

Just because the new direction in planktology has to such a high degree given naturalists the opportunity of observing how variable the conception of species within this sphere of work is, it is difficult to understand the demand of the older systematists, that their view of the species must be the only right one.

make. On p. 73 of my plankton work I have expressed myself very carefully. I say: "I still believe it very probable that the 'species' are stages in a variation series; but whether these stages are fixed species in the sense that the variation series consists of a number of temporary species following each other, or whether the transformations are only connected with certain generations and broods of the same species, we do not at present know." I have thus stated expressly that I was unable to determine with regard to the species mentioned whether they were true species or only seasonal forms; and I pointed out also that the material on which my account was based had been procured by others (M. Voigt). Nothing of this is mentioned by Rousselet in his criticism.

Rousselet maintains that the species mentioned cannot be seasonal variations since, according to his statement, they are all found at the same time. This objection is not of any importance, as I have pointed out expressly on p. 251. This will naturally be the case with the seasonal variations at most times of the year. The one form does not disappear on the same day that the other arrives; but whilst the one is decreasing numerically the other is increasing—a fact which will be observed by anyone who follows regularly the forms throughout the year. Stragglers or relicts there must always be of all the numerous forms: I have even found *S. pectinata* and *tremula* side by side in winter. What interests me most in this matter is, has Rousselet at any time found "*S. grandis*" in the months of February and March? With Rousselet's statement that "the periodic and often very sudden disappearance and reappearance of various Rotifers is a well-known fact, and the Synchroneta follow the same habits," I am naturally in agreement. But the fundamental matter here, just this "sudden disappearance and reappearance," is not apparently for Rousselet a problem which requires a solution. Now I have endeavoured to give a solution to just this problem by regarding the Synchroneta as species, in Rousselet's sense if preferred, but vicarious seasonally, with different times for breaking up the resting-stages and different requirements as to temperature. But Rousselet seems to have quite overlooked this or misunderstood it.

Further evidence that the above-named Synchroneta species are in reality species and not seasonal forms is found by Rousselet in this, that "of all plankton Rotifers the Synchroneta are the most vigorous swimmers, and quite able to counteract by their cilia any slight tendency to sink that may be due to a decrease in the density and viscosity of the water in summer." To this I would remark, in the first place, that if Rousselet had ever seen a *Ploesoma Hudsoni* swimming he would scarcely have taken the Synchroneta to be the most vigorous swimmers; but in the second place, and more especially, whence can Rousselet obtain even the remotest evidence for the view that the wheel-organ of the Synchroneta is able to counteract the fluctuations in the density and viscosity? Here, as not so seldom elsewhere, we find the "exact" systematist, without even a shadow of scientific evidence, throwing out random postulates and requiring them to be believed. At the same time he subjects to a superficial and one-sided criticism the views of naturalists who for years have studied the phenomena on which the views rest out in nature itself, under conditions with which the systematist has no acquaintance, and even though these views are put forward in an exceedingly cautious form.