

70 YEARS OF THE INSTITUTE OF DENDROLOGY OF THE POLISH ACADEMY OF SCIENCES IN KÓRNIK, POLAND

The beginning of the Kórnik dendrobiological research centre dates from the creation of Kórnik Foundation "Zakłady Kórnickie". This was established by the last owner of the Kórnik estate, Count Władysław Zamoyski, who donated all his property towards the upkeep of the Foundation. Sejm, the parliament of Poland, in a special Act confirmed in 1925 the legal status of Foundation as a national property. By the will of the benefactor, confirmed by the Act of Sejm, a forest biology institution was established and devoted to studies on trees and forests, based on a rich collection of native and exotic tree species in the castle arboretum. First, a research unit called "Kórnik Gardens" was established in 1927 under directorship of Dr. Antoni Wróblewski, an eminent botanist and dendrologist. Based on the scientific activity of the "Kórnik Gardens", the Board of the Kórnik Foundation created a Centre for the Study of Trees and Forests, which officially began its scientific activity on **July 1st, 1933**, and in 1936 the first issue of a new scientific journal *Wiadomości z Ogrodów Kórnickich (News from the Kórnik Gardens)* appeared. Antoni Wróblewski led the Institute till 1939 and under German occupation he worked as a garden-hand till his death in 1944.

The Second World War did not substantially affect the Kórnik Centre. scientific activity and the publication of results had to stop but the dendrological collections survived. After the end of a military activities in this part of Poland, the institution was taken over by Prof. Stefan Białobok in March 1945. A major shake-up took place in 1952. The Centre for the Study of Trees and Forests was transformed into a scientific station with a budget financed from the Polish Academy of Sciences and named first a Centre of Dendrology and Pomology, then a Centre of Dendrology and Kórnik Arboretum, and finally the Institute of Dendrology since 1975. Since 1952 a yearbook *Arboretum Kórnickie* has been published continuously until 2000, when it was replaced by *Dendrobiologia*.

Since the 1950's and 1960's, the classical dendrological and pomological studies were gradually phased out and new research fields were developed in Kórnik such as tree and shrub systematics and chorology, physiology of growth and development, population and biochemical genetics, seed physiology and anatomy and cytology. The Centre and then the Institute Dendrology became internationally recognized by its effective scientific activity. Well known among others are very extensive studies on the woody flora of south-west Asia and the Mediterranean region conducted by a team of researchers led by prof. K. Browicz, which resulted in a 10 volume series *Chorology of Trees and Shrubs in South-West Asia and Adjacent Regions*. The method of seed orchard layout developed by prof. M. Giertych was used in many countries all over the world. Results of prof. B. Suszka studies on forest tree seed storage and dormancy resulted in the construction of very modern facilities in Poland (e.g. Forest Gene Bank in Kostrzyca, Poland) and affected forest tree seed science development in many countries. Prof. B. Suszka was also co-author of a handbook *Nasiona leśnych drzew liściastych: od zbioru do siewu (Seeds of forest broadleaves: from*

harvest to sowing), which was translated into several European languages.

Since the early 1970's extensive research studies began at the Institute of Dendrology in cooperation with the U.S. under US PL-480 grants, and a cooperation with many scientists and scientific centres in different countries was successfully developed. This extensive research activity resulted in many papers published in the most recognized international scientific journals. Also a unique series of monographs entitled *Nasze Drzewa Leśne (Our Forest Trees)* of the most important Polish and European forest tree species was issued in Kórnik (totaling 17 volumes until now). New comprehensive monographs of Scots pine and Norway spruce (*Biologia sosny zwyczajnej – Biology of Scots Pine*, and *Biologia świerka pospolitego – Biology of Norway Spruce*) were published in 1993 and 1998 respectively.

The Institute was headed by Prof. Białobok until 1979, and then by Prof. Władysław Bugała (1980–1995) and Prof. Tadeusz Przybylski (1996–1998). At present the Director is Prof. Gabriela Lorenc-Plucińska. The research activity is being now realized in several Departments in the framework of five general topics: (1) variability of trees and shrubs in their natural ranges, (2) genetic-environmental factors affecting biodiversity and conservation of forest tree gene resources, (3) physiological and biotechnological bases of forest tree reproduction, (4) ecological and physiological consequences of long-term storage of forest tree seed and (5) effect of soil microorganisms on tree and shrub development. Also several grants from the National Committee of Science, General Directorate of State Forests and other commercial institutions support research in the Institute, which currently employs 87 people, among them 41 scientists (18 senior ones).

The Institute of Dendrology closely cooperates also with IUFRO and this relationship began in 1929 when Dr. Marian Sokołowski as representative of Kórnik Foundation took part in the VIIth IUFRO Congress in Stockholm. In 1971 prof. S. Białobok was elected as a leader of the Working Party S2.03-05 "Breeding of Scots pine", and Dr. M. Giertych was elected as a leader of Working Party S2.01-04 "Growth Processes". Since that time an effective scientific cooperation started between the Institute of Dendrology and the IUFRO and 7 scientists of the Institute are currently working as coordinators or deputy coordinators in different Working Parties. The Institute of Dendrology participated in many provenance experiments coordinated by IUFRO and organized many international meetings on different subjects. Several valuable review papers on IUFRO provenance experiments were published by the scientists working at the Institute, and several of them participated in many monographs edited under IUFRO auspices. Two scientists from the Institute were awarded a IUFRO Scientific Achievement Award (W. Chałupka in 1986 and J. Oleksyn in 1990) and three of them are among the IUFRO Distinguished Service Award recipients (M. Giertych in 1996, R. Śiwecki in 1997, and L. Mejnartowicz in 2002).

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