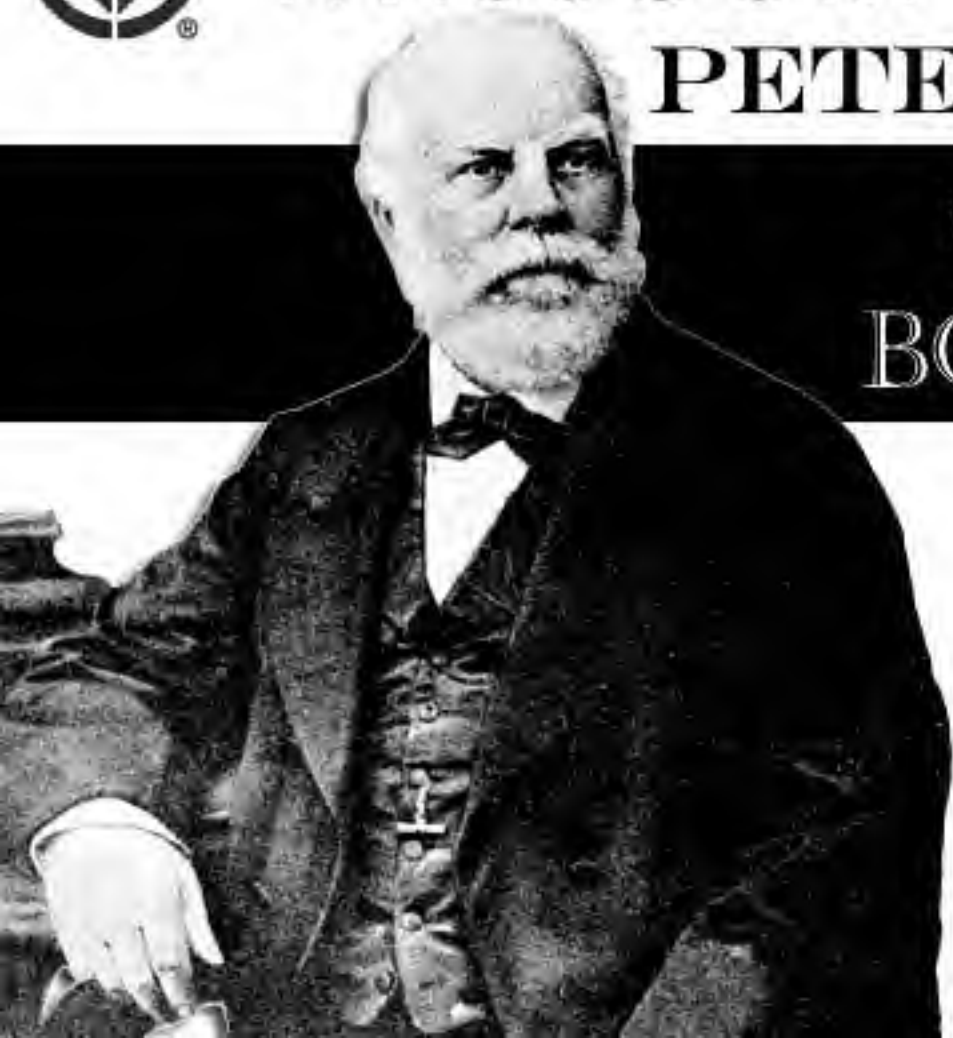




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BOTANICAL NOTEBOOKS

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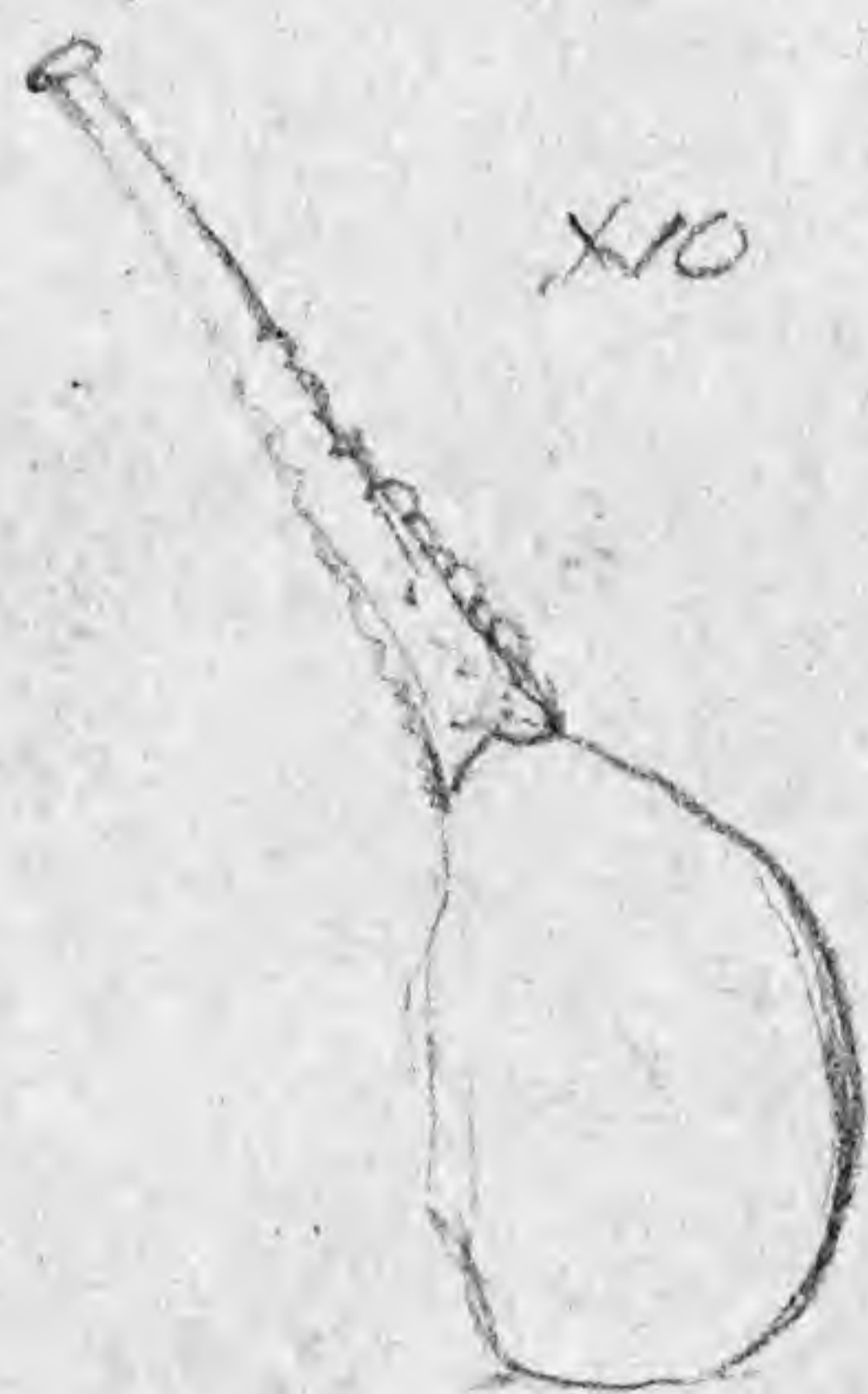
*P. Pennsylvanica*

