

unanimously corroborate the fact that the whole miracle of vital phenomena and vital forms is traceable to the active agency of the formless albuminous combinations of protoplasm, the Polythalamia alone would secure the triumph of that theory. For we may here at any moment, by means of the microscope, point out the wonderful fact, first established by Dujardin and Max Schulze, that the formless mucus of the soft plasma-body, this true "matter of life," is able to secrete the neatest, most regular, and most complicated structures. This secretive skill is simply a result of *inherited adaptation*, and by it we learn to understand how this same "primæval slime"—this same protoplasm—can produce in the bodies of animals and plants the most different and most complicated cellular forms.

It is, moreover, a matter of special interest that the most ancient organism, the remains of which are found in a petrified condition, belongs to the Polythalamia. This organism is the "Canadian Life's-dawn" (*Eozoon canadense*), which has already been mentioned, and which was found a few years ago in the Ottawa formation (in the deepest strata of the Laurentian system), on the Ottawa river in Canada. If we expected to find organic remains at all in these most ancient deposits of the primordial period, we should certainly look for such of the most simple Protista as are covered with a solid shell, and in the organization of which the difference between animal and plant is as yet not indicated.

We know of but few species of the *Sun-animalcules* (Heliozoa), the second class of the Rhizopoda. One species is very frequently found in our fresh waters. It was observed even in the last century by a clergyman in Dantzic, Eichhorn by name, and it has been called after him, *Actinosphærium*