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nd in the
temperate
waters.
ls 18-20 μ .

America, but not from North America, although a variety *commune* Hirn., which is larger than the type, is known from Massachusetts, U.S.A.

Vegetative cell diameters: constriction 14 μ ; wider part 23-25 μ ; 2 $\frac{1}{2}$ -3 times diameter in length.

Oogonia: 45 x 60 μ .

Oospore: none fully ripened.

Antheridia: diameter 18 μ , length : ..

Oedogonium paludosum (Hass.) Wotr. var. *americanum* Nordst.

This species was slightly more plentiful than the last and occurred with reproductive organs only in the swamp at Herschel island. It is a monoecious species bearing single ellipsoid oogonia with a superior pore. Oospores were not fully matured and the details of the wall were rather obscure. Distinct longitudinal lines were visible and were 18-24 in number. Antheridia were 1-5 celled, usually 3 celled. Neither the type nor variety are common in U.S.A., nor have they been recorded from Canada or the arctic regions.

Vegetative cell: 15-25 μ diam., 1 $\frac{1}{2}$ -8 diameters in length.

Oogonia: 60-65 μ diam., 80-100 μ long.

Oospores: 15-50 μ diam., 74-90 μ long.

Antheridial cell: 12-20 μ diam., 5-8 μ long.

HETEROKONTAE.

BOTRYOCOCCACEAE.

Botryococcus Kütz.

Botryococcus Braunii Kütz.

This alga is a typical plankton organism, although it is frequent in algal collections apart from plankton. Fairly large masses were found in the plankton and in tundra collections from Teller, and in the plankton of the big lake at Bernard harbour, where it was also fairly abundant. It is common throughout Europe and in the U.S.A. I have recently found it in Manitoba, although, at present there is no published record for Canada. I cannot find any arctic record for it.

OPHIOCYTIACEAE.

Ophiocytium Näg.

Ophiocytium majus Näg.

This species is the largest of the genus and readily recognized. One end of the cell is usually slightly swollen and capitate, and the other is attenuated into a spine of varying length. It is not common in America and has not been previously recorded from American arctic regions. It is fairly plentiful at Teller, where it was found in the brackish pond as well as in fresh water. It was also present in collections from Herschel island, and in the plankton of the big lake at Bernard harbour.

TRIBONEMACEAE.

Tribonema Derbes & Solier.

Tribonema bombycina (Ag.) Derb. & Sol. forma *tenuis* Hazen

This, which is a small form of the species, is fairly common in most parts of the world, although not so common as the type; it is not infrequent in arctic regions. It occurred with other algae in a lagoon just west of Martin point, at Herschel island, and at Cape Bathurst. At no place was it very plentiful.