June 10 1867

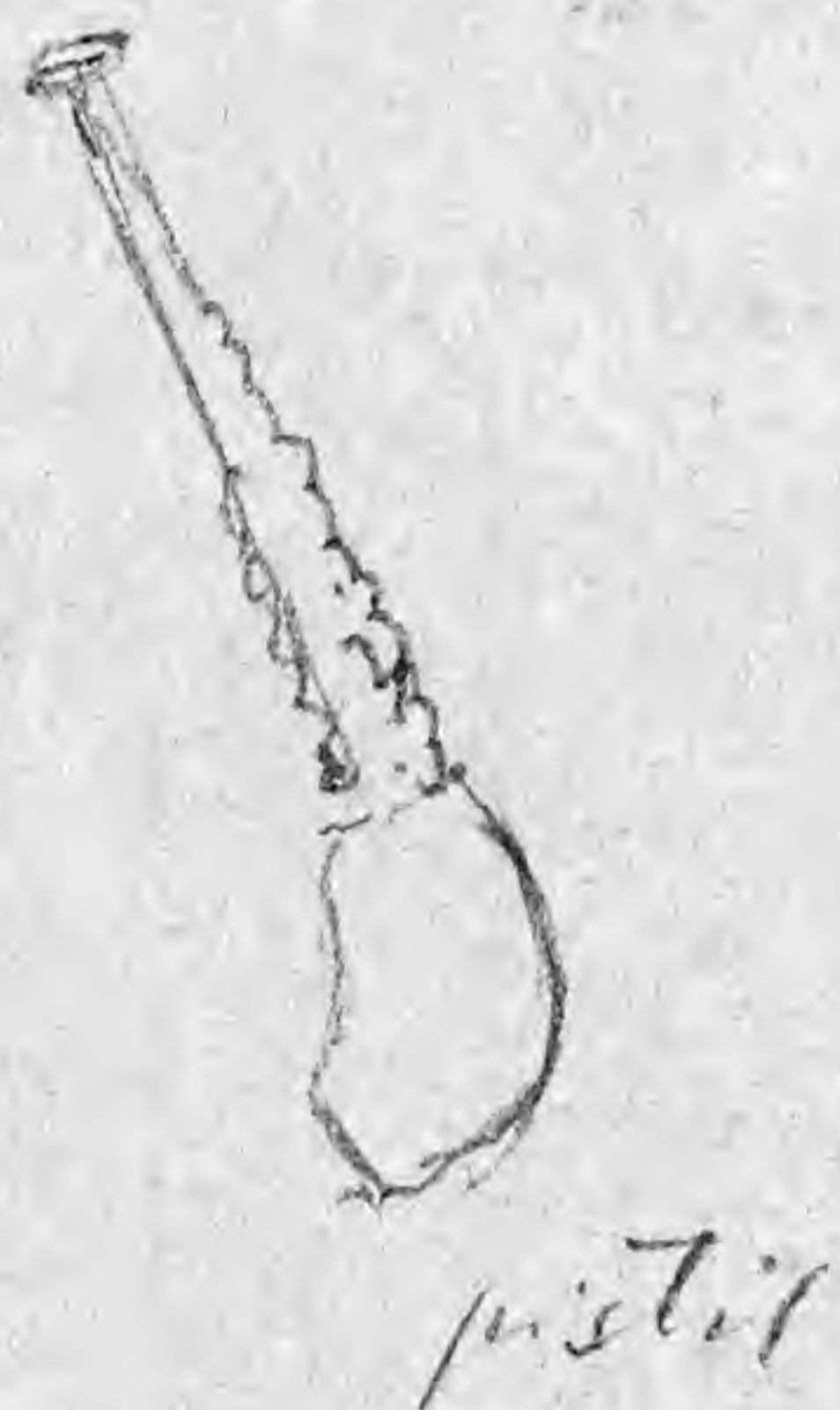
var *arguta* s. *pinnatifida*

Hort. Carolinica

716



x10



pistil



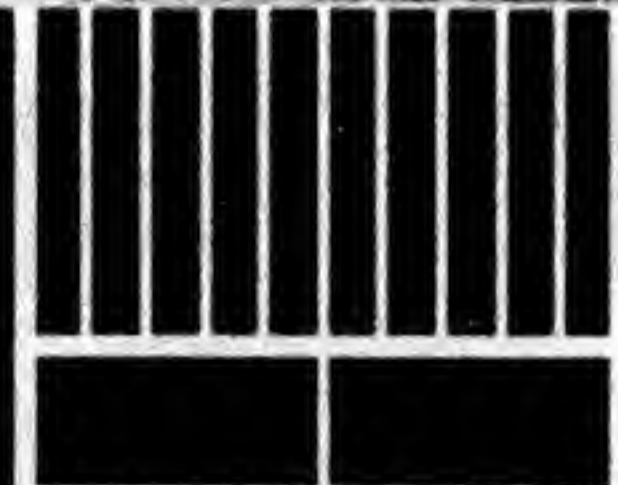
x20 stam



x4

petal obovate  
obcordate  
s. profunda emarg.

inripe achen  
in a large  
ovate - conical  
hairy recept



0 1 2 3 4 5 6 7 8 9 10

cm

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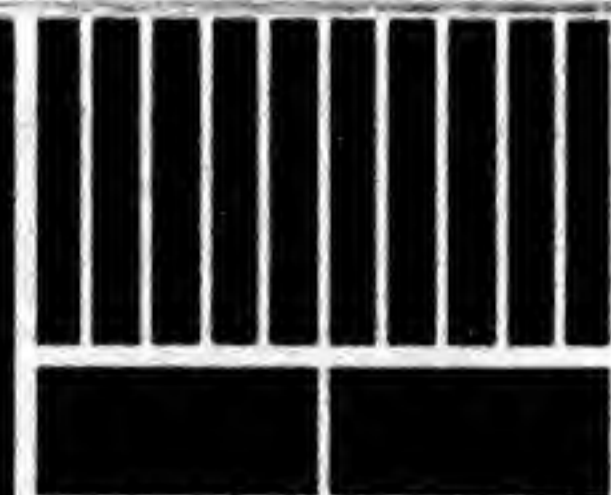


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**APOTHECARY & CHEMIST,**

Cor. 4<sup>th</sup> & Olive Sts., St. Louis.

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0 1 2 3 4 5 6 7 8 9 10

cm

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*Additional Remarks on ATMOSPHERIC ELECTRICITY.*

By A. WISLIZENUS, M.D.

The delay in the publication of this volume enables me to add to my observations of atmospheric electricity in 1861, the result of my observations in 1862. The latter observations have been made in the same manner and by means of the same fine glass thread, which, after many thousand torsions, proves as good as ever. I present herewith in tabular form the general result of my observations in 1861 and 1862.

I. *Monthly mean of Positive Atmospheric Electricity in 1861 and 1862, at St. Louis, Mo., based upon daily observations at 6, 9, 12, 3, 6 and 9 o'clock, from morning till night.*

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861*	16.5	12.1	9.8	8.8	7.8	4.0	3.7	3.4	3.0	7.1	10.0	14.3	8.4
1862...	12.1	16.0	9.4	10.6	7.5	3.0	2.2	2.3	3.0	7.7	12.6	13.9	8.4

\* This table of 1861 differs in some decimals from that published on page 66 and in Diagram No. 1. Having discovered some errors, I calculated all my observations once more, and give now the present as the corrected table.

II. *Monthly mean of Temperature and of Relative Humidity in 1861 and 1862, at St. Louis, Mo., based upon daily observations, cotemporaneous with those of Atmospheric Electricity.*

## TEMPERATURE.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1°F.
1862...	23.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	56.4°F.

## RELATIVE HUMIDITY.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861...	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862...	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8

III. *Yearly mean of Positive Electricity of Temperature, and of Relative Humidity of the Atmosphere, at the hours of 6, 9, 12, 3, 6 and 9, from morning till night, based upon daily observations at these hours through the years 1861 and 1862, at St. Louis, Mo.*

## ELECTRICITY.

	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
1861 .....	8.6	10.0	9.2	7.9	8.7	6.9
1862 .....	8.9	10.0	9.1	7.3	8.1	6.8

## TEMPERATURE.

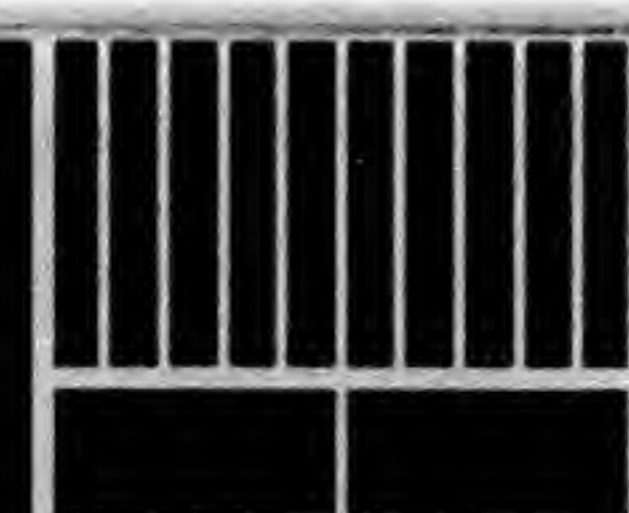
1861 .....	48.9° F...	54.9	61.6	63.6	59.3	54.3
1862 .....	48.9	55.0	60.9	62.3	58.0	53.6

## RELATIVE HUMIDITY.

1861 .....	86.4	71.3	60.3	57.2	65.1	77.3
1862 .....	5.3	70.6	60.0	57.5	67.6	78.0

*O. P. Wislizenus*

41-4



0 1 2 3 4 5 6 7 8 9 10

cm

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IV. *Direction of Winds and number of Thunderstorms in '61 & '62.*

1861.	E.	N.	N.E.	S.W.	N.W.	S.	W.	S.E.	Prevailing Winds.	Thunderstorms.
January .....	11	3	12	22	38	18	28	61	S.E. ....	0
February ....	4	2	2	35	24	19	41	60	S.E. ....	2
March .....	12	11	10	23	30	19	42	40	W. & S.E. ....	3
April .....	16	10	9	26	21	35	34	26	S. & W. ....	2
May .....	26	10	23	21	8	13	49	35	W. & S.E. ....	5
June .....	12	21	22	20	25	26	8	41	S.E. ....	7
July .....	3	31	14	21	26	46	15	29	S. ....	3
August .....	18	24	58	17	11	18	3	37	N.E. ....	5
September...	6	14	18	26	30	13	21	52	S.E. & N.W. ....	3
October .....	12	9	5	21	30	33	30	46	S.E. & S. ....	1
November....	7	15	8	22	27	20	36	44	S.E. & W. ....	1
December ...	9	19	9	25	23	33	17	51	S.E. & S. ....	0
	136	169	190	279	293	293	324	522	S.E. ....	32

1862.	E.	S.W.	N.	N.E.	W.	S.	N.W.	S.E.	Prevailing Winds.	Th. st's.
Jan. ....	19	6	19	23	29	3	38	51	S.E. ....	1
Feb. ....	14	9	18	16	22	7	39	43	S.E. & N.W. ....	0
March ...	9	14	3	15	59	10	34	43	W., S.E. & N.W. ....	4
April ....	12	13	18	31	18	11	34	47	S.E., N.W. & N.E. ....	6
May .....	12	18	14	38	18	30	14	44	S.E. & N.E. ....	5
June ....	3	29	24	16	8	36	26	23	S., S.W., N.W., N. & S.E. ....	6
July .....	5	25	17	7	2	24	31	77	S.E. ....	10
August..	6	16	16	45	5	22	28	48	S.E. & N.E. ....	7
Sept. ....	16	10	21	18	11	18	13	72	S.E. ....	6
Oct. ....	1	15	19	4	10	40	47	46	N.W. & S.E. ....	1
Nov. ....	14	19	21	12	43	19	34	18	W. & N.W. ....	0
Dec. ....	11	17	21	5	34	45	13	38	S., S.E. & W. ....	4
	112	191	211	230	259	265	351	550	S.E. ....	50

V. *Positive or Negative Electricity in the Observations of '61 & '62.*

	Positive Electricity.		Negative Electricity.		No Electricity, or 0.		Highest Positive Electricity.	
	1861.	1862.	1861.	1862.	1861.	1862.	1861.	1862.
Jan. ....	179	179	3	5		2	40°	40°
Feb. ....	162	166	6	2			34	33
March ...	168	179	15	8			30	48
April ....	157	157	12	22	1	1	33	52
May .....	171	180	17	5	1	3	25	32
June ....	162	143	5	2	8	20	16	21
July .....	183	153	3	8	1	24	14	11
August..	176	143	5	4	6	40	15	19
Sept. ....	169	117	1	1	10	61	18	23
Oct. ....	162	143	4	3	20	41	33	35
Nov. ....	172	157	2	7	6	16	42	42
Dec. ....	175	166	5	0	6	17	37	35
	2046	1883	78	67	59	225	42°	52°

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cm

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m.

