the United States. However, our knowledge of the American element of the genus we owe almost exclusively to the Macouns, through their familiarity with the genus and correct determinations. The liberal gifts of well selected material in connection with, so to speak, a most indefatigable correspondence has enabled us to draw a concise comparison of the Old World and American representations of *Carex*.

Most prevalent in the north, even beyond the Arctic Circle, and at high elevations in the mountainous districts, the genus has proved of special interest to the student of plant geography and of the migration of species during the glacial epoch, to be traced now through the circumpolar element, mingled with types of southern origin. And the vast distribution of the genus has resulted in the production of types utterly unlike each other, when comparing the supposed ancestral with those of more recent origin. The outlining of the genus in natural greges we owe to Elias Fries, Tuckerman and Salomon Drejer, who laid the foundation of demonstrating the natural affinities, instead of following the usual tendency to arrange the species in accordance with superficial characters in a mere analytical way. And, while all other Caricographers considered the "Indicae" distinct from "Vigneae" and "Carices genuinae" Drejer in his excellent work "Symbolae Caricologicae" combined these, the "Indicae" with the two others; thus the "Indicae" may be looked upon as representing evolute types of greges of both Vigneae and Carices genuinae. Furthermore Drejer demonstrated the probable affinities of the species within the greges, considering the monostachyous as "formae hebetatae" passing into the "centrales" the typical of the grex, and culminating in some more evolute with some deviating types, the so-called "desciscentes." By this logical arrangement the monostachyous species became transferred to various greges, instead of as formerly constituting one most unnatural section with no other feature in common than possessing a single spicate inflorescence, the pistillate, or a spike, the staminate.

Now with respect to Canadian types of the genus, it is interesting to see that of the 39 greges enumerated by the writer¹ only five are absent from Canada; these greges are as follows: *Psyllophorae* (Europe and Azores), *Chionanthae* (Europe), *Leucocephalae* (Virginia), *Echinochlaenae* (Australia), and finally *Podogynae* (Japan).

As regards the greges present the Microrhynchae, Aeorastachyae, Echinostachyae and Physocarpae are the best represented, being rich in species and of very wide distribution.

But of special interest are a number of types represented among the various greges, types of a very characteristic structure. These we will describe briefly in the same order as the respective greges (l.c. p. 453). A tristigmatic Vignea, C. nardina Fr., by Boott named C. Hepburnii has been collected on mountain summits of 'Alberta and British Columbia. Some of the formae hebetatae of the Astrostachyae; C. gynocrates Wormskj. and C. exilis Dew., have been known as varying from monoecious to dioecious; of these the former confined to Greenland and this continent is undoubtedly most commonly monoecious in the north, judging from the specimens we have examined which were collected in Northern Labrador. British Columbia, Alaska and Greenland; in the last place we found this species probably at its most northern limit Skarvefjaeld on the island of Disco, about 69 N. lat. where it occurred only as monoecious. A still more evolute stage is represented by C. exilis, which in Canada occurs as monoecious or dioecious, mono -or plio-stachyous. A gynaecandrous² spike is frequently met with in this species, besides that the female plant may possess several lateral spikes, from one to six, at the base of the terminal. Among the centrales of this grex we find C. stellulata Good., C. interior Bail., C. sterilis Willd., widely distributed and clearly demonstrating a natural alliance of true species, although of very close relationship. The very peculiar and rare C. sychnocephala Carey of the grex Sychnocephalae is also a native of Canada, and only one Old World species is known of this grex, C. cyperoides L.; they both are very much alike, showing exactly the same habit. Among the Xerochlaenae, C. macrocephala Willd., with its dense and remarkably large inflorescence occurs on the coast and islands of Alaska, and this Carex is tristigmatic, although a typical member of Vignea. Very peculiar is the Canadian representative of C. teretiuscula Good³ with its large and frequently ramified inflorescence. Among the Athrostachyae, C. festiva is represented by a multitude of forms, and is widely distributed in the mountains; a very interesting alliance is composed of C. pratensis Drej., C. pestasata Dew.,

¹Greges Caricum (Studies in the Cyperaceae) American Journal of Science, Vol. XVI, 1903, p. 445.

²The term gynaecandrous is applied to spikes with both sexes represented, the pistillate flowers being situated above the staminate; the opposite position occurs in androgynous spikes, where the staminate flowers are situated at the apex of the spike, the pistillate at the base. Formerly the term andrygynous was used to signify both cases.

³It is very unjust to accept the name C. diandra Schrank in place of Goodenough's C. teretiuscula, since Schrank's material upon which he established the species was mixed, containing also C. paradoxa Willd, and C. paniculata L.