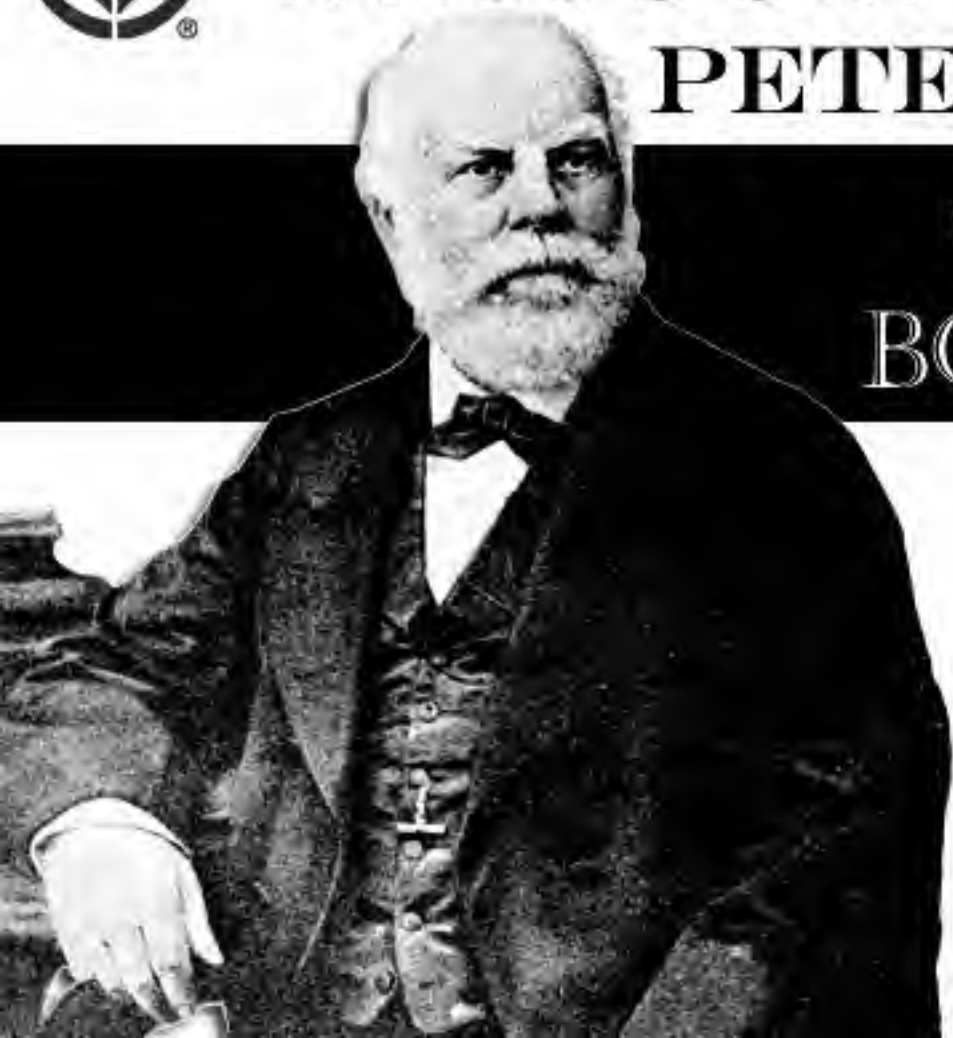




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GEORGE ENGELMANN  
BOTANICAL NOTEBOOKS

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discussions concerning their pathology. The interest in this subject seems not to have abated, and this is the chief apology offered for bringing forward a review of the very excellent little work published under the above title, by one of the most eminent clinical teachers of Germany,—one who enjoys the well-earned reputation of having written the best text-book on special pathology in the German language.

The author has witnessed an epidemic of cerebro-spinal meningitis in the towns of Freiburg, Carlsruhe and Rastatt, and from the experience thus gathered, as well as from conversations with other good observers on their own cases, and the study of numerous histories of cases and autopsies, he arrives at views differing, in some essential points, from those of many of his compeers, which shall be noticed towards the end of this review. These views are set forth in the first section (on "*pathogenesis and aetiology*") with striking clearness and conciseness, and further supported in the subsequent pages, more especially in the masterly

686-706

44

*J. Canadensis* Gay

*var. pauciflorus*

*Sepalis obtusiusculis*

*styla distincta*



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enteria caused by contagion; and after cholera nostras the body presents the same intestinal alterations, the same thickening of the blood as in consequence of Asiatic cholera.

The author's conception of epidemic cerebro-spinal meningitis as a disease of the second group, in which he was confirmed by all cases observed by him, is based chiefly on the fact that all its symptoms are referable, without difficulty, to the lesions of the cerebral and spinal meninges as observed after death. He calls attention to the following points:

"A premonitory stage usually is wanting, and where it is observed, the symptoms are confined to complaint of pain in the head and back,—accidents which already point to changes in those parts in which severe lesions are found after death.—Almost without exception, a violent chill opens the scene.—Immediately upon the chill follow symptoms which prove a serious affection of the membranes of the brain and spinal marrow, beyond doubt.—The fever is by no means more intense than the great extent of the intense inflammation would lead

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6896



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*J. Canadensis*

*capitata*

Lake Superior to central Pennsylvania

Mean of Year.

Jan.	Feb.	Mar.	Apr'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
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
1862...	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3

RELATIVE HUMIDITY.

Mean of Year.

Jan.	Feb.	Mar.	Apr'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	
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
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

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

capitulum 2-6 fl  
fl. 1-1/4 - 2-1/4 l. l. l.

695-706

Stamens sepals  
acquetus

Feb 9 '66  
*Panicum carolinense* s. *carolinense*  
capitulum pauciflorum  
sepala  
capsula  
semine oblonga basi cordata



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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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*T. grandis*  
*elaticus*  
*laxiflorus*  
*subsepalus*  
*B. petaloides*  
*brachycarpus*

This to West. N York & Central Pennsylvania

118 Wisconsin  
 $1\frac{1}{2}$  -  $2\frac{1}{2}$  feet high

TRANS. OF THE ACAD. OF SCIENCE.

interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of 71.5 degrees of electricity in 1861	and 74.6	"	"	"	1862
While the second group gives 29.0	"	"	"	"	1861
and 25.7	"	"	"	"	1862

The second group prevailed therefore in 1861. and the 1862

688-693



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WISLIZENUS—ATMOSPHERIC ELECTRICITY. 117

VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30	32	with thunderstorms.
23	28	with rains without thunder and lightning.
20	4	with dry storms (without rain and without thunder and lightning).
4	3	with snow.
1	0	with fog.
78	67	

VII. Relation of Rain and Snow to Electricity.

Rain without thunderstorm was accompanied

	By Positive Electricity.		By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
January.....	7	5	3	2	.....	2
February.....	2	1	4	.....	.....	.....
March.....	.....	5	.....	.....	.....	.....

