W.B.) 10 p.
- b) July 1, 1868 Humboldt Valley - mouth of River 2 "
- c) " 9, " Robert's Creek station 1 "
- d) Sept. 29, " Thousand Spring Valley - Rock Spring. 1 "
- e) " 25, " Near Willow Creek Camp - 10000 ft valley 1 "
40. - *R. Bartholomaei*, Wimmer? - *californicus*-var.? - Leaves undulate margin,
 truncate or cordate at base, ~~flat~~ valves normally winged, acute or acuminate,
 submarginal ~~submarginal~~,
 seems to be the same as Wm. 1870 + 1871 referred in Mex. to *R. californicus*,
 apparently ~~225 + 445~~ Bart. - name crossed on tickets in H. B. Gray.
 Oct. 1, 1867. - ~~Sierra~~ Range, Granite Peak ca. 15 p.
41. - *R. maritimus*, L. Mass. to N. Hudson's Bay & the Saskatchewan & Wash
 territory, southern to Florida. ~~W. Texas~~, N. Mexico, & California
 variable in height & habit.
- Aug. 15, 1867 - Truckee meadows on 2d, 2nd (W.W.B.) 12 p.
- " 20, " " " 3 "
- " 1, 1868. Ruby Valley 2 "
- Sept. 6, " Salt Lake Valley, mouth of River 2 "
42. - *R. Engelmanii*, Ledeb. W. Florida & S. Carolina; Texas to Illinois, Indiana & the
 P.S. line of the north; the var. in Oregon & Washington territory.
 var. with flat head (imm.) Abundant flowers on the fertile plants with
 often fruiting.
- June 22 + 29 - Parley's Park 6 p.
43. *P. arvensis*, L. From lat. 65° southward to ~~Canada~~, Texas & Arizona.
 prostrate or ~~in the young state~~ ascending form, with small leaves & crowded flowers
- Sept. 9, 1867. Unionville - 7 p.
- Aug. 25, 1868. ~~Sierra~~ Ruby Valley - roadside 1 "

415.)

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48. - *P. tenuis*, Mx. - var. ~~californicum~~ ^{viridifolium} - leaves broader, often dark green & shining - may include as well some of the last. -
- a) June 26, 1868. Mt. Diablo range - Cumberland cañon 45 ft.
- b) Aug. 26, " E. Humboldt. Cañon above Lake S. Ramona. 60 ft.
49. - *P. tenuis*, Mx. - var. *californicum*, Eng. - a small shrub of the same.
- Sept. 12, 1868. Crown Mts. head of cañon 9,000 ft. 25 ft.
50. - *P. coccinelliforme*, Dougl. - var. *B. minus*, Mx. - Achene described by Hooker and my mindfully punctate, and by Meisner as very smooth and shiny, as they also are in ^{most of the} specimens in Herb. Gray. Some ^{however} above the achene, outline, rougher with in this variety they are either glabrous or more or less tuberculate which, as we know from the same plant. This is *P. coccinelliforme* of Nutt. Mss. with "rugulose striate" achene ~~from~~ "Columbia plains" & his Mss. *P. imbricatula*, glabrous, from Rocky Mts. to Calif. - It is also 490 H. & H. from Colorado & 125 from near Donner Lake, Calif.
- a) Aug. 29, 1868 E. Humboldt Mts. - slope above Lake 9,000 ft. 125 ft.
- b) Sept. 12, " Crown Mts. - head of Cañon 9,000 ft. 150 ft.
- c) June 24, 1869 Ridge above Parley's Park 10,000 ft. 11 "
- d) " 20, " Ridge west of Camp 9,000 ft. 5 "
51. - *P. coccinelliforme*, Dougl. *B. minus* - a more slender, shorter spiked form.
- a) July 27, 1868 E. Humboldt. Sisk. a divide above Etadbury. 125 ft.
- b) June 24, 1869 Washburn. Cañon above Parley's Park 12 "
- c) " 26, " " Parley's Park Camp 10 "
52. - *P. amphibium*, L. - Northern States & Canada, as well to the Great Salt Lake, from Washington Territory to California, & the mountains westward, and in Mexico, & lower on.
- a) July 10, 1868 - Mt. Diablo - 10,000 ft. 45 ft.
- b) June 25, " Above Cumberland - 8000 ft. 2 "
- c) Aug. 1 " Rocky Valley 10 "
- d) Sept. 26 " 1000 ft. early 2 "
- e) July 20, 1868 Parley's Park 2 "

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53. - *P. amphibia*, L. var. *tenax*,
 a) July 12, 1869. - Cottonwood creek - at old ranch 2 sp.
 b) " 20, " Bodley's Park 1 "
54. - *P. Purrcana*, L.
 Oct. 6, 1869. - Malaga Valley - near ranch. - 5 sp.
55. - *P. hirsutum*, L. White mts. + Lake Superior, to Colorado + the
 Pa., Canada + Michigan straits; southward in the mts. to Colorado + Calif.
 a) Sept 10, 1869. - Clear Lake - below East Lake 9,000 ft. 7 sp.
 b) " 14, " " " " " " " " " " 1 "
 c) July 21, 1869. - Vintah mts. - Bear River bottom 4,000 ft. 2 "
 d) Aug. 3, " " " " " " " " " " 6 "
56. *P. bistorta*, L. var. *d. occidentalis*. Michigan forests + the same
 southward in the mts to ^{N. Mexico} ~~N. Mexico~~ + California
 Aug. 27, 1869. - 2. Hunt's mts. - Lake Superior 9,000 ft. 12 sp.
 Sept. 10, " Clear mts. - " " " " " " 2 "
 June 23, 1869 - Bodley's Park 6,000 ft. 3 "
 (12-13)
57. - *P. bistorta*, var. *oblongifolia*. Leaves very narrow (3-5") + elongated; need short
 Aug. 29, 1869. - Slope above Lake - 5. Hunt's mts. - 10,000 ft. 8 sp.
58. - *P. convolvulus*, L. Introduced
 July 13, 1869. - Cottonwood creek - near Straws. 4 sp.
 Aug. 27, " " " " " " " " " " 3 "
59. - *P. polymorphum*, Ledeb. *P. polymorphum* var. *occidentale* var.
 found on mt. in bond. spec. specimens to date from Canada and
 (425) from near Summit Pass on more nearly the Trans-
 alpine mts, all with broad arch leaves. Several in fruit. The
 leaves are same as *occidentale*. Though scarcely fruiting it does not accord with
P. bistorta, var. *occidentale*, but a variety
 Aug. 26, 1869. - 2. Hunt's mts. - near above Orsted Ranch - 7,000 ft. 5 sp.
 " 27, " " " " " " " " " " 2 "

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Elaeagnaceae.

5. *Elaeagnus Canadensis*, Nutt. - Vt to Wisconsin & Newfoundland, and northward to the Arctic circle & west to the Rocky Mts., Washington Territory and south in the mountains to ~~Arizona~~ ^{Wyoming (Fremont)} and Colorado (Hall & Hooker) in Mexico. Franchet
- a) July 27, 1868. E. Canadensis. Above Ft. Ruby, 9,000 ft. 11 sp.
 - b) Aug. 18, " " " Above Sawmill " " 1 "
 - c) Sept. 10, " " " below Ft. Peck " " 1 "
 - d) July 6, 1869, Blunt Mt. Mts. - head of Park Canon " " 2 "
 - e) " 17, " " Echo canon - above Hagerblock " " 2 "
 - f) Aug. 13, " " Mt. Tet. " near base of " " " 2 "

5. *argentea*, Nutt. - from the Saskatchewan southward to the Gulf of California, (along with *Canadensis*) and in Mexico (Franchet & Co)

- a) July 27, 1868. - On Esmeralda, near Clark's Sawmill 2 sp
- b) Aug. 4, 1868. - Esmeralda, below the canon " " 3 "

6. *Elaeagnus argentea* Ph. Canada & west to the Rocky Mts., in Mexico, & beyond (Fremont) 'New Miss' (~~California~~) & in the U.S. & C. Franchet.

- b) Aug. 15, 1869. - Bear River valley at Sawmill 16 sp
- a) July 29, " " " or Esmeralda 6 "

Santalaceae.

6. *Comandra pallida* Griseb. ~~Willd., Nutt.~~ Flowers not distinct from *umbellata*. Leaves somewhat punctate on the upper surface, most leaves narrowly lanceolate, sometimes cordate from the base when the leaves become very young, especially small ones, in long fruit with outflaring wings, 3" in diameter. From Oregon to Canada & N. Mexico.

