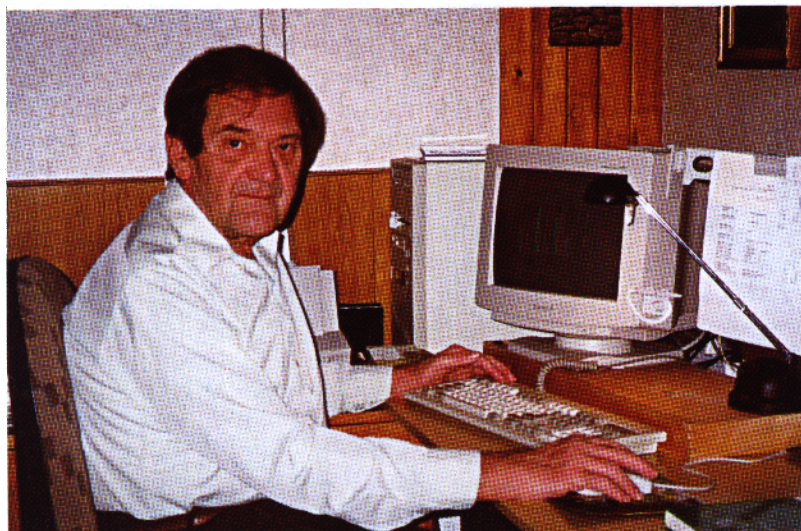


Jiří Čatský

Editor-in-Chief of *Biologia Plantarum*

septuagenarian



Jiří Čatský was born on 27 February 1932 in Prague. Already during high school years he has been interested in plant science. This is why he started in 1951 to study botany at the Biological Faculty of Charles University in Prague. His first research interest was in the chemical and physical effects of oxyhumolites on soil and on plant growth. His thesis "The Effect of Humus-Containing Brown Coal (Capuchines) on Mineral Nutrition of Plants" was supervised by Professor Silvestr Prát, and by Dr. Josef Vávra, Assistant Professor at the Chair of Plant Physiology. During the university studies he also took part in the not really legal circle of young plant physiologists organised by Dr. Ivan Šetlík, PhD., since that time the leading person of photosynthesis research in Czechoslovakia. This contact started his future interest in photosynthesis.

In 1956, Jiří started his research activity in the Institute of Biology of the Czechoslovak Academy of Sciences in Prague. He worked in the Department of Plant Physiology lead by Dr. Rudolf Řetovský, in the laboratory of Dr. Bohdan Slavík, PhD. The main research interest of Slavík was water relations in plants, and hence Jiří moved from oxyhumolites (which, according to my opinion, he did not love too much) to water relations. In his PhD. thesis, Jiří reported on ontogenetic changes in water-relations traits, and on the preference given to water supply to young leaves in the wilting plant. For this study, he proposed a simple method of calculating plant water saturation deficit, or relative water content, using isolated disks of leaf tissue. In 1961, Jiří successfully defended the PhD. thesis "Problems of Water Relations in Plants", and obtained his PhD. degree in Plant Physiology, and later, the title RNDr. (1967).

*Together with the progress of research topics of Slavík's group also Jiří continuously leaned more and more toward photosynthesis, which finally became his main research field. He worked several months (1958) with the world-known researchers in photosynthesis, Professors A.A. Nichiporovich, and O.V. Zolenskii (Academy of Sciences of the USSR, Institute of Plant Physiology, Moscow, and Botanical Institute, St. Petersburg). In 1960s, the development of proper methods for studying photosynthesis was one of the very important questions. Together with Dr. Slavík, Jiří developed a colorimetric apparatus appropriate for routine measurement of photosynthetic rate in the field that was then widely used in Czechoslovakia and abroad. For this work, he received together with Slavík, gold and silver medals from exhibitions of equipment used in agricultural research in Kiev, Budapest, and Prague. In 1963, Jiří participated in construction of one of the first gas exchange systems with infra-red gas analysers operating in differential mode. Many of these methodological improvements, Jiří reported in the Slavík's book on methods used in water relations studies, appeared firstly in Czech, and then, in a completely revised version, in English (Academia, Prague 1965 and 1974, respectively). Jiří also co-edited a book of methods for studying photosynthesis written in Czech [Z. Šesták, J. Čatský (ed.): *Metody Studia Fotosyntetické Produkce Rostlin*. Academia, Praha 1966].*

During his two-years' stay (1968-1970) in the laboratory of Dr. Philippe Chartier (Station de Bioclimatologie, Institut National de la Recherche Agronomique) in Versailles, Jiří contributed—among others—to verifying Chartier's

model of leaf photosynthesis, and to development of measuring systems using infra-red gas analysers. His achievements were used in the English, completely new, version of the book of photosynthetic methods [Z. Šesták, J. Čatský, P.G. Jarvis (ed.): *Plant Photosynthetic Production: Manual of Methods*. Dr W. Junk Publishers, The Hague 1971]. This first existing photosynthetic manual became the basic one in the 1970s as demonstrated by over 1 000 references found in the literature and has been used until now. Unfortunately, in the following decade the access to new commercially produced apparatuses was fairly limited in the Communist Czechoslovakia, and thus the preparation of a successor manual was overtaken by Prof. H.R. Bolhár-Nordenkamp of Vienna and his friends.