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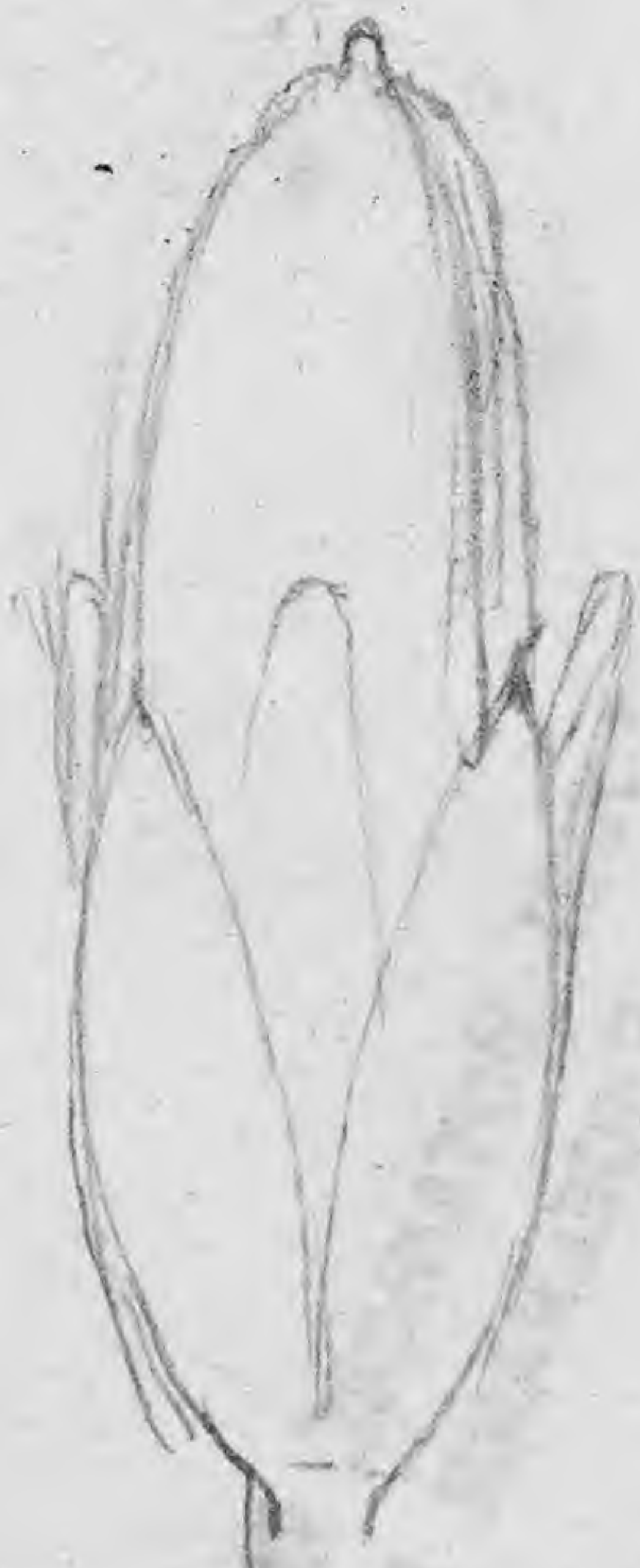
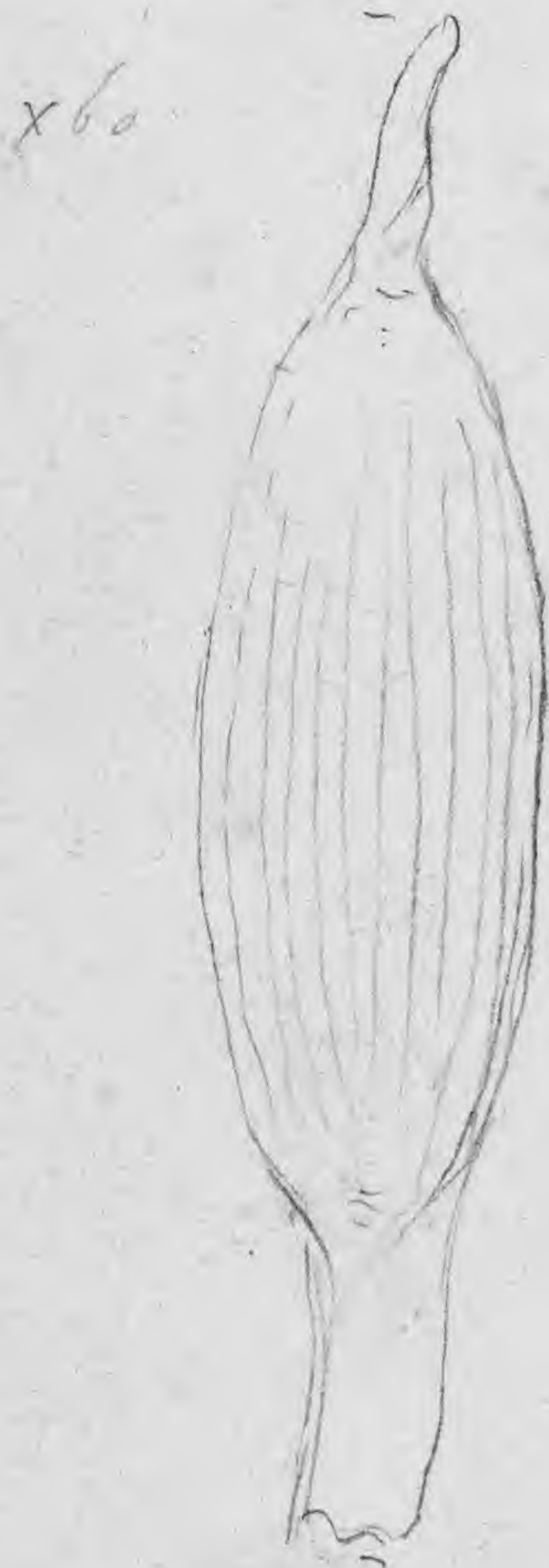
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*Juncus Canadensis*  
Border of Round Lake, Carbon Co., Penn.