- a) July 10, 1868. Diamond Mt. range. 8 sp
- b) " 20, " " E. to mouth of Mts. Canon above Camp Kelly " 2 "
- c) " 27, " " " Peak above Ft. Ruby 8,500 ft. 1 "
- d) May 17, 1869. Wadsworth a City, South canon 5,000 " 1 "
- e) June 24, " " " Slide above Bridge Canyon 6,000 " 1 "



0

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Lorantheae

Orantheobium *oxymeris*, Bieb. - some of the allied forms which extend from the
 Saskatchewan to Oregon & south to California & N. Mexico, doubtless occur in
 Idaho -

Euphorbiaeae

- 64. - *E. subulata*, Torr. & Hook. - flowers yellowish prostrate,
 - a) Aug. 25, 1857. - Common desert. - and Soda Lake 6 sp.
 - b) May 14, 1861. - Cany. - eq. plain E. of Big Bend 5 "
- 65. - *E. aclyphifolia*, Pers. var. *consequina*, Boiss. DC. 157. 43. (Monardella *var. a* Nutt.
 & *E. consequina*, Eng. Mt.) - ^{in Mexico & N. Mex.} ~~in Mexico & N. Mex.~~ ^{California} ~~California~~ and
 Oregon. 4762 ^{Chinook - near Humboldt Co.} ~~Chinook - near Humboldt Co.~~ ^{in California} ~~in California~~ ^{in California} ~~in California~~
 - a) July 22, 1857 - Snake Pass at Clark's Station, (W.V.B.) 4 sp.
 - b) " 27 + Sept 10, Big Bend & Unionville 5 "
 - c) Aug. 25th, 1858 - Idaho valley - nears about in a lot 2 "
 - d) Sept. 4th, " - Franklin valley - hot springs 10 "
 - f) May 31st, 1859 - good on valley - ~~abundant~~ salt meadow 4 "
 - e) Sept. 20, 1860 - Humboldt Pass - warm springs 8 "
- 66. - *E. glyptostachya*, Eng. - From Illinois & Canada to the Sacramento
 & southward to Arkansas & N. Mexico. Prostrate or ascending
 - a) Oct. 6, 1860. - by road side above of Big City 2 sp.
 - b) July 11th, 1859. - near the base of the Sierra Nevada 1 "
 - c) Aug. 20th, " - Cottonwood Canyon 1 "
- 67. - *E. dictyocarpus*, Hook. & Arn. - Kentucky to Louisiana & westward to
 Oregon
 - June, 4, 1859. - Arkansas - Island. 1 sp.
- 68. - *E. montana*, Eng. - Occurs in N. Mexico & California
 - a) June 29, 1857 - ~~in the~~ ^{in the} ~~mountain~~ ^{mountain} ~~above~~ ^{above} ~~the~~ ^{the} ~~base~~ ^{base} ~~of~~ ^{of} ~~the~~ ^{the} ~~Sierra~~ ^{Sierra} ~~Nevada~~ ^{Nevada} 10 "
 - b) July 4th, " - " " " " " " " " " " " " 1 "
 - c) " 5th, " - " " " " " " " " " " " " 2 "



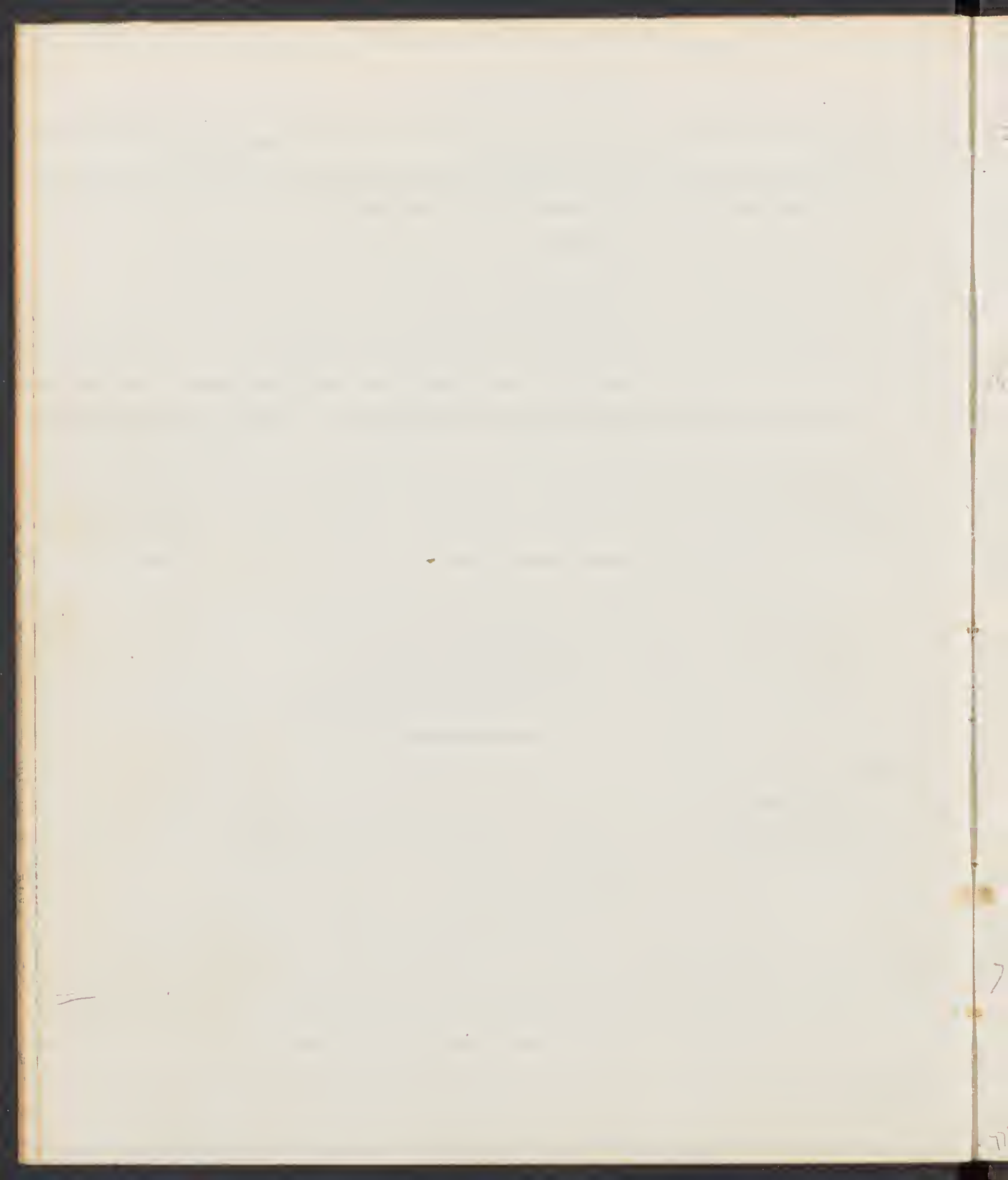
1

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73



Ex⁹. *Ectonis speciosus* for pubescens as it is

H3

76

77

78

Not seen west of the western ill. but examined at Co. road - a visit to low 36°
~~Part~~ -

- | | | |
|------------------|---------------------------|------|
| a) May 17, 1869. | - City Creek canyon | 2 sp |
| b) " 18, " | " " | 4 " |
| c) July 1, " | Parley's Park | 2 " |
| d) Aug. 20 " | Mount. Co. H. road canyon | 4 " |
| e) " 27 " | " " American Park " | 10 " |

Botulacium.

76. *Botulacium* ? - Same as Walters *B. occidentale*, *B. var. viscosa*, *Mb.* - *Rocky mts. & Canada*
 Pacific 339 (*B. alba*, var. *glutinosa*, forma *lanifolia*, etc.) - 514 H + H. (*B. papyracea*) 524 Vasey (73.
papyracea, var. *glutinosa*.) and perhaps the same as *Homopneum* spec from banks
 of Beaver (Castor) river, (Saskatch.). - With its dark colored bark can hardly
 be any form of *B. alba* + aff. - Can hardly be *B. var. glutinosa*, etc.

May 18, 1869. - City Creek canyon 9 sp

77. *B. ...*, det. - ^{2 or 3 specimens} *B. ...*, to the *entire*
area of *Achnis* *Hairs*, Alaska, Oregon and Colorado.

- | | | | |
|------------------|------------------------------|----------|------|
| a) July 5, 1869. | - Winton mts. - River canyon | 8,000 ft |) sp |
| b) " 7, " | " " | 9,000 ft | 6 " |

78. *Abies incana*, Willd. - var. *glauca*, Rept. - Herb. Gray shows but one form,
 which must include, so far as I can see, also Repts *A. simulata* *B. nigra* which
 differs in nothing and has no resemblance to *A. simulata* - ... on
 base or slightly cordate, mid, slightly concave - always doubly & sharply ...
 not, smooth, rarely subacuminata - more or less pubescent, both tips &
 base, rarely nearly glabrous - ends with a narrow concave wing. - New England

to the Saskatchewan, and farther west to N. Mexico, and west to Oregon.

Eng. Johnston - 530 Vasey - 340 Gray - 519 H + H - 104 Ann. A. Tammifile, Ann. R. H. M. W. - 215 Gray - same
 when the *Mich.* - 1798. *Gibb.* - Sask. *Eng.* - 411 *Rept.* - 422 *Ann.* - *incana* *B.*

- | | | |
|-------------------|------------------------------------|------|
| a) Dec. 6, 1867. | - Banks of Hunter near Glen | 4 sp |
| b) Apr. 18, 1868. | - near Carson City - King's Canyon | 4 " |
| c) Oct. 2, " | - City of Rocks | 4 " |
| d) June 25, 1869 | - Canyon above Parley's Canyon | 1 " |
| e) Feb. 6, " | - Parley's Canyon - Shiloh mine | 3 " |

77

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83

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N. Engla. J. to Mission in the Caskadeum + Grand Stone Lake, Colorado + Oregon.

