

Brief History of Research Botanical Gardens in Japan- (2) Koishikawa Botanical Garden 2

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Summary

This article follows on from an earlier report with the same title, which appeared in this journal, Vol. 209 No. 7 (2004). In 1897 the Botanical Gardens were renamed the Botanical Gardens, College of Science, The Imperial University of Tokyo, and Prof. Jinzo Matsumura became the first director. In the same year, the laboratories of the Department of Botany moved from the main campus of The University in Hongo to the Botanical Gardens and they coordinately organized a research facility. In 1902, the Botanical Garden received a sibling in Nikko, Tochigi Prefecture, a satellite garden focusing on studies of alpine plants. Nikko Botanical Garden moved to its present site in 1911. During the association of the Department of Botany with the Botanical Gardens until 1935, facilities and collections continuously increased. In 1918, a Laboratory of Genetics was donated to the Department of Botany so that the research activities in the Botanical Gardens soon covered not only plant taxonomy but also plant morphology, paleobotany, plant physiology and plant genetics. At this time the meetings and conferences of the Tokyo Botanical Society (founded in 1882 at the Botanical Gardens and renamed the Botanical Society of Japan in 1932) were regularly held in the building of the Department of Botany. Many important early achievements of botany in Japan were published by the staff of the Department of Botany, such as Tomitaro Makino, Jinzo Matsumura, Manabu Miyoshi (the second director of the Gardens), Bunzo Hayata (the third director) and Takenoshin Nakai (the fourth director). In September 1923, huge earthquakes rocked Tokyo and more than thirty thousand people took refuge in the Botanical Gardens, where temporary shelters were soon built to house 2,354 people from 642 families. This temporary accommodation did not end until January 1925 and resulted in serious damage to the vegetation and plant collection. In 1934 and 1935, all the laboratories of the Department of Botany moved from the Botanical Gardens to the University's Hongo campus as the facilities in the Garden had become outdated. Consequently laboratory work ceased and the old buildings of the Department of Botany were demolished to make way for the present main building of the Gardens, constructed in 1939. However, during World War II the Botanical Gardens suffered from bombing and the main greenhouse and other facilities, excepting the main building and a small greenhouse,

were burned down. After the war, in 1952, the name was changed to the Botanical Gardens, Faculty of Science, The University of Tokyo, and in 1956 Fumio Maekawa, who belonged to the Department of Botany, tentatively moved his laboratory in the Botanical Gardens where it stayed until 1965. In 1972 the Botanical Gardens regained a botanical laboratory and this has been oriented towards systematic botany since 1976. In 1969, the main building of the former Tokyo Medical Collage was dismantled and moved from Hongo campus to Koishikawa, which was opened as the Koishikawa Annex of the University Museum in 2001. At present, the laboratory of Koishikawa Gardens consists of three staff members and some graduate students with the aid of a horticulture section. The main focus of the research is assessment of plant biodiversity, using a multidisciplinary approach. This includes field observations, examination of herbarium specimens, cytological assessment, molecular systematic and molecular population analyses and developmental experiments and mathematical modeling of plant structure. An ongoing program of floristic studies of the South Himalayan region has been maintained for many years, establishing international collaborations, and contributing to an extensive collection of live material for systematic and phylogenetic studies, This has also added many rare and precious specimens to the herbarium collections. Research on endangered plants in the Bonin islands (the 'Japanese Galapagos') is also an important part of the strategy of the garden. Laboratory and practical training for undergraduate students under the care of the staff are carried out on site in the Garden, using the teaching collections, laboratory and herbarium facilities. Research and education are also carried out in Nikko Gardens by two staff members and graduate students with the aid of the horticulture section. Their main interest is understanding the plant 'body plan' and life history in terms of adaptation to abiotic and biotic environmental factors. The Nikko Garden frequently accommodates students and researchers staying for field studies and training in and around the garden. The Herbarium of the University of Tokyo (TI) is one of the major herbaria in Asia and has a worldwide reputation. It houses 1,500,000 specimens including more than 20,000 type specimens, and is one of the key reference collections for the study of East Asiatic and Himalayan plants. In the Botanical Gardens about half of the collection, consisting of pteridophytes, gymnosperms and sympetalous plants, is stored. The Library is specialized to cover the field of systematic botany and consists of three elements, i.e. the original collection of the Botanical Gardens, the books belonging to the Department of Botany which were moved from Hongo campus in 1976, and periodicals of the Botanical Society of Japan. The Friend Society of Koishikawa Botanical Gardens has about 700 members at present.