Missouri Botanical Garden
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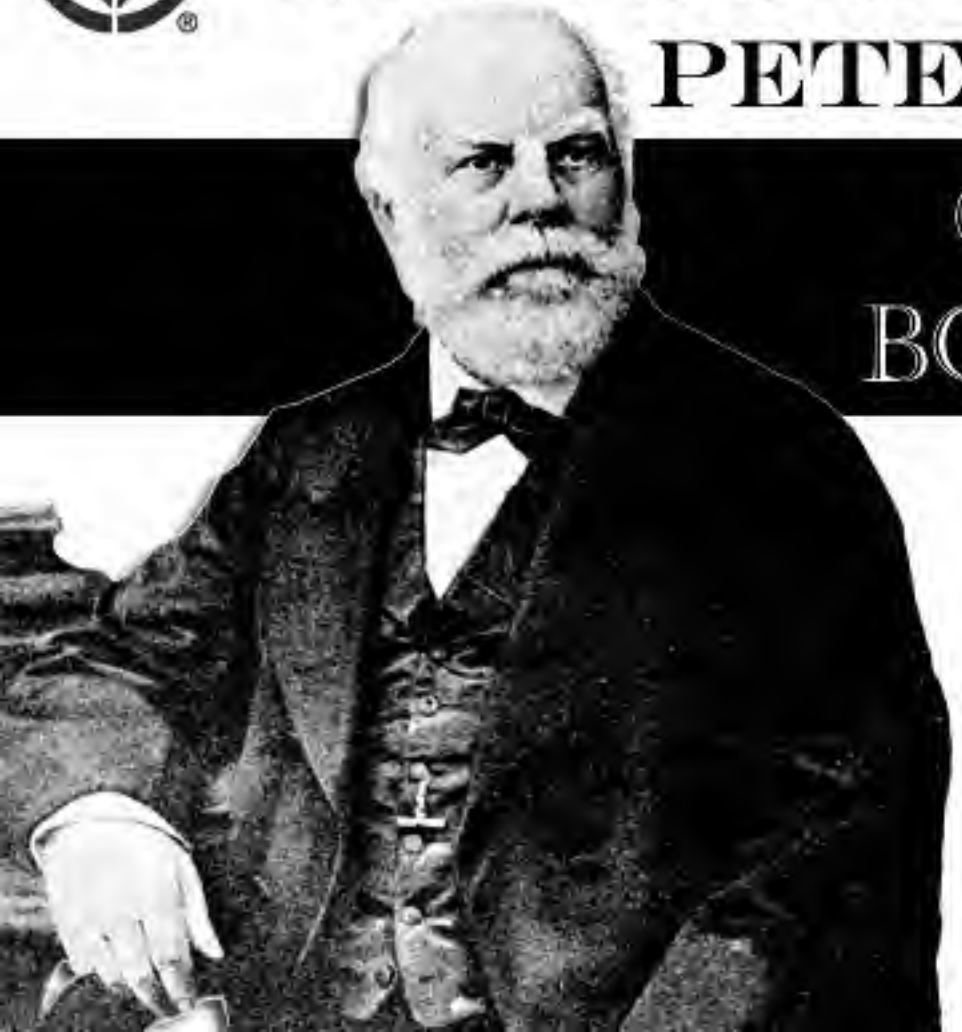
George Engelmann Botanical Notebooks



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.

O. acanthocarpa 1209-11
here O. Thurberi

The expenditures for the year were $11.27 in excess of the receipts, the balance being carried into the next year's account.

Our foreign exchanges have been transmitted, both ways, as heretofore (almost entirely), through the Smithsonian Institution and its foreign agencies, without other expense to us than the cost of transportation between Washington and St. Louis. The Academy is under great obligations to the Smithsonian Institution for this gratuitous and very important service. Without it our system of exchanges would be scarcely possible with our present means.

The Treasurer submitted his Annual Report, which was referred to auditors, and, being found correct, was accepted. The whole expenditure during the year was $1138.24, and the balance in the treasury was $350.26. A year ago there was a balance of $639.50, and $849 had been collected. The printing of the Transactions had cost $957.44. The Treasurer had been allowed ten per cent. for collecting, and had defrayed the expenses of the office. There was $500 yet to be collected.

