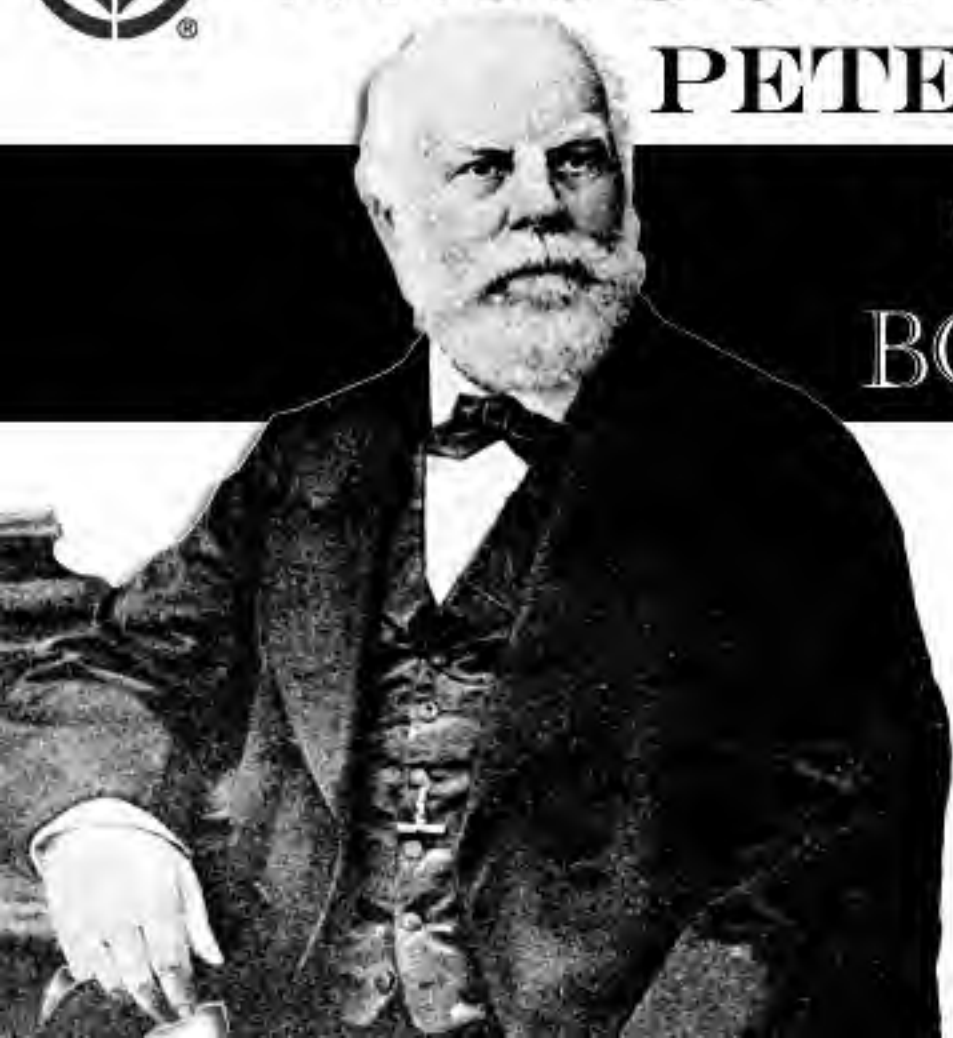




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BOTANICAL NOTEBOOKS

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Juncus