84

Salicaceae

79. *Salix longifolia*, Muhl. (S. Man.) The most abundant species usually 3-4' high in dense clump, rarely more than 1' in diameter - very variable in pubescence, size of leaves, etc. - ~~usually~~ ^{usually} white + silvery underneath, occasionally with the axils crowded at the extremity of the ~~branches~~ ^{branches}.
- | | | | | |
|----|------------------|---------------------|---|-------|
| 1. | a) July 27, 1867 | Highland of Truckee | (L.W.B.) | 9 sp. |
| 2. | b) " 27, " | " " | " | 14 " |
| 1. | { | c) Aug. 20 " | " " | 2 " |
| 1. | | d) July 29, 1868 | Ruby Valley | 1 " |
| 1. | | e) May 21, 1869 | Foot hills above Humboldt, near S. City |) " |
80. *S. longifolia*, Muhl. var. *oxyphylla*. the silvery form.
- | | | | | |
|--|------------------|---------------------|----------|--------|
| | a) July 27, 1867 | Highland of Truckee | | 22 sp. |
| | b) " " " | " " " | (L.W.B.) | 4 " |
81. *S. whitei* *oxyphylla*, Andr. 82. 16. 290 E. summit of Cascade ^{7,000 ft} Mts. (Lyon), Seattle, Wash. - on the ~~coast~~ ^{coast} to Baker's Summit of Oreg. Alaska.
- | | | | | |
|----|--------------|--|-----------|--------|
| a) | Aug. 6, 1869 | Wintah Mts. - moist bank above Pickett house | 10,000 ft | 13 sp. |
| b) | " 10, " | " " near Peck's W. camp | 11,000 ft | 4 " |
82. - *S. reticulata*, L. - *glabra*. Localities Hudson Bay & the Arctic coast, Alaska, Straits of Analechusa, and southward on the Rocky Mts. of Colorado.
- | | | | | |
|----|-------------------------|------------------------------|----------|--------|
| a) | Aug. 29 ¹⁸⁶⁸ | Humboldt Mts. - on a bank | 8,000 ft | 16 sp. |
| b) | Sept. 10, | Clown Mts. - West Park | 9,100 " | 2 " |
| c) | " 14, | " " | " | 4 " |
| d) | Aug. 10, 1869. | Wintah Mts. - Peck's W. camp | 11,000 " | 12 " |
83. *S. cordata*, Muhl. - var. *opulenta*. - var. varying in size, 6' & 8' tall
- | | | | | |
|----|---------------|--|--|-----|
| a) | July 27, 1867 | Highland of Truckee | | 7 " |
| b) | Aug. 2, 1868 | Wintah Mts. - lower Mill canyon, ^{near} in floor - near | | 4 " |
| d) | " 25, | E. Humboldt Mts. - Pickett's camp | | 4 " |
| f) | July 7, 1869. | Wintah Mts. - lower Mill canyon | | 2 " |
| e) | May 14, | Wintah Mts. - Pickett's camp | | 5 " |
| g) | Aug. 31, 1869 | Wintah Mts. - Pickett's camp | | 3 " |
84. *S. cordata*, Muhl. - var. *opulenta*. - var. varying in size, 6' & 8' tall
- | | | | | |
|--|----------------|------------------------------|--|-----|
| | Sept. 26, 1868 | Wintah Mts. - Pickett's camp | | 2 " |
|--|----------------|------------------------------|--|-----|

abb.)

84

~~61~~
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100

a d's track, ...

84. Salix - *diff. curvata* (some specimens doubtful, marked x) - Spreads
 irregularly broad, with light yellowish green bark. 8-10"
- x Aug. 31, 1868 - west of canyon 3 sp.
 - June 9th 1868, Unionville canyon 3 "
 - " 18, " " 4 "
 - Aug. 6, " S. Humb. Mts. canyon on W. side 10" x 14" 5 "
 - Sept. 4, " " " " " " " " 12 "
 - x " 26, " 10000 ft. valley - Wilson camp. 2 "
 - x May 18, 1869 City Creek canyon 5 "
 - x July 26, " Canyon above Whiskey. 2 "
 - x " 27, 1869 High Bend 1 "

85. Salix - *diff. macrocarpa*, Nutt. Closely resembles *diff. of Nuttall* in
 Herb. Gray "Columbia banks", but wants the border of the pubescence, has larger
 anthers (twice) and fruit, scales mostly broad & more obtuse, leaves
 rather larger & somewhat more acuminate. pubescence better with
 Nuttall's description than with *diff. macrocarpa*. - 2-3" high.
 Very near *diff. macrocarpa*.
 Aug. 27 + 29, 1868. - High Bend - Wilson - Lake shore 7 sp.

Hudson's Bay. - Nuttall says on Lake shore ...

86. Salix - *Arctica* var. diff. macrocarpa?
~~... ..~~

 Aug. 2, 1869, - High Bend - Wilson - Lake shore 11,000 ft. 1 sp.
 with pubescence & branches
 " 10 " " " " " " " 13 "

87. Salix - High Bend
 Aug. 2, 1868. High Bend - Wilson - Lake shore 3 sp.
 It Anderson is same with only leaves

88. Salix - High Bend - Wilson - Lake shore
 May 2, 1868 - High Bend - Wilson - Lake shore 3 sp.

89-92 - Salix - High Bend - Wilson - Lake shore
 May 2, 1868. - High Bend - Wilson - Lake shore 10 sp.
 " " " " " " " " 13 "
 Apr. 18, " " " " " " " " 3 "
 " " " " " " " " 2 "

1056)

73

74

75

76

Sing, alt. pi = Plank.

73. *Populus tremuloides*, Mx. - ~~Northwestern~~ ^{Northwestern} Canada, Newfoundland, + Canada
to the Saskatch + Oregon, + scattered in the mountains to Cal. + N. O.
California + New Mexico. Frequent in the upper canyons of
Nevada + Utah - ~~not~~ ^{not} in flower or fruit - rarely 10' though to 30' high.
Aug. 21, 1867 - Wright's canyon 4 sp

July 24, 1868. - Canyon above Camp Ruby 2 "

74. - *P. monilifera*, Mx. W. New England + Wisconsin, on the C. & N. Railway (P) Louisiana,
N. Mexico to S. California - ^{synonym} apparently forms the Mississippi to California

+ Oregon - not seen in Utah and less common than the next in Nevada

Nov. 10, 1867 - Lake Peak canyon - 2' - 3' long form - leaves
a) Nov. 26, 1867. - ~~leaves~~ ^{leaves} ~~leaves~~ ^{leaves}

b) May 13, 1868. - " at Beck's sp 2 sp

Referred by Mesnard in Gb. Prod. to *P. Canadensis*, but Arthur names
it much the same.

75. - *P. trichocarpa*, 749. - H. J. in Gyr. - *P. balsamifera*, y. Fr. 2. 153. probably from
"Pacific N. America" - certainly Lyall's "*P. balsamifera*" from Lower Fraser
River, 49 N. Lat. 1859. ^(1 1/2 - 4' long) leaves broad and ~~wide~~ ^{wide}

~~leaves~~, short acuminate, glabrous, on rounded petioles (1-2' long) - young branches
angled - finely glandularly crenate serrate. - pistillate panicles (about 1' long in
flower) (3-6' long in fruit) with lanceolate ^{small} ~~small~~ ^{small} ~~small~~ ^{small} scales - staminate (2' long)
sessile, densely flowered, scales lanceolate, pointed, entire - fruit sessile or
shortly pedicel, globose, tomentose, apex more dilated at base. - Santa Clara
River, Calif. (Perry)

Sept. 15, 1867 - W. Humboldt Mts. - Canyon Canyon 3 sp

Nov. 5, " Truckee Bottom - near Clark's - leaves

Apr. 18, 1868. - Kings Canyon inferior 2 "

May 11 " Truckee near Glendale 1 "

76. - *P. balsamifera*, 21 - var. *angustifolia* (P. angustifolia, Torr. - Referred by
Mesnard, unaccountably, to *P. Canadensis* (= *P. monilifera*, Galt.) as its affinities are
wholly like *P. balsamifera* - of which it ^{appears to be} ~~is~~ ^{the} ~~the~~ ^{the} narrow leaved form, as is
P. Canadensis the opposite extreme + broad leaved. - leaves varying much

1

27

111

between the ordinary growths (2-3' long by 4-12" wide) across the base, ^{of the} and the young things shoots when they may be 6-8' long + 3' or more broad + often considerable of base - always with a long accumulation, - not even work of River River but the ordinary of a certain kind,

- a) July 2, 1864. - River Valley - base of Shoshone Mts. 2 sp.
 - b) Aug. 24, " E. Humboldt Mts above ... 8 "
 - c) " 25, " " " Popoia creek 3 "
- Colorado + N. Mexico to Wash^{ington} & California -

Ornithoglossum

purple

27. - Corallorhiza maculiflora, Nutt. - Middle - base of ... & ...
 twice longer than the subacute lobed ones. ... petals + ... strongly
 veined. N. States + Canada. and a W. Coast from Wash^{ington}
 to Calif. - R

June 29, 1869. Center above Baker's Park - Ran. 2 sp.

Ornithoglossum ... - Maine + Penn^s + Lake
 Superior, Canada + W. to Rocky Mts, + Unalakleet

Aug. 25, 1869. E. Humboldt Mts. - center above ... 11 sp.

28. - Epipactis gigantea, Dougl. - Wash^{ington} (Zeil) + Idaho to Calif
 and N. Mexico ^{in Mexico (Wash)} 10 and 2 rows near Com. City. - leaves 6'
 long + ... nearly smooth on the ...

Aug. 27, 1869. - Shoshone ... 1 sp.

... the Company ...
 ... (See ... ^{lake} ...)

Aug. 27, 1869. Center above ... 11 sp.

Sept. ... Franklin Valley - wet meadows 6 sp.

Oct. 31, 1869. ... 11 sp.

Handwritten note or signature in the bottom left corner.

H. caerulea, (Purshiana, Gray, Mo.) is a shrub, but exactly
 Gray's plant in Herb. Gray. - It is a very large shrub, 10-15
 1894 + with Keruan ... 6-10 high - ...
 none of a ... 5-7 long, flowers in a long ...
 10-15 long), ... on subaxis, ... than ...
 ... (obovate, ...) ...
 ... the ... of ... spur (1-1 1/2") ...
 H. ... differs in its ... & ...
 ...

