

## 14. ROTIFERA

By FRANK J. MYERS, *American Museum of Natural History*

1. *Correlation between hydrogen-ions and geographical distribution.*

It has been definitely established many species occur in acid (soft) water that are never found in alkaline (hard) water. Conversely, many species occur in alkaline water that are never found in acid water. There is, however, a large number of species that are tolerant to both alkaline and acid water and are found under both conditions.

While admitting that hydrogen-ions are not the only determining factors in the geographical distribution of the acid-tolerant and alkaline-tolerant groups, yet there is evidently an important connection.

Investigations on geographical distribution were continued during the summer.

2. *Field Work.*

Numerous collections at various locations were made with the object of finding additions to the faunal list of Mt. Desert Island, exclusive of the anabiotic (terrestrial, moss dwelling) rotifers. As additions to the ploimate (strictly aquatic) rotifers are constantly being found, no work has been done thus far on the anabiotic fauna.

3. *Formulation of Fixed Rules for Narcotizing.*

Illoricate (soft-bodied) rotifers must be narcotized in order that they remain extended after being killed and fixed. The species vary greatly in tolerance to different strengths of narcotic used, and to the time immersed in it. Narcotizing has always been a hit or miss affair, no standard methods for different species having ever been proposed. Experiments were conducted in narcotizing with the object of finding exact methods for as many species as possible.

## 15. THE INNERVATION OF THE STOMACH AND RECTUM AND THE ACTION OF ADRENALINE IN ELASMOBRANCH FISHES

By BRENTON R. LUTZ, *Boston University Medical School*

A study of the literature concerning the innervation of the stomach and intestine in mammals and the effects of adrenaline reveals much confusion and contradiction. The question is of interest because of its bearing on the digestive process, especially during abnormal nervous states and under conditions of fear, anger, and worry. While the orthodox view holds that the cranial parasympathetic nervous system (vagus nerve) stimulates activity of the muscular walls of these organs and the sympathetic division (splanchnic nerve) stops this activity, so many exceptions