Aug 12 1865

St Louis Aug 1841

10-25 flowers in each head

x60

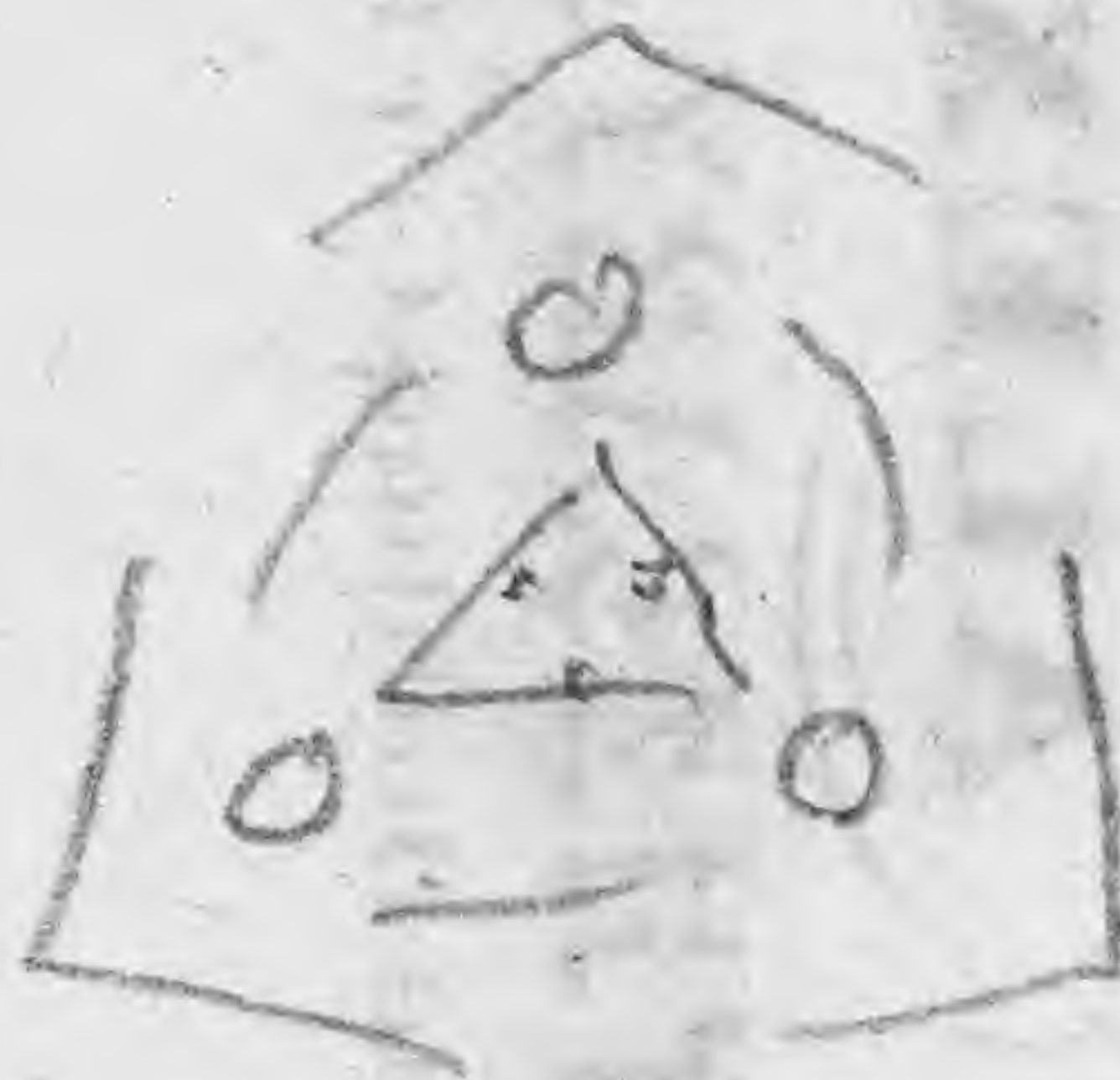
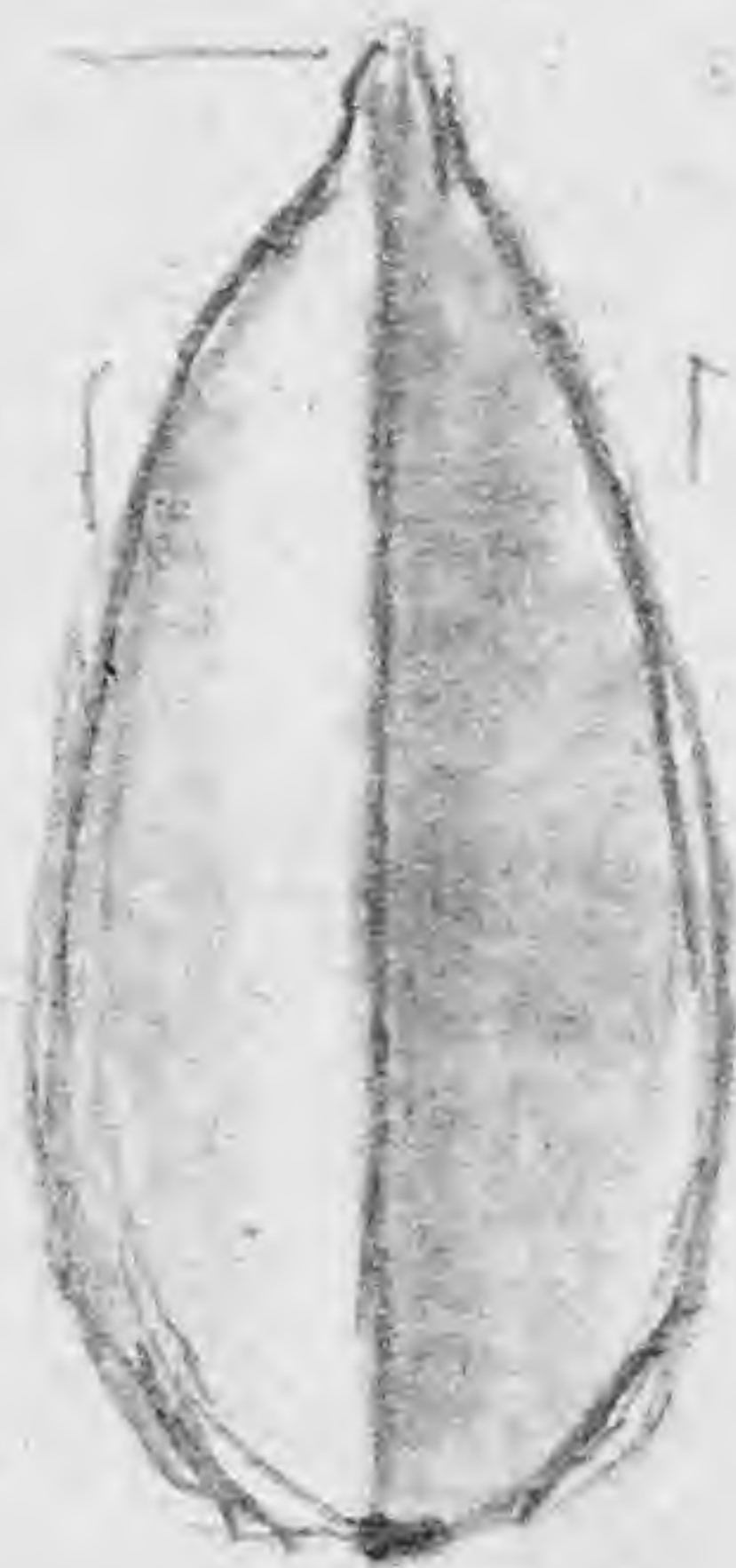


