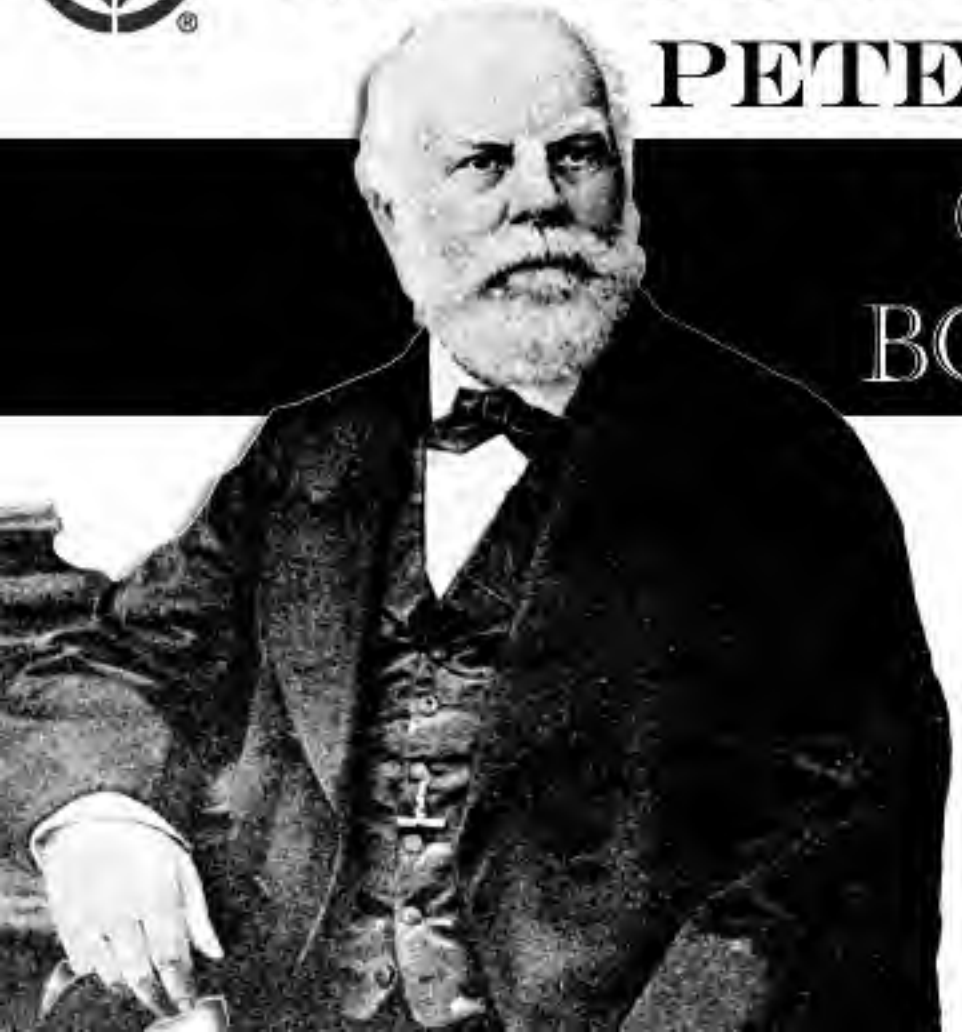
Missouri Botanical Garden
Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

1-11

134
Polygonaceae

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

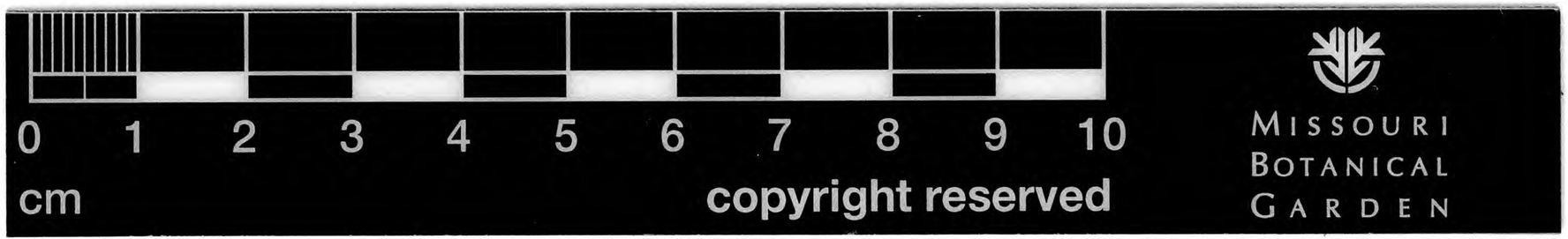
5526

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

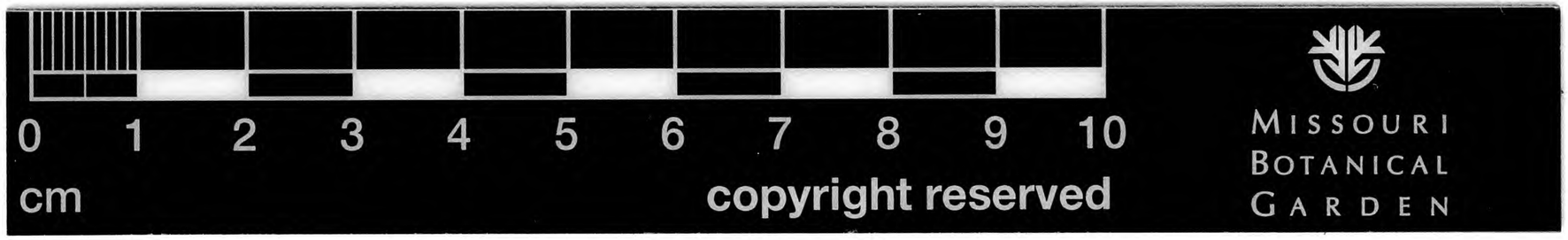
Polygonum Meisnerianum Ch. & Schl (Grun 5 st. 3 stig.

P. Campanum Meisn (Grun.

neu Australien 8. 3



5527


0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI
BOTANICAL
GARDEN

Oct. 1848.

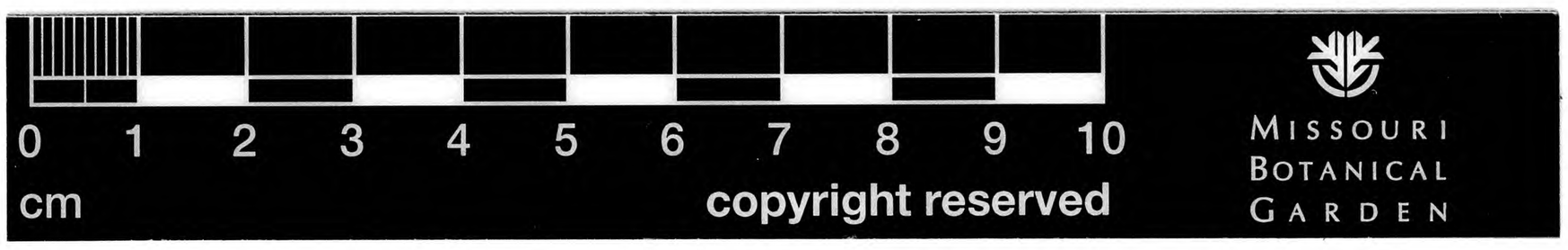
Pol. virginianum; flores inaequales, declinati; perigonii segmenta 4, lateralibus exterioribus; stam. 4 alternis, quinto segmento inferiori opposito longiore — basi glandulosa — ovario transverso, stylis dolabratis, stigmatibus truncatis.

April 1851 Polygonum lapathifolium. Europa, humile, foliis ovatis acutis eglandulosis; ochreis brevissime ciliolatis; spicis densis, denique cernuis ~~plerumque ovatis~~, perigoniis eglandulosis, stam. sub 6; styl. 2 (~~interdum 3~~) solummodo ad basi coalitis; sem. lenticularis acutis faciebus impressis

P. lapathoides = nodosum Pers var (Gray) for Missouri (Pitt) Texas

exaltatum, foliis elongato lanceolatis, ~~longe~~ acuminatis infra saepe luteo-glandulosis; ochreis inferioribus, spicis gracilioribus, denique cernuis bracteis ovato-lanceolatis acuminatis. V perigoniis eglandulosis, stam. sub-6-styl. 2 ad basi coalitis, sem. ut supra. — leaves never spotted

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN


0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI
BOTANICAL
GARDEN

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI
BOTANICAL
GARDEN

5528

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Polygonum Louis 1842

capitatum — spica gracili, nutante, pedunculis glanduloso — ochreis bracteisque ciliatis; foliis subtus glandulis luteis immersis. —

persicaria — spica cylindrica densa, pedunculis glabris nudis — ochreis bracteisque ciliatis — (foliis subtus eglandulosis)

punctatum — spica filiformis laxa, ochreis bracteisque ciliatis, calycibus glanduloso-punctatis — (foliis subtus eglandulosis). — acre!

erectum W. folius ovalibus obtusis — fl. pedicellatis

Sect. calycibus obtusis, subrotatis — seminibus brevis trianguliis mucronatis, opacis rugoso-striatis

Sect. racemis nix emitte, ramis erectis, ramosis cum foliis lanceolatis linearibus, seminibus minoribus, triangulato alatis laevibus laevibus

aviculare Spirit i d Mitte zu Sept —

Blume von d Größe der ~~erste~~ Erbse, etwas glänzend, etwas rigelig, Blätter etwas breiter,

ramisque stamina 3 — (2 — 5) ~~[illegible]~~ filamentis basi late ovalibus parietibus ovarii trigoni oppositis (internis) externis plerumque abortivis

Pl. virgata seu virgata diluta rostrum, parallela compressa laevibus

P. tenue sem. leviter nigris! leviter sorbiculatis, ovalibus triangulares subalatis, acutis (non acuminatis

P. hydropiper (europaeum) sem fusca lucentia, laevia ~~acute 3 angula~~

P. hydropiper (americanum, trachycarpum) ~~P. punctatum Ell~~ sem. fusca opaca rugulose-sorbiculata obtuse 3 angula = punctatum Ell.

