

7701 - 39064

PROCEEDINGS  
OF THE  
AMERICAN ACADEMY  
OF  
ARTS AND SCIENCES.

NEW SERIES.  
Vol. XII.

WHOLE SERIES.  
Vol. XX.

UNIVERSITY LIBRARY

FROM MAY, 1884, TO MAY, 1885.

SELECTED FROM THE RECORDS.

BOSTON:  
UNIVERSITY PRESS: JOHN WILSON AND SON.  
1885.

## XII.

CONTRIBUTIONS TO THE BOTANY OF NORTH  
AMERICA.

BY ASA GRAY.

Communicated October 8th and December 10th, 1884.

1. *A Revision of some Borragineous Genera.*

THIS revision has become necessary by some recent discoveries, and by a more thorough study and appreciation of the characters of the various plants which have been referred, first by the De Candolles and afterward by Dr. Torrey and myself, to the genus *Eritrichium*. It is not pleasant to find that the conclusions now reached require considerable changes of accepted names which have received the sanction of the late Mr. Bentham in the recent *Genera Plantarum*, and that these changes might have been made or anticipated several years ago. But if it needs be so, the sooner they are made the better.

It plainly appears that too much has been made of the degree of obliquity of the nutlets, of their extension above the gynobase, and of the extent of their attachment to it, or, which is nearly the same thing, of the amount of growth, if any, of the developing nutlets above or below their insertion upon the more or less elevated axis (*gynobase*) which intervenes between the common torus and the style.\* It seems to me equally clear that there are too great differences from species to species in *Echinosperrum*, *Cynoglossum*, *Omphalodes*, *Eritrichium*, and the various plants which have been referred to these genera, to justify the two tribes *Cynoglosseæ* and *Eritrichiææ*. So that, indeed, it seems necessary to follow De Candolle in this respect, by referring all the quadrinuculate genera with lateral or introrse-basal insertion of the nutlets to the *Cynoglosseæ*, to be divided into sections as well as may be practicable. This tribe should even include *Moltkia* (*cærulea*),

\* As Turczaninow long ago rightly expressed it, all the part to which the nutlets are attached is gynobase, whether it be depressed, pyramidal, conical, or subulate, or even filiform. Only the free portion above is the style.

\* *Intermediæ*, ramosæ, parvifloræ, foliis parvis linearibus, *Eukrynitziis* nimis affines.

+ Annua, cymis pedunculatis sæpius bi-tri-radiatis, spicis confertifloris brevibus ebracteatis.

K. OXYGONA. *Eritrichium oxigonum*, Gray, Proc. Am. Acad. xix. 89. Facie et calyce *K. pterocaryæ* sat similis, nuculis nisi acutangulis *Typicarum*. Nuculæ paullo ultra lineam longæ, dorso parce minute-que muriculatæ, nunc fere læves nitidulæ, circumscriptione angustodeltoideæ, sensim acutæ, angulis lateralibus acutatis, ventrali obtuso, sulco angusto basi furcato clauso tota longitudine gynobasi gracili adfixæ. Corolla limbo lin. 2 lato. — Collected by *Mr. Pringle* on the borders of the Mohave Desert in 1882, and again by *Mrs. Layne-Curran* in 1884.

+ + Basi demum lignescente perennans, paniculato-ramosissima, floribus parvis sparsis sæpe foliis fulcratis.

K. RAMOSISSIMA. *Eritrichium racemosum*, Watson in herb. Gray, Proc. Am. Acad. xvii. 226. Folia parva, cum calycibus angustis setis rigidis asperata. Nucula plerumque solitaria, tenuis, oblongo-lanceolata, scabrella, nitida. — This proves to be a rather widely spread species on the southern borders of California. It was described from a specimen collected by the Brothers *Parish* in San Bernardino Co.; has now been found in the Mohave Desert by *Mrs. Layne-Curran*, and at Point Loma and the Cantilas range on the borders of Lower California by *Mr. Orcutt*; also on Santa Catalina Island by *W. S. Lyon*. Moreover, it may now be identified with incomplete specimens collected on Cedros Island by the late *Dr. Veatch*, and on Guadalupe Island by *Dr. Palmer*; the latter wrongly referred to *Eritrichium angustifolium*. The specific name which it bore under *Eritrichium* I have replaced by a much fitter one. It was not very appropriate for the described specimen, and is still less so for those which have quite sessile or scattered flowers.