Mr. J. R. Gage, Assistant State Geologist, of the Missouri Survey, exhibited an interesting collection of pottery, arrow heads, and other relics from an ancient Indian mound in Issaquena Co., in the State of Mississippi, upon which he made some extended remarks, which, at the request of the Academy, he intends embodying in a paper to be published in the Transactions.

The President, on retiring from the chair, delivered his Annual Address as follows:

Gentlemen of the Academy of Science: — On this occasion, the first meeting in the eighteenth year of your chartered existence, I have the honor to congratulate you upon the improved character of your status as an academy of science. During the year last closed you have been able to recommence the publications of the Transactions of the Academy which had been suspended since the year 1868. Two hundred and ninety-five copies of the first part of vol. iii. have been sent to exchanges. For the most part, our Library is filled with valuable scientific works sent to this Academy from the numerous kindred societies at home and abroad that are recorded on our exchange list. From this source we have received the past year an aggregate of 600 volumes and numbers of scientific periodicals. The importance of sustaining the prestige of the Academy by a frequent publication of its transactions will be readily understood and appreciated. The resolution of the Academy to publish its proceedings as often as a sheet of sixteen pages is in readiness for the printer will be carried into effect, and the flourishing state of your finances gives assurance that in the future you will be able to meet the expense necessary for this purpose.

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GEORGE ENGELMANN PAPERS

The continual accession of new members is a matter of further congratulation. The provision made for the preservation and exhibition of your Museum should encourage on all hands zealous coöperation in collecting specimens, and a few years of such effort would in a great measure make good the disaster which overtook the Academy's Museum in 1869.

While affairs are thus prosperous within our organization, the cause in whose name we assemble, Science—and more especially Natural Science—is in a state of extraordinary prosperity. Never before in the history of the world have so many first-class minds devoted their energies to its prosecution. Never before have brilliant discoveries followed in such rapid succession. Natural Science has from the first befriended the cause of humanity. By means of Science man has gained an empire over the powers of Nature, and the emancipation of the human race from want and suffering has been the result. The pursuit of Science in a free and disinterested manner, with the sole view of eliciting truth, has rewarded its votaries with the meed of usefulness, besides the satisfaction of arriving at truth. The illustrations of this are matters of daily occurrence. Few persons who listened to the lectures of Tyndall on Sound, and saw his minute and painstaking experiments, made with a view to discover the *rationale* of the so-called "singing flames," would have expected that from so whimsical an affair a useful invention would arise. Yet among the most valuable applications of Science to the Arts recently made, is an alarm-lamp which indicates to miners the presence of dangerous, inflammable gases in the mine. The vibration of the flame, acted on through wire gauze by the explosive gases, produces a sound varying in pitch and intensity according to the height and calibre of the lamp-chimney.

The cultivation of Science for itself, as Tyndall informed us, is the great desideratum. No one can tell in advance which province of Science will prove the most useful in application. Free, disinterested investigation of Nature—the trivial manifestations of force as well as the most gigantic—is the surest course to discover the truth, and it is also the method that will prove the most useful to the well-being of man.

But the fruits of Science in giving to man the direct mastery over Nature are nowhere more desirable than to us who inhabit the valley of the Mississippi. What opportunities to study the laws of mineral formation has the citizen of Missouri! What immediate fruits will reward the patient enthusiasm of the investigator! How much does the improvement of the Mississippi river to-day need the elaboration of a scientific theory respecting the deposit of alluvium by rivers! A careful induction based on long and patient study of such deltas as those of the Ganges, the Nile, the Danube, the Rhine, and the Mississippi, would be worth to our commerce enough to pay for the endowment of all the scientific schools in this nation. The famous Vauban pronounced the bars at the mouth of rivers "incorrigible." But a thorough knowledge of the laws which control the transportation and deposition of the solid matter borne by these streams to the sea, and the action of the tides and waves upon their currents at

