

WOOD ANATOMY IN CHINA

In May and June of this year I had the privilege to visit the People's Republic of China as a guest of Peking University under the bilateral exchange program between that university and the State University at Leiden, the Netherlands. This visit not only enabled me to lecture and do research on dwarf trees in cooperation with Prof. Dr. Lee Chenglee and Ms. Zhang Xinying and their staff, but also to meet active wood scientists in Beijing (Peking), Nanjing (Nanking), Guangzhou (Canton), and Shanghai.

A detailed account of my personal experiences in the hospitable research communities in China would be out of place here, but some information on the state of wood anatomy may be of general interest. In the following I will also borrow from a survey of history and present developments in wood anatomy in China, compiled by Prof. Ho Tien-shiang from Sun Yat Yatsen University, Guangzhou, on the occasion of the 50th anniversary of the Botanical Society of China this year. I am greatly indebted to Professor Ho for providing me with a draft of his paper, prior to its publication.

In the development of comparative wood anatomy in China Prof. Tang Yao and his pupils take a central place. Prof. Tang published extensively on wood structure and identification over the last 52 years and is still active in this field at the Kunming Botanical Institute of Academia Sinica in Yunnan. As is the case all over the world, wood anatomical knowledge is vital for timber identification and for an understanding of wood quality, and all major research centres for Forest Products I visited have anatomists attached to their staff to comply with these essential needs. There is also a strong interest in the field of structure-property relations, but there is much scope to expand research.

The Forest Academy, embodying eight institutes, represents the main research organisation for forestry and wood science. Two of its institutes located in Beijing are of special interest: the Institute of Wood Industry houses a well-curated wood collection and its staff has expertise in anatomical wood identification; the Forest Research Institute is outstanding in its integrated studies of tree physiology and wood structure in relation to practical forestry problems.

Other aspects such as bark and bamboo anatomy, ontogeny and morphogenesis, and ultrastructure receive attention at several universities and Academia Sinica institutes; yet, expansion in all these fields is badly needed. In all centres of research the process of recovery and reorganisation is still in full progress following the virtual

stand-still of all fundamental research during the decade covered by the Cultural Revolution.

There is certainly a large potential of manpower and great progress can be expected for pure and applied wood anatomy in China in the coming decades. Prof. Ho recognises seven priorities for future research programs: 1. The establishment of a national xyliarium with regional branches; 2. Comparative anatomical studies of all woody species of China as a basis for applied research on structure-property relationships (commercial species) as well as an aid for plant taxonomy and ecological wood anatomy; 3. Timber identification based on a comprehensive perforated card system and the publication of an anatomical atlas of economic timbers; 4. The anatomy of palms and bamboo in view of the economic and botanical importance of these monocotyledons in the flora of China; 5. Cell wall ultrastructure, to be studied in a centre for ultrastructural studies, yet to be established; 6. Age determination in tropical trees (tropical species from the southern part of China constitute a major proportion of the timber of the country); 7. Strengthening of the teaching of wood anatomy.

The climate for stimulating wood anatomy in China seems favourable. The government has embarked on a massive tree planting scheme involving the entire population. Apart from the environmental benefits of this policy, the expected increase in wood production for pulp, particle board and construction timber will create conditions inviting more fundamental research on wood quality including wood anatomy. It will be attempted to establish a permanent cooperation between Prof. Lee Chenglee's department at Peking University and my section in order to promote and internationalise the challenging program of surveying the wood anatomy of all woody species native in China, family by family.

Many of our Chinese colleagues are most interested in the activities of the International Association of Wood Anatomists and would like to become personal members. As in several other countries with currency restrictions, international money transfer is unfortunately impossible. In my opinion IAWA members from countries which do not suffer from monetary restrictions have a responsibility to colleagues from countries like China and should enable them to join IAWA at their expense.

Pieter Baas