Feb 16 1868

T.C. Porter Aug 7. 1867



sepala obtusa  
sem obtusiuscula  
exteriora mucronulata

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Junonia Canadensis latera ~~diffusa~~

~~Ohio. Gray~~  
~~Central Co Pa~~ ~~Ohio~~ ~~Potter~~

49 Day near Lancaster Pa ~~Ohio~~ Potter Potter

Junonia with N York  
Jefferson Co. N.Y. Vasey (Vasey)

Dexter N.Y. Vasey Vasey  
Penn Yan Sartwell (Sartwell)

Central Ohio Silliman Hillier  
Eric Co. N York Gray (Gr)

Lancaster Pa Smith Smith  
Wisconsin Lapham



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Junc. Canadensis coarctatus

<del>Hesperis</del>	<u>Philadelphia</u>	<u>Gray</u>	<u>Cuplin</u>
Lake Superior			Robbins
Sand St. Marie	Ledy		Ledy
Oneida Lake	Torrey		(Torrey)
St Croix.	Wisconsin		Hale
White Mts	Nuttall	Gray	Nuttall (Gray) (Vasey) (Blake)
Jefferson Co N.Y.			
Maine			
Alabama ??		Gettys	(Gettys)
Dexter N.Y.		Vasey	
Herkimer Co N.Y.		J. A. Paine	
Notch, base of White Mt		Gray	(Gray)
Essex Co, Mass		Oakes	
Centre Co Pa, Near Meadows		Porter	(Porter)
Wisconsin			<del>Leprieux</del>



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*J. Canadensis* ~~*α. brevicaulis*~~

1. forma *microcephala*

a. *panicula contracta* White Mtns Gray  
Massachusetts Baker  
Dexter N.Y. Vasey  
(Alabama Gates?)  
West N York Pine

*patulus*  
b. *panicula major* <sup>Cape</sup> *effusa* Eric Co N.Y. Gray  
Jefferson Co N.Y. Vasey  
Lancaster Pa Porter  
(Louisiana Hale?)  
Tenn Yan N.Y. Scribble  
Central Ohio Sullivan

~~2. forma *albiflora* Washington Debb  
Pennsylvan Porter~~



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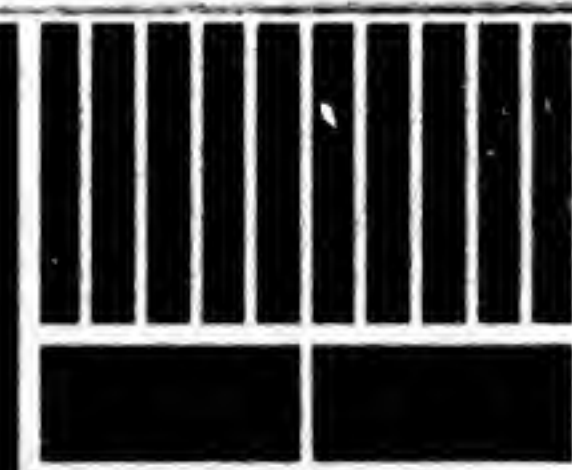
*Juncus Canadensis* <sup>major detine</sup> panicula diffusa loba 6" longa  
4-5 late

Buffalo Creek, Erie Co. N York, Agrey leg.

To this specimen, Carey makes the remark: Octob 1848

" These specimens and that from Kentucky (Short)  
" were the original authority for *J. debilis* in the  
" Manual. This Buffalo creek plant is scarcely even  
" in flower and affords no indication as to the seeds,  
" but it is trinerved and the comparatively blunt  
" seeds\* refer it rather to what I have referred to as  
" a "small form of *J. acuminatus*?" than to the Kentucky  
" *debilis*, which, unless distinct, would seem to me  
" a small depauperate state of *J. virgatus*,  
" with which it agrees in the tail less seed, & sharp  
" seeds.

\*. He might have added: of which the outer ones are shorter  
than the inner ones.



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A. McLean Allen

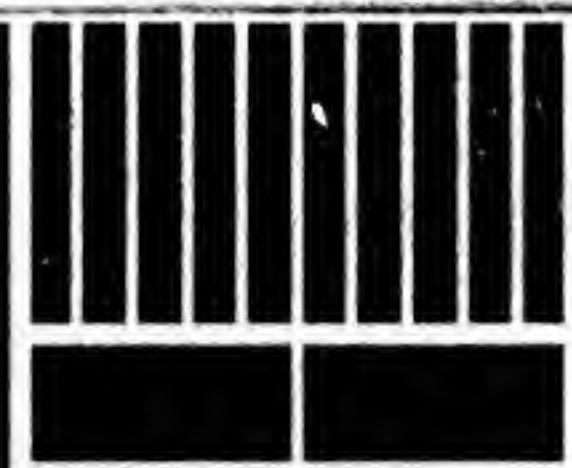
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*J. Canadensis*

*brivicaudata*

Lake Superior <sup>mm</sup>

$1\frac{1}{4}$  -  $1\frac{3}{4}$   
lin

ovary

2.8, 2.4, 3.1, 3.0, 2.5, 2.3

3.7, 3.5

fl.

2.8, 3.0

length of fl.

seed.

$$\frac{36 \times 14 - 73}{60}$$

$$\frac{35 \times 12 - 67}{60}$$

$$\frac{35 \times 14 - 67}{60}$$

$$\frac{35 \times 15 - 62}{60}$$

$$\frac{30 \times 11 - 50}{60}$$

$$\frac{35 \times 12 - 59}{60}$$

$$\frac{40 \times 16 - 62}{60}$$

$$\frac{30 \times 14 - 53}{60}$$

$$\frac{36 \times 14 - 61}{60}$$

$$\frac{40 \times 16 - 72}{60}$$

$$\text{seed } 0.25 - 0.33 \times 0.10 - 0.13 \text{ lin}$$

whole length 0.40 - 0.60 lin

$1\frac{1}{4}$  -  $1\frac{1}{2}$   
lin

fl.