- a) July 16, 1869, ... 5,000 ft 15 ft
- b) ... Peak ... 10,000 ft
- c) ... Ridge ... 9,000 ft

101. *H. hyperborea*, (W. Br.) - with smaller flowers than any of the allied species, more
 or less greenish, the upper ... petals somewhat ...
 1-3/4) the lobes ... (2-2 1/2 x 1/4-1") - petals (1 1/2-2 x
 1/2-3/4") - lobes ... towards the base (2-3 x 1") -
 ... 2-3" long. - ... to the base + ...
 in the ... to Colorado, + California? 1-3" high - species
 usually ... 4-14' long.

- July 6, 1869, ... 6,000 2 ft.
- Aug. 1, " ... 3 "
- July 15, 1869, ... 6,000 ft. 6 "
- " 12, " ... 6,500 ft. 1 "
- " 15, " ... 6 "
- " 27, " ... 6 "

102. - *H. ...* - distinct from the ... petals ...
 ... (2" - 1 1/2") - lobes ... 3" long x 1" wide, somewhat
 broader to ... the base, spur 3-4" long. - Size + habit ...
 ... to ... + ...

- July 7, 1869 - ... 6 "
- Aug 20, 1869 - ... 2 "
- Sept 12, 1869 - ... 2 "



113

[The main body of the page contains extremely faint, illegible text, likely bleed-through from the reverse side of the paper.]

[Faint handwritten notes and markings are visible along the right edge of the page, including some numbers and symbols.]

103. *H. ...* var. — flowers large, sepals much elongated —
 Post. sepal 2 1/2" x 1 1/2" — lobes ^{4 petals} 2 1/2" x 3", 1 1/2" — petals — lvs 4" long, mainly
 annulate at base, occasionally oblong (2" wide) — sepals 6" long. —
 a) Aug. 6, 1864, E. Humboldt, Wb. — ^{July} ~~at~~ camp 7,000 ft 5 1/2"
 b) " 21²², " " " " " 6,500 2 "
 c) July 13¹⁶, 1864 Cottonwood cañon 6,000 ft 1 "

Linnaceae

11. — *L. ...* L. — Western States & Canada, Saskat.,
 California, New Mexico. — usually pubescent & ...
 a) Aug. 29, 1864, ... 10 "
 b) Aug. 24, ... 4 "
 c) July 3, ... Silver Creek — ... 6 "
 105. — *L. polyrrhiza*, L. Florida to N. Carolina; west to Arkansas,
 Texas — ~~Chihuahua, + ...~~ ~~Saskat.~~ — ~~...~~
 with ...
 Aug. 21, 1864. — ... 5 1/2"
 106. — *L. minor*, L. — ~~...~~ — ~~...~~
 at same date & locality. (W.W.B.) 5 1/2"
 b) " " " " " in of ... 3 "
 # of Sept. 29, 1864. — ... 5 "
 107. — *L. ?* —
 June 29, 1865. — Summit ... 12 1/2"

Thymaceae

108. — *T. latifolia*, L. — Canada to Florida, westward to the ...
 California
 June 21, 1864. Salt Lake Valley, near ...
 July 1, 1864. Mouth of ...
 109. — *T. ...* Eng. — ...
 Nov. 21, 1867. ...
 June 2, 1867. ...

- 112 *P. ...*, L. Aug. 12, 1868. Ruby Lake 52, 0
- " " 16, 1869. Near River Mouth, Co. ... 11
- 113 *P. ...*, L. Aug. 2, 1867 - Near River Mouth 8,000 ft. 2
- 114 *P. ...*, L. Aug. 20, 1868. Humboldt Pass, 6,000 ft. - "
- 115 *P. graminifera*, L. var. *heterophyllus*, Fries.
Aug. 12, 1868. Ruby Lake 6
- 116 *P. ...*, L. var. *... ..*
July 20, 1868 - Truckee bottom, at Elko - (10,000) 5
Same loc. & date 6
- 117 *P. ...*, L. var. *vulgaris*, Fries.
Aug. 13, 1869. Near River Cañon 8,000 ft. 13
" " subvar. *intermedium*, Robb. N. S. 11
July 20, 1869. Creek near Kimballe. 11
" " Silver Creek, mouth of pass 11
- 118 *P. ...*, L.
Sept. 26, 1868. 1000 Spring Valley, Nevada. 7
- 119 " ?? - Aug. 21, 1867 Humboldt Lower Slough 14
- 120 " var. - July 30, 1868 Ruby Valley - Spring 2
- 121 " " Aug. 11, 1867 - Humboldt Lower Slough 1
- 122 " var. *latifolius*.
Aug. 24, 1867 - Humboldt River, or nearby mts. (10,000 ft.) 10
- 123 *P. ...*, L. var. *occidentalis*, Robb.
Aug. 12, 1868 - Ruby Lake 3
- 124 the same?
Aug. 14, 1869 - Near River Cañon 8,000 ft. 9
- 125 X the same?
Aug. 11, 1867 - Humboldt Lower Slough 2
- 126 " the same?
July 28, 1868 - Truckee Pass - Clark's 15

50, 2000, Lake Washburn - Anderson - Carbon City

121

122

123

His long, ... Herb. - St. ... (Reckwitz)

Wasserkraut Ring - ...

pendant pale blue. - *Asplenium* ... (1 1/2 long x 1/2).
 Columbia (Zuccini) - N. Calif. (Newberry)

June 12, 1868	Near Donnelly's Park - Siskiyou Range	6,000 ft	1 1/2
" 26, "	Amberland Canon		1 "
" 27, "	" "		1 "
July 6, "	Above Astoria		2 "
" 11, "	Fort Ruby		1 "
Aug. 1, "	Ruby Valley		1 "

Rhizocaulis

124. *Smilacina racemosa*, Desf. ... (5 compressed lvs, with ^{fructs} ~~fructs~~ ... leaves closely sessile & compressed, more much less acuminate than in the ... of ...
 Discovered from Spokan Valley & Bend Oregon river, together from ...
 2012 Harrow, with Bridges from Calif., ...
 1845 from Brown's ...
 ... the ... of ...

Sept. 11, 1868	Clary Fork, ... Canon		5 ft
July 19, 1868	... Canon		5 "
June 25, "	Canon above Paley's Park		5 "

125. *S. ...* ... (leaves ... 4 or 5 ...)

N. Mexico, - 1-3 1/2 high, the lower open with leaves 4' long by 1/2 wide - ^{2-5 in diam.}

July 20, 1868	Bank of ... river at Clark's		5 ft
Oct. 1, "	Siskiyou Range ...		5 "
May 15, "	Near Ritzberg's ...		1 "
June 9, 1868	... ..		4 1/2 "
July 7, "	... ..		1 "
Aug. 2, "	... ..		1 "
Sept. 29, 1868	... ..		2 "

+3 → Ask Zabor!



17 June 1, 1948, 575 ft. ... Smith ...

It is the same species - was in ... in ...

126. *Calochortus Nuttallii*, Torr. - no record to be the plant upon which the species was found, though the very specimen in Torr. Gray is too immature to determine definitely.

Stems 6-20 high, 1-4 flowered, with 1-3 narrow linear leaves, the radical ²⁻⁴ leaves usually broader. The ^{terminal} flowers 2-3 in diameter, on pedicels 1/2-1 in. subtended by 2 sheathing bracts; outer divisions of the perianth ^{greenish} nearly as long as the inner, ^{scarious} green slightly spread & broad at base within of the inner dilated, ^{or more} ^{lobes} or abruptly pointed, ochroleucous or slightly tinged with purple-yellow at base with more or less a ^{white} ^{margin} above it, the fully developed capsule oblong ^{and} ^{marked} ^{by} ^{striated} - 10" long, the wings 2-4 in. broad - the younger pods often giving little indication of the wings. Nevada, Montana & Idaho, frequent upon the foothills, the roots eaten by the Indians & known to the Ute as "bejo" or "fajo". It ^{is} ^{found} ⁱⁿ ^{the} ^{mountain} ^{regions} ^{of} ^{the} ^{west}.

Montana (Swallow, 30) (C. parviflorus, Nutt. Ind. Bot. Soc. Mont. 1864) - Clear Lake, Oregon - Spalding - North Pass, Sierra Nevada, Hooker & the Donner Pass 1846 Torrey - Eastern base of Sierra Nevada, Anderson 22.

June 22, 1864	near the Unionville cañon	29.00
July 9, "	near ...	1.00
July 20, "	near Ruby Cañon	2.00
Aug. 18, "	Redwood cañon	3.00
" 27, "	towards ...	1.00
" 31, "	...	2.00
May 21, 1864	near ...	1.00
June 3, "	...	1.00

127. *C. venustus*, Nutt. var. ? - Doubtfully, probably the base, but the fruit is usually slightly longer & ^{more} ^{marked} ^{by} ^{striated} than the parent, & the capsule broadly linear 10" long and wingless. (C. venustus, Nutt. Ind. Bot. Soc. Mont. 1864) - ...

1403.

120

124

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From ... (Hb. 100) (unless in ... last) - also collected by H. ...
 Euphonia in ... on the ... South ... Pass, + by Dr. ... at ... The ... It differs
 from all Californian specimens ... in having the deep red and
 orange spot on the center of the patch & in being less decidedly yellow. The ...
 of the latter has not been described and is not shown by the ...
 Herb. ... The ... of this genus + of ... (which should be
 ... to it) can readily be satisfactorily ... upon the imperfect
 materials in our herbarium ... which more is known of its ordinary
 ... variations in color, growth + general habits.

July 30, 1849. - Near River ... near ... 1849

125. *Euphonia ...* Ph. From Wash + ... to ...
 + Colorado. ... 6-15' high, 1-10. ... frequent in ...

