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A SHORT SCIENTIFIC BIOGRAPHY OF TIBOR JERMY

Birth of place and year: Lőcse (today in Slovakia), January 31, 1917
Nationality: Hungarian

Education and scientific degrees

1935–1940	University of Péter Pázmány, Faculty of Arts and Sciences, Eötvös College
1940	Secondary grammar school teacher's diploma
1942	Ph.D. "Sub laurea Almae Matris" in Zoology
1952	Candidate of Science in Agriculture
1973	Doctor of Science
1976	Corresponding member of the Hungarian Academy of Sciences
1985	Ordinary member of the Hungarian Academy of Sciences

Fellowships and positions at host institutes

1966–1967	Ford Foundation Fellow, University of Pennsylvania, Dept of Biology
1971	Visiting Scientist, Agricultural University, Wageningen, Holland
1978–1979	Visiting Scientist, USD Agricultural Research Laboratory, Yakima, WA

Positions held at Hungarian institutes

1940–1949	Chemist, National Institute for Ampelology, Budapest
1949–1969	Research Scientist, Senior Research Scientist, Head of Department of the Plant Protection Institute
1969–1978	Director of the Plant Protection Institute
1978–	Director Emeritus

Awards

1975	"Horváth Géza" Gold Medal of the Hungarian Agricultural Association
1976	"Frivaldszky Imre" Gold Medal of the Hungarian Entomological Society

1977	Gold Medal of Order of Labour
1983	State Prize
1992	Gold Medal of the Hungarian Academy of Sciences
1993	Dr. honoris causa, Pannon Agricultural University, Keszthely

Scientific societies

1969–1977	President of the Plant Protection Society of the Hungarian Agricultural Association
1977–	Honorary President of the Plant Protection Society of the Hungarian Agricultural Association
1969–1972	President of the Hungarian Entomological Society
1977–	Steering Committee Member of the Hungarian Entomological Society
1980–1987	Vice President, Department of the Biological Sciences of the Hungarian Academy of Sciences
1987–1990	President, Department of the Biological Sciences of the Hungarian Academy of Sciences
1990	Foreign member of the American Philosophical Society, Philadelphia, USA
1992	Honorary member of the British Ecological Society, UK

International organizations

1969–1977	Coordinating Centre for Plant Protection, Comecon Council of Accredited Members
1973–1984	Invited member to the Technical Advisory Board
1976–1992	IUBS, Hungarian National Committee member
1976–1985	UNESCO, Man and Biosphere Program, Hungarian National Committee member
1990–1991	ESF, Network on Insect-Plant Interactions, Coordination Committee Member
1988–1993	Entomologia Experimentalis et Applicata, Amsterdam, Editorial Board Member
1985–1988	Annual Review of Entomology, USA, Foreign Correspondent

Teaching

Invited lecturer at the Szeged University and at various institutions of the agricultural higher education.

Fields of scientific research

Taxonomy. As a university student he was interested in the taxonomy and biogeography of Diplopoda. His Ph.D. dissertation was published by the Hungarian Academy of Sciences. In later years, he dealt with taxonomy only if the target species of research was dubious. He described two species new to science.

Bionomy. The bionomy investigations on many pest insects of agricultural plants allowed the implementation of modern plant protection procedures, as well as the broadening of theoretical bases of applied entomology. In 1954, he organized a countrywide network of light traps that continues operating until today and provides outstandingly complete series of data on changes of insect populations in time. It also gives indications on long-term ecological changes.

Biological control. During the course of biological control against pest insects, he investigated the basic biology of parasitoids. He attempted the introduction of an American predatory bug against the Colorado potato beetle within the framework of the program launched by the International Biological Control Organization. By the support of the International Atomic Energy Agency, he co-ordinated and participated in experiments done to discover the possibilities and feasibility of autocidal method against three pest insects in Hungary.

Experimental insect ecology. In collaboration with colleagues, he established this area of research poorly known and investigated both in Hungary and abroad at the early 50s. Experiments performed with various insect species proved the importance of the joint effects of photoperiodic length and temperature in inducing diapause and in regulating population dynamics.

Biocenology. In dealing with the theory of terrestrial communities he established an analogy between entropy of inorganic systems and the flux of energy of biocenoses. He introduced the laws of “biocenotic minimum” and the “maximum of biocenotic work". He initiated a 10 years long program for the investigation of two major types of agroecosystems. Both in apple orchards and in maize fields, respectively, a surprisingly high species richness was found and there was a wealth of interactions with the surrounding communities, too. The data gained served the foundation of integrated control methods against pests, as well as allowed understanding of some homeostatic processes of agroecosystems.

Insect behaviour. He demonstrated the importance of sun-compass orientation in food finding of insects. Furthermore, he showed the effects of probability of food finding on the population dynamics of insects. When investigating the chemical sensory mechanism of food specialization of phytophagous insects he outlined the two-way specialization of chemoreceptors. Contrary to the earlier and generally accepted concept emphasizing the exclusive importance of phagostimulatory substances, he pointed out the ultimate significance of feeding inhibitory substances of plant origin determining the food plant spectrum of insect species. This latter finding has formed the basis for the application of substances of natural and synthetic origin having inhibitory effects for plant protection purposes. In collaboration with colleagues, he proved the occurrence of learning processes in phytophagous insects for the first time, by discovering the phenomenon of induced preference.

Evolution. The relationship of the two most species-rich groups of organisms, the plants and insects, as perceived since the middle 1960s, is the result of reciprocal selection between the participants, known as coevolution. By analysing numerous insect-plant interactions, he pointed out that, the evolution of all types of presently known interactions can be interpreted properly only by assuming that plant evolution was followed (but not induced) by the phytophagous insects (sequential evolution).