2.5 - 3.0 - 2.9 - 2.9 - 2.4

mm length of fl.

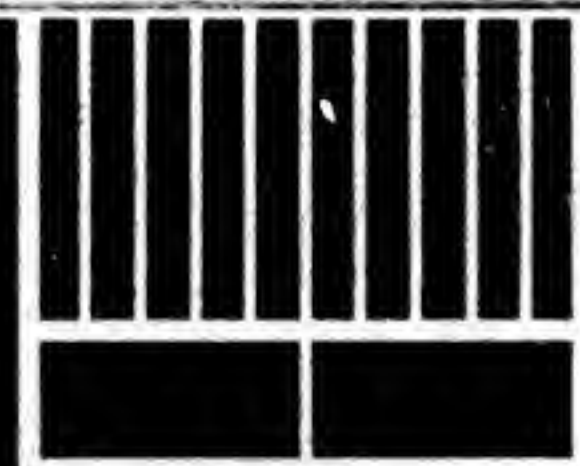
$$\text{seed. } \frac{40 \times 19 - 65}{60}$$

$$\frac{36 \times 16 - 58}{60}$$

$$\frac{35 \times 11(12) - 67}{55}$$

$$\text{seed } 0.30 - 0.33 \text{ lin} \times 0.10 - 0.15 \text{ C}$$

whole length 0.47 - 0.55 lin.



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JONES & SIBLEY,  
DRUGGISTS,

Cor. 5th Market Sts,

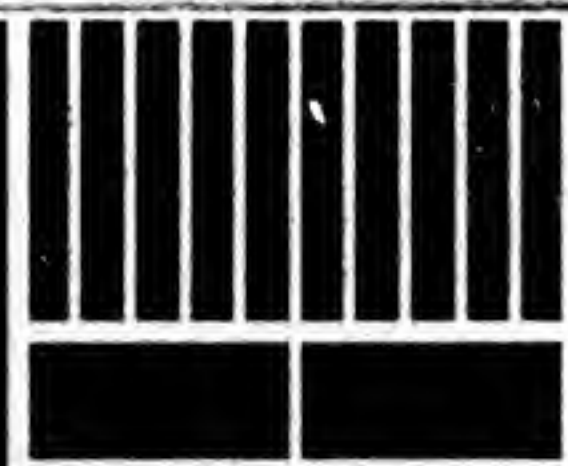
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Juncus Canadensis J. Gay - Salazar June  
46

Culmo tereti erecto rigido subbifolio

Foliis teretibus

Panicula composita, spicis 4-8-16 floris  
Sepalis lanceolato-linearibus commissuris  
internodiis sublongioribus

Capsula oblonga prismatica brevioribus  
Semiisibus utriusque caudatis

α panicula subflexa, spicis 10-12 floris  
remotiusculis (Lah.)

β. pan. ovaritate spicis 4-8 floris  
approximatis (Lah.)

3 andros Sep. lance-linear, ext. shorter, Caps exsert

Canada, Riv. Hudson, Terr. Nov.

Kuott p. 333



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**Leitch & Corlies**

**CORROGATED**

**South West  
Corner Fifth  
and Market  
Streets**

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Juncus

Oct 7 1865

Distr. Columbia June 1862, M. S. Babb - H. G. Gray  
decumbens diffuse paniculatus

x60



late growth

sepals nearly equal and equal to capsule

Cross bars very indistinct.  
ribs visible only in good light.

