The Sixtieth Birthday of Academician OTTO JÍROVEC

On January 31, 1967 Academician Otto Jírovec, member of the Czechoslovak Academy of Sciences and professor of the Charles University in Prague, celebrated in full activity and vigour his sixtieth birthday as well as the 40th anniversary of his scientific career in the fields of parasitology, zoology and general biology. Because of his extensive scientific work he has become the leading personality of Czechoslovak parasitology and one of the outstanding representatives of Czechoslovak biology, well known in scientific circles of the world.

A native from Prague, he began his studies at the Natural Sciences Faculty of the Charles University in the winter semester of 1924—1925, taking natural history and chemistry as his main subjects of study. He graduated in 1929 and received his doctor of natural sciences degree, based on his thesis "A study on trypanosomes without blepharoplast", which he accomplished under the guidance of Prof. Dr V. Breindl and docent Dr J. Hahn and which closed his scientific studies at the Zoological Institute of the Natural Sciences Faculty. Having taught natural history and chemistry at the State secondary school in Břeclav for a short while, he then returned to Prague in 1933 and took the post of assistant at the Zoological Institute of the Natural Sciences Faculty, Charles University. On the basis of his extensive study on microsporidia he qualified to become university lecturer in parasitology at the same faculty in 1938.

During the pre-war years his activities were mainly centred on hydrobiological problems and on certain subjects concerning *Sporozoa*, *Difusoria*, *Spirochaeta*, as well as on studies concerning silver fibrilles in *Protozoa* and cytological studies on nuclear reaction. He worked on the effect of radiation upon *Protozoa*, on the fauna of the digestive tract of the termite *Calotermes lucifugus*, on parasitic *Protozoa* (mainly *Microsporidia*) of the class *Oligochaeta*, etc. His papers dealing with general and special protozoology were published in numerous foreign journals and contributed to the development of protozoology as a science. He was also engaged in

solving some important problems in insect pathology. For example, together with Breindl he proved that in the insect viruses the polyedral bodies occurring in the moth *Lymantria dispar* contain DNA and experimentally he induced mortality in 14 species of insects by using a pure culture of *Tetrahymena pyriformis*, etc.

He collected material for his studies during his travels in this country and abroad. In 1928 he worked at the maritime station in Villefranche s/M, at the hydrobiological station in Plön (Holstein) where he acquired a knowledge of the latest hydrobiological techniques (under the guidance of Prof. A. Thienemann and Prof. Lenz); in 1931 he visited the biological station at Lunz in Austria (Prof. Dr Ruttner), etc. A number of his papers on hydrobiology originated during his sojourns at Czechoslovak biological stations at Lnáře, Černé jezero in the Šumava mountains, Lednice, Šamorýn, Doksy, etc.

Since the very beginning of his scientific career Otto Jírovec showed a special interest in parasitology. At that time parasitology in Czechoslovakia belonged to the neglected scientific fields. Despite the fact that some outstanding scientists such as Lambl, Drbohlav, Mrázek and Jankû worked in this field, Czechoslovak parasitology had neither tradition nor development as a science until then.

Not until the thirties Jírovec began to occupy himself systematically with parasitology, following in the footsteps of other professors at the Zoological Institute of the Natural Sciences Faculty, Charles University. He was the first in this country to demonstrate the importance of parasitology and he developed the parasitological protozoology to a scope never achieved before. He gained valuable experience by visiting, in 1931, institute in Hamburg (Institut für Schiffs- und Tropenhygiene) and Paris (Institut Pasteur, Professor Brumpt's laboratory). His papers dating from this period were important for the knowledge of endoparasites of man and of some free-living animals in Czechoslovakia. He published a number of articles elucidating parasitological problems, specially the harmful effects of parasites on man and domestic animals. These problems were summed up in a book entitled "Parasites of man from the animal realm". However, his extensive activities at the university ended after all universities and colleges were closed by the Nazis who had occupied Czechoslovakia in 1939.

After the second world war O. Jírovec resumed his work at the Zoological Institute of the Natural Sciences Faculty, Charles University, where he established a parasitological department. His scientific enthusiasm attracted the interest of young naturalists in parasitology and won them over for this field of study. In subsequent years this parasitological department educated a score of parasitologists and largely participated in postgradual education of biologists and physicians in clinical parasitology. After 1945 the basic conditions for the development of parasitology in Czechoslovakia were most favourable, because in all socialist countries parasitology has been regarded as a science which is helping the public health service to carry out measures for the protection of the population from communicable diseases, as well as for the environmental sanitation and which is indispensable to agriculture as a basis for the increase of animal production.

