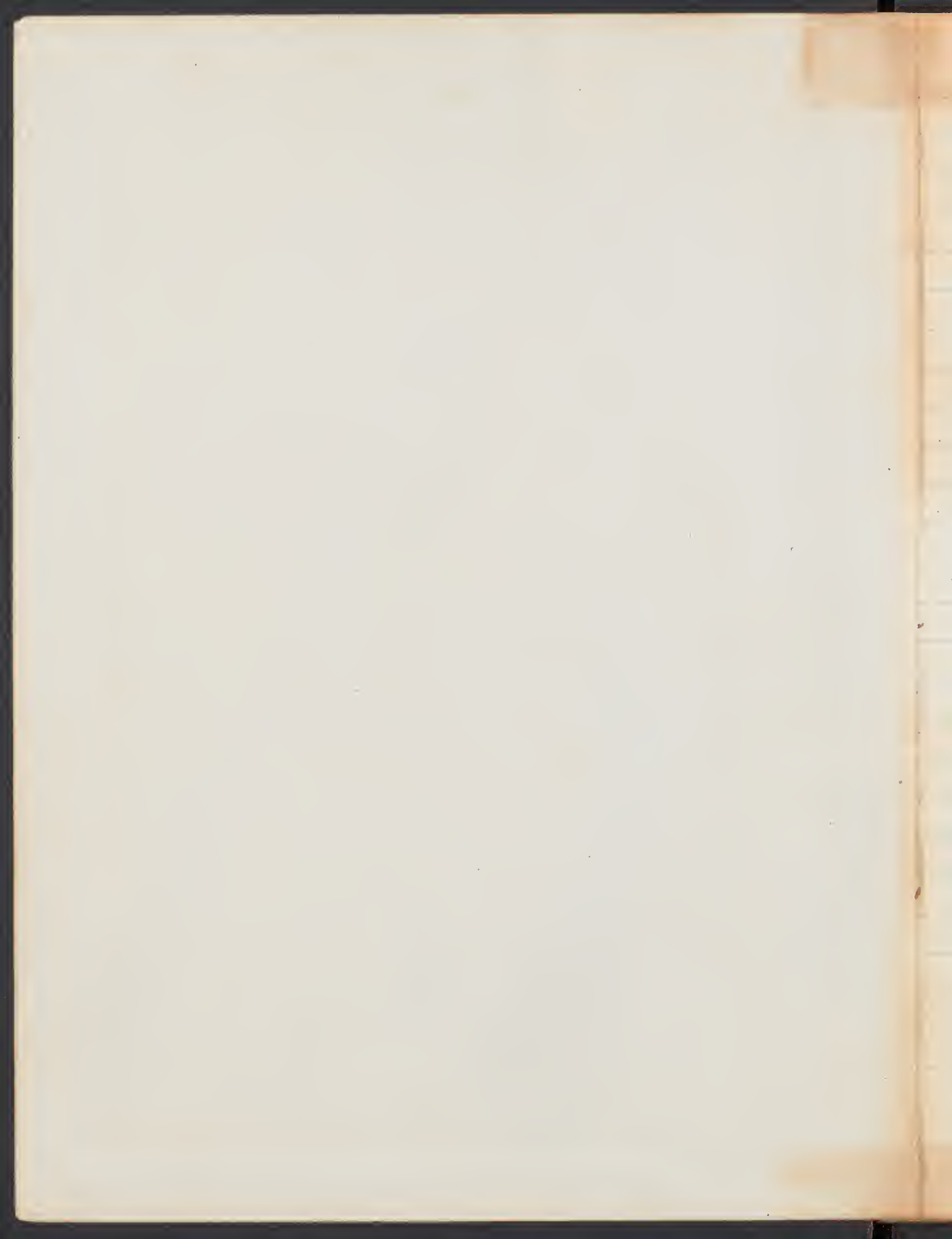


Watson
N-4

argenteus = Phaca (Chromopus)
Tri

Watson N-4



Catalogue
of
Botanical Collection

made in Nevada and Utah, in 1867-9, by
Serrano Watson, Bot. U.S. Geol. Expt. 40th Part,
Clarence King in charge.

By Serrano Watson

A single specⁿ. so labeled in Herb. Gray which is equivalent to one
specⁿ of *C. Douglasii* - The Rocky Mt. *C. Douglasii* has more narrowly
linear leaves. -

^{Nutt} ^{Pall} ^{Nutt}
C. alpinus, *leucotensis*, & *Sibirica*, differ only in degree of development of the pedicel
& on one species -

Ranunculaceae.

3. - *Clematis Wyethii*, Nutt. Evidently the plant of Wyeth's collection, described by Nuttall. It closely resembles *C. Douglasii*, Hook., and may prove a variety of it. Stem from 1 1/2° to 2 1/2° high; flower with nearly straight calyx lobes, upon a long naked peduncle which is erect ^{& elongated} in fruit. Variable in pubescence.

- | | | | | |
|-----|---------------|----------------------|-------------------------------|-------|
| a.) | July 3, 1869. | Utah, Uintah Mts., | Silver Creek cañon. In fruit. | 5 sp. |
| b.) | " 5, " | " " | Provo cañon. In flower. | 6 " |
| c.) | " 26, " | Utah, Wahsatch Mts., | near Hanship. In fruit. | 3 " |

(Nutt., Jour. Acad. Phil. VII. 6.)
749, Fl. I. 4.

4. - *C. ligusticifolia*, Nutt., var. *B. brevifolia*, Torr. Frequent on stream banks in the lower cañons of the W. Humboldt Mts. and found in a single locality in the E. Humboldt Mts. - uniformly the variety with broad, subcordate 3-lobed leaflets. The narrower leaved eastern form, or an approach to it, was met with in S. E. Idaho. (Torr., Fl. I. 9.)

- | | | | | |
|-----|----------------|--|--|-------|
| a.) | Sept. 4, 1867. | Nev., W. Humboldt Mts., | Wright's cañon. (W. W. Bailey.) Fruit. | 5 sp. |
| b.) | " 9, " | " " | Unionville. Staminate. | 4 " |
| c.) | " 19, " | " " | Santa Clara cañon. Both sexes. | 5 " |
| d.) | Aug. 20, 1866. | E. Humboldt Mts., | west base ^{Nev.} Both sexes. | 6 " |
| e.) | Oct. 2, 1866. | City of Rocks, Idaho. with narrow leaved form. | | 2 " |

1. - *C. alpina*, Mill. Is this, or not, var. *Oregonensis*? Find spec. of *C. alpina*.

- | | | | | |
|-----|----------------|----------------------|--|--------|
| a.) | July 13, 1869. | Utah, Wahsatch Mts., | Cottonwood cañon. In flower. 9,000 ft. alt. | 14 sp. |
| b.) | " 14, " | " " | Cottonwood Lake, rocks. In fruit. 9,500 ft. alt. | 3 " |

2. - *C. verticillaris*, DC., var. *Columbiana*. wooded mountain sides. Collected by Wyeth. Not

differing from the eastern form, except in the somewhat smaller narrower-veined flowers. (*Clematis Columbiana*, Torr. Fl. I. 111.)
(*Atragene Columbiana*, Nutt. Jour. Acad. Phil. VII. 7.) ~~Fl. I. 111.~~)

- | | | | | |
|-----|----------------|----------------------|---|-------|
| a.) | June 28, 1869. | Utah, Wahsatch Mts., | near Parley's Park. Sterile stems. 7,500 ft. alt. | 3 sp. |
| b.) | July 7, " | Utah, Uintah Mts., | near Duchesne river. " " 9,000 ft. alt. | 3 " |
| c.) | " 10, " | Utah, Wahsatch Mts., | N. Fork of Provo river. In fruit. 7,000 ft. alt. | 5 " |
| d.) | Aug. 16, " | " " | near Parley's Park. In flower & fruit. 7,000 ft. alt. | 6 " |

Identical with spec. in Herb. Emory from Herb. Hook.
B.S.P. Petroport. (Asian)

2. *Cornuta* does not seem to have been met with W. of Rocky Mts. The
plant of Dyall's Oregon collection being 2.5 centim. - leaves very variable
in size. It is the "*C. heterophyllum*, Nutt." of Nuttall's collection.

Then on in Herb. Bore

Ask Torrey about "*C. rugosiflora*, Torr. - Fr. 67" = *Fendleri*?

Was not the *A. Baldensis* of Drummond's collection (v. S. Hook. Fl. Bor. Am. I. 5) the
same as this? ^{perhaps *A. parviflora*} Of course with *tricapitata* with which
Stems most frequently 1-flowered

Is a certainly distinct from *A. decapetala*. *A. lanigera*, Gray
from Chile is the same.

Resembles spec. of *A. Carolinae* (= *A. decapetala*) from Sitgreaves
(Nuberry) & Fendler's form "between Little Blue & Big Blue".

5. - *Thalictrum alpinum*, L. Rare. (749. 71. I. 39.)

Sept. 10th 1868. Clover Mts., Nev. Damp, grassy bank, with *Salix* - ? and *Vaccinium*
- ? In fruit. 10,000 ft. alt. 11 sp.

6. - *T. sparsiflorum*, Turcz. A low, single flowered form. No. 10 of Dr. Vasey's Colorado collection, 1868 ("T. reflexum, miki") is apparently but a rather large leaved variety of this species. (T. claratum, Hook. Fl. Bor. I. 2, 704. 71. I. 37.)

July 7, 1869. Shaded river bottom, Provo valley, Uintah Mts. 8,000 ft. alt. 2 sp.

7. - *T. fendleri*, Eng. Frequent in the Wahsatch Mts. - rare westward. (Pl. Fendl. 5. Pl. Wright II. 7.)

a.) Aug. 6, 1868. E. Humboldt Mts., Nev. High cañon, west side ^{In fruit} _{Stout, 3°}. 9,000 ft. alt. 3 sp.

b.) June 23, 1869. - Wahsatch Mts., Utah. Parley's Park, creek bank. Pistillate. 6,000 ft. 1 "

c.) June 24, 1869 " " Cañon near Parley's Park. Both sexes. 7,500 ft. 8 "

9. - *T.* ^{a distinct} ~~distinct~~ species. Form of *T. fendleri*, with ~~chambers~~ ^{chambers} might with the fruit, & extremely large leaves. A close approach to *T. divicium*.

July 9, 1869. Wahsatch Mts., Utah. Provo cañon, river bank. 5,000 ft. alt. 1 sp.

10. - *T.* ~~distinct~~ ^{distinct} species, - Form of *T. fendleri*

Aug. 3, 1869. Uintah Mts., Utah. Bear river cañon, rocky ridge. In fruit. 8,500 ft. alt. 2 sp.

11. - *Anemone multifida*, Poir. Sepals blue, lighter within. Hook. Fl. Bor. I. 7. 749. 71. I. 13. Torr. N. Y. ^{71. I. 9. 22.}

a.) Aug. 28, 1868. E. Humboldt Mts., Nev. Rocky slope. In fruit 10,000 ft. alt. 2 sp.

b.) Sept. 3, " Clover Mts., Nev. " " " " " 7 "

c.) July 6, 1869. Uintah Mts., Utah. Rocky ridge overlooking the Duchesne.

" " " " In flower. 10,000 ft. alt. 9 "

d.) July 7, " " " " Head of fork of the Provo. In flower. 9,000 ft. 1 "

e.) Aug. 2, " " " " Bear river cañon. Rocks. Fruit. 9,000 ft. 6 "

f.) " 3, " " " " " " Peak. In flower. 12,000 ft. 2 "

g.) " 10, " " " " " " near peak. Fruit 11,000 ft. 8 "


12. - *A.* ~~distinct~~ ^{distinct} species. = *A. multifida* in a staminate form, with broader leaves, slender + ~~narrower~~ broader ~~than~~ ^{than} normal.

June 12, 1869. Stansbury Island, Salt Lake. Rocks. In fruit. 4,200 ft. 2 sp.

Cf.

This is rather *R. aquatilis*, J. Scaevola's, DC. - the ^{European + Asiatic} foreign form - ~~is~~ ^{is} ~~characterized~~,
 (cf. *R. bronchialis*, Schrad) having a well defined lamina to the segments of the leaves, while
 in all the American specimens in Herb. Gray + Edm they are always filiform. The fruit of this
 + *R. verticillifera* varies in degree of ~~pubescence~~ ^{hirsuteness} + acuteness.

var. *brachypus*, Torr! is a short pedicelled form of this var.

R. limosa, Nutt! is being pubescent, leaves $\frac{1}{2}$ in diam.,  with a close head of ~~dissepiment~~
 bearded ~~antheridia~~ ~~antheridia~~ - about 3' high - ~~near~~ ^{near} the ~~river~~ ^{river} ~~in~~ ⁱⁿ the ~~plate~~ ^{plate} ~~plains~~
 flowers small (= ~~from~~ ^{from} ~~Hb. Gr.~~ ~~Edm.~~)

Does it not approach more to *R. flaviventris*? J.

A true *R. alismifolius*, with the flower larger than in *R. flaviventris*, the scale more prominent & a deeper jet below it, - the arborescence not blunt pointed but shorter & less prominent than usual in the species.

18. - *Raminculus alismaefolius*, Geys., var. ^{montanus} minor. Identical with specimens of Dr. Parry & Dr. Vasey from the Rocky Mts., forming a well marked ~~distinct~~ variety. 4 span to a foot high, erect or decumbent; leaves entire, ^{narrowly to linear lanceolate above,} orate to lanceolate, opposite at the parting of the branches, with occasionally a pair on the central peduncle; achemia slightly flattened, short-beaked. No specimens, ^{indeed,} show the "long, straight beak" which mainly distinguishes *R. alismaefolius* from *R. Flammula*.

a.) Aug. 27, 1864. E. Humboldt Mts., Nev. Shore of mountain lake. 9,000 ft. alt. 16 sp.

b.) July 6, 1869. Uintah Mts., Utah. Fork of Provo cañon. 9,000 ft. 10 "

19. - *R. Flammula*, L., var. *reptans*. Rare.

Aug. 11, 1869. Bear River cañon, Uintah Mts., Utah. 8,000 ft. 12 sp.

20. - *R. Cymbalaria*, Ph. The most abundant species of the genus, preferring ^{4-6,000 ft. alt.} subalpine or alkaline soils. (Ph. Fl. 392, Hook. Fl. Bor. Am. I. 11, 749. Fl. I. 17.)

a.) Aug. 5, 1869. Soda Lake, in Carson desert, Nev. 5 sp.

b.) Sept. 5, " Humboldt meadow, near Ormana, Nev. 2 "

c.) Oct. " Stream bank, Unionville, Nev. (W. W. Bailey.) 1 "

d.) June 8, 1864. Same locality. 5 "

e.) " 11, " Valley, near Unionville, Nev. 2 "

f.) July 1, " Reese river valley, near the Humboldt, Nev. 4 "

g.) " 11, ^{+ Aug 11} " Ruby Valley, Nev. 5 "

h.) ^{May} ~~Sept~~ 17, 1869. Stream bank, near Salt Lake City, Utah. 2 "

i.) " 19, " City Creek cañon, " " " 3 "

21. - *R. affinis*, R. Br., var. *B.*, Hook. Agreeing perfectly with Hooker's description & figure. This species is carried by him in his "distribution of Arctic plants" into *R. auricomus*, L. (Hook. Fl. Bor. Am. I. 12, t. 6. 749. Fl. I. 14.)

a.) July 3, 1869. Creek bank, Kamas prairie, Uintah Mts., Utah. 6,000 ft. 2 sp.

b.) " 5, " Meadow, upper Provo cañon, " " 7,500 ft. 3 "

c.) " 16, " Cottonwood Cañon, Wahsatch Mts., Utah 9,000 ft. 2 "

d.) Aug. 2 " Bear River cañon, Uintah Mts. 9,000 ft. 1 "

23' = an early form of *R. Calycos-nicus*, Benth. (*R. fasciata* de. a. Muhl. of Dyall's Oregon Boundary collection.)

Also collected by Miss A. J. Davis. Nevada Co. Calif. bank of Meadow Lake

not var. ^{= *R. macranthus*, in dup.} *macranthus* (kind. 320) which is ^{more slender, leaf 8 lines in width} much more villous ^{carpel} + ~~the~~ not so long + strongly beaked. ~~Intermediate forms~~ (~~but less beaked~~) occur from N. Mex., Oregon Boundary (Dyall) + Calif. - (1352.4729) are the same. Perhaps good species.

Does resemble the plant of Douglas, though the hairs are entire throughout; the seeds ^{are} ~~at the base~~ ^{of the} ~~base~~ of the claw; the petal is attached by the edges + encloses a cavity ^{nearly a line in depth} extending to the base of the claw nearly - in this respect resembling *R. hirsuta* - found also by Dr. A. J. Davis + Tolmie (Snake Country) + Mrs. Wm. Spalding (Clear Lake, Oregon) (*R. hirsuta*, W. in fl. - 4 Sept 49)

23. *R. accleratus*, L.

- a.) July 11, 1864. Ruby Valley, Nev. 4 sp.
 b.) Oct. 4, " Pilot Spring, Salt Lake Valley, Utah. 3 "
 c.) " 8, " Near Bear River, " " " 2 "
 d.) May 31, 1869. Jordan Valley, near Salt Lake City. 3 "

27 *R. repens*, L. Flowers small.
 stem

- a.) Aug. 20, 1868. E. Humboldt Mts., Huntington Valley, Nev. 6,000 ft. 5 sp.
 b.) Sept. 22, " Thousand Spring Valley, Nev. " 1 "
 c.) June 22, 1869. Wasatch Mts., Parley's cañon. Utah " 3 "
 d.) " 23, " " " Parley's Park, " " 1 "

28 *R. repens*, L. var. *R. canescens*, Nutt.
 e.) May 8, 1868. Near Carson city, Nev. An early spring form. 4,500 ft. 4 "

29. *R. macranthus*, Scheele.

Stems stout, erect, ^{ball,} showing no tendency to throw out runners. ^{Am. West. Willow, etc.} ~~Stems~~ ^{Stems} ~~glabrous.~~ Flowers large & bright yellow. Beak long, straight, equalling the achenium. *Style reflexed.*

- July 14, 1869. Cottonwood cañon, Wasatch Mts. Utah. Muddy banks of creek. 2' high. 8,500 ft. alt. 3 sp.
 June 13, " Same cañon. (D.C. Eaton.) 5,000 ft. alt. —
 July 4, " Pack's cañon, Uintah Mts. (D.S. Eaton.) 7,000 ft. —

25 *R. vivalis*, L. var. *Eschscholzii*.

- a.) Aug. 27, 1864. E. Humboldt Mts., Nev. Shore of lake. 9,000 ft. alt. 12 sp.
 b.) Sept. 12, " Cloven Mts., Nev. 10,000 ft. alt. 5 "
 c.) Aug. 4, 1869. Uintah Mts., Utah. Head of Bear river cañon 10,000 ft. alt. 8 "
 d.) " " " near same locality. Tall, doubtful form. 1 "
 e.) July 6, " Uintah Mts. ^{Separate form.} Divide between Puro & Duchesne R's. 10,000 ft. 6 "

22. *R. glaberrimus*, Hk. (Fl. Bor. Amer. I. 12, t. 5, a.)

- Apr. 4, 1864. Washoe Mts., Nev. King's cañon, near Carson city. 5,000 ft. 11 sp.

Small specimens of *R. canescens*, Nutt.

27
according perfectly with H. J. (Sw. w. p.) description & fig. (Ann. Ent. Soc. 3. 124, p. 64) - except that the antenna are slightly pubescent & with a more recurved style.

3
Distinguishable from *R. adonae*, ^{of the Rocky Mts.,} Gr., only by the narrower almost marginless style - probably the same.

30
The cell is very closely pedicelled and ^{narrowly} winged upon the upper edge - the wing extending the whole length to the base of the pedicel. The flower analyzed had a three lobed bract at base of the flower.

27. *R. digitata* Nutt. ~~var. *R. sinensis* + *R. hypnoides*~~

June 25, 1868. Gold Run District, Ariz. Peak above Cambridge 9,000 ft. 5 sp.

" 16, 1869. Wahatch Mts. Utah. Cottonwood ^{Lake} ~~canyon~~: (9 c. canon) 9,000 ft. —

30 *R. orthocephala* Nutt. ~~var. *R. sinensis* + *R. hypnoides*~~

July 15, 1869. Wahatch Mts. ^{Utah} ~~Ariz.~~ Divide above Cottonwood canyon. Base of snow bank. 10,000 ft. alt. 14 sp.

Glabrous throughout, excepting a slight ciliation upon the margins of the leaves. 6-12' high. Previously found only in the river bottoms of Oregon. Capsules more numerous than represented.

R. Andersonii, Gr. var.

June 18, 1869. Pilot Rock Point, Salt Lake, Utah. 5,000 ft. 3 sp.

Whole plant more delicate & slender; stems 1' high, with (in one specimen) a leaflet above the middle similar to the radiate leaves; petals & achenia somewhat smaller, & the latter less numerous & crowded in the heads.

30 - *R. Andersonii*, Gr. (Proc. Am. Acad. Art. & Sci. VII. 327.) *As this remarkable species was originally described from flowering specimens only, a fuller description is here given, founded upon a large number of matured specimens of plants.*

Acaulis, glaber, radice fibrosa, foliis tripartitis, segmentis trifidis, laciniatis, laciniis lanceolatis subacutis; scapis aphyllis unifloris; floribus pollicem diametro; sepalis latissimis glabris persistentibus; petalis "saturate roseis" & ungue brevi angusto in laminam suborbicularem basi forca minima glandentem dilatatis marcescenti-persistentibus; capitulis maturis praegrandibus sphaeroidis, capsulis pro genere maximis, inflatis, ^{ad suturam ventralem anguste alatis,} glaberrimis, subcompressis, obtusis, stylo minimo curvato apiculatis, seminibus elongato, leviter curvato, supra basin suturae ventralis affixo adscendente.

Glabrous throughout, with somewhat stout & fleshy habit, a span to

A. truncata, 7 + m =
The constant difference exists between this + (A. California, Lindl., + a
eximia^{var}, Howell.) as it varies in the length of the petals + in the relative lengths of
the sepals + spurs.

six inches high. Root coarsely fibrous, leaves all radical, 3-lobed, lateral lobes 2-3 cleft, terminal one 3-cleft & pedicel - divisions incisely once or twice cleft, ^{ultimate} segments narrow. Scape longer than the leaves, naked, 1-flowered. Sepals somewhat petaloid, persistent, broad ovoid or obicular, narrowed at base, $\frac{1}{2}$ " in diameter. Petals even larger, with a narrow claw ($\frac{1}{2}$ " long) & shallow nectary. Carpels ^{large (4" in diam.)} membranaceous, obicular, connate below, ^{somewhat} ~~resistant~~ inflated compressed vesicular, abruptly pointed with the persistent short recurved style, narrowly margined upon the ventral side, crowded in a large globular head. Seeds ($2\frac{1}{2}$ " long) attached to the ventral suture above the base.

- | | | | | |
|----|----------------|--|----------------|--------|
| a) | May 16, 1868. | Trinity Mts., Nev. Foot hills. | 5,000 ft. alt. | 12 sp. |
| b) | June 8, 1868. | Humboldt Mts., Nev. Unionville cañon | 6,000 ft. alt. | 2 " |
| c) | " 27, " | Regan's Valley, Nev. Foot hills | 5,000 ft. | 1 " |
| d) | July 27 " | E. Humb. Mts., Nev. Fort Ruby cañon | 9,000 ft. | 1 " |
| e) | June 13, 1869. | Stansbury Island, Salt Lake. Near Peak | 6,000 ft. | 1 " |

31. - *Caltha leptosepala*, DC. (Hook. Fl. Bor. Am. I. 22, t. 10. 74. Fl. I. 27.)

- | | | | | |
|----|----------------|----------------------------------|------------|--------|
| a) | Aug. 29, 1868. | E. Humboldt Mts., Nev. In flower | 10,000 ft. | 13 sp. |
| b) | Sept. 10, " | Clover Mts., Nev. In fruit | 10,000 ft. | 10 " |
| c) | " 12, " | " " " In flower | 10,000 ft. | 4 " |
| d) | July 14, 1869. | Wasatch Mts. Cottonwood Lake. | 9,000 ft. | 4 " |

32. - *Trollius laxus*, Salisb. (74. Fl. I. 28. ^{Torr. Fl. N.M. I. t. 3. Gr. Gen. I. t. 11.} T. Americanus, Hook. Fl. Bor. Am. I. 23. T. laxus, var. albiflorus, Gr.

Sill. Jour. XXXIII. 12.) Sepals dull greenish or yellowish white; in no other respects distinguishable from the eastern plant.

- | | | | | |
|----|---------------|--|-----------|--------|
| a) | July 6, 1869. | Uintah Mts., Utah. Divide on Duchesne. | 9,000 ft. | 11 sp. |
| b) | Aug. 2, 1869 | " " Bear river cañon, Fruit. | 9,000 ft. | 10 " |

33. - *Aquilegia Canadensis*, L., var. *formosa*, Torr. (A. formosa, Fisch., 74. Fl. I. 30.) Not uncommon on stream banks in the mountain cañons of Nevada, but not seen in Utah.

- | | | | | |
|----|-----------------|--|----------------|-------|
| a) | Aug. 16, 1867. | Truckee Mts., Nev. | 6,000 ft. alt. | 1 sp. |
| b) | Sept. 3, " | W. Humboldt Mts. Wright's cañon. (also W. W. Bailey) | 7,000 ft. | 2 " |
| c) | June 9, 1868 | " " Unionville cañon. | 6,000 ft. | 1 " |
| d) | June 27, " | Gold Run District, Cumberland. | 6,000 ft. | 1 " |
| e) | July 6, 1867, " | Toiyabe Mts., near Austin. | 6,000 ft. | 3 " |
| f) | " " " | Ruby valley, | 6,000 ft. | 1 " |
| g) | Aug. 3 " | " " | " " | 3 " |

collected also by Dyall on Oregon Honda, Conn², and by Bourgeau
 in the Rocky Mts. - in which collections it is referred doubtfully
 to *A. canadensis* - which indeed it approaches, but the spines are always
 above the ^{great foraged oval} petals or more or less incurved, sometimes as much as
 in *A. canadensis*, K., the limb black & light a third shorter than the sepals yellow
 with one stripe sometimes lined with red, 4-5° with ~~the~~ the corolla
 & lower stem pubescent, leaflets very variable in size

Spines 4-5 pairs in line. No good spec in this country,
 It is the *A. exaltatum*, Bourgeau, & differs from *A. scopulorum* in
 the less lacinate dissected leaves & in the broader more pubescent
 dark silicles. 1940 ^{spec} ~~spec~~ - is intermediate in the form of
 the leaves while the upper petals are also bifid. It differs
 from *D. ...* in its much broader lower petals which are more
 conspicuously spread at base, while the flowers are much smaller

Certainly not *A. exaltatum* - May 27, N.Y. -

34. - *Aquilegia Canadensis*, L., var. *formosa*. A sub-alpine form; stem nearly simple, few flowered; uppermost leaflets entire, oblong or oval; sepals oval, equal to or longer than the spurs, widely spreading.

- a.) July 24, 1868. E. Humboldt Mts., ^{near} Cañon near Ruby camp 8,000 ft. 1 sp.
 b.) Aug. 6. " " " " Approaching common lower form. 9,000 ft. 2"
 c.) " 27 " " " " Shore of mountain lake. 10,000 ft. 5"

35. *A. conulea*, James. (Long's Exp. II. 345. 789. 72. 30. H. & A. Bot. Beech. I. 517, 572.) Flowers white, rarely with the sepals slightly tinged with blue. on shaded mountain slopes.

- a.) June 28, 1869. Wahsatch Mts. Utah. Near Parley's Park. 8,000 ft. alt. 11 sp.
 b.) July 14, " " " " Cottonwood Lake. 9,500 ft. alt. 1"
 c.) Aug. 2 " Uintah Mts. Bear river cañon, with small leaves. 9,000 ft. alt. 2"

35. - *A. aristyle*, Hook. & G. var. *flava*.

- a.) May 27, 1869. Wahsatch Mts. ~~Utah~~ ^{near} Salt Lake City. 5,000 ft. alt. 9 sp.
 b.) July 7, " Uintah Mts. Banks of Provo river 7,000 ft. 3"
 c.) " 13, " Wahsatch Mts. Cottonwood cañon 7,000 ft. 6"

37. - *Delphinium elatum*, L. ? wanting the hispid peduncles ^{less hispid than} ~~leafy stem & simple~~ compact head of Rocky mountain specimens, so named, ^{of var. 11 & 12, usually nearly glabrous} ~~stem seldom simple, rarely~~ ^{becoming} ~~elongated, rather woody.~~ ^{& elongated.} On creek banks in high cañons.

- a.) July 24, 1868. E. Humb. Mts., Nev. 7,000 ft. alt. 1 sp.
 b.) " 30, " " " 8,000 ft. alt. 4"
 c.) Aug. 26, " " " 7,000 ft. alt. 5"
 d.) Sept. 4, " Clover Mts. Nev. 7,000 ft. alt. 4"
 e.) July 15, 1869. Wahsatch Mts. Utah. 8,000 ft. alt. 1"
 f.) " 17, " " " 7,000 ft. alt. 2"
 g.) " 20, " " " 8,000 ft. alt. 1"
 h.) " 24, " " " 8,000 ft. alt. 1"

cf. Not to be distinguished from

D. tricorne, *W.* - + very difficult to draw the lines between it + forms of *D. appurum* (including *D. simplex*) on the one side + *D. decorum* + *D. patens* on the other, which are probably no more than varieties. Harkness's own specimens in Herb.

Every of *D. patens* shows the claw of lower petal spurred, instead of "scales" as

The lower petals are sometimes crossed dentate

Vol - The western *Delphinium* of lower altitudes are very perplexed + it is difficult to define the limits of any one of them. The ~~partly~~ ^{widely} distributed *D. monogynum*, which it closely approaches *D. tricorne* of the East, grades into *D. patens*, *D. decorum* + *D. simplex*. The smaller forms of *D. simplex*, of Calif. -

38. - *Delphinium Menziesii*, DC. (Hook. Fl. Nov. Am. I. 25. 709. Fl. I. 661.) Leaves variable. On low foothills, May & June. 1-2' high. 4-5,000 ft. alt.

- a.) May 2, 1864. Near Carson City, Nev. 2 sp.
- b.) " 14, " Truckee Valley, near the Big Bend. 2 "
- c.) " 18, " Trinity Mts. Nev. 2 "
- d.) " 20, " Humboldt Valley, near Coopers' Ferry. 1 "
- e.) June 3, " W. Humboldt Mts., ^{Nev.} Indian cañon. 5 "
- f.) " 8, " " " Unionville cañon. 2 "
- g.) " 14, " " " Bloody cañon 2 "
- h.) " 10, " " " Unionville foothills, 3 "
- i.) July 20, " E. Humb. Mts., limestone cliff. 7,000 ft. alt. - A doubtful specimen.

39. - *D. Menziesii*, DC.? var. with pink flowers.

June 23, 1864. Siemsen Range, Nev. Foothills. 5,000 ft. 1 sp.

40. - *D. Menziesii*, DC.? var. with double flowers.

June 18, 1864. Unionville Valley, Nev. 2 sp.

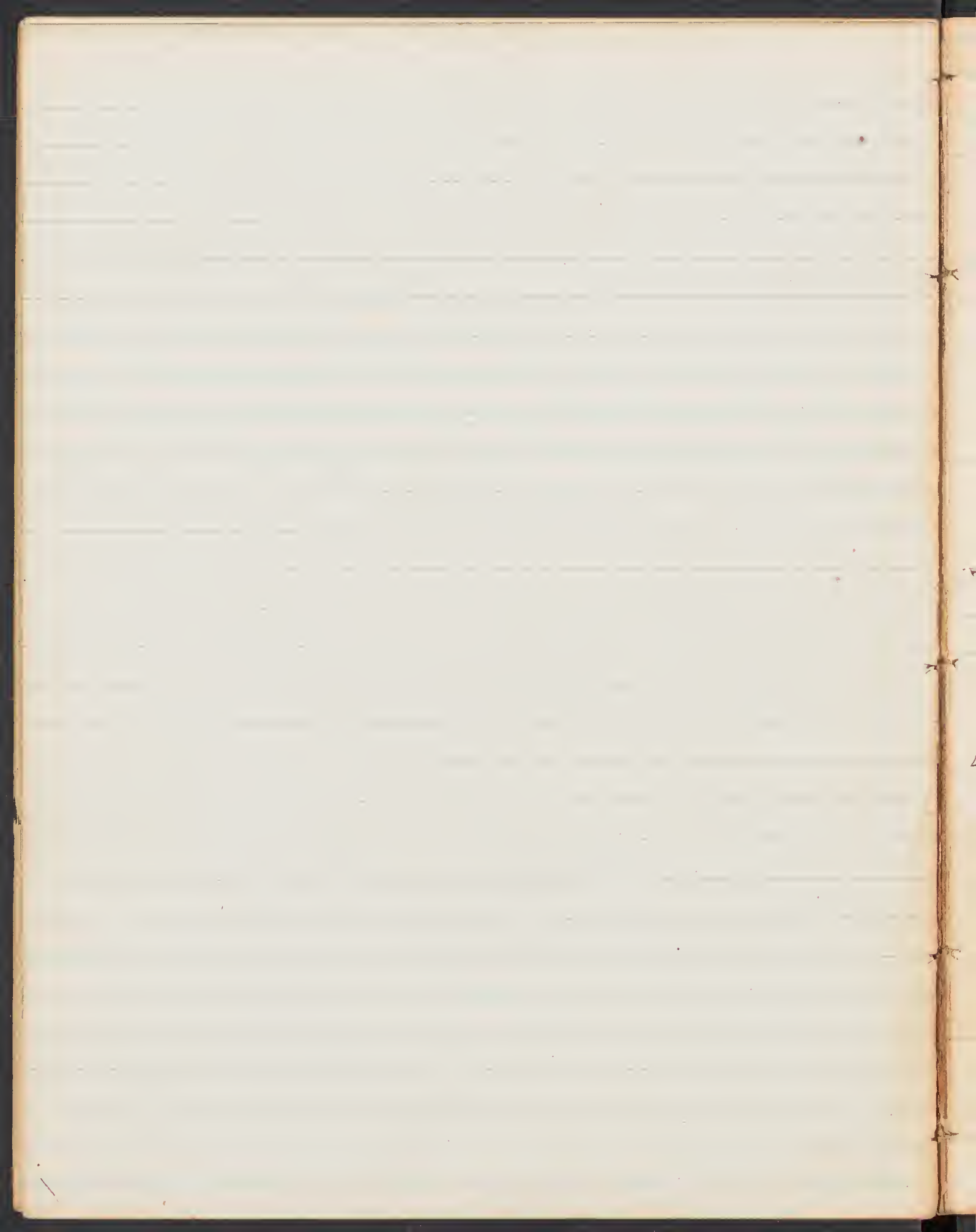
41. - *D. depauperatum*, Nutt. (709. Fl. I. 33.) ^{partly with} somewhat variable but ~~is~~ characterized by its ~~uniflorous~~ leaves ^{leaves} with rather broad ^{oblong}, ^{acuminate} ~~good~~ ^{poor} ~~specimens~~; the alpine form very distinct, well marked, ^{in its leaves, from full flower specimens, & straight slender stems.}

- a.) June 24, 1864. Regan's Valley, Nev. 5,000 ft. 3 sp.
- b.) " 27, " Gold Run District, Nev., near Cumberland. 5,000 ft. 3 "
- c.) Aug. 24, " E. Humb. Mts., Nev., near divide. 10,000 ft. 18 "

42. - *D. Menziesii*, DC. The Utah form, essentially the same as No. 38, but ^{the} ~~the~~ ^{the} segments of the leaves more usually sharply linear, and

the upper petals delicately ^{veined} ~~marked~~ with blue, which is not the case in a ^{few} ~~some~~ ^{specimens}.

- a.) May 17, 1869. Wahatch Mts., Utah. Foothills near Salt Lake City. 2 sp.
- b.) June 3, " Antelope Island, Salt Lake. 2 "
- c.) " 24 " Wahatch Mts. Parley's Park. 2 "
- d.) July 14, " " " Head of Cottonwood cañon. 9,000 ft 6 "



43. - *Aconitum nasutum*, Fisch. (Hook. Fl. Bor. Am. I. 26. 749. Fl. I.) Moist shade in high mountain cañons. Blue and white.

- | | | | | |
|-----|---------------|-------------------------------------|----------------|-------|
| a.) | Aug. 6, 1868. | E. Humboldt Mts., Nev. | 8,000 ft. alt. | 6 sp. |
| b.) | " 31, " | " " " | 7,000 ft. alt. | 2 " |
| c.) | Sept. 8, " | Clover Forks, Nev. | " " | 2 " |
| d.) | " 22, " | Humboldt Basin Mts., Nev. | " " | 3 " |
| e.) | July 4, 1869. | Uintah Mts., Utah. Pack's cañon | " " | 1 " |
| f.) | " 17, " | Wasatch Mts., " Near Parley's Park. | " " | 2 " |
| g.) | Aug. 8, " | Uintah Mts., Bear River cañon | 7,500 ft. alt. | 6 " |

44. - *Achaea spicata*, L., var. *arguta*, Torr. - (*A. arguta*, Nutt.) Berries both red & white.

- | | | | | |
|-----|----------------|--|-------------------------------------|-------|
| a.) | Aug. 19, 1868. | E. Humboldt Mts., Nev., near Fremont's Pass. | ^{In fruit, red.} 7,000 ft. | 4 sp. |
| b.) | " 24, " | " " " near same locality. | In fruit, red. | 2 " |
| c.) | " 25, " | " " Government Ranch cañon, | ^{7,000 ft.} " white | 3 " |

~~45. - *A. spicata*, L., var. *rubra*, Mx.~~

- | | | | | |
|-----|---------------|---|-------------------------|-----------------|
| a.) | May 19, 1869. | Wasatch Mts., Utah. Salt Lake City creek cañon. | ^{In flower} | |
| | | | In flower. | 6,000 ft. 4 sp. |
| b.) | June 24, " | " " " Cañon near Parley's Park. | ^{In flower.} " | 7,000 ft. 2 " |
| c.) | Aug. 14, " | " " " " " " | In fruit. | " " 1 " |

45. - *Paeonia Brownii*, Dougl. (Hook. Fl. ^{Bor. Am.} I. 27. 749. Fl. I. 41.)

- | | | | | |
|-----|----------------|--------------------------------------|----------------|-------|
| a.) | Apr. 15, 1868. | Near Carson City, Nev. | 4,500 ft. alt. | 3 sp. |
| b.) | June 9, " | W. Humboldt Mts., Nev. - Unionville. | 5,000 ft. alt. | 4 " |
| c.) | Aug. 6, " | E. Humboldt Mts. Nev. - West cañon. | 8,000 ft. alt. | 1 " |

Qn. How does var repens differ from the typical form?

E. Calif^a. col^o by Howell, W. Nevada, 49 - petals 10"

11

11

Berberidaceae.

46. *Berberis Aquifolium*, Ph., var. *repens*. ascending stems less than a foot in height, leaflets 3-7, teeth 5-15 on a side

- a.) July 10, 1868. Diamond Mts., Nev. ^{Stage Pass.} 5,500 ft. alt. 4 sp.
- b.) " 10, " E. Humboldt Mts., Nev. Stage pass. Fruit. 6,500 ft. 6 "
- c.) " 19, ²⁰ " " Camp Ruby cañon. In flower. 8,000 ft. 6 "
- d.) " 24, " " " " Fruit. 6,000 ft. 1 "
- e.) " " + 27 " ^{Fr. Ruby} Peak In flower. 10,000 ft. 3 "
- f.) " 30, " " Sawmill ^{cañon.} Peak. Fruit 9,000 ft. 2 "
- g.) May 17, 1869. Wahsatch Mts., ^{Utah.} near Salt Lake City. In flower. 4,500 ft. 4 "

Nymphaeaceae.

47. *Nuphar advena*, Ait. Rare; high mountain lakes of the Uintah Mts. Utah.

Aug. 3, 1869. Uintah Mts. Bear river cañon. 9,000 ft. alt. 2 sp.

(Ph. 71. 369. Hook. & L. Bot. Am. I. 33. 74. 72. I. 54.)

Papaveraceae.

48. *Argemone Mexicana*, L., var. *hispida*, Torr. (*A. hispida*, Cr., Pl. Fend. 5, *A. minuta*, Dur. & Hil.

Pac. R.R. Rep. V. 5, t. 1.) Common; Dry foot hills.

- a.) June 12, 1868. Dungen Range, Nev. 5,000 ft. alt. 1 sp.
- b.) July 6, " Toiyabeh Mts., ^{Nev.} near Austin 6,500 ft. alt. 1 "
- c.) " 24, " Ruby Valley, Nev. 6,000 ft. alt. 2 "
- d.) " 12, 1869. Utah Valley, near Provo City 4,500 ft. alt. 4 "

49. *Eschscholzia Douglasii*, Cham., var. *hypocoides*, Torr. (*E. hypocoides*, Benth. *Chrysis hypocoides*, Lindl., 749. 72. I. 64.) Dry rocky foot hills, western Nevada.

- a.) May 14, 1868. Truckee Mt. Pass, near the Big Bend. 4,500 ft. alt. 1 sp.
- b.) " 16, " Trinity Mts., near Brown's Station. " " 2 "
- c.) " 18, " " " " " 4 "

5152 ~~the~~ ~~revisions~~ ~~to~~ ~~the~~ ~~1000~~

51 ~~is~~ ~~not~~ ~~distinguishable~~ ~~from~~ ~~the~~ ~~eastern~~ ~~form~~ ~~either~~ ~~in~~ ~~the~~
~~fruit~~, ~~or~~ ~~habit.~~

50- *Corydalis aurea*, Willd., var. *occidentalis*, Eng. ~~(Gr. Man. 55. 2. 62)~~ Many branched
~~from the root, spur about equalling the corolla + pedicel, seeds smooth~~
^{seeds as in the same plant}
 or minutely reticulated, ~~marginless~~, pod erect or reflexed, straight or
 curved, stout or slender; bracts acute, ovate & conspicuous to linear &
 minute; 6-18' high. Pods smooth, or pubescent upon the sutures only.

- a) May 19, 1869. Wahsatch Mts. Utah. City creek cañon. 5,500 ft. 8 sp.
 b) June 11, " Black Rock Station, S. side of Salt Lake. 4,200 ft. 2 "
 c) " 20, " Promontory Point, N. " " 1 "
 d) " 23, " Wahsatch Mts., Parley's Park. Creek bank. 6,000 ft. 1 "
 e) July 1, " " " Silver creek cañon, rocks. " " 1 "

51- *Corydalis aurea*, Willd., var. *microantha*, Eng. ~~(Gr. l.c.)~~ Flowers small,
 nearly spurless, on short pedicels.

Aug. 12, 1869. Uintah Mts., Utah. Bear River Cañon. 9,000 ft. 1 sp.

Cruciferae.

52- *Parrya macrocarpa*, R. Br., var. *a. aspera*, Hook. (Hook. Fl. Bor. Am. I. 47, t. 15.
 749. 79. I. 88.) The exact counterpart of the plant of the Arctic &
 Northwest coast, hitherto its only known habitat. Near the
 summit of the highest peak of the Uintah Mts, at an altitude
 of 12,000 ft. In flower & fruit.

Aug. 3, 1869. Uintah Mts., Utah. Head of Bear river cañon 17 sp.

53- *Cheiranthus Menziesii*, Benth. & Hook. Valves opening elastically, though Nuttall
 states the contrary.

- a) Apr. 23, 1868. Wasatch Mts., Nev., near Mt. Davidson. In flower. 7,000 ft. 6 sp.
 b) May 27, " Trinity Mts., ^{Nev.} summits west of Oceana. In flower. 6,000 ft. 1 "
 c) June 9, " W. Humboldt Mts., Nev. In flower & fruit 7,000 ft. 2 "
 d) " 25, " Gold Run District, Nev. Above Cumberland. In fruit. 7,000 ft. 5 "

(58, = 62)

61 = (59 c.)