x150



earlier growth

imm. sepals & capsule elongated



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Linnaea

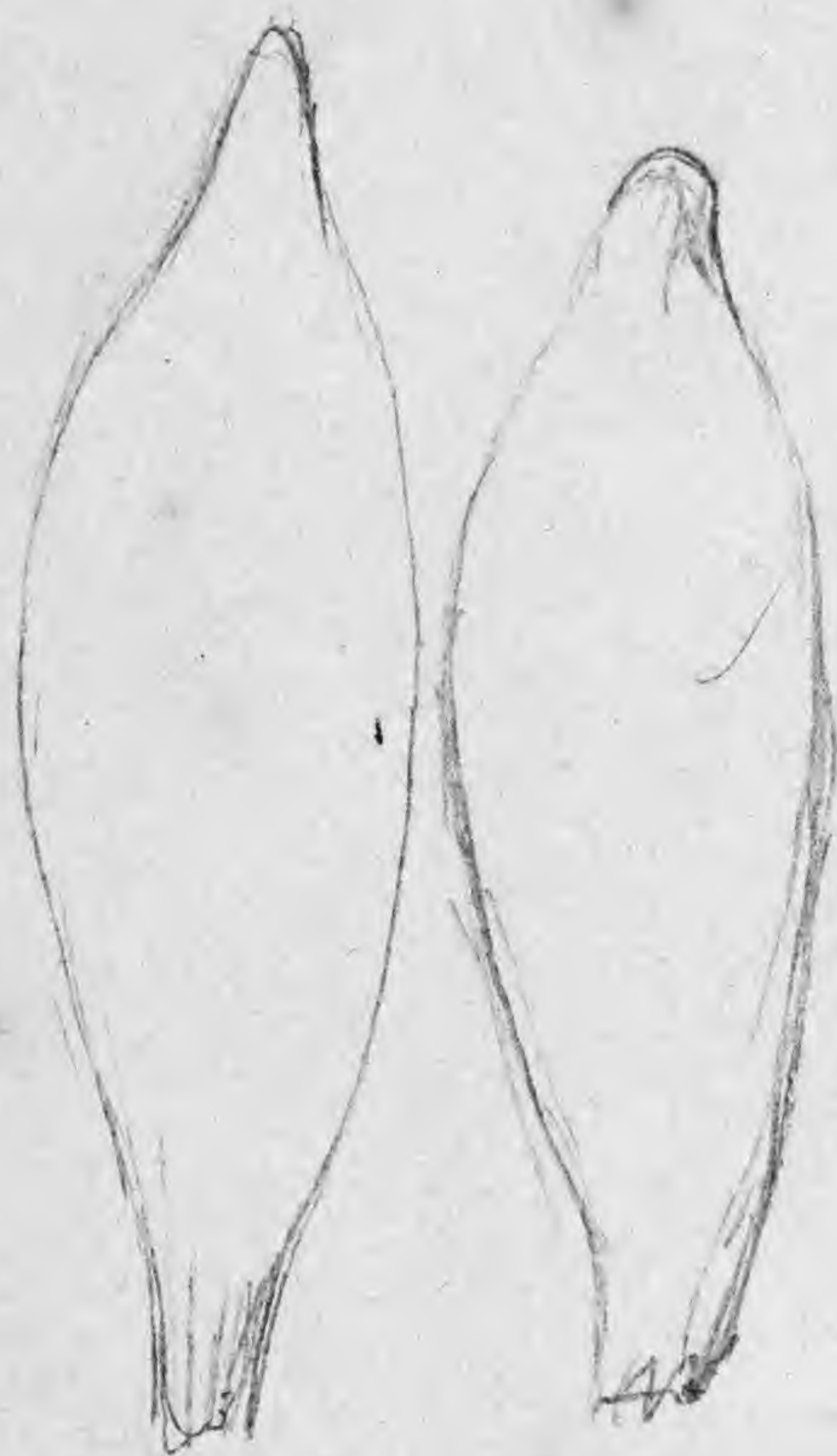
Dec 17 1865

Burlington N Jersey

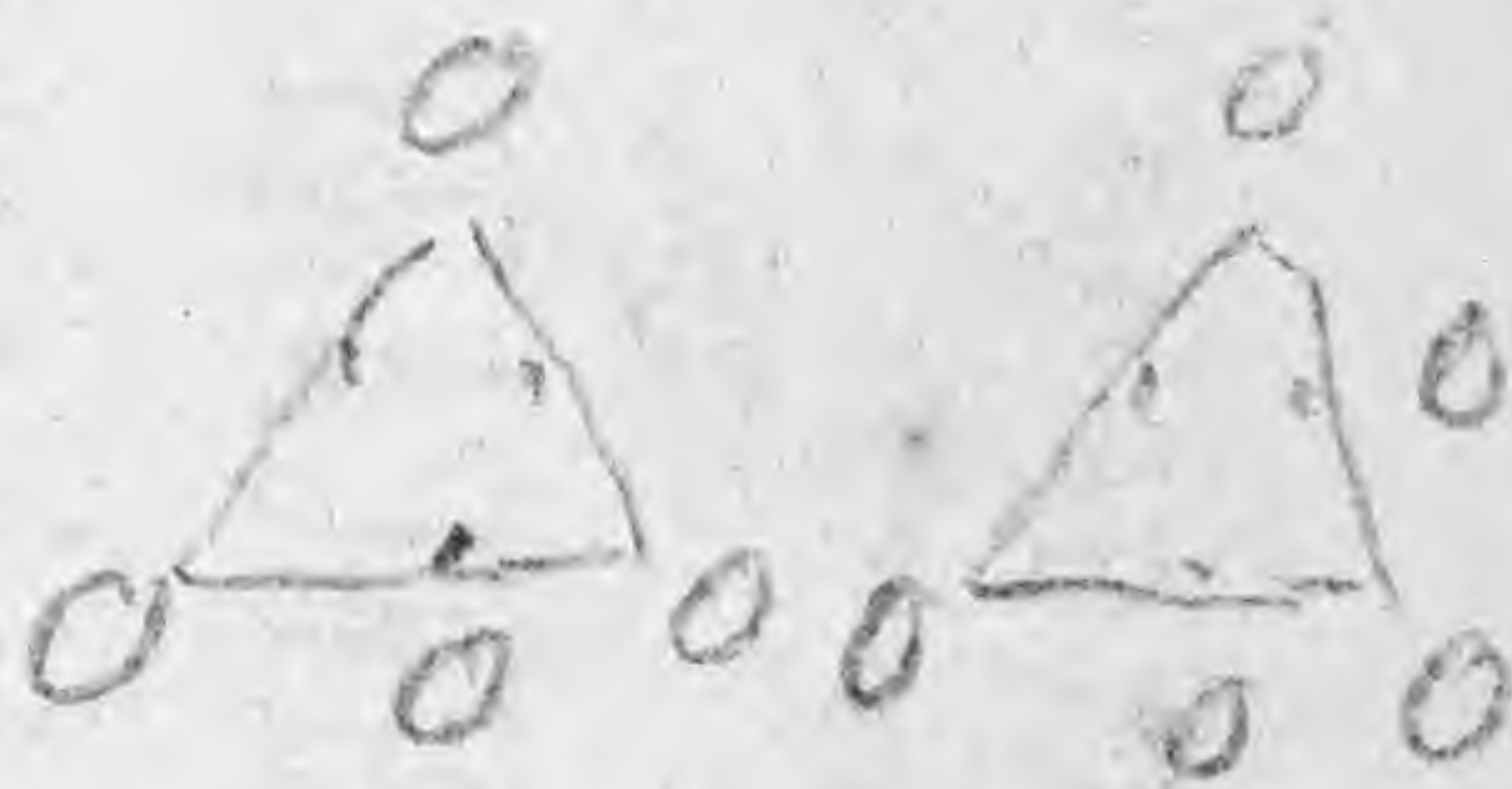
Hb Acad Philad

periantha diffusa

capitula 8-12-15 flora



immature seed



seen rarely

sepala exteriora adhibita 5 nervia  
interiori 3 nervia



