

This and that; yesterday, today, tomorrow; here and there: a medley.

Wilhelm Foissner

Department of Ecology and Evolution, University of Salzburg, Salzburg, Austria

I thank the Reichenow medal committee for choosing me as an appropriate recipient. I also thank many other people, especially co-workers, former students and reviewers of our grant proposals, who made it possible to do a lot of work during the past 55 years. In my lecture, I shall very briefly inform you on my scientific activities and how I became interested in protists.

When I was thirteen, a teacher showed us some algae and insect pieces in the microscope. This fascinated me so much that I wished a microscope as a Christmas gift. This microscope was very simple but sufficient to keep my interest alive. When I was 17, I bought a better microscope and began to concentrate on protists, especially ciliates because I found a protocol for silverline preparations. Suddenly, these small creatures, which looked rather pale and unstructured, became full of details and beautiful. However, Klein's silver method rarely gave good preparations. Thus, I tried to improve it and was successful resulting in my first publication in 1967. Fortunately, Dr. Bruno Klein, who discovered silver impregnation of ciliates, was still alive and became my teacher. Thus, I studied the nature of the silverlines and was the first who investigated silvered ciliates with the electron microscope. This showed that they were associated with fibres or the epiplasm. These studies showed that the silverlines are more than simple precipitations between the cortical alveoli. Still, the chemical nature and function of the silverlines are unknown.

During this time, I became fascinated by the diversity and beautiness of the ciliates and recognized that there were many poorly described and undescribed species. Thus, my doctoral dissertation was on diversity and ecology of ciliates in alpine ponds. As a post-doc, I became engaged in soil protists which were poorly known, most being the same as in polluted rivers and activated sludge. However, soon I recognized that this is incorrect and soil is full of undescribed protists.

Compared to the traditional way of studying protists by live observation, silver impregnation and, later, molecular characterization became a prerequisite for publication in international journals. But applying all these methods is time consuming and the descriptions become much more detailed and longer. These studies showed that soil protists are not cosmopolitan, as supposed by ecologists, but one third of them have a restricted distribution.

Now, I am 68 and have described about 700 new ciliates and authored or co-authored 12 books and monographs. However, I still have about 150 undescribed species in my folders sufficient for further 10 years.