P. hydropiperoides Michx non Mich sem fusca lucentia, laevia alato-triangula

P. hydropiperoides (Mitet, Pers) Mx sem nigra lucentia, laevia parva alato triangula

P. mite Schrank = dubium Stein sem majora, fusca lucentia, laevia, compressa (2 ~~fusca~~)

P. texanum sem minora fusca lucentia laevia compressa

P. persicaria L sem minora compressa lucentia, faciebus convexis

P. lapathifolium = nodosum Pers sem. minora compressa lucentia faciebus impressis, convexis

P. pensylvanicum sem majora, compressa lucentia faciebus impressis, convexis

P. novum (Ostwill) sem majora compressa lucentia, faciebus impressis convexis

"vermutlich eine Zwischenform zwischen P. pensylv. und fl. vitescentibus, pedunculis glabris scabris"

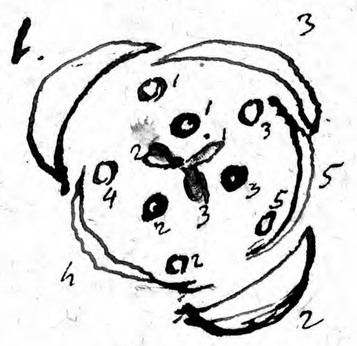
MISSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

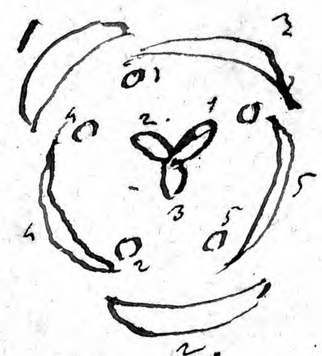
5529

Polygonum octandra
trigyn



stam 5 ext. altern
3 inter. ~~petals~~ segmentis
interstribus opposita
cum 3 stigmatibus alternantis
P. mite. punctatum. axillare. tenue

P. pentandra
trigyn

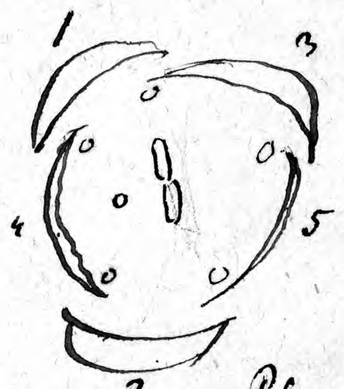


stam 5 ext. altern.
stigm. segmentis exterioribus
opposita

Polygonum 8 andra
Digyn

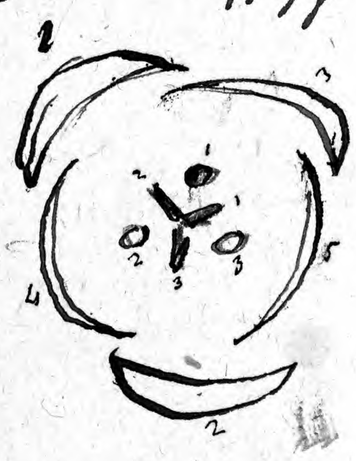
Polyg pennsylvan.
1 circle 5 segments of perianth
2 circle 5 outer stamens
3 circle 3 inner stamens & two capels

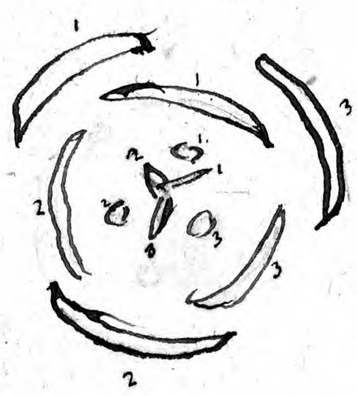
P. 6 andra
digyn

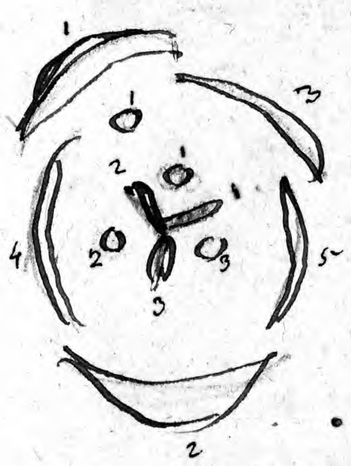


Polyg. texanum

Polyg. 3 andra
trigyn



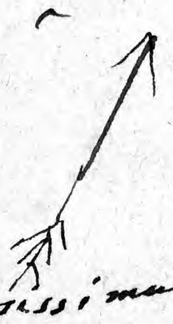




Polygo 4 andra
trigyn

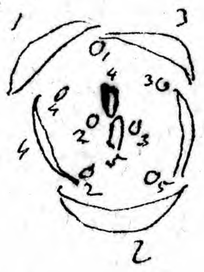
P. ramosissimum.

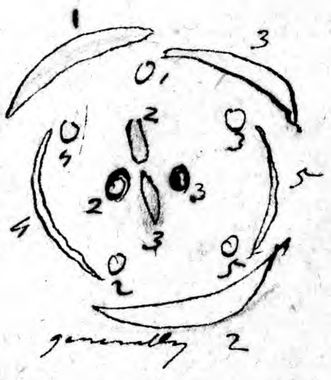
stam 6



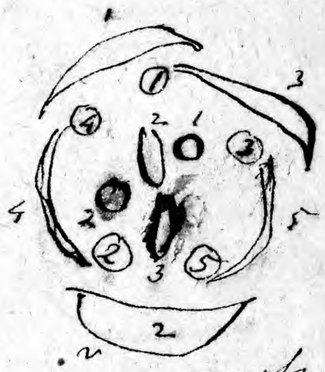
P. ramosissimum

Polygo 7 andra 2 gyna





generally 2



very rarely

Polyg. Persicaria

$\frac{3}{12} + \frac{24}{12}$ 2 $\frac{27}{12}$ $\frac{9}{12}$ $\frac{3}{2}$ $\frac{3}{6}$ $\frac{3}{12} + 25$ $\frac{27}{12}$ 3

Polyg. 5 andr.
2 gyn

P. amphibium

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Teucrium montanum L.

Spr. II, 708

Europ. Asiae minoris
colles calcar.

H. B. Würzb. 1822

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

~~Pyxie fruitfende~~
Perigonia fructifera laciniae
exteriores membranaceae
oblongolineares obtusae
reflexae, laciniae interiores
multo majores rotundati-
reniformes crenulatae
albidae, reticulato venosae nunc grandiferis v. vallifera
1½ to 2 lineas latae
Nux acute trigona ~~acuta~~ minima
fluviatili-brunea, lucens.

I have called it angustifolia ~~a name of the~~ from the shape of the leaves, and the undoubted similarity of the plant with the S. Siberica A. angustissima of Ledebour. The fruit resembles much Rumex acetosa but the ~~inner~~ valves are deeper cordate, emarginate or crenulate, not entire and the ~~nut~~ only half as large and light yellowish not deep chestnut brown. ~~I have never seen the leaves hastate.~~

A specimen from the Sandstone rocks of the Dardanelles on Arkansas river ~~has~~ collected June 1835 is only 8 inches high and much branched all the leaves are linear or linear lanceolate.

A. Pauciflora Nutt ?

Probably
Lycium Chinense

Engelmann Wislizen Dec 1848 Tracheglos Engelm.

Rumex angustifolius

nov. Spec.

Rumex, floribus dioicis, laciniis perigonii fructiferi interioribus (valvis) rotundato ~~cordatis~~ reniformibus, crenulatis, omnibus valvis dentiferis fructus ante triangulato multoties majoribus; exterioribus (valvae) lineari oblongis reflexis; folius superioribus lanceolatis in petiolum longum angustatis, superioribus linearibus sessilibus, stipulis lanceolatis.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

In America boreali, prairies opposite St Louis fl. Maj.