54. - *Nasturtium officinale*, R. Br. (Hook. Fl. Bor. Am. I. 29. 7. 4. 71. I. 73.) In ditches and streams, near Salt Lake City. Probably introduced.

May 31, 1869.

6 sp.

55. - *N. sinuatum*, Nutt. (7. 4. 72. 73.)

a) Sept. 20, 1867. W. Humboldt Mts., Nev. Star Cañon. 5,000 ft. alt. 6 sp.

b) " 24, 1868. Holmes' Creek Valley, Nev., near head. Creek bank. 6,000 ft. 1 "

56. - *N. ^{obtusum} ~~lyratum~~*, Nutt. (7. 4. 72. 74.)

a) July 16, 1867. Truckee Valley, Nev. River bank at Big Bend. (W. W. Bailey.) 3 sp.

b) " 26, " " " same locality. 10 "

c) Sept. 30, 1868. Goose Creek Valley, Utah. 3 "

57. - *N. obtusum*, Nutt. (7. 4. 71. 74.) form. -

a) July 7, 1868. Snake Valley, Nev. Dry run at Cape Horn Station. 3 sp.

b) Aug. 26, " E. Humboldt Mts., Nev. Cañon above Overland Ranch. 7,000 ft. 3 "

c) June 23, 1869. Parley's Park, Utah. Creek bank 6,000 ft. 3 "

59. - *N. palustre*, DC. (Hook. Fl. Bor. Am. I. 29. 7. 4. 71. 73.)

a) July 26, 1867. Truckee Valley, Nev. River bank at Big Bend. 10 sp.

b) " 28 " Same locality. (W. W. Bailey.) 3 "

61 c) May 19, 1868. Humboldt Slough, Nev. Leaves more narrowly & acutely lobed. 2 "

60. - *N. palustre*, DC. var. *hispidum*, Gr. (*N. hispidum*, DC. 7. 4. 71. 74.)

a) Sept. 30, 1868. Goose Creek Valley, Utah. Muddy slough bank. 1 sp.

b) May 19, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. alt. 1 "

c) " 31, " Jordan Valley, near Salt Lake City. Water. 3 "

d) June 23, " Parley's Park, Utah. Creek bank 6,000 ft. alt. 1 "

62. *N.*

~~var. *hispidum*~~ (Griseb. 1842)

a) June 23, 1869. Parley's Park, Utah. Stream bank. 6,000 ft. alt. 2 sp.

b) Aug. 14, " Wahsatch Mts. Utah. Shore of mountain lake. 8,000 ft. 6 "

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~~67~~ *Arabis cuneata*, Nutt. -

- a) July 20, 1868. E. Humboldt Mts., Nev. Cañon above Camp Ruby. 9,000 ft. 1 sp.
 b) " 27, " " " Peak above Ft. Ruby. 10,000 ft. 1 "
 c) Aug. 4 " " " Peak south of Stage Pass. 8,000 ft. 10 "

~~68~~ *Arabis*

var. sp. Nothing like it in Herb. Gray.

- a) May 9, 1868. Steamboat Springs, near Washoe City, Nev. 4,500 ft. 4 sp.
 b) " 16, " Trinity Mts. - Foothills near Humboldt Lake, 5,000 ft. 1 "
 c) " 20, " Humboldt Valley; sandy bank, above Lake 4,500 ft. 1 "
 d) June 15, 1869. Stansbury Island, Salt Lake. Sandy shore 10 "

~~69~~ *A. arcuata*, Gr.

(*Streptanthus arcuatus*, Nutt. 749. Fl. I. 77.)

- a) Apr. 23-29, 1868. Foothills near Carson City, Nev. In flower. 4,500 ft. 10 sp.
 b) May 16, " Trinity Mts., Nev. Foothills near Humboldt Lake 4,500 ft. 2 "
 c) " 27, " " Cañon west of Orona 4,500 ft. 4 "
 d) July 7 " Toiyabe Mts., Nev. Foothills east of Austin. Fruit. 6,000 ft. 1 "
 e) June 13, 1869. Stansbury Island, Salt Lake. Near Peak. ^{Fruit.} 6,000 ft. 4 "
Toiyabe Mts.

~~70~~ *A. retrofracta*, Grak.

(*Yucca retrofracta*, Hook. Hook. Fl. Bor. Am. I. 41, 749. Fl. I. 79.)

Leaves varying from all entire, to all coarsely dentate; sagittate amplexicaul or simply clasping; broad lanceolate or almost linear. Stem single or several, simple or branched.

- a) Apr. 23-29, 1868. - Foothills near Carson City, Nev. In flower. 7 sp.
 b) May 18, " Mountain Summit E. of Humboldt Lake 6,000 ft. 2 "
 c) June 8, " W. Humboldt Mts. - Unionville cañon, 6,000 ft. 2 "
 d) " 25, " Cumberland Mts., Nev. 6,000 ft. 1 "
 e) July 20, ²⁴ " E. Humboldt Mts. - cañons above Camp Ruby. 7,500 ft. 2 "
 f) Aug. 4, " " " Peak south of Stage Pass 8,000 ft. 1 "

Sp. ...

The most usual form

71. - *Arabis retrofracta*, Grak. - var. Siliques a half broader than usual and, with the rest of the plant, densely stellate-pubescent.

May 30, 1866. Foothills of Trinity Mts., Nev., near Ormana. 4,500 ft. 1 sp.

72. - *A. patula*, Torr. (*Turritis patula*, Grak. 749. Fl. I. 79.) Approaching nearly some forms of *A. retrofracta*. Flowers erect.

a.) May 19, 1869. Wahsatch Mts., Utah. City creek cañon. 5,000 ft. 4 sp.

b.) June 3, " Antelope Island, Salt Lake. 4,500 ft. 1 "

66
73. - *A. hirsuta*, Scop. (Hook. Fl. Bor. Am. I. 42. 749. Fl. I. 80.) Varying much in habit, & a...

a.) June 26, 1866. Cumberland, G. S. R. M. District, Nev. streambank. 5,000 ft. 2 sp.

b.) July 7, " Toiyabe Mts. East of Austin, Nev. streambank. 6,000 ft. 3 "

c.) Oct. 3, " North base of Raft River Mts, Utah. Clear creek 5,000 ft. 3 "

d.) June 23, 1869. Wahsatch Mts. Utah. Parley's Park. streambank. 6,000 ft. 5 "

e.) " 24, " " Canon above Parley's Park. 6,500 ft. 2 "

65
74. - *A. hirsuta*, Scop. - ~~with the~~ Basal leaves rosulate (as in some of the above specimens); stems low (1?) slender, with a few distant oblong or ovate leaves, few to many flowered, pedicels more or less divergent.

a.) June 23, 1869. Parley's Park, Utah. Streambank. 6,000 ft. 4 sp.

b.) July 4, " Uintah Mts., Utah. Pack's cañon. Rocks. 7,000 ft. 4 "

c.) Aug. 26, " " American Fork cañon. 6,000 ft. 6 "

71
75. - *A. perfoliata*, Lam. (*Turritis glabra*, d. Hook. Fl. Bor. Am. I. 40. 749. Fl. I. 78.)

a.) June 8, 1866. W. Humboldt Mts., Nev. Unionville cañon. 5,500 ft. 1 sp.

b.) May 27, 1869. Wahsatch Mts., Utah. City creek cañon 5,000 ft. 2 "

c.) June 29, " " " Cañon above Parley's Park 6,000 ft. 1 "

72
76. - *A. Drummondii*, Gr. ^{or name by} (*Turritis stricta*, Grak. Hook. Fl. Bor. Am. I. 40. 749. Fl. I. 79.)

June 8, 1866. W. Humb. Mt. Nev. Unionville cañon. A slender flexuous form, similar to one of the next. 6,000 ft. 5 sp.

June 24, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park, 6,500 ft. 5 "

Similar dwarf specimens in Lyall's Oregon boundary
collection

Found by Parry in Middle Park, 1864, - Brewers 1885 (C) at
Carr's Pass, - & by Newberry in Colorado 1859.
marked "S. coninatus, var. rotundifolius" in Herb. Gray -
Doubtless McNeill's plants, though he describes the pod
as deflexed

II.)

Flowers stratocaryx - new -
Thelypodium Kingii McNeill's

col^d by Stansbury on Salt Lake in Herb. Torr

~~King~~

77 - *A. Drummondii*, Gr. var. A reduced alpine form. Flowers few, purple or white.

Somewhat pubescent; hairs attached by the middle, or stalks. 2-1" high.

- a) July 20, 1868. E. Humboldt Mts. Nev. Cañon above Camp Ruby 8,000 ft. 3 sp.
 b) Aug. 2, " " " Lake above Orland Ranch. 9,000 ft. 2 "
 c) Sept. 7 " Clow Mts., Nev. South Peak 10,000 ft. 3 "
 d) Aug. 4, 1869. Uintah Mts., Utah. Divide at head of Bear River. 10,000 ft. 9 "
 e) " 12, " " " Ridge in Bear River cañon 8,500 ft. 2 "

76

78 - *Streptanthus cordatus*, Nutt. (709.72.1.)

- a) July 24, 1868. E. Humboldt Mts., Nev. Divide above Camp Ruby. 9,000 ft. 7 sp.
 b) " 27, " " " Ridge above Ft. Ruby 9,000 ft. 1 "
 c) Aug. 4, " " " Peak south of Stage Pass. 9,000 ft. 2 "
 d) July 4, 1869. Uintah Mts., Utah. Ridge above Park's Cañon. 8,000 ft. 8 "
 e) " 9, " " " Ridge near Kamez Prairie, 7,000 ft. 3 "

83

79 - *S. pinnatifidus* var. s. s. near s. s. s. s.

- a) May 13, 1868. Truckee Valley, Nev. Foot hills near the Big Bend. 3 sp.
 b) " 18, " Humboldt Valley, Nev. " near Humboldt Lake. 5 "

78

~~*Isodonthus Kingii*~~
 80 - *S. bracteatus*, Gr. var. *lanceolatus*. Leaves all entire, cauline ones lanceolate, radical elliptical upon a narrow petiole. 2-5". Smooth or decumbent.

June 29, 1868. Summit Springs, E. of Regan's Valley, Nev. 5,000 ft. 2 sp.

81 - S.

Same as the last

- a) July 6, 1868. Monitor Valley, Nev., at Crutt's Wells. Alkali meadow. 1 sp.
 b) June 3, 1869. Salt Lake Valley, Utah. Meadows at mouth of Jordan 3 "
 c) " 11, " Rabbit-Island, Salt Lake. Alkali mud bank. 8 "
 d) " 23, " Parley's Park, Utah. Stream bank 1 "

III.)

Sp. in. Aravis p. abaris

8
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84 - *Streptanthus pallidus hastatum*

- a.) June 24, 1869. Wahsatch Mts, Utah, Cañon above Parley's Park. 6,000 ft. 2 sp.
 b.) July 9, " Uintah Mts, " Park's Cañon 7,000 ft. 1 "
 c.) Aug. 14, " Wahsatch Mts. Cañon below Parley's Park. 6,000 ft. 6 "

82
~~79~~
~~75~~

85. - *S. crassicaulis*, Torr. (Stans. Rep. 383. t. 1.) "Glauces; caule glabro inflato fistuloso; foliis oblongis runcinato-pinnatifidis vel runcinatis. longe petiolatis; floribus erecto-patulis; petalis (purpureis) linearibus obtusiusculis calyce villosa-lanato duplo longioribus." Siliqua elongata teres enervis stigmatis lobis erectis capitata. Semina compressa oblonga subangulata angusta marginata costyledonibus suboblique accumbentibus.

- a.) May 23, 1868. Humboldt Valley, Nev. Foothills E. of Orca. 4,500 ft. 1 sp.
 b.) June 24, " Cumberland Mts.,^{Nev.} Bardman's Pass 5,000 ft. 1 "
 c.) July 20, " E. Humboldt Mts. Ridge above Camp Ruby 6,500 ft. 1 "
 d.) " 29, 1869. Bear River Valley. Foothills near Evanson.^{In fruit:} 6,000 ft. 4 "

86
~~85~~

84. - *Cardamine cordifolia*, Cr. (Pl. 71. D. 8.) "Folia, C. acerosa, etc. Leaves sometimes all reniform, 2-4' in breadth - upper ones often more or less acuminate - scarcely ciliolate - principal nerve projectly slightly beyond the margin.

- a.) Sept. 18, 1868. Clover Mts., Nev. Stream bank 6,500 ft. 5 sp.
 b.) June 25²⁵, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park. 7,000 ft. 4 "
 c.) July 4, " Uintah Mts., Utah. Park's cañon 7,000 ft. 4 "

86

85. - *C. hirsuta*, L. (Hook. Fl. Bor. Am. I. 45. 749. Fl. I. 85)

- a.) Sept. 30, 1868. Goose Creek Valley, Utah. Stream bank. 1 sp.
 b.) June 23, 1869. Parley's Park, Utah. " " 6,000 ft. 4 "
 c.) July 7, " Uintah Mts., Utah. Provo river bottom. 7,000 ft. 2 "

82.

84. - *Platyspermum scapigerum*, Hook. (Hook. Fl. Bor. Am. I. 64. t. 147. Fl. I. 112.)

May 9, 1868. Steamboat Springs, near Washoe City, Nev. In fruit. 7 sp.
 collected only in Oregon, by Douglas.

89

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88 - *Vesicaria montana*, Gr. (^{not. sec.} Proc. Acad. Phil. Mar. 1863. p. 58.) "Argenteo-incana; caulibus ex radice perenni

dipnisi foliosis; foliis spatulatis, radicalibus subrotatis petiolatis nunc 1-2 dentatis; racemo fructifero elongato; silicula ovali seu ellipsoidea cano-hirsute stylo gracili longiore pedicello patente sursum curvato paulo breviori". Dry mountain slopes.

- a) June 8, 1868. W. Humboldt Mts., near Unionville cañon. 9,000ft. 7 sp.
- b) July 27, " E. Humb. Mts., near Peak South of Camp Ruby 10,000ft. 8 "
- c) Aug. 14, " " " Peak above Sawmill. Fruit. 10,000ft. 1 "
- d) July 14, 1869. Wahsatch Mts., Utah. Above Cottonwood Lake. 9,500ft. 2 "

89 - *Thysaria didymocarpa*, Gr. (*Vesicaria*, Hook. & B. Bot. Beech. Am. I. 49, t. 16. 709. 71. I. 102.)

In specimens (c.) ^{radical} leaves sublyrate.

- a) June 8, 1868. W. Humb. Mts., near cañon above Unionville. ^{In flower.} 9,000ft. 5 sp.
- b) July 20, " E. Humb. Mts. Ridge above Camp Ruby. ^{In fruit. to 9,000ft.} 6,500ft. 9 "
- c) " 1, 1869, Parley's Park, Utah. Foot-hills on Silver Creek. 6,000ft. 7 "
- d) " 4, " Uintah Mts., Utah. Pack's cañon. 7,000ft. 1 "

90 - *Draba alpina*, L. (Hook. & B. Bot. Beech. Am. I. 50. 709. 71. I. 103.) Flowers & fruit in a loose

raceme; ^{Spangles or obovate, many or miles.} leaves stellately pubescent; Scape nearly glabrous; silicles glabrous or pubescent.

- a) July 20, 1868. E. Humb. Mts., near Cañon above Camp Ruby. 8,000ft. 15 sp.
- b) " 24, " " " Peaks above Camp Ruby. 9,000ft. 2 "
- c) " 25 " " " Peak south of Camp Ruby. 9,000ft. 1 "

91 - *Draba alpina*, L. ~~*glacialis*, Adams.~~ (Hook. & B. Bot. Beech. Am. I. 51. 709. 71. I. 105.) Carried by *Dr. Hooker to D. alpina*.

Resembling the last, but readily distinguished by the much less ^{with linear, lower leaves} more or less prominently ^{mid-} ~~oblongly~~ ^{oblongly} ~~carinated~~ ^{carinated} leaves. The stellate pubescence is sometimes wanting.

Scape 2-4' high. ^{densely} somewhat more ^{or} matted + crowded with ^{leaves}.

- a) July 20, 1868. E. Humb. Mts., near - with 89, a. 8,000ft. 1 sp.
- b) " 24, " " " with 89, b. 9,000ft. 1 "
- c) Aug. 4, " " " Peak south of Stage Pass. 9,000ft. 2 "
- d) " 25, " " " Peak above Oriskany Ranch. 10,000ft. 2 "

collected also by Lyall (A.) and Brewers 175. 1851
leaves densely stellate pubescent or nearly glabrous, more elevated. ~~Probably~~
~~equivalent to Nuttall's~~

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97. *Duchesnea Douglasii*, Gr. (Proc. Am. Acad. Art. + Sci. VII. 324.)

Apr. 29, 1868. South side of Mt. Davidson, near Virginia City, Nev. 6,500 ft. 18 sp.

98. *D. aurea*, Kahl. (Hook. Fl. Bor. Am. I. 55. 749. 71. I. 10.) Flowers yellow or white.

a.) Aug. 2, 1869. Uintah Mts., Utah. Above Bear River Cañon 9,000 ft. 2 sp.

b.) " 3 " " " Peak above " (white.) " 9-11,000 ft. 4 sp.

c.) " 11, " " " Bear River cañon, stream bank. 8,000 ft. 4 "

99. *D. nemorosa*, L. (*D. nemoralis*, Ehr.) Siliques equalling the pedicels.

a.) May 17, 1869. Foothills near Salt Lake City. 2 sp.

b.) " 19, " City creek cañon, Utah. 4,500 ft. 4 "

c.) " 31, " Jordan Valley, near Salt Lake City - under sagebrush. 5 "

d.) June 25, " Parley's Park, Utah. Creek bank. 6,000 ft. 6 "

e.) July 14, " Wahsatch Mts., Utah. Cottonwood cañon. 8,500 ft. 1 "

100. *D. nemorosa*, L. var. *lutea*. (*D. lutea*, Gilib.) Often with the scape nearly or quite leafless. Hall + Harbour's No. 41 seems to be the same thing, (marked *D. crassifolia*, Grak.) The flowers from the first specimen are pinkish white.

a.) Aug. 29, 1868. E. Humboldt Mts. Peak above Orland Bend. 10,000 ft. 15 sp.

b.) July 6, 1869. Uintah Mts., Utah. Duchesne River divide. 10,000 ft. 2 "

c.) " 14, " Wahsatch Mts., " Cottonwood cañon. 9,000 ft. 7 "

d.) Aug. 4, " Uintah Mts., " Bear River cañon, lake shore. 9,000 ft. 4 "

e.) " 12, " " " Ridge above cañon 10,000 ft. 2 "

101. *D. Caroliniana*, Walt., var. *micrantha*, Gr. (*D. micrantha*, Nutt.)

a.) May 17, 1869. Foothills near Salt Lake City. 5 sp.

b.) " 31, " Jordan Valley, " " 2 "

c.) June 7, " Antelope Island, Salt Lake 1 "

102. *Sisymbrium junceum*, Bieb. (Hook. Fl. Bor. Am. I. 61. 749. 71. I. 91.)

Aug. 4, 1868. E. Humboldt Mts., Nev. South of Stage Pass, head of cañon. 9,000 ft. 23 sp.

105. *S. Californicum*

107. - *Sisymbrium canescens*, Nutt. (799.92.) Very abundant. Varying much in the division of the leaves & degree of pubescence - the latter always branched. Seeds gathered by the Indians for food. = Ah-tsák. "Heap eat'em".

- a) July 26, 1867. Truckee Valley, at the Big Bend, Nev. (W. L. Bailey.) 4,500 ft. 2 sp.
- b) Sept. 2, " Unionville Valley, Nev. Meadows " 2 "
- c) Apr. 12 - May 4, 1868. Near Carson City, Nev. Early forms. " 13 "
- d) May 14, + 20, " Humboldt Valley, Nev. near Humboldt Lake " 6 "
- e) June 19, " E. Humboldt Mts., Nev. Unionville 4,500 ft. 1 "
- f) " 27, " Cumberland Mts., Nev. 5,000 ft. 1 "
- g) July 6, " Toiyabe Mts., Nev. near Austin 6,000 ft. 1 "
- h) " 20, " E. Humboldt Mts., Nev. Ridge above Camp Ruby. 7,000 ft. 5 "
- i) Aug. 4, " " " Below Stage pass. 8,000 ft. 1 "
- j) " 14, " " " Peak above Sawmill. 10,000 ft. 1 "
- k) June 30, 1869. Wahsatch Mts. Utah. Parley's ~~Camp~~ Park. 6,000 ft. 4 "

107. - *S. canescens*, Nutt., var. with oblong or nearly orbicular siliques. Much less frequent.

May 16 + 20, 1868. Humboldt Valley, Nev. near Humboldt Lake 12 sp.

106. - *Sandowiskia calycina*, Meyer. (*Hutchinsia*, Desv. Hook. Fl. Bor. Am. I. 58, t. 17. 799. 71. 114.)

- a) Aug. 27, 1868. E. Humboldt Mts. Peaks above Overland Ranch. 10,000 ft. 10 sp.
- b) Sept. 3, " " " Peak above Hummerman's 10,000 ft. 6 "
- c) Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear River cañon. 11,000 ft. 8 "
- d) " 10, " " " Peak west of do. 16,000 ft. 3 "

107. - *Erysimum cheiranthoides*, L. (Hook. Fl. Bor. Am. I. 64, 799. 71. 94.)

- a) July 2, 1868. Reese Valley, Nev. E. foothills near mouth. Creek bank. ^{5,000 ft} " 1 1/2 "
- b) June 23, 1869. Parley's Park, Utah. Creek bank. 6,000 ft. 2 "
- c) July 3, " Kamas prairie, Utah. Creek bank. 6,500 ft. 3 "
- d) " 9, " Wahsatch Mts., Utah. Provo cañon, river bank, 6,000 ft. 4 "

Collected also by Bourgeois

Qu. also var. of *aspinum* cf. sp?

~~Qu. *aspinum*~~

108. - *Eriogonum asperum*, DC. (Hook. & G. Bot. Beechey. I. 64, t. 22. 7. 71. I. 95.)

- a) July 10, 1864. Diamond Mts., Nev. Summit of Stage Pass. 7,000 ft. 7 sp.
b) " 20, " E. Humboldt Mts., Nev. Cañon above Camp Ruby 7,500 ft. 3 "
c) " 24, " " " Divide above Camp Ruby 8,000 ft. 1 "
d) " 27, " " " Peak above Ft. Ruby 9,000 ft. 1 "
e) Aug. 4 " " " Peak south of Stage Pass. 8,000 ft. 1 "
f) May 17, 1869. Foot-hills near Salt Lake City, Utah. 4,500 ft. 2 "
g) " 27, " City Creek cañon, Wahsatch Mts. " " 2 "
h) June 3, " Antelope Islands, Salt Lake " " 1 "
i) July 4, " Uintah Mts., Utah. Parks cañon 8,000 ft. 1 "
j) Aug. 3, " " " Peak above Bear river cañon 11,000 ft. 1 "
k) " 12, " " " Ridge " " East 9,000 ft. 2 "

110

109. - *E. asperum*, DC. var. ^{inconspicua} with ~~very~~ small flowers, ^{the pedicels help longer than} ~~the pedicels are longer than~~ the petals.
The (5-4) sepals.

July 9, 1864. Diamond Valley, Nev. - western foot-hills. 6,000 ft. 4 sp.

109

110. - *E. pumilum*, Nutt. (749. 71. I. 95.)

- a) May 2, 1864. Washoe Mts. Nev. Clear Creek cañon below Carson. 5,000 ft. 7 sp.
b) " 9, " Steamboat Springs, Nev. near Washoe City. 4,500 ft. 5 "

111. - *Stanleya pennatifida*, Nutt. (749. 71. I. 97.) The upper leaves are often entire and by the ^{decay} of the lowermost we have the *S. integrifolia* of James.

It does not merit the rank of a variety. The woody base is found 1' in diameter, showing 10-12 annual rings.

- a) July 26, 1867. Truckee Valley, Nev. Border of desert (W. B. Bailey.) 8 sp.
c) " 8, 1866. Monitor Valley, Nev. Foot-hills. 3 "
b) June 11, " Unionville Valley, Nev. " 2 "
d) July 11, 1869. Wahsatch Mts., Utah. Provo cañon, near mouth. 6 "

112. - *S. viridiflora*, Nutt. (749. 71. I. 96.) This seems to be Nuttall's plant, which otherwise has not probably been found, but the radical leaves (often 1' long) rarely show even a tendency to division, the cauline ones are sagittate clasping, the stipes 1/2' long, the siliques ^{very} narrowly, 2-3' long.

a) Aug. 4, 1864. Regan's Valley, Nev. 2 sp.
b) July 2, 1869. Bear River Valley, Utah. Near Evanston. 8 "

But a single specimen (Dyall), in Herb. Gray. - probably
right. - a single branch & cauline leaf, branch much branched -
leaf coarsely & obtusely lobed. - My pods too, fit the
the description. It is not *L. Wrightii*

Also spec. of *L. bulbosus* var. from Walla Walla, (scrap), and from Hooker -
doubtless the same.

113 - *Thelypodium integrifolium*, Endl. (*Pachypodium*, Nutt. 789. 71. 96.)

a.) July 26, 1867. Truckee meadow, Nev., at the Big Bend. (W. W. Bailey.) 6 sp.
 " " " Same locality. 10 "

b.) " 7, 1868. Monitor Valley, Nev. Fort Hills. 1 "

c.) Sept. 2, " City of Rock's cañon, S. E. Idaho. 1 "

d.) July 22, 1869. Wahsatch Mts. Utah. Silver Creek cañon. 5000 ft. 9 "

80

114 - *T. brachycarpum*, Torr. (S. Pac. Ex. Exp. Bot. W. Amer. t. 1. Proc. Am. Acad. Art. + Sci. ^{VI, 520})

a.) July 24, 1867. Truckee meadow, Nev. at the Big Bend. (W. W. Bailey.) 6 sp.

b.) Aug. 20, " Same locality. 2 "

81

115 - *T. laciniatum*, Endl. (*Pachypodium*, Nutt. - 789. 71. I. 96.) Same as above, 6 sp.

June 25, 1868. Cumberland Mts., Nev. Rocky ridge above Regan's Valley. 6,000 ft.

116 - 7.

June 24, 1868. Regan's Valley, Nev. 5,000 ft. alt. 3 sp.

117 - *T. sagittatum*, Gr. (*Pachypodium*, Nutt. 789. 71. I. 97.) Growing in alkaline soils. Stem weak, subdecumbent. Radical leaves lanceolate, tapering to a long slender petiole.

a.) May 9, 1868. Truckee meadows, near Glendale, Nev. 5 sp.

b.) June 11, 1868. Unionville Valley, Nev. 5 "

c.) July 28, " Ruby Valley, Nev. 1 "

d.) June 11, 1869. Tulla meadow, south shore of Salt Lake 1 "

e.) " " " Rabbit Island, Salt Lake. 9 "

113

118 - *Brassica nigra*, Roth. (*Sinapis nigra*, L.) Introduced. Near old settlement.

Sept. 19, 1867. W. Humboldt Mts. Star cañon 3 sp.

114

119 - *B. campestris*, L. Introduced.

Oct. 11, 1868. Unionville Valley, Nev. 2 sp.

July 10, 1868. Gilson's Valley, Nev. Near Stage road 5 "

May 15, 1868. Trinity Mts, near stage road. Fruitful form. 1 "

Cf

The western form is usually apetalous + pubescent or glabrous. ss.
H. seems to consider it identical with ~~the~~ *d. indivisa* - + *indivisa* Tibet
spec. in Herb. Gray is indistinguishable either by the size or shape of the pod from
some Western American ones.

115
~~120~~ - *Capzella Bursa-pastoris*, Moench. Introduced.
 May 17, 1869. Wahatch Mts., Utah. Foothills near Ft. Douglas. 3 sp.

116
~~121~~ - *C. divaricatus*, Benth. (Hymenolobus, Nutt. 749. 71. I. 11.) Collected previously
 along by Antelope, in Oregon. Leaves oblong-spatulate, radical ones ovate,
 on petioles ^{sculpting} ~~or longer~~ ^{exceeding} the blade - entire, or rarely
 sinuate-dentate or pinnatifid. Growing in damp ^{and} alkaline soil,
 usually under sage brush.
 a) Apr. 23, 1868. Sage brush plain, near Carson City, Nev. 10 sp.
 b) July 1, " Humboldt Valley, Nev., mouth of Reese river 7 "
 c) May 31, 1869. Jordan Valley, near Salt Lake City 5 "
 d) June 3, " Salt Lake Valley - mouth of Jordan. 6 "
 e) " " Antelope Island, Salt Lake 6 "
 f) " 15 " Stansbury's Island, " " 5 "

117
~~122~~ - *Lepidium intermedium*, Gr. ~~var. nudicaule Gr.~~ (*L. nudicaule*, Auct. non L.)
 " " var. *longicaule*, Engelm.)
 a) July 26, 1867. Truckee Valley, at Big Bend. 4 sp.
 b) May 20, 1868. Humboldt Valley, near Humboldt Lake. 4 "
 c) July 6, " Toiyabe Mts., Nev. Summit above Austin. 6,500 ft. 2 "
 d) May 17, 1869. Foothills near Salt Lake City 1 "
 e) June 3, " Salt Lake Valley - meadow at mouth of Jordan 5 "

118
~~123~~ - *L. alyssoides*, Gr. (Pl. Fend. 10.) Perennial, with a woody base.
 a) May 14-18, 1868. Foothills of Trinity Mts., near Humboldt Sink. 6 sp.
 b) June 9, " W. Humboldt Mts. Nev. Unionville Cañon. 1 "

119
~~124~~ - *L. montanum*, Nutt. (749. 71. I. 116.) Very variable in pubescence, division of
 leaves, & habit of growth. Peculiar to saline soils.
 May 9, 1868. Steamboat Springs, Nev., near Washoe City. 5 sp.
 June 12, " Pleasant Valley, east of Dungen Range, Nev. 3 "
 " 23, " Hot Springs, in Grass Valley, east of Dungen Range, Nev. 1 "
 July 4, " Monitor Valley, Nev. near Grubbs Wells. 5 "
 Sept. 7, " Salt Lake Valley - above Bear River. 1 "
 June 11, 1869. Trillick meadow & south end of Salt Lake 1 "
 July 27, " Weber Valley, Utah - above Coalville 4 "

#7

Indeterminate - probably, *L. montanum* with unopened pods. -

Retain the number. -

VI) Gathered in Fremont 2° expt on Mohave River, Apr. 25-27 '44, Camp 90. - fine
poor spec^s with a few fruits + vestiges of leaves. Ceryle... incubation
... in no case more than 12...
Lacey's *L. spatulatum* seems to be *L. integrifolium* also probably ~~described~~ ^{described}
from imperfect specimens, the leaves upon the branches ^{always hairy} ~~the~~ the duration
of the cauline ones. *L. integrifolium* in Herb. Torr has the lower leaves sparingly
divided & all acuminat

13

VII) nothing in the least like it in Herb. Gr. or Torr,

120

~~125.~~ *Lepidium montanum*, Nutt. var. alpinum. Remarkable for the locality in which it was found, but peculiar only in its slender growth & in the broader outline of the lobes of ~~the~~ its leaves. — perennial.

July 13 - Aug. 19, 1869. Wahatch Mts. Utah. Rocky gulch of Cottonwood cañon. ^{9,000 ft. alt.} 15 sp.

121.

~~126.~~ *L.* — ~~sp.~~

122

Oct. 1, 1867. — Junglen Range, Nev. Granite Peak cañon 5,000 ft. 15 sp.

~~127.~~ *L. spatulatum*, ~~Vasey?~~ var. 2 sp.

Nov. 16, 1867. — Rocky foothills, below Humboldt-lake, Nev. 2 sp.

123
~~127.~~ *L. dichotum*, Gr. (Proc. Am. Acad. S. S. VII. 329.) Differs from the description in its leaves which are pinnate with a few linear lobes. The flowers are also petalous.

Apr. 4⁺²³, 1868. Under sage brush, near Carson City, Nev. 20 sp.

124

~~129.~~ *L. flavum*, Torr. (Bot. of Whipple's Exped., Pac. R.R. Rep. IV. 67.) Dr. Torrey's description, though drawn ^{from} very scanty early specimens, needs little alteration. The prostrate branches of the ^{advanced} plant are 6' or more in length, with short densely fruiting branchlets. The ramal leaves are simple, ovate-spatulate, with a few teeth towards the apex. Abundant about Humboldt-lake, Nev.

a) Nov. 16, 1867. — Foothills east of Humboldt-lake. 1 sp.

b) May 16 + 20, 1868. — Foothills west & south of Humboldt-lake. 12 sp.

125

~~129.~~ *L. marianum*. var. sp. *Perennium nanum caespitosum*; foliis congestis obovatis apice trilobatis, petiolis marginatis ciliatis; floribus ignotis; scapis vix foliis exsertentibus 1-3-floris; siliiculis ovatis apice acuminato exalato ~~profunda~~ emarginatis stylo ^{cotyledonibus acuminatis.} persistente 3-longioribus; ^{Whole plant} ~~Whole plant~~ scarcely an inch high, in dense mats.

Sept. 24, 1868. Dry gravelly foot-hill, head of Holmes' Creek Valley, Utah. 6,000 ft. 12 sp.

Cf. with *F. alpestris*. The pods are not so frequently but four seeds, leaving ^{very} no distinction between the *F. humo-humum*. It seems to occur perfectly with alpine specimens referred by H+T to *F. alpestris*? except that the flowers are usually but not always somewhat larger. The distinctions between the species are ^{very} trifling.

This species doubtless includes *F. angustifolia* H. & *F. latifolia* H. & M. The *F. filyipes* & *F. pubescens* are variable & the development of the ^{7th} member occurring, are a little specific, but *F. sibirica*, H. & M. & *F. lanata*, H. & M. *F. latifolia* H. & M. *F. angustifolia* H. & M. are also *F. sp.* H. & M. (the *F. angustifolia*, H. & M.)

Examined again - brought up, *F. latifolia* H. & M.

... and *F. angustifolia* H. & M.

It is like nothing in Herb. Borng, which is all right, - but is not a species of *F. latifolia*. I believe it is a good species, whether it is *F. latifolia* or not.

Woke in 1848

126.

130. - *Thlaspi cockleariforme*, DC. (Hook. Fl. Bor. Am. I. 55. 286. Pl. I. 113.)

- a.) Aug. 2, 1868. E. Humb. Mts, Nev. Lake shore above Overland Ranch. 9,000 ft. 10 1/2
 b.) Sept. 3, " " " Peaks above Humboldt. 10,000 ft. 7 "
 c.) " 13, " Clover Mts, Nev. Highest Peak 11,000 ft. 1 "
 d.) July 4, 1869. Uintah Mts., Utah. Ridge above Park's cañon 7,000 ft. 10 "
 e.) " 5, " " " Peak above Brown cañon 9,000 ft. 10 "
 f.) " 14 " Wahatch Mts., " Cottonwood cañon, 8,500 ft. 3 "
 g.) " 15, " " " Humboldt's Mine cañon 9,000 ft. 2 "
 h.) Aug. 4, " Uintah Mts., " Lakes at head of Bear River cañon - 10,000 ft. 1 "

127

131. - *Thysanocarpus* ^{Thysanocarpus} ~~umbellifer~~, Hook. (Hook. Fl. Bor. Am. I. 69, t. 14. 185. Pl. I. 115.)

- a.) Apr. 14-23, 1868. Foot hills near Carson City, Nev. 2000 ft.
 b.) June 4, " W. Humb. Mts. Nev. Unionville cañon 2 "

Cappariaceae.

128

132. - *Cleome integrifolia*, Torr. (Pl. I. 122.) Frequent in Salt Lake Valley.

- a.) Sept. 7, 1868. Bonneville Valley, near mouth. 5000 ft. 2 1/2
 b.) June 11, 1869. Black Rock point. South end of Salt Lake 1 "
 c.) July 26, " Silver Lake cañon, near Park's Park 1 "

129

133. - *C. aurea*, Nutt. (185. Pl. 122.) Distinct from *C. pubera*, Hook.

- a.) July 27, 1867. Truckee Valley, at the Big Bend. Nev. 11 1/2
 b.) Aug. 4, 1867. Carson Desert, near Keed's Station 1 "
 c.) May 18-20, 1868. Truckee & Humboldt Valleys, near Desert. 4 "
 d.) July 1, 1868. Humboldt Valley, Nev. Abundant 1 "

130

134. - *C. latifolia*, Hook. (Hook. Fl. Bor. Am. I. 70, t. 25. 186. Pl. I. 122.) Less frequent than

the last & much smaller plant; branched from base, racemes less dense, filaments scarcely equaling the petals, two shorter.

May 18, 1868. West side of Humboldt Lake sand flat 14 "

VIII.)

Cf. S. Sonora - not there -

VIII.)

Compared with another species of C. mexicana, ^{in Herb. A.} collected in Mexico by or Humboldt & Bonpland. ~~seems to be distinct, in the shape of the leaves + size + shape of the seeds.~~ ^{seems to be distinct, in the shape of the leaves + size + shape of the seeds.} In C.

Mex the seeds are thickly obovate, nearly globular, with a short + straight acumination, in these specimens Mexico, the length exceeding the width by half, with a curved acumination, ^{having a longer outline than the width + depth}

& C. Mex. the peduncles are prominent or even depressed at the top, the anthers are projecting - the stamens are usually deciduous, seems as described. flowers same in both. It is also Boissier's

No. 28, "sterile saline plains, Humboldt County, Mex." a taller (1°) specimen

139 = C. longipes, var. grandiflora. - tall (1-2°) etc. 69 and 70 are the same thing. The seeds are the same but larger, flowers very much larger, than of C. longipes

being same as those of 137 + 68. 579 ^{in Herb. Gray.} & 1269 ^{in Herb. Gray.} are very high, branching plants at base with several equal stems. - Cf. Gray's concepts - maybe good sp. ^{except for the diff. seeds it might be longipes but rather}

138. probably var. near the last. 657 in Gray's 1851 seems to be the same, with seeds

exactly. C. longipes 1269 in Herb. - a tall spec (2°) - Good. C. longipes, May 70, MS. -

131
~~131~~ - *Cleomea sparsiflora*, nov. sp. ^{pedale} Annua glabra, caule flexuosa ramosa, ramis
 in ~~unifloro~~ ~~expansis~~; foliis simplicibus vel 3-foliatis oblongis integris brevipedicel-
 latis parvis (2-3") mucronatis sparsis; floralibus minutis; floribus parvis flavis;
 pedicellis 2" longis; calyce parva; filamentis non petalis longioribus; siliquis linear-
 ibus teretibus subuncialis stipite 4-6-longioribus; petalis ungue lato intus squamula
 nectarifera bianniculata instructo.

Aug. 5, 1867. Carson Desert, near Ragtown, Nev.

6 sp.

133

~~133~~ - *Cleomella Mexicana*, ~~Dr. var. *truncatella*~~. heterosperma

Sept. 4, 1868. Ruby Valley, Nev. Hot Springs

3 sp.

132

~~132~~ - *C. parviflora*, Gr. (Proc. Am. Acad. A. S. VI. 520.) Differing from the last in the
 shorter ^{stem} ~~stipe~~, smaller flowers, + more orate ~~siliqua~~ capsule.

July 6, 1868. Monitor Valley, Nev. Bank of Dry Creek

10 sp.

135

~~135~~ - *C. longipes*, Torr. (Pl. Wright. I. 11.)

June 23, 1868. Grass Valley, Nev. E. of Dunfer Range. Hot Springs.

2 sp.

134

~~134~~ - *C. latifolia* ~~nov. sp.~~ ^(1/2-3/4 long) Annua erecta glabra subramosa; foliolis ^{oratis}
 seu orbicularis obtusis mucronatis petiolatis; bracteis conspicuis ^{simplicibus} oratis longe
 mucronatis pedicellatis; racemis densis elongatis; floribus magnis flavis; petalis
 calycis longe acuminatis oratis lobis 2-3 longioribus; filamentis brevioribus; capsulis
 bicornis stylo gracili. ~~ovatis~~ mucronatis stipite ^(1/2-3/4) ~~pedicell~~ pedunculum aequante
 multoties brevioribus

May 11, 1868 - Alkali Lake - Nevada - 4500 ft

4 sp.

June 3, 1868. W. Humb. Mts., Nev. East foot hills

5,000 ft. 5 sp.

136

~~140~~ - *Polemonia uniglandulosa*, Dr. var. *parviflora*. (P. trachysperma, 749. 71. I. 669.)

July 29, 1868. Truckee Mts., Nev. Canon West of Big Bend. (W. W. Bailey.)

6 sp.

Aug. 29, 1869. Jordan Valley, Utah. East foot hills.

10 sp.

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U

Violaceae.

137

~~141~~ - *Viola palmstris*, d. (799. 72. I. 139.) Flowers white, veined with purple.

- a.) July 8, 1869. Uintah Mts, Utah. Head of Park's Cañon 8,000 ft. 5 sp.
- b.) " 14, " Wahsatch Mts, Utah. Shore of Cottonwood Lake. 9,000 ft. 4 "

138

~~142~~ - *V. cucullata*, Ait.

Apr. 15 - May 4, 1868. Spring banks near Carson City, Nev.

- a.) June 13, 1868. Dangler Range, Nev. Donnelly's Pass 6,000 ft. 1 sp.
- b.) " 30, " Battle Mts., Nev. Stream bank. 6,000 ft. 1 "
- c.) Aug. 3, " Ruby Valley, Nev. Border of Spring. 6,000 ft. 8 "
- d.) May 17, 1869. City Creek cañon, Utah 4,500 ft. 1 "
- e.) June 22, " Wahsatch Mts., Utah. Parley's Park 6,500 ft. 1 "

~~143~~ - *V. cucullata*, Ait., var. *cordata*.

~~Apr. 15 - May 4, 1868. Spring banks near Carson City, Nev. 9 sp.~~

139

~~144~~ - *V. canina*, L., var. *sylvestris*, Regel. (*V. Muhlenbergii*, Torr.)

- a.) Aug. 3, 1868. Ruby Valley, Nev. Spring bank. In fruit. 6,000 ft. 7 sp.
- b.) Sept. 29, " Humboldt Pass, Nev. Creek bank. In fruit. 6,000 ft. 2 "
- c.) May 19, 1869. City Creek cañon, Utah. Stream bank. 4,500 ft. 5 "
- d.) June 29, " Cañon above Parley's Park, Utah. 6,000 ft. 1 "
- e.) July 4, " Uintah Mts., Utah. Park's cañon, shade of pines. 7,000 ft. 3 "
- f.) " 10, " Wahsatch Mts. North fork of Provo cañon. 7,000 ft. 1 "
- g.) Aug. 2, " Uintah Mts, Utah. Lake shore, head of Bear river cañon. 10,000 ft. 6 "

140

~~145~~ - *V. Canadensis*, L.

July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon, Fern fork. 7,000 ft. 7 sp.

141

~~146~~ - *V. Nuttallii*, Ph.

The normal *Nuttallii*

- a.) July 29, 1868. E. Humb. Mts. Deep shade of limestone cañon. 6,500 ft. 3 sp.
- b.) June 26, 1869. Parley's Park, Utah. Shade of sage brush. 6,000 ft. 9 "
- c.) July 5, " Uintah Mts. - Provo cañon, mountain side. 8,000 ft. 5 "

142

~~147~~ - *V. Nuttallii*, Ph., var. *praemorsa*. (*V. praemorsa*, Dougl.) Stipules

laciniously toothed.

Apr. 16-24, 1868. Washoe Mts, Nev. King's cañon, near Carson City. 5,000 ft. 15 sp.

1
H
this is the pedunculata form, with rather small
flowers—

Spec. of *S. bonplandii*, correct description.

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144. - *Vilfa Nuttallii*, Ph., var. *pedunculata*. (*V. pedunculata*, 789.) A mountain or subalpine form, readily distinguished by its somewhat fleshy, more or less uniform, conspicuously veined leaves. Petals strongly tinged with purple. Stipules usually laciniately toothed.