\* \* *Glomeratæ*, sat robustæ, e radice valida perenni vel bienni; foliis plerumque latiusculis; floribus thyrsoido-congestis mediocribus (corolla limbo lin. 3-4 lato) hinc inde bracteatis. (Flores in nonnullis heterogono-dimorphi: stylus crassiusculus.)

The final species of this division are too widely different from true *Krynitzkia*. It might be more satisfactory to found a genus for all the following, along with *K. setosissima* (referred elsewhere on account of its decidedly winged nutlets); but the various intermediate forms forbid the taking of that course. Some tendency to heterogone dimor-

phism in the whole group is to be suspected, at least in the length of the style. For the last two species this is manifest, but sometimes low stamens are accompanied by a still lower style.\*

+ Fructus (e nuculis 4 acutangulis dorso rotundatis arcte conniventibus) depresso-globosus : perennes, multicaules.

K. JAMESII. *Myosotis suffruticosa*, Torr. in Ann. Lyc. N. Y. ii. 225. *Eritrichium Jamesii* & *E. multicaule*, Torr. Bot. Mex. Bound. 140, & Marcy Rep. 294. Canescens pube adpressa molli, denique pl. m. hirsuta vel molliter hispida; caulibus brevibus decumbentibus nunc demum erectis subpedalibus; foliis obtusis oblanceolatis ad fere lineares; glomerulis demum in spicas evolutis; sepalis lanceolatis; corolla subrotata, tubo calycem haud superante lobis parum longiore, fornicibus exsertis oblongis; antheris oblongis fauci insertis; nuculis lævissimis, singulis  $\frac{1}{4}$  globi depressi. — Sometimes decidedly hispid in age, sometimes canescent only with a soft and close pubescence. In the latter form it extends westward into San Bernardino Co., California, coll. *Parish*.

K. PALMERI. *Eritrichium fulvocanescens*, Watson, Proc. Am. Acad. xviii. 121, non Gray. Humilis; foliis angusto-linearibus pube strigoso-hirsuta canescentibus; caulibus calycibusque pilis patentibus hirsutissimis; corolla angusta, tubo sepala lineari-lanceolata vix superante lobis (parvulis) plus duplo longiore, fornicibus subglobosis; antheris fere linearibus; nuculis opacis rugosiusculis. — Coahuila, Mexico, forty miles south of Saltillo, *Dr. Palmer*, March, 1880, no. 895 of the distribution.

+ + Fructus pl. m. pyramidatus; nuculis dorso convexiusculis vel planis.

++ *Breviflora*, i. e. corolla tubo calycem haud superante limbo suo (diametro lin. 2-3 $\frac{1}{2}$  lato) breviora, fornicibus faucialibus semiglobosis paullo exsertis: antheræ oblongæ: sepala lanceolata: nuculæ ovatæ pl. m. obcompressæ, dorso saltem scabro vel tuberculato, angulis lateralibus marginato-acute acutissimis, ventre parum elevato sulco tenui basi in areolam desinente percurso.

= Setis longis patentissimis hispidissimæ, semipedales ad 2-3-pedales e radice bienni.

---

\* *Myosotis grandiflora*, HBK., would seem from the figure to be of this group, if it came from Mexico ("in monte Orizaba, Sch. & Depe," ex DC. Prodr.), and not from the Quitensian Andes. May not the latter habitat come from a transposition of the two species of *Myosotis* in the Nov. Gen. & Spec. ?