

floralibus e basi lata anguste linearibus obtusis involucri, corollæ limbi laciniis patentibus obovatis apiculatis tubo gracili duplo brevioribus.

HAB. Green River, Snake Country. *Mr Tolmie.*

5. *C. gracilis* (*Benth.*); glanduloso-pubescentibus, caule valde ramoso, foliis lineari-oblongis obtusis, calycis segmentis longis subulatis. *Benth. l. c. Hook. Fl. Bor. Am. 2. p. 76.*—*Gilia gracilis. Hook. in Bot. Mag. t. 2924.*

LEPTODACTYLON. *Hook. et Arn.*

*Calyx* tubuloso-campanulatus, subæqualis, semiquinquefidus, lobis subulatis spinescentibus, sinus membranaceis. *Corolla* infundibuliformis, limbo patente, lobis obovatis obtusis. *Stamina* intra partem superiorem tubi inserta, æqualia. *Antheræ* oblongæ. *Stylus* cum *stigmatibus* tubo corollæ duplo brevior. *Capsula* sublignosa apice dehiscens, loculis polyspermis, columna centrali crassiuscula.—Frutices *humiles, ramosissimi.* Folia *alterna profunde palmatisecta, laciniis subulatis rigidis spinescentibus; aliæ axillaria, integra, fasciculata.* Flores *terminales, speciosi, Phloem simulantés.*

1. *L. Californicum*; foliis patentibus, floribus subcapitatis, corollæ tubo calycem subæquante, stigmatibus stylo duplo longioribus. (TAB. LXXXIX.)

The corolla is large. Another species of this genus is *Phlox Hookeri*, Dougl. in Hook. Flor. Bor. Am. 2. p. 73. t. 159, which may be distinguished as follows: foliis erectis, floribus subsolitariis, corollæ tubo calycem superante, stigmatibus stylo æquantibus.

TAB. LXXXIX. *Leptodactylon Californicum.* *Fig. 1.* Flower-bud and flower; *fig. 2.* Corolla; *fig. 3.* Stamens; *fig. 4.* Pistil; *fig. 5.* Capsule enclosed in the calyx; *fig. 6.* Capsule bursting open, and showing the central receptacle with attached sides; *fig. 7.* Seed; *fig. 8.* Portion of the receptacle from which the seeds have been removed; *fig. 9.* Leaf:—*magnified.*

ORD. XL. BORAGINÆ. *Juss.*

1. *Heliotropium Curassavicum.* *Linn.—Hook. et Arn. supra, p. 152. Hook. Flor. Bor. Am. 2. p. 81.*

1. *Myosotis flaccida.* *Dougl. in Hook. Flor. Bor. Am. 2. p. 82.*

Our specimens are more leafy and not so much advanced as those from Columbia; but they appear to be the same species. *M. versicolor*, of the Flor. Bor. Am., with small flowers, seems to be *M. verna* of Nutt., and has its calyx oblique; the larger-flowered specimens are perhaps referrible to *M. flaccida*.

2. *M. muricata*; caule erecto stricto foliisque linearibus obtusis ubique piloso-hispidis, racemis densis bi-trifidis terminalibus ebracteatis, calycibus hispidis, nucibus ovatis obtusiusculis dense muriculatis.

From six inches to a foot high, erect, straight, rather stout, throwing out numerous lateral leafy branches, which, in our specimens, are short, from not being sufficiently developed. Flowers white; limb flat; segments as long as the tube. The hairs on the calyx and raceme are yellowish-white.

3. *M. fulva.* *Hook. et Arn. supra, p. 38.—Hook. Flor. Bor. Am. 2. p. 83.—Cuming (Chil.) No. 707. Bridges (Chil.) No. 309.*

The flowers are white; the limb flat and broad; the segments about the length of the tube. The achenia are wrinkled, but not always black, and not in the slightest degree hispid or muricated.