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Junonia

Febr 8 1866

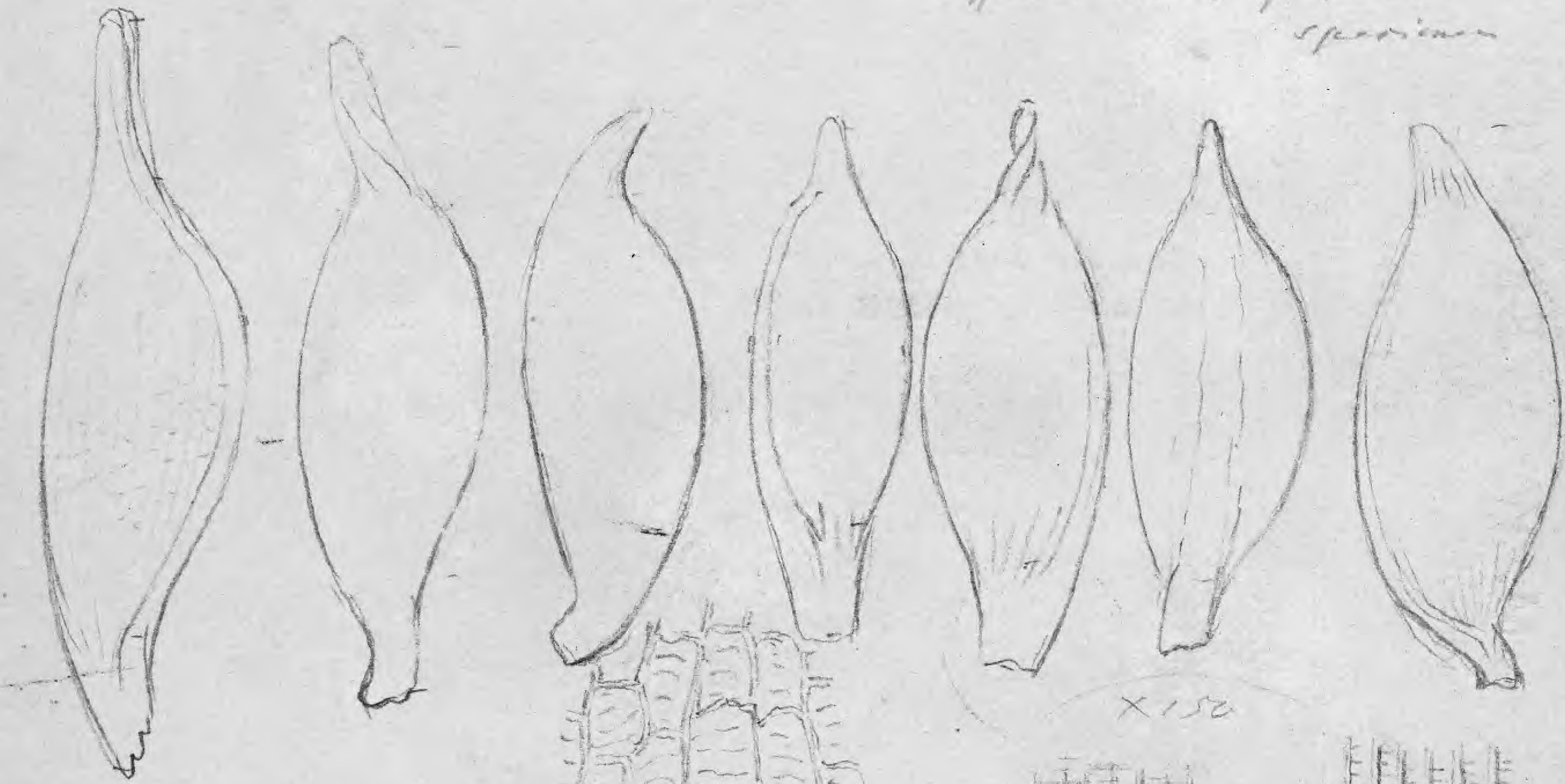
N.J.

mixed with *J. asper* from Griffiths Swamp

ex H.C. Ch<sup>s</sup> & Smith

x60

Different seeds of same  
specimen



Different surfaces  
of seeds



x150



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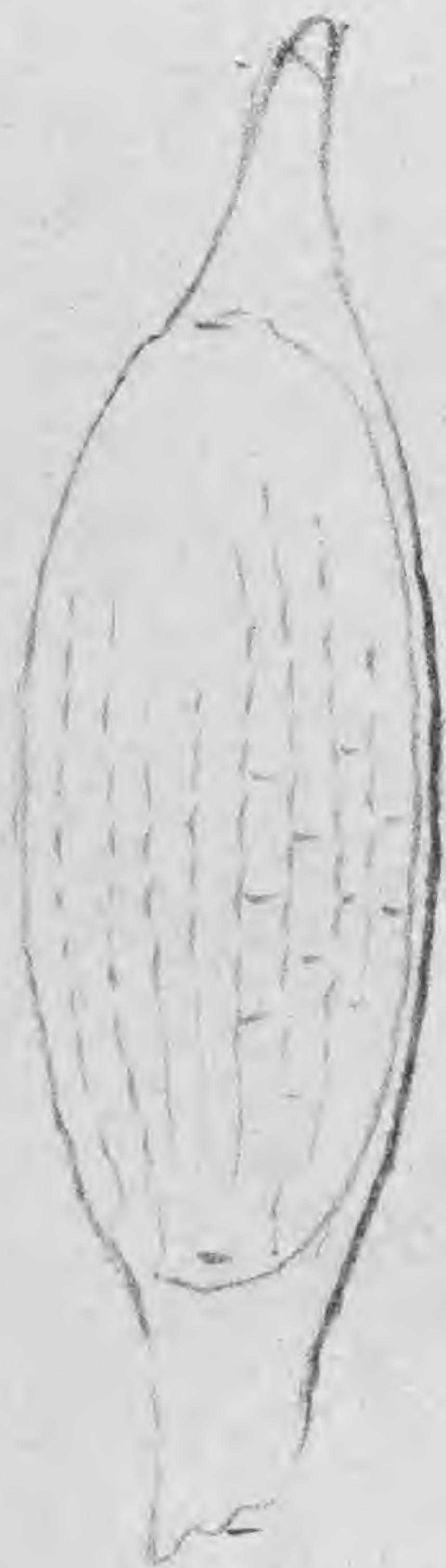
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*Linum*