Var. minor, ramosissima in ripibus, Arkansas Junio

Radix perennis, multiceps,

caulis erectus, simplex, 1–2 pedalis, strictus;

folia radicalia lanceolata plus minusve hastata s. cuspidata s. ovato lanceolata, rarius ovata, petiolum aequantia 1–2½ poll. longa, 2–4 lin. lata saepe rubella, aridula

folia caulina paucia, inferiora similia, angustiora, superiora linearia;

stipulae albo membranaceae pollicares, laciniatae

flores dioici in paniculam compositam contractam dispositi

mite. fol ∨ mitia supra subtusque ∨ margine et nervo asperula — segm. cal. petaloidea rosea major ~~mitia~~ obtusa. stam 8. — styli 3 admedii connati cal. fructif. basi truncata

Myrtil nigri elevatis? aculei 3 angul. nervo

mite β. fol ∨ supra subtusque glabra, albiflorum mitia medio obtusus et margine asperus, segm. calycis albida, stam 8. cal. fructif. basi truncata fol angustior lineari lanceolata

H. minores albidi viescentes

jamaicense stam 5 styli 2 ad medii connatis

~~acre~~ trachycarpum ~~punctatum~~ undulatis

fol glabrum ∨ margine ~~sollemmodo~~ glandulosis inaequaliter aspera segm calycis viridescentibus oblongis ~~obtusis~~ obtusis, stam 6. (rarely 5 or 7) styli 3 (rarely 2) admedium connatis, florib axillaris et spiratis. spicis laxis pendulis ochrea smoothish, calice short. tomentose obtuse trigonis s. convexo compressis, ~~punctatis~~ ~~pilis~~ sublaevibus, opaca punctatis

Ell.

fol glabris ~~nervo~~ medio et margine ciliato asperis ~~pilis~~ inpunctatis glandulosis albidis s. viresentibus, segm. calycis obtusis, stam 8 (rarely 7) styli 3 admedium connatis) semitrifidis fl in spicis terminalibus solitariis laxis erectis dispositis, rarissime non aculeatum (with the leaf)

fasciculatum castaneis luventibus

Hypericum mundanum L

fol glabris, nervo medio et margine ciliato asperis inpunctatis, segm calycis glandulosis viresentibus, obtusis, stam 6, styli 2 or more rarely 3) fl in spicis laxis subnutantibus terminalibus et axillares dispositis, ochreis glabris sublis brevitor ciliatis, nervibus conspicuis castaneis luventibus

Hypericum mundanum L

Ell. 2nd 1st

5531

Cassinia vernosa — 2.

Stem not more the 4–6 inches high, partly smooth, partly (near the inflorescence) more or less hispid with pellucid vesicular excrescences. the lower part of the stem as well as the youngest ~~branches~~ shoots I have always found smooth. ~~it is wherever it is hispid it is on the flowering branches~~ ~~the~~ inflorescens is ~~so~~ in Mr Lindheimers specimens ~~also~~ hispid in the manner described; ~~and so is the calyx~~ in Drummonds specimen the inflorescence is somewhat smoother, Calyx always hispid but ~~[illegible]~~ vesicles less hair like, more glandular or (when dry) wartlike. Lobes of corolla very acute spreading, ~~at~~ white; after flowering the tips are incurved and turn brown; stigmas purplish-brown, ~~globose~~ bifid.

This texan species is nearly related to the pentagona; size of flower, shape of corolla and scales are the same but may easily be distinguished by the loose few flowered cyme, the hispid pedunsles and hispidly-tuberculate calyx which is campanulate not pentagonal.

Jan. 1840

Polygona hydropiperoidea

I. Polygona mitia, perigonio eglandloso

1. P. mite Schrank hexandrum, diggynum, nuces majores fuscae lucentes, laeves, compressae — Europa

2. P. Persoonii Engelm octandrum trigynum, nuces minores nigrae, lucentes, laeves, alato-triangulatae — America
(Syn: P. mite Persoon, P. hydropiperoides Mx (not Pursh))

II. Polygona acria, perigonio glandloso

3. P. hydropiper L hexandrum, diggynum (rarius 3gynum) nuces castaneae, lucentes, laeves, ~~acute triangulatae~~ compressae — Europa

4. P. trachycarpum Engelm hexandrum trigynum (rarissime 2gynum) nuces fuscae, opacae, rugulosa-scrobiculatae, obtuse triangulatae — Missouri

5. P. punctatum Ell (P. hydropiper Mx P. hydropiperoides Pursh non Mx) octandrum, trigynum, nuces fuscae, lucentes, laeves, acute triangulatae — America

6. P. texanum Engelm hexandrum, Diggynum, nuces nigricantes, lucentes, laeves, compressae — Texas

May 1843.

I Polygona mitia

1. P. mite Schrank hexandrum, 2-3 gynum, nuces majores nigricantes, lucentes laeves, ~~majores~~, acute triangulatae s. compressae — Europa

2. P. Persoonii E 8-andr. 3gynum, nuces minores nigrae, lucentes laeves, alato triangulatae. — America

α. ~~vulg~~ albiflorum foliis lanceolatis, supra scabrosis, floribus roseis

β. albiflorum, foliis linearibus lanceolatis supra glabris, floribus albidis s. viresentibus.

Flowers & fruit less than half the size of the europ. plant.

II Polygona acria

3. P. hydropiper L hexandrum. 2-3 gynum, nuces castaneae subopacae, rugulosae, scrobiculatae. — Europ. ~~America~~

The American plant appears to have darker coloured, on the edges more obtuse ~~but not than~~ and more frequently triangular nuts than the European one

4. P. punctatum Ell } as above
5. P. texanum E } = inanum Ell

5532

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Construction der Blüthen
der Polygoneen
von Braun

April 1844

4-11

und einige Worte zu Species Naumann
habe ich selbst gesehen. E.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

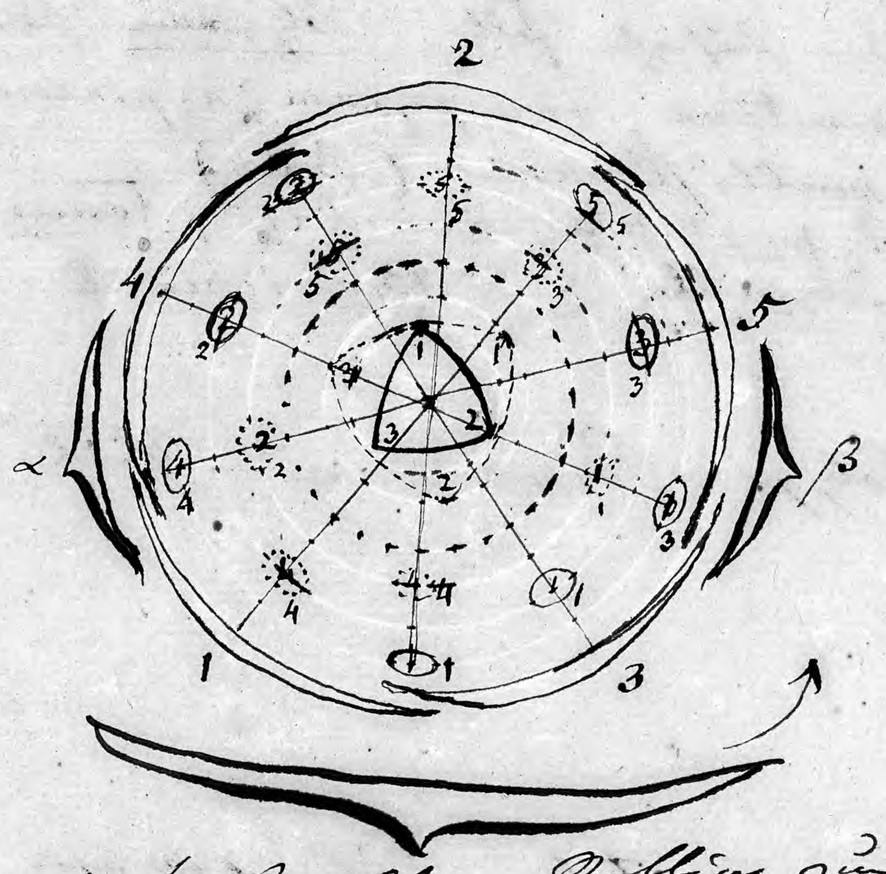
5533

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

I. 5 zählige Blüth mit 3 zähligen Früchten

Polygonum zum Theil Polygonella



α. β. 2 Vorblätter in transversaler Stellung zur Achse.

Übergang der Vorblätter zum Kelch mit $\frac{1/4 + 3}{5}$ Drehung des 2ten Kelchblatt median nach hinten.

Von nun an Alternation 5zähliger Kreise, bewirkt durch Übergang $\frac{1/2 + 3}{5}$ von einem zum andern.

1. 5 Kelchblätter

Petala fehlen gänzlich, auch im Schema, nicht apetal, ist blos der Unterdrückung

2. erster Staminenkreis.

3. zweiter Staminenkreis davon sind blos 1, 2 = 3 vorhanden, 4 = 5 geschwunden.

4. dritter Staminenkreis ganz geschwunden; muß aber obwohl nie da gewesen, der äußere Fruchtblattkreis nach der Analogie der Verwandtschaft der Caryophylleen angenommen werden.

