

To the memory by Vladimir Ivanovich Tobias (1929–2011)**Памяти Владимира Ивановича Тобиаса (1929–2011)**

S.A. BELOKOBYLSKIJ & M.J. SHARKEY

С.А. БЕЛОКОБЫЛЬСКИЙ, М. ДЖ. ШАРКИ

S.A. Belokobylskij, Zoological Institute Russian Academy of Sciences, St Petersburg 199034, Russia.
E-mails: doryctes@yahoo.com

M.J. Sharkey, Department of Entomology, University of Kentucky, Lexington KY 40546-0091, U.S.A.
E-mail: msharkey@uky.edu

This year on July 2th, 2011, the famous Russian entomologist, Vladimir Ivanovich Tobias, passed away at the age of 82.

He was born on July 6th, 1929 in Kineshma, Ivanovo Province, USSR. In 1948 Dr Tobias enrolled as an undergraduate in the Biology and Soil Science Department of Leningrad State University, and graduated there with an honours diploma in 1953. In the same year he started his post-graduate study at the Zoological Institute of the USSR Academy of Sciences, and all his further scientific activities were associated with this Institute. In 1959 he defended his dissertation for the degree Candidate of Sciences on the systematics of the genus *Bracon* (in arid territories of the USSR), and in 1969 he defended his dissertation for the degree Doctor of Sciences on the classification, evolution and phylogeny of Braconidae.

The main research activities of Dr Tobias centred on the systematics of Braconidae, a large family of parasitic Hymenoptera. He began his research studying the genus *Bracon*, one of the largest and most complicated genera of braconids. The keys he compiled, including the published key to subgenera and species of this genus for the faunas of the USSR European part (1986) and of the Russian Far East (2000), remain the definitive diagnostic tools for *Bracon* in the Palaearctic Region. An important accomplishment was his generic revision of the

braconid subfamily Euphorinae, based upon male and female genital structures, and including a thorough analysis of host-parasite relationships (1965, 1966). His suggestion to place a number of taxa, earlier regarded as representatives of separate subfamilies, in the Euphorinae has been confirmed over time, demonstrating his insight and knowledge before the advent of molecular tools. In 1970 Dr Tobias published a generic review of the braconid fauna of the USSR, a significant contribution to the investigation of the diversity of this group of parasitoids in this large region (translated into English in 1975). His next tome entitled “Braconid wasps of Caucasus (Hymenoptera, Braconidae)”, a large and very important investigation of the fauna of this region of the USSR, was published in 1976.

Publication of the two-volume “Key for the Identification of Braconidae of the USSR, European Part” (1986) was the most important synthesis of knowledge of this group of entomophagous insects in this period for Europe and Middle Asia. These volumes were translated into English in 1995 and became manuals for scientists studying this group of parasitoids throughout the world. Another important contribution by Dr Tobias was made (together with co-authors) in compiling the three-volume “Key for the Identification of Braconidae of the Russian Far East” (1998, 2000, 2007). These books were the first summary of the