The period after 1945 marks the extensive and basic research conducted by Jírovec mainly on human parasitology. He and his co-workers (Peter, Šebek, Málek, Ptáčková etc.) were engaged in the study of trichomoniasis and vaginal fluors. This teamwork provided a background for the new classification of vaginal fluors into 6 classes and for the introduction of effective treatment of these fluors by means of the new preparations Triflocid and Fluocid. These studies finally resulted in comprehensive papers on vaginal biocenosis.

In 1947 Jírovec was appointed professor in parasitology at the Charles University in Prague. In this period he studied, besides the problems of *Trichomonas vaginalis*, the distribution and biology of leptospires in Bohemia and Moravia and was the first to use the protozoon *Tetrahymena pyriformis* as a test object in pharmacology and in the study of the effects of antibiotics. As for helminthoses, he studied the distribution and chemotherapy of oxyuriasis in Bohemia and Moravia, the treatment of taeniasis with atebrin, etc.

In 1953 O. Jírovec and J. Vaněk were awarded a State prize for the discovery or the causative agent of the so-called intersticial plasmocellular pneumonia in infants and for the proposed effective treatment of this disease. This discovery attracted the appropriate attention of parasitologists and physicians both in Czechoslovakia and abroad and the discovered pathogen — *Pneumocystis carinii* — has become the object of further profound research. Jírovec's studies have become a basis for the research of pneumocystosis as a new nosological unit among important parasitoses of man living in the temperate zone. His contributions to the improvement of diagnostic methods in toxoplasmosis, to the elucidation of possible toxoplasmic etiology and pathogenesis of some chronic human diseases, to the problem of therapy of post-natal toxoplasmosis etc., have been generally recognized. At present he continues his research of epidemiology and pathogenesis of toxoplasmosis, he is also working on the problems of standardization methods used in human clinical parasitology, etc.

O. Jírovec is the author or co-author of more than 200 scientific papers and of nearly the same number of popular scientific and special articles.*) He wrote the first Czechoslovak textbooks on parasitology: Parasitology for Physicians, Parasitology for Veterinarians, and Protozoology (in Czech). His textbook in German language "Parasitologie für Ärzte" (Fischer Verlag Jena) and the publication by Engelbrecht, Jírovec, Nemeséri and Rosický "Parasitologische Arbeitsmethoden" (Akademie-Verlag, Berlin) have received considerable attention in parasitological circles. His book "Zoological Techniques" (in Czech and Slovak) has reached several editions. He edited a number of parasitological and zoological publications and is chief editor of the journal Věstník Čs. spol. zoologické, member of the editorial boards of Folia parasitologica, Journal of Protozoology, Acta protozoologica and other scientific periodicals.

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*) A bibliography of his papers is given in detail in: Fendrych M., Bibliography of Czechoslovak parasitological literature until the end of 1961. Publ. House Czech. Acad. Sci, Praha 1966.

When the Czechoslovak Academy of Sciences was founded in 1952, O. Jírovec was elected corresponding member and in 1955 academician. He held a number of important posts at the Academy: he was scientific secretary of the biological section, head of the biological-medical section and member of the presidium. It was on his initiative that as early as 1950 a parasitological department was established at the then Central Biological Institute and a Protozoological Laboratory was affiliated to the Czechoslovak Academy in 1954. At present he is director of the Zoological Institute of the Charles University in Prague, member of the scientific collegium for special biology of the Czechoslovak Academy of Sciences, chairman of the Czechoslovak Parasitological Society and member of the presidium of the World Federation of Parasitologists.

His scientific activities have been widely recognized in the world: he has been awarded honorary doctorates of the Medical Faculty of the Humboldt University in Berlin and of the Natural Sciences Faculty in Clermont-Ferrand; he is Fellow of the New York Academy of Sciences, honorary member of the Polish Parasitological Society and of the Parasitological Society in the German Democratic Republic.

Concluding this brief article on the scientific, organisational and pedagogical activities of O. Jírovec, we must pay tribute to his efforts in the development of human and clinical parasitology of the temperate zone. He is one of the parasitologists who have proved the expedience and economic importance of parasitological studies relating to public health and to veterinary problems as existing in nontropical regions. In this year of his double anniversary the editorial board of Folia parasitologica wishes Otto Jírovec many happy returns of the day and further new scientific successes for the sake of the development of parasitology and the protection of health of man.

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