Nevertheless, the research topic of Jiří was much broader than dealing only with methods or with the effects of water relations of plants on their photosynthetic and respiratory activities and primary production. In the newly (1962) established Institute of Experimental Botany the effects of leaf and plant development on photosynthetic activities, from pigment contents and gas exchange to activities of photosystems and carboxylases, were studied in our Department. The good impact of these studies (Jiří lead the gas exchange part) was that this developmental factor (including ageing) is no longer neglected in photosynthetic studies of all kinds, even if some authors do not cite our pioneering papers (this often means that the conclusions already became part of general knowledge). The acquaintance with questions connected with agricultural and bioclimatological studies in Versailles certainly influenced also further research topics of Jiří: biotechnology (acclimation and adaptation reactions of plantlets grown in vitro, photosynthesis of transgenic plants) or application of phytohormones that might affect production of sugar beet and amount of products used in human food. List of original scientific papers, reviews and chapters in books written by Jiří contains till today more than 130 items.

In 1960s to 1980s Jiří participated also in the co-operation of photosynthesis research in countries of the so-called Comecon (Council of Mutual Economic Aid). This co-ordination of photosynthesis research was founded by Prof. A.A. Nichiporovich of Moscow, well-known due to his studies of the role of photosynthesis in agricultural production. The co-operation was realised mainly by yearly informative meetings organised in various countries of the Communist block. Its advantage was that we were excellently informed on the recent developments in photosynthesis research in the six participating countries (the contacts with the so-called Western countries, especially our participation at meetings and congresses, were much more difficult in these times). This all lead to close co-operation in studies of leaf photosynthesis with relative institutions in Sankt Peterburg, Russia, and in Gatersleben, Germany. For these activities, Jiří with his colleagues won the Prize of German and Czechoslovak Academies of Sciences in 1987, and Awards of Czechoslovak Academy of Sciences in 1962 and 1968. Research organisational activities of Jiří include also his function as a Secretary of the Scientific Council of Theoretical Bases of Agriculture of the Czechoslovak Academy of Sciences, a function in which he helped in the years 1961-1968 to the development of Czech plant physiological and genetic research. He was vice-president of one section of the Grant Agency of the Academy of Sciences of the Czech Republic (1992-1996).

Jiří has always been very active in publishing science: he helped to launch the international journals published in the Institute of Experimental Botany, namely *Biologia Plantarum* in 1959 and *Photosynthetica* in 1967. From the very start he has been a very active member and reviewer of the Editorial Board of *Photosynthetica*. In *Biologia Plantarum*, he joined the Editorial Board as Executive Editor (1970-1990), and after the velvet revolution, Jiří has been acting from 1990 as Editor-in-Chief of this journal. In 1983-1997 he was also member of the Editorial Boards of scientific journals *Agronomy*, and *European Journal of Agronomy* published in France and in The Netherlands.

From 1974 to 1998 Jiří co-edited also the book series "Photosynthesis Bibliography" (published originally by Dr W. Junk Publishers in The Hague, then by SPB Publishing in Amsterdam, and finally by the Institute of Experimental Botany of the Academy of Sciences of the Czech Republic). Its 25 volumes contain 104 874 references to literature in all fields of photosynthesis research and are accompanied by detailed indexes. A parallel more specialised bibliographic series published in the journal *Photosynthetica* and produced by Z. Šesták and J. Čatský "Bibliography of reviews and methods of photosynthesis" has 85 parts till now.

Last but not least the activities of Jiří as tutor of undergraduate and post-graduate students must be mentioned. He helped all of them to produce experiments and theses as good as possible.

Private interests of Jiří include photography (he even participated in some competitions), amateur film and video, music and theatre, travelling, and also mushroom picking (being helped in this hobby by his wife Vlasta, scientist in microbiology and mycology), and steady technical improvements of his house situated on the outskirts of Prague. Unfortunately, the years 1965-1967 have been also connected with suffering from his asthma, now compensated by rather complicated medical treatment. Happily enough, his only daughter Jana is a medicine doctor, and by her help he shall certainly live very many years to come.

All colleagues and friends wish him on this occasion better health and continuation of successful scientific and editorial career.

Zdeněk ŠESTÁK (Praha)