- a.) June 8, 1868. W. Humboldt Mts., Nev. Limestone cañons. 7-9,000 ft. 10 sp.
 b.) " 12, " Dungen Ramp, Nev. Near Granite Peak. 7,000 ft. 1 "
 c.) " 30, " Battle Mts., Nev. Near peak. Snow. 9,000 ft. 1 "
 d.) July 24, " E. Humboldt Mts., Nev. Peaks above Camp Ruby ^{Snow} 9,000 ft. 9 "
 e.) May 17, 1869. Wahsatch Mts., Utah. Cañon near Salt Lake City. 6,000 ft. 1 "
 f.) July 15, " " " Divide above Cottonwood cañon ^{snow} 9,000 ft. 1 "

Caryophyllaceae.

144.
149. - *Saponaria Vaccaria*, L. (*Saponaria Vaccaria* ^{vulgaria, Host} ~~and Nuttall Hooker~~) Introduced. Common about the Mormon settlements of Utah, & spreading thence westward.

- a.) July 2, 1868. Reese Valley, Nev. Irish Ranch. 1 sp.
 b.) " 7, " Monitor Valley, Nev. By Overland Stage Road. 1 "
 c.) " 28, " Ruby Valley, Nev. 2 "
 d.) " 13, 1869. Jordan Valley, Utah. Mouth of Cottonwood cañon 1 "

145.

150. - *Silene acaulis*, L.

- a.) Aug. 31, 1868. E. Humboldt Mts., Nev. Peaks above Overland Ranch. 10,000 ft. 8 sp.
 b.) " 3, 1869. Uintah Mts., Utah. Peak above Bear River Cañon. 11,000 ft. 5 "
 c.) " 10, " " " " west " " 11,000 ft. 8 "

146.

151. - *S. Douglasii*, Hook. ? (Frank. Fl. Bor. Am. I. 88. 789. Fl. I. 190.)

- a.) July 19, 1868. E. Humboldt Mts., Nev. Cañon above Camp Ruby 7,500 ft. 6 sp.
 b.) " 30, " " " Cañon above Sawmill. " " 5 "
 c.) " 14, 1869. Wahsatch Mts., Utah. Ridge above Cottonwood Lake. 10,000 ft. 7 "
 d.) " 20, " " " Peak west of Ruby's Park. 9,000 ft. 4 "
 e.) " 27, " " " Echo cañon, Hanging rock. 7,000 ft. 1 "
 f.) Aug. 14, " " " Divide west of Ruby's Park. 9,000 ft. 5 "
 g.) " 19, " " " From fork, Cottonwood cañon 9,000 ft. 5 "

X.)₄ not in Herb. Gen. - p. 36. 1801 Sp.

154

159. - *Cerastium nutans*, Raf.

a) July 10, 1868. Huntington Valley, Nev. West-foot hills. 6,000 ft. 5 sp.

b) June 24, 1869. Parley's Park, Utah 6,000 ft. 6 "

155

160. - *C. vulgatum*, L., var. *Beringianum*, (*C. Beringianum*, Ch. Sch., 74. 71. I. 184.)

Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear River Canon 10,000 ft. 8 sp.

156

161. - *C. arvense*, L.

July 31, 1869. Uintah Mts, Utah. Bear River canon. edge of wood. 9,000 ft. 8 sp.

157

162. - *Stellaria Jamesii*, Torr. (7. 58. 71. I. 183.) Leaves 1-2' in length.

a) July 6, 1868. Toiyabe Mts., Nev. Divide above Austin. 7,000 ft. 6 sp.

b) " 20, " E. Humboldt Mts., Nev. Canon above Camp Ruby 7,000 ft. 5 "

c) Aug. 18, " " " Ridge above Sawmill 9,000 ft. 4 "

d) May 19, 1869. Wahsatch Mts., Utah. City Creek Canon 6,000 ft. 4 "

e) June 24, " " " Canon above Parley's Park. 6,000 ft. 2 "

158

163. - *S. longipes*, Goldie. (Hook. Fl. Bor. Am. I. 95. 78. 71. I. 184.)

a) July 6, 1868. Toiyabe Mts., Nev. East of Pass, stream bank 6,000 ft. 3 sp.

b) June 23, 1869. Parley's Park, Utah. Stream bank. 6,000 ft. 4 "

c) July 31, " Uintah Mts., " Bear river canon 8,000 ft. 3 "

159

164. - *S. borealis*, Big. (Hook. Fl. Bor. Am. I. 94. 78. 71. I. 185.) Two forms.

a) Aug. 7, 1869. Uintah Mts., Utah. Bear river canon - creek bank. 8,000 ft. 4 sp.

b) " " " Near same locality. Leaves ovate. " 6 "

160

165. - *S. crassifolia*, Ehr. (D.C. Prod. I. 394.)

June 8, 1868. E. Humboldt Mts., Nev. Unionville, creek bank. 5,000 ft. 12 sp.

161

166. - *S. umbellata*, Turcz.?

a) Aug. 27, 1868. E. Humboldt Mts., Nev. Lake shore, above Overland Ranch. 9,000 ft. 9 sp.

c) " 4, 1869. Uintah Mts., Utah. Lake at head of Bear R. canon. 10,000 ft. 12 "

d) " 12, " " " Ridge above " " 10,000 ft. 5 "

b) July 15, " Wahsatch Mts., " Cottonwood canon, 9,000 ft. 10 "

162

167. - *S. nitens*, Nutt. ? Nov. sp. (72 9. 21. 185.) smooth below, viscidly pubescent above;

sepals 1-nerved, about equally the petals.

July 24, 1868. E. Humboldt Mts., Nev. Divide above Camp Ruby. 9,000 ft. 2 sp.

~~from near approach in the West~~ Collected also by Burke, "Snake
River, Rocky Mts." - Intermediate between the preceding & following. Sp. of new -
var. *paniculata* Cr. Th. Apr. 26, Western Colorado of Calif. + St. Fr. + from ^{Dr.} D. D. D. near
near Canon City, Mo. - approach it closely. -

Sp. of *Ichneumon* from Mt. Ranier, Brown's 2703, Palmer 355, from Ft. Whipple, Arizona, Lyall's
from Cascade Mts, 1860, + from ^{the Rocky Mts.} Kottmancy, 1861, + var. 37 from near Donner Pass, appear
to be the same thing - varying in the degree of pubescence + in the leafiness of
the stem, + branching fasciculation - ~~identical~~ coming better to the *A. meridionalis*
of Ledebour. + *A. lychmidra*, Krib.

~~Ch.~~

XI.)

163

165. - *Arenaria congesta*, Nutt. (709. Fl. I. 174.)

a.) July 6, 1869. Uintah Mts., Utah. Divide above Duchesne River. 10,000 ft. 10 sp.

b.) " 30, " " " Bear river cañon, foothills 8,000 ft. 12 "

c.) Aug 24, " Wahsatch Mts., " Ridge above American Fork 6,000 ft. 5 "

166

169. - *A. Fendleri* - var. *subcongesta*
~~*congesta* - var. *subcongesta* - head few 2-5 flowers~~very loosely fasciated - sepals acuminate nearly equally in petals.
Perhaps distinct.

a.) July 20, 1868. - E. Humboldt Mts., Nev. - Ridge above Camp Ruby. 7,000 ft. 7 sp.

b.) " 27, " " " Peak above Ft. Ruby. 9,000 ft. 4 "

167

170. - *A. formosa*, Fisch. (U. Nevada, etc., Ledeb.)

Aug. 24, 1869. Wahsatch Mts., Utah. Ridge above American Fork. 6,000 ft. 5 sp.

165

171. - *A. Fendleri*, Gr. var. *B. glaberrima* (Pl. Ind. 13.) A slender, rather short leaved form.

a.) July 6, 1868. Toiyabe Mts., Nev. East foothills of Pass. 6,000 ft. 10 sp.

b.) May 27, 1869. Wahsatch Mts., Utah. City creek cañon 5,000 ft. 5 "

167

172. - *A. pungens*, Nutt. (709. Fl. I. 179.)

Sept. 15, 1867 - Star Peak

a.) June 8, 1868. W. Humboldt Mts., Nev. Foothills, mouth of Coyote cañon. 5,000 ft. 5 sp.

b.) July 9, " Diamond Valley, Nev. Foothills above Sulphur Sp. 6,000 ft. 3 "

c.) " 24, " E. Humboldt Mts. " Peaks above Camp Ruby 9,000 ft. 5 "

168

173. - *A. acutata*

Aug. 24, 1868. E. Humboldt Mts., Nev. Granite rocks, near Fremont's Pass. 6,500 ft. 10 sp.

169

174. - *A. serena*, L. (Hook. Fl. Bor. Am. I. 99. 709. Fl. I. 141.) Including *A. prospingua*, Rich., *A.**hinta*, Worn., + *A. umbella*, Hook.

Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear R. cañon. 10,000 ft. 8 sp.

170

170. - *A. serena*, L. (Hook. Fl. Bor. Am. I. 99. 709. Fl. I. 141.)

Fr. Norit. Fl. Susc. Mant. III. 31. — caulis caespitosus abbreviatus erectus, foliis
subulatis mucronatis glabris, persistentibus siccis stricis, apiculis 5-6. alis obtusis,
membranaceo-marginatis petala sixae quadrifida. Spengler, Linth. Armenia
? caespitosa, Vahl, Fl. Dan. t. 224g.

171

175. - *Arenaria arctica*, Steven. (Hook. Fl. Bor. Am. I. 100, t. 34. 709. Fl. I. 141.) Variable; probably including *A. biflora*, Wahl.

- a.) Aug. 29, 1868. E. Humb^d Mts. near Ridge above Lake. 10,500 ft. 5 sp.
- b.) Sept. 12, " Clover Mts. " Head of Bearings Cañon 10,000 ft. 2 "
- c.) Aug. 4, 1869. Uintah Mts, Utah. Lake, head of Bear R. cañon 10,000 ft. 3 "
- d.) " 10, " " " Peak west of " " 11,000 ft. 3 "
- e.) " 12, " " " Ridge east of " " 10,000 ft. 6 "

172

176. - *A. latriflora*, L. (Hook. Fl. Bor. Am. I. 102, t. 36. 709. Fl. I. 142.)

July 7, 1869. Uintah Mts., Utah. Provo cañon, shade bottom. 7,000 ft. 12 sp.

173

177. - *Sagina Linnaei*, Presl. (*S. decumbens*, 709. Fl. I. 177.)

- a.) July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon, fern gorge. 8,000 ft. 3 sp.
- b.) " 14, " " " " " stream bank, " " 8 "

174

178. - *S. miralis*, Fries. ?

Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear River cañon. 11,000 ft. 1 sp.

175

179. - *Spergularia media*, Presl. (Gr. Man. 95.) Erect, branches spreading, glandular-pubescent above, and smooth, wingless.

- a.) June 26, 1869. Parley's Park, Utah. Salt Lick. 6,000 ft. 20 sp.
- b.) July 21, " Same locality. 8 "

Portulacaceae.

176

180. - *Portulaca oleracea*, L. Introduced.

Sept. 1867. Unionville, Ariz. (W. W. Bailey.) 3 sp.

181. - *Talinum pygmaeum*, Gray. (Proc. Am. Ac. A. S. VII. 332.) With the habit of a *Silene*; stems prostrate, by the absence of under nodes. Claytonia; sepals persistent, entire or glandularly dentate; petals white or rose color, slightly united at base, unequal, 5 or 6; stamens 4-7; stigmas 3-4; seeds few to many.

- Aug. 29, 1868. E. Humb^d Mts., near Peaks above Overland Ranch. 10,000 ft. 14 sp.
- June 25, 1869. Parley's Park, Utah. Creek bank. 6,000 ft. 12 "
- July 6, " Uintah Mts., " Divide above Duchesne river. 9,000 ft. 1 "
- Aug. 4, " " " Head of Bear River cañon. 10,000 ft. 14 "

Distinguish *C. Virg.* if possible = the narrow leaved form, the broader
essile leaved one = *C. lanceolata*. of published = *C. Carolina?*

175
142. *Claytonia lanceolata*, Ph.

- a) June 25, 1868. Tobin Peak Range. ^{Mr.} Peak above Cumberland. 9,000 ft. 10 sp.
 b) July 20, " E. Humb. Mts. - Cañon above Camp Ruby 8,000 ft. 15 "
 c) " 24, " " " Divide " " 9,000 ft. 15 "
 d) Aug. 29, " " " Peaks above Overland Ranch 10,000 ft. 2 "
 e) May 17, 1869. Wahsatch Mts., Utah. Ridge near Salt Lake City 5,000 ft. 12 "
 f) June 25, " " " Ridge above Parley's Park. 7,500 ft. 1 "

179
143. - *C. Caroliniana*, Roby, var. *Neovalleis*. - Leaves ovate, petioles equaling the blade; flowers apparently axillary in the axils of the leaves - petals + sepals 5-6 long. Among rocks. - ~~W. Davidson~~

- a) Apr. 29, 1868. Washoe Mts., Nev. Peak south of Mt. Davidson. 7,000 ft. 15 sp.
 b) May 13, " Truckee Mts., Nev. Above Clark's Station 5,000 ft. 4 "

180
144. - *C. arctica*; Adams, var. *megarrhiza*, Gr. (Sill. Jour. ~~XXXIII~~. 406.) Flowers small.

Aug. 4, 1869. Uintah Mts., Utah. Divide at head of Bear R. cañon. 10,000 ft. 7 sp.

181
145. - *C. perforliata*, Torr. (Hook. Fl. Bor. Am. 2. 225. 709. Fl. I. 200.) - ~~var. in C. arctica~~

- a) Apr. 15-22, 1868. Foothills near Carson City, Nev. 5,000 ft. 20 sp.
 b) May 16, " Trinity Mts., Nev. near Eagle Crag. " " 1 "
 c) June 3, " W. Humb. Mts., Nev. East foot-hills. " " 5 "

182
146. - *C. Chamissonis*, Esch. & Led. (*C. aquatica*, Nutt. 708. Fl. I. 201.)

- a) May 9, 1868. Truckee meadow, alkaline - S. of Glendale 8 sp.
 b) June 24, " W. Tobin Range, Nev. Cumberland cañon, stream bank. 6,000 ft. 12 "
 c) " 30, " Battle Mt. Cañon, Nev. stream bank. 7,000 ft. 10 "
 d) " 24, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park. 6,500 ft. 10 "
 e) July 9, " Uintah Mts., " ^{Along Weber City.} ~~Head of Bear cañon~~, meadow. 6,000 ft. 6 "
 f) " 31, " " " Bear river cañon, meadow. 8,000 ft. 8 "

183
147. - *Spraguea umbellata*, Torr. (Pl. Frem. 4. 5. 1.)

- a) May 9, 1868. Steamboat springs, near Washoe City, Nev. 5,000 ft. 8 sp.
 b) Aug. 26, " E. Humb. Mts., Nev. Peaks above Overland Ranch. 10,000 ft. 11 "

XII.)

E. Americana Am. col^d by Zornig (72) on Lake Washoe

XIII.)

2 *Tillaea angustifolia*
Mitt.

144
144. - *Calyptridium*

Nov. sp.

- a.) May 11, 1868. Truckee Valley, Nev. Sandy sage brush plain near Glendale 35 ft.
b.) July 4, " Monitor Valley, Nev. Sandy plain 7 "

145

~~144~~ - *Lewisia rediviva*, Ph. (Hook. Fl. Bor. Am. I. 223. 709. Fl. I. 677.) Cotyledons accumbent.

- a.) May 9, 1868. Steamboat Springs, near Washoe City, Nev. 45 ft.
b.) " 19, " Trinity Mts., Nev. foothills above lake 57,500 ft. 3 "
c.) June 7th " E. Humboldt Mts., Nev. Ridges above Unionville " " 16 "
d.) " 26, " Mr. Tobin Range, Nev. Ridge near Cumberland. 5,000 ft. 2 "
e.) " 14, 1869. Pilot Rock point - South end of Salt Lake " " 1 "

Elatinaceae.

146

(Crypta)

146 - *Elatine tetrandra*. Nov. sp. Foliis lanceolatis acutis; floribus 4-meris. pedunculatis alternis
4-andris; capsulis 4-boularis; petalis calyce elongioribus; stipulis conspicuis.
Small, diffusely branching, proscumbent.

Sept. 30, 1868. Goose Creek Valley, Utah. muddy bank. 10 ft.

147

~~146~~ - *Bergia Texana*, Soubert. (Elatine Texana, Hook. 708. Fl. I. 674.)

Aug. 3, 1867. Carson River bottom, Nev. near Reed's station 8 ft.

Hypericaceae.

148

148 - *Hypericum Scouleri*, Hook. (Hook. Fl. Bor. Am. I. 111. 709. Fl. I. 160)

- a.) Sept. 5-11, 1869, W. Humboldt Mts., Nev. Wright's cañon. Stream bank. 7,000 ft. 7 ft.
b.) June 27, 1868. Tobin Peak range, Nev. Cumberland cañon. 6,000 ft. 2 "
c.) July 7, " Toiyabe Mts., Nev. East foothills, stream bank " 4 "
d.) " 10, " Diamond Springs, Nev. Spring bank " 3 "
e.) " 26-Sept. 2, " E. Humboldt Mts. Ruby valley, & cañons. 6,000 ft. 5 "
f.) " 3, 1869. Uintah Mts., Utah. Pack's cañon 7,000 ft. 3 "
g.) " 20, " Toiyabe Mts., Utah. Cañon above Peck's Park " " 1 "

8

3
x



189

188. *Hypericum multatum*, L. (749. 71. I. 164.)

Aug. 27, 1868. E. Humboldt Mts., Nev. Cañon above Orland Ranch. 9,000 ft. 1 sp.

Malvaceae.

190

189. *Sidalcea malvaeflora*, Gr. (*Sida malvaeflora*, Moq. Trans. 749. 71. I. 108. v.) The larger flowered form; petals 9" long by 5" in breadth, emarginate, slightly oblique; outer staminate plalanges considerably longer than the inner.

- a) Aug. 1867. W. Humboldt Mts., Nev. Wright's cañon. 1 sp.
- b) June 13, 1868. Dwyler Range, Nev. Donnelly's Pass. Meadow. 6,000 ft. 2 "
- c) July 7, " Toiyabeh Mts., Nev. Eastern foothills, stream bank. 2 "
- d) Sept. 9, " Humboldt Valley, Nev. Foot of Clow Mts., " 1 "
- June 7, 1869 Antelope Island, Salt Lake meadow 3 "
- e) June 26, 1869. Wahsatch Mts., Utah. Parley's Park 6,000 ft. 1 "

191

189. *S. malvaeflora*, Gr. with smaller flowers; petals 3-6" long, more oblique; inner staminal plalanges equal to or longer than the outer.

- a) July 20, 1867. Truckee valley, near Glendale. (W. W. Bailey.) 2 sp.
- b) June 24, 1868. Regan's Valley, Nev. Foothills of Mt. Tobin Range. 5 "
- c) July 17, " Ruby Valley, Nev. 2 "

192

189. *S. malvaeflora*, Gr. with sterile flowers; petals nearly aborted, + glandularly ciliate.

June 27, 1868. Mt. Tobin range. Cumberland Cañon. 6 sp.

2. 190

189. *S. malvaeflora*, Gr., var. *albiflora*.

June 7, 1869. Antelope Island, Salt Lake meadow 3 sp.

193

189. *S. candida*, Gr. (Pl. Fend. 24. Pac. R.R. Rep. II 119, t. 2.)

July 26, 1869. Wahsatch Mts., Utah. Fibro Creek cañon 6,000 ft. 5 sp.

194

189. *Malvastrum coccineum*, Gr. (*Sida coccinea*, DC. 749. 71. I. 235.)

May 17-21, 1869. Foothills near Salt Lake City. 6 sp.

June 3, " Antelope Island, Salt Lake, 1 "

Not met with west of Salt Lake.

195

200. - *Malvastrum coccineum*, var. *gryseovirens* or *angustifolium*. - 7.20.2
 approaches *impedalis* Torr., which is ~~probably~~ not distinct. Gray's specimens have the same var. of leaf section, but long hairs are mostly esmarces.
- a.) May 20, 1868. Foothills east of Humboldt Lake, Nev. 3 sp.
 b.) " 30, " Trinity Mts., Nev. Foothills near Orama 3 "
 c.) June 3, " W. Humb. Mts. Nev. Foothills 5 "
 d.) " 18, " " " Mouth of Coyote cañon 2 "
 e.) " 27, " Regan's Valley, Nev. 2 "
 f.) July 3, " Reese River Valley, ^{Nev.} Foothills near Austin 3 "
 g.) Sept. 23, " Holmes' Creek Valley, Nev. Foothills 3 "
 h.) Oct. 1, " Goose Creek Mts., Utah. near City of Rocks. 2 "

200

199

201. - *Sida hederacea*, Torr. (*Malva hederacea*, Dougl. ex. 1.49.71.1.22.) Varying in size of the flowers, length of the peduncles, & flatness of the lobes of the leaves.
- a.) Oct. 7, 1868. Blue Spring station, above Salt Lake Valley, prostrate. 3 sp.
 b.) June 20, 1869. Promontory Point, Salt Lake. Suberect. 5 "

198

202

197

202. - *Sphaeralcea emoryi*,

- b.) May 15, 1868. Truckee Mts., Nev. Foothills in the Pass. 5,000 ft. 2 sp.
 a.) July 26, 1867. near same locality. (W.W. Bailey.) 2 "
 c.) " 7, 1868. Smoky & Monitor Valleys. Foothills. 5 "
 d.) " 12 & 29, " Ruby Valley, & Foothills of E. Humb. Mts. 5 "

196

203. - *Malvastrum Michxtoanum*, Torr. ~~but, as is also true of all the various forms~~
~~is distinguished from *Sphaeralcea emoryi* only by the superiorly~~
~~uniformly rounded apex of the ovary~~

193,

203,

- a.) June 12 & 15, 1869. Stansbury Island, Salt Lake. 4 sp.
 [b.) " 20, " Promontory Point, " 2 "
 c.) " 29, " Parley's Park, Utah. Foothills. 3 "
 d.) July 26, " Lake Salt Mts., Utah. Silver Creek cañon 1 "
 e.) " 28, " Bear River Valley - near Evanston. 1 "

XV.

Including G. Fremontii in, 2000? *G. F.*

But 2 or 3 spec^s of G. Fremontii in Herb. G. (scraps from Herb. 2000, H.H. 49, & long. 50 v. 5
4. p. 100. 1000) which excepting the last have the leaves smaller, less deeply & less sharply
divided.

10

2
20

2
2

20
20

199

~~204~~ - *Sphaeralcea acrifolia*, Nutt. (749. 71. I. 228.)

- a) Aug. 6-19, 1868. E. Humboldt Mts., Nev. Streambanks. 6-7,000 ft. 15 sp.
 b) Sept. 21, " Wts. at head of Humboldt river. stream bank. 1 "
 c) June 24, 1869. Wahsatch Mts., Utah. Above Parley's Park. 1 "
 d) July 15, " " " Over Cottonwood divide 1 "

p 59

Linaceae.

201

205. - *Linum perenne*, L.

- a) Sept. 19, 1867. W. Humboldt Mts. Nev. Star Peak. 10,000 ft. 5 sp.
 b) " 20, " " " Star cañon 5,000 ft. 3 "
 c) June 10, 1868. " " Foot-hills near Unionville 5,000 ft. 6 "
 d) July 2, " Reese River Valley, ^{Nev.} below Crippen's 5,000 ft. 2 "
 e) " 27, " E. Humb. ^{Nev.} Mts. Peak above Ft. Ruby 7-10,000 ft. 2 "
 f) May 21, 1869. Ridge above Salt Lake City, Utah 5,000 ft. 1 "
 g) June 24, " Parley's Park, Utah 6,000 ft. 2 "

202

206. - L.

perenne glabrum, caulibus pluribus basi puberulo adscen-
dentibus, supra angulatis; foliis alternis linearibus obtusis; glandulis stipularibus nullis;
floribus paniculatis, flavis; pedicellis calyci longioribus; sepalis ovatis acutis margine
glandulosis; filamentis basi dilatatis; stylis stigmatibusque liberis; capsula globosa
cuspidata 10-12-lobis calyci sublongioribus. Petala 4" long, capsulae 1 1/2" in diam.

- a) July 4, 1869. Uintah Mts., Utah. Ridge above Pack's cañon. 8,000 ft. 6 sp.
 b) " 14, " Wahsatch Mts., " Ridge above Cottonwood Lake. 10,000 ft. 9 "
 c) Aug. 12, " Uintah Mts., Utah. Ridge above Bear R. cañon. 9,000 ft. 3 "

Geraniaceae.

203

207. - *Geranium Richardsonii*, F. & M. (*G. albiflorum*, Hook. - Fl. Bor. Am. I. 116. ^{749.} 71. I. 206.) Abundant

in mountain cañons. Flowers white, or more usually various shades of purple. Pubescence variable.

- a) June 8, 1868. W. Humb. Mts., Nev. Unionville cañon. 6,000 ft. 2 sp.
 b) " 25, " Mt. Tobin Range, Nev. Cumberland cañon " 4 "
 c) July 20+24, " E. Humb. Mts., Nev. Cañons above Camp Risby. 7,000 ft. 7 "
 d) Aug. 29, " " " Peaks above Orland Ranch. 8,000 ft. 1 "

2
2

2
2

2
2

20

2
2

2
2

- e.) May 21, 1869. Wahsatch Mts., Utah. Beacon ridge above Salt Lake City. 5,000 ft. 2 sp.
- f.) June 10, " Black Rock station, south end of Salt Lake 2 "
- g.) " 25, " Parley's Park, Utah - cañon 7,000 ft. 5 "
- h.) July 10, " Uintah Mts., Utah. Pack's cañon 8,000 ft. 5 "

204

204 - *Ceranium Carolinianum*, L. - Specimens (c) are few flowered, fruiting pedicels much elongated.

- a.) Sept. 10, 1867. W. Humb. Mts., Nev. Unionville cañon 2 sp.
- b.) June 4, 1868. Antelope Island, Salt Lake. Low cañon. 8 "

205

205 - *Erodium cicutarium*, L'Her. Abundant in Utah in some localities & affording good pasturage.

206

206 - *Erodium cicutarium*, L'Her. Abundant in Utah in some localities & affording good pasturage.

- a.) Oct. 1867. W. Humb. Mts., Nev. Unionville. (with Bailey.) 1 sp.
- b.) Dec. " Foot-hills west of Pyramid Lake. In bloom. -
- c.) Apr. 15 - May 9, 1868. Foot-hills of Washoe Mts., near Carson & Washoe city. 12 "
- d.) June 8, " Same locality as (a.) 4 "
- e.) " 11, 1869. Black Rock - south end of Salt Lake. 4 "

209

209 - *Floerkea proserpinacoides*, Willd. (749. 72. 210.) The most western locality recorded.

June 24, 1869. Wahsatch Mts., Utah. Parley's Park cañon. 6,000 ft. 18 sp.

208 - *Ptelea trifoliata* = Rutacea

Celastraceae.

209

209 - *Pachystima myrsinites*, Raf. (*Boreophila myrtifolia*, Nutt. 749. 71. 259.) Abundant in the Wahsatch & Uintah Mts.

- a.) Sept. 3, 1868. East extremity of Raft Run Mts., Utah. 6,000 ft. 6 sp.
- b.) May 17, 1869. Wahsatch Mts., Utah. City Creek cañon. 4 "
- c.) June 25, " " " Above Parley's Park. 3 "

Rhamnaceae.

210

210 - *Ceanothus velutinus*, Dougl. (Hook. Fl. Bor. Am. I. 125. t. 45. 749. 71. 265.) Leaves nearly glabrous beneath.

- a.) Sept. 10, 1867. W. Humb. Mts. - Couch Peak. 9,000 ft. 7 sp.
- b.) July 10, 1868. Diamond Mts., Nev. - Stag Pass 7,000 ft. 12 "
- c.) " 30, " E. Humb. Mts. - Peak above Sawmill. 8,000 ft. 2 "
- d.) June 29, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park 7,000 ft. 1 "

C. cordulatus, Kell., - Vid. Caly. 2. 124

11

Oct 2

11

2
2
2
2
2
2

211

211. - *Ceanothus foveolatus*, Nutt., var. *glabra* found only in the E. Humboldt Mts.

Nearly glabrous throughout, flowers white, in loose racemes, leaves somewhat entire,

- a) July 27, 1866. E. Humboldt Mts., Nev. Peak above Ft. Ruby. 8,000 ft. 4 sp.
 b) " 30, " " " Peaks above Sawmill. 8,000 ft. 6 "
 c) Aug. 12, " " " near same locality. 2 "

212

212. - *C. rigidus*, Nutt., var. *prostratus*, Nutt. Much branched, prostrate. ^{nearly the} *C. prostratus* which many of the leaf ^{the leaves} of *Benthiana* is apparently the same with ^{the leaves} *tridubata* at apex.

Seen only on the Washoe Mts. - under pines.

Dec. 4, 1867. Pearline Mt., Nev. 7,500 ft. 3 sp.

May 4, 1868. Sandy foot hill, head of Washoe Lake. 5,000 ft. 10 "

Sapindaceae

213

213. - *Acer grandidentatum*, Nutt. Frequent in the Wahsatch Mts. & sometimes though rarely attaining 1' in diam. + 30-40' in height. The leaf is like that of *A. macrophyllum*, Ph. as figured in Hook. Fl. Bor. etc., but not exceeding 3-4' in diameter. Flowers loosely corymbose. Fruit broadly winged.

May 17, 1869. City creek cañon. In flower. 6 sp.

214

214. - *A. glabrum*, Torr. var. *tripartitum*. Rare in the E. Humboldt Mts., more frequent in the Wahsatch. Never more than a shrub; leaves ternate or merely 3-lobed on the same branch.

- a) July 20 + 29, 1868. E. Humboldt Mts. - Cañons, in shade of rocks. 6-7,000 ft. 11 sp.
 + Aug. 124.
 b) June 28, 1869. Wahsatch Mts., Utah. Peaks above Parley's Park 7-8,000 ft. 5 "
 c) July 14, " " " Above Cottonwood Lake 10,000 ft. 6 "
 d) Aug. 3 " " " Ridge above Bear River cañon, 8,000 ft. 1 "
 e) " 24 " Wahsatch Mts. - American Fork cañon. 5,000 ft. 7 "

215

215. - *Negundo aceroides*, Moench. - Common in the Wahsatch Mts., but not ^{seen} west. Leaves usually 3-foliate, coarsely serrate.

May 19, 1869. Wahsatch Mts., City creek cañon. 4 sp.

Aug. 27, " " American Fork cañon 2 "

2
2

2
2

2
2

2
2

23
23

Exactly

Anacardiaceae.

- ²
218. - *Rhus glabra*, L. - On the foot hills of the Wasatch Mts., in Salt Lake valley.
July 13, 1869. - Mouth of Cottonwood cañon. 7 sp.
- ²¹⁷
219. - *R. Toxicodendron*, L. - Cañons of the Wasatch Mts. - Erect; ~~leaves~~ ^{flowers} white.
a.) May 18 ~~approx~~, 1869. City Creek cañon. 2 sp.
b.) June 3, " Antelope Island, Salt Lake. 1 "
- ²¹⁶
220. - *R. aromatica*, Ait.; var *trilobata*, Gr. (*R. trilobata*, Nutt. H. 749. 71. I. 219.) Abundant
on the foothills + in the cañons of the Wasatch + in the adjacent valleys.
a.) Oct. 3, 1868. - North foothills of Kap. River Mts., Utah. Clear Creek station. 10 sp.
b.) " 7, " East foothills of Promontory Range, Utah. 2 "
c.) May 17, 1869. Foothills near Salt Lake City 11 "
d.) July 12, " Utah Valley, near Battle Creek. 3 "

Leguminosae.

- ²¹⁹
~~221~~ - *Thermopsis fabacea*, DC. - var. *montana*, Gr. (*T. montana*, Nutt. - 749. 71. I. 300.) ~~This seems to~~
~~be both the T. montana, Nutt. and T. macrophylla, Torr.~~ On stream banks, but not
frequent. Rarely more than a single plant in one locality. Stems numerous
from the root, in a dense clump.
a.) June 8, 1868. W. Humb. Mts., Nev. Unionville. 7 sp.
b.) " 26, " Mt. Tobin Range, near Argus Hills, Nev. 2 "
c.) July 11, " Ruby Valley, Nev. 2 "
d.) Aug. 25, " E. Humb. Mts. - Cañon above Government Ranch. 3 "
e.) June 23, 1869. Parley's Park. Utah. 1 "
- ²²⁰
~~222~~ - *Lupinus pusillus*, Ph. (749. 71. I. 374.) Leaflets 4-6, usually 5; the dense
silky pubescence upon their under surface, straight + appressed; seeds obovate,
flattened.
a.) May 11, 1868. Truckee Valley, Nev. Dry foothills near Glendale. 1 sp.
b.) " 21, " Humboldt Valley, Nev. Sand Dunes, Cooper's Ferry. 1 "
~~c.) July 10, 1869. Hobo Valley, Utah. - Dry roadside. 7 "~~
c.) June 15, 1868. Unionville Valley, Nev. Mouth of Dunham cañon 1 "

21. ^{ma} (S. C. 5) appears very distinct, - slender & much
 branched, apparently low (1' or as high) - racemes ^{terminal} short, (2-3'), longer in
 fruit, lower & flowers scattered - bracts short - calyx broad campan' &
 sepals oblongish. leaflets 7-9, longer about equal to petioles, 1'±, oblanceolate, obtuse
 submucronate. capsule 4" x 11", 3-5-seeded - ^{short} pubescent - grayish green.

13

XI. Nothing like in or all in a 10' tree.

Q

Well marked - tall, erect, deep green & nearly glabrous - leaflets expanded - entire
 petioles short, radial elongated - raceme elongated, slender.

May be several species of what occurs in some of the forms between "latipetala" & "peruviana".
 at any rate appear - petioles has pubescence, & a red purple. The original peruviana leaf has
 around 1" long, in a short raceme - 11' plant - 7 months same "S. C. 5" is branched, petioles
 & leaflets pubescent. Gray's doubtful species are Abundant (S. C. 5) (S. C. 5) (S. C. 5) - equals from
 the same place, seems Abundant. If they are not peruviana, but probably a new species -
 appears to be a & branches, with Abundant (S. C. 5) (S. C. 5) (S. C. 5) racemes, but

221
 223. - *Lupinus* viscidus, var.? Upper lip of calyx nearly obsolete, succulentaceous, stout wip
 white, or somewhat 2-2-toothed and occasionally with a small succulent tooth at its junction with the
 upper lip. - ^{apparently} *Lupinus* ^{more or less} *sterilis* claws of keel adhere to the staminal tube.

- a) May 13-30, 1869. Humboldt Valley, Nev. - Foot hills from the Truck + edge of the desert to Oream. 8 sp.
 b) June 29, " W. Humboldt Mts., Nev. High foot hills & middle cañons. 6-8,000 ft. 5 "
 c) " 12, " Simpson Range, Nev. Dry sandy ridge. 6,000 ft. 1 "
 d) July 26, " E. Humboldt Mts. - Foot hills of Ruby Valley. 6,000 ft. 1 "
 e) June 30/1869. Antelope Island, Salt Lake 2 "
 f) " 15, " Carrington Island, Salt Lake 1 "

222
 224. - *L.* with abnormal racemes of flowers in addition to the
 ordinary ones; peduncles elongated above the leaves, florets reduced in all their
 parts, scattered, & usually sterile.

June 29, 1869. Foot hills near Summit Spring, Nev. - W. of Battle Mt. 8 sp.

223
 225. - *L. uncialis*, nov. sp. - *Annua* *ramis* *uncialis* *villosus* *diffuse* *ramosus* *foliosus*;
 floribus ^{hairs} *solitariis* *axillaribus*, *pedunculis* *foliis* *aequantibus* *vel* *bracchiis*; *leguminibus*
 2-spermiis; *foliis* 5 *oblongo-spatulatis* *obtusis*. - Calyx deeply bilabiate, with a short oval
 bract; upper lip deeply 2-cleft, lower lower, 3-toothed, middle tooth small. Vexillum broader,
 shorter than the wings & keel, sides scarcely or all reflexed; wings free or but slightly united at
 top, keel rather obscure. Stipules short, adnate, obtuse, often wanting. Flowers absolutely
 with keel tipped with purple, 2 1/2" long; legumes 4-5" by 2". Leaves on 1/4-1/2" petioles, leaflets 2" long.

- a) May 18, 1868. Foot hills of the Truckee, Nev., in the Pass. 10 sp.
 b) June 12, " Simpson Range, Nev. Dry sandy ridge 5 "

224
 226. - *L. parviflorus*, Nutt. - (749. Fl. I. 3) 5.) On shaded mountain side throughout
 the Wahsatch.

- a) June 28, 1869. Wahsatch Mts., Utah. Above Parley's Park. 8,000 ft. 6 sp.
 b) July 10, " " " Cañon of North fork of Pecos Riv. 7,000 ft. 1 "
 c) " 14, " " " Cottonwood cañon 8,000 ft. 1 "
 d) " 15, " " " Over Cottonwood Divide. 3 1/2 h. 8,000 ft. 1 "
 e) Aug. 12, " Uintah Mts., Utah. Ridge above Bear River Cañon. 9,000 ft. 2 "

227. - *L. excrucians*, var. 2 high. - *C. excrucians* ..

Work for the shrubby glabrous style + narrow reddish pubescence on upper the leaves
would be *L. decumbens*, var. *epiphylla*

225 =

L. decumbens, var. *epiphylla* - near rip' city

This is near *L. micrantha*, Gr. which has shorter calyx lobes, etc. It is what is called in
Herb. No. ~~232~~ *L. decumbens*, var. (232 And.) + is 84 300, which Gr. called *micrantha*.
In appearance *L. decumbens* is an epiphylla but is more silvery, silky + smaller flowered. If
231 is *L. decumbens* - this cannot be a variety - but as far as the silvery part is a
new species - or perhaps the name for *L. decumbens* var. - or possibly, a very silvery
form of *L. flexuosus*

L. decumbens in the below, has narrow pointed leaves, with rather dense racemes of
small flowers, reddish pink, the inflorescence \leftarrow concolorous corolla.

L. leucophis, var.?

227. - *Lupinus flexuosus*, Lindl. (748. 71. I. 377.) Variable. The most common species. Native name = Chi-si-wan-ope - not eaten. Flowers blue or white.

- a) Apr. 23, 1868. Foothills near Canon City, Nev. 15 ft.
 b) May 27, " " of Trinity Mts., near Orona, Nev. 4 "
 c) June 3, '68 " of W. Humboldt Mts., near Unionville 16 "
~~b 204~~ d) " 12, " Dunfer Range, foothills of Pleasant Valley 1 "
 225. e) " 23, " " " of Grass Valley. 2 }
 f) " 24, " Mt. Tobin Range - " of Regan's Valley 1 }
~~b 204~~ g) " " " Regan's Valley 1 "
 exactly opposite - h) July 20, " E. Humboldt Mts. Nev. Ridge above Camp Ruby. 7,500 ft. 6 "
 i) " 28, & Aug. 1 " Ruby Valley 6,000 ft. 3 "
 j) Aug. 28, " E. Humboldt Mts. - Peaks above Orland Ranch. 9,000 ft. 2 "
 250 k) May 17 & 29, 1869. Wahsatch Mts. Utah. Foothills near Salt Lake City 4 "

228. - *L. ~~251~~ ~~251~~*

Lupinus leucopsis, Ag.

June 3, 1869, ~~Wahsatch Mts. Utah~~ Salt Lake

July

July 10, 1869. - Wahsatch Mts, Utah. Provo Cañon. Dry foothill. 65 ft.
 " " " " " limestone ridge 2 "

229. - *L. ~~251~~ ~~251~~* = *L. ~~251~~ ~~251~~*, near Empire City. Spikes should be greatly increased in the leaves and branches inside of the species.

227 c. f. -

- a) July 31, 1867. - Washoe Mts, Nev. East of Mt. Bond of Truckee. 7,000 ft. 25 ft.
 b) Sept. 8, " W. Humboldt Mts. Wright's cañon. (W. Bailey) " " 3 "

226

230. - *L. ~~251~~ ~~251~~* - *L. ~~251~~ ~~251~~* - Exactly, which Gray in not, says is *argenteus*, Ph. ~~251~~ ~~251~~ Douglon's name is far more appropriate.

a) Sept. 18, 1868. - Humboldt Valley, Nev. Foothills of Clover Mts. 25 ft.

233

b) May 17 & 24, 1869. - ~~Wahsatch Mts. Utah~~ near East 4 "

~~231~~ - *L. ~~251~~ ~~251~~* - *L. ~~251~~ ~~251~~* - no authentic spec. in Herb. Griseb. the only one is in Herb. Dougl. - accord. with description, it is not *leucopsis*?

a) June 18, 1868. W. Humboldt Mts. - Mouth of Bloody cañon. 15 ft.

b) June 3, 1869. Antelope Island. Salt Lake 7 "

229

c) July 10, " Wahsatch Mts. - Limestone ridge in Provo cañon 2 "

37 ch

... The root upon the ... stems
his ... us dark brown hairy - H.H. light. - ... is
also ... in ... 2-4 ...
shaggy ... the stem.

2700m. (near ... + 6 1/2 ... (Kobanik Valley) ...
... near ...
... pedicels, the stems ...
... & ... linear lanceolate ...
... surfaces silky

M. paniculata - W. ... - ...

J. Kingii

T. ...

231

- ~~231~~ - *Lupinus carpioides*, Nutt. - (749. 379.) Low, 6-10'; hairs upon long petioles, squalling
 or extending the stems; bracts long, squalling the flowers, uppermost ones often flowerless.
 July 10, " Heber Valley, Utah - Dry roadside. 7"
 July 20, 1869. Parley's Park, Utah. Dry meadow. 7 1/2"

232

- ~~232~~ - *L. leucophyllus*, Lindl.
 July 9, 1869. Heber Valley, Utah. Meadow at head of Pecos cañon. 6 sp.

230

- ~~234~~ - *L. sericeus*, Ph. - The first spec. are more strict than 227 + his little pit -
 at base. They are placed here with incitation.
 (June 12, 1868. Smelter Range, foothills of Pecos cañon valley 1 sp.
 " 24 " Regan Valley - 1 "
 June 26, 1869. Wahatch Mts., Utah. - Foothills of Parley's Park. 2 sp.

236

- 235 - *Medicago sativa*, L. Doubtless introduced.
 Oct. 10, 1867. Mt. Humboldt Mts., Ariz. Unionville cañon. 1 sp.

237

- 236 - *Melilotus alba*, Lam. - (M. leucantha, Koch. 749. 71. I. 321.) Introduced.
 May 21, 1869. Foothills near Salt Lake City. - Stream bank. 1 sp.

237

- 237 - *Trifolium longipes*, Nutt. - (749. 71. I. 314.) Flowers often deflexed.
 a.) June 27, 1868. Mt. Tobin Range, near Cumberland - Stream bank. 6,000 ft. 12 sp.
 b.) " 23, 1869. Parley's Park, Utah. - Stream bank. " " 6 "
 c.) " 24, " Cañon above Parley's Park. - A variety. 1 "
 d.) July 31, " Uintah Mts., Utah. Bear River cañon - meadow. 8,000 ft. 4 "
 e.) Aug. 2, " " " Ridge above same cañon 9,000 ft. 1 "

238

- 238 - *T. nanum*, Torr. - (749. 71. I. 314.)
 Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear River cañon. 11,000 ft. 9 sp.

239

- 239 - *T. dasyphyllum*, Torr. - (749. 71. I. 315.)
 a.) Aug. 3, 1869. Uintah Mts. - Same locality as the last. 11,000 ft. 6 sp.
 b.) " 12, " " " Ridge above same cañon. 10,000 ft. 2 "

240

- 240 - *T. gymnocarpum*, Nutt. - a rediscovery
 Legume oblong, the ventral suture corr. 1869

June 24 + 26, 1869. Wahatch Mts., Utah. - Foothills, Parley's Park. - 9 sp.

~~It is~~ *H. andinum*, Nutt. - 709, 314

H. obtusidatum, Nutt., is a large pubescent variety,

H. subpinnata, W. Wood & Strickh - small, erect, 2-3' high.

241. - *Trifolium Andersonii*, Gr. ? (Proc. Am. Ac. & 45. 51. 522.) ~~Her. Rep.~~

July 29, 1869. - Medicine Mts. Hills, Utah. Cedar Peak above Evanston. 7,000 ft. 10 sp.