*P. Ternstroemii*? *diversifolia*? June 10 1867

Mauvaises Terres. Hayden Jun 30 1853

717



wrinkles light  
achene not ripe

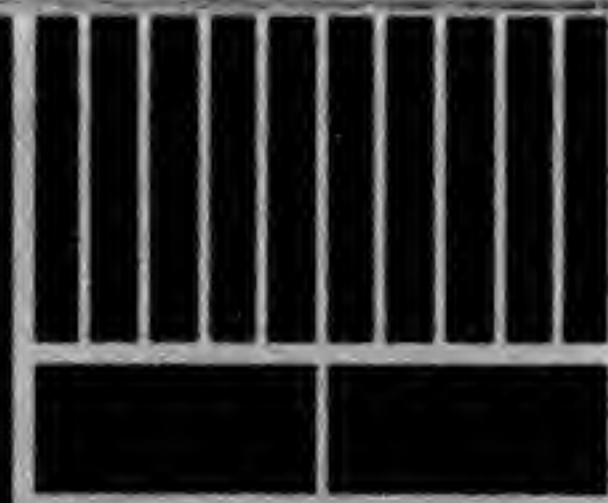
no doubt more wrinkled  
when fully ripe



20 stam



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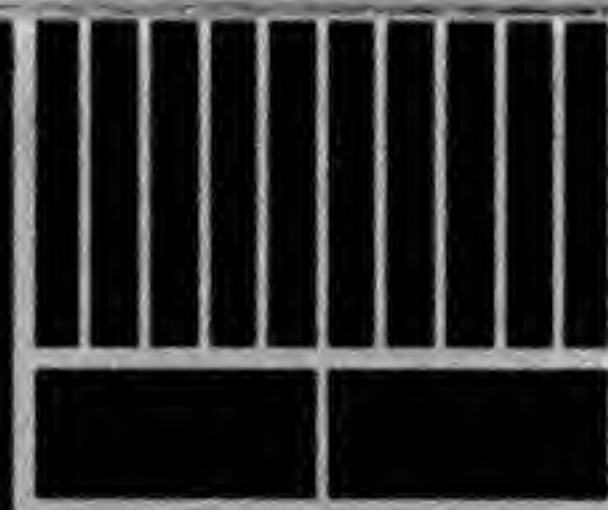
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AND R. V. G. & S. 'S,

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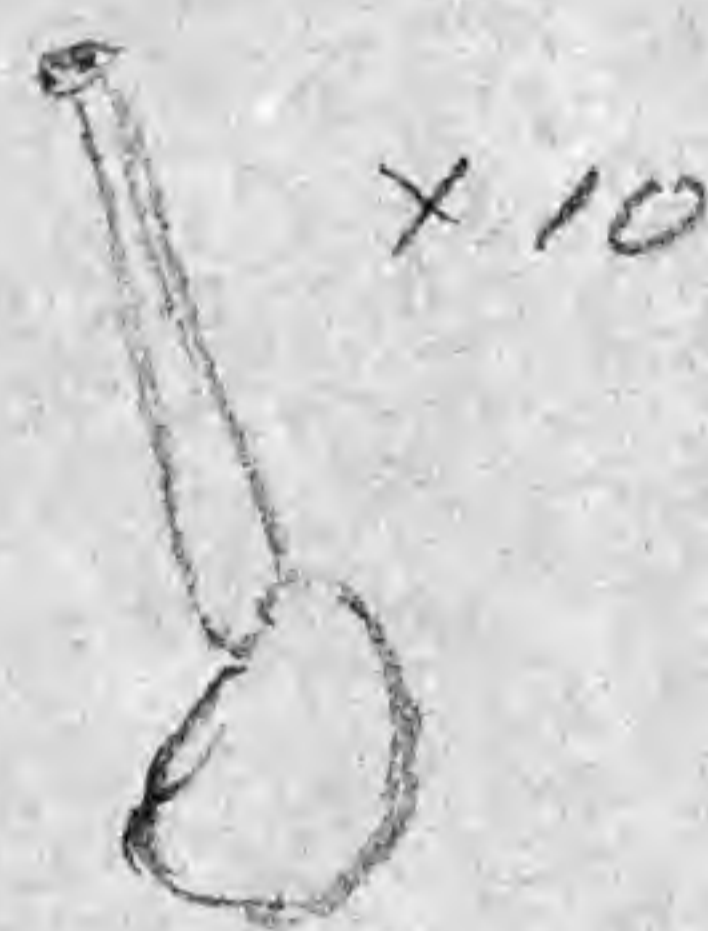
L

*P. Pennsylvanic*

Jun 9 1867

Colorado, Hall No 162

718



x10

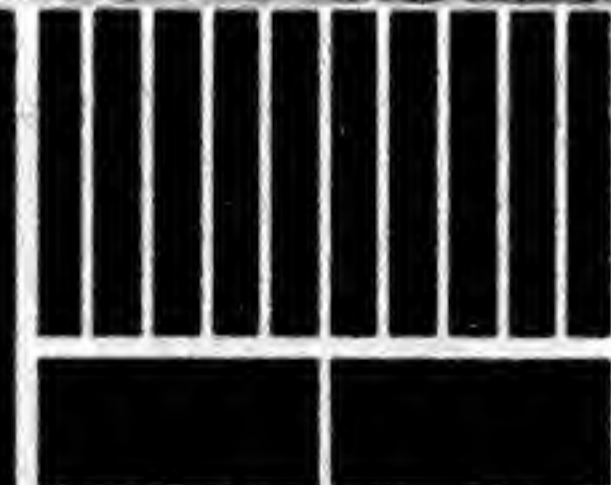


x10

20 stain



Petal x 4



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cm

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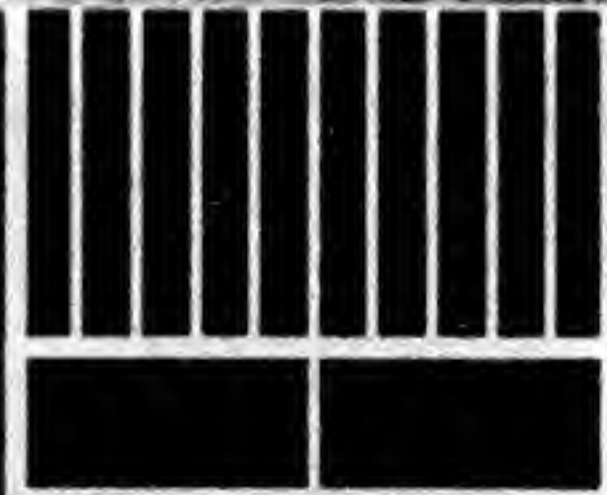
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0 1 2 3 4 5 6 7 8 9 10

cm

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GARDEN

June 8 1867

*P. Penicillaria*

Katte River, H. Bogota

719



achenium wrinkled  
discoides wrinkled  
style scarcely as long

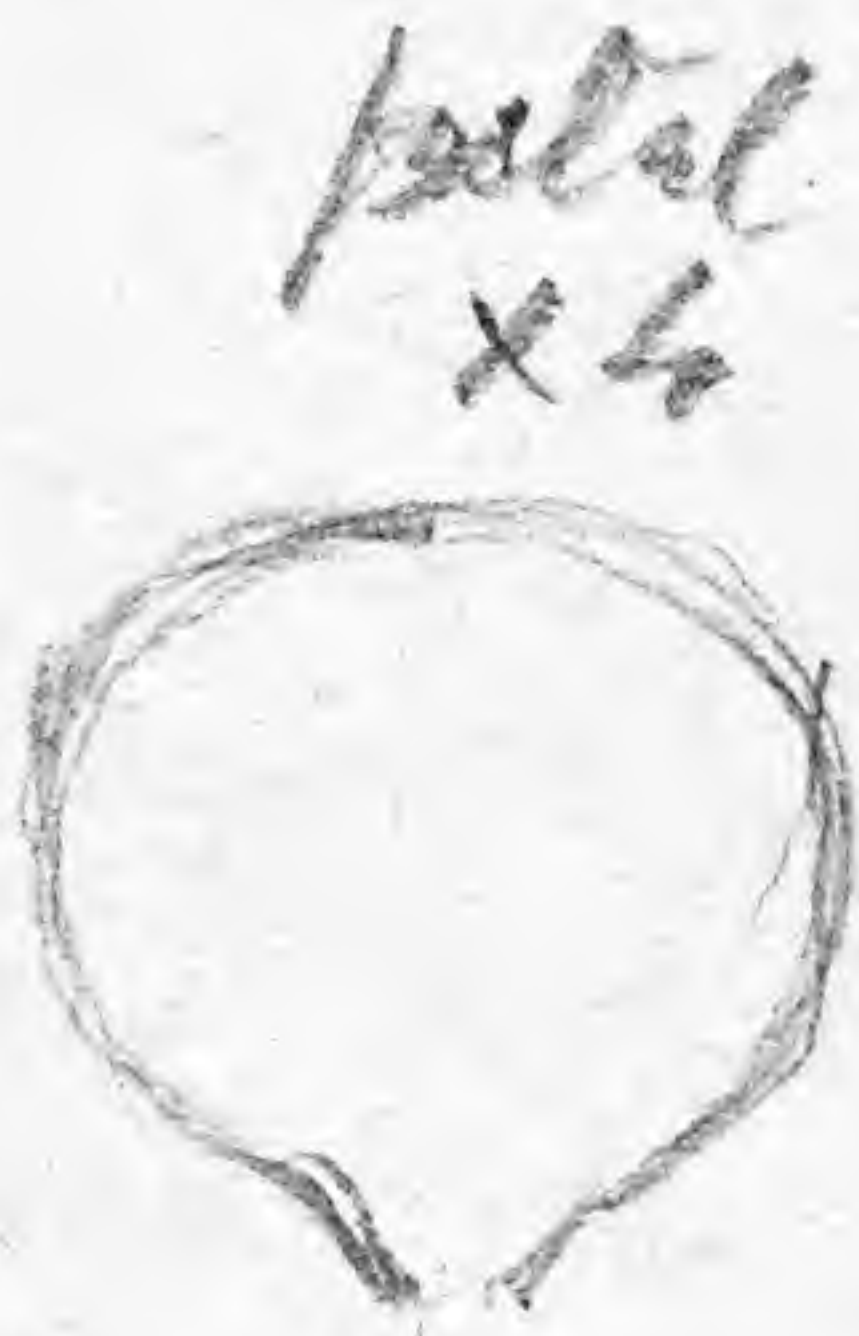
recept conic - obly  
very villous



pistil



anther  
20 stamens  
on very villous  
recept.