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Palmer Arizona Opuntia acanthocarpa var grandiflora (O Thurberi ?) Febr 1868

stems slender, tall, bushy, 10 feet high or more
branches 5–8 l. diam, slender, tubercles linear (1¼–1½ inch)
in 3/8 arrangement; 6–8 in other specimen, 12–16 dark spines,
sheaths mostly (easily ?) rubbed off; at upper end of
areole sometimes small bunches of short bristles
fl. about 2 inch diameter.
ovary about 3/4 inch long with 9–12 areolae rounded towards
upper end, ~~with~~ specially upper ones with large brown spines
1–6 in number, (sometimes 6–9 l long) more or the appressed
leaves (sepals of ovary) 1½–2 l. long; ~~deciduous~~ tube or bowl
obovate 5–7; petals from deep yellow to bronze purple
about 8 obovate obtuse or emarginate, 9–12 l. long;
stamens in red flowers red brown, in yellow ones yellow;
anthers linear; pistil about 1/5 yellow or red

over

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Eugene L. Massot,
DISPENSER OF
PURE MEDICINES,
THE FINER CHEMICALS,
And Reliable Pharmaceutical Preparations,
CORNER OF FOURTH AND SPRUCE STREETS,
ST. LOUIS, MO.

Every dry, 1/4–1 inch long, glabrous above, c
or tomentose, anvolum very spicy.

seeds very angular, irregular, exactly
like those of O. acanthoranus, to which
this seems to belong as a slender variety

BOTANICAL GARDEN
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Opuntia acanthocarpa Ex B Feb 1868

Fort Whipple, Arizona Cones & Palmer 1845

One joint only before me, 1 inch diam. 5 inches long: tubercles very long (1½ inches) in 3/8 arrangement, abt 12 (10-14) spines, light horn colour, mostly terete or long stout somewhat flattened 2-2½ lines long, sheathed, or sheaths rubbed off.

Berry dry, 1/4 inch long, wide, clavate, naked below, with abt 13 areolae exposed, all, especially the upper ones spiny (spines (5-9) 2-5 l. long very thin and stary) and at the upper end bearing a few reddish & yellow bristles. Umbilicus hemispherical, rather shallow.

Seeds as in Bigelow's plant.

Flower not yet known.

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ST. LOUIS, MO.

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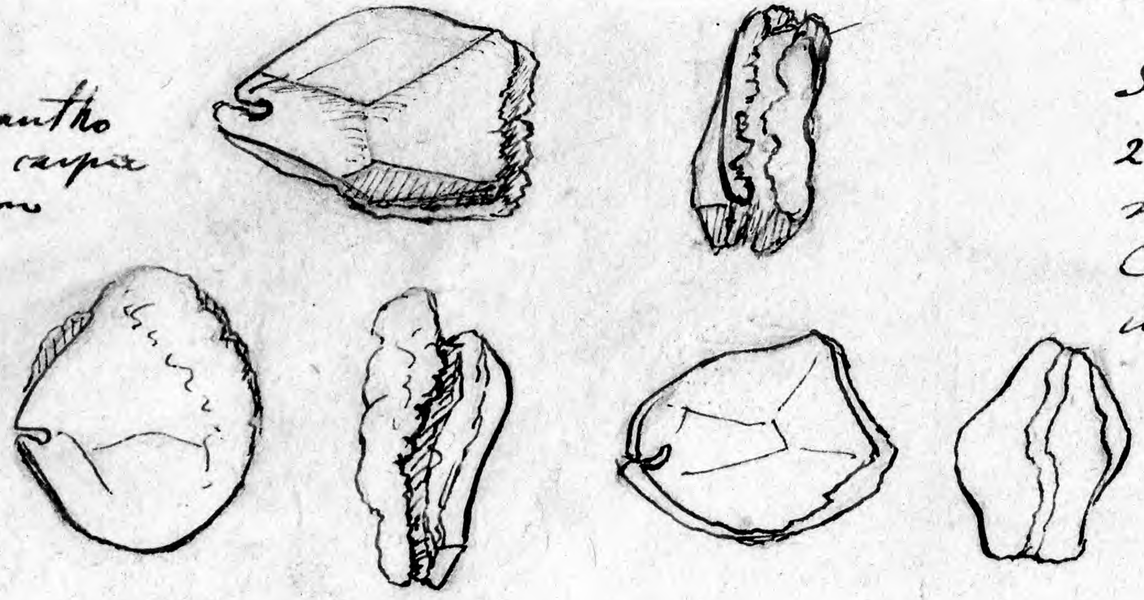
3. Sp. acantho carpa
Ceylon



Seed very irregular, 2.5 – 3.2 broad, 2.4 – 2.8 high, 1.0 – 1.3 thick, irregular mostly with sharp angled faces. Commissure mostly 0.2 broad, with raised walls on both sides of the rough and tuberculated.