strongly reticulate



stamens and stigmas almost as long as ovary style almost none

inner sepals equal or scarcely shorter than outer ones



0 1 2 3 4 5 6 7 8 9 10

cm

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Sumas

Aug 12 1865

Mississippi, E. Holyard

x60

x10

heads 10-20 flowers

nursed



ribs very prominent,
cross bars much less
so



April 5 1866

reticulate
cross lobulate

from same specimen



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Immunus

Sept 30 1865

Berlandier 1571. - Hb. Gray
between Guadalupe & Colorado, Texas

April 1828

Label wrong - plant
coll. in summer or fall

x 60



x 10



heads 25-30 fl



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cm

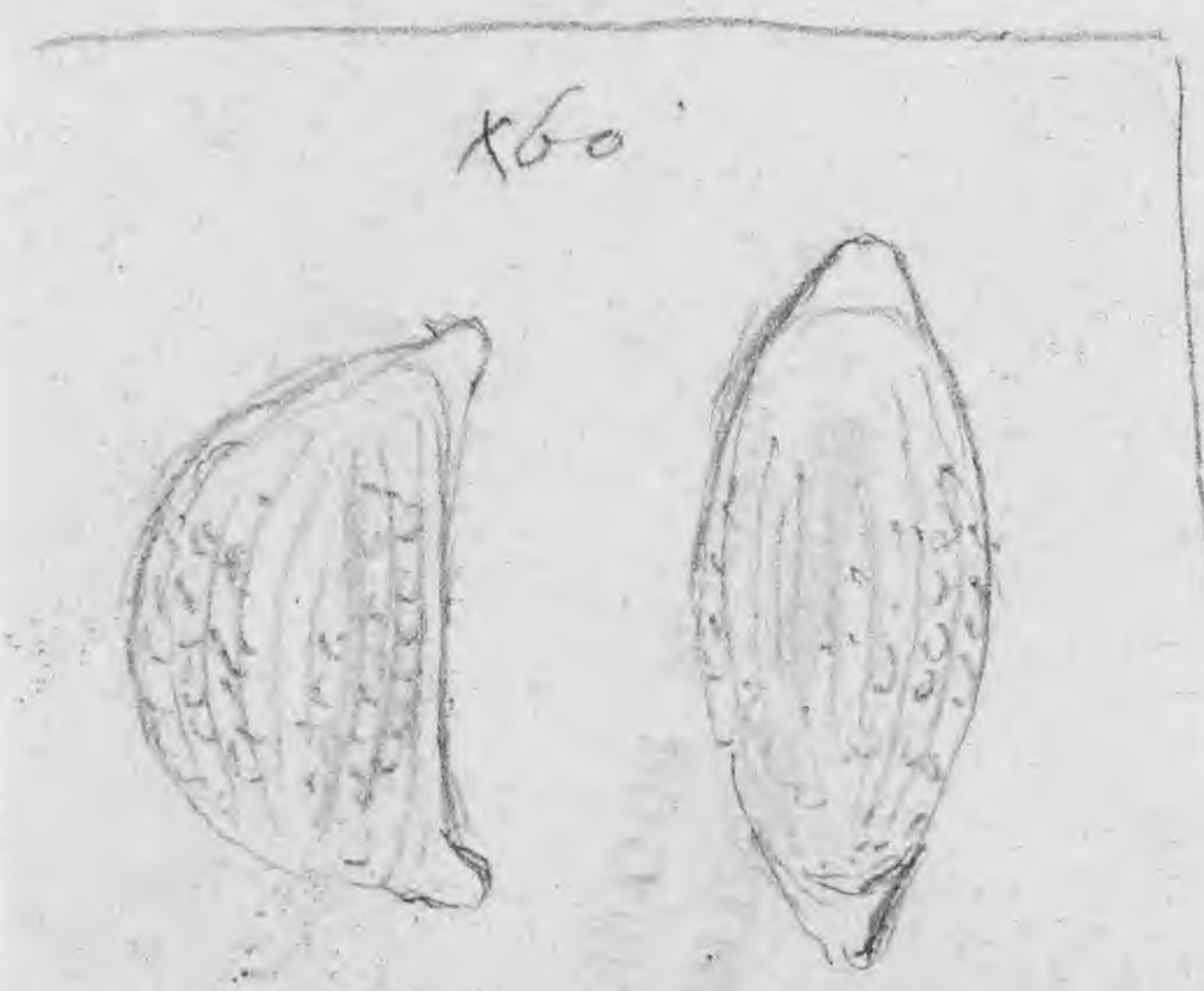
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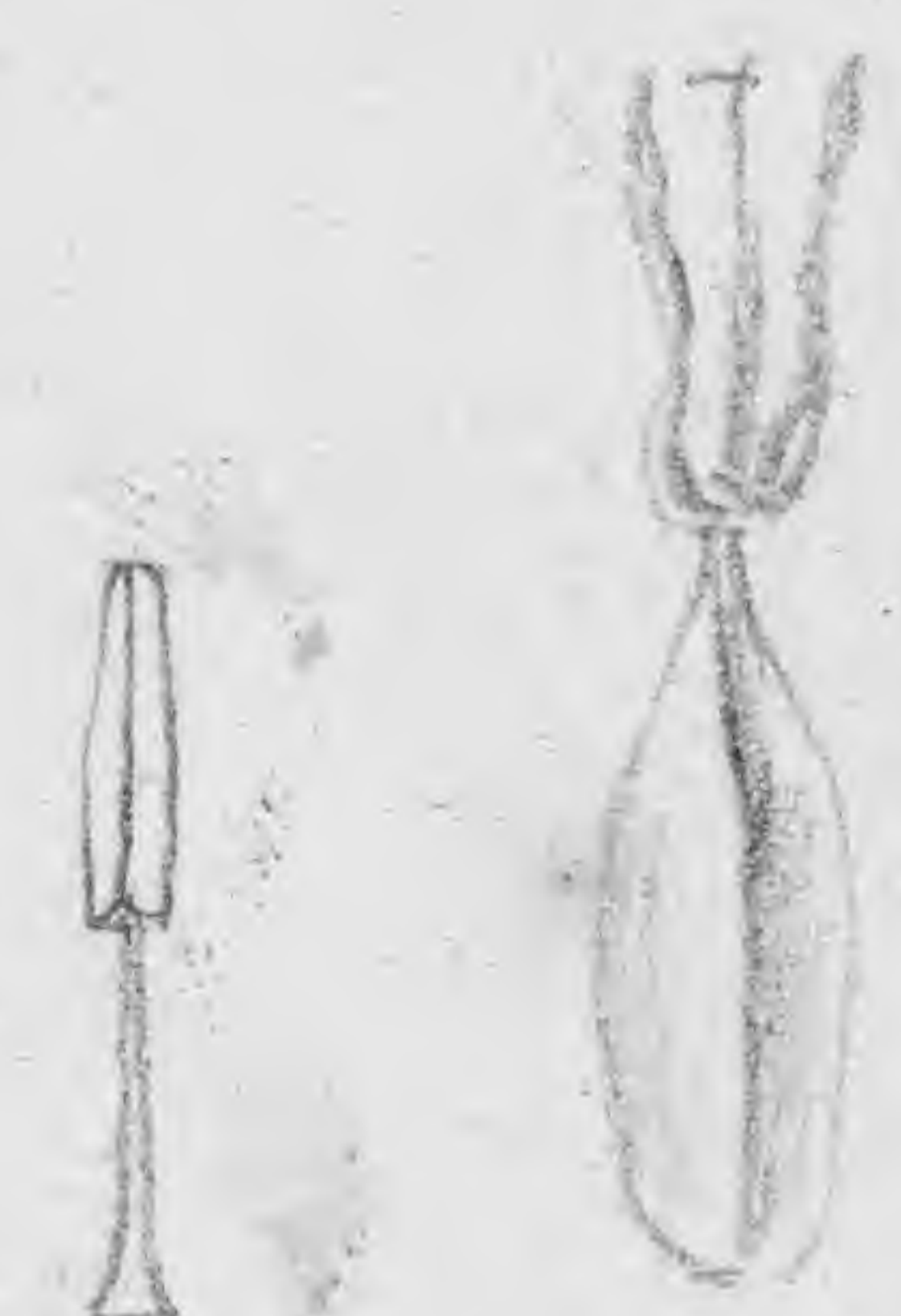
see fig. April 5. 1866 *Imms* Octob 7 1865
 sub nom Elliottii, M. S. Peck in Hb Gray
 Ditch Columb. June 1864

"heads 8-20-30 flowers"



x60

seeds unripe



x150

seeds pitted -
 rows, more than
 articulated

undoubtedly seeds
 of *S. dichotomus* mixed

because unripe



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Juncus

April 5 1866

"*J. Curtisii*" Bebb = *H. Gray*

see fig. Octob. 1865

ripe seeds



about 6-7 ribs



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At S. Debb remarks in a letter to Prof Gray

J. patens

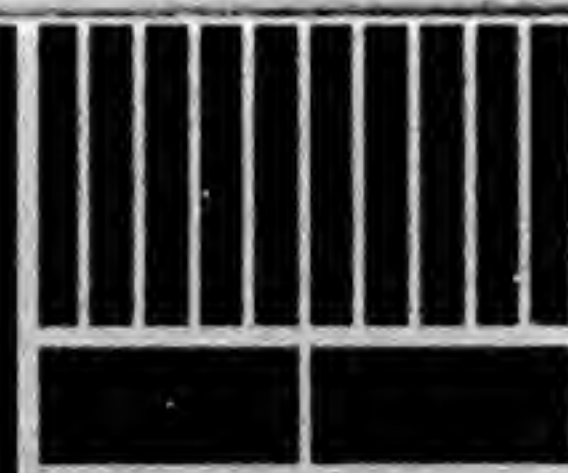
J. patens?

probably *acuminata* Ell, but scarcely Ell. 'oth' Chap.
perhaps *J. patens* Kunth.