Feb 23 1866

Laurens Pa. T.C. Porter Sept 2 1862  
- Hb. Gray, Smith & Pyle



usual



seed

fruit



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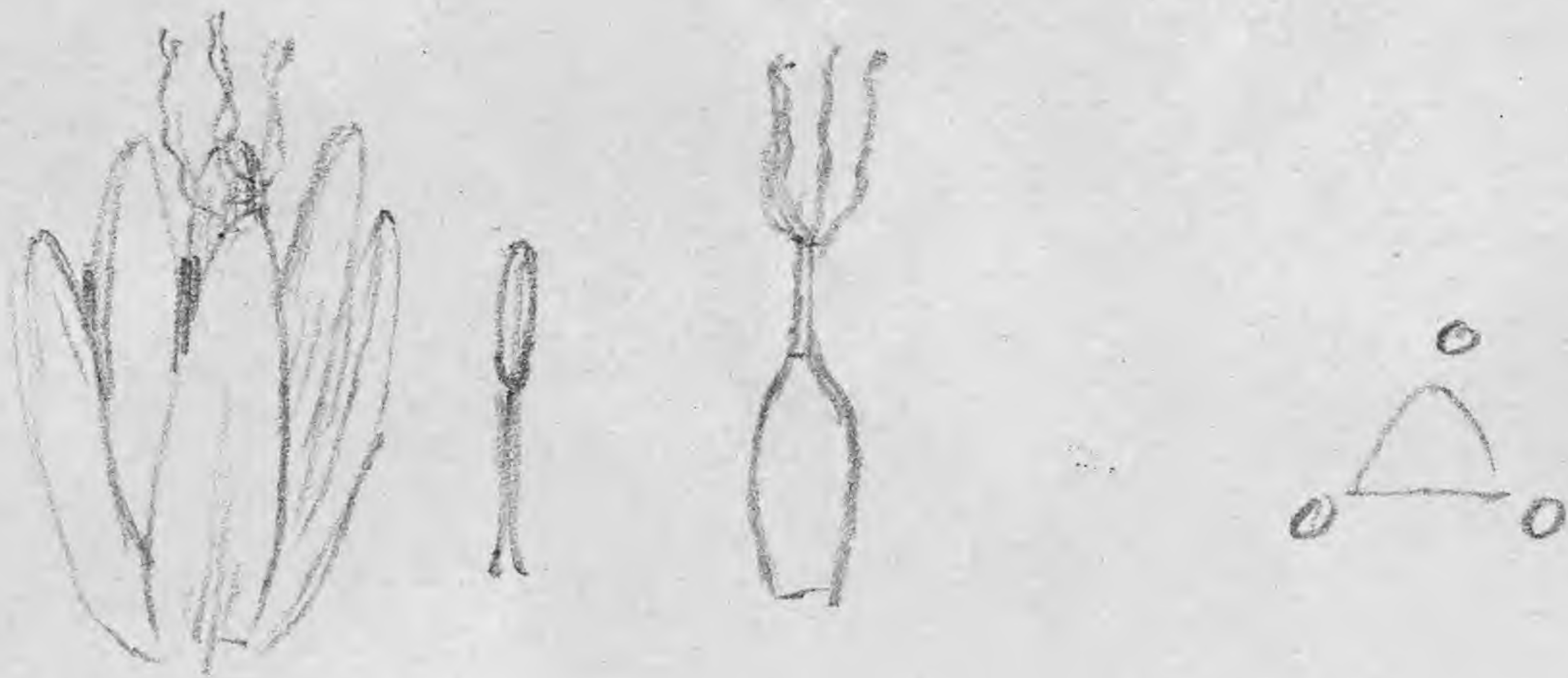


Feb 23 1866

Buffalo Creek, Erie Co N.Y. A Gray leg

ex herb A Gray

"one of the specimens on which *J. debilis* was  
founded" J. Carey



*Oedoceras subdumulosum*  
 $1\frac{1}{2}$  pedalis



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" *Senecio acaesum notus?*  
capitulis parvis "

Oct 7 1865

Penn. Yan, Berwell  
H. A. Gray

panicula pubescenti, capituli  
3-5 flor.