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June 21 1881

Op. Wrightii ?
near arborescens

West Texas, Meusebach
Coll: Prof B Bessey

leaves 4–2 mm
spreading

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Leitch,
& CHEMIST,
Sts. St. Louis.

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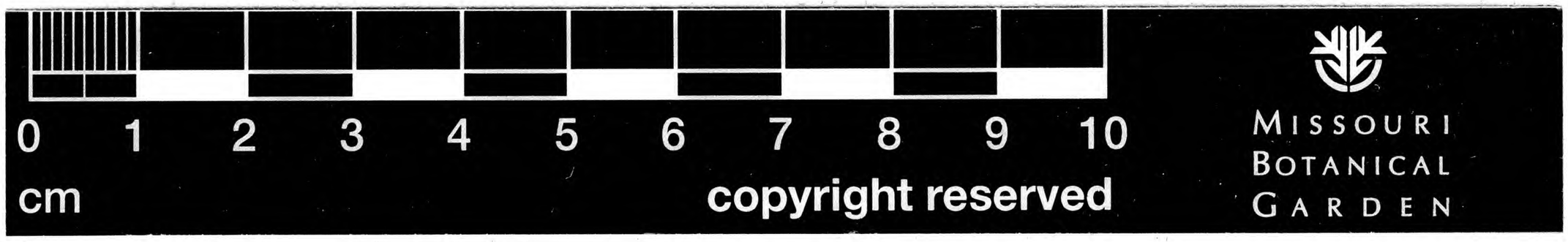
Hort Dyck 1857 Jan

O. Kleiniae could possibly be =
O. Wrightii; same size; branches tubercles
tubercles elongated, spines scarcely single



effect of car

O. clavarioides is very similar to the clavate Opuntiae small and pretty, in short - seen by me young.

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here also O. arborescens × O. Wrightii Sept 1861

Opuntia Kleiniae DC. Pfeiff. 171. Salm 250.

Hort Bot. Monsonv. sub nom. "102 O. Kleiniae" 4-pedalis, caule erecto lignoso; areolis in articulis junioribus 1–2 in caule senioris 1–5; longitudine 1/2–1 3/4 unc. long.

Pfeiff. says "facul 1. max." Salm: "Acul 3–5 solid" foliola 6–8 lin long.", H. Rev. p. 118 "ramis erectis cylindricis tuberculatis, setis innumeris ex albido rufis, ~~aculeo~~ singulo maximo etc"

Pfeiffer l.c. "tuberculatis" otherwise copy of Salm (but "folia oblonga")

× with grey tomentum and a pencil of redbrown bristles, upper one with a few longer white setae

In flower July 9th 1862 every tubercle 1 inch long, clavate with 21 areolae ×, on the upper ones the leaves (ovaries sepals) stalk sessile, soon deciduous, 2–3 1/2 l. long — about 8 upper sepals, (outer ovate acute, inner larger, obovate cuspidate) Petals oblong,

withdrawn from the sides of the tube, leaving the base free, as in many Echinocactus etc. Anthers linear obtuse, deeply emarginate or sagittate. Style ventricose, viscous upwards, a little longer the stamens; 5 whitish ~~stigmas~~ stigmas forming a globose head.

Pollen only slightly faceted, more distinctly so when contracted by sulph acid; 1/20 or 0.05 lin diam

Ovules less than 1/2 lin long (0.43 lin)

No fimbrillae on the funicules.

Fully flowering June 1865

native ground in (north?) Africa fide Salm

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Op. Wrightii looks exactly like
Op. Kleinia (which has also been sent
from Africa)

Hort Dyck Jan 1857

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tuberculate are [illegible]

oval, deeply immersed areola

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Quentia Kleiniae D.