242. - *T. Parryi*, Gr. (Sill. Jour. XXXIII. 409.)

Aug. 4, 1869. - Uintah Mts. - Bear River Cañon, shade of woods - 8,500 ft. 12 sp.

243. - *T. microcephalum*, Ph. - (749. 71. I. 317.)

June 26, 1868. - Tobin Peak Range, Cumberland cañon. - stream bank. 6,000 ft. 11 sp.

244. - *T. variegatum*, Nutt. - (749. 71. I. 317.)

a) July 26, 1867. - Truckee meadow, at the Big Bend 10 sp.

b) June 24 & 27, 1868. - Mt. Tobin Range, - stream banks near Cumberland, 5 "

c) Aug. 25, " Ruby Valley, meadow. 7 "

245. - *T. fimbriatum*, Lindl. - (749. 71. I. 317.) Pale & teeth entire. Leaflets $\frac{1}{2}$ -1'

in length, obovate to linear lanceolate.

a) July 15, 1867. Truckee bottom, at Glendale, Nev. (W. W. Bailey.) 7 sp.

b) " 6, 1868. Toiyabe Mts. - Nev. Cañon east of Austin. 6,000 ft. 3 "

c) " 28, " Ruby Valley, Nev. " 7 "

246. - *T. cyathiferum*, Lindl. - (749. 71. I. 320.)

a) July 27, 1867. - Truckee meadow, Nev. at the Big Bend. 15 sp.

b) June 27, 1868. - Mt. Tobin Range, Nev. Cumberland cañon. 6,000 ft. 5 "

c) July 10, " Huntington Valley, Nev. East foothills - stream bank. 3 "

248

247. - *Hosackia Purshiana*, Benth.

a) July 27, 1867. - Truckee meadow, Nev. at the Big Bend. Sandy river banks. 10 sp.

b) Aug. 5 " Same locality. (W. W. Bailey.) 6 "

249

~~248~~ - *Psoralea lanceolata*, Ph. (749. 71. I. 299.)

June 13, 1868. - Simpson Range, Nev. East foothills, in Grass Valley. 3 sp.

" 4, 1869. Antelope Island, Salt Lake 3 "

" 21, " Salt Lake valley, roadside near Farmington 6 "

XVII.

larger & finer spec^s than any in the B.C.

253^a = *u. adytopis* =

~~cf.~~ The var. *frankii* ~~is~~ ^{seems to be} ~~very~~ ^{very} rare

~~cf.~~

Leaves occasionally subpubescent. — A more finely pubescent form of *u. adytopis* as Coulter's, Beattie, (*u. adytopis* - *u. frankii*, Gr.) — which being the older name takes precedence — so that this may be var. *frankii*.

252 & 253 are doubtless one. The flowers of *u. adytopis* (*u. frankii* (*u. frankii*)) and *u. adytopis* (Willd.) + *u. adytopis* (*u. frankii*, Gr.) are identically the same — & allow in a moderate degree of variation in the density of the raceme, general pubescence, length & flexibility of the stem, & size & arrangement of the pedicels, they may all be easily embraced under one species. — *u. adytopis* (*u. frankii*, Gr.) is the same as u. adytopis — Cf. flower of *u. adytopis*

250
249. - "Dalea polydenia, Torr. MSS."

July 26, 1867. - Border of Truckee Desert, near the Big Bend. (W.W. Bailey.)

251

250. - Close to Dalea spinosa, differing in longer calyx lobes & pinnate leaves - otherwise not closely compared.

Aug. 11, 1867. - Hot Spring Mts., Nev. - Sand ridge of high cañon 5,000 ft.

251. Atragalus diphyeus, Gr. (Pl. Fensl. 34.) Variable in the size & acuminations of the legumes, which are often mottled, & in the density of the racemes. Stems often 18' long, recumbent or suberect. Occasionally with acute hairs.

252

252. Atragalus diphyeus, Gr. (Pl. Fensl. 34.)
- a.) May 15, 1868. Trinity Mts., Nev. Sage plain at South extremity 15 ft.
- b.) June 18, " W. Humboldt Mts. - east base, near Unionville 3 "
- c.) July 6, " Toiyabe Mts., Nev. Cañon above Austin. 6000 ft. 4 "
- d.) " 20, " E. Humboldt Mts. Cañon above Camp Ruby 7-8,000 ft. 12 "
- e.) " 27, " " " Divide above Ft. Ruby, 8,000 ft. 2 "

252. - A. lentiginosus, Dougl. (Hook. Fl. Bor. Am. I. 151.) Legumes nearly globose, with short acuminations.

- a.) May 12 & 13, 1868. Foothills of Truckee Pass, Nev. 5,000 ft. 4 ft.
- b.) June 8, " W. Humboldt Mts., Nev. Cañon above Unionville. 8000 ft. 1 "

253. - A. fremontii, Gr. (Bot. Whiff. Exp. IV. 80.) Variable in the size & acuminations of the legume, which is sometimes mottled. In Bailey's specimens the flowers are unusually large. Leaflets 7-10 pairs. Stem usually more or less flexuous. Confined to the low dry valleys.

- a.) July 26, 1867. Truckee Valley - edge of the Desert. (W.W. Bailey.) 15 ft.
- b.) Aug. 4, " Carson Desert, near Reed's Station 1 "
- c.) Sept. 27, " Unionville Valley - alkaline flat 6 "
- d.) May 30, 1868. Humboldt Valley, Nev. near Orona 7 "
- e.) June 12, " Pleasant Valley, Nev. - East of Simpson Range. 1 "
- f.) " 23, " Grass Valley, " " " near Hot Springs 2 "
- g.) July 2, " Rose River Valley, Nev. near mouth. 1 "

253

~~257~~
254. - *Astragalus Andersonii*, Gr. - (Proc. Am. Acad. S. & S. VI, 524.)

260 *Californica*, var. May 9, 1868. - Washoe Mts., Nev. - Rocky foothill below Washoe City. 2 sp.

~~255~~ - *A. Mortonii*, Nutt. - (*A. spicatus*, Nutt. 749. 71. I. 336.)

a) July 16, 1867. - Truckee Valley, near Glendale, Nev. (W. W. Bailey.) 3 sp.

b) " 6, 1868. - Toiyabe Mts., Nev. - Cañon above Austin, Stream bank. ^{7,000 ft.} 2 "

c) " 24, " Ruby Valley, Nev. - Creek bank. 6,000 ft 2 "

d) Aug. 6, " E. Humboldt Mts., Nev. - Cañon on West side. West. 8,000 ft. 4 "

e) " 25, " " " Cañon above Government Ranch, " 6,500 ft. 4 "

259

[f) July 10, 1869. - Wahsatch Mts., Utah. Provo Cañon - slide 2 "

g) " 24, " Bear River Valley, Utah. Near Evanston 3 "

261

~~256~~ - *A. hypoglottis*, Gr. - (*A. goniatum*, Nutt. 749. 71. I. 330.) 6' - 2" high.

a) Aug. 6, 1868. - E. Humboldt Mts., Nev. Stream bank in cañon on W. side. 8,000 ft. 17 "

b) Sept. 22, " Cañon above Humboldt Pass, Nev. stream bank. 6,000 ft. 5 "

c) June 23, 1869. Parley's Park, Utah. " " " 6 "

d) July 3, " Winter Mts., " Silver-creek cañon " 2 "

e) " 9, " " " Cañon above Kamas Prairie 7,000 ft 2 "

f) " 26, " Wahsatch Mts., Silver-creek cañon 6,000 ft 4 "

262

257. - *A. Nuttallianus*, Gr. - Legumes with scattered hairs.

June 12, 1869. - Stansbury Island; Salt Lake. 7 sp.

263

~~258~~ - *A. ...* ...

264. *A. abn.* June 29, 1868. Foothills near Summit-Springs, W. of Battle Mt. 3 sp.

~~259~~ - *A. Richardsonii*, Gr. - *modicripetio*.

265 [a) May 11, 1868. Rocky foothills near Truckee Pass, Nev. 3 sp.]

A. ... b) June 13, " Snyler Range, Nev. Ridge near Donnelly Pass 6,000 ft. 3 "

c) " 23, " " " near Spalding's Pass 3 "

d) " 25, " Mt. Tobin Range, " Divide above Cumberland 7,000 ft. 3 "

e) July 6, " Toiyabe Range, " Divide above Austin 6,000 ft. 1 "

XXI

The same as Bourgeois's *Praca* (2) - made in the Gray aff. *a. alpinum*

XXII

Close next to *A. Beckwithii*

XXIII

Woods is the same & he had called it calycosa, but seems to
hesitate about making a new species of it

Pods run into those of *Storkianus*, with which it
is most nearly allied

266

260. *Astragalus aboriginum*, Rich. (Placa aboriginum, Hook. - 78. Fl. I. 346.)

Aug. 29, 1868. E. Humb. Mts., Mr. Peak above Overland Ranch. 11,000 ft. 6 sp.

267

261. A.

for very near *aboriginum* with much var. *aboriginum*.

It is - May as well call it *Rab.* var. *occidentalis*. It has not
not the peculiar long stippled cyathium of *aboriginum* + *glabrescens*, + *aboriginum* has much
longer + narrower leaves, etc.

Aug 28 + 29, 1868. - E. Humb. Mts., Mr. Peaks above Overland Ranch. 10,000 ft. 10 sp.

268

262. *A. iodanthus* Nov sp.

near *aboriginum*.

a) Apr. 23 + 29, 1868. Washoe Mts. - Mountain side north of Carson. 6,000 ft. 4 sp.

b) May 14 + 16, " Trinity Mts., Mr. Southern foot hills, 4,500-5,000 ft. 2 "

c) " 27 + 30, " " " Foot hills west of Ormana 5-6,000 ft. 5 "

d) June 7 + 10, " E. Humb. Mts., " near Unionville. 2 "

e) " 14, " " " " 5 "

269. A.

256

Nov sp.

A form *Astragalus* + should name next to 253^a.

Probably nearest to *aboriginum*

a) June 14, 1868. W. Humb. Mts., Mr. Divide above Moody canon. 8,000 ft. 5 sp.

b) July 24, " E. Humb. Mts., Mr. Divide above Camp Ruby. - 8,000 ft. 10 "

c) " 25, " " " Peak above Ft. Ruby. 9,000 ft. 2 "

d) " 31, " " " Peak above Sawmill 10,000 ft. 15 "

e) Sept. 10, " Clover Mts., Mr. Highest Peak 11,000 ft. 3 "

f) May 13, 1869. Plains east of Cheyenne - Salt flat form 1 "

270. *A. Passyi*, Gr. - with 274
(see form. XXXIII. number 10.)

Less hairy + imperfectly sulcate-ventrally.

269. *A. iodanthus*, var.

a) May 17, 1869. Foot hills near Salt Lake City 4 sp.

b) June 3, " Antelope Island, Salt Lake 8 "

... ..

It is about St. Shastiana with my own, pubescence & my hairy pod.

14, 7, 19, 7 pp. - 126 H + H, 128 Vasey

~~PK~~

255

~~255~~ *Astragalus malacus*, Gr. - (Proc. Am. Acad. A. S. VII. 336.)

- a.) Apr. 23, 1866. - Foothills near Carson City, Nev. 5 sp.
 b.) May 11, " - Foothills of Truckee Valley, near Glendale. 4 "
 c.) " 14, " - Trinity Mts., Nev. Foothills above Humb. Lake 2 "
 d.) " 27 & 29, " " " Cañon west of Orama 5 "

272

~~266~~ *A. orthotropis* Hook. & G. - Gray camp - new sp. - distinguished by hairy pod & long oblong nearly straight keel.

- a.) May 16, 1866. - Trinity Mts., Nev. Cañon west of Humb. Lake 5,000 ft. 2 sp.
 b.) " 20, " W. Humb. Mts. - Cañon above Cooper's Ferry 6,000 ft. 2 "
 c.) June 10 & 14, " " " Foothills near Unionville. 2 "
 d.) " 29, " Range west of Battle Mts near Summit Spring. 2 "
 e.) Aug. 1, " E. Humb. Mts. - Foothills in Ruby Valley. 1 "

273

~~267~~ *A. Purshii*, Dougl. (Bot. Fl. I. 336.)

- a.) Apr. 30 & 29, 1866. Washoe Mts., Nev. Foothills near Carson 14 sp.
 b.) May 16-27, " Trinity Mts. Nev. " 12 "
 c.) June 3, " Humb. Mts., Nev. Foothills below Unionville 2 "
 d.) " 24, " Mt. Robin Range, Nev. " near Beardman's Pass. 1 "
 e.) July 20, " E. Humboldt Mts., Nev. Cañon above Camp Ruby - 7,000 ft. 1 "

274

~~268~~ *A. Utahensis*, G. & G. - (Bot. of R. R. Rep. II. 120.)

- a.) May 9, 1866. - Washoe Mts., Nev. Foothills near Steamboat Springs. 3 sp.
 b.) Aug. 19, " E. Humb. Mts., Nev. Foothills near Fremont Pass. 3 "
 d.) June 3, 1869. Antelope Island, Salt Lake 2 "
 e.) " 30, " Wasatch Mts., Utah. Foothills of Parley's Park. 1 "
 c.) May 17, " " " " near Salt Lake City 4 "
 f.) July 24, " " " Peak above Parley's Park 8,000 ft. 5 "

275

~~269~~ *A. Egeyri*, Gr. - (Proc. Am. Acad. A. S. VI. 214.)

- a.) May 14, 1866. Trinity Mts., Nev. Southern foothills. 3 sp.
 b.) " 21, " Humboldt Valley, Nev. Sand dunes at Cooper's Ferry. 4 "

~~XX~~

~~XX~~

Same more or less, and ... smaller than ... but well dis-
tinguished by the rounded apex & tapering base of the ...
filiculus, with which he had placed Anderson's 273, from "Humboldt's ..."

~~XXI~~

Not complete

~~XXI~~

11

~~XX~~

~~XXVI~~

Similar to ... spec^s

270. - *Astragalus platytropis*, Gr. (Proc. Am. Acad. A.S. VI. 526.)

a) July 30, 1866. E. Humboldt Mts., Nev. Peak above sawmill 11,000 ft. 6 sp.

b) Aug. 14, " Same locality. " 3 "

271. - *A. Hookerianus*, Gr. (Phaca, 709. 77. I. 692.)

Sept. 19, 1867. Star Peak, Nev. In fruit. 10,000 ft. 6 sp.

Differs from Douglas' original specimen in Herb. Torrey only in its broader, nearly orbicular leaves (1-3" long) in the sheath & blunter stipules which are sheathing below, & in the shorter calyx tube & bracts. Legume 1" long.

272. - *A. oophorus* var. - *A. curvipes*.

to 270 [a] June 29, 1866. Ridge near Summit Spring, Nev. W. of Battle Mt. 4 sp.

b) July 20, " Shoshone Range, Nev. Reese River Pass. 6 "

273. - *A. jeffersonii* var. - *A. thurberi*.

270 July 29, 1869. Bear River Valley, Utah. Foot hills near Evanston. 15 sp.

274. - *A. Beckwithii*, Gr. (Bot. Pac. R.R. Rep. II. 120, t. 3.)

June 29, 1866. Ridge near Summit Spring, Nev. W. of Battle Mt. 4 "

July 28, 1866. Ruby Valley, Nev. 15 sp.

June 3, 1869. Ariz. - Gila Mts. 2 "

275. - *A. nevadensis* var. - *A. nevadensis*, but distinguished by the larger

erect pedicel, blue flowers, lower & fewer glaucous racemes, rachis of leaves longer but leaflets 2-3 shorter.

a) May 20, 1866. W. Humboldt Mts. Foot hills east of Cooper's Ferry 8 sp.

b) June 14, " " " Coyote creek, mouth of canon (7-10 pairs) 2 "

276. - *A. Chamalece*, Gr. leaflets more numerous than in Dr. Hooker's spec. in Herb. Gr. - Doubtless Hooker's plant.

a) July 29, 1866. Ruby Valley, Nev. Dry meadow 3 sp.

c) " 29, 1869. Wahatch Mts., Utah. Divide at head of Echo canon 7,000 ft. 1 "

d) " 30, " Near River Valley, Utah. Foot hills near Evanston. 4 "

b) June 24, " Parley's Park, Utah - Foot hills north. 12 "

Q. In same, a simple Syall species
in the same with but 2 pairs - which are smaller, rougher and rounder, & being the dorsal
leaves - leaves smaller (3") - correct the description.

Acyrthos (27) belongs in same section.

ff

XXIII

ff

XXIII

2
27
28
27
2
2
2
2
2
2

241

277. - *Astragalus spiroscarpus*, Gr. ? (Proc. Am. Acad. A. & S. VI. 225.)

- a.) May 2, 1868. Trinity Mts., Nev. Head of Willow canon. (w. of Ormsby) 3 sp.
- b.) June 11 & 12, " Dungen Range, Nev. Foothills below Granite Peak. 8 "
- c.) July 7, " Toiyabe Range, East foothills, beyond Austin. 2 "

242

278. - *A. filipes*, Torr. (Proc. Am. Acad. A. & S. VI. 226.)

- a.) June 13, 1868. Dungen Range, Nev. Near Spalding's Pass. 7 sp.
- b.) July 6, " Toiyabe Range. Ridge above Austin. 3 "

243

279. - *A. ocreatus* nov. sp. *A. tenuiflorus* var. *occipitalis* - which however agrees with *A. Palmeri*, to which it is nearest - flowers very much larger, stipes etc. -

- a.) May 14, 1868. Trinity Mts., Nev. Foothills above Humboldt Lake 2 sp.
- b.) " " " " " " " " " " " " 3 "

244

280. - *A. multiflorus*, Gr. (*Homalobus multiflorus*, Nutt., 71. I. 351.)

- a.) July 24, 1868. E. Humboldt Mts., Nev. Peak above Camp Riley 9,000 ft. 2 sp.
- b.) " 30, " " " " Peak above Sawmill 10,000 ft. 5 "
- c.) Aug. 18, " " " " " " " " " " 8 "
- d.) July 29, 1869. Bear River Valley, Utah. Foothills near Evanston. 6,000 ft. 8 "

246. - *A. campestris*, Gr. ?(*Homalobus tenuiflorus*, Nutt., 71. I. 351.)

- a.) July 6, 1869. Uintah Mts., Utah. Provo river canon, foot-hills. 8,000 ft. 18 sp.
- b.) " 31, " " " " Bear River canon, dry meadow. " " 5 "
- c.) Aug. 11 & 12, " " " " " " ridge or wood, " " 4 "

247

282. - *A. junceus*, Gr.(*Homalobus junceus*, Nutt., 71. I. 351.)

- a.) Aug. 4, 1868. E. Humboldt Mts., Nev. Peak south of Stage Pass. 9,000 ft. 4 sp.
- b.) " 16, " " " " Ridge above Sawmill " " 1 "
- c.) June 25 - July 21, 1869. Parley's Park, Utah. Foot-hills. 6,000 ft. 15 "

248

283. - *A.*

- a.) July 30, 1868. E. Humboldt Mts. - Peak above Sawmill - 10,000 ft. 28 sp.
- b.) Sept. 18 " " " " " " " " " " 5 "

XXIX

(*O. mollis*, Miss. Herb.)

This is *O. viscidula*, Nutt. ~~not~~ *O. campestris*, DC? of Thompson from
"Rocky Mts." is nearly the same, but less viscid + with sepals spread by the leaves.

289

~~284~~ - *Astragalus Kentrophyta*, Gr. (*Kentrophyta montana*, Nutt. - 7. 59. 71. I. 353.)

a) July 5, 1868. Monitor Valley, Nev. - Dry foothill. 4 sp.

b) Sept. 24, " Holmes Creek Valley, Nev. " " 2 "

290

~~288~~ - *A. Kentrophyta*, Gr. var. *clatessa*. Stem erect, (1-2') branched at base + with short branchlets (1-2') above. Leaves stout + longer petioled.

Sept. 23, 1868. - Holmes Creek Valley, Nev. Dry foothill. 6 sp.

295

~~286~~ - *A. simplicifolius*, Gr. - Leaves but in single miserable spec. with only fragments of fruit

a) May 15, 1869. Wahsatch Mts. - Summit, near Railroad station. 4 sp.

b) July 28, " same locality 1 "

271

~~287~~ - *Astragalus* & *more sp.* *pterocephalus*

July 1, 1868. - Humboldt Valley, Nev. at mouth of Reese river. 6 sp.

291

~~288~~ - *Oxytropis campocorymbosa*, L. - var. *viscosa*. - Obovate leaves, with keel tipped with purple nodule.

Aug. 28, 1868. - E. Humb. Mts. - Nev. Peak above Oakland Ranch. 10,000 ft. 12 sp.

292

~~289~~ - *Glycyrrhiza lepidota*, Nutt. (7. 59. 71. I. 294) Called by the Mormons "Bees nest weed."

a) Oct. 15, 1867. Humboldt Valley, at Thacker's station, Nev. 2 sp.

b) Sept. 9, 1868. Goose Creek Valley, Utah. 3 "

c) June 21, 1869. Salt Lake Valley. Meadow near Farmington. 5 "

d) July 10, " Wahsatch Mts., Utah. Provo Cañon, below Heber. 1 "

e) " 12, " Jordan Valley - Battle creek meadow 1 "

293

~~290~~ - *Hedysarum Mackenzii*, Rich. - (7. 59. 71. I. 357.)

a) May 17-18, 1869. Hillsides near Salt Lake City. 6 sp.

b) July 10, " Wahsatch Mts., Utah. Provo Cañon. 8 "

c) " 17, " Parley's Park, Utah. 11 "

29
29

2
29

2
29

291. - *Vicia Americana*, Muhl. (748. 71. I. 269.) Foliage very variable, even on the same plant; lower leaflets usually much narrower than the upper; which vary from linear to ovate, & are acute, obtuse, or broadly truncate, always mucronate. The only climbing leguminous plant seen west of Utah, abundant in localities, & known as the "Peasvine". Confined to the banks of creeks & springs.

- a.) Oct. 2, 1867. Dangler range, Nev. Cañon of Granite Peak. In fruit. 6 sp.
- b.) July 10, " Truckee Meadows, Nev., near Glendale. (W.W. Bailey.) 3 "
- c.) May 9, 1868. Washoe Valley, Nev. - near Washoe City. 2 "
- d.) June 12, " Dangler Range^{Nev.}, Cañon East of Granite Peak. 3 "
- e.) May 27 + 31, 1869. Cañon & meadow near Salt Lake City, Utah. 5 "
- f.) June 21, " Salt Lake Valley, near Farmington 3 "
- g.) " 25, " Parley's Park, Utah - Cañon above Camp. 1 "
- h.) July 9, " Uintah Mts. Utah. Provo valley - river bank. 1 "
- i.) " 31, " " " Bear River Cañon, meadow 1 "

292. - *Lathyrus polyphyllus*, Nutt. (748. 71. I. 273.) Frequent on the wooded hillsides of the Wasatch & Uintahs. Stems wingless, stipules ^{much smaller} ~~several cordate~~ than the leaflets.

- a.) May 17, 1869. Cañon near Salt Lake City. 5,000 ft. 4 sp.
- b.) July 14, " Wasatch Mts. - Above Cottonwood Lake. 10,000 ft. 1 "

293. - *L. palustris*, L. (748. 72. I. 275.) Stems ^{scarcely} wingless; peduncles 4-10 flowered.

- a.) May 27, 1869. Wasatch Mts. - City Creek Cañon 2 sp.
- b.) June 24 + 29, " " Cañon above Parley's Park. 6 "

294. - *L. ornatus*, Nutt. - (748. 71. I. 277.) Pubescent.

- May 10, 1869. - City Creek Cañon, near Salt Lake City. 6 sp.

~~Spizella~~ *Asmerpinola*, Dougl. - (No. from Anderson (259) near
Carson City - (= *Pinicola*, Dougl.)

Rosaceae.

294

~~294~~ - *Prunus Andersonii*, Gr. (Proc. Am. Acad. S. S. VII. 33.) Abundant on the foothills of the Washoe & Trinity Mts. Leaves green lanceolate, tapering to a slender petiole; stem obovate, compressed, sharply ridged on the margins, abruptly pointed with a sharp beak. Fruit scarcely eatable.

- a) Apr. 23, 1866. Foothills near Carson City. 4 sp.
- b) May 27, " " of Trinity Mts., near Orama. 2 "
- c) June 9, " " of Humboldt Mts., near Unionville. 2 "

295 - *P. densissa*, Walp. (Cerasus, Nutt. Bot. Fl. I. 411.) Frequent in moist mountain cañons; ^{5-10,000 ft. alt;} ^{or reaching 3-4' in diam.} 2-10° high; leaves obovate; fruit resembling that of *P. serotina*, Shr.

- a) Sept. 9, 1867 - W. Humboldt Mts., near Unionville Cañon. 6,000 ft. 2 sp.
- b) May 16, 1868. Trinity Mts., near East Cray. " 1 "
- c) June 5, " W. Humboldt Mts. - Unionville & Canyon Cañons " 5 "
- d) July 20, " E. Humboldt Mts., near Cañon above Camp Ruby 7,000 ft. 1 "
- e) Sept. 21, " Mts. above Humboldt Pass " 3 "
- f) May 19, 1869. - Washoe Mts., Wash. City Creek cañon 6,000 ft. 4 "
- g) June 30, " Antelope Island, Salt Lake 5,000 ft. 2 "

297 - *P. densissa*, Walp. - var. Tree comparatively tall (12°) slender & graceful; racemes long & pendent; fruit light red, larger, more juicy & thinner skinned than usual.

Sept. 10, 1867. W. Humboldt Mts. - Unionville cañon 6,000 ft. 3 sp.

300
298 - *P. densissa*, Walp. - var. ^{Vir. viridula?} Very different in habit from the ordinary forms; 10° high by 6' in diameter; semidecumbent (aldon-like) on the bank of a high mountain stream, where the true *P. densissa* did not exceed 2-3°; leaves small.

June 9, 1868. - W. Humboldt Mts., near Unionville Cañon. 9,000 ft. 5 sp.

299 - *P. mollis*, Douglas? A straggling bush, 4° high, on stream bank of high granite cañon in ^{the} Washoe Mts., near Carson City, Nev. May 4, 1866. Not yet in leaf but with the habit of a *Prunus* of this section 2 sp.

Cf. with *S. arizana* - scarcely differs from the single
specimen in Herb. Eaton - from Ariz. Des.

It seems to be the mountain form of *S. arizana*, ~~found~~ ^{the taller & larger hand form} in
the valleys of Oregon & California i.e. *S. arizana*, var. *Dialoa*, 741.

304

300. - *Spiraea dumosa*, Nutt. (*S. arifolia*, Sm. var. *discolor*, Torr. Fl. I. 416.) Frequent on rocky mountain sides; never exceeding 2-3° in height.

- a.) June 6, 1866. W. Humboldt Mts., Nev. Summit above Unionville. 9,000 ft. 1 sp.
 b.) July 24 + 29, " E. Humboldt Mts., Nev. - Cañons above Camp Ruby 7,000 ft. 6 "
 c.) Aug. 14, " " " Peak above Sawmill 10,000 ft. 1 "
 d.) Sept. 4, " Clover Mts., Nev. Ridge above Sweet Valley 8,000 ft. 2 "
 e.) June 14, 1869. Stansbury Island, Salt Lake. 5,000 ft. 1 "
 f.) July 17, " Wahatch Mts. above Parley's Park. 7,000 ft. 1 "
 g.) Aug. 10, 1868. Uintah Mts. Utah. Ridges above Bear River Cañon 10,000 ft. 9 "

305. - *S. caespitosa*, Nutt. (Torr. Fl. I. 414.) * Scapes usually simple.

- a.) Sept. 15, 1868. W. Humboldt Mts., Nev. Limestone cliffs. 9,000 ft. 4 sp.
 b.) " " " Same locality (W. W. Bailey.) 3 "
 c.) Aug. 22, 1868. E. Humboldt Mts., Nev. - Cliffs above Camp Ruby 7,000 ft. 12 "

306. - *S. caespitosa*, Nutt., var. *elata*. Much larger; stems scapes 6-10' high, branched, lateral spikes short; radical leaves 1' in length. Flowers variable; petals obicular to ^{linear} spatulate, naked or hairy within; ovaries very hairy or nearly smooth, 5-6, as many as the lobes of the calyx.

Oct. 3, 1868. Eastern Extremity of Raft River Range. 6,000 ft. 8 sp.

302
 307. - *Neillia pulchifolia*, Don. (*Spiraea*, L. - Torr. Fl. I. 413.) ^{Frequent} Abundant in the Wahatch & Uintah Mts.

May 27, 1869. Wahatch Mts., City Creek cañon. 7 sp.

308. - *N. pulchifolia*, Don. var. *pauciflora*, More or less tomentose pubescent, especially the calyx & peduncles; ovary usually single, becoming smooth; ovaries 2-4, mostly pendulous; stamens 20, or sometimes 15. Frequent in the E. Humboldt Mts.

- a.) July 12-24, 1866. E. Humboldt Mts., Nev. Cañons near Camp Ruby. 6-7,000 ft. 7 sp.
 b.) " 30, " " " Cañon above Sawmill 8,000 ft. 1 "
 c.) Aug. 14, " " " Ridge " " 9,000 ft. 1 "
 d.) June 13, 1869. Stansbury Island, Salt Lake. Peak 6,500 ft. 1 "

2
2

3

30

31
30

31
307

31
311

307

307. - *Rubus strigosus*, Moq. - (779. 71. I. 449.) Frequent in the Wahsatch Mts.;

2-3° high; fruit well flavored.

a) Aug. 25, 1868. E. Humboldt Mts., Nev. Cañon above Orland Ranch. 7000 ft. 8 sp.

b) June 30, 1869. Wahsatch Mts., Utah. " above Parley's Park. " 7 "

308. - *R. strigosus*, Moq. (779. 71. I. 453.) Frequent in Utah, but rare in the mountains west and subalpine.

a) Aug. 31, 1869. E. Humboldt Mts., Nev. Peaks above Orland Ranch. 10,000 ft. 6 sp.

b) Sept. 7, " Clow Mts., Nev. South Peak 10,000 ft. 1 "

c) July 5, 1869. Uintah Mts., Utah. Provo Cañon 7,500 ft. 1 "

d) " 10, " Wahsatch Mts., north fork of Provo Cañon 6,000 ft. 1 "

e) " 13, " " " Cottonwood cañon 5,500 ft. 2 "

309. - *R. occidentalis*, D. ^{leucodermis, Dougl.} (779. 71. I. 454.) Seen only in the Wahsatch Mts. -

July 13, 1869. Cottonwood cañon. In fruit. 6 sp.

310

310. - *Purshia tridentata*, DC. Very frequent.

a) May 2, 1868. Foot Hills near Carson City, Nev. 5,000 ft. 6 sp.

b) June 13, " Dunsmuir Range, Mackay Pass " 4 "

c) " 30, " Battle Mts., Nev. cañon 6,000 ft. 3 "

d) July 10, " Diamond Mts., Nev. Stage Pass " 3 "

e) Oct. 6, " Hills N. of Salt Lake, near Ausley's Station 5000 ft. 6 "

f) May 17, 1869. Foot Hills near Salt Lake City " " 3 "

g) July 1, " " of Parley's Camp, Utah 6,000 ft. 4 "

311
311. - *Cercocarpus parvifolius*, Nutt. (779. 71. I. 42.) Not seen west of the Wahsatch.

A diffusely branched shrub, 2-4° in height.

a) July 4, 1869. Uintah Mts., Utah. Ridge above Park's Cañon 7,000 ft. 9 sp.

b) " 10, " Wahsatch Mts., " Provo cañon 6,000 ft. 3 "

312
312. - *C. brevifolius*, Gr. ^{florosa} (Pl. W. II. 54.) Found but in a single cañon. A very diffusely, densely & rigidly branched shrub, 1-6° high. Previously found only by Wright in New Mexico.

Aug. 24-29, 1869. Wahsatch Mts., Utah. American Fork cañon 5000 ft. 11 sp.

no. 317 + 318 on next page

312

312. - *Cercocarpus ledifolius*, Nutt. (709.71.I.422) Frequent on mountain slopes from the washoe to the Wahsatch Mts., and known as "Mountain Mahogany"; from the color, hardness & weight of its wood. In habit of growth it much resembles a neglected ^{half-stemmed} apple tree, seldom exceeding 10' in height & 6' in diameter, but sometimes becoming a handsome tree. The largest seen was 2 1/2' in diameter and 40' high. Pubescence variable.

- | | | | | |
|-----|----------------------------|--|-----------|-------|
| a.) | Sept. 15, 1868. | W. Humboldt Mts., Nev. Above Unionville. | 8,000 ft. | 2 sp. |
| b.) | Apr. 23, 1868. | Washoe Mts. Nev. Above Carson City. | 7,000 ft. | 3 " |
| c.) | June 9, " | W. Humboldt Mts. - Above Unionville, | 8,000 ft. | 9 " |
| d.) | July 7, " | Toiyabeh Mts., Nev. East of Austin. | 6,000 ft. | 7 " |
| e.) | Aug. 4 th 1869. | E. Humboldt Mts. " | 7,000 ft. | 5 " |
| f.) | Oct. 3, " | East extremity of Raft River Mts. | 6,000 ft. | 3 " |

314

314. - *Cowania Mexicana*, Don. (C. Stansburiana, Torr. - Stanw. Rep. 346, E. 3.) From Pilot Peak to the Wahsatch. A shrub 3-6' high, the trunk covered with an abundant loose shreddy cream-colored bark; the wood hard, compact, light colored; flowers, bright yellow.

- | | | | | |
|-----|-----------------|--|--|-------|
| a.) | Sept. 17, 1868. | ^{Antelope Mts} Rock Peak, Nev. | | 3 sp. |
| b.) | May 21, 1869. | Foot hills near Salt Lake City. | | 11 " |
| c.) | June 14, " | Stansbury Island, Salt Lake | | 1 " |
| d.) | July 17, " | Wahsatch Mts., Utah. Mouth of Boro cañon | | 7 " |

315

315. - *Dryas octopetala*, L. - (709.71.I.420) Rare.

- | | | | | |
|-----|---------------|---|------------|--------|
| a.) | Aug. 3, 1869. | Uintah Mts. Utah. Peak above Bear River Cañon | 11,000 ft. | 15 sp. |
| b.) | " 10, " | " Peak west " h. fruit | " " | 4 " |

314. - *Geum macrophyllum*, Willd. - (709.71.I.421)

- | | | | | |
|-----|----------------|--------------------------------|--|-------|
| a.) | Aug. 1, 1868. | Ruby Valley, Nev. Stream bank. | | 3 sp. |
| b.) | Sept. 26, " | Thousand Spring Valley, Nev. " | | 3 " |
| c.) | June 23, 1869. | Farley's Park, Utah " | | 1 " |

319

319. - *G. Rossii*, Ser. var. B. Torr. - (709.71.I.424.) Stems 1-5 flowered, 1' high; appressed silky pubescent.

- | | | | | |
|--|----------------|---|-----------|-------|
| | Aug. 27, 1868. | E. Humboldt Mts., Nev. Big Lake above Washoe Ranch. | 9,000 ft. | 6 sp. |
|--|----------------|---|-----------|-------|

317a is in Herb. var. as "Progenia Chilensis" from Warkon Valley, by Sturtch. June '65

P

~~fruticosa~~

Progenia, Gray, - distinguished by its more slender branched habit, smaller flowers, numerous small smooth white actinoid flowers. Stems ^{her} $\frac{1}{2}$ (10), 2 opposite each leaf

A spec. of *P. chilensis*, Max. in flower which approaches it closely, no 20 St.

P judging from the spec. in Herb. var. *P. chilensis* is but a trifoliate & the more usual form of *P. viridis*, Nutt.

324. *Potentilla millegrana*, Eng. ^{Nov.} (Lehm. Revis. Potent. 201.) Growing in the ^{deep} shade of rocks & perhaps only an obelated form of *P. scopulorum*.

Aug. 25, 1868. E. Humb. Mts., Nev. Cañon above Cor. Ranch. 2 sp.

331 ² *Platensis*, Nutt. = var. of *P. diversifolia*
~~323~~ - *P. sericea*, L. var. *P. glabrata* (748. 71. I. 437) ~~Pubescence variable, some approaching the true *P. sericea*.~~

(21) a) Aug. 29, 1868. E. Humb. Mts., Nev. Peaks above Orland Ranch. 10,000 ft. 6 sp.

(11) b) Sept. 7, " Clover Mts., " South Peak. " 1 "

" c) " 10, " " " North Peak 11,000 ft. 2 "

(21) d) July 13, 1869. Wahsatch Mts., Utah. Cottonwood Cañon, Fern Fork. 10,000 ft. 2 "

(12) e) Aug. 3, " Uintah Mts., " Peak above Bear River Cañon. 11,000 ft. 8 "

325

~~324~~ - *P. Pennsylvanica*, L. var. *striposa*, Ph. (748. 71. I. 436) Dr. Hooker refers this species to *P. sericea*, L.

a) Aug. 22, 1868. E. Humb. Mts., Nev. Summit S. of Camp Ruby 9,000 ft. 4 sp.

b) " 27, " " " Ridge above Orland Ranch. " 2 "

332

~~325~~ - *P. Pennsylvanica*, L. var. *Hippiana*, 748. ^{puberulenta}

July 24, 1869. E. Humb. Mts., Nev. Cañon above Camp Ruby 6,500 ft. 15 sp.

July 30, 1869. Uintah Mts., Utah. Bear River Valley, mouth of Cañon. 7,500 ft. 2 sp.

" 31, " " " " " 8,000 ft. 3 "

326. *P. diversifolia*, Lehm. (748. 71. I. 439.)

a) July 27, 1868. E. Humb. Mts., Nev. Peak above Ft. Ruby. 9,000 ft. 1 sp.

b) Aug. 14, " " " " above Sawmill " 1 "

c) " 31, " " " " above Orland Ranch. 10,000 ft. 7 "

329

~~327~~ - *P. diversifolia*, Lehm. ^{var. multicaulis} - var. with the leaflets cleft to the base, segments linear.

a) July 24, 1868. E. Humb. Mts., Nev. Divide above Camp Ruby 9,000 ft. 10 sp.

b) " 27, " " " " Peak above Ft. Ruby. " 7 "

327

~~326~~ - *P. diversifolia*, Lehm. ^{var. glaucophylla} A large leaved, nearly glabrous form. (Dr. Vasey's *P. nivea*, No. 171.)

a) Aug. 27, 1868. E. Humb. Mts., Nev. Lake shore above Orland Ranch. 9,000 ft. 5 sp.

b) " 3, 1869. Uintah Mts., Utah. Peak above Bear River Cañon 10-12,000 ft. 6 "

335

~~327~~ - *P. gracilis*, Dougl. (748. 71. I. 440.) Silky canescent throughout, (upper surface of the leaves somewhat greener;) branches of the corymbs such; heads rather crowded.

b) July 5, 1868. Shoshone Mts., Nev. Silver Creek Cañon. 5,500 ft. 2 sp.

a) June 13, " Dungen Range, Nev. Donnelly's Pass. 6,000 ft. 5 "

336

" " var. [c] July 9, " Diamond Spring Valley, Nev. " 7 "

d) " 11, " " Ruby Valley, Nev. 6,000 ft. 1 "

e) June 30, 1869. Parley's Fork, Utah. " 4 "

There are certainly very strong affinities between the various forms of
P. gracilis + *P. Pennsylvanica* - both species varying similarly in the shape
+ serration of the leaflets, in the character of pubescence + hysteresis - in such
a manner that by ^{simply} curving the pinnate leaflets of the one so as to form the ^{digitate} ~~pinnate~~
leaf of the other the transformation is complete. There is an ^{apparently} constant distinction,
however, in the character of the style which in *P. Pennsylvanica* ^{+ serrate} is short with a thick &
fleshy base, but in *P. gracilis*, *nivosa* + *concolor* a long & slender, as also in *P. sinensis*

This is 159 H + H. ~~27 Penn. stabilis (P. H. H.)~~ + is probably *P. fo. bipinnata*, but
a slender form is Penn. 217, Vandyke, + Bonpland's *P. niva*, var., + *P. imbricaria*? with
3-5 leaflets seem to be the same.

P. (P.) H. H. - 179 H. H. - 5000 H. H. - style + other collectors, Nebraska to Calif. - It
is *P. H. H.* form though the glandular character of the pubescence is not of the
same.

2 specimens on the sheet are a form with somewhat pinnate leaves.

It is a very pinnate form. It is not *P. bipinnata* - there is a slight approach to it in 325
It seems distinct. There is nothing so near in Herb. Gr. - there may be a
form of *P. sinensis*

333. ~~330.~~ *Potentilla gracilis*, Dougl. - var. *pulcherrima* - with *Digitaria* leaves. -
 leaflets conspicuously tomentose beneath; leaf green & somewhat hispidely pubescent above, with a uniform serration not reaching half way to the midrib, rounded at the apex; corymb loose & spreading, with slender peduncles; calyx somewhat hispid, not tomentose; flowers orange.

a) July 24, 1868. E. Humb. Mts., Nev. Cañon above Camp Ruby - 6,000 ft. 2 sp.

b) June 29, 1869. Wahsatch Mts., Utah. Ridge near Parley's Park " 6 "

to 332 [c) July 31, " Uintah Mts., " Bear River Cañon, 8,000 ft. 3 "

337
 331. *P. gracilis*, Dougl. - var. *flabelliformis*, 709. (709. 72. I. 440.)
 with leaflets much as in the last but more strongly & deeply cleft; flowers in crowded corymbs, calyx tomentose.

a) June 26, 1868. Mt. Tobin Range, Nev. Cumberland Cañon. 6,000 ft. 5 sp.

b) Sept. 5, " Secret Valley, Nev. " 2 "

338
 332. *P. Nuttallii*, Schum. *P. nigida*, Nutt. (709. 72. I. 440.) Another form of *P. gracilis*, Dougl.

a) July 16, 1867. Truckee Meadows, Nev. near Glendale. (W. W. Bailey.) 1 sp.

b) Aug. 28, 1868. E. Humb. Mts., Nev. Peak above Orland Ranch. 9,000 ft. 2 "

c) Sept. 5, " Secret Valley, Nev. - (with 331, b.) 6,000 ft. 1 "

334
 333. *P. nirea*, L. (709. 72. I. 441.)

Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear River Cañon. 11,000 ft. 7 sp.

324
 334. *P. biflora*, Schum. - *P. divaricata*, var. *plana*, (709. 72. I. 442.)

Aug. 3, 1869. same locality as the last. 3 sp.

339
 335. *P. Anserina*, L. (709. 72. I. 444.) A. p. approaching var. *P. grandis*, 709.

a) July 9, 1868. Diamond valley, Nev. Sulphur Spring. 6,000 ft. 2 sp.

b) " 11, " Ruby Valley, Nev. " 4 "

c) May 31, 1869. Jordan Valley, Utah. Near Salt Lake City 5,000 ft. 6 "

d) July 17, " Parley's Park, " 6,000 ft. 6 "

310
 336. *P. fruticosa*, L. (709. 72. I. 445.)

a) Aug. 3, 1868. Ruby Valley, Nev. Stream bank. 6,000 ft. 20 sp.

b) " 6, " Huntington Valley, Nev. " " 3 "

c) " 27 & 28, " E. Humb. Mts., Nev. ^{Cañons} Peaks above Orland Ranch. 9,000 ft. 8 "

d) July 5, 1869. Uintah Mts., Utah. Provo Cañon 7,000 ft. 1 "

341.

337.- *Potentilla fruticosa*, L. var. *Alpina* form; leaves very short, linear.

Aug. 16, 1868. E. Humboldt Mts., Nev. Peak above Sawmill. 11,000 ft. 12 sp.

