

Laboratory of Hydrobiology Institute of Ecology Polish Academy of Sciences. Head: dr Zdzisław Kajak. Address: Pracownia Hydrobiologii Zakładu Ekologii PAN, Warszawa, Nowy Świat 72.

The laboratory is concerned with scientific research but also discharges certain educational functions, such as the direction of research for the Master's degree as well as students' training.

At present the laboratory consists of five scientific workers and two scientific technicians.

The main research themes of the laboratory are the examination and analysis of the factors and mechanisms regulating abundance of populations and biocenoses and determining productivity in aquatic ecosystems.

The objects of research are the following ecological systems: populations, associations of species belonging to the same taxonomic group, biocenoses or communities of a biocenotic character (e.g. plankton, benthos, periphyton), as well as aquatic ecosystems.

The specialities and interests of particular workers are as follows:

Anna Hillbricht-Ilkowska, M. Sc.: factors determining the abundance and productivity of zooplankton (mainly *Rotatoria*); problems of succession in aquatic systems.

Zdzisław Kajak, Dr.: factors determining the abundance and productivity of benthic organisms (particularly *Tendipedidae*); attempts at experimental control of the numbers of benthic animals under natural conditions.

Ewa Pieczyńska, M. Sc. (from Chair of Evolutionism and Animal Ecology, University of Warsaw, collaborates with the laboratory) — factors determining the development of periphyton (particularly *Nematoda*); productivity of periphyton.

Eligiusz Pieczyński, M. Sc.: factors determining the changes in numbers and dominance-interrelationships of *Hydracarina* from various aquatic environments; the abundance and activity of the fauna from various lake environments; problems of seston in lakes.

Irena Spodniewska, M. Sc.: factors determining the abundance and interrelationships in phytoplankton and algal periphyton.

Anna Stańczykowska, M. Sc.: factors determining the abundance and interrelationships of aquatic molluscs.

At present the main research is concentrated upon Mazurian lakes. The laboratory has at its disposal a boat with an out-board motor and two kayaks as well as an adequate supply of field apparatus for taking samples. During the periods of field work, the laboratory uses facilities of the Hydrobiological Station at Miłkołajki.

The first investigations by group of workers that later formed the laboratory's staff, were begun in 1950, together with the Institute of Inland Fisheries, on lake Tajty. The aim of this research was to estimate the abundance of the fauna from

various lake biotopes and to examine the relation between this fauna and the fishes.

In 1952—1955, the stagnant waters and river-side pools of the Wisła were investigated in order to determine quantitative changes of organisms and their causes in these environments as well as to estimate the significance of these river-side pools for fishery management in rivers.

In 1955 and 1956 research was carried out on the factors determining the occurrence and abundance of *Viviparus fasciatus*. Other group of workers carried out in co-operations with the Institute of Inland Fisheries extensive investigations on many Mazurians lakes in the Węgorzewo region, the aim of which was to elucidate the relationship between fish production and the abundance of the invertebrate fauna.

Starting from 1957 some works were carried out on lake Wilkus as well as on other Mazurian lakes.

In 1959, together with the Hydrobiological Station, the lakes situated in the drainage area of the river Krutynia were investigated in order to elucidate the relationship between environmental conditions (particularly hydrochemical ones) and the profundal benthos and the littoral fauna.

Simultaneously with these lake investigations, in 1958—1960 two workers studied the plankton (phytoplankton and *Rotatoria*) of the experimental fish ponds at the Experimental Fish Pond Station, Żabieniec near Warsaw; they investigated the influence of fish-stock density as well as of pond age on plankton.

In preparation for group research on lake productivity in 1963 and the following years preliminary investigations were begun in 1960 mainly on research methods including extensive field experiments.

Z. Kajak