fol pinnat



0 1 2 3 4 5 6 7 8 9 10

cm

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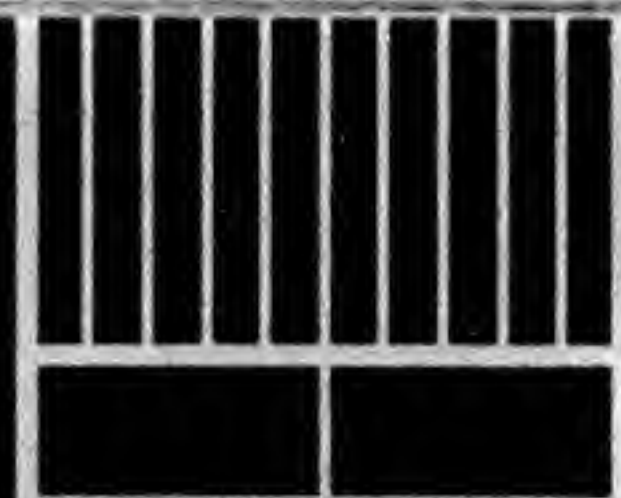


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cm

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GARDEN

K

*P. Pennsylvanicum*

June 9 - 1867

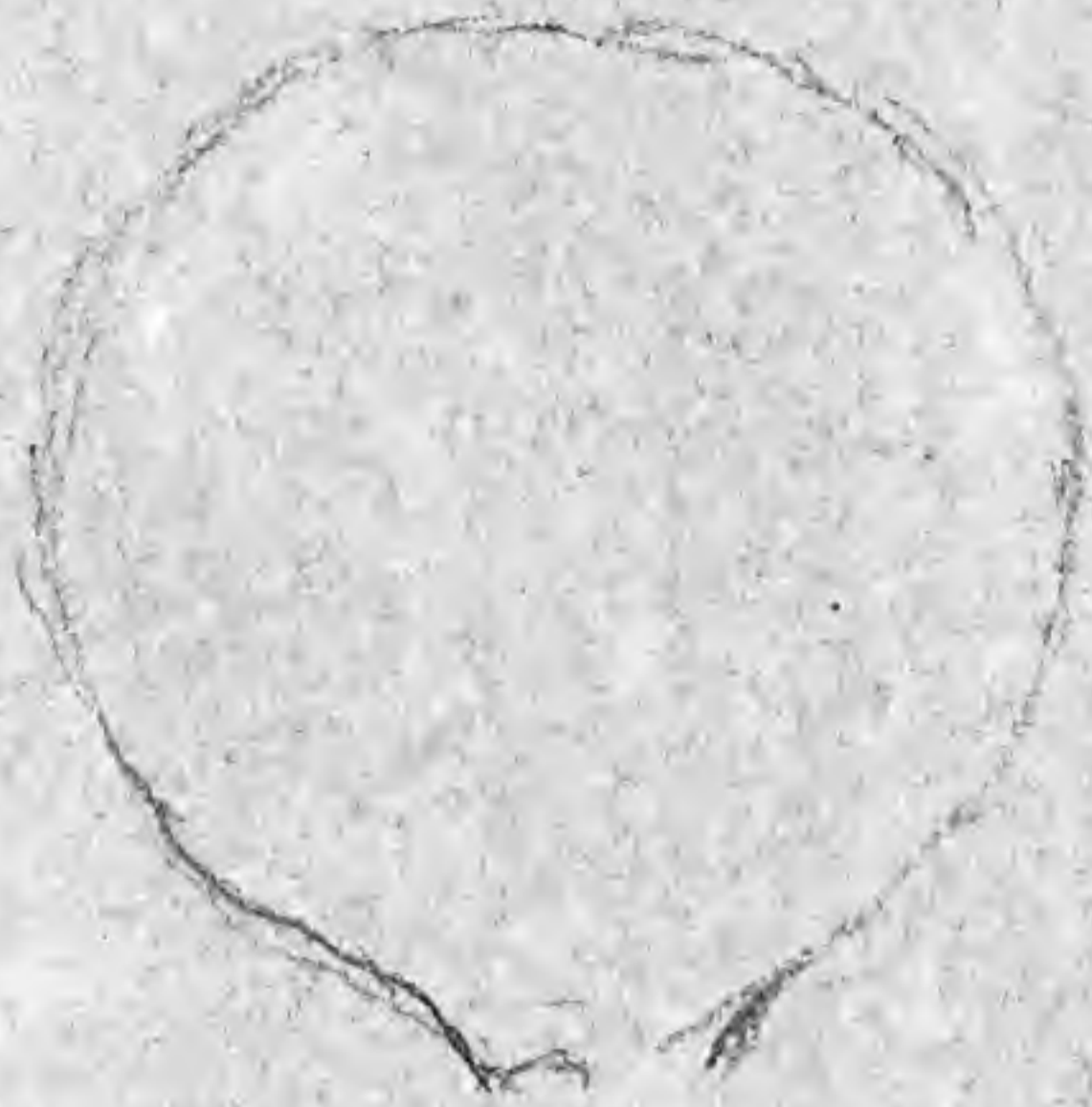
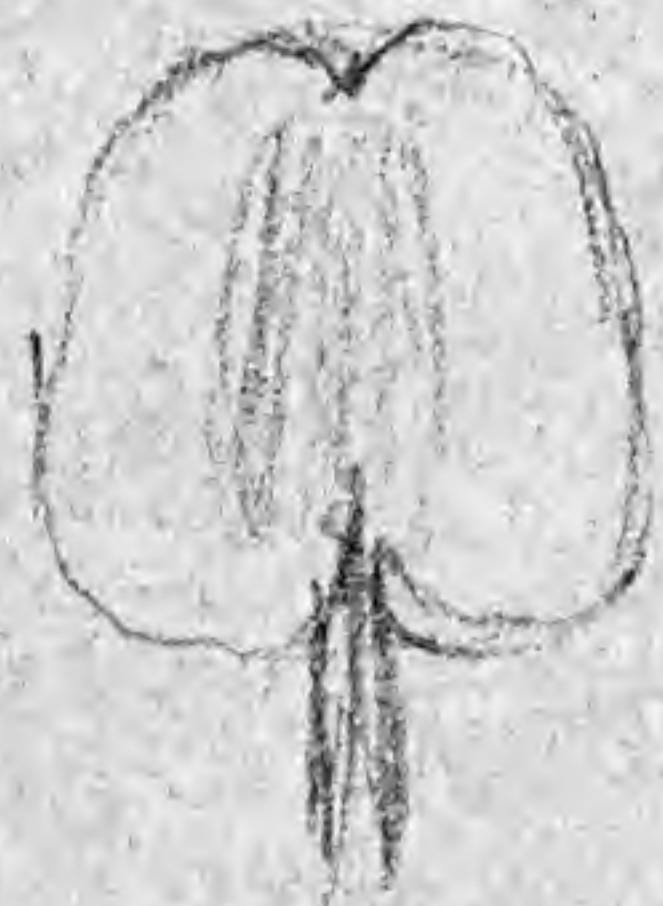
Maudslayi Ferry

St. Hay Dec

1853

720

x10



x4

petals orbiculate

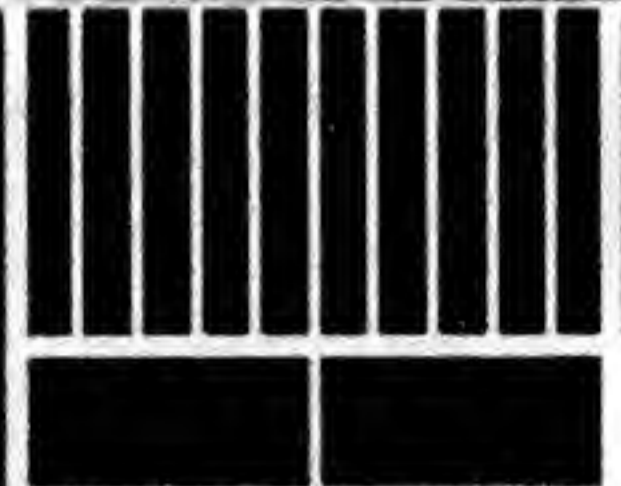
x10



flower  
just  
opening



after  
deflorescence



0 1 2 3 4 5 6 7 8 9 10

cm

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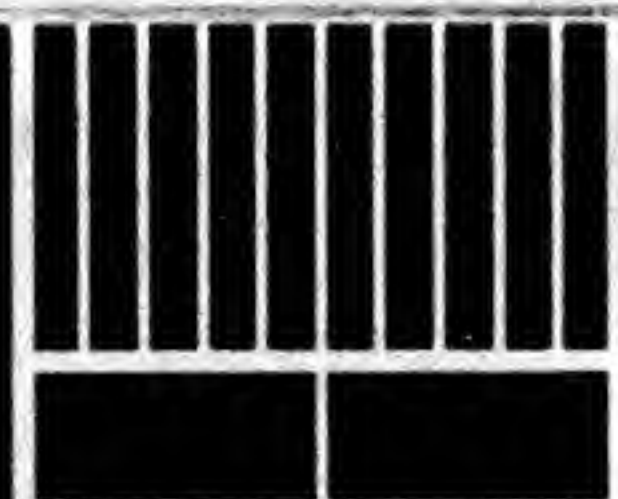