342

338.- *P. glandulosa*, L. (749. 72. I. 446.)

a) June 26, 1868. Mr. Robin Range, Nev. Cumberland cañon 5,500 ft. 15 sp.

b) " 30, " Battle Mts. West cañon. stream bank. " 1 "

c.) July 24, " E. Humb. Mts., Nev. Cañon above Camp Ruby 6,500 ft. 8 "

d.) Sept. 22, " Range at head of Humb. R., Nev. Coyote Creek cañon " 1 "

e.) May 19th, 1869. Wahsatch Mts., City Creek cañon. 5,000 ft. 5 "

f.) June 29, " " Cañon above Parley's Park. 6,000 ft. 1 "

343

339.- *P. procumbens*, " *Clairv. maculata* (L.) (Sibbaldia, L. - 749. 72. I. 433.)

a.) Aug. 29, 1868. E. Humb. Mts., Nev. Cañon above Orland Ranch. 10,000 ft. 12 sp.

b) " 4, 1869. Uintah Mts., Utah. Peak West of Bear River Cañon 11,000 ft. 9 "

344

340.- *Fresia Gordonii*? nov. sp. " *viscoso-pubescent*, leaves numerous, radical, linear, elongate, sheath pubescent, pinnae; pinnae numerous above and deeply 2-5 parted, linear, cuneate, obtuse, entire or bifid, racemes longer than the leaf rather naked, cymes many flowered capitulae, base of the bracts calyx obovate. *lamellae* *tricus* longer than the *apical* petals, bracts of the *apical* lobes, root woody, *perennial*, *collum* thick + leaves at base copiously *sessile*, upper *plata* *linea*, Gordon. R. Jour. Bot. & Hort. Univ. T (1853) 341, t. 12.a.) July 6th, 1869. Uintah Mts., Utah. Divide above Duchesne River. 9,000 ft. 19 sp.

b) " 14, " Wahsatch Mts., " Above Cottonwood Lake. " " 2 "

c.) Aug. 4, " Uintah Mts., Head of Bear River cañon " " 1 "

d.) " 12, " " Ridge above Bear River Cañon 10,000 ft. 1 "

346 *P. Baileyi* nov. sp. *habitat* *gracilis*.~~*P. setigera*~~

Aug. 24, 1868. E. Humb. Mts. Nev. Granite Rocks, near Fremont Pass 6,500 ft. 17 sp.

345

345 *P. Baileyi*, nov. sp.

Sept. 4, 1867. W. Humb. Mts., Nev. Granite rocks, Wrights cañon. 8,000 ft. 8 sp.

~~XXXIII~~ 1

Collected by Fremont in the Wind River, by Bouvier at four of Rocky Mts., by Nuttall
on the Columbia R. + by Lyall on Vancouver's Island.

347.

347. - *Ivesia* nov. sp. ~~near~~ *I. Pickeringii*, Torr. var. *glabra*

- a) July 8, 1868. Monitor Valley, Nev. Alkali flat, at Grubbs wells. 6,000 ft. 14 sp.
 b) " 9, " Diamond Valley, Nev. Alkali meadow " " 1 "
 c) " 11, " Ruby Valley, Nev. meadow " " 3 "

348

348. - *Rosa blanda*, Ait. (749. 71. I. 459.) Mostly confined to stream banks & growing from 3 to 15 feet high, usually 5. Leaves usually more or less acute, flowers 1 1/2" & fruit 4" in diameter, the latter globose or oval.

- a) July 26, 1868. Truckee Meadows, Nev. Glendale. (W. W. Bailey.) 4,500 ft. 3 sp.
 b) June 11 & 14, 1868. W. Humb^l Mts., Nev. Stream banks near Unionville 5,000 ft. 4 "
 c) " 29, " Range W. of Battle Mts. Summit Spring. " 5 "
 d) July 10, " Diamond Spring, in Diamond Valley, Nev. 6,000 ft. 1 "
 e) " 24, " E. Humb^l Mts. Nev. Cañon above Ruby Camp 7,000 ft. 2 "
 f) " 28 Aug. " " " Ruby Valley 6,000 ft. 5 "
 g) Aug. 27, " " " Ridge above Overland Ranch. 8,000 ft. 2 "
 h) Sept. 9, " Humb^l Valley - above Ft. Halleck. 5,500 ft. 6 "
 i) " 21, " Range above Humb^l Pass - Coyote cañon 6,000 ft. 1 "
 j) May 21, 1869. Wahatch Mts., Utah. City Creek Cañon 5,000 ft. 2 "

349

349. - *R. blanda*, Ait. var. ^{*traximifolia*} with larger flowers & fruit, & the more usual form met with in Utah, & growing on dry ridges away from water; 2-3° high, flowers 3' and fruit 6-8" in diam.; more pubescent & glandular.

- a) June ²⁴ 29, 1869. Wahatch Mts., Utah. above Parley's Park. 6-7,000 ft. 9 sp.
 b) Aug. 16, " " " " " " In fruit 6,500 ft. 3 "

350

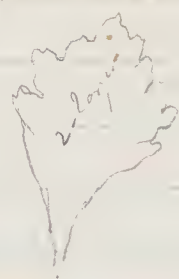
350. - *Pyrus sambucifolia*, Ch. & Sch. (749. 71. I. 471.) Accumination of the leaves very variable.

Sept. 3, 1866. E. Humb^l Mts., ^{Nev.} Cañon above Hummer's. 7,000 ft. 4 sp.

June 24, 1869. Wahatch Mts., Utah. Ridge above Parley's Park 7-8,000 ft. 6 "

July 5, " Uintah Mts., " Ridge above Provo Cañon 8,000 ft. 1 "

C. virginica B. D. L. is has lobed & doubly serrate leaves
 " virginica, is lobed & unequally serrate with rather
 small teeth mostly 1. base
 a single crop



2-3' x 1-1/2'

For small groups of virginica, virginica, & in the region it is common to have the entire leaves. The leaf of
virginica are usually large (1-2' x 1/2'). Smaller mountain species may or will be required to
 one species.

EX

351,

~~347~~ - *Crataegus glandulosa*, Willd. - (*C. sanguinea*, Pall., 709. 71. I. 464.) Leaves more or less broadly ovate, acute, ^{narrowly} ~~longly~~ at base into a slender petiole, occasionally sublobed. Fruit large, dull purple with whitish dots, eatable.

Sept. 15, 1868. Humb. Valley, Nev. above Ft. Halleck. Stream bank. 5,500 ft. 10 sp.

May 14, 1869. Wahsatch Mts., Utah. City Creek Cañon 5,000 ft. 6 "

352

~~348~~ - *Amelanchier Canadensis*, 709., var. *striifolia*. (709. 72. I. 473.) Abundant on all the higher ranges, and giving their name to the "Toiyabe" Mts. - 2-8° high.

a) June 8, 1868. W. Humb. Mts., Nev. Unionville cañon. 8,000 ft. 8 sp.

b) " 25, " Mt. Robin Range, Nev. Peak above Cumberland. 8,000 ft. 6 "

c) July 20+24, " E. Humb. Mts. - Cañons above Camp Ruby " 4 "

d) Aug. 1, " Ruby Valley, Nev. 6,000 ft. 2 "

e) " 18, " E. Humb. Mts. - Peak above Sawmill 10,000 ft. 3 "

f) May 17, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. 1 "

Saxifragaceae.

350

~~349~~ - *Saxifraga flagellaris*, Willd. - (709. 71. I. 564.) ~~var. striata~~

Aug. 3, 1869. - Uintah Mts., Utah. Peak above Bear R. cañon. 11,000 ft. 8 sp.

353

~~350~~ - *S. caespitosa*, L. (709. 71. I. 565.) Stems 1-flowered; basal leaves often entire, linear-oblong; petals scarcely longer than the calyx.

Aug. 3, 1869. - Same locality as the last. 11,000 ft. 9 sp.

351 - *S. punctata*, L. (*S. arstivalis*, Fisch. - 709. 71. I. 567)

a) Aug. 27, 1868. E. Humb. Mts., Nev. Lake shore above Orland Ranch. 9,000 ft. 6 sp.

b) July 5, 1869. Uintah Mts., Utah. Provo cañon 8,000 ft. 4 "

356

~~352~~ - *S. nivalis*, L. - (709. 71. I. 571.)

a) Sept. 12, 1868. Clover Mts., Nev. River north Peak. 9,000 ft. 4 sp.

b) Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear R. cañon 11,000 ft. 7 "

c) " 4, " " " Head of same cañon 9,000 ft. 2 "

d) " 12, " " " Ridge above same cañon 10,000 ft. 2 "

357

~~353~~ - *S. nivalis*, L. - A loose flowered form with nearly five calyx, equivalent to *S. virginicus*.

Aug. 29, 1868. E. Humb. Mts., Nev. Lake shore above Orland Ranch. 9,000 ft. 8 sp.

" " Diff. in marks

Ex. own spec. more closely

Newberry plant in Jrs seems to be tenella - at least the petals are more
than 1.000, leaves pubescent & pretty much dissected - no bulblets
also knicker - Herb. Torr!

Seeds small (in Jrs) apparently smooth.

357. - *Saxifraga controversa*, Sternb. (Det. R. & D. IV. 34.)

- a) Sept. 12, 1868. Clover Mts., Nev. Below North Peak. 10,000 ft. 5 sp.
 b) Aug. 3, 1869. Uintah Mts., Utah. Peak above Bear R. cañon 11,000 ft. 19 "

~~358~~ - *S. integrifolia*, Hook. (749. Fl. I. 572.) Roots "granular" fibrous.

- June 29, 1869. Wahsatch Mts., Utah. Parley's Park 6,000 ft. 10 sp.

~~354~~ - *S. rivularis*, L. (749. Fl. I. 574.) In the cliffs & shade of wet rocks; apparently also the *S. debilis* of Engelm.; glabrous or pubescent.

- Aug. 2-21, 1869. Uintah Mts., Utah. Head of Bear R. cañon & peak above. 9-11,000 ft. 9 sp.

~~361~~ - *Tellima parviflora*, Hook. (Lithophragma, Nutt. 748. Fl. I. 544.)

- a) June 9, 1868. E. Humb. Mts., Nev. Unionville cañon. 7,000 ft. 9 sp.
 c) July 20, " E. Humb. Mts., Nev. Cañon above Camp Ruby 7,000 ft. 1 "
 b) " 6, " Trigayatch Mts., Nev. Divide above Austin, " " 3 "
 d) Aug. 29, " E. Humb. Mts., " Peaks above Orland Ranch. 10,000 ft. 1 "
 f) June 23, 1869. Parley's Park, Utah 6,000 ft. 4 "
 e) May 17, 1869. Wahsatch Mts., Utah. City Creek Cañon 5 "

~~362~~ - *T. tenella*, Nutt. possibly - not answering perfectly to my description according sufficiently well with a very poor original specⁿ in Herb. Gr. - Around description 413 Fl. 46 and 62 and "

- a) Apr. 15-May 9, 1868. Washoe Mts., Nev. Cañons near Carson City 5,000 ft. 25 sp.
 b) June 9, " E. Humb. Mts., Nev. Unionville cañon - ^{pink & white.} 7,000 ft. 13 "
 c) " 24+25, 1869. Parley's Park, Utah, & cañons 6,000 ft. 8 "
 d) July 15, " Wahsatch Mts., - E. of Divide above Cottonwood Lake 9,000 ft. 7 "
 e) Aug. 5, " Uintah Mts., Utah. Head of Bear R. cañon. " " 3 "

~~363~~ - *Mitella pentandra*, Hook. - (749. Fl. I. 546.)

- a) Aug. 2, 1868. E. Humb. Mts. - Lake shore, above Orland Ranch. 9,000 ft. 8 sp.
 b) May 15, 1869. Wahsatch Mts., Utah. City Creek cañon 5,000 ft. 14 "

~~364~~ - *M. trifida*, Graham. (749. Fl. I. 547.) Petals filiformly divided, often much exceeding the calyx, white; capsule opening before maturity.

- a) May 24, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. 11 sp.
 b) June 2, 1869, " " " Cañons above Parley's Park. 6,500 ft. 2 "
 c) July 15, " " " Cottonwood Cañon 9,000 ft. 2 "

It differs from H. sanguinea, Engelm only in its exserted genitalia, & usually
also exserted petals

13

Low (6-10'), viscidly hispid throughout. Lyall's spec^s of H. cybrioides show
the same ^{scarcely} glandular pubescence, without fulvous hairs.

More probably R. leptanthum!

365

361. - *Heuchera rubescens*, Torr. - (Stans. Repl. 344, t. 5.) Varying in the color & size of the flowers.

- a) June 5, 1868. W. Humb. Mts., Nev. - Unionville cañon 7,000 ft. 6 sp.
 b) July 20, " E. Humb. Mts., Nev. - Cañon above Camp Ruby, " 2 "
 c) May 19, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. 3 "
 d) July 14, " " " Cottonwood cañon 9,000 ft. 1 "

366.

362. - *H. cylindrica*, Dougl. - var. *alpina* - or new sp. (749. 72. I. 540.)

Sept. 7, 1868. Clover Mts., Nev. South Peak. 11,000 ft. 8 sp.

367

363. - *H. parvifolia*, Nutt. (749. 72. I. 541.)

- a) July 20-24, 1868. E. Humb. Mts., Nev. Cañons above Camp Ruby 7-8,000 ft. 7 sp.
 b) " 25, " " " Peak above Ft. Ruby 9,000 ft. 3 "
 c) May 29, 1869. Wahsatch Mts., Utah. City Creek cañon - 5,111 ft. 5 "
 d) June 30, " " " Ridge above Parley's Park. 7,000 ft. 1 "

368

364. - *Parnassia parviflora*, DC. (749. 72. I. 149.)

- a) Aug. 7, 1868. - Huntington Valley, Nev. Wet meadow. 6,000 ft. 11 sp.
 b) " 10, " Ruby Valley, Nev. " " 4 "
 c) July 27, 1869. Echo cañon, Utah. - near Hanging Rock. " 5 "

369

365. - *P. fibrata*, Banks. - (749. 72. I. 150.)

- a) Aug. 27 or 28, 1868. E. Humb. Mts. - Nev. Cañon above Overland Ranch. 9,000 ft. 6 sp.
 b) Sept. 2, " " " " above Hummer's 7,000 ft. 4 "
 c) " 10, " Clover Mts., Nev. below South Peak 10,000 ft. 1 "
 d) July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon, Frem. fork. 8,000 ft. 9 "
 e) " 30, " Uintah Mts, " Mouth of Bear R. cañon. 7,000 ft. 7 "
 f) Aug. 7, " " " Bear River cañon - meadow 8,000 ft. 5 "

370

366. - *Jamesia Americana*, Tuck. - (749. 72. I. 593. Pl. Fend. 55.) In a deep rocky gory - a straggling shrub, 2-3' high; mostly in fruit.

Aug. 28, 1869. Wahsatch Mts., Utah. American Fork cañon. 7,000 ft. 14 sp.

367. - *Ribes cynosbati*, Mx. ? (749. 72. I. 545.) Without flowers or fruit.

June 11, 1869. Black Rock, S. end of Salt Lake 2 sp.

Cf. - Perhaps *R. virgatum*

It is the plant of James referred to in 1848 (in Herb. 1000!), also
of 1842 (in the Great Water) - and Strickland (Washoe Valley)

R. virgatum in Herb. 1000, not in Herb. 1000.

So far as Torrey's spec^d is it is *R. Missourianum*. Nuttall's spec^d has
smaller leaves (6-8" diam) - Nettle's or like mine, a little more pubescent, - so

Barney's, (Alamogordo)

Call it *virgatum* = 3309 Geyer, Oregon, 1856 Mr. Calif. - ^{at 2700 ft} Mex.

3/2 from '66 and 254'44 + also a spec^d of James in Herb. 1000 seem
to be the same

R. lacustris has the flowers in long slender ^{racemes} ~~racemes~~, in oxyacanthoid
they are sessile or in short racemes

~~GH~~

371

~~368~~ - *Ribes hirtellum*, Mx. (749. 71. I. 546.) 2-3° high.

a) Sept. 2, 1868. E. Humboldt Mts., Nev. Cañon above Overland Ranch. 7,000 ft. 2 sp.

b) June 24, 1869. Wahsatch Mts. Utah. Cañon above Parley's Park. " " 2 "

372

~~369~~ - *R. divaricatum*, Dougl. X (749. 71. I. 547.) Stream banks; 6° high.

5

a) Sept. 19, 1868. W. Humboldt Mts., Unionville cañon 5,000 ft. 8 sp.

b) Oct. " same locality. (W. W. Bailey.) " 3 "

c) June 9, 1868. " " " 5 "

373

~~370~~ - *R. leptanthum*, Gr. - (Pl. Fendl. 53.) Flowers usually with a rather short, campanulate calyx. 2° high Bear hillsides.

b) May 16 + 18, 1868. Trinity Mts., Nev. Above Humboldt Lake 6,000 ft. 4 sp.

a) Apr. 18 + 23, " Washoe Mts., Nev. King's cañon, near Carson " 6 "

c) May 27, " Trinity Mts., Nev. Cañon W. of Orcoma 5,000 ft. 2 "

June 11, 1869. Black Rock, S. end of Salt Lake, some + bitter. 2 "

374 - *R. lacustre*, Poir. (749. 71. I. 544.) Fruit nearly smooth; racemes several flowered; leaves 1-2" in diameter. In woods.

Aug. 10, 1869. Uintah Mts., Utah. Bear River Cañon 8,000 ft. 3 sp.

375

~~372~~ - *R. lacustre*, Poir., var. *setosum*, Gr. (*R. oxycanthoides*, L. var. B. 785. - Fl. I. 546.) Leaves small; fruit hispid; racemes few flowered. 1-2° high.

a) July 27, 1868. E. Humboldt Mts. - Nev. Peak above Ft. Parley 9,000 ft. 1 sp.

b) Aug. 18, " " " Peak above Sawmill. " 1 "

c) July 6, 1869. Uintah Mts., Utah. Divide above Duchesne R. 10,000 ft. 5 "

d) Aug. 4, " " " Head of Bear R. cañon. " 1 "

377 - *R. bracteosum*, Dougl. - (749. 71. I. 550.) A loose straggling bush on shaded stream banks in mountain cañons. Fruit unpleasant.

a) Aug. 19, 1868. E. Humboldt Mts., Nev. Cañon near Fremont's Pass. 7,000 ft. 5 sp.

b) May 19 + 27, 1869. Wahsatch Mts., Utah. City Creek cañon 6,000 ft. 8 "

376 - *R. prostratum*, L'Her. (749. 71. I. 549.) Flowers white; closely resembling the last.

July 14, 1869. - Wahsatch Mts., Utah. Cottonwood cañon. 9,000 ft. 7 sp.

Bracts conspicuous, nearly equal the pedicels.

37
XXXIV. will distinguished by its broad campanulate short sepaled
calyx, short stamens, ~~the~~ bifid style, & general smoothness & white
petals. Collected by Anderson - not named

R. Raynium Ph. Donnell. includes R. glutinosum, Kunth

In R. maroccanum the style & interior of calyx tube are hairy.

378

~~375~~ - *Ribes cereum*, Dougl.(according to altitude)
(745. 72. I. 551.) 1-4. Varying considerably in the

amount of waxy secretion, both upon the fruit & leaves. "The resinous dots

would seem to be at first stalked glands, but are variously modified by age", etc.
fruit sweet. *R. Balsamifera*, Kell., though said to have yellow flowers, is with scarcely a doubt the same.

- | | | | | | |
|----|-----------------|----------------------|--------------------------------|------------|-------|
| a) | Sept. 15, 1867. | West Humb. Mts. Nev. | Star Peak | 10,000 ft. | 1 sp. |
| b) | June 19, 1868. | " " | Head of Echo cañon | 9,000 ft. | 2 " |
| c) | June 27, 1868. | W. Robin Range, Nev. | Cumberland cañon | 6,000 ft. | 2 " |
| d) | July 20, " | E. Humb. Mts., Nev. | Cañon above Camp Ruby | 7,500 ft. | 4 " |
| e) | Aug. 19, " | " " | Peak above Sawmill | 10,000 ft. | 4 " |
| f) | " 19, " | " " | Foot hills near Fremont's Pass | 7,000 ft. | 3 " |
| g) | Sept. 10, " | Clear Mts., Nev. | North Peak. | 11,000 ft. | 1 " |
| h) | May 19, 1869. | Wasatch Mts., Utah. | City Creek cañon | 5,000 ft. | 3 " |
| i) | July 4, " | Uintah Mts., " | Ridge above Park's cañon | 7,000 ft. | 2 " |
| j) | " 20, " | Wasatch Mts., " | Peak west of Parley's Park | " " | 3 " |
| k) | Aug. 10, " | Uintah Mts., " | Peak above Bear R. cañon | 9,000 ft. | 1 " |
| l) | " 19, " | Wasatch Mts., " | Cottonwood cañon, from fork. | 8,000 ft. | 2 " |

379

~~376~~ - *R. viscosissimum*, Ph.

(745. 72. I. 551.)

A ^{low} spreading bush, 3° high.

- | | | | | | |
|----|------------------|---------------------|--|-----------|-------|
| a) | June 28, 1869. | Wasatch Mts., Utah. | Cañon ^{Ridge} above Parley's Park. | 8,000 ft. | 4 sp. |
| b) | July 5, " | Uintah Mts., " | Provo cañon | 9,000 ft. | 3 " |
| c) | Aug. 11 or 12, " | " " | Bear River cañon | 8,000 ft. | 3 " |

380

~~377~~ - *R. aureum*, Ph.

(745. 72. I. 552.)

on low stream banks. Called by the

Pah-Utah Indians, "Páup-si".

- | | | | | | |
|----|----------------|--|--------------------|-----------|-------|
| a) | May 11, 1868. | Bank of the Truckee, near Glendale, Nev. | | 4,500 ft. | 3 sp. |
| b) | " 27, " | Trinity Mts., Nev. | Cañon W. of Orance | 5,000 ft. | 3 " |
| c) | July 28, " | Ruby Valley, Nev. | | 6,000 ft. | 2 " |
| d) | June 23, 1869. | Parley's Park, Utah | | " " | 2 " |

380

~~378~~ - *R.*~~wasatch.~~~~R. malvaceum.~~

Apr. 22 & May 2, 1868. Wasatch Mts., Nev. Clear Creek cañon. 5,000 ft. 4 sp.

Tillaea myrsinites, Nutt.

See *Elatine*

It easily comes as a small very imperfect spec. of *Androsace* in Herb. Gr.
~~Tillaea~~ near Carson City, Nev.)

"Silvatica" is *S. sparsiflorum*, Nutt. (1799, 1859) which has
axillary flowers, stems more upright & branched - flowers small
(1/2" long) with short arching sepals

Crassulaceae.

382

379. - *Sedum Rhodiola*, DC. - (749. Fl. I. 556.) Sepals, petals & filaments of a deep maroon color; flowers occasionally perfect, with 10 stamens or 5 pistils. -

a.) Aug. 27-29, 1868. E. Humboldt Mts. ^{Nov.} Above Overland Ranch. 9,000 ft. 14 sp.

b.) Sept. 3, " " " Peak above Hummels. - 10,000 ft. 2 "

383. - *S. rhodanthum*, Gr. (Sill. Jour. XXXIII. 405.) Stem 6-14' high; leaves entire, oblong lanceolate, acute; flowers pale rose color;

Aug. 30-4, 1869. Uintah Mts, Utah. Bear River Cañon; stream banks. 9,000 ft. 13 sp.

384. - *S. stenopetalum*, Ph. - (749. Fl. I. 560.)

a.) July 7, 1868. Toiyah Mts, Nev. Granite foothills, E. of Austin. 6,000 ft. 3 sp.

b.) Aug. 4, " E. Humboldt Mts, " Ridge south of Stage Pass. 8,000 ft. 4 "

c.) Sept. 9, " " " Foothills of Sweet Valley 6,000 ft. 7 "

d.) June 26, 1869. Wahatch Mts. - " of Parley's Park. " " 8 "

385. - *S. Torreyi*, G. Don. (Tr. Ann. Ag. II. 205.) Leaves broadly ovate or

obovate (1-2" long) obtuse; flowers yellow, in a loose few-flowered corymb; petals oblong-lanceolate, twice longer than the ovate sepals, 1-nerved; stamens 10, nearly equaling the petals & attached to them near the base, one to the midvein of each & one near the margin. 2-4', rarely 6', high.

a.) Sept. 15, 1867. W. Humboldt Mts. ^{Nov.} Star Peak. Cliffs of limestone rocks. 9,000 ft. 8 sp.

b.) July 20, 1868. E. Humboldt Mts, Nev. Cañon above Camp Ruby 8,500 ft. 3 "

c.) Sept. 9, " " " Foothills of Sweet Valley 6,000 ft. 4 "

d.) May 27, 1869. Wahatch Mts, Utah. City Creek cañon 5,000 ft. 1 "

e.) July 4, " Uintah Mts, " Limestone Ridge above Parker cañon 7,000 ft. 2 "

f.) " 10, " Wahatch Mts, " Poor Cañon, north fork " " 5 "

g.) Aug. 12, " Uintah Mts, " Ridge above Bear R. cañon 10,000 ft. 3 "

290
386^a - *Callitriche autumnalis*, L. - (Gr. Man. 429.)

July 20, 1869. - Parley's Park, Utah

6,000 ft. 15 sp.

Number to 469 & increased by one.

Do not know the diff. - divide by length.

Ex

Haloragaceae.

386. - *Hippuris vulgaris*, L. (749. 71. I. 531.)
- a) Oct. 17, 1867. Humboldt Valley, Nev. Nelson Wimmermeca 5,000 ft. 2 sp.
- b) July 20, 1869. Parley's Park, Utah. 6,000 ft. 2 "
387. - *Myriophyllum verticillatum*, L. (749. 71. I. 529.)
- a) Aug. 1, 1868. Ruby Lake, Nev. 6,000 ft. 11 sp.
- b) " 13, 1869. Uintah Mts., Utah. Bear River cañon, slough. 8,000 ft. 14 "
388. - *Callitriche verna*, L. (Gr. Man. 424.)
- a) Sept. 1, 1868. Ruby Valley, Nev. 6,000 ft. 6 sp.
- b) Aug. 11, 1869. Uintah Mts., Utah. - Bear River cañon - slough. 8,000 ft. 12 "
- 389
388. - *C. verna*, L. - var. *ternstrois*
- a) July 3, 1869. Uintah Mts., Utah. Silver Creek cañon 6,000 ft. 7 sp.
- b) " 20, " Wahsatch Mts., " Parley's Park. " " 5 "

Lythraceae.

- 391
389. - *Ammannia latifolia*, L. (749. 72. I. 240.)
- Aug. 3, 1867. - Carson Valley, Nev. - River Bottom, Reed Station. 9 sp.

Onagraceae.

- 390
390. - *Epilobium alpinum*, L. (749. 72. I. 448.)
- a) Aug. 27-29, 1868. - E. Humb. ^{Nev.} Mts. - Peaks above Unkand Ranch. 9,000 ft. 8 sp.
- b) July 8, 1869. Uintah Mts., Utah. - Head of Park's Cañon. 8,000 ft. 2 "
- c) " 14, " Wahsatch Mts. - Cottonwood cañon 9,000 ft. 4 "
- d) Aug. 4, " Uintah Mts., Utah. - Head of Bear R. cañon " " 8 "
- 391
391. - *E. coloratum*, Michx. (749. 71. I. 449.) Embracing forms of *E. tetragonum*, L.
- a) July 14, 1867. - Truckee Meadows, at Glendale, Nev. (W. B. Bailey.) 9 sp.
- b) " 24, " Truckee Bottom, at the Big Bend. 10 "
- c) Aug. 5, " - Shore of Soda Lake, Carson Desert, Nev. 3 "
- d) Sept. 10, " W. Humb. ^{Nev.} Mts., Nev. - Unionville cañon 5,000 ft. 3 "
- e) June 30, 1868. Battle Mts. Nev. - West Cañon 6,000 ft. 3 "
- f) July 10, " - Diamond Valley, Nev. - near Diamond Spring. " " 4 "

~~3~~

- g.) July 25, 1868. Ruby Valley, Nev. 6,000 ft. 2 sp.
- h.) Aug. 26 & Sept. 2, " - E. Humb. Mts., Nev. Cañon above Orland Ranch. 7-8,000 ft. 7 "
- i.) June 24, 1869. - Wahsatch Mts., Utah. Parley's Park. 6,000 ft. 1 "
- j.) July 13, " " Cottonwood cañon, Fern fork. 7,000 ft. 4 "
- k.) " 15, " " " E. side of divide, above Cottonwood cañon. 8,000 ft. 2 "

394.

394. - *Epilobium paniculatum*, Nutt. - (789. Fl. I. 490)

- a.) Sept. 8, 1867, - W. Humb. Mts., Nev. Unionville cañon. (W.W. Bailey.) 6,000 ft. 6 sp.
- b.) " 9, " " " Same locality 5,000 ft. 1 "
- c.) Aug. 16, " Truckee Mts., Nev. Above Pyramid Lake. 7,000 ft. 3 "
- Sept. 27, 1868. Mt. Tobin, Nev. Above Humboldt cañon 6,000 ft. 9 "
- d.) July 2, " Reese River Valley, Nev. Near mouth. 5,500 ft. 3 "
- Sept. 14, " Huntington Valley, Nev. 6,000 ft. 4 "
- e.) " 20, " E. Humb. Mts., Nev. Cañon above Camp Ruby 7,000 ft. 1 "
- f.) " 30, " Ruby Valley, Nev. 6,000 ft. 1 "
- g.) May 14, 1869. - Foot hills near Salt Lake City. 5,000 ft. 4 "
- h.) May 31, 1869. Jordan Valley, Utah. Near Salt Lake City. 5,000 ft. 1 "
- Sept. 7, " Antelope Island. Salt Lake " 4 "
- i.) " 10, " Black Rock - S. end of Salt Lake " 4 "

~~395-397~~

395. - *E. angustifolium*, L. - (789. Fl. I. 44.) Banks of mountain streams. -

- a.) Sept. 4, 1867. - W. Humb. Mts., Wright's cañon. (W.W. Bailey.) 6,000 ft. 1 sp.
- b.) " 10, " " " Unionville cañon. 8,000 ft. 3 "
- c.) Aug. 1, 1868. - Ruby Valley, Nev. 6,000 ft. 4 "
- d.) July 10, 1869. - Wahsatch Mts., Nev. Provo Cañon. " " 1 "

396. - *E. obcordatum*, Gr. - (Proc. Am. Acad. A. & S. VI. 532.)

- a.) Aug. 31, 1868. E. Humb. Mts., Nev. Peaks above Orland Ranch 10,000 ft. 13 sp.
- b.) Sept. 7, " Clover Mts., " South Peak. " " 2 "

397. - *Zauschneria Californica*, Presl. (789. Fl. I. 446.) var.? - with orate, denticulate

leaves, (1-1 1/2 in length) villous underneath, the petals much deeper colored than the calyx. The ~~receptacle~~ ~~is situated within the calyx tube, and~~ ~~is~~ ~~found~~ ~~in~~ ~~these~~ ~~specimens~~ ~~is~~ ~~found~~ ~~in~~ ~~other~~ ~~forms~~ ~~near~~ ~~San~~ ~~Francisco.~~

- July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon 5,000 ft. 9 sp.
- " 17, " " " East Creek cañon, below Parley's Park. 6,000 ft. 10 "
- Aug. 19, " " " Cottonwood cañon 6,000 ft. 10 "

includes *G. metallica*, T & G. - Pods short peduncled or subsessile, more or less scattered along the branches, usually many seeded, sometimes 8-12 seeded - glabrous or with a minute deciduous pubescence upon the young capsules.

~~397~~⁴⁰¹ = 394(a+c) = alpine form, dwarf (1-6'), stem simple = var. *alpina*.

~~398~~⁴⁰² - a lower form (6-12'), simple or branched, clothed with a minute pubescent
pods usually rather few seeded.

G. casiana in herb. Torr. is quite pubescent throughout, otherwise = *var. alpina*

398

394. - *Clarkia rhomboides*, Dougl. - (748. 71. I. 516) 1-3° high; sparingly branched
fragile; hillside. Rarely met with in herbaria.

- a) June 27, 1868. - Mt. Robin Range, Nev. Cumberland Cañon. 6,000 ft. 6 sp.
b) " 22, 1869. Wahsatch Mts., Utah. - Parley's Cañon 5,000 ft. 4 "
c) July 10, " " " - Provo Cañon. 6,000 ft. 6 "
d) " 13, " " " - Cottonwood Cañon " 2 "

395. - *Epilobium paniculatum*, Nutt. ^{var.} - Almost wholly glabrous, with flowers
of twice the usual size.

- 1,394 { a) June 27, 1868. - Mt. Robin Range, Nev. Cumberland Cañon. 6,000 ft. 9 sp.
b) July 10, " Huntington Valley, Nev. " 4 "
c) June 7, 1869. - Antelope Island, Salt Lake. 5,000 ft. 1 "

396. - *Gayophytum ramosissimum*, Torr. - (748. 71. I. 513) Readily distinguished
by the short pods (2-3") on pedicels of the same length; flowers minute.

- a) July 31, 1867. E. Washoe Mts., Nev. Cañon above Stockton Station. 6,000 ft. 6 sp.
b) May 21, 1868. Humboldt Valley, near Orama, Nev. 5,000 ft. 1 "
c) June 3, " W. Humb. Mts., Nev. - Foot-hills below Unionville " 7 "
d) " 22, " Simpson Range, Nev. Spalding's Pass. " 1 "
e) July 6, " Monitor Valley, Nev. " 8 "
f) May 14, 1869. Foot-hills near Salt Lake City. " 1 "
g) June 7, " Antelope Island, Salt Lake " 2 "
h) July 22, " Foot-hills of Parley's Park, Utah " 6 "

400

397. - *G. racemosum*, Torr. - (748. 71. I. 514) Pods 6-10" long, nearly sessile, axillary
along the branches; flowers minute; nearly glabrous.

- a) June 23, 1868. Simpson Range, Nev. Spalding's Pass. 5,000 ft. 1 sp.
b) Aug. 26, " E. Humb. Mts., Nev. Cañon above Orland Ranch. 7,500 ft. 2 "
c) June 30, 1869. Foot-hills of Parley's Park, Utah 6,000 ft. 5 "

401

398. - *G. racemosum*, Torr. - var. ~~montanum~~ ^{caesum} (*G. caesum* ~~Torr.~~) A more ample, & reduced form; the
capsules & younger portions of the ^{plant} stems with a short appressed
pubescence; 1-1 1/2 high.

- a) July 24, 1868. E. Humb. Mts., Nev. Cañon above Camp Ruby 8,000 ft. 5 sp.
b) Aug. 29, " " " Peaks above Orland Ranch. 10,000 ft. 23 "
c) Sept. 12, " Clear Mts., Nev. Below North Peak 9,000 ft. 10 "

yet it is doubtful whether this is more than a variety of *G. racemosa*

399. - *Gayobryum diffusum*, Torr. ? (709. Fl. I. 573.) flowers 1 1/2-3" in diameter; capsules 3-6" in length, rather longer than the pedicel; calyx, capsules, & upper portions of the stem with a short spreading pubescence; shorter stamens with round polleniferous anthers; stigma capitate.

- a.) Sept. 10, 1867. W. Humb. Mts., Nev. Unionville cañon. - 5,000 ft. 4 sp.
 b.) June 27, 1868. Mt. Tobin Range, Nev. Cumberland cañon. 6,000 ft. 6 "
 d.) July 22, 1869. Foothills of Parley's Park, Utah " 11 "
 c.) " 20, 1868. E. Humb. Mts., Nev. Cañon above Ft. Ruby " 1 "

403. - *Oenothera biennis*, L. - (709. Fl. I. 492.)

Aug. 10, 1869. Wahsatch Mts., Utah. Provo cañon; rim Barker. 3 sp.

404. - *O. biennis*, L., var. *grandiflora*, Torr. - (709. Fl. I. 492.) The most common usual form.

- a.) July 17, 1867. Truckee Meadows, Br's Bend, Nev. (W. W. Bailey.) 4,500 ft. 4 sp.
 b.) Aug. 16, " Truckee Mts., Nev. Above Pyramid Lake 6,000 ft. 1 "
 c.) Sept. 8, " W. Humb. Mts., Nev. - Wrights Cañon " " 1 "
 d.) June 27, 1868. Mt. Tobin Range, Nev. Cumberland cañon " 1 "
 e.) " 30, " Battle Mts., Nev. " 2 "
 f.) July 7, " Smoky Valley, Nev. - Foothills, " 1 "
 g.) " 10, " Diamond Valley, Nev. " 1 "
 h.) " 28, " Ruby Valley, Nev. " 2 "
 i.) Aug. 7, " Huntington Valley, Nev. " 1 "
 j.) June 27, 1869. Wahsatch Mts., Utah. Mouth of Parley's cañon 5,000 ft. 1 "
 k.) July 10, " " " Provo cañon, (with 4000) 6,000 ft. 3 "

405. - *O. coronopifolia*, Torr. - (709. Fl. I. 495.)

- July 1, 1869. Foothills of Parley's Park, Utah. 6,000 ft. 11 sp.
 " 3⁺ " Uintah Mts., Utah. Packs Cañon " " 10 "
 " 10, " Wahsatch Mts., Utah. Provo cañon " " 2 "

403 - *Oreotheca albicaulis*, Nutt. - (709. 71. I. 495.)

- a) May 16, ¹⁸⁶⁹ 1869. Foothills near Salt Lake City. 5,000 ft. 6 sp.
b) June 12 & 14, " Stansbury Island, Salt Lake. " 3 "
c) July 10, " Wahsatch Mts., Utah. Provo canon " 2 "

404. - *Oz. albicaulis*, Nutt., var. *B. runcinata*, Eng. (~~Stt. Jour. XXXIV, 224~~)

- b) Aug. 19, 1868. Foothills of Ruby Valley, Nev. 6,000 ft. 5 sp.
a) July 7, " Smoky Valley, Nev. Foothills " 2 "

405

~~405~~ - *Oz. albicaulis*, Nutt., var. *trichocalyx*, Eng. A stout fleshy-stemmed form, early specimens almost acanulescent; flowers large; leaves tapering to a long petiole, often very variable in the same plant, ranging from broadly ovate & entire to lyrate-pinnatifid linear, with ~~uneven~~ ~~unequal~~ ~~linear~~; capsules 1-2 ¹/₂ woody, with thick base, curved.

- a) May 11 & 14, 1868. Southern foothills of Truckee & Trinity Mts., 5,000 ft. 3 sp.
b) " 21, " Humboldt Valley, Nev. Sandhills at Cooper's ferry 2 "
c) June 13 & 15, " Foothills of Douglas Range, 5,000 ft. 4 "

406

~~406~~ - *Oz. triloba*, Nutt. (709. 71. I. 499.)

- a) May 11, 1868. Truckee Valley, Nev. Foothills near Glendale 5,000 ft. 2 sp.
b) June 8, " W. Humboldt Mts., Nev. Unionville canon. " " 1 "
c) " 23, ¹⁸⁶⁹ 1869. Parley's Park, Utah. 6,000 ft. 12 "
d) July 5, " Uintah Mts., " Provo canon. 8,000 ft. 2 "

409

~~409~~ - *Oz. marginata*, Nutt. - (709. 71. I. 500.)

- a) May 19, 1868. Trinity Mts., Nev. Foothills west of Humboldt Lake. 5,000 ft. 3 sp.
b) June 8, " W. Humboldt Mts., Nev. Unionville canon. " " 5 "
c) " 24, " Mt. Robin Range; Bardman's Pass " " 1 "
d) May 16, 1869. Foothills near Salt Lake City " " 2 "
e) June 3, " Antelope Island, Salt Lake. " " 2 "
f) " 12, " Stansbury Island, " " 2 "

410

~~410~~ - *Oz. marginata*, Nutt. - A high mountain form with lanceolate acute or ovate obtuse petioled leaves, entire or slightly denticulate; corolla & calyx more or less deep purple, even before opening.

- a) July 20, 1868. W. Humboldt Mts., Nev. Ridge above camp. 8,000 ft. 15 sp.
b) " 24, " " " Divide above camp. 9,000 ft. 5 "
c) Aug. 16, " " " Peak above Sawville 10,000 ft. 2 "

Or. claviformis is doubtless *Or. scapoides*. There is no spec^{imen} of *Or. cardiophylla*, but from the description it is but one of its numerous forms. *Or. brevipes* is more distinct, with capsules 2-3 long, but is probably only a variety.

Or. virginica (apparently) collected by Smith in Walter's Valley + near
Virginia — May-July 1865

411² = 421

412

409. - *Oenothera clavaeformis*, Torr. (Frem. 2^d Rep. 314.) Flowers small, yellow; terminal leaflet cuneate or cordate at base; lateral ones often obsolete. The species probably includes both *O. breviflora*, Gr. & *O. cardio-phylla*, Torr. and perhaps also *O. scapoidea*, Nutt. - which is the oldest name.

- May 11, 1868 Truckee Valley, Nev. in its natural state 3 sp.
- a) Sept. 23, 1868. Holmes' Creek Valley, Nev. - 6,000 ft. 1 sp.
- b) May 21, 1869. Foothills near Salt Lake City. 5,000 ft. 4 "
- c) June 11, " Black Rock, S. end of Salt Lake 4,500 ft. 3 "
- d) " 15, " Carrington Island, Salt Lake " 1 "
- e) Aug. 24, " Wahsatch Mts., Utah. - Mouth of Amer. Fork Cañon. 5,000 ft. 1 "

413

410. - *O. clavaeformis*, Torr. - var. with much larger flowers ($\frac{1}{2}$ -1" in diam.), yellow, or more frequently pinkish white, occasionally with a large deep-purple spot at base of the petal; the prevalent Nevada form.

- a) Aug. 17, 1867. Truckee Valley, Nev. near the Big Bend. (W.W. Bailey.) 1 sp.
- b) Nov. 9, " " " " near Pyramid Lake, 1 "
- c) May 13, 1868. " " Foothills below Glendale. 7 sp.
- d) " 15+16, " Southern foothills of Trinity Mts., Nev. 2 "
- e) " 21, " Humboldt Valley - Coopers Ferry 4 "
- f) June 14, " Unionville Valley, Nev. Foothills. 3 "
- g) July 6, " Toiyabe Mts., Nev. Ridge above Austin 1 "

414

411. - *O. Nuttallii*, T. & G. - (749. 72. I. 506.)

Aug. 14, 1869. Wahsatch Mts., Utah. Lake shore above Parley's Park. 8,000 ft. 13 sp.

415. - *O. tanacetifolia*, Torr. & Gr. - (Beckwith's P.R.R. Rep. II. 121, t. 4.)

July 16, 1867. - Truckee Meadows, Glendale, Nev. (W.W. Bailey.) 3 sp.

416. - *O. heterantha*, Nutt. (749. 72. I. 507.) Leaves occasionally lyrate-lyrate-pinnatifid + 12-15' long; growing in damp or boggy places.

- a) June 13, 1868. Dwyer Range, Cornelly's Pass 6,000 ft. 3 sp.
- b) " 27, " Mt. Robin Range, Cumberland Cañon " 1 "
- c) July 6, " Toiyabe Range, Austin Pass. " 1 "
- d) June 24, 1869. Wahsatch Mts., Utah. Parley's Park. " 4 "

This is most nearly related to *Borithia*, Dougl. ^{being} misplaced in 7th. 41.

Zorr. 99

~~Cf. - *mar. sp.*~~

Apparently an annual or at most biennial

^{low}
This form includes both *oc. contorta*, Gr. + *pauciflora*, Nutt. - long narrow, linear, usually
linear leaves, + small flowers. The capsule ^{which are more or less round} have often a short pedicel which is more or
less connate with the base of the subind of leaf. This species like others of the
genus, is quite variable in size of flowers, pubescence, + foliage. *oc. squiloboides* ^{Walt} + *strig-*
ulosa, Torr. are to be referred to it.

oc. chamamensis, Gr. in Herb. Torr. seems to be the same

with larger flowers (4" in diam), ~~characterized~~ throughout with a short spread of pubes-
cence, leaves linear lanceolate, repandly toothed, sessile, - capsule sessile

414. - *Oenothera alyssoides*, H. & A. (709. 72. I. 511.) Flowers nearly white, varying to deep rose-color; calyx tube linear in fundibuliform, about equalling the lobes.

