The eel-grass, *Zostra,* which suffered complete destruction several years ago due to bacterial parasites, was gradually making its appearance in the small inlets about the island. Many small animals usually found in association with Zostra were also reappearing.

In all, over ninety species of marine animals were collected in carefully prepared lots for winter work of several kinds. Practically all of these were taken by other means than dredging.

WORK AT MOUNT DESERT ISLAND BIOLOGICAL LABORATORY IN 1934

DUNCAN S. JOHNSON, E. D. DELAMATER AND BENJAMIN GOLDBERG
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Duncan S. Johnson studied the differences in species present and in the density of stand found in different seasons in the algal population of the intertidal zone at Otter Cliffs. In the "Upper litoral belt" here (see Johnson and Skutch, Ecology 9: 202, 1928) the green alga *Codiolum longipes* was about 10 times as abundant in August 1934 as in any August for a decade past. In August 1923, the year in which our study of this area began, *Codiolum* though more abundant than in any year after that up to 1934, did not cover half the area that it did last summer.

Bangia fusca-purpurea also was decidedly more abundant in August last than in any summer for 10 years past. Only in late March 1927, the one year in which we studied this area outside the summer season, have we seen *Bangia* present here in at all comparable abundance (see Johnson & Skutch, Ecology 9: Figs. 6 and 25).

Photographic as well as written records are being made each year of the algal population of certain definite areas and these show clearly the widely differing abundance of the same alga in different years. It is surprising that *Codiolum* and *Bangia* should be so unusually abundant in a summer following the severest winter of a decade and more on this coast. Evidence is accumulating that such climatic conditions as direction of wind and height of waves at the time of spore discharge affect critically the chances of lodging of the spores of *Codiolum* and *Bangia.* It is probable also that the intensity of sunlight and the evaporating power of the air are likewise critical factors that determine how long the young sporelings can persist after they are once started. These two sets of factors together must be chiefly responsible for the relative abundance of these algae in different years.

D. S. Johnson also continued his laboratory study of the development of certain *Myrtaceae* collected in Guatemala. The results of the study of *Batis* which was referred to in this report last year will appear in the *Bulletin* of the Torrey Botanical Club for January 1935.

Edward D. DeLamater worked at the laboratory in August especially on the distribution of the kelps and the germination of their zoospores.

Benjamin Goldberg worked on the reproductive structures of the *Florideae.*