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cm

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GARDEN

n

June 10 1867

*P. Pennsylvanica*

Santa Fe, Number 202

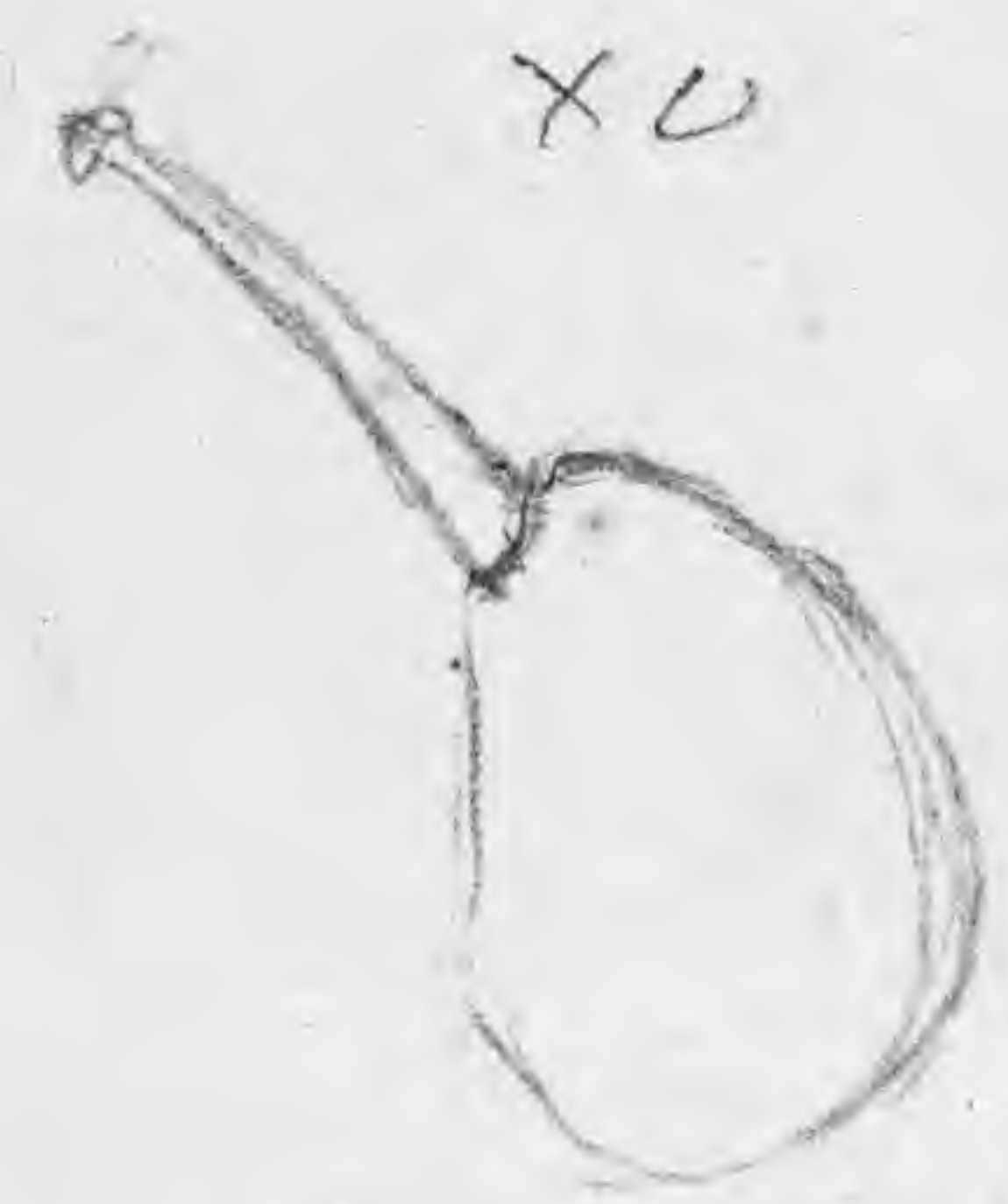
The broad leaved species

721

x 10



20 stam



very young  
achen

x 10



petal  
x 4

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0 1 2 3 4 5 6 7 8 9 10

cm

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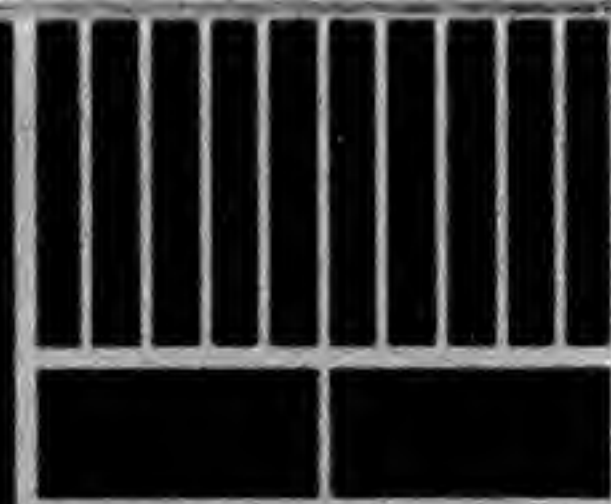
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0 1 2 3 4 5 6 7 8 9 10

cm

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*P. Pennsylvanicum*

June 15 1867

Santa Fe

Frondose 201

x10



x10

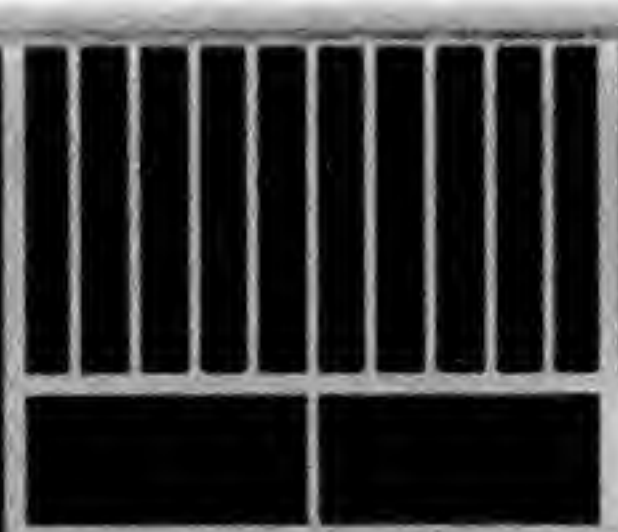


Petal

x4

compressed  
delicately rugose

722



0 1 2 3 4 5 6 7 8 9 10

cm

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cm

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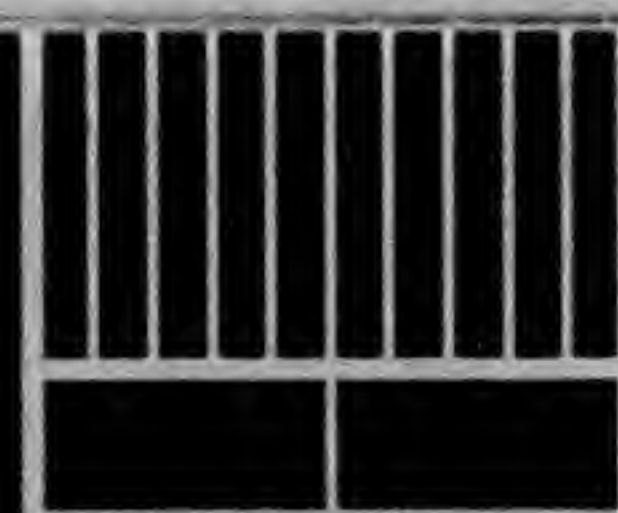
*P. Pennsylvanic*  
Paris 1852

June 11 1867



723

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0 1 2 3 4 5 6 7 8 9 10

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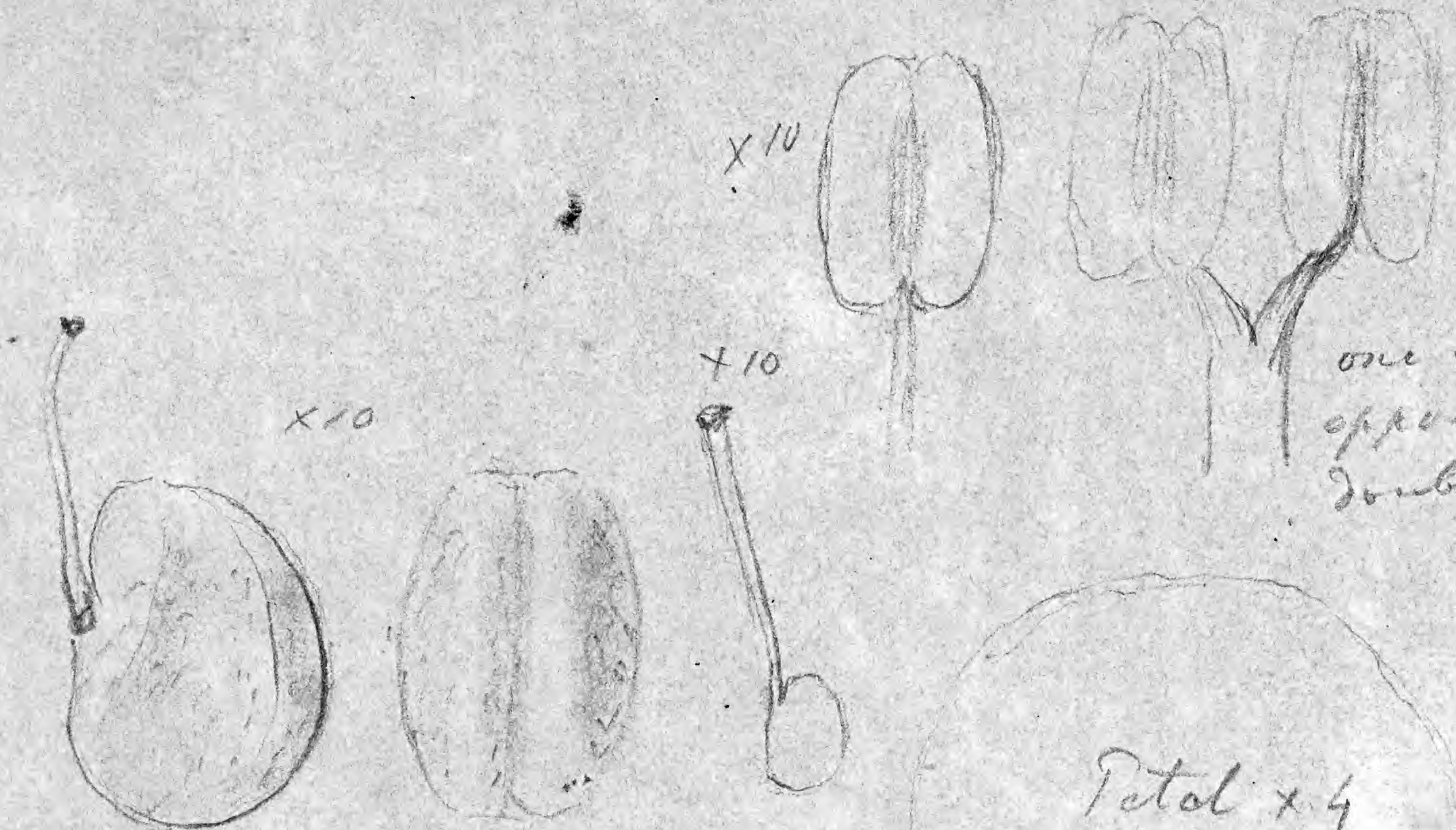
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X