July 14, "	White Cottonwood	6,000 ft	10 sp
Aug. 4, "	Near River Cañon	10,000 ft	"

129. *Fritillaria ...* (in ...). Only spec^d in ...
 ... from ... of ... City. 6-20' high.

July 24	...	...	...
...
...

July ... near ...
 Aug. ...
 Sept. ...
 Oct. ...
 Nov. ...
 Dec. ...

144

Dr. Gray refers *Ranunculus* to *Scilla*

1889 - Spr. 1-4-1889. Wash. D.C. ...
 ... clear water, ...

April 1889 - ...

1889 - "C. ...", collected by ... (10) near ...
 ... flowers ...
 ... 1-2 1/2 high, 6" ...

Trifolium grandiflorum, ...
 ...

Trifolium grandiflorum, ...
 ...
 ... 1-2 1/2 high, ...

May 19, 1889 - ...

June 26, ...

July 27 - ... 2 1/2" ...

Br.

Andia

... 1889 ...

155 - *Scilla kamaoensis*, ...
 ... 1-2 1/2 high, 6" ...

June 7, 1889 - ...

June 26, ...

45/1
130

45/1

45/1
200

111

paniculata

Donnellii
~~*ovatifolia*~~

63+286 Anisovon, near Carver City - like *A. tibracteatum*, Zorr
which it greatly resembles in habit - but the male of the H.P. has 8 bracts, cap
cule not at all crested, stigma entire. Very present in the same
locality.

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Time also noticed by ...

Spec. of Anderson, (near Community) is probably the same, but
without ...

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160.

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160. - *... ..*, Dougl. *... ..* Stems, annual, very low, woody, branched, pubescent capillary, decapitate, numerous (1/2-1" high), much exceeding the filiform hairs which are shorter & directed towards the apex; glomerous, capitate or solitary; appears to be subulate, acute apically, the ovule, cotyled, numerous, 2-3-celled capsule, acute,,, sharp pointed, glaucous & transversely - very, long, low,, with the 2-bracted flowers, usually 2-merous (4 sepals, 2 stamens, style, ovary, and capsule). - *... ..*

Sept. 11, 1862. - Clona with flowers. 149)

161. - *... ..*, Torr. *... ..* (p. 453) Stems (1-2" high) caespitose, striate, glaucous, a small, slightly scabrous under a glass, woody; leaves, granulate, heads green in a contracted panicle or rarely solitary; flowers (8 or 12) rather large (2 1/2-3"), green with brown ribs) anthers, pedicelled; 2 sepals equal or unequal, acute or cuspidate, 2 longer than the anthers; anthers 2 longer than the filament, ovary, equaling the stamens & style, elongated exserted; capsule ovate, obtuse, numerous & exsertate, chestnut colored, shiny, 3-celled, equaling or little exceeding the calyx; seeds oblongish or obovate, pointed, - New Mexico to & to & Wash.

- July 23, 1862. - Truckee bottom, near (6000 ft.) 300
- July 26, 1862. - King Valley 3 "
- Sept. 4 " - Strawberry - Honey Lake 6 "
- Aug 23, 1862 - King's 5 "
- July 31 " - 7 "

Var. *... ..*, Torr. *... ..* (p. 490) Stems naked; the (2-3" wide); panicle simpler longer than the racemes or rarely of glaucous; seeds green (3-5) exserted; anthers long, & sub-reticulate. Collected by Anderson (1.) near Calif.

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(1891)

165. - *Y. xyloides*, *y. montanum*, *pauciflorum*. - Lower (2-3) leaves
narrower, more upright, heads few-flowered, numerous,
pendulous, pale; flowers a little smaller; more copious & more
dense, the outer ones especially the long narrow capsule. - Arizona
to W. Texas.

- Aug. 18, 1867. - Indian Valley (1) (W. Texas) 2 Sp.
- July 20, 1868. - Indian Valley 2 "
- Aug. 18, 1867. - " " " " " 4 "
- July 27, 1867. - Indian Valley near H. Hall's 2 "

166. - *Y. xyloides*, *y. montanum*, *multiflorum*. - (Aug. 2, 1867) Heads few or
many, sessile, sessile (12-20) to many (20-50) fls to head, brown. - Seen to
Wash. Terr. & S. to Colorado & N. Mexico.

- July 2, 1867. - Unionville 2 Sp.
- Aug. 18, 1867. - Indian Valley (W. Texas) 10 "
- Aug. 18, 1867. - Indian Valley 8 "
- Aug. 18, 1867. - Indian Valley 4 "
- Aug. 1, 1868. - Indian Valley near 1 "
- Aug. 18, 1867. - Indian Valley near 2 "
- Aug. 7, 1867. - Indian Valley near 4 "

167. - *Cypripedium pubescens*, *pubescens*. - Common form.

- July 24, 1867. - Indian Valley 11 Sp.
- Aug. 18, 1867. - Indian Valley 11 "
- " " " " " (W. Texas) 20 "
- " 25, 1867. - Indian Valley near H. Hall's 7 "
- Sept. 17. - Indian Valley near 2 "

X. Canada to Canada & other writings - Wash., and
- the Cypripedium - Report by Wortham and Dr. Zuccer
to C. A. Smith, V. 16. July 1867.

III



|

68. - *C. filiformis*, ... 6-10' - ...
 with to ... - Calif. - Arizona -

July 2, 1877 ... Station on the ... 57
 Aug. 7 - ... 20

69. - *Scirpus microcarpus*, Presl. - New Spain, ...
 July 7, 1877 ... 15
 Oct. 1, 1861 - ... 5

July 9, 1877 ... 1

70. - *S. ...* from ... to ...
 ... "Tule", ...
 ... by the ... for the ...
 July 1, 1861 - ... 1
 " 10, ... 1
 ... 1

71. - *S. martinicus* L. ...
 ... "Hog Tule"
 ... 65
 ... 4
 ... 2

72. - *S. ...* ... Spikes 1-2, many-
 flowered ...
 The ... in ...
 73 ...
 ...
 ...
 ...

Aug. 5, ... 58

2126.)

17

17

17

2162 1

173. - *... ..*, K.B.S. - "Common, com." + laev. Bay
 from ^{the} *... ..* Calif. Spec. 1-2' high, the spikes to
 6-8 inches, ~~... ..~~

July 2, 1862 - *... ..* 5 sp.

174. - *E. palustris*, *... ..* From the Great Steep to the level
 of the *... ..*

July 2, 1862 - *... ..* 5 sp.

175. - *E. ... ?* - resembling *E. palustris* but much shorter ^{32' high} &
 the base ^{very} flattened above. ^{or not} Slightly ^{or not} 2-3' - bristles
 4, expanding the tubercles style 2-3' - faint occasionally ^{or not} ...

from Aug. 5, 1862 - "Mountain cañon" - near *... ..* (1862) 5 sp.

" 20, 1862 - *... ..* 8 "

176. - *Fimbristylis kingii*, -
 Culms 12-14' high, from a perennate rhizomatous root, rigid, -
 prostrate, striate, scabrous, leaves above, channeled or more or less
 curved back (1-2" broad) hispid scabrous, spikes 3-5, the central one much
 with an involucre of 3 scarious bracts mostly shorter than the spike, 3' ^{or not}
^{or not} *... ..* along the scabrous, light distinct color, pubescent; stamens 2,
 style 2-3' - delect + *... ..* deciduous; antheris *... ..* *... ..* *... ..*
... .. *... ..* *... ..* - *... ..* *... ..* *... ..* but rough
... .. *... ..* *... ..* the scales thinner & less rigid, the *... ..*
... .. *... ..* *... ..* - scales + *... ..* less curly colored.

Sept. 4, 1862 *... ..* - Franklin Valley 10 sp.

1862 14 & 14, *... ..* to be the *F. quadricca*, also 359 Palmer, 1868, from the Indian
... .. ^{the latter} *... ..* with the upper stem & scales somewhat scabrous.

2163.1

See title of same, 30. (July '64) p. 127.

Chrysothrix

Trichia opaca, Ag.

July 17, 1868. Mucku River, at ~~Blind~~ W.W.B.

" 22, " " Clark's Station

" " " " W.W.B.

" 31, 1869. Near River cañon

? Sept. 1, 1868. - Franklin Fork - Steady, under rain -
perhaps *N. flexilis*?

Chama fragilis, Desv.

Aug. 12, 1868. Ruby Lake

C. foetida, A. Br.

July 30, 1868. Ruby Valley - (sp.?)

" 4, 1869. - Park's cañon

" 10, 1869. - Puro cañon, Wahwash

Same var.

July 10, 1868. Diamond Spring

2
6.
4
6
6,000 ft
6,000 ft
1

6

4

4

4

6.

22001

Equisetum arvense, L. - N. Mex. - Calif. - Tex. •
 May 4, 1868. - Creek bank - lower hills near
 July 1, 1868. - Monitor valley - lower hills near
 11/14, 1869. - Cottonwood Lake. 9,000 ft. 1 "

E. myzomale, x. and *E. robustum* (Burm.) Don't know
 which is which. - They cannot see the difference, Engelm.
 can.

Aug. 17, 1868. - Bank of Truckee, Big Bend - (W. W. B.) 10 sp.
 " 31 - Trip to ... Canyon 6 "
 July 3, 1868. - ... Creek canyon 12 "
 June 26, 1869. - New Park ... Camp - W. W. B. 1 "

Marsilia ...
 Same as ... ^{trickled in ...} 2112 W. 1852, 404 W. 1852,
 746 W. 1852, ... 11 W. 1849 - (New Mex?) all
 ... 125 W. 1849 trickled in ... and
 also a spec from W. ... Halls trickled in quadr. ...
 Sept. 30, 1868. - Goose Creek valley. 9 sp.