Erect $1\frac{1}{2}$ - 2 feet high, terete, leaves terete, pinnate
Decomposed, sepals subulate lanceolate equally the
ovoid perianth sharply angled shining chestnut colored capsule
stamens 3 - seeds tailless, pointed - head 8-20-30 fl.
root fibrous.

^{Ditto}
Massachusetts, New York (Clinton) Pennsylvania (Porter)
Dist. Columbia (Debb) Illinois (Marion Co, Debb Ridgway,
Vernon, Allen, Hall)

One of the earliest species - flowering near Washington
in May - ripe about middle of June - " by the first of July
I find all the plants gone by (1864) "



0
cm

1

2

3

4

5

6

7

8

9

10

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ENNO SANDER & CO.,
PHARMACEUTISTS,

Cors. Second and Fourth on Walnut Street,

SAINT LOUIS, MO.



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Desman *algae-complex*

Oct 1st 1865

sub nom. *paradoxus* S. Carolina Curtis

- Hb. Gray

x60

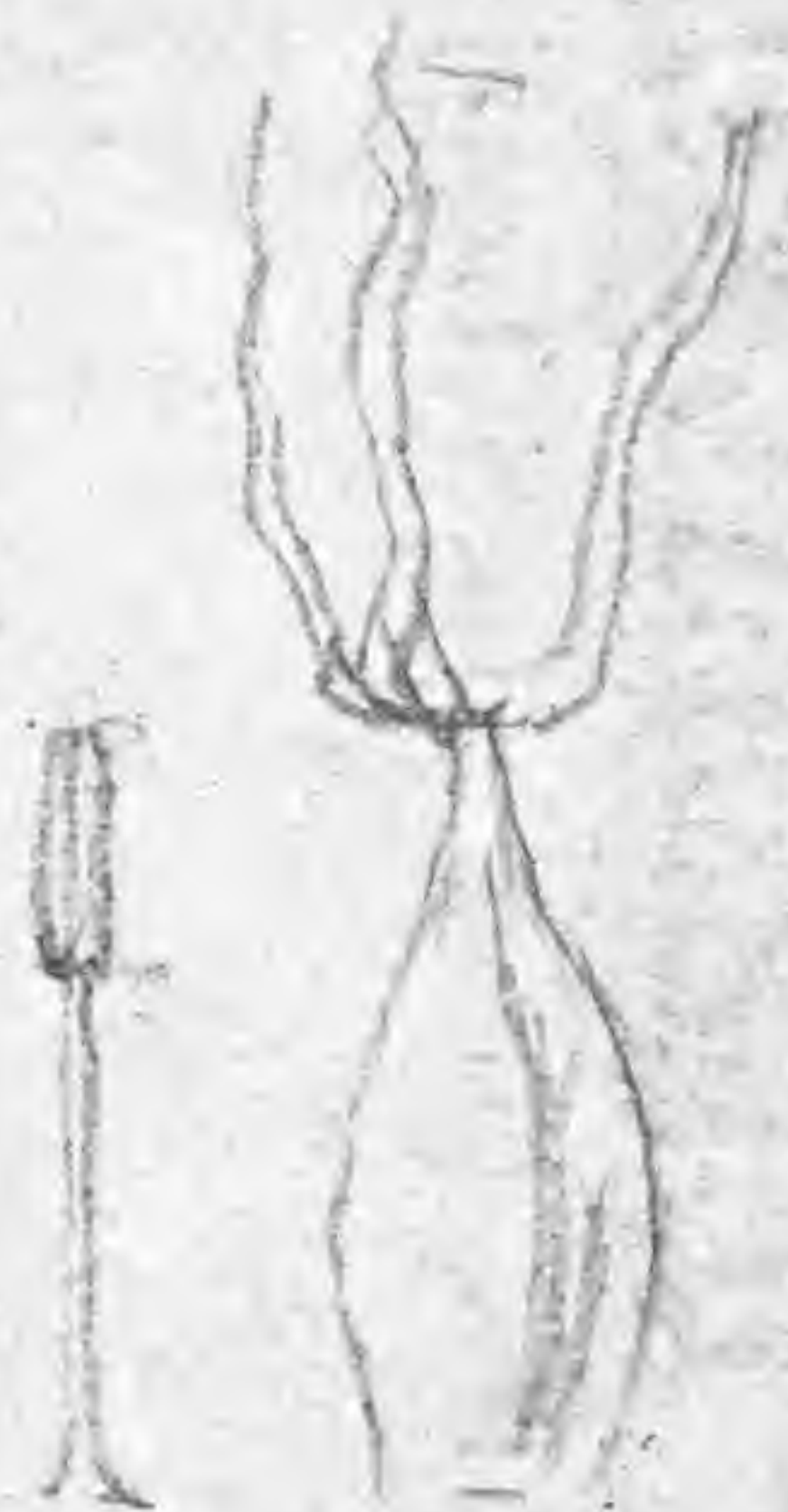


x2



young

old



Lower part of head
with open capsules,
seed shed

upper part just
in flower, or
not yet -
second growth in
fall on same head!

x150



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ering.

Dimensions.—Length, 0.20 of an inch; width, 0.18.

The *Elæacrinus Kirkwoodensis* is nearly allied to *E. (Pentremites) melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

8

J. pallidus
var *fraternus*

J. fraternus Keuth En. 3. 340

J. paradoxus Mey

402-422



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as far as
circumstances prevented me from obtaining more than a few crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.



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cm

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J. pillesocas
var *fontemus*

April 20. 1866

Delaware, A. Common.