- a) Sept. 19, 1867. W. Humboldt Mts., Nev. near mouth of Cooper cañon. 5,000 ft. 2 sp.
 b) May 11 & 14, 1868. South foothills of Truckee & Trinity Mts., Nev. " 11 "
 c) " 30, " Humboldt Valley, Nev. near Ormana " 1 "
 d) June 13 & 23, " Grass Valley, Nev. Foothills of Dwyer range " 2 "
 e) July 6, " Toiyabe Range, Ridge above Austin 6,000 ft. 12 "
 f) June 12 & 14, 1869. Stanbury Island, Salt Lake 4,500 ft. 5 "
 g) " 20, " Promontory Point, " " 1 "

419 *alysoides*, var. ?
 415. - *Oe. micrantha*, Hornem. (708. 72. I. 509.)

- a) July 7, 1868. Monitor Valley, Nev. Foothills. 15 sp.
 b) June 11, 1869. - Black Rock, Salt Lake 2 "
 c) " 12, " Stanbury Island " 3 "

416. - *Oe. Boothii*, Dougl. - (708. 72. I. 509.) A rediscovery. - (W. W. Bailey.)
 a) Aug. 5, 1867. - Truckee Mts., Nev. Cañon above Pyramid Lake. 6,000 ft. 7 sp.
 b) Nov. 11, " Lake Range, Nev. Cañon above Winnemucca Lake. " 2 "

417. - *Oe. Dubautii*, Cav. - (708. 72. I. 510.) Varying somewhat in size of flowers & degree of pubescence. The species doubtless includes *Oe. parvula*, Nutt., *Oe. crotcha*, Hook. & *Oe. spiloboides*, Nutt., & *Oe. strigulosa*, ~~Nutt.~~ as given in Gray & Gray's Flora.

- a) May 14, 1868. South foothills of Trinity Mts. 5,000 ft. 5 sp.
 b) July 8, " Monitor Valley, Nev. Foothills. " 5 "
 c) June 7, 1869. Antelope Island, Salt Lake. " 10 "

418. - *Oe. strigulosa*, Cav. - (708. 72. I. 512.)

- a) May 2, 1868. Washoe Mts., Nev. Foothills near Carson City. 5,000 ft. 7 sp.
 b) June 3, " W. Humboldt Mts., " of Spring Valley Pass. 6,000 ft. 2 "
 c) " 23, " Dwyer Range, Foothills of Grass Valley 5,000 ft. 2 "

XXXV

C. insigniflora Lindl. as recognized, is so exceedingly variable that those comparatively glabrous, very small flowered forms might perhaps ~~also~~ be also included as well. But the absence of the somewhat tomentose pubescence, the reflexed valves & the very short calyx tube seem sufficiently distinctive. Flowers solitary in the axils of the cauline leaves from the base upward, calyx tube shorter than the lobes & than the (1" long) petals

Cf. with *intermedia*, which is No. 15362, Lyall's from Carlton Mts., on same sheet with Nuttall's "*C. lubriflora* × *occidentalis*" Oregon -

422

419. *Oenothera Andria*, Nutt. (708. 72. I. 512.) Flowers yellow; stems 1-4' high; capsules 4-8" long, often crowded upon the stems.

- a) June 24, 1868. Mt. Robin Range, Bardman's Pass. 6,000 ft. 9 sp.
 b) " 26, " " " " " " " 2 "
 c) July 9, " Monitor Valley, Mr. Roberts Station " 1 "
 d) " 10-28, " Foot Hills of E. Humboldt Mts., Ruby Valley 67,000 ft. 19 "
 e) Aug. 27, " E. Humboldt Mts. - Cañon above Ordland Ranch. 8,000 ft. 1 "
 f) July 9, 1869. Wahsatch Mts., Utah. Weber Valley 6,000 ft. 10 "

422

420. *O.* *Mesospema* var. sp. next to *O. decedentata*. Distinguished by its pedicelled clavate capsules + entire oblong leaves (character of seed coming?)

411

May 19, 1868. Trinity Mts., Foot Hills above Lovelock's Station. 5,000 ft. 14 sp.

~~420~~

~~421. *O.* *cabella*, Nutt. ~~var. sp.~~ var. .~~

- a) Aug. 3, 1867. Carson Valley, Mr. Reed's station - river bottom. 4 sp.
 b) " 17, " Truckee Valley, Mr. River bottom, at Big Bend (W.W. Bailey) 9 "

424

422. *Caura parviflora*, Dougl. (708. 72. I. 519.) Two fragments.

- a) Sept. 20, 1868. Humboldt Pass, Mr. Stream bank. 4 sp.
 b) June 14, 1869. Stansbury Island, Salt Lake. 4 "

425

~~423.~~ *Circaea alpina*, L. (708. 72. I. 52.) with the reddish size (4-10') + one-celled fruit of *C. alpina*, but with the slightly toothed hairs, trackless pedicels, & hispid fruit of *C. subotiana* - which is said to be a more eastern species.

- a) July 10, 1869. Wahsatch Mts, Utah. North fork of Paria Cañon, 7,000 ft. 21 sp.
 b) Aug. 19, " " " " Cottonwood cañon, Fern fork. 8,000 ft. 2 "

var gracilioria, = M. gracilentra, 7Hr. 165 contr. ⁵⁰⁶ 575-11mm

It much resembles M. micrantha, HK. but has more numerous seeds + ~~them~~ of the stamens are petaloid.

138 Torr. is a distinct species, collected in the valley south of Unionville not far from St. Louis. - named in Gray's Herb. 5. 13 - with bracte
low & diffusely branched in dense clusters - ^{anthers} stamens white - leaves lance-ovate. The
^{acuminately} corolla lobes with a few acute subreflexed lobes, margin revolute, strongly
monodiflorous axillary, 2-4 long, subsessile - calyx lobes 5 pleat, petals 5, stamens
about 15 or filiform filaments - capsule ovate (2" long) few seeded.

Torr. had put all of his like this in M. ornata.

Loasaceae.

- 426 - *Mentzelia albicaulis*, Dougl. - (P. & R. Fl. I. 534.) ^{Petals} ~~flowers~~ light yellow, but little extending the calyx.
- a.) May 13, 1868. Foothills of the Truckee, above the Big Bend. 5,000 ft. 4 sp.
 - b.) " 14, " Trinity Mts. Foothills above Humboldt Lake " 3 "
 - c.) June 10 & 14, " W. Humboldt Mts., Foothills near Unionville " 4 "
 - d.) July 24, " E. Humboldt Mts., Nev. Divide above Camp Ruby 8,000 ft. 1 "
 - e.) June 15, 1869. Carrington Island, Salt Lake 4,500 ft. 1 "
- 427 - *M. albicaulis*, Dougl. - var. with the flowers somewhat capitate, petals 2-3 times longer, deep yellow with an orange base; the same as the *Veitchiana*, Kell. in Proc. Calif. Acad. II. 99. Frequent in western Nevada. Foliage very variable.
- a.) July 29, 1867. Truckee Valley, Nev. near the Big Bend. (W. W. Bailey.) 7 sp.
 - b.) May 20, 1868. Foothills of Washoe Mts., near Carson City & Washoe City. 20 "
 - c.) June 6 & 10, " " near Unionville, W. Humboldt Mts. - 8 "
- 428 - *M. albicaulis*, Dougl. - var. *integrifolia*. Stem more or less pubescent, 1-2° high; leaves ovate, oblong, or oblong lanceolate, sessile, entire or evenly toothed or pinnatifid; flowers & fruit as in the ordinary *M. albicaulis*.
(^{plants in weak,})
A well marked form, but with no constant characteristics that can be considered specific. It is Dr. Vasey's No. 195. H. & A. 571, 949. ⁶⁶³
- a.) July 20, 1868. E. Humboldt Mts., Nev. Cañon above Camp Ruby. 6,500 ft. 3 sp.
 - b.) June 4, 1869. Antelope Island, Salt Lake 5,000 ft. 2 "
 - c.) " 22, " Wahsatch Mts., Utah. - Parley's Cañon 6,000 " 2 "
 - d.) July 1, " Parley's Park, " Foothills 6,000 " 1 "
 - e.) " 10, " Wahsatch Mts., " Provo Cañon, North fork " 2 "
- 429 - *M. congesta*, Nutt. - (T. & G. Fl. I. 534.) ^{Rare.} Lower leaves linear lanceolate, entire or pinnatifid toothed; petals yellow, with deep orange colored claw, little longer than the calyx lobes; stamens about 20; seeds 3 on each of the 4 placentae.
- July 7, 1868. Toiyabe Mts., Nev. Foothills E. of the Austin Pass. Camp. 2 sp.
- 430
~~429~~ - *M. laevicaulis*, Torr. - (T. & G. Fl. I. 535.)
- a.) Aug. 1, 1867. - Truckee valley, near the Big Bend. (W. W. Bailey.) 9 sp.
 - b.) Sept. 19, " W. Humboldt Mts., Nev. Coyote cañon. 3 "
 - c.) Aug. 30 & 4, 1868. Foothills of Ruby Valley. - Nev. 2 "
 - d.) Sept. 20, " Humboldt Pass, Nev. 1 "
 - e.) June 20, 1869. Promontory Point, Salt Lake. 1 "

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Cactaceae.

431 *Echinocactus mupsoni*, Eng.
 429 - *Hamillaria* (*Coryphantha*) Eng. -

- a) June 25, 1888. Mt. Robin Range. Ridge above Cumberland 5,000 ft. 3 sp.
 b) " 30, " Battle Mts, Nev. West peak. " " 1 "
 c) Toiyabe Range - (Mr. Wilson) 2 "

432 *O. Missouriensis*, DC. (74. 71. I. 555.) Frequent on dry foothills ^{+ cañon bottom} in Utah.

- a) June 30, 1869. Foothills of Parley's Park - flowers 6,500 ft. 8 sp.
 b) Aug. 20, " Wahsatch Mts, mouth of Cottonwood cañon, 8 "

434 - *O. hystericina*, Eng. & Big. - (Whitf. Rep. R.R. IV, 44, p. 15.) Abundant in the dry valleys of north-middle Nevada. Flowers sulphur-yellow or rose color, resembling those of *O. Missouriensis*, DC.

- a) June 24+27, 1868. Regan's Valley, Nev. Flowers, etc. 8 sp.
 b) July 7, " Monitor Valley, Nev. 7 "
 c) Aug. 4, " E. Humboldt Mts., Nev. South of Stage Pass. 2 "

432 - *O. Missouriensis*, DC. - var. ?

July 28, 1869. Wahsatch Mts, Utah. Divide at Wahsatch Station. 4 sp.

433 - *O. fragilis*, Nutt. - (74. 71. I. 555.) Seen only in Utah Valley.

- a) July 12, 1869. Mouth of American Fork cañon 3 sp.
 b) Aug. 20, " " Cottonwood cañon 6 "

436 - *O. pulchella*, Eng. - *W. pubescens*. Frequent in the valleys of western Nevada.

- a) Aug. 28, 1867. Humboldt Valley, near Humboldt Lake 1 sp.
 b) May 19+23, 1868. " " + Foothills of Trinity Mts. 3 "
 c) June 11+22, " Unionville Valley, Nev. 4 "
 d) July 1+2, " Reese River Valley, near mouth 2 "
 e) " 7 " Monitor Valley, Nev. 2 "

A very hard zone species; flowers often 50 or more upon a single plant. 3-10' in height. The largest number of annual rings counted in a stem was 25.

Er

XXXVI

Nothing, as near as Erigeron

Probably better be considered 2 officinalis, with which the accounts will
enough as to in volumes, & which HK refers to conclini

Ficoideae.

437. - *Sesuvium Portulacastrum*, L. (Gr. Man. 97.) leaves spatulate ^{strongly} ~~strong~~ & ~~obovate~~
as in *S. pentandrum*;

- a) July 14, 1867. Truckee Meadows, or Glendale. (W. W. Bailey.) 125 ft.
- b) May 15, 1868. Hot Spring Mts., near. Moist alkaline Bank at Hot Spring 4 "

Umbelliferae.

438. -

June 28, 1869. - Wahatch Mts., ridge above Parley's Park, Utah. 7,000 ft. 85 ft.

439

~~438~~ - *Cicuta maculata*, L. - (785. 71. I. 610.)

- a) July 19, 1867. - Truckee Meadows, near Glendale ^{near} (W. W. Bailey.) 15 ft.
- b) " 10, 1868. - Diamond Valley. Nev. - Spring bank 6,000 ft. 1 "
- c) Sept. 26, " Thousand Spring Valley, Nev. - Stream bank " 1 "

~~439~~ *Ligusticum acapulcense*, Gr. (Pon. A. Acad. S. S. VII. 247.)

- a) July 31, 1868. - Uintah Mts., Utah. Bear R. cañon - meadow. 8,000 ft. 15 ft.
- b) Aug. 7, " same locality 4 "

440. - *L. apifolium*, Gr. - (Cynapium, Nutt. - 789. 71. I. 640.)

- a) July 14, 1869. - Wahatch Mts., Utah. Above Cottonwood Lake. 9,000 ft. 15 ft.
- b) " 20, " " " Peak above Parley's Park. 8,000 ft. 2 "
- c) Aug. 1, " Uintah Mts., Utah. Bear River Cañon, Sangre de Cristo " 2 "

457

~~441~~ - *Arctostaphylos Gmelini*, ? var. *nuda*. - Alpine, 1-2°, ^{mountain} ~~mountain~~ ^{plants} ~~plants~~ ^{minute} ~~minute~~ ^{with} ~~with~~ ^{immature} ~~immature~~ ^{possibly} ~~possibly~~ ^{distinct} ~~distinct~~.

- a) Aug. 9, 1869. - Uintah Mts., Utah. Divide at head of Bear R. cañon. 10,000 ft. 25 ft.
- b) " 10, " " " Peak west. - 11,000 ft. 3 "

[Faint, illegible text covering the page]



4
4

~~Cordantrum sibiricum, d.~~
~~449. - Common~~

~~Oct. 11, 1867. Unionville Valley, Nev. - ditch bank. 5,000 ft. 4 sp.~~

440. - *C. cairdneri*, B + H. - (*E. diamia*, 749. 72. I. 612.) Stems very variable; 1-3 pinnate, segments entire or lobed, short or long linear. The root an important article of food to the Indians - known as "Yeji" or "Yeji-ab".

a) Oct. 1, 1867. Dunfer Range, near Granite Peak canon 5,000 ft. 4 sp.

d) June 23, 1868. " " Foot hills of Cross Valley " " 2 "

b) May 23 + 27, " W. Humboldt Mts., Nev. Peak east of Orana 6,000 ft. 1 "

c) " 27, " Trinity Mts., Nev. near Orana " " 1 "

e) July 6, " Toiyabe Range, above Austin " " 3 "

f) " 10, " Diamond Valley, Nev. " " 2 "

g) " 20, " E. Humboldt ^{Mts.} Ridge above Camp Bailey 6,500 ft. 3 "

441. - *C. cordatum*, Nutt. (*Thaspium* ^{trifoliatum} 749. 72. I. 615.)

June 23, 1869. Parley's Park, Utah. Creek bank. 6,000 ft. 1 sp.

442. - *Pium lineare*, Mx. - (749. 72. I. 611.) Leaves ranging from nearly entire to pinnate.

a) July 29, 1867. - Mucker Valley, at the Big Bend (w. L. Bailey) 3 sp.

b) Aug. 20, " " " 1 "

c) July 29, 1868. Ruby Valley, Nev. 1 "

d) Aug. 12, 1869. Weber River bottom, Utah. near Coalville. 2 "

⁴⁴²
443. - *S. angustifolium*, ~~Nutt.~~ (*S. pupillum*, Nutt. - 749. 72. I. 611.)

a) July 10, 1868. Diamond Valley, Nev. Spring bank. 6 sp.

b) " 30, " Ruby Valley, Nev. " 9 "

c) Sept. 20, " Humboldt Pass, warm Spring. 3 "

d) Oct. 6, " Malade River Valley - ^{Utah.} Ashley Station. Spring bank. 3 "

e) July 12, 1869. Jordan Valley, Utah. Cottonwood creek. 2 "

444. ³ - *Pimpinella apiodora*, Gr. - (Proc. Am. Acad. & S. VII. 345.)

Sept. 10, 1868. Clow Mts. Nev. Head of cañon below S. Peak. 9,000 ft. 4 sp.

the absence of involucres ~~of~~ is pretty constant

~~CX~~ Call in accidentals to
as, sometimes occur they stand. Cray's single species
look different.

In Nuttall's own spec^s in herb. some the involucres are
but 1-1/2" long - & stem subpubescent

XXXX

Very near *C. alpinus* - but distinguished by the broader membrane, very unequal
involucres & the smaller more compact heads of white flowers - papae much
more coriaceous, comparatively thin & a distinct variation in the examination of the
corolla lobes as usually found.

A well marked var. ~~C. Fendleri~~ *C. Fendleri* is most readily
distinguished by the ~~pubescent~~ hebaeous involucres & yellow flowers.

444 - *Osmorhiza* ~~viridis~~, Torr. ? (N. Whiff. R.R. Rep. IV. 93.) Apparently passing into *O. bristly*, DC., of which it is probably only a variety. Involucres + involucels ^{occasionally} present, though small + pubescence variable, as well as shape + section of leaflets.

- a) May 29, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. 6 sp.
- b) July 6, " Uintah Mts., Utah. Poro cañon. 7,000 ft. 8 "
- c) " 10, " Wahsatch Mts., " North fork of Poro cañon. " 1 "
- d) Aug. 12, " Uintah Mts., Utah. Ridge above Beer R. cañon. 9,000 ft. 3 "

445 - *Thymus occidentalis*, Nutt. (Glycosma, Nutt. Bot. 72. I. 639.) Variable in size + section of leaves, in pubescence, in also in length of the fructiferous pedicels - including *M. Solandix*, etc.

- a) June 8, 1869. W. Humb. Mts., Unionville cañon. 7,000 ft. 6 sp.
- b) " 27, " Mt. Tobin Range. Nev. Cumberland cañon. 6,000 ft. 2 "
- c) July 24, 29, " E. Humb. Mts., Nev. - Cañons above Camp Ruby. 7,000 ft. 2 "
- d) Aug. 19, " " " Fremont's Pass, 6,500 ft. 2 "
- e) June 29, 1869. Wahsatch Mts., Utah. Ridge above Parley's Park. 7,000 ft. 2 "

446 - *Cymopterus* nov. sp.

- a) July 27, 1868. E. Humb. Mts., Nev. Peak above Ft. Ruby. 9,000 ft. 7 sp.
- b) " 30, " " " Peak above Sawmill. 10,000 ft. 16 "
- c) Aug. 31, " " " Peak above Orland Ranch. " 8 "

447 - *C. montanus*, Nutt. - var. *glaberrimus* (749. 72. I. 624.) Stamens few or very few + central, or singly - the whole involucre concealing the broad membranaceous involucre + involucels; pedicels 1-3, equaling the leaves; carpophore very slender, 2-cleft to base; vittae, 3 in the intervals, + 3-4 on each side of the commissure, opposite the edges of the involucre semilunar sessile; fruit 5-7" long, wing 2-3" broad.

- Apr. May 29, 1868. - Mt. Davidson + Carson Valley, Nev. 5-7,000 ft. 72 sp.
- May 19, " Trinity Mts., Nev. Hills above Parkers station. 6,000 ft. 2 "

Small described the species from ~~a~~ young flowering specimen, with
which this agrees. Peduncles elongating in fruit

X-

The turbinatus is a stouter plant with rigid coarsely dissected
leaves

XXX

near *C. montanum* - but distinguished by involucre, yellow flowers, less
winged fruit, & habit.

1, 2, 454 = *repens* - v. d. *repens*

x

~~Approachis~~ ^{Approachis} ~~nearish~~ ^{nearish} ~~which is a plant~~ ^{which is a plant}
by N.H. in Selkirk ~~approachis~~ ^{approachis} ~~which is a plant~~ ^{which is a plant}

Probably - but no spec. in Herb. Cal. ~~Spec.~~ Spec. of dioid from the Galton + Gassard
Mts. are apparently the same but are only in flower + the large leaves are bi-pinnately
divided.

Fruit slightly pubescent when young - plant otherwise glabrous. Leaves not at all gland

XL

Clearly resembling *P. carniolicum*, but distinguished by the long fruit, narrow
upward, + the narrowly linear leaflets of the involucres.

3 Same! Look in Ledebour fl. Ross. + see if *P.*
latifolium, DC. has come up. - No - Good yet.

The large loose form not in Herb. Cal.

456

sparsipinnata~~457~~ - *Angelica glaucoflexa*, Nutt. ? (709. 72. I. 620.)

- a) July 20, 1869. Wahsatch Mts., Utah. Cañon near Parley's Pass. 7,000 ft. 1 sp.
 b) Aug. 7, " Uintah Mts., Utah. Bear R. cañon. 6,000 ft. 4 "
 c) " 18, " Wahsatch Mts., Cañon above Parley's Pass. 7,000 ft. 1 "

458. - *Ferula multifida*, B. & H. - (*Leptobenia multifida*, Nutt. - 189. 72. I. 630.) Very frequent on dry foothills; root large, fusiform; involucre deciduous. "Tót-sif"; "heop nosak".

- a) May 2, 1868. Foothills near Carson City, Nev. 5,000 ft. 2 sp.
 b) " 27, " " of Trinity Mts., near Orana. " 1 "
 c) June 26, " Mt. Tobin Range, Cumberland Cañon " 2 "
 d) Aug. 6, " E. Humboldt Mts., Nev. Cañon above Camp Riley 7,000 ft. 1 2 "
 e) May 18, 1869. Wahsatch Mts., Utah. City Creek cañon 5,000 ft. 2 "
 f) Aug. 1, " " " Parley's Pass 6,000 ft. 1 "

465

~~459~~ - *Pencedarum* ~~latifolium~~ *Nov. sp.*

- a) May 19 + 20, 1869. - Wahsatch Mts., Utah. City Creek cañon 5,000 ft. 11 sp.
 b) June 24, " " " Ridge above Parley's Pass 6,500 ft. 6 "
 c) " 26, " " " Foothills " 6,000 ft. 6 "

small; (P. latifolium, Nutt. (709. 72. I. 625.))

460. - *Pencedarum latifolium*, Nutt. - (709. 72. I. 625.) Root long + cylindrical; vittae obscure, interrupted.

- a) June 24 + 25, 1869. Mt. Tobin Range, foothills of Carson's Valley 6,000 ft. 2 sp.
 b) " 25, " " " Peak above Cumberland 6,000 ft. 4 "

459

~~461~~ - *P. sativum*, B. & H. - (*Pastinaca sativa*, L.) Introduced.

July 24, 1869. Parley Valley, Nev. - Stream bank. 2 sp.

466

~~462~~ - *P. nudicaule*, Nutt. - (709. 72. I. 626.) Quite variable in size & habit. The earliest flowering plant at Carson City. - Very frequent in U. Nevada.

- a) Mar. 26, 1869. - Near Carson City, Nev. Saybrook Valley 10 sp.
 b) Apr. 22, " Foothills near Carson City, 6 "
 c) May 27, " Trinity Mts., Nev. Peak west of Orana 2 "
 d) June 10, 1869. " W. Humboldt Mts., Nev. above Unionville. 2 "

2) var. megacarpum. - glabrous throughout, fruit 2-3 times larger than
the usual form (6" x 4") - 1-2" high. - Vittae simple + conspicuous in the
intervals, a central point in the commissure.

Approaches nearly *P. dasy-carpum*, which includes *P. tomentosum* of
Bth. - but differs in the linear dentulate involucre leaves, more capitate
umbels, + less tomentose fruit, Vittae 6 in the commissure, 3-4 in
each interval. Collected by Nuttall on Niobrara plains, by Hayden in Nebraska, by
Newberry in N. Mexico, by Nicolson at Virginia City.

= glauculacum, 7, 7, 1 ! cf. +

P. trichocarpum - var. platycarpum, Torr. in lit - fruit open in Herb
Torr. - fruit 6" x 4", 1 1/2" high. - also flowering specimen Nuttall's

220
Glabrous. - Fruit varying in breadth, frequently much thickened. Whole
plant with a strong rank odor. Root not eaten by hidians. - Made
in Aug in timber the capsule was unequal (1/4 - 3/8) in flower + fruit
however - The only spec that is certainly same as mine is Bayer 220, in some
respects certainly a *P. dasy-carpum*. - Very broad, the involucre

464

~~464~~ - *Peucedanum* ^{*millipolium*} ~~*funiculaceum*, Nutt.~~ (7. 2. 72. 2. 62.)

June 3, 1869. Antelope Island - Salt Lake. 5,000 ft. 6 sp.

467

~~467~~ - *P. macrocarpum*, Nutt. - (7. 2. 71. 2. 62.) ^{cap} A specimen has yellow flowers

+ more glabrous involucels, but is probably the same

a) May 24, 1866. Trinity Mts, Nev. Ridge - base of Orman. 2 sp.

b) June 3, " W. Humb. Mts., Nev. - foot hills below Unionville 1 "

c) " 19, " " " 3 "

468

~~468~~ - *P. villosum*, Nutt. - Mts. in Herb. Gr. - "Tai-Ki".

a) Apr. 29, 1866. Washoe Mts., Nev. - Mt. Davidson. 7,000 ft. 8 sp.

b) May 16, 2, " Trinity Mts., Nev. - foot hills 5,000 ft. 8 "

c) June 30, " W. Humb. Mts., Nev. " 5-6,000 ft. 3 "

d) " 30, " Battle Mt. Nev. - High Divide 7,000 ft. 1 "

462

~~462~~ - *P. tridactylum*, Nutt. ^{*goproleum*, var. *acuminatum*} - a dwarfed alpine form. Villae inconspicuous, ^{var. *acuminatum*} glabrous. Calyx teeth ^{var. *acuminatum*}

a) July 27, 1868 E. Humb. Mts., Nev. Peak above Ft. Ruby. 9,000 ft. 4 sp.

b) Aug. 22, " " " Peak below Camp Ruby. 8,000 ft. 6 "

463

~~463~~ - *P. simplex*, M. H. Wats. - no description. a single flowering specimen of Nuttall's collection, from "Rocky Mts" + another recent one from Montana

a) May 17-29, 1869. Foot hills near Salt Lake City. 5,000 ft. 7 sp.

b) June 30, " Wahatch Mts, Utah. Ridge above Parley's Park. 6,500 ft. 3 "

c) July 19, " near same locality 1 "

461

~~461~~ - *P. tridactylum*, Nutt. ^{*goproleum*} - subalpine + alpine, -

a) July 5, 1869. Uintah Mts, Utah. Divide between Park & Duchene Rivers. 9,000 ft. 5 sp.

b) " 15, " Wahatch Mts. " " ridge above Cottonwood. " " 1 "

c) " 20, " " " Peak west of Parley's Park " " 8 "

d) Aug. 12, " Uintah Mts. " ridge above Bear R. cañon " " 1 "

469. *Heracleum lanatum*, Mx. - (749. 72. 2. 632.) Frequent in mts. of Utah.

- a) Oct. 1, 1868. Goose Creek Mts., Utah. Emigrant Pass. 6,000 ft. 5 1/2 ft.
 b) July 10, 1869. Wahsatch Mts., Utah. Provo Cañon " " 4 "
 c) " 20, " " " Cañon above Parley's Pass " 1 "

470. *Conium maculatum*, L. - Oct 11/69 - Unionville Valley, Nev. Ditch bank. 2 ft. 1 ft.

Cornaceae

471. *Cornus stolonifera*, Mx. - (749. 71. 3. 650.) Frequent on mountain streams at a low altitude; 6-8° high. Berries white, becoming black color.

- a) Sept. 4, 1867. W. Humb. Mts., Nev. Wright's Cañon. (W. W. Bailey.) 5,000 ft. 7 1/2 ft.
 b) June 6th, 1868. " " Unionville Cañon. 5,500 ft. 9 "
 c) " 27, " Mt. Robin Range, Nev. Cumberland Cañon " " 4 "
 d) Aug. 1, 1869. Ruby Valley " " " " 6,000 ft. 6 "
 e) May 18, 1869. Wahsatch Mts., Utah. City Creek Cañon 5,000 ft. 2 "
 f) July 7, " Uintah Mts., Utah. Provo Cañon 7,000 ft. 3 "
 g) Aug. 20, " Wahsatch Mts., " Cottonwood Cañon. Infinit. flowers. 4 "

Caprifoliaceae

472. *Sium borealis*, Gron. - (749. 72. 2. 2.)

July 31 & Aug. 2, 1869. Uintah Mts., Utah. Bear R. Cañon. 8,000 ft. 18 ft.

473. *Symphoricarpos montanus*, HBK. (Kth. Syn. III. 72.) Very variable; leaves soft-pubescent & ciliate, or wholly glabrous, acute or obtuse, entire or lobed, orbicular to ovate lanceolate, 1/4" - 1 1/2" in length; flowers with corolla 2-4" long, nearly glabrous within, light pink, axillary, distant along the leafy branch, or in a somewhat close naked spike; fruit globular or oblong, white; a straggling shrub, 2-5° high, very frequent upon the mountains. Probably includes *S. microphyllum* HBK., as well as *S. glaucescens* - + ^{also} *S. rotundifolius*, Gr.

- a) Aug. 5 " Same location? (W. W. Bailey.) 6,000 ft. 3 1/2 ft.
 b) Aug. 16, 1867. Truckee Mts., Nev. - Above Pyramid Lake 7,000 ft. 6 1/2 ft.
 c) Sept. 9, " W. Humb. Mts., Star Peak 9,000 ft. 7 "
 d) June 27, 1868. Mt. Robin Range, Cumberland Cañon 6,000 ft. 4 "
 e) " 30, " Battle Mts. - West Cañon " " 4 "
 f) July 6, " Toiyabe Mts., Nev. - above Austin " " 5 "
 g) " 20, " E. Humb. Mts. - Cañon above Camp Ruby 7,000 " 4 "
 h) Aug. 4, " " " Peak south of Stage Pass 8,000 " 2 "
 i) " 8, " " " One divide above Camp Ruby " " 1 "

Cf. with *S. racemosa* —
is *S. racemosa* but reading *S. racemosa* —

- j) Sept. 8, 1868. Closer Mts. Mv. Ridge above Sweet Valley 8,000 ft. 4 sp.
- k) May 28, 1869. Wahsatch Mts., Utah. City Creek cañon. 5,000 ft. 2 "
- l) July 6, " Uintah Mts., Utah. Ridge above Buchanan River 9,000 ft. 3 "
- m) " 26, " Wahsatch Mts., " Silver Creek cañon. 6,000 ft. 3 "

474. - *Lonicera involucrata*, Banks. - (749. 71. II. 9.) Bracts reflexed in fruit, and with the berries deep purple.

- a) Aug. 26 + 27, 1868. E. Humb. Mts., Nev. Cañon & Lake above Orland Ranch. 8,900 ft. 9 sp.
- b) June 24, 1869. Wahsatch Mts., Utah. Above Parley's Park. 7,000 ft. 2 "
- c) July 7, " Uintah Mts., " Provo cañon " 1 "

475. - *L. ciliata*, Muhl. ? var. - Perhaps a distinct species. Wholly glabrous & without ciliation. In the absence of flowers, leave it a var.

Aug. 14, 1869. Wahsatch Mts., Utah. Cottonwood cañon. 9,000 ft. 15 sp.

476. - *Sambucus pubens*, Mx. - (749. 71. II. 13.) Leaves variable, broad elliptic, ovate or oblong lanceolate, sometimes laciniately serrate at the apex with a long acumination, pubescent or glabrous beneath.

- a) May 18, 1869. Wahsatch Mts., Utah. City Creek cañon. 6,500 ft. 6 sp.
- b) June 28, " " " Ridge above Parley's Park. 7,000 ft. 3 "
- c) Aug. 12, " Uintah Mts., " Ridge above Bear R. cañon 9,000 ft. 2 "
- d) " 14, " Wahsatch Mts., " Above Parley's Park. 8,000 ft. 3 "

477. - *S. glauca*, Nutt. - (749. 71. II. 13.) Distinguished from *S. canadensis* by the more lanceolate leaflets, the short straight serratures, and the glaucous blue fruit, which is also more pleasant to the taste. Leaflets often with foliaceous stipellate appendages, & occasionally sub-bipinnate.

- a) Sept. 7, 1869. W. Humb. Mts., Nev. Wright's cañon. (w. w. Bailey.) 7,000 ft. 6 sp.
- b) " 19 " Same locality. 3 "
- c) July 7, 1868. Monitor Valley, Nev. - Foot Hills. 6,000 ft. 2 "
- d) " 24, " E. Humb. Mts., Nev. Cañon above Camp Ruby. 7,000 ft. 1 "
- e) Aug. 1, " Ruby Valley, Nev. 6,000 ft. 2 "

Stitch collected in Warner Valley (Ariz. Torr.) a species of *Stachys* with
basally serrated leaves, (perfectly glabrous) flowers all diametric + fruit
naked or occasionally a few hairs on base

Stachys trichocarpa

S. multiflora Nutt. (Culcit. II. 27) maybe one of these

~~*Stachys trichocarpa*~~

distinguished from last by few hairs on base of leaves

Rubiaceae.

478. - *Galium bifolium*. - nov. sp.?

- a.) May 27, 1868. - Trinity Mts., Nev. - Shade of granite rocks. - 5,000 ft. 10 sp.
 b.) June 29, " Ridge west of Battle Mt., near Summit Spring - Shade of Junipers. - 6,000 ft. 6 "
 c.) July 20, " E. Humb. Mts., Nev. Ridge above Camp Ruby - Shade of Mt. Mahogany. - 7,000 ft. 25 "
 d.) June 24, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park. - 6,500 ft. 15 "

479. - *G. aparina*, L. - (Tr. Fl. II. 20.)

- a.) May 9, 1868. - Steamboat Springs, Nev. near Washoe City. - 5,000 ft. 6 sp.
 b.) May 20 & 27, " Trinity Mts. - foot hills. " 2 "
 c.) June 3-10, " W. Humb. Mts., Nev. - Foot hills. " 4 "
 d.) July 20, " E. Humb. Mts., Nev. Cañon above Camp Ruby 6,000 ft. 1 "
 e.) May 17, 1869. - Wahsatch Mts., Utah. + City Creek cañon 5,000 ft. 3 "
 f.) June 3, " Antelope Island - Salt Lake " 1 "

480. - *G. Bohornieri*, Gr. - (Proc. Am. Acad. A. S. II. 534.) - Leaves broadly ovate;

flowers peduncled; peduncles not reflexed; fruit very hispid, 1" in diameter

- July 31, 1867. Washoe Mts., Nev. East of Virginia City. 7,000 ft. 8 sp.
 Sept. 15, " W. Humb. Mts., Nev. - Star peak 8,000 ft. 10 "
 May 23, 1868. " " " East of Ormsby 5,000 " 1 "
 July 27, " E. Humb. Mts., Nev. Peak above St. Ruby 9,000 ft. 1 "

481. - *G. hypatrichium*, Gr. - (Proc. Am. Acad. A. S. II. 534.) -

- a.) July 27, 1868. E. Humb. Mts., Nev. Peak above St. Ruby. 9,000 ft. 7 sp.
 b.) Aug. 4, " " " Peak south of Stage Pass. 8,000 ft. 1 "
 c.) " 10, " " " Ridge above Sawmill. 9,000 ft. 4 "
 d.) June 14, 1869. Pilot Rock Point. South end Salt Lake 5,000 ft. 5 "
 e.) July 13, " Wahsatch Mts., Utah. Fern fork, Cottonwood cañon. 7,000 ft. 1 "
 f.) " 14, " " " Above Cottonwood Lake 9,500 ft. 1 "
 g.) Aug. 19, " " " Same locality as (e.) 3 "

42

4

2

4
4

4

4

4

442. - *Galium triflorum*, L. - (749. 77. II. 22.)

- a.) June 29, 1869. Pauley's Park, Utah 6,000 ft. 1 sp.
- b.) July 10, " Wahsatch Mts., Utah. Provo Cañon " 5 "

443. - *G. triflorum*, Mx. - (7. 75. 71. II. 23.)

- a.) Sept. 9, 1868. Clear Mts., Nev. - Draining Ranch. 6,000 ft. 3 sp.
- b.) July 7, 1869. Uintah Mts., Utah. - Provo cañon. 7,000 ft. 4 "
- c.) Aug. 16, " Wahsatch Mts., " Cañon above Pauley's Park. 6,000 ft. 1 "

444. - *G. boreale*, L. - (7. 79. 71. II. 25.)

- a.) Sept 1, 1868. Ruby Valley, Nev. near Orland Ranch. 6,000 ft. 4 sp.
- b.) " 3, " E. Humb. Mts., " Cañon above Hummenan's. 6,500 ft. 5 "
- c.) June 22, 1869. Wahsatch Mts., Utah. Pauley's Cañon 5,000 ft. 3 "
- d.) July 17, " " " East creek cañon 6,000 ft. 3 "
- e.) " 27, " " " Echo cañon " 2 "

asperum, Gr. - with purplish flowers as in 6350 1202
445. - *G. triflorum*, Mx. - with narrow lanceolate leaves, nearly or brownish purple flowers

Aug. 1, 1868. Ruby Valley - Nev. - Shaded bank of Can Creek. 6,000 ft. 3 sp.

Valerianaceae.

446. - *Valeriana dioica*, L., var. *sylvatica*. (V. *sylvatica*, Rich. - 749. 71. II. 47.)

- a.) July 20, 1868. E. Humb. Mts., Nev. - Cañon above Camp Ruby. 7,000 ft. 11 sp.
- b.) " 27, " " " Peak above Ft. Ruby. 9,000 ft. 7 "
- c.) Sept. 2, " " " Cañon above Orland Ranch. 7,000 ft. 3 "
- d.) June 24, 1869. Wahsatch Mts., Utah. Cañon above Pauley's Park. 6,500 ft. 1 "
- e.) July 4, " Uintah Mts., " Provo Cañon 7,000 ft. 1 "
- f.) Aug. 26, " Wahsatch Mts., " Head of American Fork 9,000 ft. 6 "

447. - *V. edulis*, Nutt. - (749. 71. II. 48.)

- a.) July 3, 1868. Toiyabe Mts., Nev. - Clear Creek cañon. 6,000 ft. 2 sp.
- b.) " 11, " Ruby Valley, Nev. " 3 "
- c.) June 23+29, 1869. Wahsatch Mts., Utah. Pauley's Park " 7 "

~~2/11~~

C. thibetica, Kuhn = *prostrata*?

~~C~~

all one

~~2/11~~ - a few larger but broken spec^s in Herb. Gray - from Wash^g Univ. - to Cooper
- generally 1° in height, leaves 7-10 in diam. corolla 4", half longer than calyx
limbs sharply & coarsely serrate - stem lax & slender - leaves more
or alternat^e, somewhat in pairs,
= *Heterocodon variflorum*, Nutt. "Oregon" - Bot. 5005, var. 200 *linearis* calif^a -
+ Whipple's spec^s - Tripelton, Topeka Valley.

Ask Waring about the names. - Gray has not Marshall's paper

445. - *Plectritis congesta*, DC. - (749. 71. II. 50.)

- a.) Apr. 14, 1868. - Foot hills of Wasatch Mts., near Casper City. 5,000 ft. 12 sp.
b.) May 14, " Trinity Mts., Nev. - Foot hills near Humboldt Lake " 1 "
c.) June 3, " W. Humboldt Mts., " " near Unionville " 1 "
d.) " 12, " Dunsmuir Range, Nev. " 5,500 ft. 1 "
e.) July 2, " Rush Run lower valley - foot hills " 1 "
f.) May 21, 1869. Foot hills near Salt Lake City, Utah. 5,000 ft. 3 "

Lobeliaceae.

Downingia pulchella, Torr. (*Clintonia*, Lindl. - DC. P. VII. 34.)

- July 14, 1867. Truckee Meadows, near Glendale. - (L. W. Bailey.) 10 sp.

Campanulaceae.

Campanula rotundifolia, L. var. *Lampochiana*.

Fls. variable

in the comparative length & breadth of the calyx segments. The alpine specimens

(b.) are exactly like Groundland plants, referred to *C. linifolia*.

- a.) July 30, 1869. - Uintah Mts, Utah. Bear River Cañon. 8,000 ft. 15 sp.
b.) Aug. 3, " " " Peak above Bear R. cañon. 10,000 ft. 8 "

C. uniflora, L.

- Aug. 3, 1869. Uintah Mts. Utah. Peak above Bear R. cañon 11,000 ft. 12 sp.

Specularia perfoliata, DC. - (Gr. Man. 246.) Rare.

- May 27, 1869. Wahsatch Mts, Utah. City Creek cañon 5,000 ft. 7 sp.

S. perfoliata, DC. var. nov. sp.

Rare; more slender, & somewhat branching from the base; nearly glabrous, but slightly spinulose hairy; calyx lobes broad ovate, toothed; 1-6' high.

- a.) June 27, 1868. Mt. Robin Range, Nev. Cumberland Cañon. 6,000 ft. 9 sp.
b.) Aug. 26, " E. Humboldt Mts., Nev. Cañon above Oriskany Ranch. " 1 "

46

Leaves glaucous or but slightly pubescent as is not ~~unusually~~ ^{unusually} ~~the size & shape of leaves~~ ^{the case in} ~~it is also~~ ^{authentic} ~~of the species~~ (Vid. St. H. 111.) The leaves vary in age & shape, being either wider or acute at base, broadly ovate, oval, or obovate in the ~~same~~ ^{same} ~~specimens~~ ^{specimens} in the herbarium, ~~which are~~ ^{which are} ~~included~~ ^{included} ~~A. purpurea~~ ^{A. purpurea}. That this plant is not ~~prostrate~~ ^{prostrate} as ~~A. purpurea~~ ^{A. purpurea} is described to be, ~~which should be near~~ ^{which should be near} ~~A. Nova~~ ^{A. Nova} ~~less~~ ^{less} ~~than~~ ^{than} ~~A. glauca~~ ^{A. glauca}, ~~with~~ ^{with} ~~A. tomentosa~~ ^{A. tomentosa} has exactly the ~~habit~~ ^{habit}, the smooth red bark, ~~erect~~ ^{erect} ~~growth~~ ^{growth}, & ~~is~~ ^{is} ~~not~~ ^{not} ~~prostrate~~ ^{prostrate}.

The ~~same~~ ^{same} ~~spec~~ ^{spec} from the ~~W. I.~~ ^{W. I.} (the most eastern locality in which it has been found) on a low form 1-2 high, readily distinguished from ~~A. tomentosa~~ ^{A. tomentosa} by the ~~glabrous~~ ^{glabrous} ~~fruit~~ ^{fruit}. It might be considered an approach to ~~A. purpurea~~ ^{A. purpurea}, but it has perfectly the ~~fruit~~ ^{fruit} ~~habit~~ ^{habit}, the smooth red bark, ~~erect~~ ^{erect} ~~growth~~ ^{growth} of ~~A. glauca~~ ^{A. glauca}, with ~~no~~ ^{no} ~~resemblance~~ ^{resemblance} ~~whatsoever~~ ^{whatsoever} to ~~A. Nova~~ ^{A. Nova} ~~less~~ ^{less} ~~with~~ ^{with} ~~which~~ ^{with} ~~the~~ ^{the} ~~"prostrate"~~ ^{"prostrate"} ~~A. purpurea~~ ^{A. purpurea} is ~~con-~~ ^{con-} ~~ferred.~~ ^{ferred.}

Ericaceae.