July 11 1862

H. B. Mason.

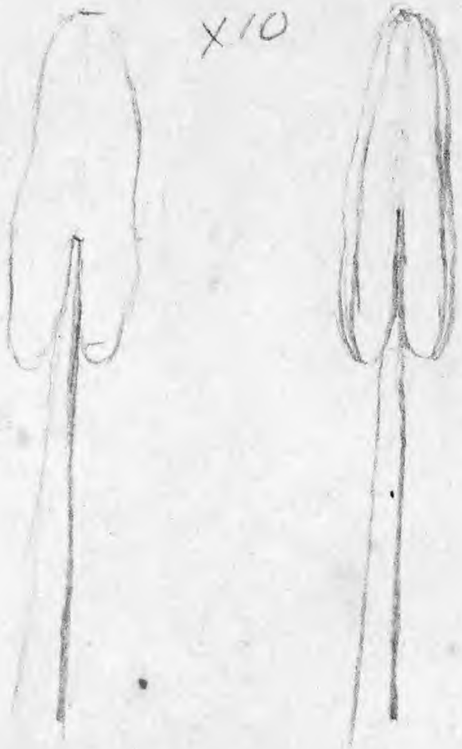
5 stigm. whitish

× 30

made transparent by Potash

× 280

× 10



Pollen almost globular

with sulph acid

filaments very indistinct

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M. W. ALEXANDER,

SOUTH-EAST CORNER OF FOURTH AND MARKET STREETS,

ST. LOUIS.

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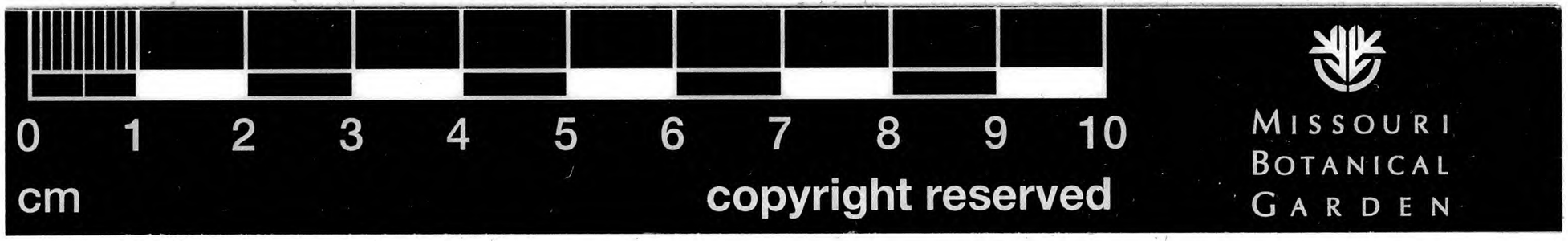
Op. decipiens and Kleiniae seem identical.

Hook Windsor Jan 1858



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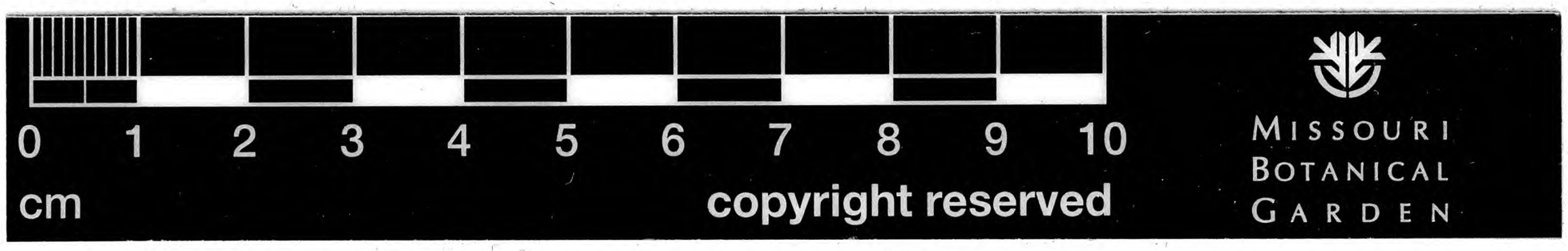

Hort Bot Venet. Jan 1858

Opuntia Kleinia, two specimens 10 – 12 feet high, treelike stem 2½ – 3 inches diam. almost without spines; joints with 1 – 4 sheathed spines. Has never flowered here, though so well grown.

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faire part du mariage de leur fils, Monsieur
Paul Cosson, Avocat à la Cour d'Appel,
avec Mademoiselle Gabrielle Defresne.

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Paris, le 15 Juillet 1880.

