

with purplish spots above, and the caespitose habit reminds one of *C. caespitosa* L., but it lacks the aphyllipodic structure of this species.

Allied to *C. acutina* Bail. is *C. limnocharis* nob. from Yukon, a species with long, slender, pistillate spikes of reddish brown color, in habit much like the European *C. proluxa* Fr. Furthermore there are two very characteristic species bearing a strong resemblance to the European *C. acuta* L., *C. Sitchensis* Presc., known from Alaska, and *C. dives* nob., from the Chilliwack Valley and Vancouver Island, British Columbia. And, if we compare the European representations of these alliances, the *aquilis*, *rigida* and *acuta*, we meet with analogous types corresponding with those of this continent.

The large grex *Acorastachya* is also well exemplified in Canada, and several of the species are also well known from the northern parts of Europe, viz., *Carex subspathacea* Wormskj., *C. salina* Wahlenb., *C. cryptocarpa* C. A. Mey., *C. maritima* L., *C. Magellanica* Lam.⁵ *C. limosa* L., *C. rariflora* Sm., and *C. stygia* Fr. Of these *C. subspathacea*, *rariflora* and *stygia* extend to the Arctic regions.

But especially characteristic of this continent are *C. macrochaeta* C. A. Mey., *C. nesophila* nob., *C. aperta* Boott, *C. crinita* Lam., and *C. magnifica* Dew. A somewhat peculiar habit is exhibited by *C. nesophila*; the culm is phyllopodic and the spikes resemble those of *C. salina*, while the structure of perigynium corresponds with that of *C. macrochaeta*. This interesting species was detected by James M. Macoun on St. Paul Island, Bering Sea, and since then it has also been collected on Popoff Island by Mr. Trevor Kincaid.

Although exceedingly frequent on the Alaskan coast and the islands, *C. macrochaeta* shows but

⁵With respect to *C. Magellanica* Lam., this species has been excluded from the North American flora, and in the recently published Gray's New Manual of Botany it has been replaced by *C. paupercula* Michx. on the strength of the diagnosis of Lamarek calling for a species with androgynous spikes, as pointed out by M. L. Fernald (Rhodora, Vol. 8, 1906, p. 73). And Mr. Fernald having examined 633 inflorescences and finding that in 600 of these the terminal spike was purely staminate, and only more or less androgynous in the remaining 33, this author reaches the remarkable conclusion that the North American species is distinct from Lamarek's, which was collected on the shores of the Straits of Magellan. The fact is, however, that Lamarek (Encyclop. 3, p. 385, n. 25) described his species "spicis androgynis," meaning that all the spikes, the terminal as well as the lateral, had staminate flowers at the base thus beneath the pistillate flowers. In *C. Magellanica* the spikes are, thus, gynaeandrous, i.e., pistillate at the top, staminate at the base and exactly this disposition of the sexes occurs in the North American and European representations of *C. Magellanica*. The main point, that the lateral spikes are constantly gynaeandrous has escaped the attention of Mr. Fernald, although Boott, Schkuhr and nearly all other caricographers have described and figured the species correctly. The fact, that the terminal spike is frequently purely staminate is of no importance.

slight variation. The terminal spike is usually wholly staminate, but we found, however, a few specimens from Unalaska in which this was either androgynous or gynaeandrous or even entirely pistillate. In the variety *emarginata* nob., the scales are prominently emarginate with a seta four times as long as the body of the scale.

In another variety *macrochaeta*, nob., the plant is very robust with four short and heavy pistillate spikes, the perigynium is very large and longer than the simply mucronate scale; it was collected on St. Paul Island, Bering Sea, by James M. Macoun. These varieties agree, however with the typical plant with respect to the culms being constantly aphyllipodic.

Among the *Cenchracarpae* we meet with the interesting little species *C. bicolor* All., reported from Alaska, Yukon and British Columbia, besides from Labrador; it occurs also in Greenland, and on the Alps in South Europe. Much more frequent is *C. aurea* Nutt., and among the desciscences we meet with *C. granularis* Muhl., *C. pallescens* L. and the very local *C. Torreyi*, Tuckerm.

From a morphological viewpoint the *Lejochlaenae* constitute one of the most interesting grexes with their monopodial shoots and aphyllipodic culms. They are mostly sylvan types of light green color, and the more or less drooping spikes give them a very graceful aspect. Nearly all the American members are represented in Canada, and while *C. Hendersonii* Bail. is a western type the others are mainly eastern. We meet here with the *laxiflora* alliance, as well as with some desciscences: *C. grisea* Wahlenb., *C. oligocarpa* Schk., *C. conoidea* Schk., and *C. glaucoidea* Tuckerm.

The *Dactylostachya* are much less common, and altogether poorly represented on this continent; Canada, however, is the home of the beautiful little species *C. concinna* R. Br., *C. pedunculata* Muehl. and *C. Richardsonii*, R. Br.

Some few species of the small grex *Microcarpae* are represented in Canada, viz.: *C. gracillima* Schw., and *C. formosa* Dew. Characteristic of the *Athrochlaenae* is the scales being deciduous of the perigynia being prominently stipitate and reflexed at maturity. It is a very small grex containing only two species, *C. pyrenaica* Wahlenb., and *C. nigricans* C. A. Mey. Both are found in Canada and the geographical name of the former certainly proves very unfortunate, inasmuch as the species occurs also in New Zealand. A grex closely allied to the *Athrochlaenae* is that of the *Stenocarpae* so far as concerns the structure of the perigynium, being attenuated at both ends, relatively narrow, and the generally dark colored spikes. It is a grex