to those illustrations and descriptions which best record the characteristics of the species in question.

Only the species that are new or that show exceptional variations from the type forms are illustrated in this paper. The species recorded were collected by Mr. F. Johansen and the localities are as given in his field list of collecting stations.

The specimens of these new forms are deposited in the diatom collection of the United States National Museum, Washington, D.C., as well as nearly all the known species herein recorded. Each specimen is mounted separately on a properly labeled slide; so that the difficulty of finding the individual diatom named, so difficult to locate on the ordinary strewn slides, is wholly avoided. All the specimens in the Museum diatom collection are freely available for examination by interested diatomists.

The nomenclature followed in this report is that which has received the general approval of diatomists. It rejects some obscure names which a few authors claim to antedate and be synonymous with those in common use, such as, *Tessella* for *Rhabdonema*, etc. The author feels that sufficient doubt exists as to the generic boundaries of these archaic names to justify their abandonment to the oblivion in which they have long reposed, especially as much needless confusion must result if they now supplant the well known and classical names used in our most valuable diatom books. This is the position taken by Van Heurck, DeToni, Schmidt, Brun, and the majority of diatom writers. There is also a rejection here of the set of new generic names proposed by P. T. Cleve (see Cleve's Naviculoid Diatoms) for breaking up the huge genus *Navicula* into more compact divisions. The genus is unwieldy; but the writer agrees with the above mentioned diatomists that these proposed new genera are too misty in outline to be workable, useful as they may be for subgeneric grouping.

There is a chance of confusion in the record of the marine diatoms found by the Canadian Arctic Expedition because of a report already published on the fresh-water diatoms of the expedition. In it quite a number of marine diatoms are included. Its author, Mr. Charles W. Lowe, is careful to refer to this in his introductory remarks and to explain the reason for the mixed character of the diatom flora, as well as the fauna, found in some of the ponds and lagoons adjacent to the sea. He also notes the marine character of many of the species in his list. I find there are twelve marine species in the list which do not appear in the following enumeration, because the writer has found no specimens of them in any of the marine gatherings secured, and not having seen Mr. Lowe's specimens the following additions to my list are on his authority:

Grammatophora angulosa Ehr. See vol. IV, Part A, page 36A of this report						
Navicula Crabro Ehr	"	"	"	41A	"	"
Navicula Hennedyi W. Sm.	"	"	"	42A	"	"
Navicula humerosa Breb.	"	"	"	42A	"	"
Nitzschia acuminata (W.Sm.) Grun.			"	39A	"	"
Nitzschia lanceolata W. Sm.			"	39A	"	"
Opephora Schwartzii (Grun.) P. Petit			"	37A	"	"
Pleurosigma hippocampus W. Sm.			"	43A	"	"
Stauroneis Gregorii Ralfs			"	41A	"	"
Surirella fastuosa Ehr.			"	40A	"	"
Surirella recedens A. Sch.			"	40A	"	"
Surirella regina Jan.			"	40A	"	"