Saxifraga chinensis, Dur. - var. *obovata* - ~~...~~
 Aug. 5, 1869 - Above Lily Lake 10,000 ft 10 sp.

Selaginella rupestris, ... ~~...~~

8000 ft. - Wash. ... Mex. - Canada ...
 Aug. 2, 1868. - Ridge above ... Peak 12 sp.
 " 29, " above Lake 9,000 ft 3 "
 " 12, " above ... 1 "
 July 14, 1869 - Cottonwood Lake 4 "

2236
 2237
 2238
 2239

[Faint, illegible text on a lined page, possibly bleed-through from the reverse side. The text is too light to transcribe accurately.]

<i>Carum nigricans</i> , Wieg.				
	Aug. 14, 1869	Large shore head of Bear R. cañon	10,000 ft.	4 sp.
	" 15, "	Dry thorn of second lake "	" "	2 "
- <i>C. ligustica</i> Winkl.				
	Aug. 9, 1869	Woods on side head of Bear R. cañon	" "	14 sp.
- <i>C. acinapica</i> , DC.				
	Sept. 3, 1868	Upper cañon above Hermosa man...	5,000 ft.	4 sp.
	" 12, "	Clear Mts. - head of cañon	7,000 ft.	2 "
	Aug. 5, 1869	Dry woods of 2 ^d lake - Bear R. cañon	16,000 ft.	17 "
- <i>C. obtusum</i> , Michx.				
	Sept. 3, 1868	Near Punta above Hermosa man...	10,000 ft.	3 sp.
	" 10, "	North Canon Peak	6,000 ft.	4 "
- <i>C. Bognerianii</i> , Ktze.				
	Apr. 15, 1868	Near Canon City	" "	8 sp.
- <i>C. stiposum</i> , Muhl.				
	June 21, 1869	Roadside below Fort...	" "	5 sp.
- <i>C. mucicatum</i> , L.				
	July 20, 1868	Cañon above Holy Camp	7,500 ft.	1 "
	" 24, "	" "	9,000 ft.	7 "
	" 27, "	head of cañon above Ft. Ruby	8,000 ft.	15 "
	Aug. 1, "	Near Punta south of George Pass	" "	4 "
	" 6, "	Woods above Camp Ruby	" "	2 "
	May 19, 1869	Big Concha cañon	5,000 ft.	5 "
	June 24, "	Cañon above Panjo's Camp	7,000 ft.	2 "
	" 26, "	" "	" "	1 "
- <i>C. siccum</i> , DC.				
	May 4, 1868	Winnem's meadow	" "	18 sp.
	" 9, "	Steamboat valley	" "	2 "

Handwritten scribbles on the left side of the page.

Handwritten mark resembling a stylized 'h' or 'n' with a vertical stroke.

Handwritten mark resembling a vertical line or a partial character.

Fragment of text from the adjacent page, including numbers 10, 13, 14, 15, 16, 17, 18, 19, and 20.

1.- <i>C. ...</i> , Mott.			
	Oct. 11, 1867	Unionville Valley	14 sp.
	Sept. 26, 1868	Thousand Oaks Valley	5 "
	May 31, "	Jordan's Lake (water) near Pasadena City	2 "
0.- <i>C. ...</i> , Mott.			
	May 7, 1868	Steamboat Valley	5 sp.
	June 3 rd , 1868	Unionville	5 "
	" 24, "	San Antonio Pass	1 "
	July 8, "	Trinidad, ... Valley	7 "
	June 24, 1869	Canyon above Pando's Pass Camp	1 "
1.- <i>C. ...</i> , Mott.			
	July 1, 1868	Head of ... canyon	11 sp.
2.- <i>C. ...</i> , Mott.			
	July 1, 1868	Unionville Valley	2 "
	May 19, "	City Creek Canyon	2 "
3.- <i>C. ...</i> , Mott.			
	July 2, 1868	Unionville Valley	6 sp.
	Aug. 11, "	Spring ...	1 "
4.- <i>C. ...</i> , Mott.			
	Aug. 11, 1868	Spring ...	6 sp.
5.- <i>C. ...</i> , Mott.			
	Aug. 5, 1869	Lily Lake	12 sp.
6.- <i>C. ...</i> , Mott.			
	Aug. 5, 1869	Lily Lake	6 "
	Aug. 5, 1869	Lily Lake	6 "
7.- <i>C. ...</i> , Mott.			
	Aug. 17, 1869	Spring ...	15 "
8.- <i>C. ...</i> , Mott.			
	Aug. 3, 1869	Pass above ...	4 "

20

21

27

28

24

25

26

27

28

20. - *C. uva* - L. - *ana*, form
- | | | | |
|---------------|----------------------------------|------------|-------|
| Aug. 6, 1868. | West cañon - 2. Humboldt mts | 7,000 ft. | 1 sp. |
| " 9, 1869. | Divide, at head of Bear R. cañon | 11,000 ft. | 4 " |
21. - *C. gestiva*, Davis.
- | | | | |
|----------------------------------|-------------------------------------|-----------|-------|
| June 10, 1868. | Unionville - west hillsides - south | | 2 sp. |
| " 11, " | Falligorens - divide bank | | 3 " |
| " 12, " | Pleasant Valley | | 5 " |
| July 20, " | Cañon above Ruby Camp | 9,000 ft. | 8 " |
| " 24, " | " " | 6,000 ft. | 5 " |
| " 27, " | Head of cañon above Ft. Ruby | " | 4 " |
| Aug. 6, " | West cañon | 7,500 " | 4 " |
| " 27, " | Lake shore | 9,000 ft. | 1 " |
| July 14, 1869 | Drybank near Cottonwood Lake | " | 5 " |
| Wrong? (")
? Aug. 27, 1868. | Shaded river bottom, Pecos Cañon | 6,000 ft. | 1 " |
| | var. <i>fulvicornis</i> | | 3 " |
22. - *C. atramentaria*, var. *fulvicornis*
- | | | | |
|---------------|------------------------|--|-------|
| July 6, 1869. | Divide - above Truckee | | 4 sp. |
|---------------|------------------------|--|-------|
23. - *C. lidiana*, Tr. & H. -
- | | | | |
|----------------|------------------------------|-----------|-------|
| July 27, 1868. | Head of cañon above Ft. Ruby | 6,000 ft. | 5 sp. |
| Aug. 6, " | Divide above Camp Ruby | " | 1 " |
24. - *C. tenalis*, Lunge - ~~tenalis~~ *vulgaris*, var. *junella*
- | | | | |
|---------------|------------------------------------|-----------|-------|
| July 7, 1869. | Shaded river bottom at Pecos Cañon | 6,000 ft. | 6 sp. |
| " 14, " | Cottonwood Lake - shore | 9,000 " | 2 " |
25. - *C. linula*, Tr.
- | | | | |
|----------------|---------------------------------|-----------|----------|
| July 14, 1869. | Wet shade, near Cottonwood Lake | 9,000 ft. | 1 sp. |
| Aug. 5, " | Lily Lake | | (-2) 2 " |
26. - *C. ripida*, Good.
- | | | | |
|-----------------|-----------------------------|------------|-------|
| Sept. 10, 1868. | Chlor - Hills - North Pecos | 11,000 ft. | 3 sp. |
|-----------------|-----------------------------|------------|-------|
27. - *C. ripida*, Good - var. -
- | | | | |
|-----------------|-----------------------------|------------|-------|
| Sept. 12, 1868. | Chlor - Hills - below Pecos | 11,000 ft. | 3 sp. |
|-----------------|-----------------------------|------------|-------|

20

21

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31

32

33

34

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37

38

28. - *C. vulgaris*, Ten.
 Aug. 2, 1868 - E. Humboldt Mts. - Lake Shoshone 1 sp.
29. - *C. saxatilis*, L. - var. *major*
 Aug. 4, 1869 Lake on head of Bear R. cañon 5 sp.
 " 5, " Lily Lake 2 "
30. - *C. Jamesii*, Torr. -
 May 19, 1869. City Creek cañon 1 sp.
 " 2, " " " 1 "
31. - *C. Jamesii*, Torr. - var.
 May 8, 1868. - Wet meadow, near Washoe Lake 6 sp.
 July 26, " Ruby Valley 1 "
 June 2, " High cañon above Humboldt 8,000 ft. 1 "
 July 9, " Sulphur Spring Station - Diamond Valley 4 "
 " " " Diamond Valley - meadow 0 "
 (9) Aug. 2, " E. Humboldt Mts. - Lake Shoshone 9,000 ft. 3 "
32. - *C. strackmannii*, Dew.
 Sept. 1, 1868. - Franklin Valley, near Carson City 2 sp.
 June 21, 1869. Near Gardnerville 1 "
33. - *C. laciniata*, Booth.
 July 10, 1868. - 8,000 ft. Spring 2 sp.
 Sept. 2, " 7,000 ft. cañon above Diamond Valley 1 "
 " 25, " 10,000 ft. Valley 0 "
34. - *C. laciniata*, Booth. -
 July 9, 1869. Parrot cañon, in Washoe Lake bank (-2) 18 sp.
35. - *C. Emoryi* - Dew.
 May 2, 1868. - Washoe Mts, near Carson City 5 sp.
37. - *C. anna*, Nutt. - var. *amblygyna* Olin.
 June 29, 1869. Cañon west of Peleg's Park Camp. 6,000 ft. 12 sp.

