

Native plants of great medicinal value gathered in the Himalayan uplands by scientists working at Urusvati, the Himalayan Research Institute of Roerich Museum at Naggar, Kulu, India, have been identified by Dr. E. D. Merrill, director-in-chief of the New York Botanical Garden. These plants are part of a collection of 3,800 specimens recently presented to the Botanical Garden by the Himalayan Research Institute.

While the natives have been making use of some species of these plants and herbs for hundreds of years, many are practically unknown to the western world. Some specimens in the collection were previously unknown and undescribed, according to Dr. Merrill.

Several species of Ephedra which grow in the drier parts of Kulu, are included in the herbarium sent to the Botanical Garden. Ephedrin is a drug derived from some species of this genus, used in the treatment of asthma and colds which has been known for some 2,000 years in China but only during the past ten years has its use been recognized here.

Derris which is attracting a great deal of attention in this country as an insecticide, according to Dr. Merrill, is another plant represented in the collection. In the East, Derris is used to poison fish, which is the native way of making fishing easy. The fish are stupefied by the drug and can be caught in large numbers with little effort but the poison used is not harmful to man. Experimentation is now going on here to determine the possibilities of using Derris as a fruit spray or insecticide.

Certain species of Ganscora, a plant of the Kulu uplands, are used in the East to treat insanity, epilepsy, and as a nerve tonic.

Little is known of Coriaria, except that it contains a powerful poison, Dr. Merrill stated, saying that scientists advocate experimentation to learn ~~the~~ its uses as well as of

Corydalis, several species of which appear in the recently gathered herbarium. While Corydalis is believed to be valuable as a tonic and is so employed by some of the native hillmen, actual recorded scientific knowledge is meager.

Other medicinal plants identified by Dr. Merrill in the special collection include: Meconopsis, a narcotic allied to the poppy; Peganum, recorded as a possible substitute for opium; Aconitum, a narcotic and sedative; Datura, extensively used throughout the Orient; Withania, a narcotic and diuretic; Nardostachys, a stimulant and tonic used to treat epilepsy and hysteria; Ophiorrhiza, which grows in some parts of India and is reputed among the natives of Ceylon to be effective against the poisonous bite of the ribbon snake.

Specimens in the herbarium presented to the Botanical Garden were collected under the direction of Dr. Walter N. Koelz, formerly of the University of Michigan, now on the staff at the Himalayan Research Institute. These plants were secured at altitudes ranging from 5,000 to 18,000 feet. Sixty-one mounted specimens have been loaned by Dr. Merrill to the Roerich Museum, where they are now on display. Included are: ferns and ^{fern} allied, and representatives of various families of flowering plants.

The idea of studying native herbs and ancient medical books as a preface to scientific experimentation is essentially a sound and logical procedure, according to Dr. Merrill who points out that much of our modern medical knowledge is based on empiricism.

"A valuable ancient medicine which was recently re-discovered, though known for centuries in India, is chaulmoogra used in the treatment of leprosy and skin diseases," said Dr. Merrill. "A European scientist, having made an investigation of some of these seeds bought in the open market, having obtained the wrong species, he found them worthless for the purpose claimed and therefore declared chaulmoogra was of no value. For thirty years no further research was made in that direction. Subsequent research with the right species of seeds has proved their value. This example just serves to show the importance of getting the true material and the real name before investigation begins.

"An interesting sidelight on the Chaulmoogra investigation is seen in Borneo where there is a native species. The natives there had no knowledge of Chaulmoogra or its uses yet the tree grew right at the door, one might say, of their leper colony!

"Quinine is another native remedy. It was first known as 'Jesuit's bark' and the earliest

species came from the mountains of South America. In Java and in India, the Dutch and the English have greatly improved the yield of the plant by breeding and selection."

The collecting of plants and herbs is just a part of the general program of the Himalayan Research Institute at Naggar, Kulu, as it is believed that through the study of these plants and their native uses, knowledge valuable to the western world will be obtained. One of the objectives is to discover why the region of the Kulu Valley is now virtually immune to cancer.

Through the generosity of an anonymous American donor, a new bio-chemical laboratory is being completed where research and experimentation of new and local cures for cancer may be made. Collecting and cataloging of the medicinal herbs has begun and plantations of these herbs started. Extracts for further investigation have been forwarded to the Bio-chemical Department at Harvard University and to Dr. Felix Lukin at Riga, Latvia.

Tibetan pharmacology is known to have in its possession remedies said to be effective in treating cancer and tuberculosis. The Himalayan Research Institute will concentrate upon absolutely unexplored fields of the native pharmacopoea. Under the direction of Dr. Georges Roerich, eminent orientalist, Lama Lobzang Mingyur Dorje, well-known Tibetan scholar and their assistants, a rare and valuable collection of ancient medical books on Tibetan pharmacology and therapy has been made. These books are now being translated. The plants described in these treatises will be the subject of scientific experimentation in the Institute's laboratories.

The Himalayan Research Institute was founded by Prof. Nicholas Roerich and Mme. Helena Roerich, following their five year expedition through India, Sikkim, Chinese Turkestan, Mongolia, and Tibet. They donated the land for the building of "Urusvati" the outpost of the Roerich Museum at Naggar, Kulu, realizing the infinite possibilities for scientific research offered by India. By virtue of fertility, climate, atmospheric conditions and altitude, the site is singularly adapted to the scientific investigation now under way there.

On the Advisory Board of the Himalayan Research Institute are: Prof. Albert Einstein, Prof. A. Millikan, Sir C.V. Raman, Sir Jagadis Bose, Dr. Sven Hedin, Dr. John Abel, and Prof. Metchnikoff.