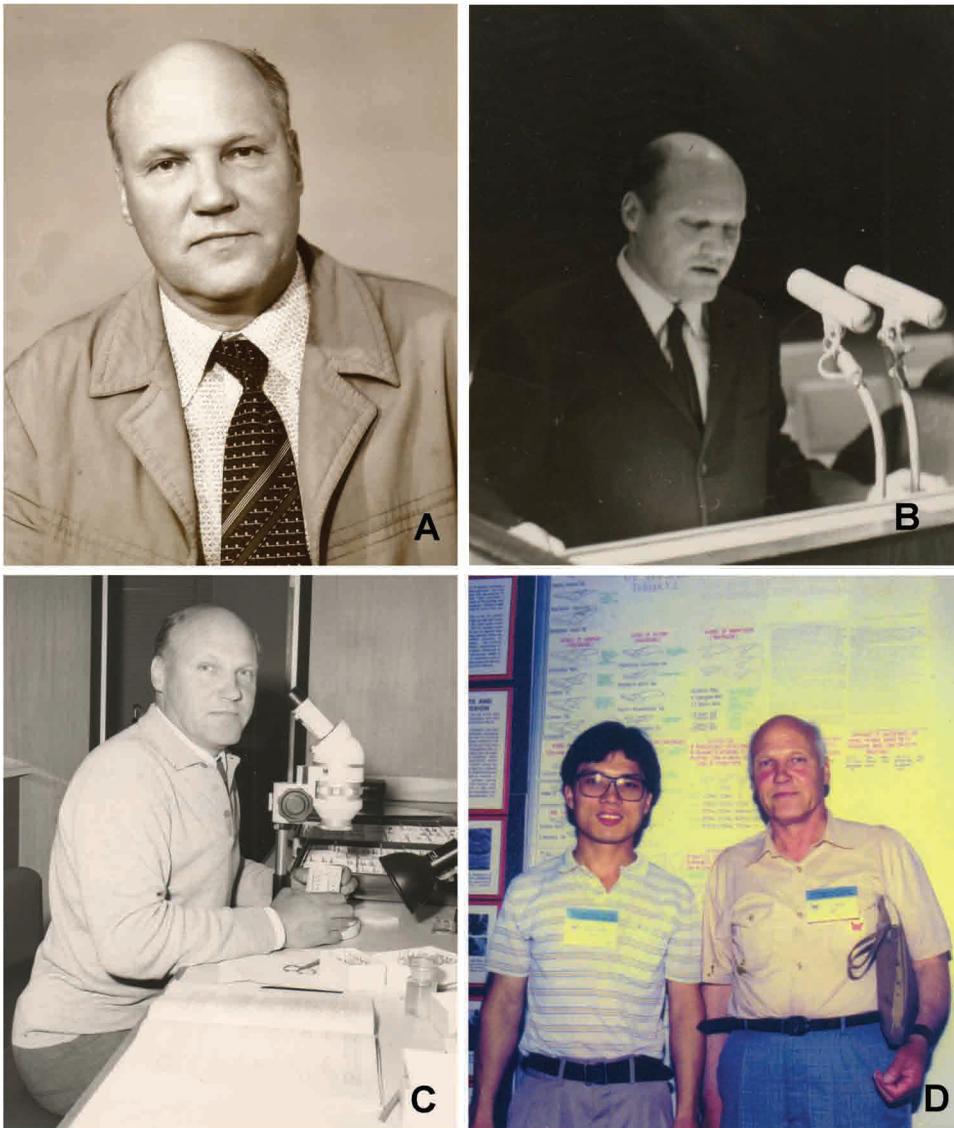


Fig 1. V.I. Tobias. A, private photo, 1981; B, VI Congress of the All-Union Entomological Society, Voronezh, 1970; C, in ANIC, Canberra, Australia, 1979; D, on XIX International Congress of Entomology, Beijing, China, 1992 (with Dr X. Chen).