Aug. 9, 1899	Barren - at Head of Bear River	11,000 ft	1,111
" 2. "	Ridge over Camp "	10,125 ft	"
" 3. "	Peak - " "	12,000	2,000

3

25

30

39

40

41

4

4

5

5/8/1

36. - *C. aurora*, Nutt. -

- ? May 8, 1868, Washburn Valley 18 sp.
 July 11, " Kaskaskia Valley 8 "
 " 24, " " " 8 "
 Aug. 6, " West cañon - Creek bank 7,000 ft. 8 "
 " 20, " Huntipon Valley 1 "
 " 24, " ~~Huntipon~~ above Grand Rock 9,000 ft. 7 "
 Sept. 3, 1868 " North cañon " " (Carroll) 6 "
 " 12, " Claron Mts. below New Rock 7,000 ft. 1 "

37. - *C. l.* July 31, 1869 - Near River cañon - meadow 8,000 ft. 1 "

38. - *C. timosa*, L.

Aug. 5, 1869 - Lily lake 10 sp. - (-2) 10 sp.

39. - *C. atrata*, L. var. *nigra* (Walt.)

- Aug. 31, 1868 - Summit above Grand Rock 10,000 ft. 3 sp.
 " 3, 1869 - Peak above New Rock " " 2 "

40. - *C. atrata*, L. - var. ?

Sept. 10, 1868 - Claron Mts. - Huntipon cañon 9,000 ft. 3 sp.

41. - *C. Brewsteriana*, Woodw.

Aug. 5, 1869 - Lily Lake 6 sp.

42. - *C. frigidula*, All.

- Aug. 27, 1868 - Cañon above Grand Rock 9,000 ft. 1 sp.
 Sept. 12, " Claron Mts. - head of cañon " " 1 "
 Aug. 19, 1869 - Mts. in front cañon " " 5 "

43. - *C. Raynoldsii*, Tuck.

- July 6, 1869 ~~Claron Mts. - head of cañon~~ 10,000 ft. 4 sp.
 " 14, " Claron Mts. cañon 9,000 ft. 7 "
 " 16, " " cañon 8,000 " 1 "

44. - *C. caryocarpa*, Nutt.

May 17, 1869. Clary Creek cañon 4 sp.

July 3, 1865. - Silver Creek Canon - Choshon Range
" 20, " Ruby Valley - Stran work

5p
1.

41

46

47

48

49

50

51

52

53

45. - *C. concolor*, Boiss.

July 14, 1869

Sierra near Cottonwood Lake

(2)

1 "

46. - *C. Rossii*, Nutt.

Aug. 4, 1869. - Park above a Stage Pass

5,000 ft.

2 sp.

" 4, 1869.

Lake shore, head of Bear River

10,000 ft. (2)

1 "

July 14, "

Sierra base, near Cottonwood Lake

9,000 "

1 "

" "

Sierra base " "

" "

5 "

47. - *C. capillaris*, L.

July 14, 1869.

Sierra base - near Cottonwood Lake

9,000 ft. (2) 5 sp.

48. - *C. lanuginosa*, Michx.

June 27, 1869.

Cross-land canyon -

6,000 ft.

1 sp.

July 11, "

Ruby Valley -

"

-

" 20, "

" "

"

5 "

Aug. 12, "

Ruby Lake

"

2 "

" 24, "

Fremont's Pass

6,500 ft.

5 "

June 2, 1869 -

Cross-land canyon

"

1 "

" 24, "

Canyon above Ruby's Lake

"

4 "

" 29, "

" west

"

6 "

Aug 3, "

~~Ruby Lake~~

10,000 ft.

1 "

" 14, "

Sierra - near Cottonwood Lake

8,000 "

8 "

(?) - Oct. 21, 1869

Head of Bear River

"

-

49. - *C. lanuginosa* - with solitary stipe spine

June 3, 1869 -

Park above, lower sawtooth

"

1 sp.

50. - *C. lanuginosa*, Michx. - apparently *C. capitata*

Aug. 12, 1869.

Ruby Lake

"

1 sp.

June 21, 1869

Near Farmington

"

2 "

51. - *C. lanuginosa*, Michx. - apparently *C. acuticarpa*

June 25, 1869.

Cross-land - near Farmington

"

1 sp.

52. - *C. aristata*, Ribr. ?

Sept. 1, 1869 -

Ruby Valley -

"

2 sp.

2

55

5

42

500

53. - *C. intricata*, No. H.

July 11, 1888.	Henry valley.	1 sp.
" 24, "	" "	2 "
Aug 7, "	Hawitson Valley	6 "
" 12, "	Lily Lake	1 "
Sept. 4, "	Pennsylv. Valley	4 "
" 26, "	1000 Sp. "	7 "
Aug 5, 1889	Lily Lake	2 "
July 14, "	near Co. H. road near	3 "
" 3, "	Pointe Carre - lower cañon	1 "
June 23, "	Kimballe - Creek	1 "

9,000 +

55. - *C. vesicaria*, L. var. (*obliqua*, Fr.?)

Aug. 2, 1889. ~~Lily Lake~~ Creek back 9,000 + 1 sp.

54. - *C. mexicana*, L.

June 29, 1889. - Camp west of Pointe Carre Camp 1 sp.

July 7, " Camp a River, in lower cañon 1 "

Undetermined.

Aug 24, 1888 ~~Pointe Carre~~ 3 sp.

July 11, " ~~Pointe Carre~~ -

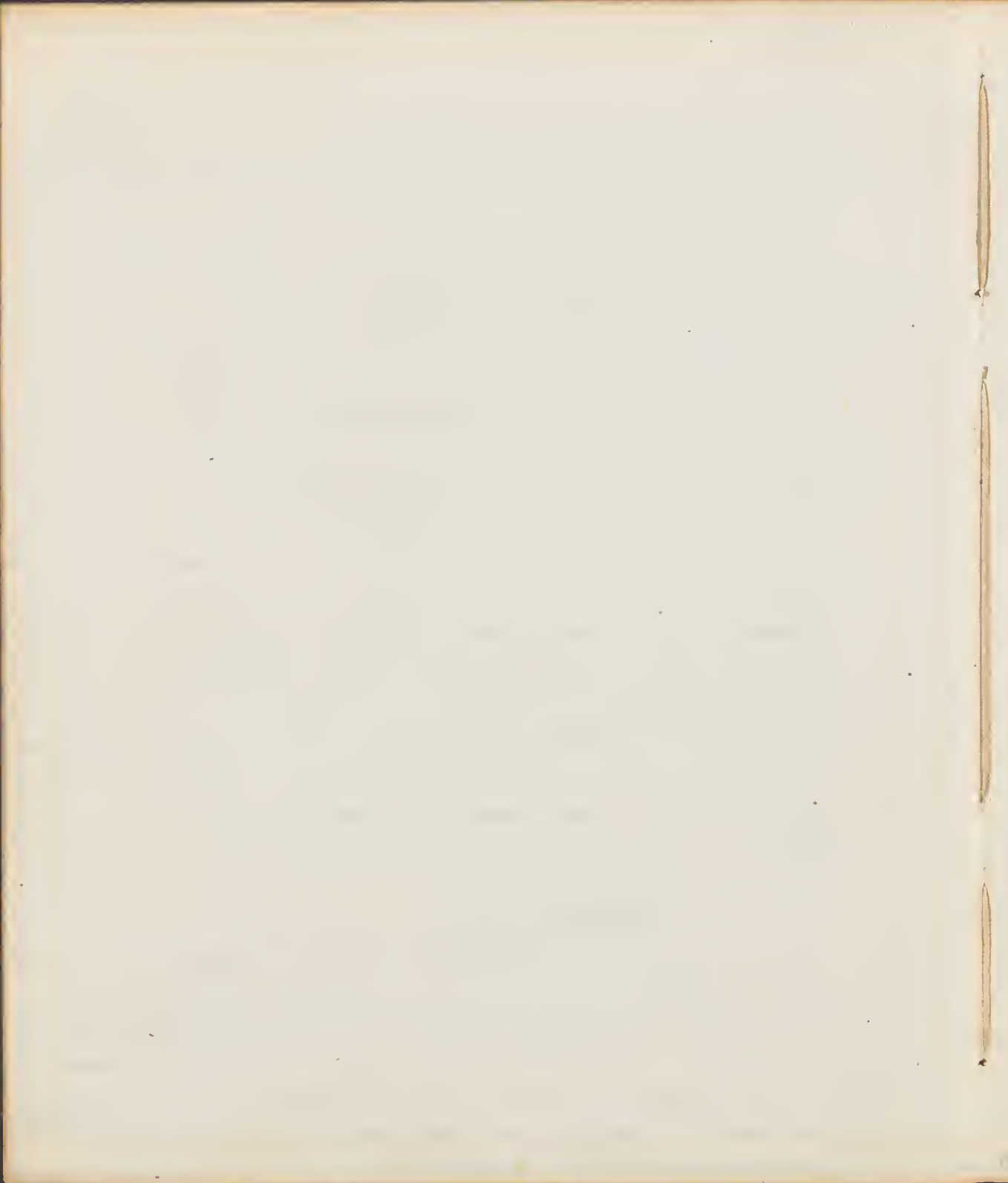
July 15, 1889 ~~Pointe Carre~~, stream above bridge 2 "

Aug. 14, " ~~Pointe Carre~~ 6 "

500

Arachnidae.