heads & flowers larger than usual



sepala exteriora
breviora



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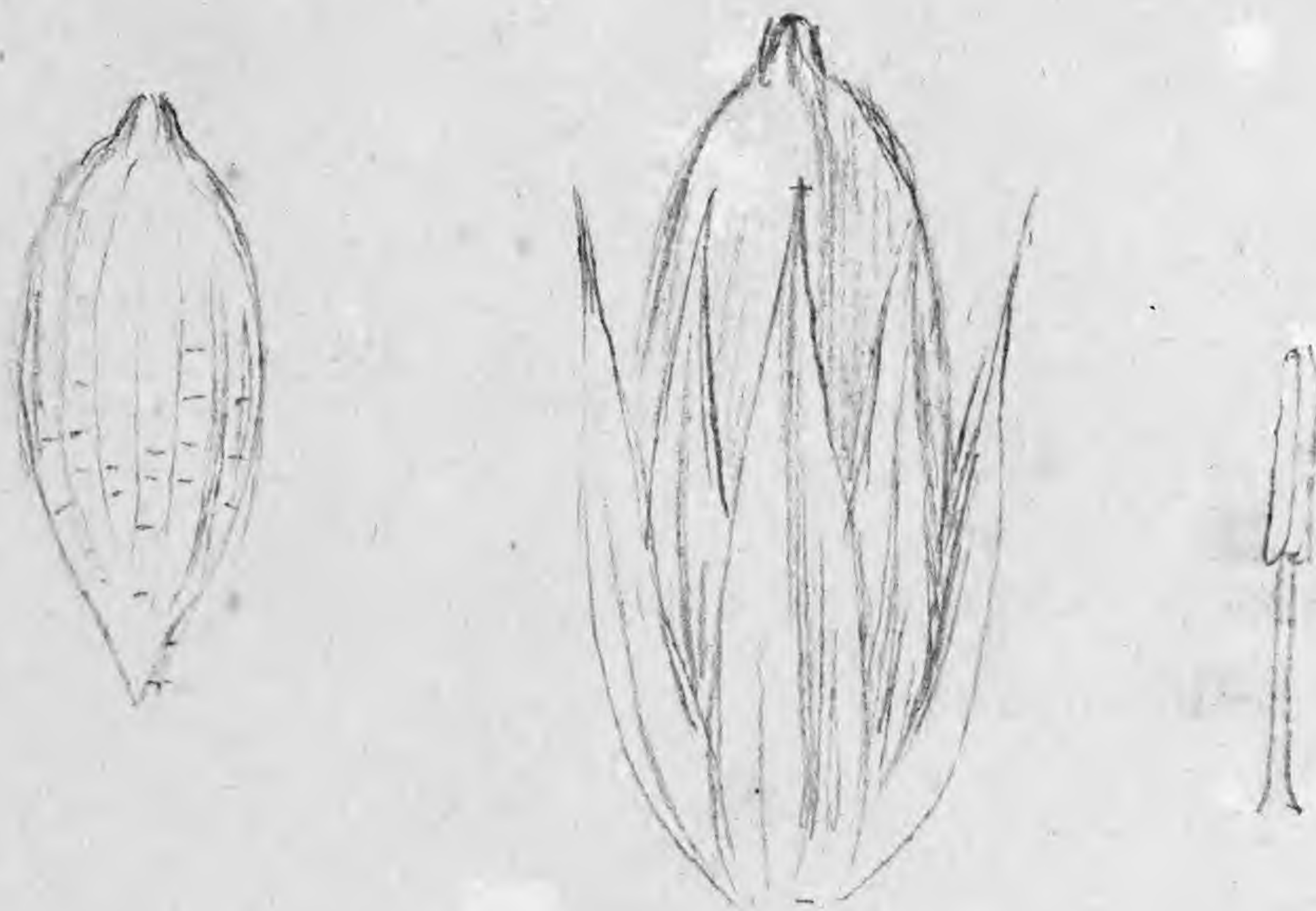
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Juncus fuleranus Dec 9 1865
capsula sepala exsertente ad *J. debilem* spectans,
New Jersey ex Hb. Ar. Philad.



Some capsules exsert, few others (on same
specimens) as long as sepals.



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cm

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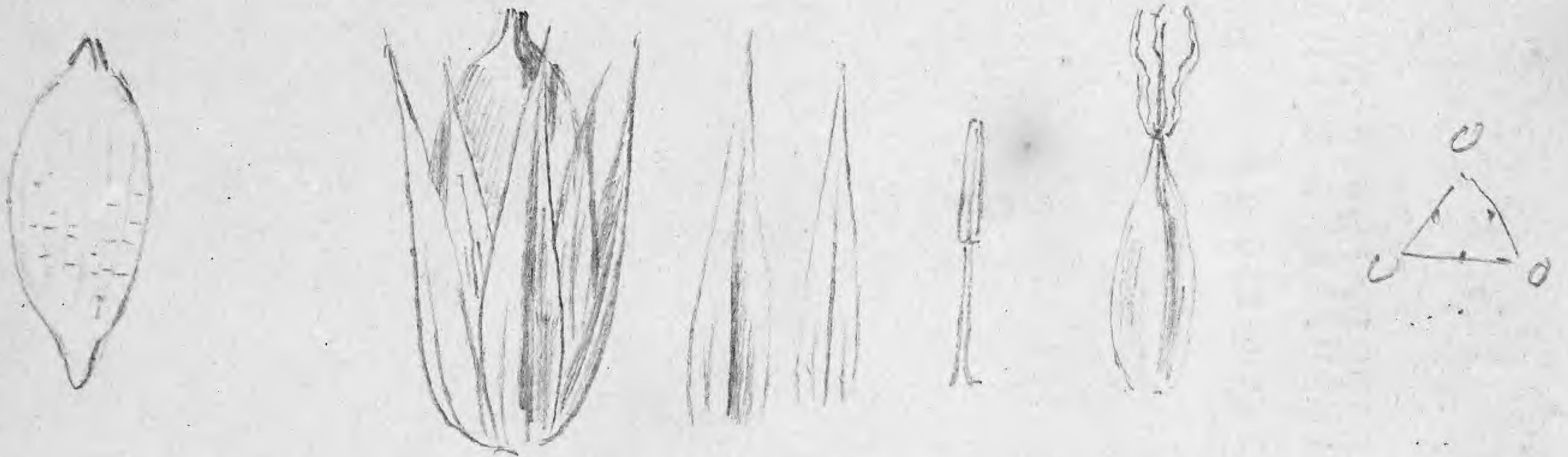
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Juncus fraternus Dec-9 1865-
sub nom *J. subovoidellatus* Nutt
New Jersey - Hb. Acad. Philad.



sepalis internodibus
saepe brevioribus

sepalis exterioribus nervis 3
— interioribus basi 1 nervi, 3 nervis
basi 3 nervis



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cm

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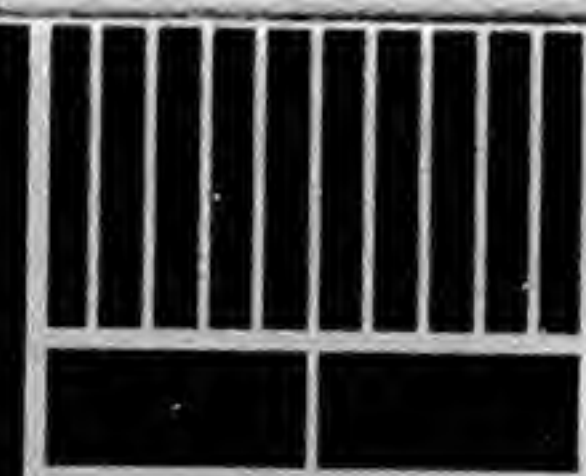
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Juncus patens

March 31 1866

sub nom *J. acuminatus*

Aiken S.C.

H.W.

