

CYNOGLOSSUM OCCIDENTALE. *C. Virginico* potius quam *C. grandi* affine, scabrido-hirsutum; caule vix ultrapedali ad apicem fere foliato;

rugæ run nearly unbroken and straight across the broad back from the low dorsal ridge to the margin.

E. TORREYI. Hispido-hirsutum, pube etiam calycis albida; caulibus diffusis, ramis floridis usque ad apicem sæpius foliosis; foliis oblongis, superioribus inter flores; nuculis albidis nitidulis apice tantum contractis, rugis latis lævissimis. — Sierra Nevada, California; in or near the Yosemite Valley, Torrey, a form with rather erect flowering stems and spicate inflorescence, the bracts hardly exceeding the flowers: Sierra Valley, Lemmon (1874), much branched from the root, diffusely spreading, the flowering branches equally leafy to the top, the upper leaves among and beyond the scattered flowers. Nutlets rather larger than in *E. tenellum*, somewhat over a line long, destitute of the cruciform outline (like that of the club of cards), and of the sharp murication, but at the margin sometimes obsolete tuberculate.

§ 3. PIPTOCALYX. (*Piptocalyx* Torr.) Nuculæ, gynobasis, et cetera *Krynitzkia*: calyx 5-fidus circumscissus, basi membranacea quasi 5-crenulata persistente: corolla fauce prorsus nuda: flores folioso-bracteati sessiles.

E. CIRCUMSCISSUM. Annum, pusillum, diffusum, albido-hispidum; foliis angusto-linearibus, ramealibus floribusque alaribus et subaxillaribus confertis; staminibus medio tubi corollæ albæ insertis; nuculis oblongo-ovatis lævissimis nitidis gynobasi subulato-pyramidata angulo ventrali a basi fere ad apicem adnatis; semine amphitropo-pendolo. — *Lithospermum? circumscissum* Hook. & Arn. Bot. Beech. p. 370. *Piptocalyx circumscissus* Torr. Bot. Wilkes, Phan. Pacif. p. 414, t. 12 B; Wats. Bot. King, p. 240. Southeastern California through the interior desert region to Washington and Wyoming Territories.

§ 4. KRYNITZKIA. (*Krynitzkia* Fisch. & Meyer, cum spp. *Eritrichii* DC., etc.) Nuculæ gynobasi elatæ sæpius angustæ ("styli basi" auctorum) angulo ventrali a basi ad medium vel ad apicem usque affixæ, cicatrice aut angustissima aut inferne latiore pl. m. exarata: semen aut amphitropum aut rarius fere anatropum (*E. leucophleo* excepto): corolla alba fere semper parva: calyx 5-partitus persistens, in spp. genuinis cum fructu incluso articulo quandoque secedens.

* *Eukrynitzkia*: annua, calyce hispido, stylo brevi: nuculæ immarginatæ lateribus obtusis vel rotundatis,

← Angulo ventrali cicatrice vel sulco angustissimo percurso gynobasi fere subulata affixæ.

↔ Pusillum, hirsuto-canescens; floribus minimis congestis folioso-bracteatis; corollæ fauce nuda; nuculis lævibus; calyce fructifero diu persistente.

E. MICRANTHUM Torr. Mex. Bound. p. 141. Utah to W. Texas.

↔ ↔ Parvula; floribus in spicis demum elongandis; calyce setoso-hispido sæpius cum fructu secedente.

E. OXYCARYUM. Hirsuto-canescens, gracile, spithamæum ad pedale; foliis angustissime linearibus; spicis demum strictis confertifloris; corollæ parvæ

foliis viridibus oblongis lanceolatisve plerisque obtusis cum apiculo, inferioribus spatulatis inferne sensim in petiolum alatum attenuatis,

fauce nuda; setis calycis apice subuncinatis; nucula fertili sæpissime unica ovato-lanceolata acuminata lævissima sesquilineam longa gynobasi 2-3-plo longiore, sulco tenui. — Common in Oregon and California; often confounded with or mistaken for the next, as in the collections of Douglas and Hartweg.

E. LEIOCARPUM, Watson, Bot. King, p. 244. Hispidum; corollæ cristis faucialibus manifestis; nuculis 4 ovatis seu oblongo-ovatis acutis lævissimis nitentibus gynobasi subulatæ altius adnatis et paullo longioribus. — *Krynitzkia leiocarpa* Fisch. & Meyer. *Myosotis flaccida* Dougl. in Hook. California to British Columbia and Saskatchewan.

E. MURICULATUM (A. DC.?) Torr. Bot. Wilkes, l. c. p. 416, t. 13 A. *Myosotis muricata* Hook. & Arn.? A præcedente persimili differt nuculis sæpe majoribus latioribus granulato-vel muriculato-scabris, cicatrice parum latiore. — Same range as the last, but not known so far northward or eastward. To this belong many specimens referred by Dr. Torrey to the next species, and also so referred by Watson in Bot. King. Expl. Perhaps the *Myosotis muricata* of Ruiz & Pav., and *Eritrichium alyssoides* DC., of Chili, are the same thing. Very likely this species is not Hooker and Nuttall's *Myosotis muricata*, as I have not seen it in Douglas's Californian collection. The plants which I possess of that collection, upon one or the other of which *M. muricata* would seem likely to have been founded, are, one of them my *E. oxycaryum*, which is more probably what was referred to *M. flaccida*; the other one, *E. canescens* without fruit, which therefore may represent *M. muricata* Hook. & Arn.

E. ANGUSTIFOLIUM Torr. Spithamæum, diffusum, setis rigidis hispidissimum sæpius cum pilis mollioribus; foliis angusto-linearibus; floribus in spicis elongandis etiam fructiferas confertas arcte sessilibus; calycis fructiferi persistentis segmentis lineari-filiformibus erectis; corollæ parvæ cristis faucialibus prominulis; nuculis (haud ultra semilineam longis) oblongo-ovatis crebre minuteque granulatis ventre sulco ab apice ad basim sensim latiore gynobasi conico-subulatæ affixis. — Pacif. R. R. Exped. 5, p. 363, Bot. Mex. Bound. p. 141. W. Arizona and adjacent part of California. It is no. 500 of Coulter's collection; and no. 76 of that of Xantus in Lower California was correctly referred to it. But specimens of other species, notably of the preceding, have been confounded with it.

+ + Nuculæ (*E. Texano* excepto) cicatrice latiore brevior excavata gynobasi angusto-pyramidata vel subulato-conicæ affixæ: corolla parva.

+ + Calycis segmenta lanceolata haud incrassata: nuculæ 4 consimiles, triangulari-ovatae, dorso muricato-grulatæ, vix ultra semilineam longæ.

E. PUSILLUM Torr. & Gray in Pac. R. R. Expl. 2, p. (171) 15. Pygmæum; corollæ cristis faucialibus evanidis; nuculis angulis lateralibus acutis, faciebus internis concavis lævibus, angulo ventrali cicatrice lanceolata infra apicem evanida. — New Mexico and borders of Texas.

E. HISPIDUM Buckley in Proc. Acad. Philad. 1861, p. 462. Spithamæum, cinereo-hispidum, ramosissimum; foliis linearibus; spicis paniculatis laxis sæpe