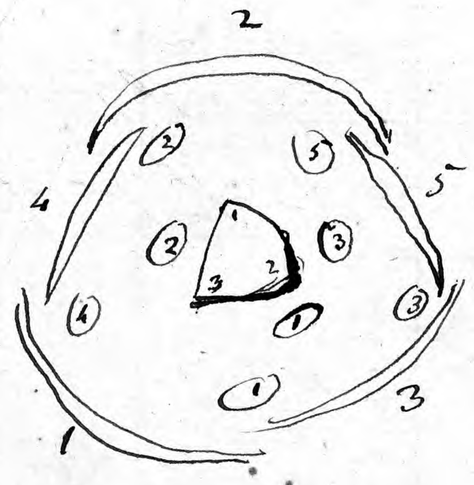
5. Äußerer Fruchtkreis ganz geschwunden; der Übergang zum 5ten Theil des dritten (geschwundenen) Staminenkreises geschieht mit

$$\frac{\frac{1/2}{5} + 2}{3} = \frac{3}{30} + \frac{2}{3} = \frac{23}{30}.$$

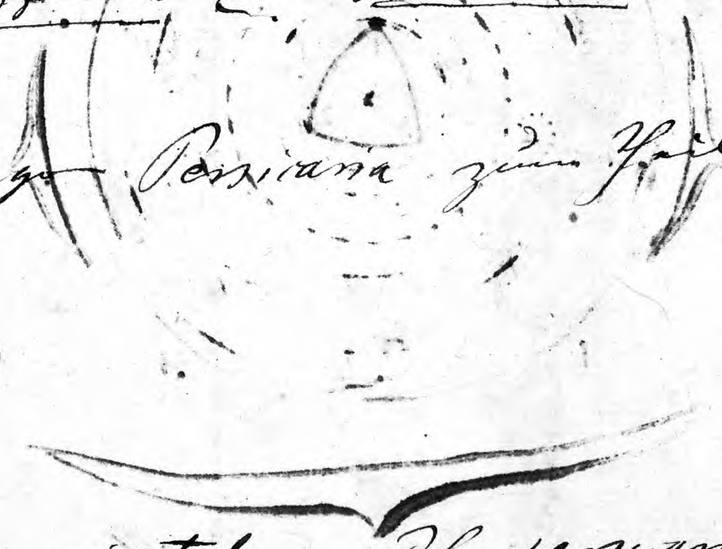
6. der zweite, innere, vorhandene Fruchtkreis wechselt mit dem erst ab und seine Theile stehen nicht ganz schwerdtförmig gegen die Achse, indem das erste Fruchtblatt um 1/30 Kreis zu der Medianebene rückwärts. 2tes Fruchtblatt fällt genau zu 3 des äußeren Staminenkreises.

Hieraus gehören folgende interessanten Fälle:

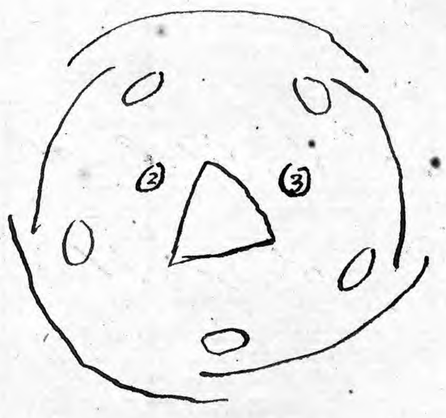
0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN



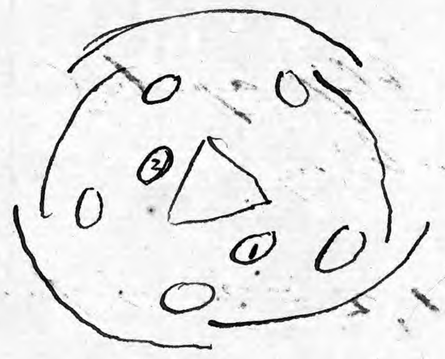
der häufigste Fall: Polygonum Bistorta, Convolvulus dumetorum, Fagopyrum, alpinum, fulescens multiflorum. (Brn.)
P. punctatum, aviculare, tenue (E.)
Polygonella E. Bruniichia E



Polyg. Persicaria zum Theil. Brn

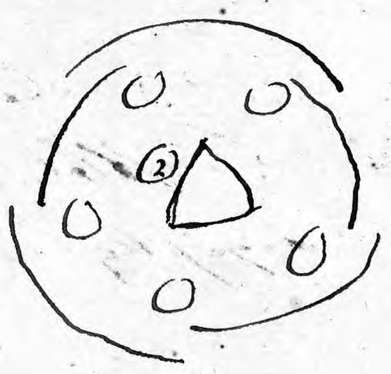


Polygon orientale, Pl. persicaria zum Theil Brn
Bruniichia orth (stigmatibilobum) P. persicaria

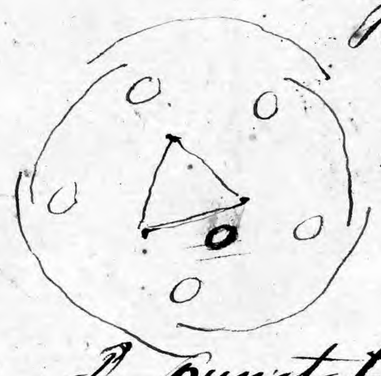


P. Persicaria fallax. Brun
Bruniichia orth P. Persicaria

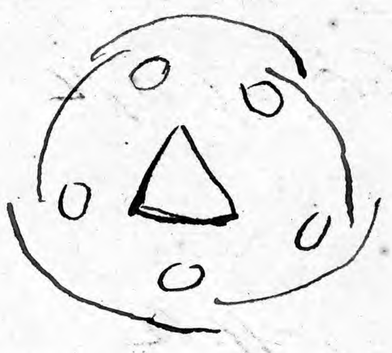
P. punctatum rare



P. Persicaria zum Theil Brn
P. Persicaria

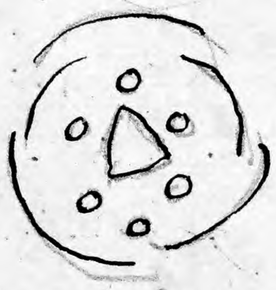


P. punctatum rare

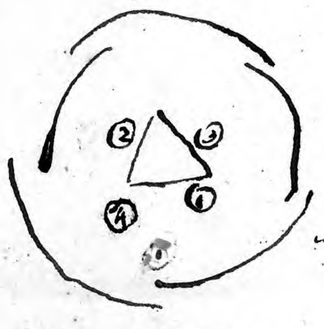


P. salsugineum (ex descript.) Brn
P. Persicaria

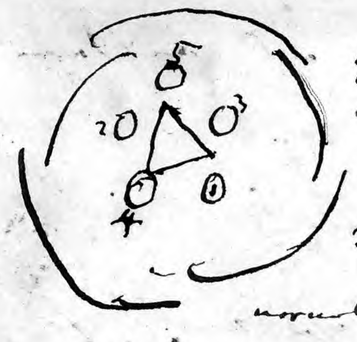
P. ramosissimum, normaler Fall. E.



P. aviculare selten rare



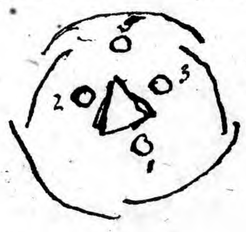
P. ramosissimum E. =



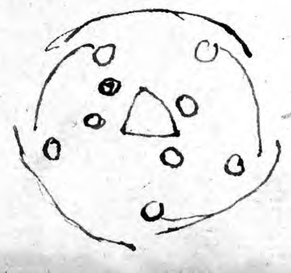
Normal in P. aviculare St Louis & P. erectum
zuweilen auch in P. ramos. selten
normal in P. ramos. Adsle

?