Ravens

mis 1866



6-7 ribs



sep each 5-7 rows
lvs 2 rows



HERBARIUM OF THE UNIVERSITY OF CALIFORNIA
716 OCEANOGRAPHY BLDG
DIEBOLD ST
BERKELEY CALIF



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Juniperus fraterculus

	Hb. Philad	Gray	Engelm
Pennsylvania Philadelphia	Schwarz Smith Lidy Dunn Townsend	Smith Townsend Porter	Smith Townsend Porter Lidy
New Jersey	Lidy	Porter	Smith
Kentucky	Grisebald Peterson		
Washington	Bebb	Bebb	Bebb
Texas	Baldwin	Baldwin 2556, 1571	1571 2556 Wright
Louisiana		Hale	(Hale)
S. Carolina		Curtis Ravens	(Curtis) (Ravens)
Alabama Decatur Co	Mead Bebb	Hall	Geyer Hall Bebb Wright Engelm
Illinois Salem Argyle			
Michigan		?	
Maryland	Aitken	Aitken	Aitken
Massachusetts			Pickering (Boott) Little Hilgard
Mississippi	Little		(Chapman)
Florida	Chapman		
N. Carolina	Curtis		
N. Mex	Wright 1925		
Georgia	Baldwin		
Delaware			Common



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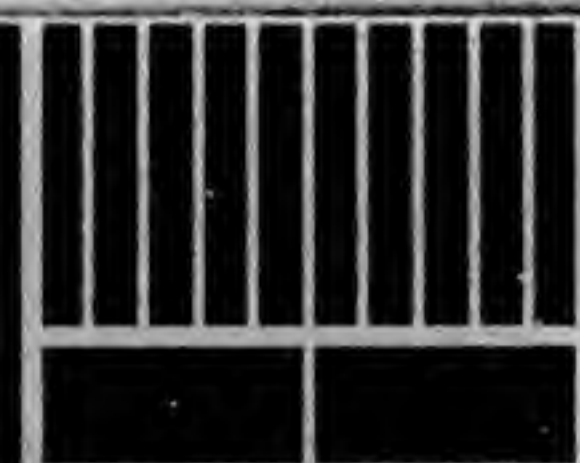


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Kunth Enum III. 341

Juncus patens n. sp.

— sepals lanceolatis acutis-subulatis

— corolla viridulis

capitulam oblongam triangularem

acutata apiculata — unilocularem

superioribus

interioribus brevioribus

Boston, Booth in itin.

" An a J. paradoxe sat distinctus? "

Kunth.



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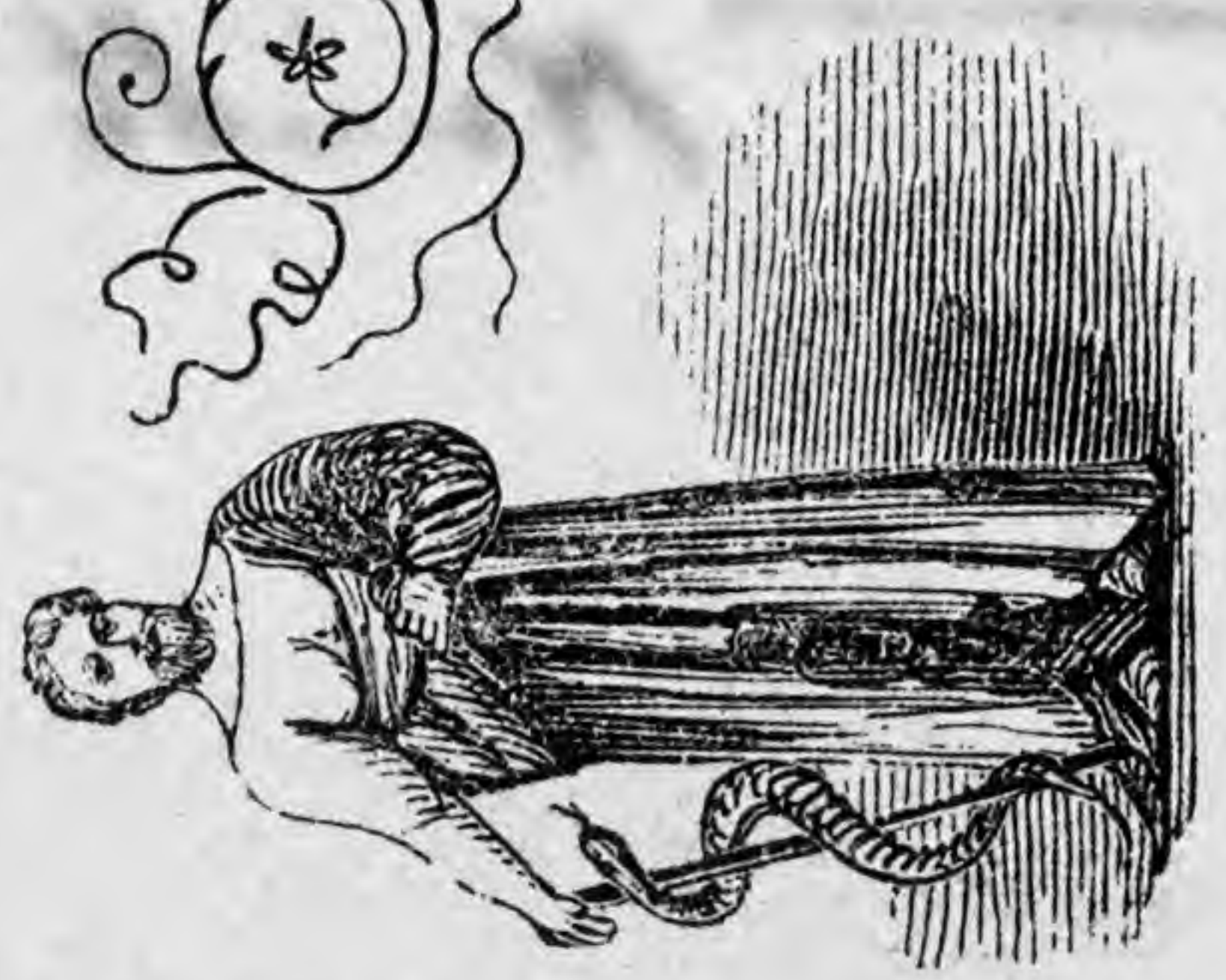


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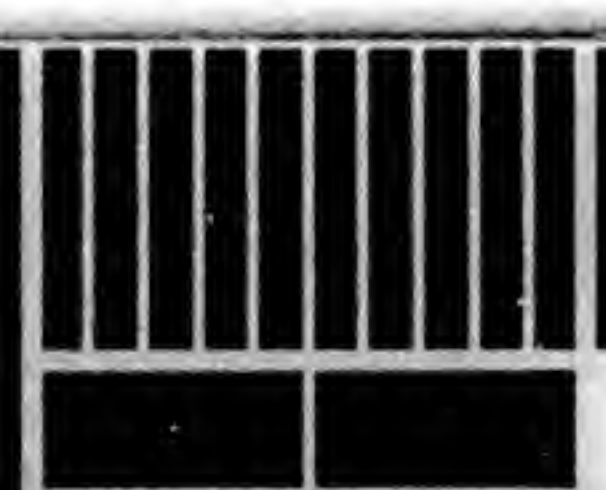
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[Faint, illegible handwritten text]