*Rausseria*

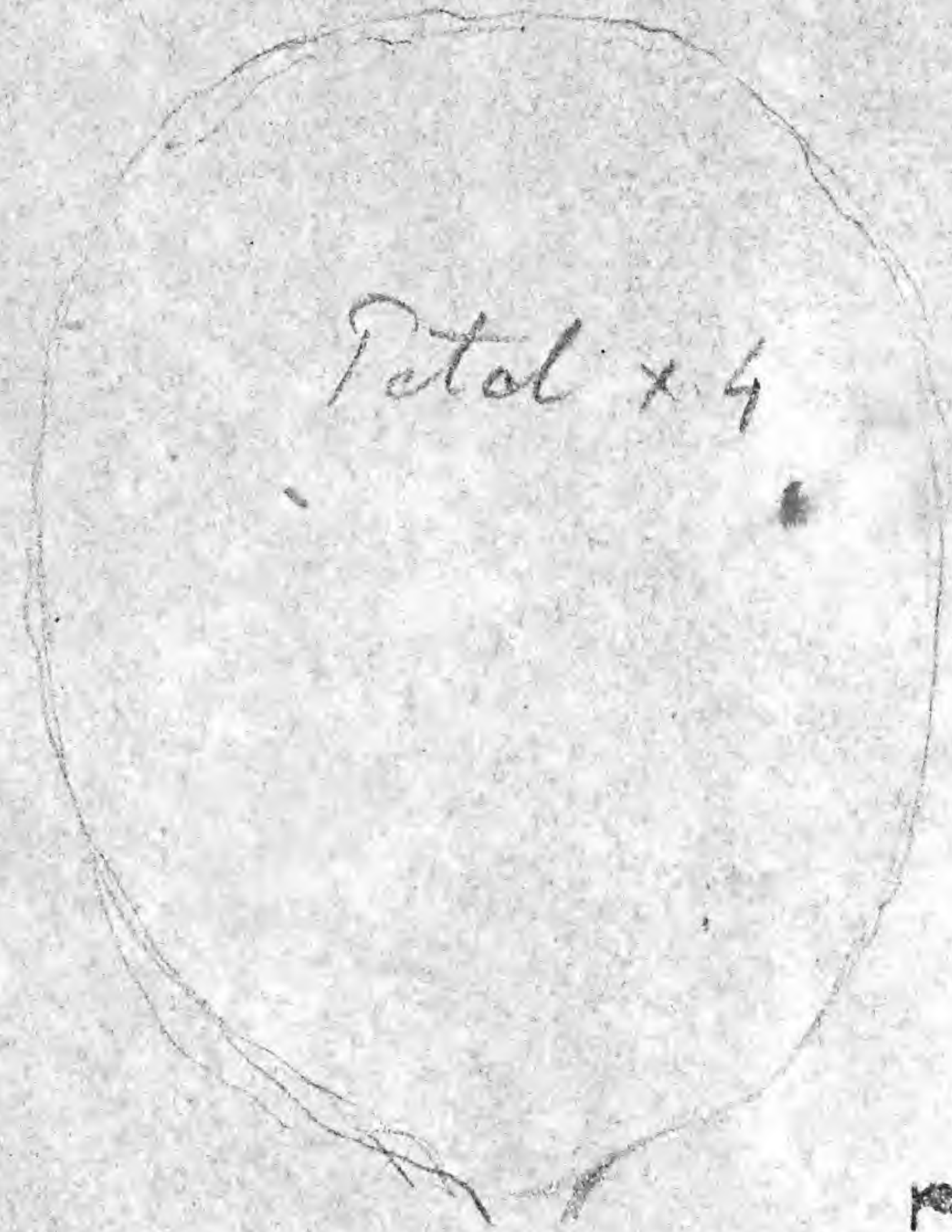
June 10 1869

South Fe, Florida No



longest  
one of the stamens  
opposite sepal  
doubled!

lateral dorsal  
achene rugulose  
rough dark  
red brown



724



0 1 2 3 4 5 6 7 8 9 10

cm

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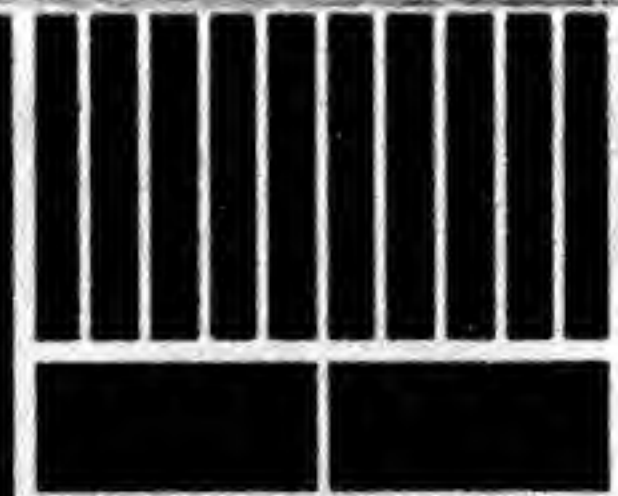


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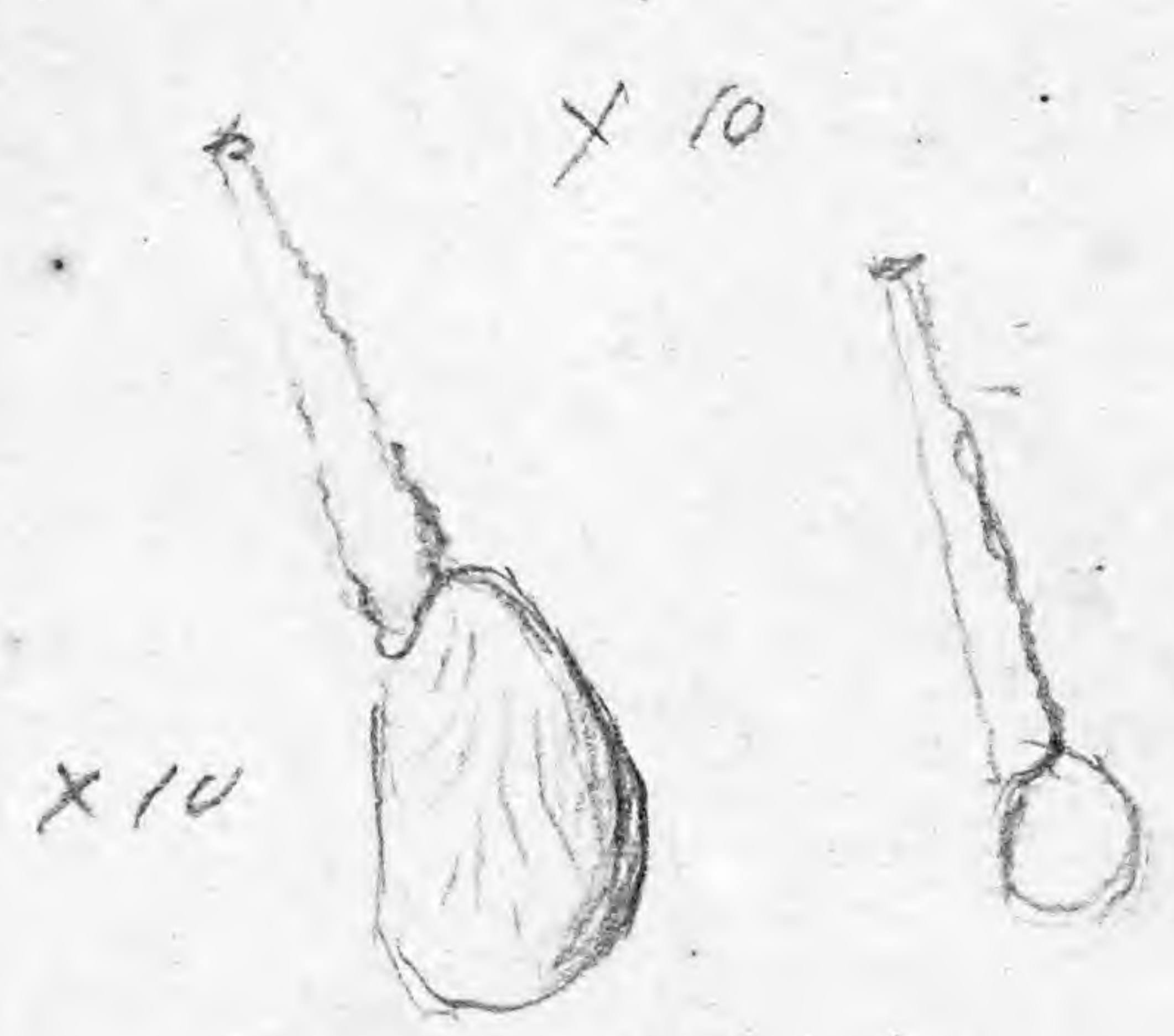


