

A black and white close-up photograph of several long, narrow grass blades. The blades are covered in numerous small, glistening water droplets of varying sizes. The lighting creates highlights on the droplets and the edges of the leaves, while the background is dark and out of focus. A white rectangular box is overlaid on the upper right portion of the image, containing the word "Plants" in a cursive font.

*Plants*

## *The Greatest Service*

FRANK NICHOLAS MEYER sailed for China in 1905. He died there in 1918. In those 13 years of search for plants and seeds for his adopted United States, he achieved what few men have achieved: "The greatest service which can be rendered to any country" (as Thomas Jefferson wrote in 1790) "is to add a useful plant to its culture."

The search was hard. The young man, who was born in Holland in 1875 and trained there in horticulture, had a wide assignment from the Department of Agriculture to look at and send back every fruit, nut, and vegetable that he thought would have value in this country and to learn all he could about Chinese methods of cultivating plants. He smelled and tasted produce in the markets of Peking and then went to the places the fruit grew, and so got seeds of persimmons, grapes, apricots, cherries. He went to gardens of monasteries and temples and found, among others, a valuable pistachio tree. He walked through central China to find strains of cabbage, rice, and soybeans, which he sent to Washington. Then he set off for Manchuria, Korea, and Siberia. He walked 1,800 miles in the next few months over mountains, hillsides, plains, collecting seeds of onions, peppers, pumpkins, and many more, 680 varieties in all.

He spent 2 years in Turkestan, Siberia, and the Caucasus. In 1916, ill and tired, he was trapped by a Chinese revolution. He wrote to his anxious coworkers in Washington: "I have not received mail now for many months. Travel is nearly impossible. Food supplies are running low." He disappeared from a steamer on the Yangtze River on June 2, 1918. The American Consul later found his body in a village, where some Chinese had buried it. It now rests in Shanghai. His will left a bequest to his associates, and they decided to have a medal struck in his honor, to be awarded each year for outstanding efforts in plant introduction. It shows the first recorded plant exploration, that of the Egyptian Queen Hatshepsut's expedition to the Land of Punt for the incense tree in 1500 B.C.

Frank Nicholas Meyer's service was greater than he knew, for he saw growing in this country only a few of the treasures he sent back. It was a great service in a great tradition. The Department of Agriculture since 1898 has had a formal organization whose main



*Frank N. Meyer's cart in Turkestan in 1911.*

*P. H. Dorsett's pack train in China in 1924.*





*Howard S. Gentry, agricultural explorer, in 1961.*

concern is the exploration for useful plants, their introduction and evaluation for crop potentials, and the preservation of breeding stocks of value in American agriculture. Department explorers have collected more than 275 thousand introductions from all parts of the world. Early plant explorers, like Frank Nicholas Meyer, traveled by primitive means. They spent much of their time just getting to the field and returning their collections. Plant explorers today use airplanes and heavy field trucks to accomplish their missions faster and more successfully. Their greater knowledge of the global distribution of plants also has helped them. Shipping methods have changed from the cumbersome Wardian case designed to protect soil-grown plants during ocean voyages to the growing of plants in sphagnum moss, wrapped in plastic film, and packed in light cartons for shipment by air.

The testing of the plant introductions formerly was done at Federal Plant Introduction Stations at Chico, Calif., Miami, Fla., Savannah, Ga., and Glenn Dale, Md. Four more stations have been established at Experiment, Ga., Ames, Iowa, Geneva, N.Y., and Pullman, Wash. Today testing of plant introductions is a precise, coordinated effort by research groups in Federal and State agricultural experiment stations so that the best of the plant immigrants are quickly incorporated into our crop varieties. Seeds of the introductions and breeding lines that are believed to be essential for the needs of crop breeders in generations to come are preserved in the National Seed Storage Laboratory, Fort Collins, Colo.



*The Meyer Medal.*



*Plants shipped in a Wardian case in 1914.*

*Plants packed for overseas shipment in 1954.*





*Gerald Seaton (left) and John L. Creech prepare cuttings of plants from Portugal for propagation at Glenn Dale, Md.*

*Scientists examine wild collections of vine crops at Geneva, N.Y.*



Plant introduction encompasses the study of innumerable plants, not all of which have become important to us. Our modern wheats, rice, potatoes, and many other crops may be said to derive from the germ plasm provided by plant introductions. Our success with soybeans has grown out of the collections of two plant explorers, P. H. Dorsett and W. J. Morse. Today the search is equally hard, despite modern conveniences, and the role of the Department's explorer remains unchanged. He is still essentially a one-man team, who depends on his knowledge of plants and his curiosity to find plants growing wild in near or remote regions that will fill the needs of agriculture and industry for more plants for new uses. In Meyer's day, the emphasis was on cereals, vegetables, and forage plants; the explorers now seek species useful to scientists in their search for new industrial components, constituents that may have value in medicine, sources of paper pulp, and other plants that may diversify our agriculture and be useful to gardeners and nurserymen.

One of them is Howard Scott Gentry, a senior plant explorer of the Department of Agriculture. He has traveled the world over—the Alps of southern Europe for legumes and grasses, the hill country of Afghanistan and India for forages and food crops, the deserts of Mexico and our Southwest for drug and industrial plants, and South Africa for new oilseeds. He has made 9,500 collections. Tomorrow somebody may be sent to Mexico or Ethiopia, or Japan. The names of the explorers and the places may be different, but the search will continue, and more new and useful plants will enrich our agriculture. (*John L. Creech*)

*Valuable seeds are kept at the National Seed Storage Laboratory, Fort Collins, Colo.*