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Juncus fraternus Kunth

Syn. *J. Pondii* Wood Bot (1861) p. 724

Panicle diffuse decomposed

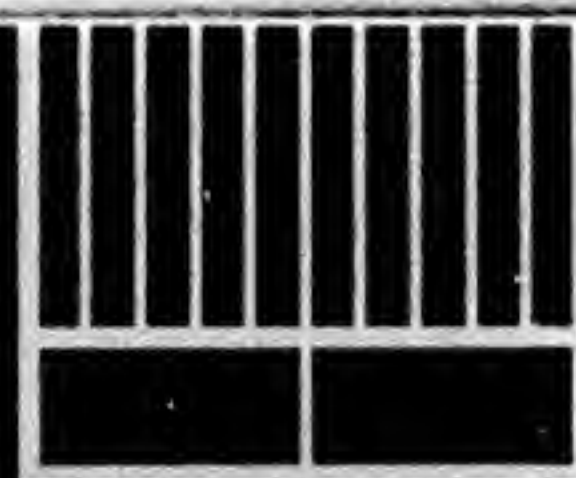
Head globular ⁵⁻²⁰⁻³⁰ 5-12 flowered chestnut col^d

Sepals equal as long as the capsule

Capsule triangular acute abruptly pointed

Stamens 3.

Seeds oval, acute at each end.



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cm

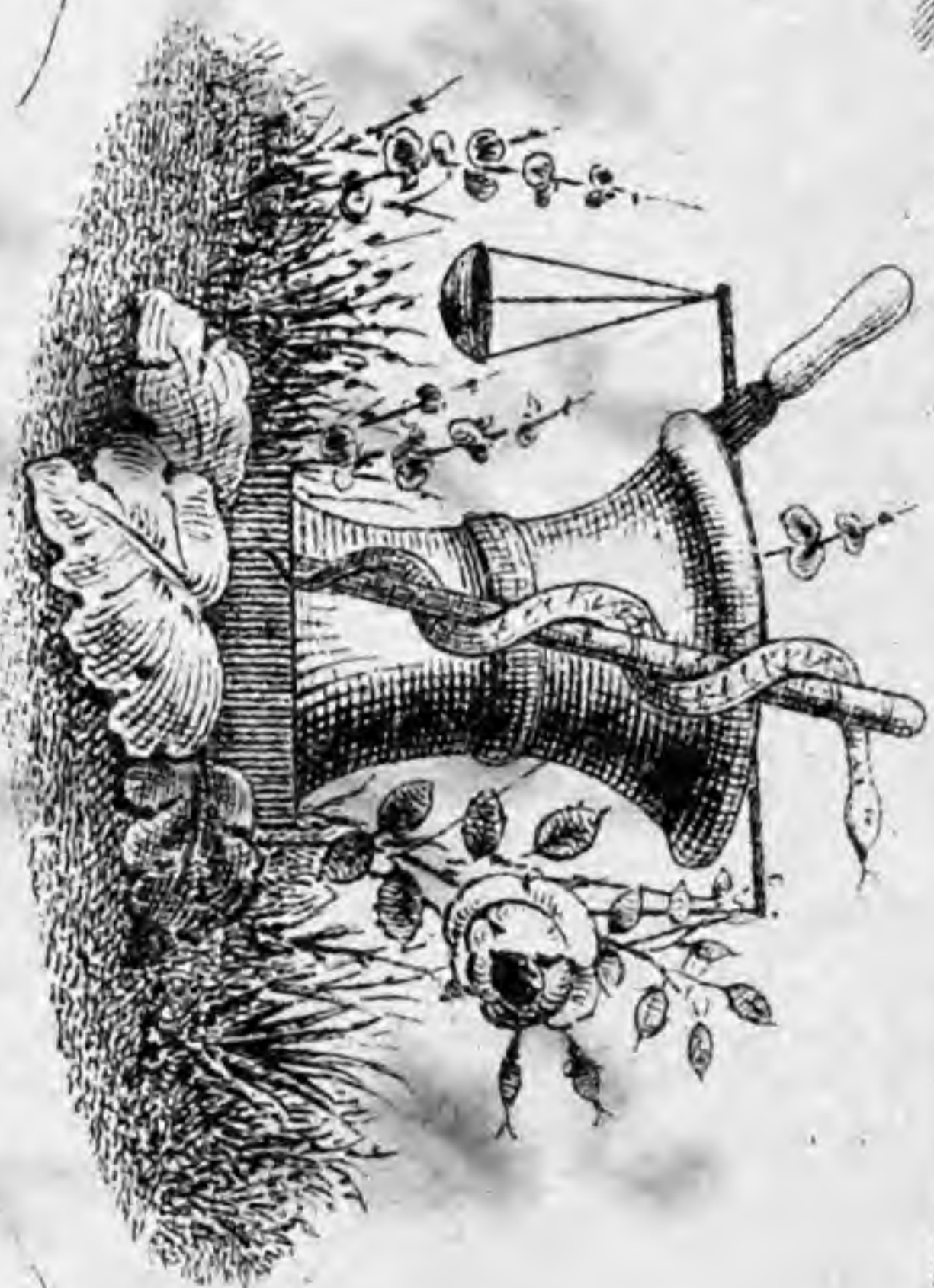
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Juncus fraternus Kunth! *Proc. III*. 340