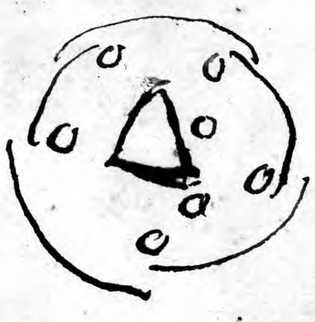
unnormal



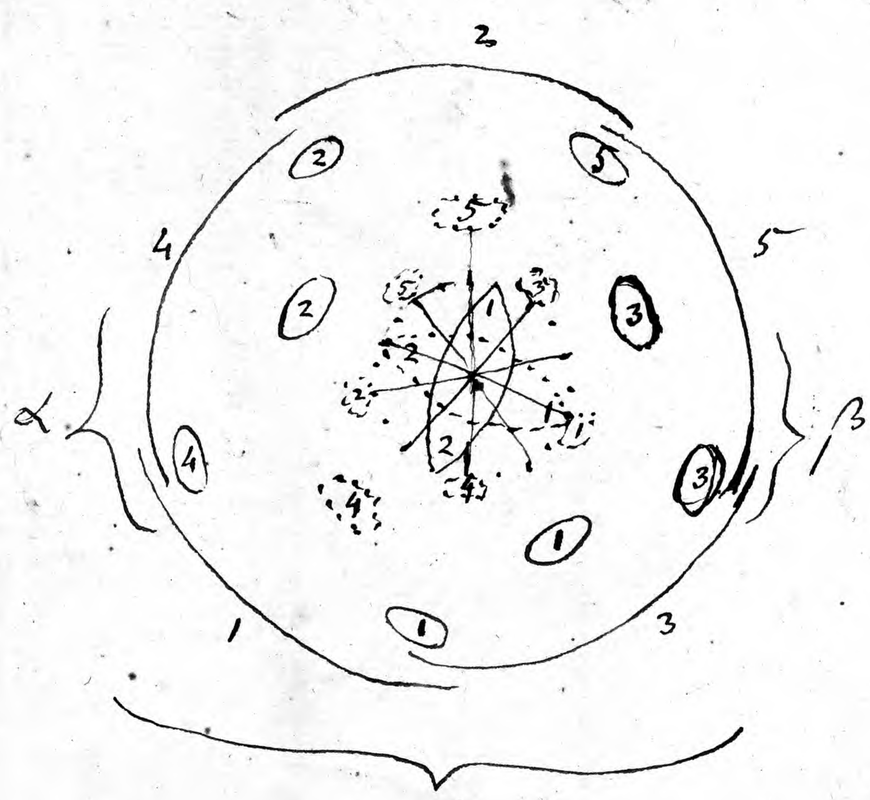
normal



Bruniichia E

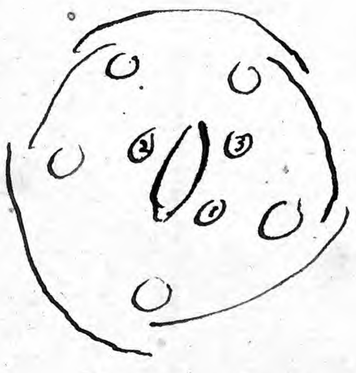


0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

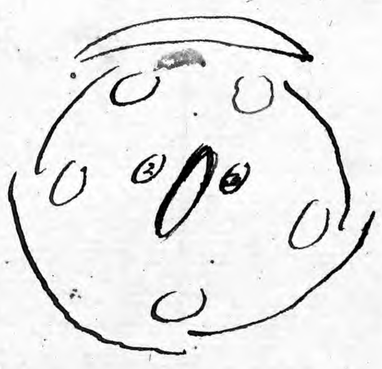


II Polygonum spec.
5 zählig. Blüthen
mit 2 zähligem Pistill
= No. 1, aber Übergänge zum
Pistill $\frac{1/5 + 1}{2}$

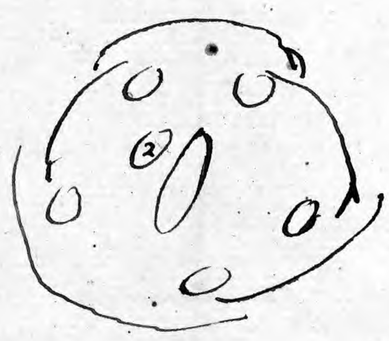
Hieher:



pilosum bei Polygonum Persicaria (Braun)
P. pennsylvanicum (normal). E.



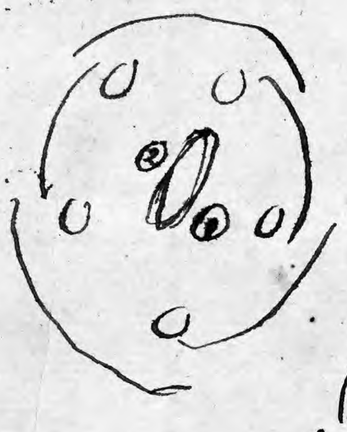
bei Fr., Pol. orientale, persicaria, lapathifolia, mite (Braun)
P. persicaria pennsylvanicum (rare)



P. lapathifolia. P. mite, Persicaria, orientale (Braun)
P. texanum E. P. Persicaria pennsylvanicum (rare)
lapathifolia (rare)

P. amphibium normal (Braun)
P. coccineum texanum (Pell) pennsylvanicum very rare

P. texanum



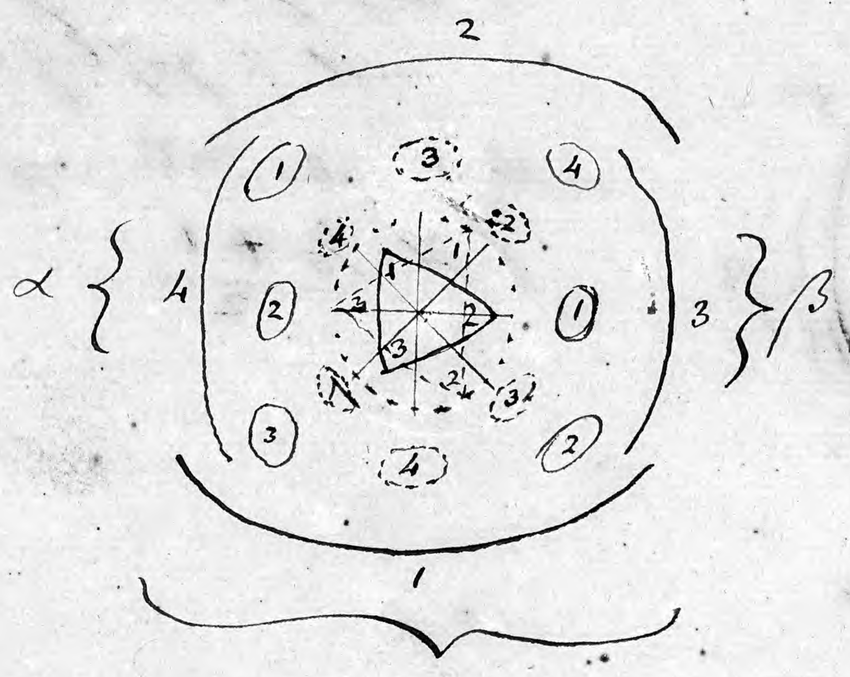
P. Persicaria (fide Pell).

P. punctatum (normal)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

5534

III Vierzählige Blüthen mit 3 zähligem Kreisel



Die Vierzahl ist dy Paare gebildet

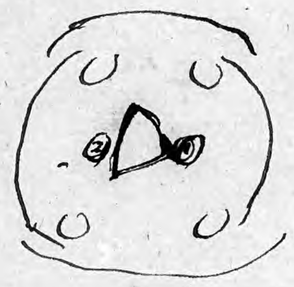
$\frac{\frac{1}{2}+1}{2} = \frac{2}{4}$ ...

Übergang zum Kreisel mit $\frac{\frac{1/2}{4}+2}{3}$

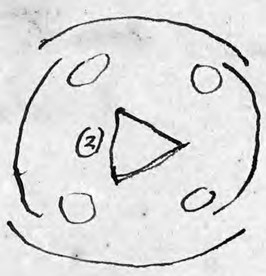
$= \frac{3}{24} + \frac{2}{3} = \frac{19}{24}$

Ci. Polygonum

Lichen.

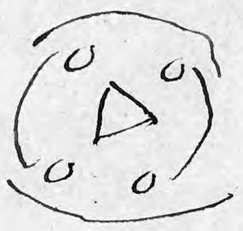


Polyg. Hydropiper (Braun)



P. Hydropiper ? P. virginicum ? (Braun)

P. Hydropiper ? P. virginicum ? (Braun)



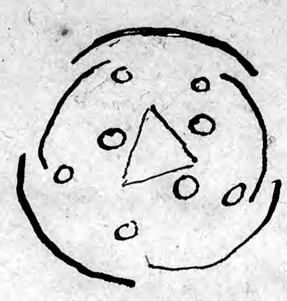
Unbekannt.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Octob 1845

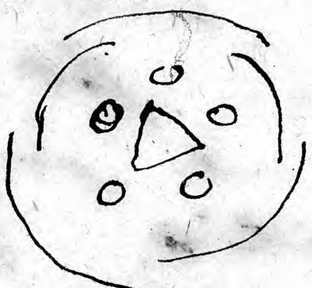
Polygonum aviculare europaeum



Stam 5 exteriora cum laciniis perig. alterna; fil. cum subulata. stam 3 interior. Laciniis interioribus opp.; fil. basi dilata, longiora. nuces rugulosae, opacae

P. aviculare americanum

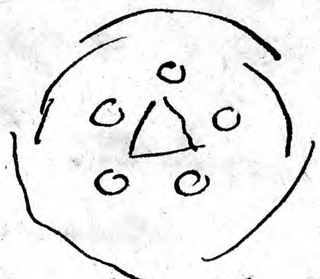
perenne?



Stam 5 laciniis perig. opposita, fila omnia basi dilatata. Stamina laciniis exterioribus opposita interiora. nuces rugulosae opacae = P. plebejum Roxb. Nov. Holl.

P. erectum

ann?

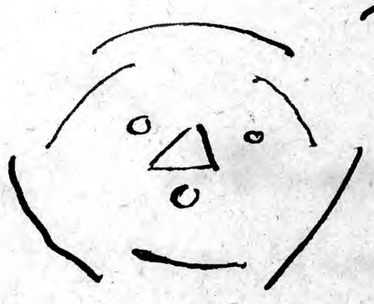


non differt nisi habitu erecto, foliis majoribus, floribus viridibus, majoribus nucibus majoribus, magis rugosis, obtusius angulatis.