x60



x10



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*Juncus acuminatus*

Febr 9 1866

Griffith's swamp N.J. with *J. asper*

ex HB. C. E. Smith

2 fruits from same head

rarior

usual



outer sepals carinate 3 nerved or indistinctly 5 nerved  
inner sepals 5 nerved



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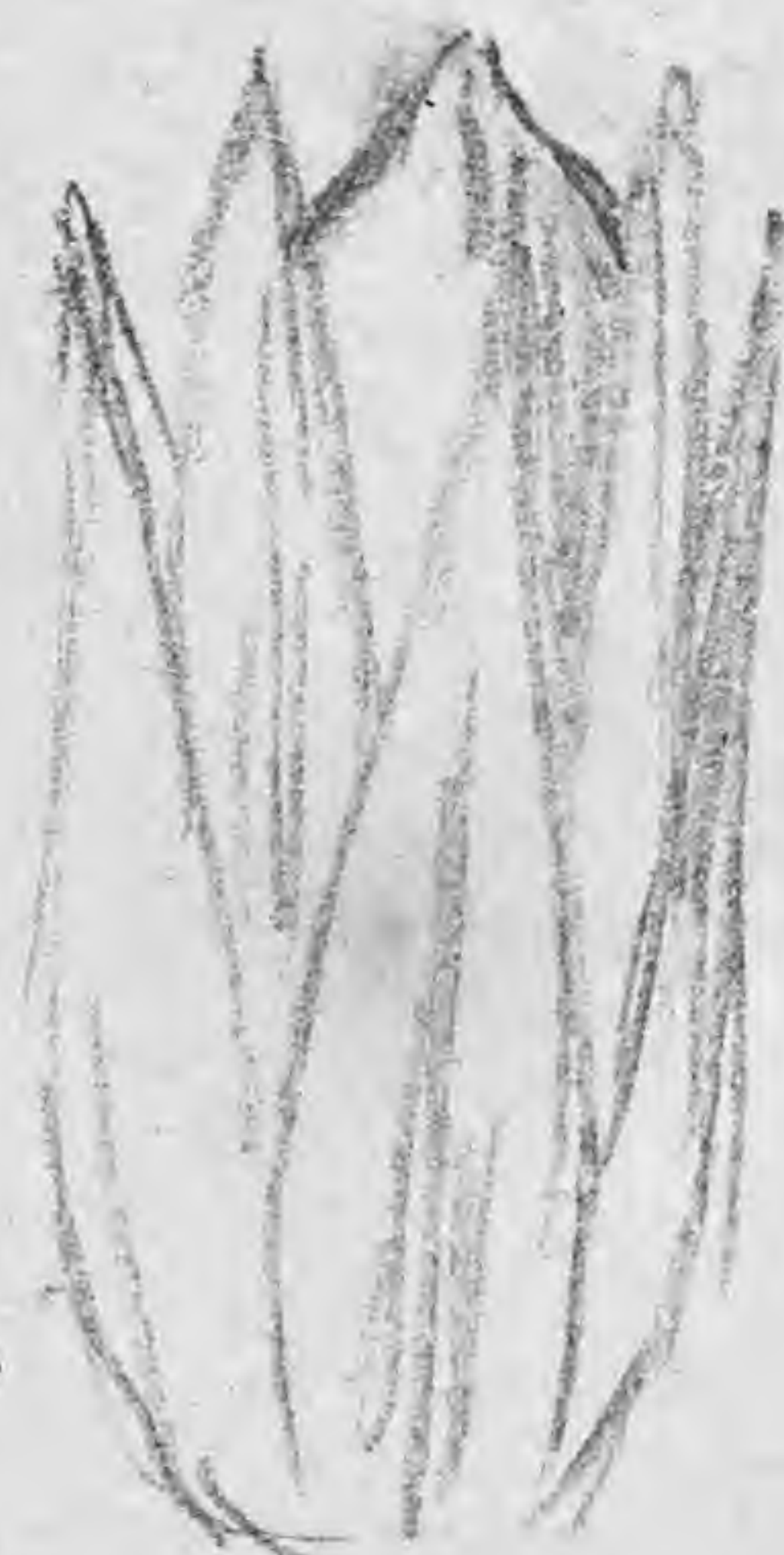
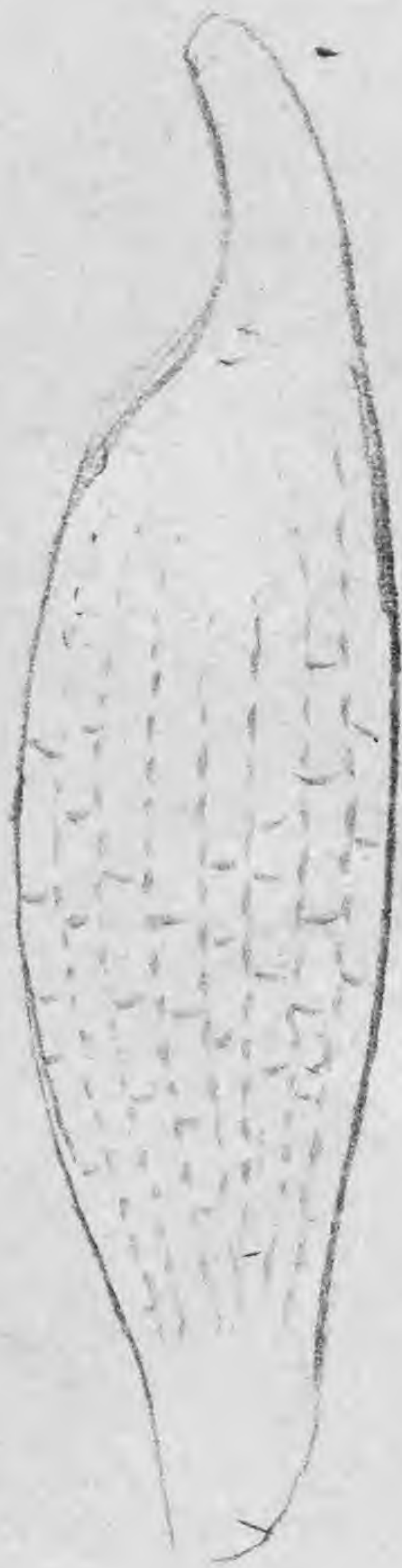
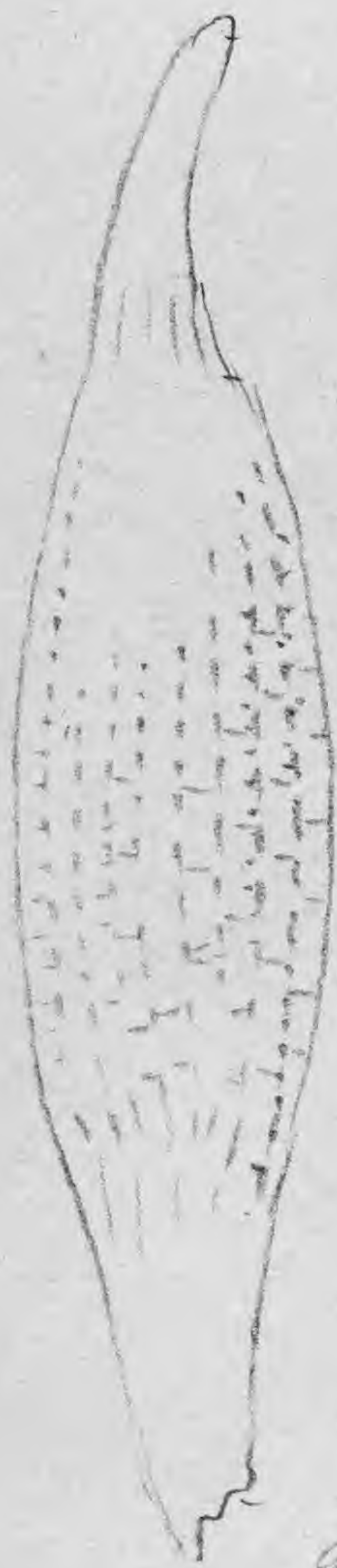
"*J. panduricus*"

Feb 22 1866

Lancaster Co, Pa T.C. Porter

Oct 8 1862

H.C. Smith.



about 7 ribs visible

usual form  
for same species



0 1 2 3 4 5 6 7 8 9 10

cm

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BOTANICAL  
GARDEN



M. W. ALEXANDER,

SOUTH-EAST CORNER FOURTH AND MARKET STREETS

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0 1 2 3 4 5 6 7 8 9 10

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*Juncus brevicaudus*

Febr 23 1866

sub nom. *J. debilis*

at Tomlinsons, N Jersey, in swamps

Ch<sup>s</sup> E Smith Aug (1865)

diversitate sinu, debilis



septa interna 3 nervi obtusiuscula  
ext. nervulata vix ad basin  
3 nervi  
acuta s. mucronata



0 1 2 3 4 5 6 7 8 9 10

cm

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