4. *M. Chorisiana*. Cham. et Lehm. in Linn. 4. p. 444. Hook. et Arn. supra, p. 152. (non Lehm. in Hook. Fl. Bor. Am. 2. p. 83.)

The flowers here are on pretty long pedicels, while the Columbia plant has them shortly pedicellate; the latter presents, besides, a different aspect, and may be called *M. Scouleri*; it appears very closely allied to *M. Californica*, Fisch. et Meyer, but the corolla is longer than the calyx.

5. *M. glomerata*. Nutt.—Hook. Flor. Bor. Am. 2. p. 82. t. 162.—*Cynoglossum glomeratum*. Fraser. Pursh.

HAB. Green River, Snake Country. Mr Tolmie.

1. *Echinosperrnum Lappula*. Lehm. in Hook. Flor. Bor. Am. 2. p. 84.

HAB. Pine Creek, near Green River, one of the tributaries of the Colorado, Snake Country. Mr Tolmie.

1. *Lithosperrnum? circumscissum*; annuum nanum diffusum ramosum, totum pilis albis rigidis hispidum ad apicem usque foliosum, foliis anguste linearibus, floribus axillariibus, calyce 5-fido basi membranaceo fructifero transversim circumscisso deciduo, corollæ tubo calycem æquante ad faucem nudo, nucibus ovatis acutis nitidissimis lævibus dorso convexis intus subcarinatis.

HAB. Snake Fort, Snake Country. Mr Tolmie.

The flowers are very minute, and white with a yellow eye; the calyx is 5-angled; the segments are about as long as the tube, and in fruit are patulous or somewhat recurved; the base of the tube is membranaceous between the ribs or angles, and separates transversely with five teeth. The nuts do not appear to be at all perforated at the base, and are inserted into the bottom of the calyx.

1. *Amsinckia vernicosa*; corolla fauce nuda glabra, limbo tubo triplo brevior, staminibus ad faucem insertis, antheris exsertis, nucibus ovato-oblongis acutis acute triquetris dorso planis lævibus nitidissimis.

This approaches closely to *A. angustifolia*, Lehm. (Fisch. et Mey. Ind. Sem. Hort. Petrop. Secundus, p. 26), but that we believe to be a Chilian species, transmitted by Bertero, and therefore probably the same with Cuming's No. 512, and Bridges' No. 311. In the Chilian plant, the flowers are almost entirely the same as in *A. vernicosa*, but the nuts are ovate, keeled and transversely wrinkled on the back, and all over minutely muricated, the points on the keel and wrinkles being much larger than the others; of this Mathews' No. 193 is perhaps a mere variety, but the leaves are much broader, and, when dry, of a blackish colour. *Lithosperrnum lycopsoides*, Lehm. in Hook. Flor. Bor. Am. 2. p. 89, is the same with *Amsinckia lycopsoides*, Lehm. Del. Sem. H. Hamb. 1831.

2. *A. spectabilis*; corolla fauce glabra plicis intrusis semiclausa, limbo longitudine tubi, staminibus ad faucem insertis.—Species pulchritudine florum insignis atque distinctissima. Corolla aurea, limbo 6 lin. in diametro, ad faucem plicis 5, squamulas simulantibus. Fisch. et Mey. Ind. Sem. Hort. Petrop. Secund. p. 26.

We do not possess the fruit of this species, but in habit it accords with *Amsinckia*, and in specific character with *A. spectabilis*, F. and M. It certainly is an extremely handsome plant, with large yellow flowers; the corollas much exerted, and the calyx thickly clothed with white and golden-coloured hairs. Leaves 2-3 inches long.

The genus *Amsinckia* is not, so far as we know, as yet further characterized, than by having four cotyle-

dons. It was noticed by Lindley in his first edition of the *Introduction to the Natural System*, and called there *Benthamia*; as however no reasons were assigned for reducing the genus of Richard of that name, Lehman supposed it to be an oversight, and altered it to *Amsinchia*. Since then, Dr Lindley has bestowed the name *Benthamia* on an East Indian plant. This confusion is to be regretted; and now that Richard's genus has been ascertained to be *Peristylus* of Blume, it were better that *Amsinchia* should bear the appellation originally given to it.