8. *Vaccinium myrtilloides*, Mx. (Gr. Man. 291.) Rare.
July 7, 1869. Uintah Mts., Utah. Cañon above Duchesne River. 9,000 ft. 7 sp.
9. *V. myrtillus*, L., var. *microphyllum*, Hook. (Hk. Fl. Bor. Am. II. 33.) Very abundant in the shade of pines among the high Uintahs. 6'-1' in height.
a.) July 6, 1869. Uintah Mts., Utah. Divide above the Duchesne. 9,000 ft. 4 sp.
b.) Aug. 12, " " " Bear River Cañon 8,000 ft. 6 "
7. *V. caespitosum*, Mx. - (Gr. Man. 291.)
a.) Sept. 10 + 12, 1868. Cloner Mts., Nev. 9,000 ft. 12 sp.
b.) Aug. 1 + 4, 1869. Uintah Mts., Utah. Bear River Cañon. 8-9,000 ft. 8 "
6. *V. uliginosum*
Aug. 4, 1869. Uintah Mts., Utah. Head of Bear R. Cañon. 9,000 ft. 7 sp.
- Arctostaphylos Uva-ursi*, Spreng. (Gr. Man. 292.)
a.) Sept. 3, 1868. Ruby Valley, Nev. near Hummermann's Ranch. 6,000 ft. 7 sp.
b.) July 29, 1869. Bear River Valley, Utah. near Evanston. " 2 "
c.) Aug. 11, " Uintah Mts., Utah. Bear River Cañon 8,000 ft. 2 "
- A. glauca*, Lindl.
May 2, 1868. Washoe Mts., Nev. Above Carson City. 6,000 ft. 4 sp.
- ~~*Arctostaphylos glauca* (Lindl.) 5120~~
2. *A. purpurea*, H.B.K. ~~*Arctostaphylos glauca* (Lindl.) 5120~~ Are both the same?
a.) July 5, 1869. Uintah Mts., Utah. Provo River Cañon. 7,000 ft. 8 sp.
b.) " 7, " " " Above Duchesne River 9,000 ft. 2 "
c.) Aug. 12, " " " Ridge above Bear R. Cañon. 8,000 ft. 1 "
2. *Gaultheria hirsutifolia*, Hook. - (Hk. Fl. Bor. Am. II. 35, t. 129.)
Aug. 4 + 10, 1869. Uintah Mts., Utah. Bear River Cañon. 8-9,000 ft. 12 sp.
3. *Kalmia glauca*, Ait., var. *microphylla*, Hook. (Hk. Fl. Bor. Am. II. 41.)
a.) Aug. 27, 1868. E. Humboldt Mts., Nev. Lake shore, above Orland Ranch. 9,000 ft. 20 sp.
b.) Sept. 10, " Cloner Mts., Nev. Below North peak 9,500 ft. 2 "
c.) Aug. 4, 1869. Uintah Mts., Utah. Head of Bear R. Cañon 9,000 ft. 9 "

fm

7

4. *Ledum glandulosum*, Nutt. (Walp. Ann. II. 1123.)
- a.) Aug. 27, 1868. E. Humb. Mts., Nev. - Lake shore, above Orland Ranch. 9,000 ft. 12 sp.
- b.) " 2, 1869. Uintah Mts., Utah. Ridge above Bear R. cañon 9,000 ft. 3 "
5. *Pyrola rotundifolia*, L., var. *incarnata*, (Gr. Man. 301.)
- a.) Aug. 25, 1868. E. Humb. Mts., Nev. - Kessler Creek cañon 6,500 ft. 7 sp.
- b.) " 26, " " " Cañon above Orland Ranch. " " 5 "
- c.) July 7, 1869. Uintah Mts., Utah. Provo cañon 7,000 ft. 5 "
16. *P. chlorantha* d.) " 27. " Wahsatch Mts., " Echo cañon 6,500 ft. 1 "
- P. secunda*, L. - (Gr. Man. 302.) Rare.
- a.) July 5+7, 1869. Uintah Mts., Utah. Provo cañon. 7,000-8,000 ft. 6 sp.
- b.) " 31, " " " Bear R. cañon 8,000 ft. 9 "
- Monarda uniflora*, Gr. (Gr. Man. 303.) Not in bloom. Rare. Shade of pines.
- July 6, 1869. Uintah Mts., Nev. Divide above Duckam R. 9,000 ft. 14 sp.
- Chimaphila umbellata*, Nutt. (Gr. Man. 303.) Rare.
- July 7, 1869. - Uintah Mts., Utah. Provo Cañon. 5 sp.
- Pterospora Andromedea*, Nutt. - (Gr. Man. 303.) Rare. Shade of pines; 1-3.
- Aug. 7+12, 1869. Uintah Mts., Utah. Ridge above Bear R. cañon. 8,000 ft. 14 sp.

Plantaginaceae.

21. *Plantago eriopoda*, Torr. (Walp. Ann. III. 241.) Leaves fleshy, oblong lanceolate, 1-2' wide; scapes somewhat hairy, 1'-1½' high; pod 4-5 seeded; growing in clayey ^{sub.}alkaline meadows. Not frequent.
- a.) Aug. 4, 1868. Ruby Valley, Nev. 6,000 ft. 8 sp.
- b.) July 30, 1869. Bear River Valley, above Evanston. 6,500 ft. 7 "
22. *P. pusilla*, Nutt. (Gr. Man. 312.) Rare.
- June 3, 1869. Salt Lake Valley. Meadow near mouth of Jordan. 4,500 ft. 11 sp.
23. *P. patagonica*, Jacq. - var. *graphaloides*, Gr. - (Gr. Man. 312.)
- a.) May 31 or June 3, 1869. Salt Lake Valley, near mouth of Jordan 4,500 ft. 12 sp.
- b.) June 4+7, " Antelope Island, Salt Lake " 4 "
- c.) July 12, " Utah Valley - Little Cottonwood Creek bottom. " 5 "

Cf. with ~~the~~ ~~accident~~ is

Primulaceae.

24. *Primula Parryi*, Gr. (Sill. Journ. XXXIV. 257.)
- a.) Aug. 29, 1868. E. Humb. Mt. Nev. - Peak above Overland Ranch. 9,500 ft. 4 sp.
 - b.) Sept. 7, " Clow Mt., Nev. ^{Under} ~~Peak~~ South Peak. 9,000 ft. 3 "
 - c.) Aug. 4, 1869. Uintah Mts., Utah. Head of Bear R. cañon 9,000 ft. 5 "
25. *Androsace septentrionalis*, L. (Hk. & B. Bor. Am. II. 119.)
- a.) June 28, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park. 6,500 ft. 1 sp.
 - b.) July 5, " Uintah Mts., Utah. Provo cañon 8,000 ft. 3 "
 - c.) " 6, " " " Ridge above Duckwater Riv. 9,000 ft. 3 "
26. *A. septentrionalis*, L. Alpine form, with reduced scapes.
- a.) Sept. 3, 1868. E. Humb. Mt., Nev. Peak above Hummels Ranch. 10,000 ft. 4 sp.
 - b.) " 9, " Clow Mt., " ^{Under} ~~Peak~~ South Peak " " 4 "
 - c.) Aug. 10, 1869. ^{Nev.} Uintah Mts., Utah. Ridge above Bear R. cañon, " " 3 "
27. *A. occid.* 10120, Ph. A sage brush ground.
- May 31, 1869. Jordan Valley, near Salt Lake City. 4,500 ft. 20 sp.
28. *Dodecatheon Meadia*, L. (Gr. Man. 314.) Known by the Indians as "Nát, li-wa-tah."
- a.) June 24 + 27, 1868. Mt. Tobin Range, Nev. Cumberland cañon. 6,000 ft. 4 sp.
 - b.) July 2, " Reese River Valley. 5,000 ft. 1 "
 - c.) " 11, " Ruby Valley. 6,000 ft. 1 "
 - d.) Aug. 24, " E. Humb. Mt., Nev. Cañon above Overland Ranch. 9,000 ft. 5 "
 - e.) July 14, 1869. Wahsatch Mts., Utah. Cottonwood Lake 9,000 ft. 4 "
 - f.) June 24, " " Cañon above Parley's Park 6,000 ft. 5 "
 - g.) Aug. 2, " Uintah Mts., Utah. Ridge above Bear R. cañon 8,000 ft. 2 "
29. *D. Meadia*, L. The ordinary ^{droop} alpine form with 1-few flowers and narrow or long lanceolate leaves tapering to the petiole.
- a.) Aug. 27-31, 1868. E. Humb. Mt., Nev. Head of cañon above Overland Ranch. 9,000 ft. 7 sp.
 - b.) Sept. 3, " Clow Mt., Nev. Cañon above Hummels. 9,500 ft. 6 "
30. *D. Meadia*, L., var. *frigida*, ? - The exact counterpart of specimens in Herb. Eaton of *D. frigida*, Ch. & Sch., from Behring's Straits. Made of the leaf ovate, narrowing abruptly into the petiole, subrepand. No other distinction is evident, and similar leaves are found in specimens of acknowledged *D. Meadia*, both from California & the Eastern States. Found but in a single locality.
- Aug. 17, 1868. ~~Wahsatch~~ ^{Wahsatch} Mts. Utah. From fork of Cottonwood cañon. 9,000 ft. 4 sp.

Ep

#400 var. (Humboldt Mts., var.) with elongated pedicels + more or less distinct
bracts, would tend to merge P. comosa, 249, with this species + P. duboiana.

31. - *Lysimachia ciliata*, L. (Gr. Man. 315.)
- a) July 10, 1869. Wahsatch Mts., Utah. Provo Cañon. 5,500 ft. 4 sp.
- b) " 12, " Jordan Valley, Utah. On Cottonwood Creek. 5,000 ft. 6 "
32. - *Glaux maritima*, L. (Gr. Man. 316.)
- Sept. 20, 1868. Warm Springs, Humboldt Pass 6,000 ft. 4 "
- a) May 31, 1869. Jordan Valley, Utah. Near Salt Lake City. 12 sp.
- b) June 11, " Tuilla Valley, " South end of Salt Lake. 6 "
33. - *Samolus Alexandri*, L. (Gr. Man. 317.)
- June 6, 1869. Antelope Island, Salt Lake. 8 sp.

Scutellariaceae.

34. - *Utricularia vulgaris*, L. (Gr. Man. 314.)
- Aug. 12, 1868. Ruby Lake, Nev. 12 sp.
35. - *U. minor*, L.? (Gr. Man. 314.) Barren specimens, apparently of this species.
- a) Sept. 30, 1868. ^{Goose Creek} ~~Thousand Spring~~ Valley, Utah. Warm Spring. 7 sp.
- b) Aug. 13, 1869. ^{Utah} Wahsatch Mts., Utah. Bear River Cañon. 8,000 ft. 5 "

Proboscaceae.

36. - *Phalipara erianthera*, Engelm. (Proc. Am. Ac. S. S. XII. 372.) The prevalent western form and frequent in the valleys of Nevada. The calyx lobes are often much elongated, equalling or exceeding the corolla, while the corolla limb also varies in the size & depth of its divisions. Eaten by the Piutes, & known as "Too-shoo."
- a) Sept. 8, 1868. Humboldt Meadow, Nev. near Orana. (W. W. Bailey.) 8 sp.
- b) " 10, " E. Humb. Mts., Nev. Unionville Cañon 5,000 ft. 13 "
- c) July 7, 1868. Monitor Valley, Nev. On sagebrush roots. 5,500 ft. 3 "
- d) ^{Oct.} Sept. 3, " Raft River Valley, Utah. 5,000 ft. 1 "
- e) June 6, 1869. Antelope Island, Salt Lake. " 2 "
- f) Aug. 19, " Wahsatch Mts., Utah. From fork of Cottonwood Cañon 8,000 ft. 1 "
37. - *Aphyllon uniflorum*, Tuck. (Gr. Man. 323.)
- June 25 + 29, 1869. Wahsatch Mts., Utah. Cañon above Parley's Lake. 7,000 ft. 2 sp.

Man ragans, but flower & calyx smaller, pedicel longer, 3-4
more uniformly linear. ~~Ch.~~

Collected by Stetson near ~~Heaven~~ ~~Heaven~~ Springs, June 65

R₃

Find out about S. Californica ~~mutica~~, of which there is a spec^s in Herb. Gr. with
trailing panicle & smallish leaves (1-1 1/2 long) - All western spec^s (Newsp. 1, Aug. 190, Herb.
1877). Form 364, Big. from Lake Mead, ca. & Lieut. Thompson, 26. - has leaves ^{+ thick} ~~truncate~~ ~~or~~ ~~more~~ & more
con. very toward tip of leaf, Bigelow's very smooth ~~long~~ leaves (2 1/2) all are ~~plumose~~ ~~by~~
specimens in the herbarium, except, the of course, & Hooker's even more than mine as a
minutely ~~pubescent~~ ~~at~~ ~~the~~ ~~apex~~ ~~but~~ ~~the~~ ~~young~~ ~~Eastern~~ spec^s ~~are~~ ~~more~~ ~~or~~ ~~less~~ ~~7~~ ~~near~~ ~~in~~

— *Aphyllon fasciculatum*, 949. (Gr. Man. 323.) Usually under sage brush.

- | | | | | |
|----|----------------|--|-----------|--------|
| a) | June 18, 1868. | Unionville Valley, Nev. | | 10 s/. |
| b) | " 23, " | Stanger range, Nev. Foot-hills of Grass Valley | | 2 " |
| c) | July 20, " | E. Humboldt Mts, Nev. Ridge above Camp Ruby | 6,500 ft. | 5 " |
| d) | May 21, 1869. | Foot-hills near Salt Lake City | | 1 " |
| e) | June 6, " | Antelope Island, Salt Lake | | 2 " |
| f) | " 28, " | Wasatch Mts, Utah. Cañon above Parley's Park | | 1 " |

Scrophulariaceae.

Verbascum Thapsus, L. (Gr. Man. 325.) Introduced.

July 12, 1869. Jordan valley, Utah. On Cottonwood Creek. 1 s/.

Antirrhinum

- | | | | | |
|----|--------------------|--|-----------|--------|
| a) | May 13 & 14, 1868. | South foot-hills of the Truckee & Trinity Mts., Nev. | 5,000 ft. | 11 s/. |
| b) | June 18 & 22, " | Unionville Valley, Nev. | " | 8 " |
| c) | " 29, " | Valley west of Battle Mts., Nev. | " | 12 " |
| d) | July 2, " | Shoshone Range, Reese River Pass. | " | 2 " |
| e) | June 15, 1869. | Stansbury's Island, Salt Lake | 4,500 ft. | 1 " |

41. — *Scrophularia nodosa*, L. (Gr. Man. 327.)

- | | | | | |
|----|----------------|---|-----------|-------|
| a) | June 8, 1868. | W. Humboldt Mts., Nev. Unionville cañon | 5,500 ft. | 2 s/. |
| b) | Sept. 21, " | Foot-hills above Humboldt Pass, stream bank | 6,000 ft. | 2 " |
| c) | June 23, 1869. | Parley's Park, Utah | " | 1 " |
| d) | Aug. 18, " | Cañon above Parley's Park, | " | 1 " |

S. nodosa, var. ?

Oct. 10, 1867. — W. Humboldt Mts., Nev. Unionville cañon. 5,500 ft. 4 "

136 Anderson, "near Carson City", = *P. breviflorus*, Benth.

He also collected, same loc., *P. Thunbergii*, HBK. - var. *a. Sawraii*

Should be narrow leaves, much like the next - has it?

Stretch, Washoe Valley, -

- | | | | | |
|----|----------------|---|-----------|-----|
| g) | July 10, 1869, | Huntington Valley, Nev. | 6,000 ft. | 1/2 |
| h) | " 20 " | E. Humb. Mts., Nev. Cañon above Camp Lake | 7,000 ft. | 5/8 |
| i) | " 27, " | " " Peak below Stage Pass | 8,000 ft. | 1 " |
| j) | Aug. 14, " | " " Ridge above Sawhill | 9,000 ft. | 1 " |

The ex. is a small plant with 10-15 fls. - except a flower or two from the near the head, in the family, think it will be the same though smaller.

- 42 - *Collinsia parviflora*, Dougl. (Gr. Man. 327.) Slightly & generally diffusely. Stem simple or bran becoming decumbently branched, 3-14' long.
- | | | | | |
|-----|------------------------|--|-------------|-----|
| a.) | Apr. 15 + 23, 1864. | Foot hills near Canon City - under sage brush. | 125 ft. | |
| b.) | May 27, " | South Trinity Mts., west of Ormana, Nev. | 5,000 ft. | 4 " |
| c.) | June 809, " | W. Humb. Mts., Nev. Cañon above Unionville. | 8,000 ft. | 6 " |
| d.) | " 26, " | W. Robin Range, Cumberland Cañon | 5,000 ft. | 4 " |
| e.) | July 20 - Aug. 26. | E. Humb. Mts., Nev. | 6-8,000 ft. | 5 " |
| f.) | May 18 + 31, 1869. | Near Salt Lake City, Utah. | | 3 " |
| g.) | June 24, " | Parley's Park, Utah. | 6,000 ft. | 1 " |
| h.) | From Nevada seed, 1869 | | | 6 " |

58. *Penstemon decurtatus*, Dougl. - though in sketch (6) of the sterile filament is bearded. Corolla minutely pubescent. Corolla - lobes frequently entire. (Should follow 57.)

- | | | | | |
|-----|--------------------|--|-----------|--------|
| a.) | May 16 + 18, 1864. | Trinity Mts., Nev. Southern foot hills. | 5,000 ft. | 75 ft. |
| b.) | June 8, " | W. Humb. Mts., Nev. Cañon above Unionville. | 6,000 ft. | 3 " |
| c.) | " 13, " | Dryden Range, Nev. ^{Foot hills of Grand Valley} Diamond Valley | 5,000 ft. | 4 " |
| d.) | July 20, " | E. Humb. Mts., Nev. Cañon above Camp Ruby. | 7,000 ft. | 2 " |
| e.) | Aug. 26, " | " " Cañon above Overland Ranch. | 6,500 ft. | 5 " |

43. *P. glaber*, Ph. - *P. occidentalis*. (Gray's Syn. Pent. - Proc. Am. Acad. A. S. VI. 59.) Anthers & sterile filament or the latter very rarely bearded. Frequent in western Nevada.
- | | | | | |
|-----|-----------------|---|-----------|--------|
| a.) | Sept. 10, 1867. | W. Humboldt Mts., Nev. above Unionville | 7,000 ft. | 35 ft. |
| a.) | May 16, 1864. | Trinity Mts., Nev. Southern foot hills | 5,000 ft. | 15 ft. |
| b.) | " 20, " | W. Humb. Mts., Nev. East of Ormana | " | 6 " |
| c.) | June 9, " | " " Unionville cañon | 6,000 ft. | 1 " |
| d.) | " 12, " | Dryden Range, Nev. Foot hills of Pleasant Valley. | 5,000 ft. | 6 " |
| e.) | " 18 + 22, " | Unionville Valley - foot hills | " | 3 " |
| d.) | " 23, " | Dryden Range, Nev. - Foot hills of Grand Valley | " | 1 " |
| f.) | " 26, " | W. Robin Range, Nev. Cumberland cañon | " | 2 " |

44. *P. glaber*, Ph. - var. *Utahensis*. The prevalent Utah form; anthers & sterile filament bearded; sepals narrower & ~~is~~ membranaceous; leaves narrow & tapering to the clasping base; taller & of more slender habit. ~~These specimens are the anthers & calyx of (45) with the filament, base, & habit of this, & are smaller, & locality in Nevada.~~
- | | | | | |
|--|---------------|---|-----------|--------|
| | July 9, 1868. | Diamond Valley, Nev. Grassy alkaline meadow | 6,000 ft. | 15 ft. |
| | " 9, 1869. | Utah Mts., Utah. - Pack's cañon | " | 7 " |

Koster's figure exactly. ~~He. c. 9. c.~~ He. c. 9. c. distinguished by its long
acc. in the aspects. The flower just that of *P. glaberr*, but no approach
in the leaves.

Var. *Parryana*, f. spec. in Herb. Gr. - exactly. -
description possibly in H & H.

~~47~~⁴⁸ - *P. concolor*, Nutt. - but perfectly glabrous. 10 high.

July 9, 1828. - Diamond valley, Nev. - grassy alkaline meadow - 6000 ft. - 1 spec.

An extreme form - the flowers small ~~at least~~ sessile & crowded in the axils of the
large woody cordate clasping bracts, - stem shrub, ~~leaves~~ fleshy.

~~J. F.~~
~~J. F.~~

Aspect & habits is the same, tickled *P. humilis*, Nutt. var. - The approach
to form of *P. humilis* is very close. - ^{of this species}

None in Herb. Gr. with equally small calyx.

None like it in Herb. Gr.

XIV



An unnamed species of *Stachys* (110) from Warner Valley, of S. Sac. cont. ~ 10' high,
with spread, subpanicled peduncles & narrowly lanceolate entire leaves
stem & pedicels glandular pubescent, calyx & ovary as in sketch
somewhat omitted on base ^{puberulous} ~~retrocurved~~, stam. filament, lobes, anthers
slightly curved on the line of attachment to the filament, corolla 9" long, purple, pubescent

54. - *P. glaucus*, Grak. ♀ (Gr. Syn. Pent. 70.) Usually not all glaucous; ^{color of} corolla a dull
 (44) deep purple, connecting this with the Mexican species *P. campanulatus*
 + *P. profoliatus*. In specimens (b.) and (f.), however, the color was
 light blue. Lower leaves somewhat repeatedly dentate.

- a) July 6 + 7, 1869. - Uintah Mts., Utah. Ridge above Duchesne River. 9,000 ft. 11 sp.
 b) " 14, " Wahsatch Mts., Utah. Cottonwood Lake, " " 8 "
 c) " 20, " " " " Peak above Parley's Pass. " " 3 "
 d) Aug. 2 + 3, " Uintah Mts., Ridge above Bear R. cañon 9-10,000 ft. 5 "

56. - *P. confertus*, Dougl., var. *B. caruleo-purpureus*, Gr. (Gr. Syn. Pent. 72.) 1-2' high.

- (50)
 a) June 22, 1869. Wahsatch Mts., Utah. Parley's cañon. 6,000 ft. 2 sp.
 b) " 23, " " " Parley's Park. " 3 "
 c) July 27, " " " Echo Cañon " 3 "

57. - *P. confertus*, Dougl. - Alpine form of same variety. 6' high.

- a) Aug. 29, 1868. W. Humb. Mts., Nev. Peaks above Garland Ranch. 9,000 ft. 3 sp.
 b) Sept. 7, 1869, " Clover Mts., Nev. " 4 "

58. - *P. azureus*, ~~Benth.~~? (Gr. Syn. Pent. 75.) *P. heterophyllum*, Buss, Lindl. - var.

(62) with my short, often obtusely lobed calyx, flowers light purple, whole
 plant glaucous. ^{linear &} leaves lanceolate (2-6" ^{x 2-3"} wide) tapering to a narrow
 subpubescent point. Stem branched above.
 July 10, 1869. Wahsatch Mts., Utah. - Provo Cañon. 6,000 ft. 16 sp.

59. - *P. heterophyllum*, Buss, Lindl. (Gr. Syn. Pent. 75.) var. *latifolium*.

(62) Leaves oval to lanceolate (1/2-1" wide x 1/2-2" long), calyx lobes longer & more acute
 than in var. *heterophyllum*. Flowers in leaf.

- a) July 13, 1869. Wahsatch Mts., Utah. Mouth of Cottonwood Cañon. 5,000 ft. 5 sp.
 b) Aug. 19, " " " Fern fork of Cottonwood Cañon 8,000 ft. 2 "
 c) " 25, " " " American Fork Cañon 6,000 ft. 3 "

60. - *P.* _____

- a) June 9, 1868. W. Humb. Mts., Nev. - above Unionville. 6,000 ft. 1 sp.
 b) June 24, 1868. Mt. Robin Range, Cumberland Cañon 6,000 ft. 1 sp.
 c) July 3, " Toiyabe Mts., Nev. Reese R. Pass. " 2 "
 d) June 29, " Ridge west of Battle Mt., near Summit Spring. " 1 "
 e) July 10, " Monitor Valley. Foot hills near Roberts Station. " 5 "
 f) June 24, 1869. Wahsatch Mts., Utah. Ridge above Parley's Park. " 2 "
 g) July 4, " Uintah Mts., " Park's cañon 7,000 ft. 1 "

M. candidula -

26 and now, "near Cass City", is treated *M. candidula*, but it has a smooth + is
a small plant - the only one from out of Cass City

64
I cannot from the descriptions, my own spec^s, or those in the Herb^s, discover the limits
between the species *M. hirsuta*, *glabrata*,¹¹¹ + *propinqua*, etc. - I rank here all the smaller
flowered forms, answering to the name *M. glabrata* of the Herb^s. As is the case with
the larger forms, they are not unequivocally minutely glandular - pubescent, -

M. glabrata is more distinct in its habit though sometimes referred to *glabrata*
by Dr. Gray.

M. glabrata

110 An. near Cass City

(*M. glabrata* - *M. glabrata*)

62. - *Mimulus Lewisii*, Ph. (Sc. Prod. x. 370.) Tall, 1-3° high; along cold mountain streams; with a musky odor.

- a) Aug. 26-31, 1868. E. Humb. Mts., Nev. Cañon above Orland Ranch. 7,000 ft. 9 sp.
 b) July 13, 1869. Wahsatch Mts., Utah. Fern-fork of Cottonwood cañon. " 5 "
 c) Aug. 7, " " " " Bear River Cañon. 8,000 ft. 7 "

M. luteus, L. (Sc. Prod. x. 370.) Variable; 3-4° high; corolla $\frac{1}{4}$ - $\frac{1}{2}$ " in length; somewhat stoloniferous. It probably includes *M. glabratus* Hook. f. & Thunb., again, *M. Jamesii*, Torr. is but a still smaller flowered form, as has been indicated by Dr. Gray. Very frequent.

- a) July 16, 1867. Truckee River Bottom, Nev. near Glendale. (W. W. Bailey.) 4 sp.
 b) " 26-Sept. 20, 1867. Truckee Bottom, Soda Lake, & Unionville Cañon. 11 "
 c) June 6-21, 1868. - W. Humb. Mts., Nev. Unionville cañon. ^{+ valley} 5,000 ft. 4 "
 d) July 11, " " Ruby Valley, Nev. 6,000 ft. 1 "
 e) May 21, 1869. Wahsatch Mts., Utah. City Creek Cañon 5,000 ft. 2 "

M. luteus, L. with smaller flowers. *var. glabratus* -

- a) Sept. 1867. W. Humb. Mts. Nev. Unionville cañon. 6,000 ft. 4 sp.
 b) June 10, 1868. - " " ^{Falls} Cañon S. of Unionville 5,500 ft. 2 "
 c) " 27, " " " " " " " " " " 1 "
 d) July 18, " " " " " " " " " " 3 "

M. luteus, L., *var. alpinus*, Gr. - Proc. Ac. Nat. Sci. Phil. 1863, p. 71.)

Aug. 29, 1868. E. Humb. Mts., Nev. Cañon above Orland Ranch. 9,000 ft. 6 sp.

M. primuloides, Benth. (Sc. Prod. x. 372.)

Aug. 27, 1868. E. Humb. Mts. Nev. Cañon above Orland Ranch. 8,000 ft. 9 sp.

M. floribundus, Dougl. - (Sc. Prod. x. 372.)

- a) July 16, 1867. Truckee River Bottom, Glendale. (W. W. Bailey.) 4,500 ft. 2 sp.
 b) " 26, " " " " at the Big Bend. 4,500 ft. 11 "
 c) Sept. 18, 1868. E. Humb. Mts., Nev. near Hummerman's Ranch. 6,000 ft. 6 "
 d) July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon 5,000 ft. 4 "

M. moschatrus, Douglas. (Sc. Prod. x. 372.) Prostrate or suberect.

- Aug. 26, 1868. - E. Humb. Mts. Nev. Cañon above Orland Ranch. 7,000 ft. 10 sp.
 June 30, 1869. Wahsatch Mts., Utah. Cañon above Parley's Park. " " 15 "
 July 14, " " " " Cottonwood Cañon 8,500 ft. 7 "

Mimulus rubellus, Gr. (Rep. Mex. Bot. 5. 116.) Flowers occasionally pink; with the throat ^{from rim} or spotted with purple. more usually yellow, 1/4'-3' high, simple or much branched.

- a) July 16, 1867. Truckee River bottom, near Glendale. (W. W. Bailey.) Pink. 1 sp.
 b) Apr. 21-29, 1868. Hillsides near Carson City, Nev. 5-6,000 ft. 20 "
 c) July 24, " E. Humboldt Mts., Nev. Cañon above Camp Ruby. 7,000 ft. 5 "
 d) Sept. 12, " Clear Mts., Nev. Under Wolfe Peak. 10,000 ft. 5 "
 e) June 7, 1869. Antelope Island, Salt Lake. 6 "
 f) " 24-29, " Wahatch Mts., Utah. Above Parley's Park. 6-7,000 ft. 11 "

70. *M. rubellus*, Gr., var. *leptiflorus*. Limb enlarged + throat sprinkled with purple spots, bearded; ^{viscid/pubescent.} The same as *M. montivoides*, Gr. - perhaps distinct.

Apr. 21, 1868. Carson Valley, near Carson City - under sage brush. 25 sp.

71. *Eumarrhina Fremonti*, DC. (DC. Prod. x. 374.) Varying greatly in size; early specimens with a single flower, the length of which often exceeds that of the stem, side later in the season it may be 6' or more in height, more or less branched, + with numerous flowers; either deep purple or yellow, throat usually bearded; viscidly pubescent or villous; calyx ^{of bases,} ~~sub~~ ^{equally} or exceeding the calyx, narrow. Probably includes *E. Tolmiei*, DC.

- a) Apr. 25, 1868. Carson Valley, near Carson City - under sage brush. 20 sp.
 b) May 13+27, " Trinity Mts., foothills. 20 "
 c) June 12, " Douglas Range, above Pleasant Valley 5,000 ft. 17 "
 d) " 22, " " " Spalding's cañon " 4 "
 e) July 6, " Toiyabe Mts., Nev. Above Austin 6,000 ft. 1 "

72. *Herpestis pilosa*, Benth. (DC. Prod. x. 394.)

- a) July 16, 1867. Truckee Meadows, at Glendale, (W. W. Bailey.) 4 sp.
 b) " 24, " Truckee River bottom, at the Big Bend. 9 "

73. *Gratiola Virginiana*, L. (Gr. Man. 330.)

July 18, 1867. Truckee Meadows, at Glendale. (W. W. Bailey.) 3 sp.

74. *Limnoloba aquatica*, L. (DC. Prod. x. 426.) Petioles sometimes much elongated, 2-4'.

- a) Sept. 29+30, 1868. Carson Creek Valley, Utah. 6,000 ft. 11 sp.
 b) July 20+22, 1869. Parley's Park, Utah. " 6 "
 c) " 3, " " " " " 10 "

~~75. - *Limnoloba aquatica*, L., vfr. *tennifolia*, Hoffm. - (Gr. Man. 331.)~~

~~July 3, 1869. Uintah Mts., Utah. Silver Creek cañon. 6,500 ft. 105/.~~

~~75. - *Synthlipsis pinnata*~~

Aug. 26, 1869. - Wahsatch Mts., Utah. - Head of Amer. Fork cañon. 9,000 ft. 125/.

76. - *Veronica Anagallis*, L. - (Gr. Man. 332.)

a) Sept. 25 + 26, 1868. - Thousand Spring Valley, Nev. - 105/.

b) May 31, 1869. - Jordan Valley, near Salt Lake City 2 "

c) Aug. 16, " - Weber Valley, near Coalville, Utah. 1 "

77. - *V. Americana*, Schreb. - (Gr. Man. 332.) More common than the last; flowers deeper blue.

a) Oct. 1867. W. Humb. Mts., Nev. Unionville cañon ^(to W. Bailey) 5,000 ft. 25/.

b) June 8, 1868. - Same locality. 105/.

c) July 6, " Toiyabe Mts., Nev. above Austin 6,000 ft. 5 "

d) " 11, ^{Aug. 1} " Ruby Valley, Nev. " 3 "

e) Sept. 25 " Thousand Spring Valley, Nev. " 6 "

f) May 17, 1869. City Creek cañon, Utah. 5,000 ft. 2 "

g) June 22, " Parley's Park, " 6,000 ft. 3 "

h) Aug. 7, " Uintah Mts., Utah. Bear R. cañon 8,000 ft. 2 "

i) " 16, " Weber Valley, " near Coalville 1 "

78. - *V. alpina*, L. - (Gr. Man. 332.)

a) Aug. 27, 1868. E. Humb. Mts., Lake shore above Orland Ranch, 9,000 ft. 135/.

b) Sept. 10, " Clont Mts., Nev. Under North Peak. " " 3 "

c) July 14, 1869. Wahsatch Mts., Utah. Cottonwood Lake. " " 8 "

d) " 31 + Aug. 2, " Uintah Mts., " Bear River cañon 8-9,000 ft. 7 "

79. - *V. scopulifolia*, L. - (Gr. Man. 333.) Only subalpine.

a) July 13, 1869. Wahsatch Mts., Utah. Fern fork of Cottonwood cañon. 8,000 ft. 65/.

b) " 14, " " Cottonwood Lake 9,000 ft. 4 "

c) Aug. 27, " Uintah Mts., " Ridge above Bear R. cañon 8,000 ft. 9 "

8

8

8

8

80. - *Veronica peregrina*, L. - (Gr. Man. 333.)

- a.) July 26, 1867. Truckee River bottom, at the Big Bend. 4,500 ft. 11 sp.
- b.) " 10, 1868. Diamond Valley, Nev. 6,000 ft. 3 "
- c.) Aug. 1, " Ruby Valley, Nev. " 3 "
- d.) " 26, " E. Humboldt Mts., Nev. Cañon above Orland Ranch. 6,500 ft. 2 "
- e.) Sept. 30, " Goose Creek valley, Utah. 6,000 ft. 1 "
- f.) May 31 & June 3, 1869. - Jordan Valley, near Salt Lake City. 4,500 ft. 2 "
- g.) June 23, " Parley's Park, Utah. 6,000 ft. 2 "
- h.) Aug. 16, " Weber Valley, Utah 5,500 ft. 1 "

81. *Castilleja linariaefolia*, Benth. - (Gr. Sill. Jour. XXXIV. 335.) Quite variable; the gabra from scarcely exact to an inch or more in length; the pubescence confined to the summit or covering the whole plant; the leaves 1-5 nerved, entire or lobed, usually narrow, occasionally 3-4" broad. A mountain species.

- a.) July 31, 1867. E. Truckee Mts., Nev. Cañon above Valley Wells. 6,000 ft. 6 sp.
- b.) Sept. 10, " W. ^{Humboldt} Truckee Mts., Nev. Wright's Cañon 7,000 ft. 2 "
- c.) July 3, 1868. Toiyabe Mts., Nev. Silver Creek Cañon 6,000 ft. 4 "
- d.) " 20, " E. Humboldt Mts., Nev. Cañon above Camp Ruby 7-8,000 ft. 8 "
- " 30, " " Ridge above Sawmill. 6,000 ft. 3 "
- e.) Sept. 2, " " Cañon above Orland Ranch. 6,500 ft. 3 "
- f.) June 24, 1869. Wahsatch Mts, Utah. Ridge above Parley's Park " " 5 "
- g.) July 27, " " " Echo Cañon " " 2 "

82. *C. affinis*, H. & A. - (Gr. Rev. Castil. ^{2c.} 336.) Leaves long acuminate, 2-8" in width, confined to meadows & stream banks.

- a.) July 26, 1867. - Truckee River bottom, at Big Bend, Nev. 8 sp.
- b.) " 29, " Same locality - (W. W. Bailey.) 12 "
- c.) " 28 & Aug. 1, 1868. - Ruby Valley, Nev. 6,000 ft. 7 "
- d.) Sept. 2, " E. Humboldt Mts., Nev. Stream bank above Humman's, - 6,500 ft. 1 "

83. - *C. parviflora*, Bong. (Gr. Rev. Castil. 336.) Very common mountain species, 6-14" high, color varying from yellow to deep purple.

- a.) Apr. 23, 1868. - Washoe Mts. Nev. Above Carson City. 6-7,000 ft. 5 sp.
- b.) May 12-27, " Truckee & Trinity Mts., Nev. 5-6,000 ft. 10 "
- c.) June 6, " W. Humboldt Mts. - Above Unionville 7,000 ft. 4 "
- d.) " 25, " Mt. Robin Range. Above Camerland. 6,000 ft. 2 "
- e.) July 6, " Toiyabe Mts. - Above Austin 6,000 ft. 1 "

85. - *Cordyleanthus ramosus*, Nutt. ~~var. *complanatus*~~ This is doubtless Nuttall's though the former sp. the small fragments of "detailed spec." in Herb. Gr. are more hispidly ciliate than in any of the present collections.

July 8, 1866.	Monitor Valley, Nev. -	Foot hills -	6,000 ft.	5 sp.
" 27+28, "	Ruby Valley, Nev.	"	"	5 "
Aug. 18, "	E. Humbt. Mts., Nev.	Ridge above Sawmill	9,000 ft.	3 "
July 17+26, 1869.	Parley's Park, Utah.	Foot hills	6,000 ft.	2 "
" 27, "	Echo Cañon, Utah.	"	"	1 "

86. - *C. longii* nov. sp.

July 9, 1866. - Ridge near Roberts' Station, Monitor Valley, Nev. 6,000 ft. 4 sp.

87. - *Orthocarpus luteus*, Nutt. - (Oc. Prod. X. 536.)

a.) July 26, 1866.	Ruby Valley, Nev.	6,000 ft.	6 sp.
b.) Sept. 1, "	"	"	3 "

88. - *O. columbianus*, H. & G. - Near *O. luteus*, Nutt. but easily distinguished by its want of hispidness, ^{usually} entire leaves, ^{very many deeply lobed bracts,} glabrous corolla (excepting edge of upper lip) ~~usually~~ ^{racemes} less dense, a 1-2" high, becoming much branched.

a.) ^{July 21} June 29, 1869.	Parley's Park, Utah -	Foot hills -	6,500 ft. -	18 sp.
b.) July 14, "	Wasatch Mts., "	Above Cottonwood Lake -	9,000 ft.	2 "
c.) " 27, "	"	Echo Cañon	6,000 ft.	1 "
d.) Aug. 18, "	"	Lake shore, above Parley's Park -	9,000 ft.	1 "

89. - *Pedicularis Groenlandica*, Ryb. - (Oc. Pr. X. 566.) In the border of mountain lakes.

b.) Aug. 27, 1866.	E. Humbt. Mts., Nev.	Lake above Ireland Ranch.	9,000 ft.	4 sp.
a.) " 25, "	"	Poplar Creek cañon	7,000 ft.	5 "
c.) July 14, 1869.	Wasatch Mts., Utah.	Cottonwood Lake	9,000 ft.	7 "
d.) " 31, "	Uintah Mts., "	Bear River cañon	8,000 ft.	2 "
e.) Aug. 4, "	"	Lake at head of rd.	9,000 ft.	1 "

90. - *R. racemosa*, Dougl. - (Oc. Pr. X. 570.) Frequent among the Uintahs in the ^{comp} head of pines.

a.) July 14, 1869.	Wasatch Mts., Utah.	Cottonwood Lake	9,000 ft.	15 sp.
b.) Aug. 2, "	Uintah Mts., "	Bear River cañon	8,000 ft.	10 "

cf. with pro. note
163

94 *Pedicularis bracteosa*, Benth. (DC. Pr. x. 574.)

- a) July 6, 1869. Uintah Mts., Utah. Ridge above Duchesne River. 9,000 ft. 3 sp.
b) Aug. 23, " " " Bear River Cañon, 8,000 ft. 8 "

Verbenaceae.

95- *Verbena hastata*, L. (Gr. Man. 340.)

July 12, 1869. Salt Lake Valley. About cultivated fields. 1 sp.

96- *V. bracteosa*, Mx. (Gr. Man. 340.)

May 29 & June 21, 1869. Foothills about Salt Lake City. 7 sp.

Labiatae.

97- *Mentha Canadensis*, L. (Gr. Man. 303.)

a) July 16, 1869. Tondsen Valley, near Glendale^{Ariz.} (W. W. Bailey.) 6 sp.

b) " 26, " " " at Big Bend. 4 "

c) " 1, 1868. Humboldt Valley, Ariz. Mouth of Reese River 3 "

d) " 28, ¹⁸⁶⁸ " " Ruby Valley, Ariz. 6,000 ft. 4 "

e) " 9, 1869. Uintah Mts., Utah. Boro Cañon 7,000 ft. 1 "

98- *Lycopus Europaeus*, L., var. *sinuatus*, Gray. (Gr. Man. 304.)

Aug. 25, 1869. Wahatch Mts., Utah. American Fork Cañon. 6,000 ft. 6 sp.

99- *Monardella odoratissima*, Benth. (DC. x. 11. 190.)

a) Sept. 19, 1867. W. Humboldt Mts., Ariz. Star Peak. 8,000 ft. 10 sp.

b) July 27, 1868. E. Humboldt Mts., Ariz. Peak above Ft. Ruby. 8,000 ft. 5 "

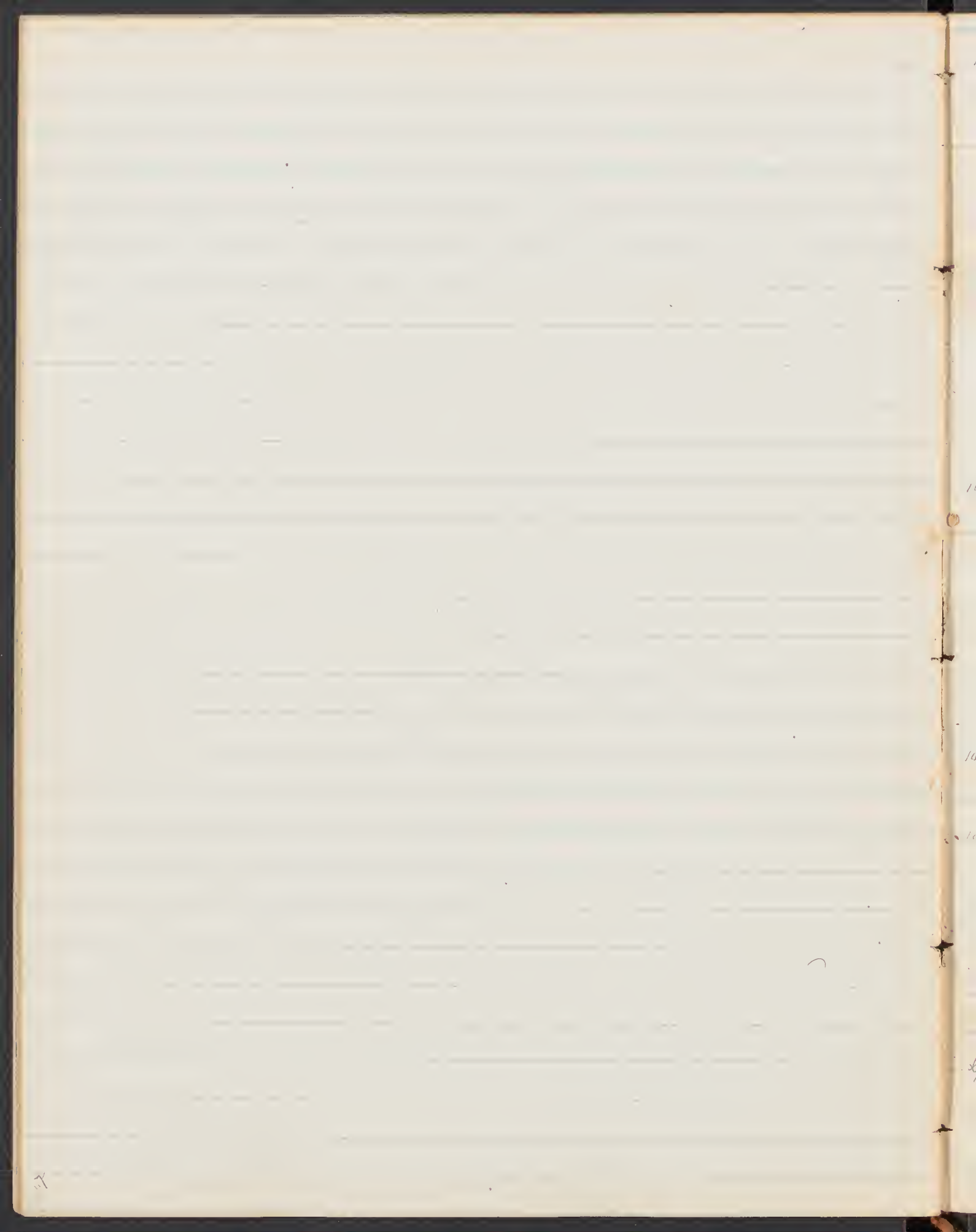
c) Aug. 4, " " " " below Star Pass. " 3 "

d) July 13, 1869. Wahatch Mts., Utah. Fern fork of Cottonwood Cañon 8,000 ft. 4 "

100- *Thymus* *Satureia hortensis*

a) Sept. 10, 1867. W. Humboldt Mts., Ariz. Stream bank in Unionville. 5 sp.

b) Oct., " " " " Same locality. (W. W. Bailey.) 4 "



101. - *Sabia columbiana*, Britt. (Dr. Prod. XII. 349.) Rare.

a.) Nov. 25, 1867. Truckee Pass, roadside. 2 sp.

b.) May 11, 1867. " " Rocky foot hills. 5 "

102. - *Audubonia incana*, Britt. - Dr. X. 11. 359, Made of the leaf nearly orbicular, slightly longer than the very narrow petiole.

a.) July 30, 1867. Border of Carson Desert - Valley Wells Station. 7 sp.

b.) Aug. 5, " W. Humb. Mts., Nev. Wright's cañon (W. W. Bailey). 1 "

c.) May 13, 1868. Truckee Pass, Nev. Mountain side 5,500 ft. 1 "

d.) " 23, " W. Humb. Mts., Nev. East of Orana. " 3 "

e.) July 7, " Mountain Valley, Nev. Dry stream bed. " 5 "

103. - *Lophanthus uncinatus* X Very abundant in moist mountain cañons, especially in Nevada.

a.) Sept. 6, 1867. W. Humb. Mts., Nev. Star Peak 6,000 ft. 6 sp.

b.) July 27, 1868. Mt. Tobin Range, Nev. Cumberland Cañon 6,000 ft. 4 "

c.) July 6, " Toiyah Range - above Austin " " 2 "

d.) " 24, " E. Humb. Mts., Nev. above Camp Ruby 7,000 ft. 3 "

e.) " 3, 1869. Uintah Mts., Utah. above Karnas Prairie 6,000 ft. 1 "

104. - *Nepeta Cataria*, L. (Gr. Man. 311.) Introduced.