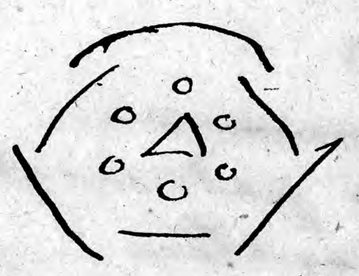
P. ramosissimum

ann?

1



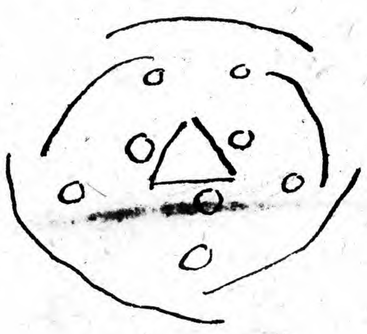
2



3

1. normalis, 2 & 3 frequentissime, plerumque in eadem stirpe, floreum structura uniformis. 1, Perigonium 5 partitum, 3 andrum, rare 4 rarissime 5 andrum; stamina semper laciniis opposita filamento basi dilatata, 2, Perig. 5 partitum 3 andrum rare 4 vel 5 andr. 3, Perig. 6 partitum 6 andrum; stamina 3 laciniis interioribus et faciebus ovarii opposita, 3 exteriora, stamina 3 laciniis exterioribus et angulis ovarii opposita interiora, semina nuces laeves, nitentes, acutangulae, a faciebus convexis; — fusca

Polyg. tenue



stam = P. aviculare europ. nuces nigrae laeves nitentes, acutangulae.

Sept. 1848

Polygon pennsylvanicum & lapathifolium nearly related, leaves, sheaths, glandular pubescence the same, shape of seeds also — but flowers of pennsy. rose colour & twice as large, mostly 8 androus, but I have seen them also 5-6-7 androus — styles united to the middle — lapath. has small greenish flowers almost always 6 androus — styles united only at base at most ¼ their length. — leaves of pennsy below rough with short hairs " lapath " glandular impressed " hairs

5585

Polygona scandentia.

I. aptera

P. Convolvulus L. Europ., America, nervibus oparis

P. cilinodes Mx. Canada et nervibus ?

II alata, omnes nervibus luventibus nigris albis

P. Dumetorum Europ. fol hastato-cordatis, alis val. post. integris in pedunculi partem supra nodulum longiorem angustatam sensim angustatis. flor spic albis

P. Scandens L.? fol. cordatis, flor spic alis undulatis in pedunculi partem supra nodulum crenatis longiorem angulatam sensim angustatis; nervibus medis

P. ——— fol cordatis flor spic alis albis undulatis, in pedunculi partem supra nodulum longiorem, alatam angustatis, nervibus nigricantibus. — St Louis, America bottom

P. ——— fol cordatis flor spic alis inciso crenatis, virescentibus in pedunculi partem supra nodulum elongatam infra tenetem sensim angustatis; nervibus minoribus St Louis, Hilgard Prairie

P. cristatum foliis basi truncatis, alis virescentibus inciso crenatis, in pedunculi partem supra nodulum longiorem, angulatam sensim angustatis, nervibus minimis. — flor. axill glom Texas. Lindh

~~Flora Boreali-Am.~~

(fl. glomer, al. col fruit. virescent)

P. ——— foliis basi cordatis; alis virescentibus angustis, crenatis, basi truncatis, in pedunculi partem supranodulem brevem teretem non angustatis; nervibus minoribus. — flor. axill. glom. Beaudstown Jesup

---

Size of nut not characteristic!

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Erodium cicutarium &
" moschatum Herb. Lod.
Spec II, 419
Exhib II, 272.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Polyg. amoenum Raides Allison Lto. Alg

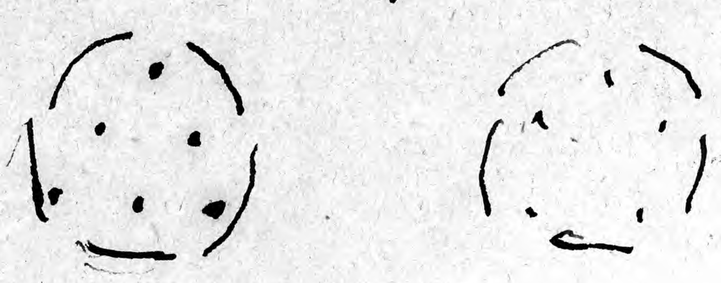
stam 3 perfecti interiora opposita

c. stylis 3 non connatis altam

flm bisi triangulari latis separamosa

seu alat lucid cartan 3 gon

Polyg. mitis flor rotat. virid. 5 (or 6) anth.



compare P. virginianum Lee probably identical

Polygonum texanum erectum, glabrum foliis lanceolatis elongatis utrinque acuminatis breviter petiolatis ochreis ~~glabris~~ truncatis glabris ciliatis spicis sub-binis terminalibus axillaribusque floribus erectis; ~~floribus~~ floribus glandulosis hexandris (hinc inde pentandris) digynis nucibus convexis (anceps tibus) nigripunctatis, lucidis.

Very near P. punctatum, but always with smooth Ochreae and 5 or 6 stamens, and probably apparently without the acrid taste; also a much stouter plant; leaves 5 to 7 inches long 1 inch broad; stem 2–3 feet high, growing in water, and with the base decumbent and radicant.

Houston Texas

Polygon. tenue 8 anthis sepalis 2 exterioribus 3 interioribus excedentibus — 3 stigmatibus subsessilibus; — nuce nigra acutangula lucente

5536

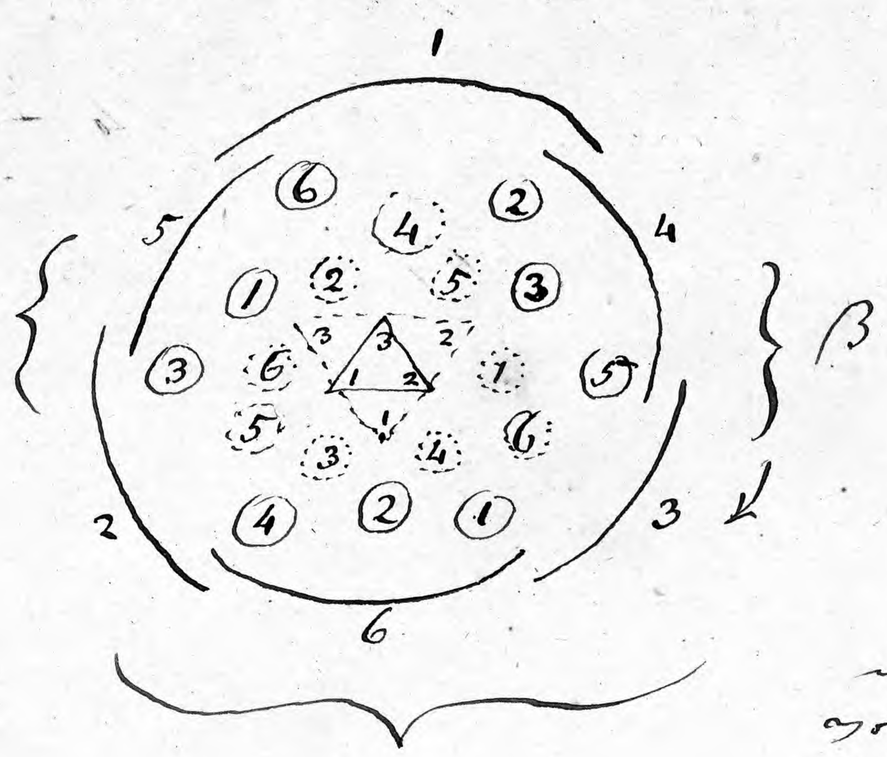
MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

V. Nachzahlige Blüthen mit 3 zähligen Früchten.

Rheum, Rumex, Eriogonum

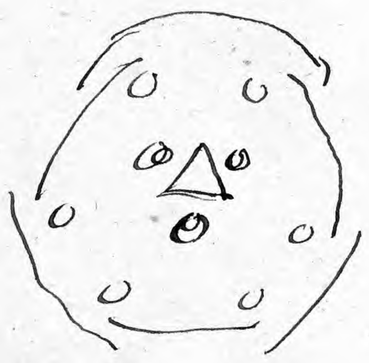
Polygon spec.