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Opuntia Kleinii June 21 1881

(ex Hort Salm) Utah Mission

leaves 4–7½ lines long, erect

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Alex.
APOTHECARY
Cor 4th & Olive

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Jardin des Plantes Aug 1857

Opuntia decipiens is very similar to
O. Kleiniae, only a little more
slender

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Opuntia decipiens Hort Junch
= O. Kleiniae, ~~but~~ the
leaves are shorter

Sept 1857

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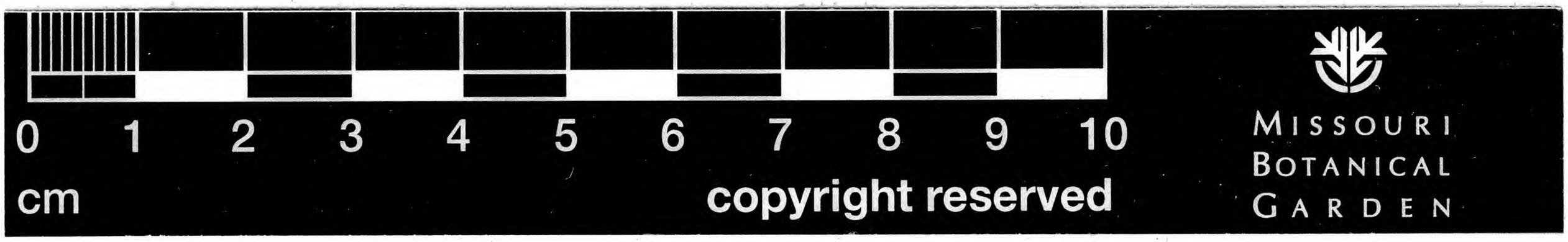
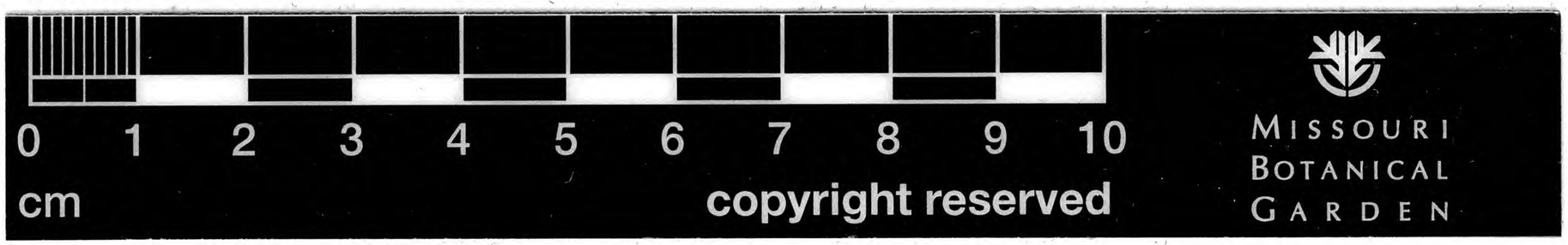


a "Op. Stapeleae" = C. Kleinia

H. B. Padua
Jan 28 1858



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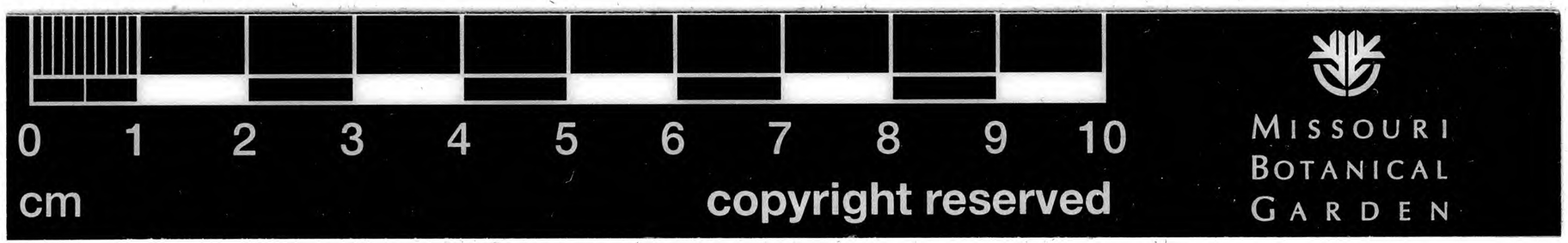
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