

PROFESSOR VLADIMÍR RYPÁČEK

Corresponding Member of the Czechoslovak Academy
of Sciences, at sixty

October 10, 1970 will be the sixtieth birthday of Professor (RNDr. and PhMr.) Vladimír Rypáček DrSc., Corresponding Member of the Czechoslovak Academy of Sciences, holder of the Klement Gottwald State Prize professor of plant physiology and anatomy, head of the Research laboratory of plant physiology and anatomy of the Faculty of Science and vice-rector of J. E. Purkyně University in Brno. We wish, on the occasion of his life's jubilee, to recapitulate the results of his scientific work to date and discuss his merit in connection with the development of Czechoslovak plant physiology.

Vladimír Rypáček was born in Okrouhlá Radouň in south Bohemia, graduated from high school in Jindřichův Hradec and completed his studies at Charles University in Prague. In 1934 he graduated as a Doctor of Science (RNDr.) and the following year he went to Brno, where he began work as an assistant to professor V. Úlehla at the Faculty of Science. His developing scientific work was interrupted by the 5-year shut-down of Czechoslovak universities. In 1945, after their re-opening, he received the *venia docendi* for specialization in plant physiology. When Professor Úlehla died in 1947, Dr. Rypáček was entrusted with the direction of the Institute of Plant Physiology and Anatomy, which he gradually built up. He directed its pedagogical activities concerned himself with personnel and material development and formed its scientific profile. In 1952 he was appointed to the position of professor of plant physiology and anatomy.

In 1956, at the Faculty of Science of J. E. Purkyně University, a Laboratory of plant physiology and anatomy was founded under his care and he became its director. In 1958 he received the title of Doctor of Biological Science. His growing importance and the results of his scientific and pedagogical work were appreciated in 1965 when Dr. Rypáček was elected to the position of member-correspondent of the Czechoslovak Academy of Sciences and received the Klement Gottwald State Prize.

The first scientific work of Prof. Rypáček was concerned with lichenology. He was interested chiefly in the regulatory abilities of lichens; later, however, he extended his study to other plant tissues. He considers the ability of living organisms to regulate the acidity of their environment as an important manifestation of vitality. In addition to new histochemical methods, the most important contribution of this work was the discovery of changes in the course of regulatory curves resulting from dying off in plant tissues.

After the Second World War, Professor Rypáček embarked on a new trend of scientific work, the study of the physiology of wood-destroying fungi. The sources of interest in this area of biology lay in his previous lichenological papers in which he dealt with the study of isolated lichen fungi, and in his study of lignified cell walls. He is the author, co-author and inspirator of a series of publications in which the physiology of wood-destroying fungi is studied in connection with their natural substrates. A bibliography of these papers completed since 1948 at the Department of plant physiology and in the Research Laboratory of Plant Physiology and Anatomy of the Faculty of Science of the University at Brno is compiled in a special list (*Folia facultatis scientiarum naturalium universitatis purkynianae brunensis* XI (5), 1970). The origin of, and necessary condition for these works was the foundation of a collection of cultures of wood-destroying fungi, which was gradually expanded. Its existence made possible an extensive study of inter-specific relationships of fungi, which together with the study of effects of other components of from wood flora and micro-flora, resulted in the wide-spread solution of problems related to the biological preservation of wood.

Besides this stream of research, Professor Rypáček was also involved in the study of the effect of wood-destroying fungi on the ultrastructure and physical and chemical properties of wood. From these papers a new field of scientific interest was opened up — the broad conception of the study of the humifying effect of these fungi. In connection with this question his attention was drawn to the production by these organisms of some oxidative enzymes, once considered as biocatalysts in humus formation. He was trying to obtain detailed information about the biological effectiveness of humus compounds, particularly in relation to the steps in their synthesis. Owing to his broad spectrum of interests, he introduced many modern methods to his laboratory: spectrophotometry, gas chromatography, the electron spin resonance method, sensitive biotests and special methods of experimental morphology.

Professor Rypáček's monograph "Biology of Wood-Destroying Fungi" is a comprehensive review on the subject of his studies; it was first published in 1957. In 1966 it was translated into German and published in the German Democratic Republic in an enlarged and revised edition; in 1967 it was published in Russian in the U.S.S.R.

Professor Rypáček has become involved in intensive activities as an organizer; in particular, he took part in the organization of the international symposia "Humus et Planta" (1961, 1965, 1967) and in the preparation of "International symposium on trends in the basic investigation of wood", for which he worked out directives for investigation in the area of formation and biological destruction of wood. He is a member of several scientific societies in Czechoslovakia and abroad, *e.g.* The International Peat Society, where he represents Czechoslovakia as a member of the executive committee, and the International Society for Research on Moor. His scientific connections and cooperation with the Polish Peoples' Republic are very strong, as evidenced by the fact that he is an honorable member of the society *Polskie towarzystwo botaniczne*.

An important part of Professor Rypáček's activity is his pedagogical

work. More than 20 post-war classes in biology of the Faculty of Science in Brno heard his lectures on plant physiology. Many of them attended his seminars and for some of them he was advisor during their post-graduate and doctoral research work. His pupils can be met in important positions in universities and other scientific institutions. He participated in the curriculum plans for biology in Czechoslovak universities. He is a member of scientific and pedagogical commissions, both nation-wide and within the University. He was the dean of the Faculty of Science in Brno and is now vice-rector of J. E. Purkyně University. For his services he was awarded the J. E. Purkyně University silver medal.

Because of his scientific and pedagogical work, Professor Vladimír Rypáček is ranked among the leading personalities in Czechoslovak plant physiology. Many factors have contributed to this position: not only his broad range of vision and scientific qualities, but also his abilities as an organizer and his relationship with his pupils and colleagues.

We wish that Professor Rypáček may continue in health to use all his power and abilities, not only for the direction and development of his place of work, but also for the flowering of all of Czechoslovak plant physiology.

Doc. RNDr. Vladimír Tichý CSc.