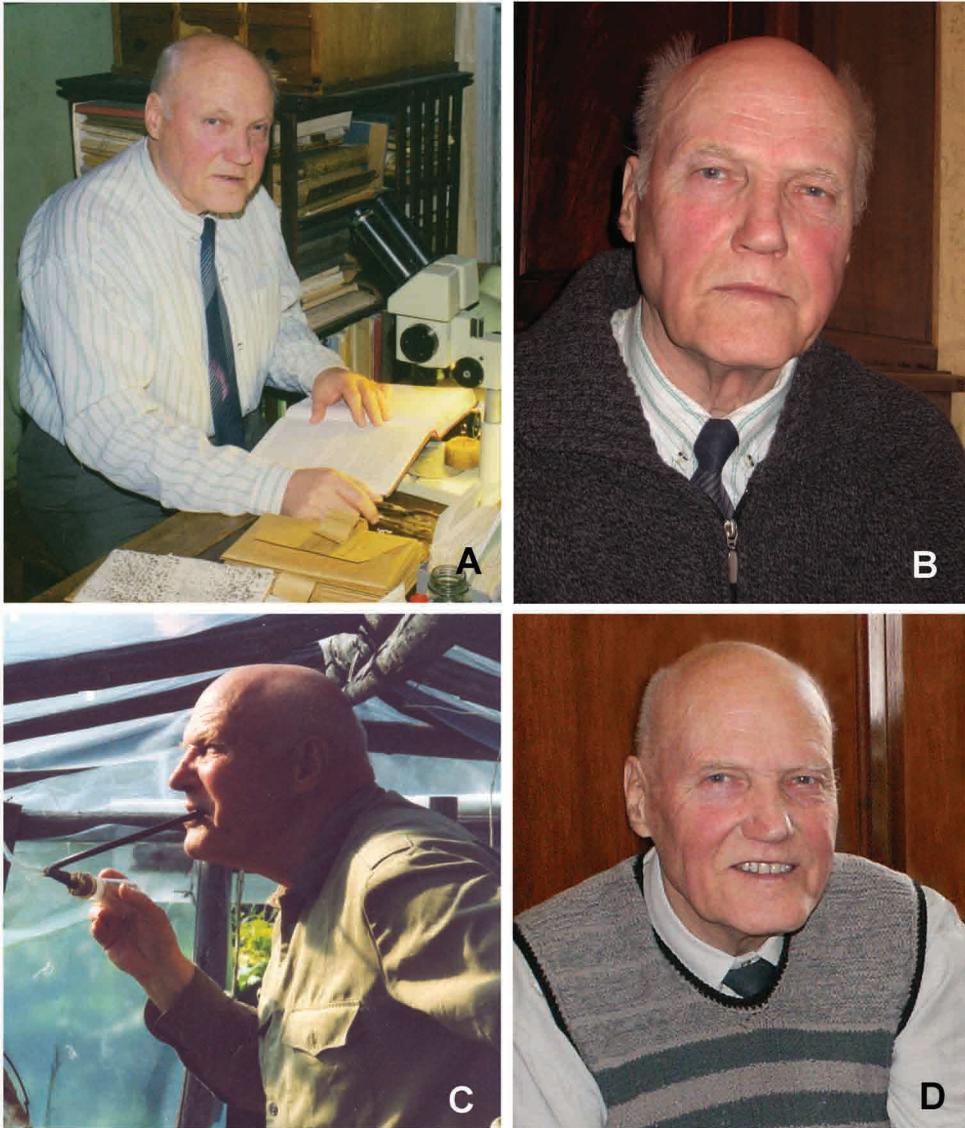


Fig 2. V.I. Tobias. A, on the working place in Zoological Institute RAS, St Petersburg, 2000; B, private photo, 2006; C, collecting of braconids, Tychkino, Novgorod Province, 2003; D, private photo, 2010.

fauna and systematics of Eastern Palaearctic Braconidae. For the last 30 years or so V.I. Tobias studied *Microchelonus* (subfamily Cheloninae), one of the largest Palaearctic genera of Braconidae, of which he described 357 new species! The monograph of *Microchelonus* species of the Palaearctic Region with key to all 434 known species (2010) was his last major book.

Dr Tobias proposed the subfamilies Betylobraconinae (1979), Telengainae (1962), the fossil subfamily Diospilitinae (1987), and raised to the rank of the subfamily, Meteorideinae (1967), Lysiterminae (1968) and the fossil taxon Acampsocheloniae (1987). He described a total of 22 supergeneric taxa, 65 genera and subgenera, and 1585 new species!

Dr Tobias studied phylogenetic relations in the family Braconidae employing Hennig's cladistic method (1967, 1968) and proposed a new classification elucidating the main evolutionary tendencies characteristic of this group. He also studied morphological structures and their evolutionary transformations (male genitalia, metasoma, head and labio-maxillary complexes) for the purpose of assessing their value in phylogenetic analyses. Dr Tobias made an important contribution to the study of swarming (lekking) of braconid males and some other groups of Hymenoptera (1997–2002). He proposed original ideas on the evolution of the ability of parasitoids and wasps to paralyze their hosts, on the evolution of adult behaviour, on the evolution of the body size, and on the function of morphological characters in first instar parasitoid larvae.

Dr Tobias made valuable contributions to the systematics of aculeate Hymenoptera, and published keys for the identifi-

cation of wasps of the families Scoliidae, Tiphidae, Sapygidae, Pompilidae, Vespidae and Eumenidae of the European part of the USSR (1978).

In total he published 303 scientific works including nine monographs.

Perhaps Dr Tobias' greatest contribution was in mentoring a future generation of systematists. More than 30 theses for the degree of Candidate of Sciences (= D. Ph.) were defended under his supervision, and many of his disciples continued and obtained the degree of Doctor of Sciences. For many years Dr Tobias taught a course on entomophagous insects in the Entomology Department of Leningrad (now St Petersburg) State University and attracted the most talented students to scientific activities and to the study of hymenopteran insects.

Dr Tobias was elected Secretary of the All-Union Entomological Society in 1960 and since then participated actively in the workings of the Society where he was vice-president since 1970, and President since 2009. Dr Tobias participated in the organizing committees of the 4th to 12th congresses of the All-Union/Russian Entomological Society. He was a member of the Presidium of the Council of the Russian Entomological Society, and for many years he was editor of the Proceedings of the Society and of the Proceedings of the congresses.

Dr Tobias was a person principled in arguments and judgments of a diversity of scientific problems, a talented researcher and supervisor, and an interesting and stimulating companion. He was a man with wide-ranging interests and applied the knowledge he gained to hymenopteran systematics. His death is an irreplaceable loss to science, and to all of his friends, colleagues, and disciples.