Ephedrus arabisiphilivica, C.A. Mey. - A low diffusely branched thymus (20 high), the branchlets mostly fasciated on the opposite sides of the numerous joints, ^{smooth or minutely reticulate} thickened at the nodes, ~~smooth~~ ^{yellowish} green; ~~branches~~ ^{lobes} ~~very short~~, the lobes ^{short}, or lanceolate, or linear-auriculate, ^{slightly} ~~obovate~~; ~~absida~~ ^{absida} ~~acuminate~~ ^{opposite} clusters of usually 3, or more, sessile or very shortly peduncled, ~~anthers~~ ^{anthers} ~~about 6~~, ^{more or less} ~~filaments~~ ^{filaments} ~~triple~~ ^{triple} ~~longer~~ ^{longer} than the ~~anther~~ ^{anther} ~~filament~~ ^{filament};



2. Fr. ... usually ...
 scales - ~~small~~ ...
 from ... & ...
 cells, expanded ...
 testa double, outer coat ...
 red above - inner thick ...
 from above elongated & ...
 of the testa - embryo in young ...

the only species in the U.S. - West Texas to Calif., S. Utah & Nevada.

Apr. 22 + May 9, 1864	near Coalinga	4 sp.
May 12,	" Truckee foothills	3 "
" 13,	" " "	4 "
" 16,	" Trinity foothills	2 "
" 18,	" " "	2 "
June 27,	" Redwood Valley	1 "
" 22,	" North Springs ...	3 "
July 7,	" Smoky Valley	5 "
California		24

Libocleonus, decurrens, Torr. Sierra of California

May 2, 1864 - Kings Co. 3 sp.

from ...
 main ...
 Sitka - Wash. - Colo. (Harrison)

July 30, 1864	St. Humbert Mts. - 9,000 ft. alt.	8 sp.
Aug. 14, "	" "	5 "
" 27, "	" Lake shore	3 "
Sept. 25, "	Peak above Will. camp	1 "

f. Virginiana, L. - ...
 Oregon, ...
 Wash.

Upper Pine Lamin - simple with = "Bear Pine" or "Swamp Pine"

Cottonwood with Lamin. - DCE,

(Cottonwood Lamin - Pine Lamin - simple with = "Bear Pine" or "Swamp Pine", DCE) 47

July 10, 69 - North fork of Grand Lamin
~~Pine Lamin~~ / ~~Rock Lamin~~ / ~~Willow~~ - 5 miles

- So. Cal., 1868 - California + Wash. - near + common in
 Oct 3, " 2. end of Cape Pine Mts. 1 "
 July 11, 1869 - Above Park's Cañon 3 "
Yucca umbellata, Hk. - W. Tex. to Calif + Oregon,
 July 31, 1869 - Virginia Range 4 sp.
 Aug. 6, " W. Humboldt Mts. - (W. W. S.) 3 "
 Apr. 21, 1868 - Near Canon City 3 "
Alopecurus lanatus, Lindl. - Scapes of the immature leaves repeated, being
 erect (3 Barren) - From Wash. Territory to S. Cal., Northern Mexico, N. Mex
 + Colorado. -
 July 4, 1869. - Ridge above Park's Cañon 6 sp.
 " 6, " Divide above Duchesne 8 "
 6 cones. -
A. grandis, Lindl. (Pinnatifid only.) (5 cones) "White Spruce of Canon
 Wash. Territory to S. Cal. to Col., & N. Mex. (Fr. L.) ~~Scapes of the~~
~~scapes of the leaves, which become more deeply the case, the~~
~~underneath to the same rarely emarginate in my specimens, 5-10 long~~
 May 4, 1868 - Above Canon City 9 sp.
 Sept. 1, " Gaven Creek Mts. (cones) 5 "
 June 25, 1869 Above Park's Park Cañon (cones) 2 "
 July 10, " North fork of Park's Cañon (cones) 1 "
 " 6, " Ridge above Park's Cañon (cones) -
A. Douglasii, Lindl. (Pinnatifid) (Picea) - S. Cal. to Calif +
 July 3, 1869 Upper part of Canon Johnson Mts. (cones) 4 sp.
A. montanum, Pursh (Healy's Picea - near Canon City, Col.)
 Sept. 3, 1868 (cones) 4 sp.
 July 14, 1869 Near Canon City
~~Yucca umbellata~~ (3 cones) (Picea, etc.) near Canon City (6 cones) with young
 cones - the most numerous & most extensively the leaves of the
 cones - the most numerous & most extensively the leaves of the
 cones - the most numerous & most extensively the leaves of the

Pinnis monophylla, Torr. - N. Calif^o to Col^o & N. Mex.
 leaves always solitary & thick, in no way indicating compound structure,
 - in the earliest form (from the first 2 or 3 years) with flattened canines, & axillary
 leaves

Apr. 21, 1868. Hills near Carson City. 4 sp.

July 7, " E. Humboldt of Toiyabe range 2 "

" 20 " E. Humboldt Mts. 1 "

P. compta, Douglas. Alaska to N. Calif^o ~~and~~ Col^o 2 com.

July 5, " 1000 ft. near water of Prine river. 4 sp.

" " " " " " 10 com.

P. grandifolia, Douglas.

May 4, 1868 - Washoe Mts 3 sp.

July 5, 1869 - Park's cañon, near upper Sawville (Humboldt) 3 "

P. aristata, Engelm. but the cones much less dark colored and the cones much

less conspicuous even on the young cones. cones large 2 1/2 - 4'

July 20, 1868. E. Humboldt Mts. Peak above Sawville 3 sp.

Colorado. 4 com.

P. flexilis, James (17 com.) Rocky Mts. from New Mex. to Wash^o 2 com.

July 20, 1868 - E Humboldt Mts. above Camp Ruby 1000 ft. 1 sp.

Aug. 27, " " " Peak above Ruby 9,500 " 3 "

Sept. 3, " " " Cañon near Humboldt Mts. 6,500 " 5 "

July 20, 1869, Peak above Park's cañon 2 com 6,000 1 "

" 24 " Ridge above Park's cañon 9 com 7,000 3 "

Genera 3 Species 4

betula 3
Aulis 2
P. septentrionalis 1
P. arctica 1

Species 3 }
" " 2 } Genera 4 Species 7
" " 1 }
" " 1 }

Cappariaceae Cleome 1

Genera 2 Species 2

Portulacaceae Polarisia 1
Portulaca oleracea 1

" 1 " 1

Malvaceae Malva 1

Genera 2 Species 2

Gramineae Sidalcea 1
Graminum 1

" 1 " " 1

Leguminosae Vicia 1

Genera 5 " " 5

Dalea 1
Trifolium 1

Rosaceae Rosa 1
Spiraea corymbosa

Genera 4 Species 5

Lythrum 2
Potentilla or Geococcyx featheryi

Onagraceae Epilobium paniculatum
" " argenteifolium } 3

Erigeron perennis (?) }
" " " " } 4
" " " " }
" " " " }

Genera 3 Species 8

Loasaceae Unknown genus 1

Genera 2 Species 2

Mentzelia laevicaulis
Mentzelia albicaulis

Compositae Compositae

Genera 19 Species (30) 31

Aster 10

Corycium 2

Pol. lugo. 2

Biscutella 1

Thlaspi 1, Aplopappus 1

Transectia 1

Xanthium 1

Helianthus 1

Chaenactis 1

Achillea (millefolium ?)

Artemisia 1

Gnaphalium 2

Arnica 1

Saxifraga (?) 1

Lonicera 1

Stephanomeria 1

Unknown genus 2

Ledum 1

Genus 1 - Species 1

" " 1 - Species 1

" 1 " " 1

Crassulaceae

Umbelliferae

Conaraceae

Unknown genus 1

Cornus 1

Caprifoliaceae	<i>Lambucus glauca</i>	Genus 1	Species 1
Umbelliferae	<i>Ribes</i>	" " 1	" " 1
Flacagraceae	<i>Shepherdia argentea</i>	" " 1	" " 1
Polyganaceae	<i>Criogonum</i>	" " 8	" " 5
	<i>Ranex</i>		1
Lobeliaceae	<i>Polygonum</i>		2
	<i>Lobelia</i> (?)		1
Scrophulariaceae	<i>Asperula</i> (?)	Genera 3	" " 5
	<i>Castilleja</i>		1
Orobanchaceae	<i>Veronica</i>		1
	<i>Protopaea</i>	" " 1	" " 1
Labiatae	<i>Monarda Canadensis</i>	Genera 5	" " 5
	Unknown genus		
	" "		
	<i>Hymenocallis vulgaris</i>		
	<i>Scutellaria</i>		
	Unknown genus		
Barbareaeae	<i>Myosotis</i>		
Polemoniaceae	<i>Gilia aggregata</i> or <i>pulchella</i>	Genus 1 - 2	
	<i>Gilia</i> (?)		
Solanaceae	<i>Nicotiana (rustica?)</i>	" " 1 - 1	
Asclepiadaceae	<i>Asclepias</i>		1 - 2
Chenopodiaceae	<i>Chenopodium</i>	Genera 2	Species 6
	Unknown genus		
Amaranthaceae	<i>Amaranthus</i>	Genus 1	" 1
Euphorbiaceae	<i>Euphorbia</i>	" " 1	" 2
Urticaceae	<i>Urtica</i>	" " 1	" 1
Salicaceae	<i>Salix</i>	" " 1	" 2
Coniferae	<i>Juniperus occidentalis</i>	" " 1	" 1
Lemnaceae	<i>Lemna</i>	" " 1	" 1
Najasaeae	<i>Polamogeton</i>	" " 1	" 1
Alismaceae	<i>Triglochin</i>	" " 3	" 3
	<i>Alisma</i>		
	<i>Sagittaria</i>		
Liliaceae	<i>Smilacina</i>	Genus 1	Sp. 1

Spores of species
Cyperaceae & species
Ordere ~~non determinat~~ } species
Equisetum 1
Panicum 2

27 1/2
11 1/2

14 5

1000

1000

18	15
19	21
20	33
21	34

166
8
1528