MISSOURI  
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GARDEN

28

June 8th 1867

Hayden 157, Mission bottom



petal x 4  
from a full grown bud

recept. oblong  
villous  
style a little longer  
than achen  
very thick at base  
achen slightly rugose

20 stam

MISSOURI BOTANICAL GARDEN  
 GEORGE ENGELMANN PAPERS  
 725

fruit & style of Pennsylv  
Habit of Hippocrepis

fol. pin. sendeo  
to me



0 1 2 3 4 5 6 7 8 9 10

cm

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0 1 2 3 4 5 6 7 8 9 10

cm

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*P. Platanensis* var. *virgata* June 9 1867

Hall No

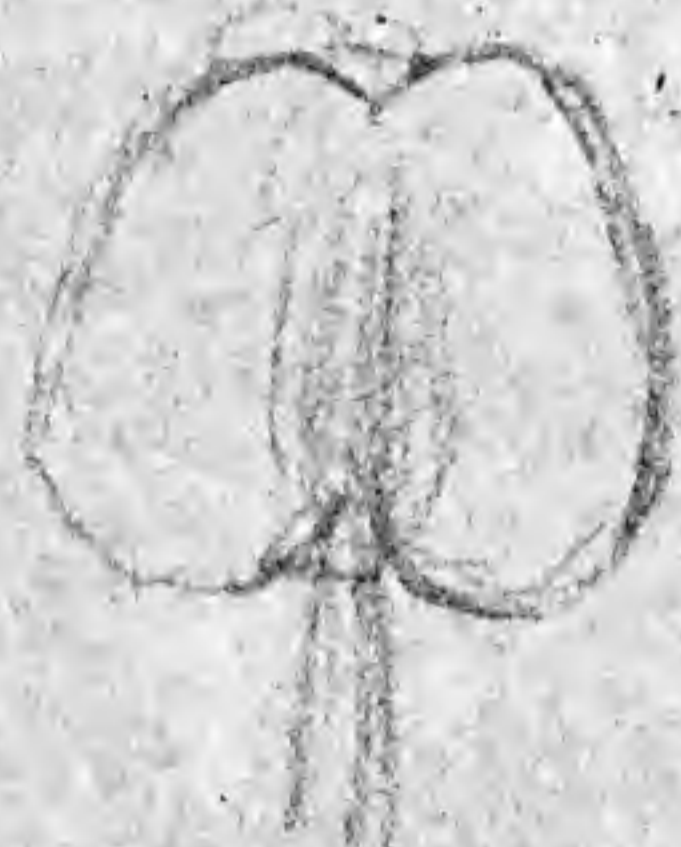
726



x 10

pistil

unripe young fruit



x 10

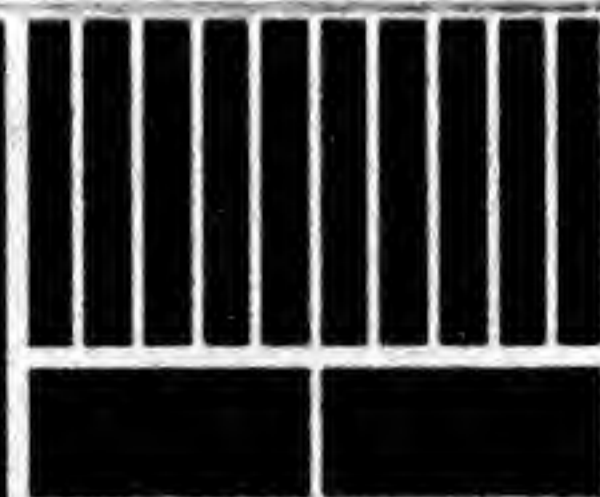
20 stam

anthers of the shorter ones much smaller



petals x 4

transverse  
obtusely lobed  
emarginate



0 1 2 3 4 5 6 7 8 9 10

cm

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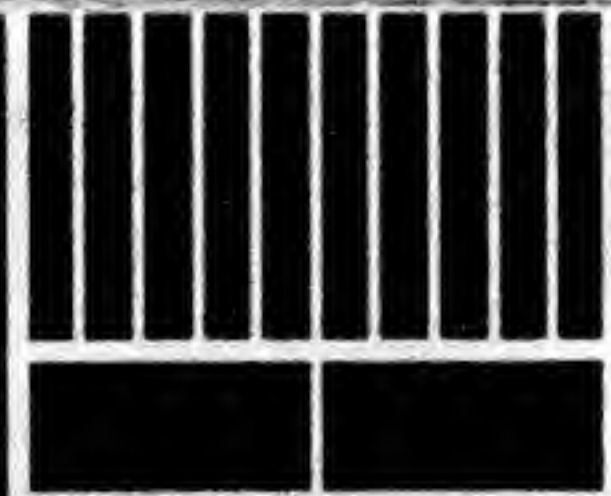
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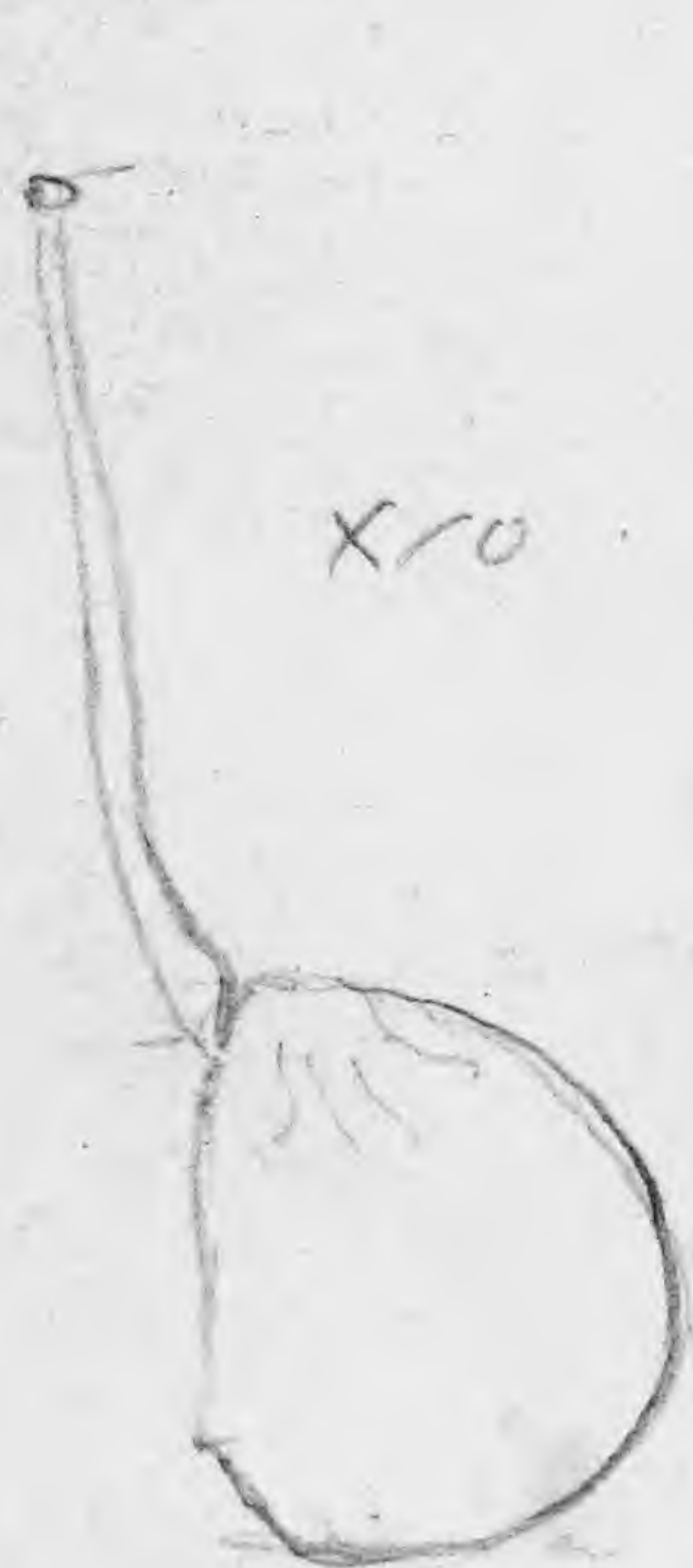


MISSOURI  
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GARDEN

9

*P. crinita* Gray June 11 1867

Santa Fe, New Mexico



X4  
petal

not quite ripe  
very slightly  
irregular upward

727

fruit more globose than in any allied species



0 1 2 3 4 5 6 7 8 9 10

cm

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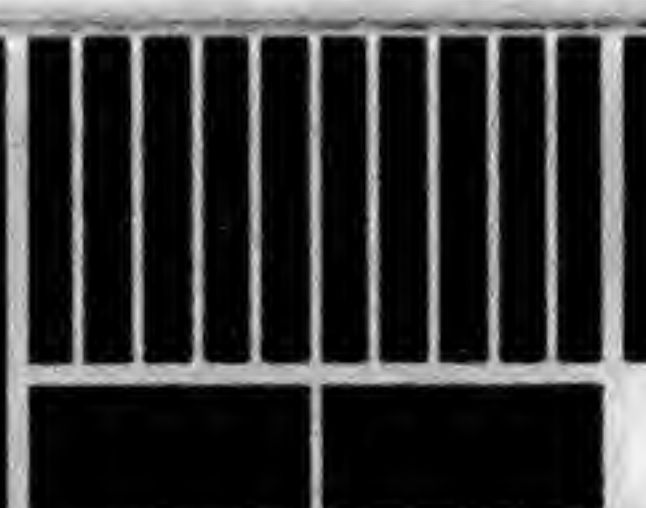
MISSOURI  
BOTANICAL  
GARDEN

47  
 → *crinita*

head, the do-nothing plan of Drs. JOHNSTON and LINTON might answer very well; and when the symptoms are insomnia, with the peculiar tremors, when the organs are in pretty good condition you can do a great deal of good with opium. I don't, of course, give opium with an idea of eliminating the poison of alcohol from the system, but as a prophylactic against certain conditions which may supervene if quiet and sleep are not procured, viz: passive congestion of the brain or complete exhaustion, when the patient is apt to die. I have in such cases given as much as 80 grains in the course of 24 hours with good effect. I would not, however, continue opium too long if it does not produce sleep. In acute alcoholic poisoning or intoxication, we may have active congestion of the brain, and of course in such cases opium is contra-indicated because it has a tendency to produce congestion of the brain. Here we must use antiphlogistics and arterial sedatives, cold applications, purgatives, counter-irritants, or digitalis or veratrum viride. We must then, of course, make a proper and very careful diagnosis of every case and treat it accordingly.