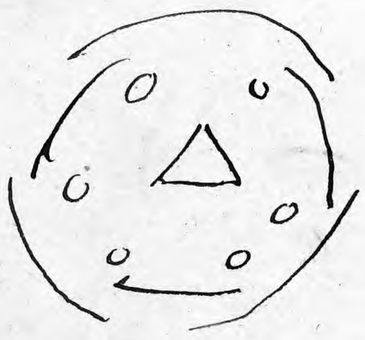
Nachzahl des 2 mal das erste der $\frac{2}{6}$ ($\frac{2}{4}$, $\frac{2}{5}$, $\frac{2}{6}$ können variiren) Übergang von den Vorblättern zum Kelch mit $\frac{\frac{1}{4}+2}{3}$ so zwar nicht <u>durchaus</u> <u>unreinzählig</u> wie bei 5zahl, sondern <u>vorwiegend unreinzählig</u>. Übergang zur Frucht mit $\frac{\frac{1\frac{1}{2}}{6}+2}{3} = \frac{9}{12}$

Dafür

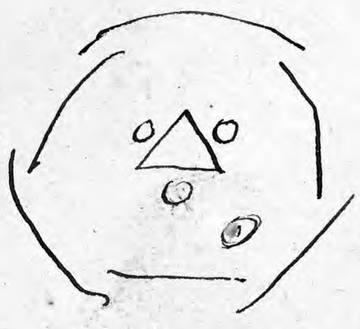
Lichtenau



Rheum, Eriogonum



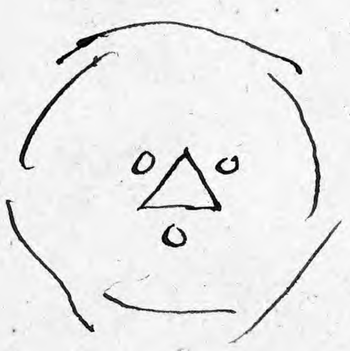
Rumex



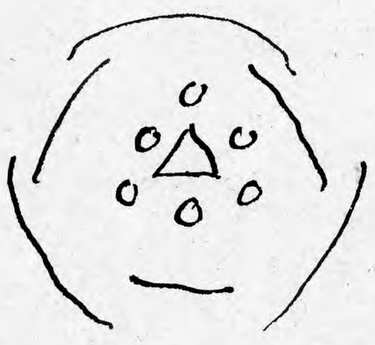
?

Polygon ramosissim.

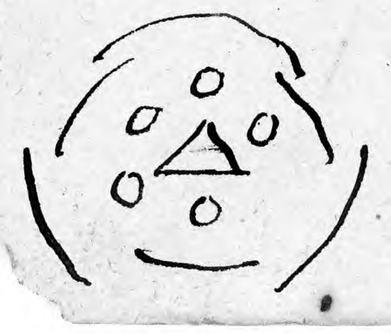
wohl so unregelmäßig gestaltet.



Polygon ramosissimum oft!



Polyg. ramosissim oft!



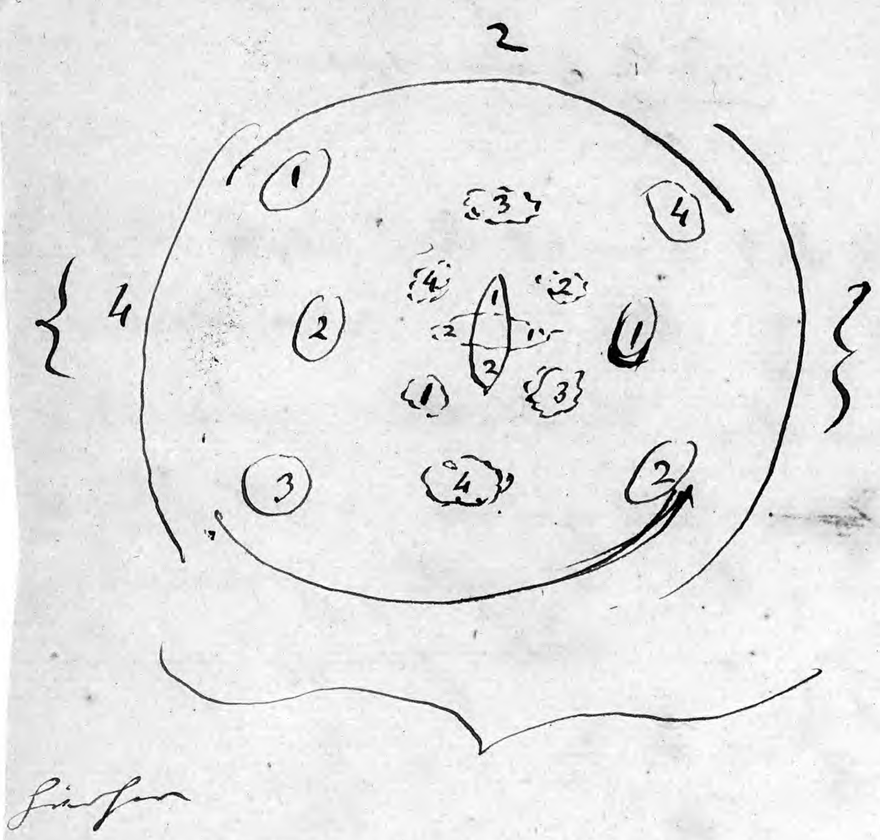
Polygon. ramosiss. unregelmäßig

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

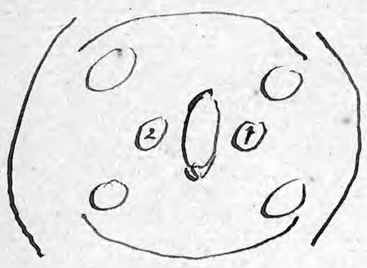
IV. Vierzählige Blüthen mit zweizähligen Kreis.

Übergang zu Kreis mit $\frac{4+1}{2}$

Polygonum, Oxyria, Atraphaxis

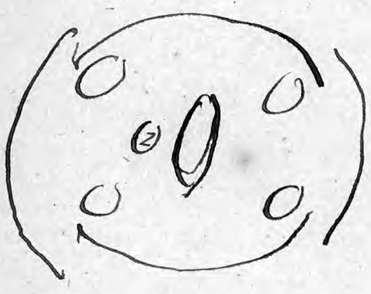


einfach

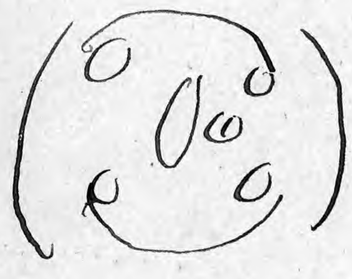


Oxyria, Atraphaxis, Polyg. Hydropiper häufig.
P. mite, P. lapathifolium.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

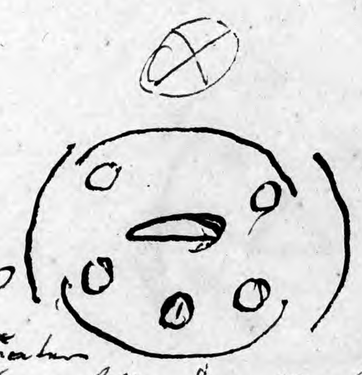


P. Hydropiper ?



P. virginicum A. Br.

Ist nicht häufig; selten so rein.
Die Blüthe ist ab nicht gebogen, und stehen immer im Blatt gegenüber
aber immer etwas länger als die 4 andern
[illegible]



Aug 1846

lapathifolium.
(aber)
the same.

P. gracile ex descript. A. Br.

lapathifolium oft ± fall

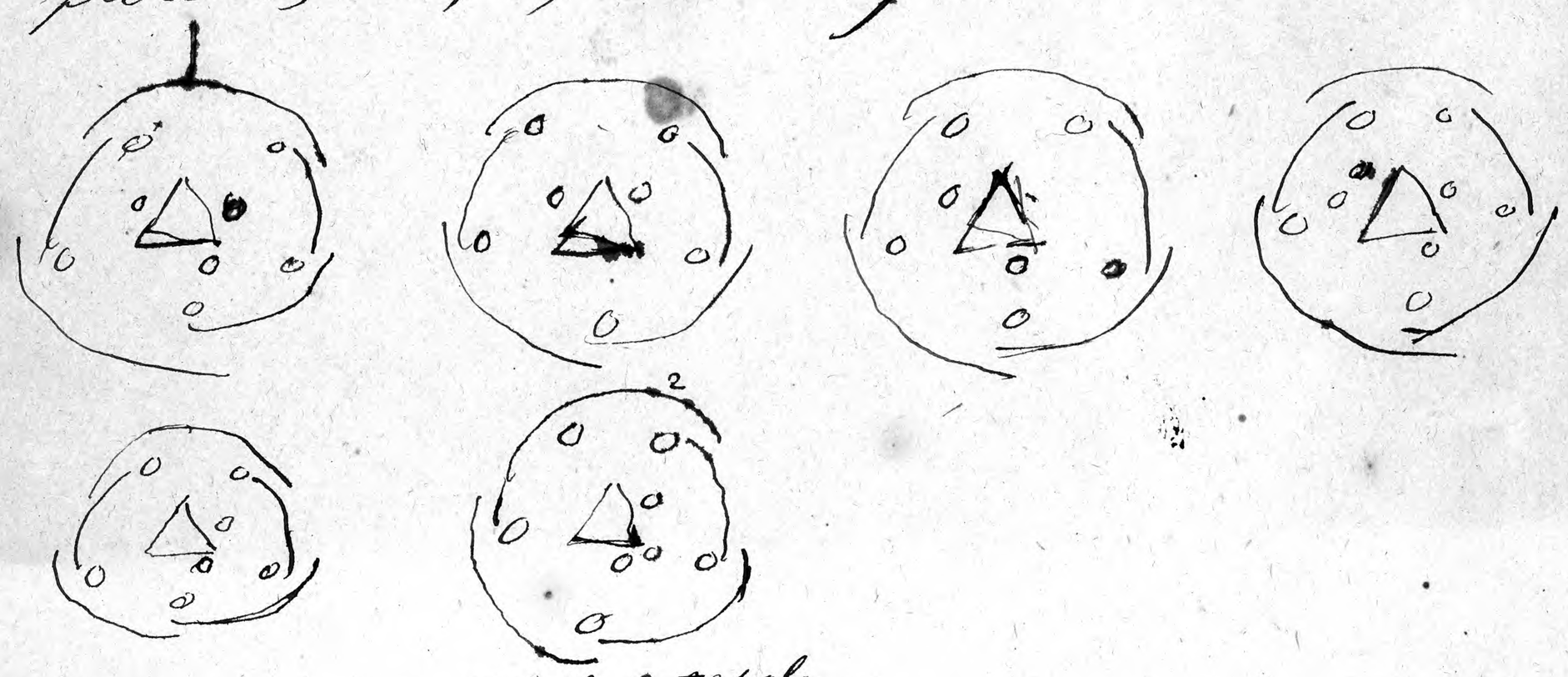
0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Brunnichia cordata

Medial with 5 carinae corresponding with the five midribs of the sepals; always the second enlarged and wing like at maturity; the 4th & 5th smallest.