Nov 16 1865

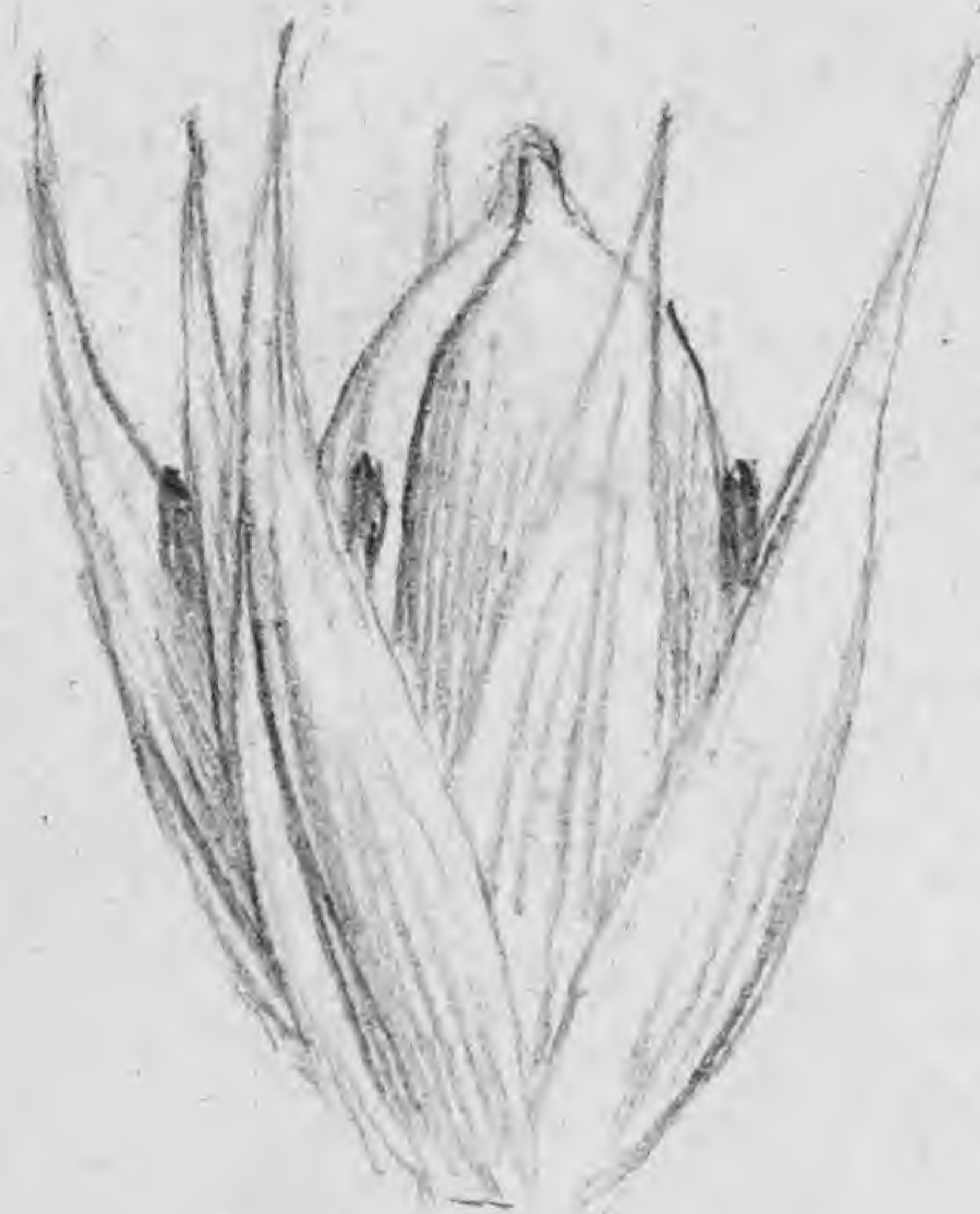
"Boston, Booth mis 1831" - Hb Kunth

capitula 2 6-7 flora
5-6 mm lata 4 mm longa
Subsphaerica

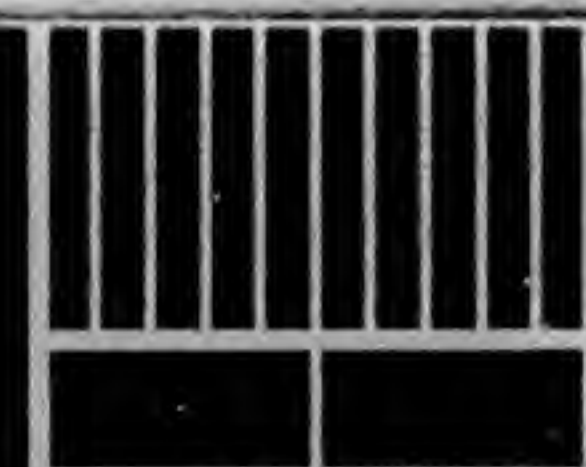
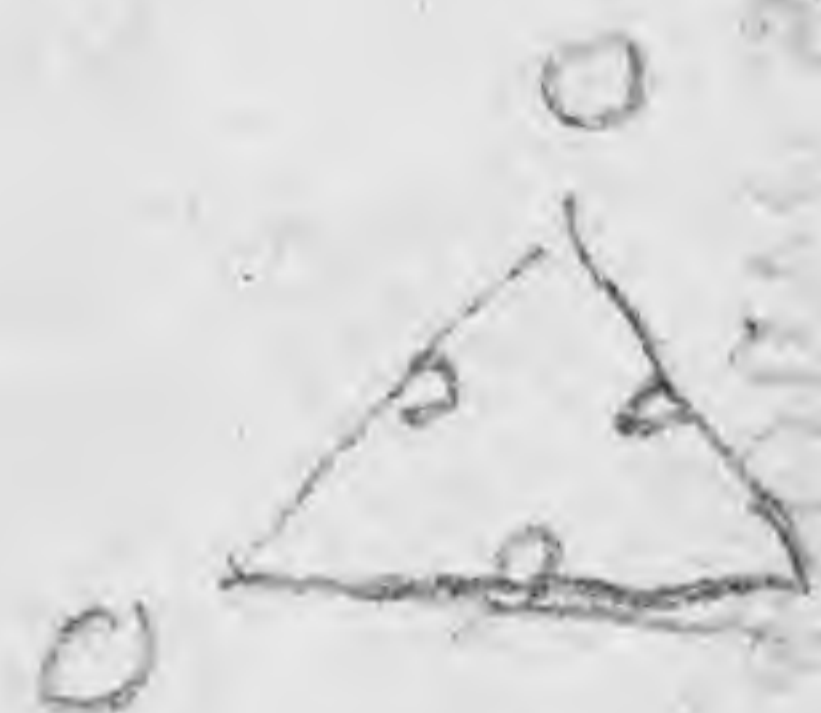
x 60



very young



capsule unripe,
not full grown



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Juncus paradoxus Mey
Mey. Syn. Fr. 30

anthera capitulis paucifloris
composita
~~acuminata~~

perianthis laciniis lanceolatis
acuminatis

exterioribus longioribus

capsulam acutam mucronatam
subumbellarem

non aequantibus

staminibus 3 perianthis

vix brevioribus

antheris minoribus

Why not fraternus?

on acct of minute anthers

but Boott & other sp. of fraternus

have also short anthers, some have slightly exserted

Juncus pallescens Lam
Mey. Syn. Fr. 31

capitulis paucifloris
superdecompositis

lanceolatis acuminatis

subaequalibus

[inacutis]
(acutis
aequantibus?)

3 distinctis perianthis
vix superantibus?

Why not debilis?

or rather few flowered
fraternus?



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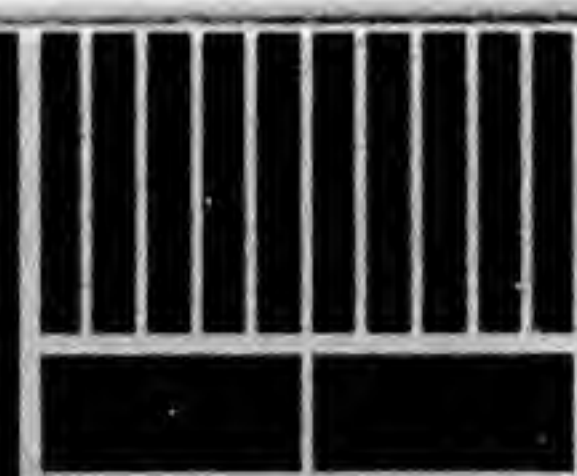
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