1. *Cynoglossum grande* (Dougl.); caule erecto glabro superne nudo, foliis petiolatis subtus pilosis, inferioribus maximis cordato-ovatis undulatis, superioribus oblongo-lanceolatis, racemis ebracteatis glabris pedunculatis paucifloris, calyce villosulo.—*Lehm. Pugill. 2. p. 25. in Hook. Flor. Bor. Am. 2. p. 85.*—*C. officinale. Hook. et Arn. supra, p. 152.*

2. *C. penicillatum*; annum diffusum multicaule basi ramosum ubique pilis adpressis canescens, foliis remotis anguste linearibus, floribus solitariis in omnibus axillis brevissime pedicellatis, fructus nucibus lineari-oblongis patentissimis per paria subparallelo-approximatis disco planis marginibus membranaceis inflexis nudis apice ciliatis.

This ought, perhaps, to be removed from the genus: it is so extremely allied to *C. lateriflorum*, Lam., or *C. lineare*, Ruiz et Pav. (Mathews, No. 332, Bridges, No. 253, and Cuming, No. 721), that it can only be distinguished by a close examination of the nuts, which, in the Chilian plant, are pectinately toothed all round the margin. Lehman places this last in *Rindera*, an arrangement to which we can scarcely assent. Another plant of the same group is *C. pilosum*, Ruiz et Pav. (Mathews, No. 989, and Cuming, No. 1070).

ORD. XLI. HYDROPHYLLÆ. *R. Brown. Benth. in Linn. Soc. Trans. 17. p. 272.*

HYDROPHYLLUM. *Linn. Benth. l. c.*

*Squamæ corollinæ* 5, lineares, dorso adnatæ, apice marginibusque liberæ. *Stamina* longe exserta. *Placentæ* maximæ, dorso liberæ, ovarium implentes, 2-ovulatæ.—*Folia radicalia numerosa; caulina pauca alterna lata pinnatim vel palmatim dissecta. Racemi scorpioideo-dichotomi vel capitati, ebracteati.*

1. *H. capitatum* (Dougl.); foliis pinnatisectis, segmentis inciso-dentatis subtus canescentibus, floribus dense capitatis, laciniis calycinis lanceolato-linearibus ciliato-hispidis.—*Benth. in Linn. Soc. Trans. 17. p. 273. Hook. Flor. Bor. Am. 2. p. 78.*

The Californian specimens have quite a different appearance from those gathered at Fort Vancouver; both are canescent on the under side of the leaves, from the presence of adpressed white rather soft hairs; but these are much more numerous in the Californian form than in the other. The hairs on the branches and petioles are whitish and somewhat soft to the touch. In *H. macrophyllum* (Nutt. Indig. Pl. Un. St. p. 111), which Mr Bentham seems to think may be the same, the hairs on the stem, branches, and petioles, are longer and much more harsh; the under side of the leaves is only sprinkled with a few bristly hairs, and these exist chiefly on the nerves and veins; the flowers are either capitate (as in a specimen from Drummond found in the Alleghanies) or they form a corymbose compact cyme (as in the specimens from Dr Short), with the pedicels thick and stout, and shorter than the calyx; divisions of the calyx attenuated from a broad ovate base. Nuttall's species approaches, in some respects, to *H. Virginicum*, but that has a loose dichotomous inflorescence, with slender pedicels that are often longer than the calyx; the calyx-segments narrow-linear; and the stem is much more free from hairs, often nearly quite glabrous.

ELLISIA. *Linn.—Benth. l. c.*

*Calyces* exappendiculati. *Squamæ corollinæ* 10, breves, vel nullæ. *Stamina* corolla subbrevia. *Placentæ*