DR. BOISLINERE. I saw the case reported to the society, and am very much obliged to Dr. Kennard for giving me the opportunity. It was certainly a most remarkable one and was evidently treated very judiciously and with great care. I merely wish to refer here to a plan of treating this disease with ammonia, on the ground of its antidotal properties, which I think a very rational one. I have long known that ammonia will very rapidly cure drunkenness, have frequently proved it by experiment, and the same idea has been applied in France to the treatment of delirium tremens.

Dr. BLAND. I think Dr. Hammer takes the proper view of the pathology and treatment of this disease; at any rate his views of the pathology accord entirely with mine. In this disease we have two very different pathological conditions. 1st. An exhaustion of nervous power, derangement of the nerve centres, when we have the peculiar delirium, the hallucinations, so varied and characteristic of this disease, and the muscular tremors, the mind becoming entirely deranged from the poisonous effects of the alcohol on the whole system and the brain in particular. In these cases, the judicious use of opium is the proper plan. In the second class of cases we have either a tendency to, or actual congestion or inflammation of the



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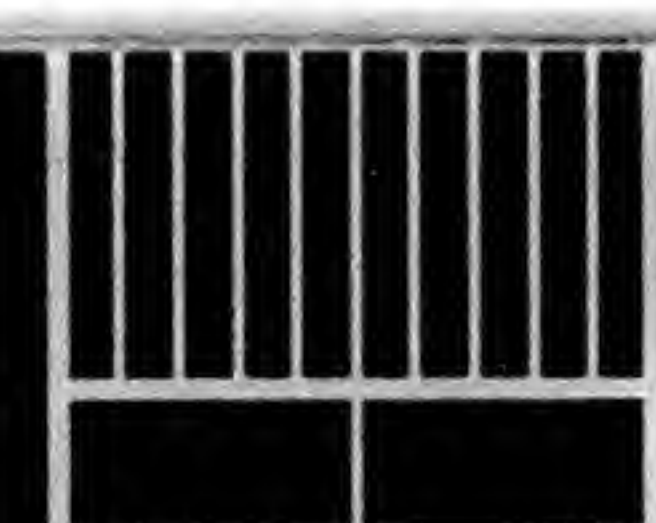
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duced by withdrawal of stimulus, is not true, and that in his large experience every case was produced by continued use of alcohol or abuse of opium; and in his article, to be found in Braithwaite's Retrospect, he clearly demonstrates, to my mind, that continuance, and not withdrawal of stimulus, is the cause of the delirium tremens. He states, from the time the delirium first manifests itself, until it passes off entirely, is generally from 20 to 60 hours, but it may not pass off till a much longer period expires; and that we need not be uneasy about the case until 9 days have passed. Remove the cause of the disease, and it will generally be cured; and hence, by withdrawal of stimulus we will remove the cause, and unless there be some organic lesion of the brain, the case will terminate in health.

Dr. LINTON said he did not propose entering into a discussion as to the pathology of delirium tremens, but merely wished to state that the treatment which he pursues of late years in this disease is very similar to that which Dr. JOHNSTON recommends; that is, knowing that a great many cases will get well without any treatment, he pursued the expectant plan—left the case pretty much to nature, and was very careful in giving opium. In early life, believing sleep to be necessary to cure the disease, and opium the remedy to produce sleep, he had sometimes given too much opium.

Dr. A. HAMMER said he was much interested in the report of the remarkable case detailed before the Society. He could not go so far as Dr. JOHNSTON—to discard all treatment in this disease; but he thought, as in almost everything else, the middle ground was the safest. In this disease, whether it be delirium tremens or mania a potu, we must remember that we may have two very different conditions to deal with; one where there is simply derangement of the nervous centres, irritation or exhaustion, with derangement of the functions of the mind, produced by the poisonous effects of alcohol; all the tissues, the nervous, and the muscular, are saturated with alcohol; the mucous membranes are inflamed by it; and it will take a long time to eliminate this poison, to restore to the proper condition the muscular tissue, the nervous tissue, and the mucous membranes. This is one condition we have; but we may have another and a very different and much more dangerous condition—viz: a passive or even active congestion of the brain; the two requiring very different treatment. In very slight cases, coming under the first

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Potentilla

June 4 1867

San Francisco Mountain, Arizona

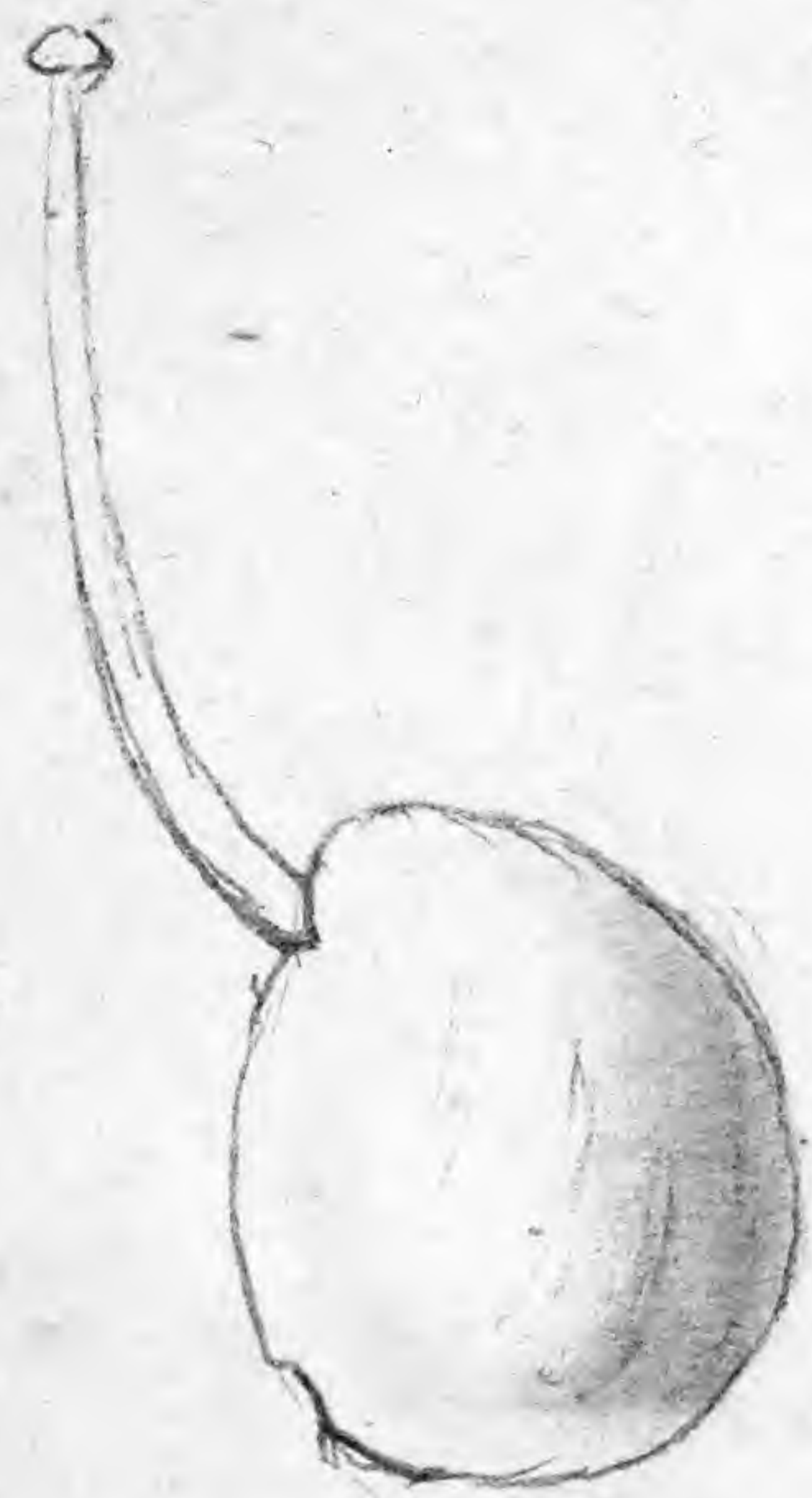
July 26<sup>th</sup>

20 stamens, emarginate petals  
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728

subglobose achenium

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x10

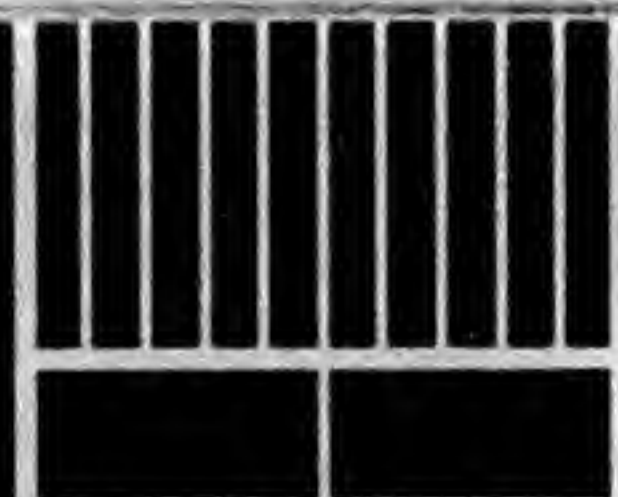


x10

20 stam



Petal x4



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**Alex. Leitch,**  
**APOTHECARY & CHEMIST,**

Cor 4<sup>th</sup> & Olive Sts. St. Louis.

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