July 13, 1869. Wahsatch Mts., Utah. Cottonwood cañon 2 sp.

105. - *Dracopis parviflorum*, Nutt. (Gr. Man. 312.) Frequent in the Wahsatch Mts.

a.) May 27, 1869. City Creek cañon. 5,000 ft. 6 sp.

b.) June 22, " Ruby's cañon 6,000 " 1 "

c.) " 30, " Cañon above Ruby's Park 6,500 ft. 2 "

d.) July 22, " Silver Creek cañon 6,000 ft. 1 "

106. - *Brunella vulgaris*, L. (Gr. Man. 313.)

a.) Sept. 4, 1868. E. Humb. Mts., Nev. Foot hills of Ruby Valley - 6,000 ft. 5 sp.

b.) July 6, 1869. Uintah Mts., Utah. Park's cañon 7,000 ft. 1 "

c.) " 17, " Wahsatch Mts., " East Creek cañon 6,000 ft. 3 "

d.) Aug. 13, " Uintah Mts., " Bear River cañon - meadow. 6,000 ft. 5 "

L. multiflorum Torr. is less slender branched stems 1-1 1/2' high, with broadly linear subsessile
 leaves, the ^{yellow} flowers in terminal ^{clayey} racemes, ^{very sessile,} 6" long, the tube much exceeding the linear sepals, with lobes
 1 1/2" in length, smooth & shiny (in one of Wright's specimens, which is otherwise similar, dull and
 scabrous.) The *L. booyei*, Nutt. as shown by the original specimens of Wright's collection in
 Herb. Torr. is the same, while the *L. decumbens*, Torr. of Janus's collection is *L. hirtum*, Lohm. —

of a specimen with granular base in H.K. H. Berlin.

114^a c. & h. = *M. paniculata*, Don. - distinguished by its general minuteness, (varying in
degrees) & by its lanceolate acute calyx lobes. The ~~extremity~~ forms of the
two species are readily distinguished but there are frequent intermediate ones
that may be placed with either. Foliage & habit precisely the same.
~~Small tuba seen above & exactly the same~~

116. - *M. paniculata*, a. - 114 - b. c. e. and h.

117. var. *viridis*. - lower leaves attenuated into a petiole, upper ones broad at base
ovate & clasping. ^{glabrous on midrib & sides} - the flowers *viridis* - the lower flowers broader leaves & denser panicle.

XLVIII.

This should be distinguished as a new species - more distinctly narrower than most - the
others. It is thus ~~H+H~~ H+H, collected by (H+H) in some part of the ...
- in some in some country.

M. ...

119 *Amsinckia lycopsoides*, Schum. - (DC. Prod. x. 117.) The specimens are so exceedingly variable in habit, foliage, position of the stamens & other characters of the flower, that it becomes unavoidable to include in this species both *A. Mexicana*, Nutt. & Gr. and *A. intermedia*, Fisch. & Mey., & perhaps also *A. spectabilis*, F. & M. - as has already been suggested by both Dr. Zorny & Dr. Gray.

- | | | | | |
|----|------------------------|--|-----------|--------|
| a) | Apr. 22 - May 2, 1868. | Foot hills near Carson City, Nev. | 57,000 ft | 27 sp. |
| b) | June 3, | " W. Humboldt Mts., Nev. - Foot hills | " | 2 " |
| c) | July 10, | " Diamond Mts., " Stage Pass. | 6,000 ft | 12 " |
| d) | " 20, | " E. Humboldt Mts., " Cañon above Camp Ruby, | 6,500 ft. | 1 " |
| e) | May 10 + 21, 1869. | Foot hills near Salt Lake City | | 3 " |
| f) | June 3, | " Antelope Island, Salt Lake. | | 1 " |
| g) | " 12, | " Starbuck's Island, | | 1 " |

¹²⁰
119. - *Piptocalyx circumscissus*, Torr. (*ditiospermum*?, H. & A. - Bot. Beech. I. 370.)

- | | | | | |
|--|----------------|--|-----------|--------|
| | June 12, 1868. | Inglen range, ^{dry sandy ridge} Foot hills | 5,000 ft. | 15 sp. |
| | " 6, 1869. | Antelope Island, Salt Lake. - shore | | 3 " |

121. - *P.* Nutt. in Herb. Gr.

Probably only young state

Apr. 22 + May 2, 1868. - Foot hills near Carson City. 18 sp.

124. *Eriogonum Californicum*, DC.

- | | | | | |
|----|----------------|---|-----------|------|
| a) | July 10, 1867. | Wet meadow, at Glendale. (W.B.) | 4,500 ft. | 3 sh |
| b) | " 27, " | " valley at the Big Bend. | " " | 8 " |
| c) | Apr. 23, 1868. | Salt meadow, north of Carson. | " " | 12 " |
| d) | May 9 " | Wet alkali meadow S. of Glendale | " " | 1 " |
| e) | " 14 " | Alkali flat near Richeys | " " | 1 " |
| f) | June 12 " | Swampy ground in Pleasant Valley - | 5,000 " | 1 " |
| g) | " 30 " | Rattle Mt. Swampy spot in high cañon | 7,000 ft. | 11 " |
| h) | July 3 " | Near river pass of the Shoshone Mts, near Crispin's | 5,000 " | 5 " |
| i) | " 6 " | Zionville Mts, camp in pass E. of Austin | 6,000 " | 1 " |

None of the spec^s in Herb. Torr. have fruit. Fruitly spec^s that seem to be the same as also
put with *E. canescens* (Plagiobotrys, etc.) — but one of Stodd's which is mine exactly, from Eagle valley —
the fruit broadly ovate with an abrupt broad ^{or strongly incurved,} beak, somewhat tuberculate cristate and also tuberculate marginated, obviously
transversely rugose. The fruit of *E. canescens* is similar but more strongly rugose.

Nothing of this in Herb. Gray, nor in Herb. Gray, though near
E. canescens yet is assumed to be distinct.

j) July 27, 1868.	E. Humb. Mts. sink in divide above Ft. Ruby.	8,500 feet.	10 sp.
k) Sept. 12 "	Clear Mts. - Head of Cañon	9,500 feet.	5 "
l) " 30 "	Goose Creek Valley, mont.	6,000 "	2 "
m) June 3, 1869.	Mouth of Jordan.	4,300 "	2 "

131. *E. heterocaryum*, Torr.

Apr. 22 + May 2. - sandy foothills near Canon				19 sp.
a)	May, 13, 1868.	Foothills near Clark's in Mucker Pass.		15 sp.
b.1)	" 14, "	Sandy sage plain E. of Ricker's		1 "
c.1)	" 15 "	Rocky ridge of Station 14		3 "
d.1)	" 16, "	Trinity Mts, near Eagle Cray.		2 "
e.1)	June 12, 1869.	Stansbury Island - shore		1 "

122. - *E. villosum*, var. *arctivoids*,

a)	Aug. 3, 1869.	Wintake Mts. - Above Bear River Canon	12,000.	12 sp.
b.)	" 10, "	" " Peak W. of Camp	"	1 "

123. *E. ~~arctivoids~~ ^{heterocaryum}*, Torr.

a)	May 14, 1868.	Sandy sage plain E. of Ricker's	4,500 ft.	6 sp.
b.)	" 15 "	Rocky ridge of Station 14 - Trinity Mts	5,000 ft.	2 "
c.)	" 16 "	Dry foothill near Eagle Cray "	" "	1 "
d.1)	" 20 "	Lower Canon E. of Cooper's Ferry	4,500 "	1 "
e.1)	June 10 "	Foothills near Unionville	5,000 "	1 "
f.)	May 27, 1869 -	City creek canon	" "	2 "
g.)	June 11, "	Rabbit Island	4,300 "	1 "

124. *E. trichocarpum* fulvum, DC. DC. 10, 132.

Apr. 23, 1868.	Foothills north of Canon City		15 sp.
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129. *E. micranthum*

a)	June 15, 1869.	Stansbury Island Stansbury Island		5 sp.
	" 15 ²⁹ "	Corrington Island - rather doubtful		1 "
b.)	July 22 "	Rocky hillside in Silver Creek canon		3 "

127. *E. ^{trichocarpum} ~~trichocarpum~~*

May 11, 1868.	In Mucker Pass, or near Glendale.		65 sp.
" 13 "	" " Rocky hillside near Clark's		2 "
" 15 "	Rocky ridge of Station 14, Trinity Mts.		1 "
" 16 "	Eagle Cray		1 "

It seems to be only a var of *E. glomeratum*

13. *E. glomeratum* may be distinct

This is doubtless *Krynitzkyia Peivocarpa*, though the calyx is not consistently 5-lobed, as
E. muriculatum, Torr. (n. sp. DC.) Bot. of Calif. ex. bot. ped. 5. 12, 1847. is apparently in every respect
 the same thing, except that the tubercles are very minutely granular (as in the *E. glomeratum* type). The
 fruit of the present specimen shows in the microscope a very obviously granular
 surface. Make two more for large + small calyx specimens. There are
 no other great specimens in Herbarium.

Everything in Herb. Acad. is put under *E. flor.* - Form. 2 + 3' ex. 6337 and - make, with 434 from N. branch
 of Columbia, 314 Wild, Davis (Calif.) - *E. diffluum* var. of *max.* (small) - An authentic spec. from
 Hartweg has yellow fruit changing tendency to granulation, like my specimen. It is
 rather shorter than *E. diffluum* but can hardly be considered distinct. The tubercles are
 as in hairs in the same way, though coarser than found in this spec. in section, and the
 granular surface is as by the same process.

125. *E. glomeratum*

- a) July 4, 1869. Limestone ridge - Park's Cañon 3 sp.
 b) " 29 " Ridge in ~~High~~ river valley, near Eranston. 2 "

126. *E. fulvofuscescens*, Torr. - 632 750 ft. ^{5-22 44 70} _{1-1-1 " + 40}

- a) May 16, 1868. Cañon bet. n. of Eagle crag. 5,000 ft 5 sp.
 b) " 23, " " " E. of Breana 5,000 ft. 1 "
 c) June 13, " Ketchikan Pass, Douglas range, sand 5,000 ft 2 "
 d) July 8, " Monitor Valley, Dry gravelly & clayey knoll, in dense clumps, ^{6,000 ft} 3 "
 e) " 24 " E. Humboldt Mts., divide at head of cañon above Camp Ruby 6,000 ft. 2 "
 f) " 27 " " " Peak above Ft. Ruby 9,000 feet 2 "
 g) Sept. 10, " North Coast Peak 10,000 ft. 4 "
 h) May 17, 1869 Cañon above Camp Douglas 5,000 ft 3 "

130. *E. ~~glomeratum~~*

- v.d.int a) June 10, 1868. Fort Hills near Unionville, Mr. 5,000 ft. 1 sp.
 b) July 20, 1868. E. Humboldt Mts., border June pass above Camp Ruby 7,000 feet. 2 sp.
 c) Aug. 26 " " " Cañon above Oriskany ranch, shady roadside " 1 "
~~d) June 15, 1869. Corning, below Dutch Settlement~~
 e) July 22 " Rocky hillside in Silver Creek cañon 6,000 3 "

June 10, 1868. Fort Hills near Unionville 3 "

~~*Argemone leucocarpa*, Torr.~~

- 7-131, ¹⁸⁶⁸
 a) Apr. 26 & May 2, Sandy fort hills n. of Carson 12 sp.
 b) May 2, 1868 " " below Carson 7 "
 c) " 12, " Rocky fort hills near Ricksays 4 "
 d) " 16 " Trinity Mts., Rocky hillside near Dutch Pass 6 "

132. *Echinopspermum floribundum*, Schum.

- ~~a) July 25, 1869. Truckee bottom at Big Bend. (below 131.) 4 sp.~~
 b) June 27, 1868. Mt. Union Range - Cumberland cañon 4 "
 c) " 30, " Better Mt. high cañon - shaded stream bank 7,000 feet. 4 "
 d) July 20, " Diamond Pass - Dry run 7,000 feet 5 "
 e) " 20 " E. Humboldt Mts. - cañon above Camp Ruby ^{thin & white} 6,000-7,000 6 "
 f) Aug. 1, " " " Cañon creek bank - shaded - light blue 6,000 3 "
 g) May 17, 1869 Washoe - Cañon above Ft. Douglas 5,000 6 "

There are no ~~new~~ young species either of *probulum* or *Redoukii* in Herb. Zool.
All the native species of both are one thing. Bark irregularly & acutely tuberculated with
the interspaces minutely granulated

Annual

It is the ~~same~~ same as that of the *Wittke's* sp. (or *pro*) and of *trunc* (1842, p. 100) on the
Pilos - hairy ^{linear} 5' calyx teeth, small corolla but like *long* & readily dilated above (2")
the style short & rarely exceeding the calyx. Also 359200. (near ^{15' long} San Pedro City) - that
the *Replicata* of Mexico has a ^(1" long) 4-lobed calyx, the ovary tube ~~about~~ ^{about} equaling the tube, the
corolla 3" or more in length, dilated upwards, - the style much exserted from the
calyx. - A good species apparently sub-erect

h.)	May 27, 1869	Wahsatch - City Creek cañon.	5,000 ft.	2 sp.
i.)	June 22, "	" Parley's cañon	"	1 "
j.)	" 26 "	" cañon above Parley's Park	6,000	1 "
k.)	July 10, "	" Provo cañon, n. fork	"	1 "
l.)	" 20, "	" Summit W. of Parley's Park	8,000 feet.	1 "

E. patulum, ?

a.)	July 27, 1867,	Big Bend of Truckee		2 sp.
b.)	" 29 "	" " (W.W.B.)		4 "
var. <i>strictum</i>	May 15, 1868.	Trinity Mts. - foothills N. of Station 12		15 "
c.)	" 21, "	Sage plain above Cooper's Ferry		8 "
d.)	" 23 "	near Summit E. of Orm	7,000 feet	2 "
e.)	" 27, "	Trinity Mts. - hillsides near Camp	6,000 ft	12 "
f.)	June 9, 1869	W. Humboldt Mts. - hillside of N. upper cañon, above Minner's	7,000 ft	1 "
g.)	" 12 "	Swampy ground in Pleasant Valley	5,000 ft.	1 "
h.)	" 23 "	Dryden Range - Dry foot hill in Spalding Pass	"	1 "
i.)	July 3, "	Shoshone Range - Silver Creek Cañon - Dry wash	"	5 "
j.)	" 24, "	E. Humboldt Mts. divide above Camp Ruby	8,000 ft.	3 "
k.)	May 17, 1869.	Wahsatch - Cañon bank of Camp Tompess		1 "
l.)	" 18, "	" Spur north of city		2 "
m.)	" 31, "	Jordan floor near city		1 "
n.)	June 11, "	Roberts Island		2 "
o.)	" 12 "	Stansbury Island		1 "

Helictogonium curassavicum, L.

a.)	July 16, 1867,	Truckee bottom, or Glendale (W.W.B.)		6 sp.
b.)	Aug. 6, "	Humboldt Slough.		1 "
c.)	July 1, 1868	Humboldt valley, mouth of Reese		2 "
d.)	May 31, 1869	Bank of Jordan, near city		5 "

Calandrinia Nuttallii,

a.)	July 26, 1867.-	Truckee desert, near Big Bend, (W.W.B.)		1 sp.
b.)	Aug. 4, "	Canon desert, Reed's Station		1 "
c.)	June 22, 1868	Unionville valley.		3 "

May 17³¹. 1869

" 22¹, "

" 28⁶, "

10¹

3¹¹

1

Hydrophyllaceae

Hydrophyllum

nov. sp.?

May 17, 1869.	Canon back of Camp 8 miles	5,000	2 sp.
June 24 "	Peak above Parry's Pass	7,000	1 "
" 29 "	" "	"	1 "

H.

nov. sp.?

July 30, 1868

5

H.-

June 4, 1868

7

" 8⁶⁰ "

1

" 9¹⁰ "

1

Stemofructum

nov. sp.

June 24, 1869	Canon above Parry's Pass camp	7,000	5.
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July 5, "	Near head of Parry's canon		2
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" 30, "	Near same bottom, 6.5 miles		1
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Stemofructum

Nov. Gen.

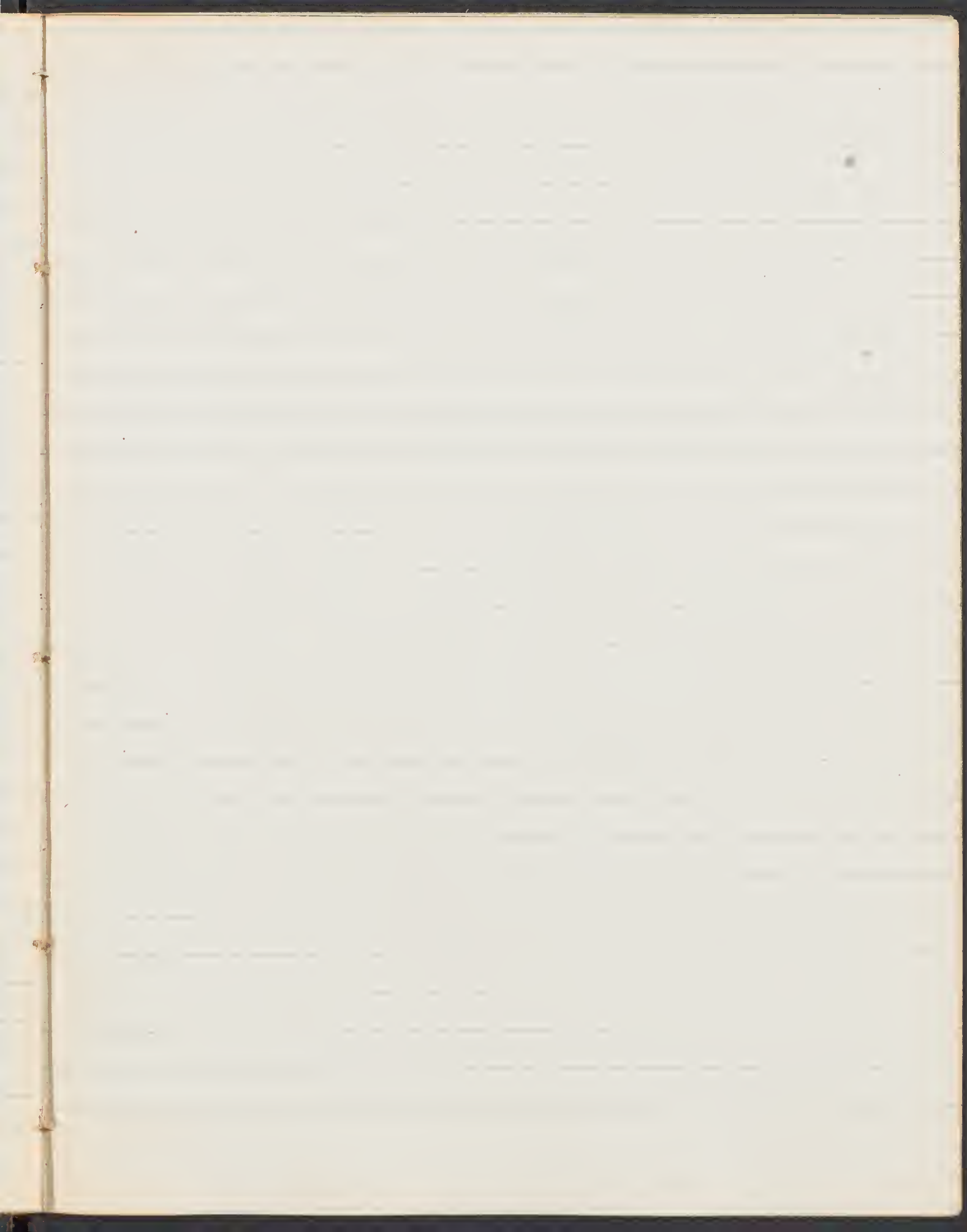
533

Near Clark's station, Truckee Pass	2
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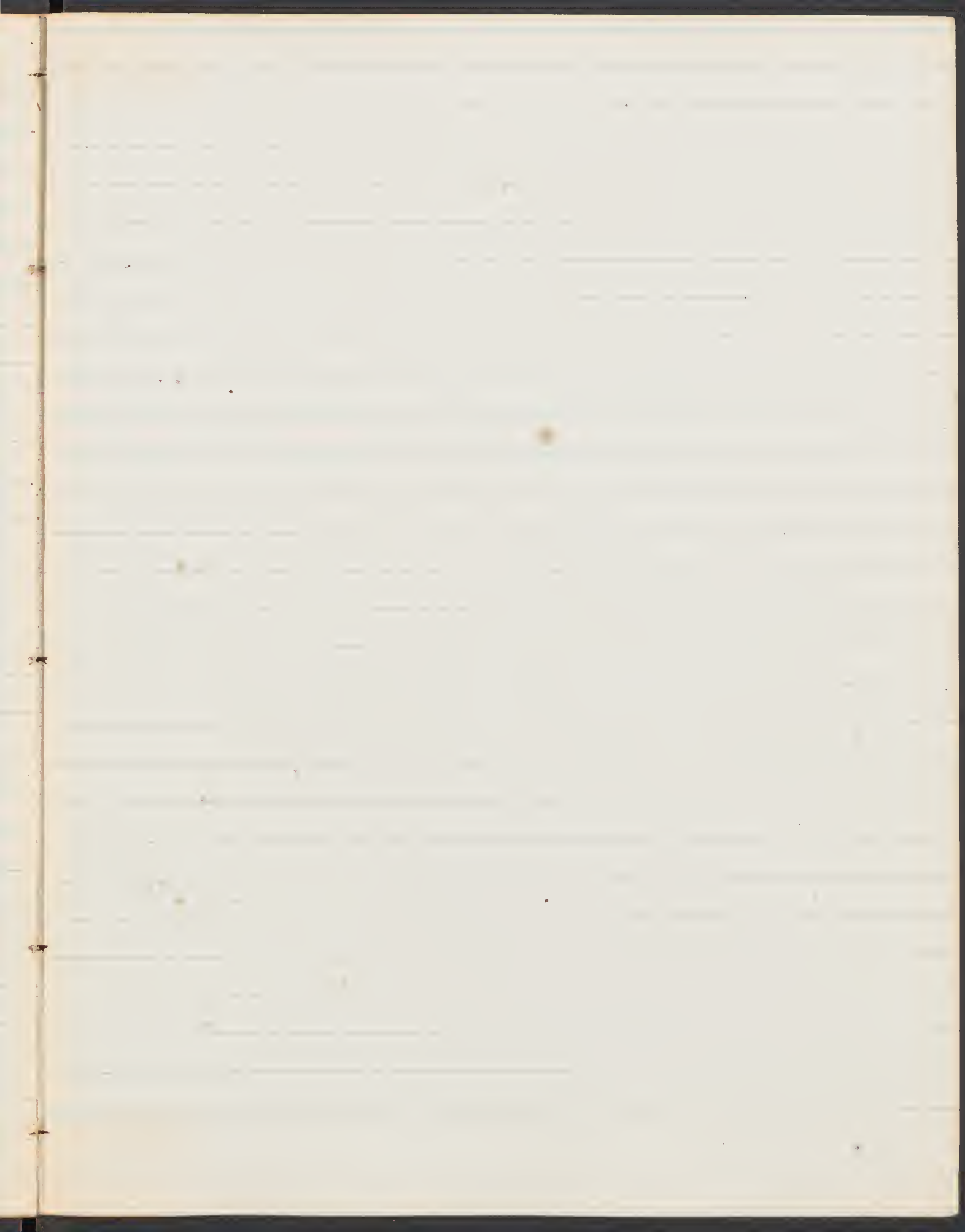
May 14, 1868	Near Pickens	1
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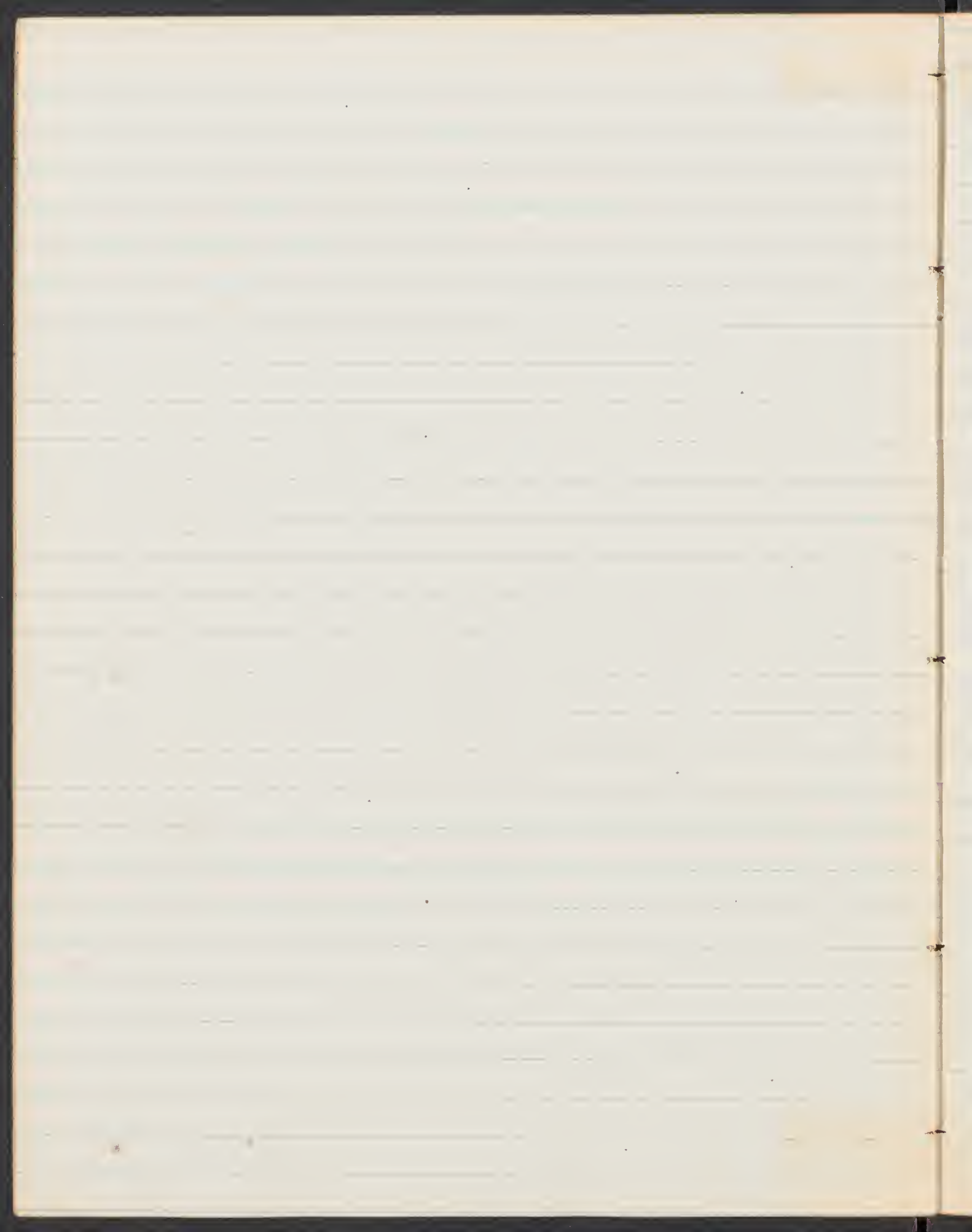
" 19 ¹² "		2
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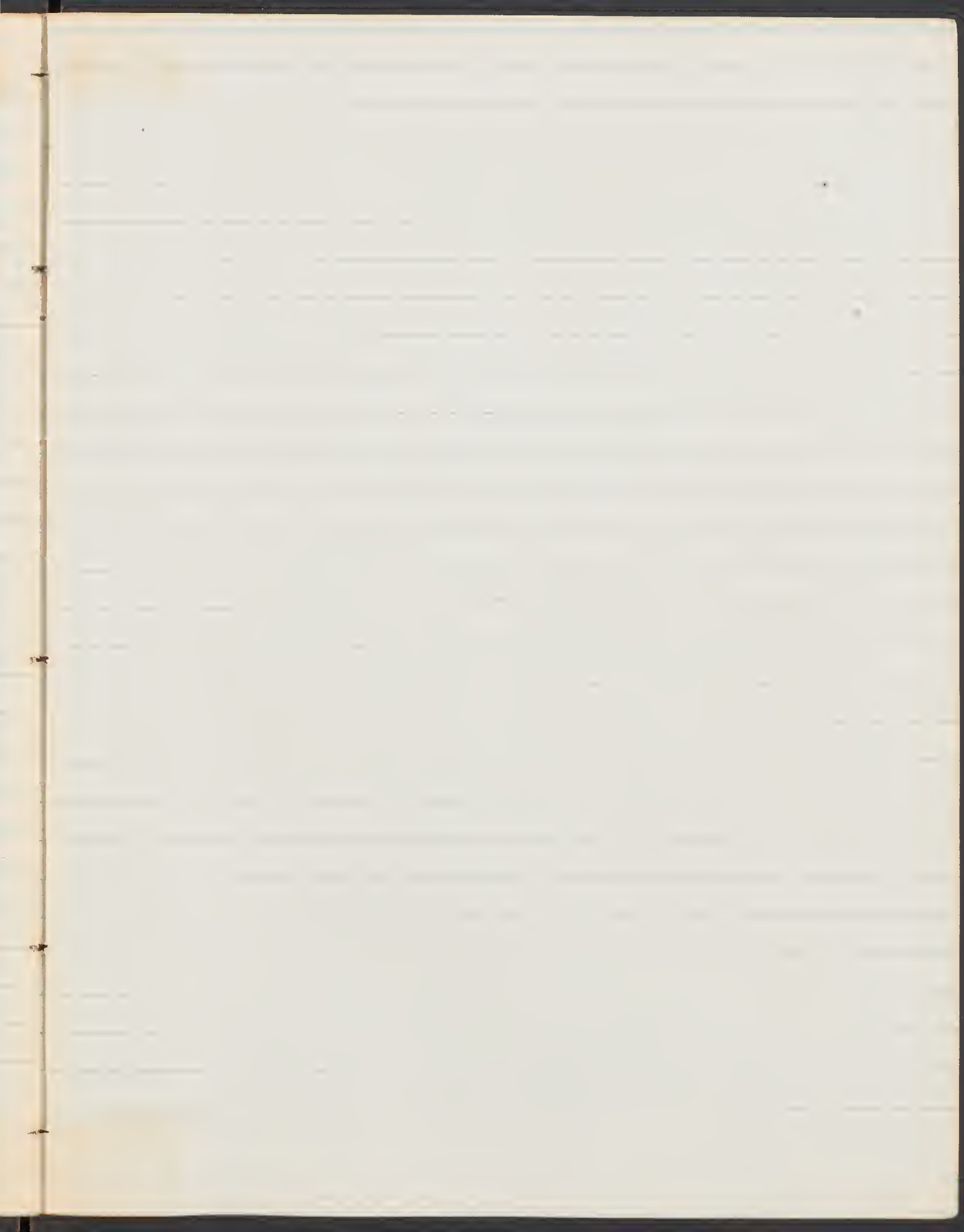
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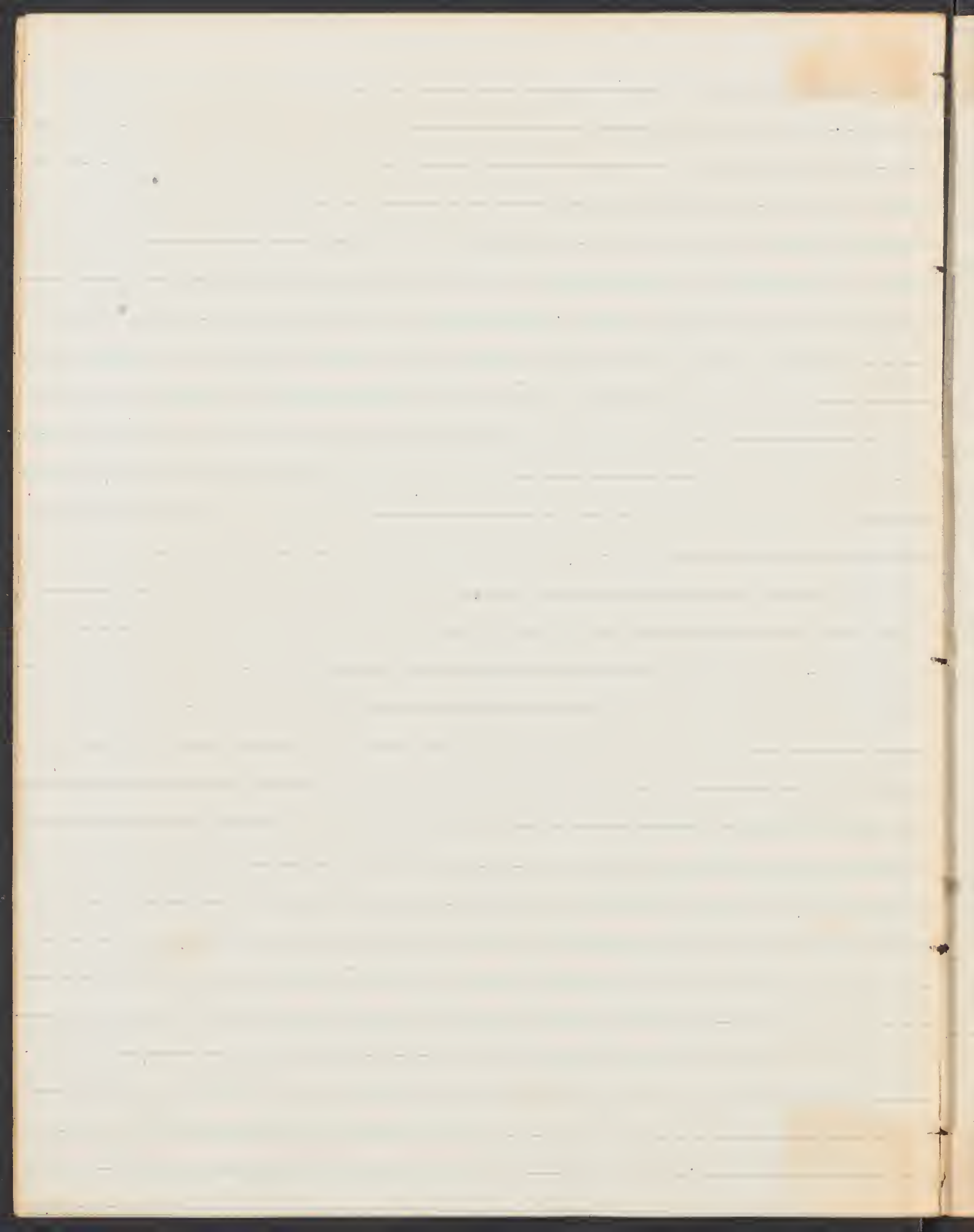


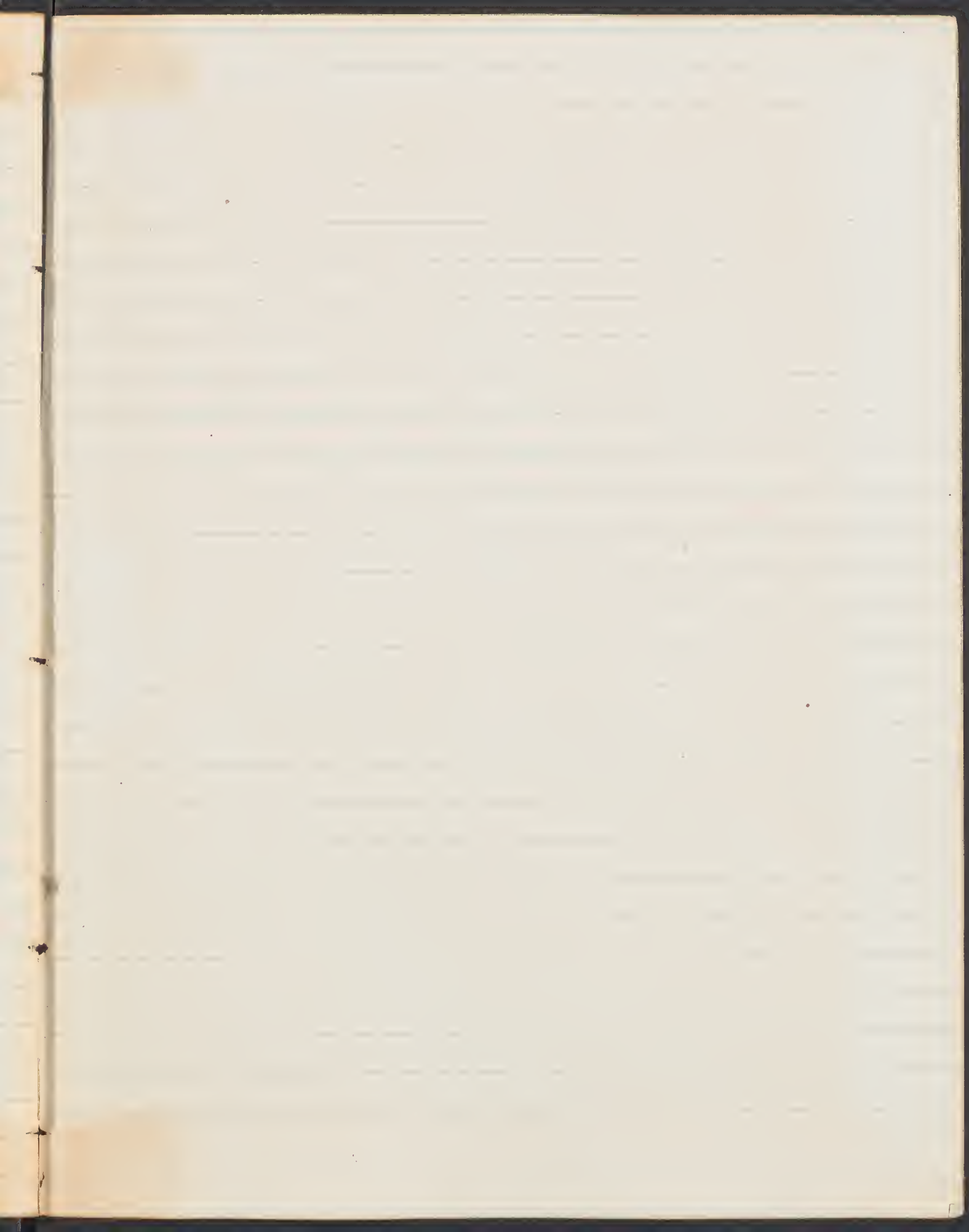




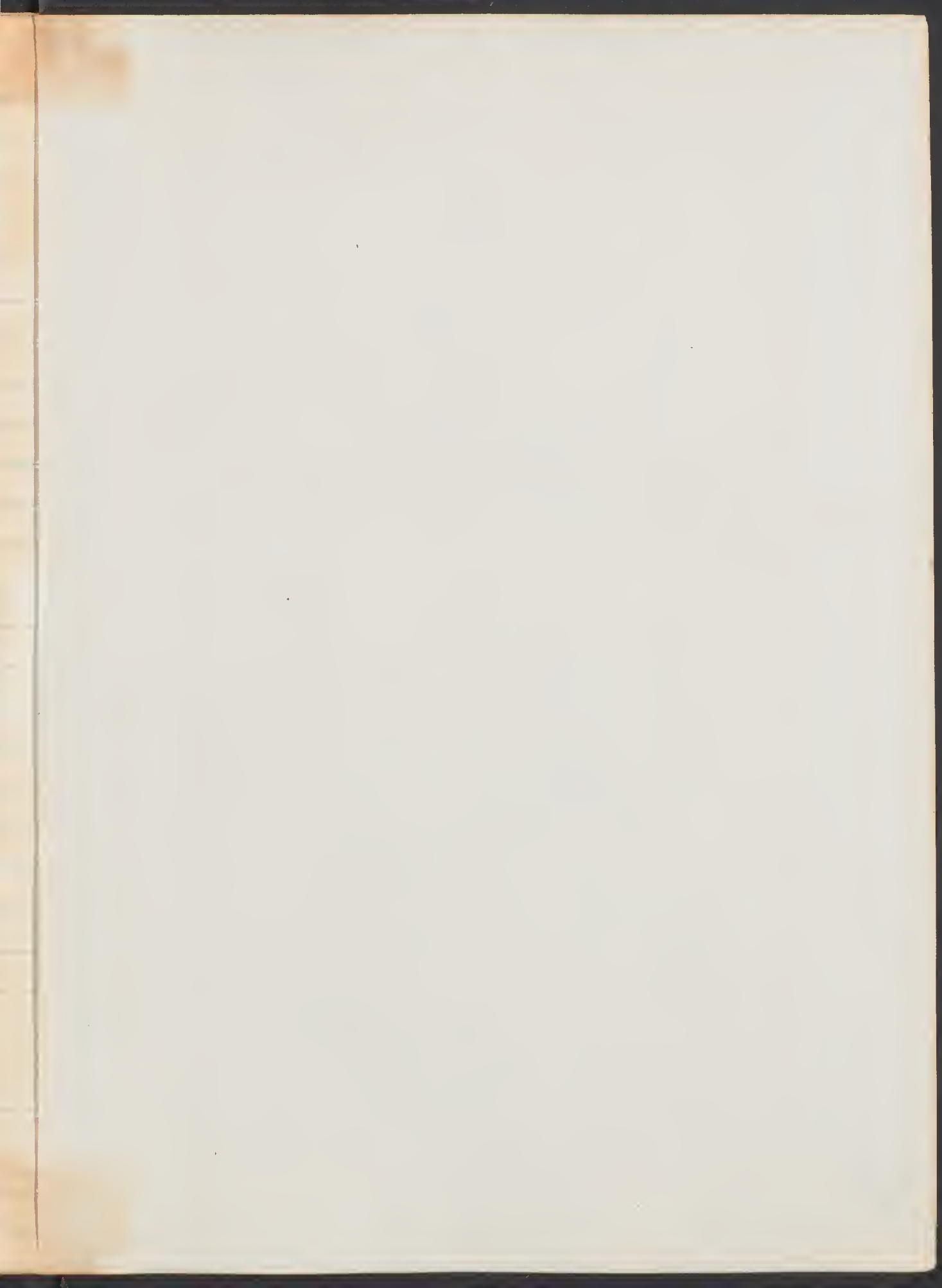








Earl's Collection



$\frac{20}{100}$ ✓

