

Comments and Communications

A Living *Metasequoia* in China

It is a rare occurrence when a plant genus originally based on paleobotanic records is found to have a living representative. In 1941 the genus *Metasequoia* was proposed and described to take certain species which had originally been described by various paleobotanists as representatives of the genus *Sequoia*; and, strange as it may seem, only 5 years after the group was characterized, a Chinese forester, Mr. Wang-chan, actually discovered three living trees representing an undescribed species of the genus in Szechuan. This discovery was made in February 1946. Later in the year C. Y. Hsueh was sent to Wan-hsien by Prof. Wan-Chun Cheng, of the National Central University of Nanking, to secure additional material. His field work brought the census of the large trees up to about 25 in the vicinity of Wan-hsien.

Intrigued with the possibility of securing seeds of this remarkable species when botanical specimens were received at the Arnold Arboretum early in 1947, a modest grant was made to Dr. H. H. Hu, of the Fan Memorial Institute of Biology, Peiping, in the summer of 1947. With this fund it was possible for Prof. Cheng to send a third expedition to the type locality in the fall of 1947, the leader of this expedition also being Mr. Hsueh. He spent about three months in the field, brought the census of the large trees up to over 100, and—what is most interesting—secured a quantity of seeds. He returned to Nanking early in December, and the first shipment of seeds of this new living species of *Metasequoia* reached the Arnold Arboretum on January 5, 1948.

Mr. Hsueh's field work in 1947 brought out the fact that the species actually extends into adjacent parts of Hupeh Province. This is a region not exactly unknown to European botanists, for at least two very keen collectors had traversed the region, one in the last century, the other in the early part of the present one. The large trees occur as widely scattered individuals over a distance of at least 100 miles, the Shui-sa-pa Valley in Hupeh taking its name from the local name of the species, *shui-pa* (*shui*=pine). We have no information, as yet, as to what the reproduction of the species may be, but the large old trees are very widely scattered. It is clear, however, that this sole living representative of a very ancient genus is now apparently on the verge of extinction. Seeds have already been distributed to selected institutions in various parts of the United States and Great Britain, and it is hoped that, somewhere, we may be able to establish the species in cultivation. A larger supply of seeds is expected in the near future.

Metasequoia, or its immediate ancestors, developed in Mesozoic times, when the animal life of the globe was dominated by the long-extinct giant reptiles. Like *Sequoia*, it was formerly of very wide distribution in the

North Temperate Zone. To it has been transferred several paleobotanic species originally placed in *Sequoia*, from North America, Japan, Saghalien, and Manchuria. But the one living species now persists in a limited area in China, even as the two species of *Sequoia* persist in limited areas in California, last stands of ancient and formerly widely distributed types. It is suspected that the chances of this species persisting much longer in this, its last stand, are not too promising.

The discovery of a living representative of *Metasequoia* is an event of extraordinary interest to both botanists and paleobotanists. Two other cases occur to me where genera, actually described from living species of eastern Asia, prove to have been described under earlier and different names by the paleobotanists. Thus, *Petrophiloides*, originally described from fossil fruits found in the London clay flora, is older than *Platyacarya*, the sole living species being of wide distribution in eastern Asia. *Caryojuglans*, originally described from fossil forms found in Europe, long antedates *Rhamphocarya*, the latter having been described in 1941 on the basis of living specimens found in Yunnan. These are both genera of the Juglandaceae, not as old, geologically speaking, as is this remarkable coniferous *Metasequoia*.

This living *Metasequoia* is a large tree, attaining a height of about 35m, with a trunk diameter up to 2.3m. A remarkable character about it is that, like *Larix* and *Pseudolarix*, it is deciduous, the trees being leafless in the winter months. Its botanical alliance is scarcely with *Sequoia*, as one might infer from the generic name. In its vegetative characters it suggests *Glyptostrobus* and *Taxodium*, but it may prove to be not closely allied to these two genera, one of southeastern China, the other of North America. Its technical description is not yet published, but when this appears, the true alliance of this ancient type will doubtless be determined.

E. D. MERRILL

Arnold Arboretum

AAAS Meetings and Lantern Slides

During the recent AAAS meetings in Chicago, I heard 52 papers presented at the several sections of the Botanical Society of America and related organizations. The authors of 23 of these (nearly half the total) interspersed their talks with apologies for their lantern slides. The slides, which justly deserved profound apologies, had a common objectionable feature, namely, the crowded inclusion of such excessive amounts of data that persons seated more than three rows from the screen were unable to read either the numbers or the accompanying legends. The acme of wasted visual-aids effort was attained by one standard-sized lantern slide which presented 16 vertical columns and 12 horizontal columns of numerical data, so crowded that the perpetrator of the slide, although he stood within 8 feet of the screen, could scarcely decipher his own figures. Obviously, slides of this type contribute nothing to the understanding of the audience and are better omitted. In preparing such slides, the authors utilize the method of photographic reduction of tables prepared by typewriter, gummed-