3 stigmas bilobed —

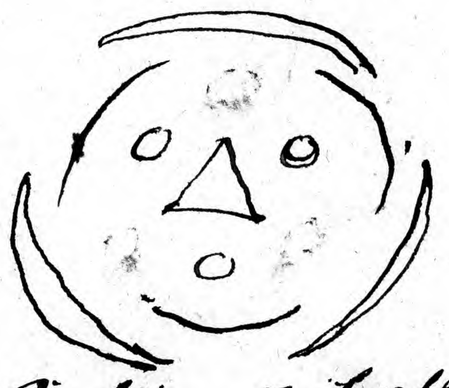
flowers 6, 7, 8 and 9 androus.



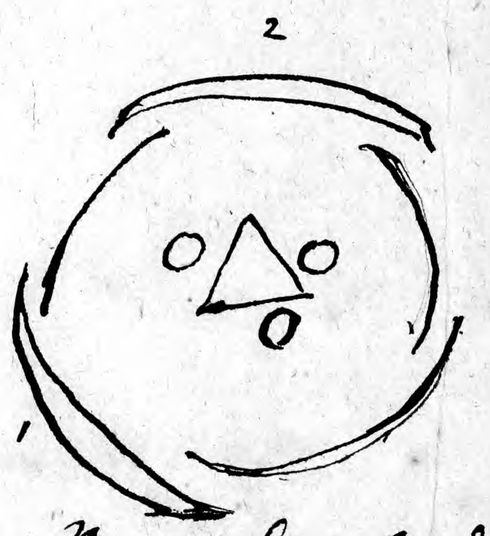
probably 2 sepals united

Polygonum ramosissimum Sept 1845.

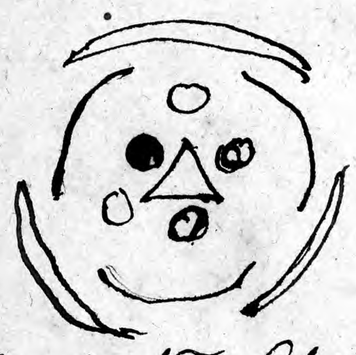
Stamina der äußern Perigon-Blätter gegen über größer entwickelt, als die der innern gegenüber. Immer!
Diese Form in allen Blüthen aller Pflanzen eines Individuums



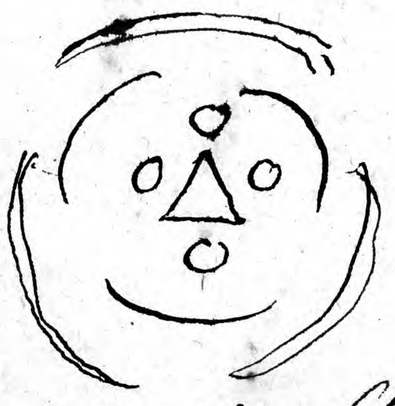
ebenso hier in einer Blüthe von d. Mehrzahl der einer Individuen



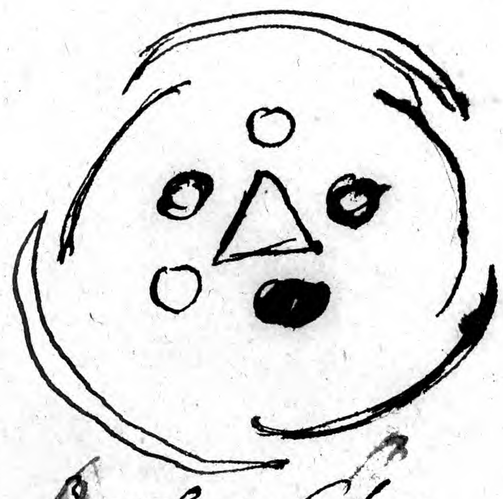
Normal, als diese Form ist oft zu sehen



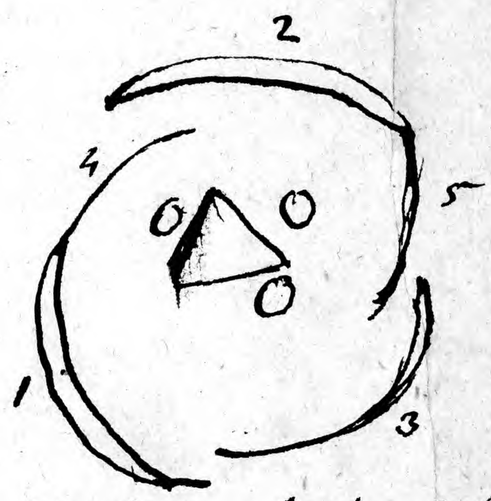
oft unregelmäßig gesehen



einmal gesehen.



Dreimal gesehen.



Einmal; perigonialacinien 1 ≈ 4 ≈ 2 ≈ 5 zu verfassen

Embryo lateral, on one edge of the fruit radical above, ~~[illegible]~~ cotyledons curved under the base

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Saxifraga exarata Vill — Lpr II, 369

" nervosa
" mixta
" intricata
" quinquedactyloides } Lapeyr
" hypnoides All
" pubescens Poir
" caespitosa Vill
" pulchella Don ?

5538

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Pyrenaei. Delphinat. Alp. cott. grai. Caucas. Terra Nova. — H.B. Fr. 1825

Polyg. Convolv. seu opac. oblongum
P. diameter seu lurid. alat angul. major
P. viridens seu " " " minoribus
P. cristata seu " " " minimis

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Geranium rotundifolium L

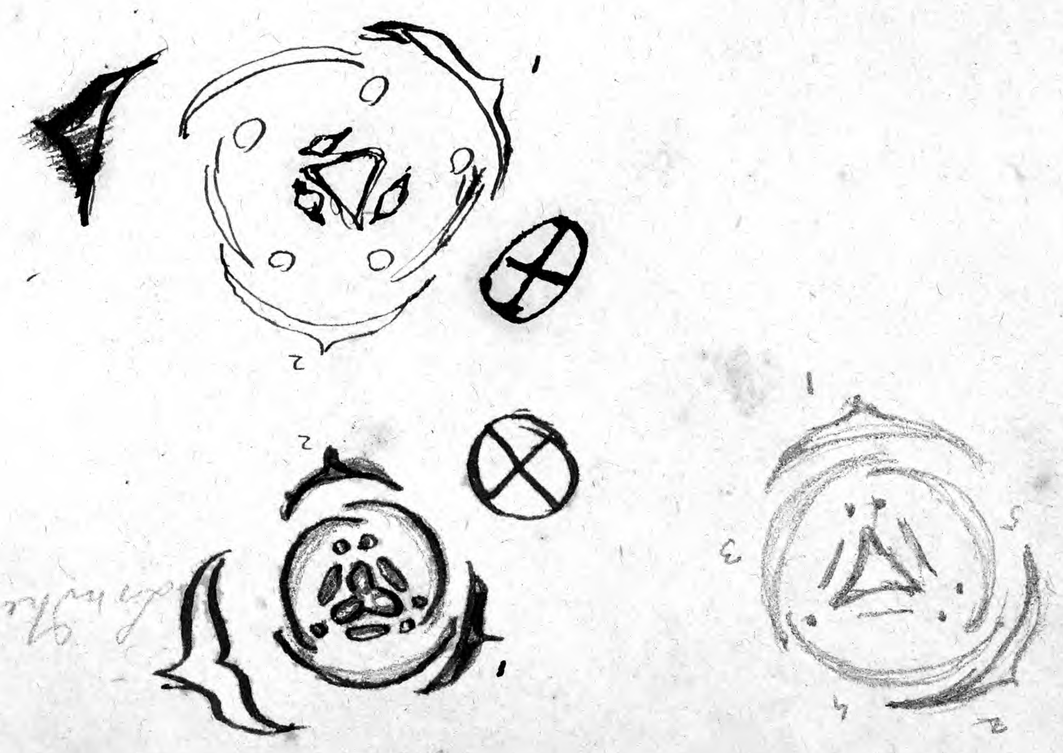
" patens

Spr III, 75

RA, 383

Europ.

Sub rupe Rothenfels
prope Crucenac. 1826



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

5539

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN