

# THE DEPARTMENT OF THE AMERICAN CONFERENCE OF PHARMACEUTICAL FACULTIES

[EDITOR'S NOTE.—At the 1922 meeting of the Conference at Cleveland, Ohio, a complimentary dinner was given by the Conference in honor of Dr. H. H. Rusby who had but recently returned from South America where he had gone as the organizer and soul of the Mulford Biological Expedition, exploring the Amazon Basin. After the dinner Dr. Rusby spoke informally upon the experiences and observations of his journey. The lecture was illustrated with lantern slides and the observations were of so much general interest that the Editor requested Dr. Rusby to abstract his remarks for publication. The abstract is presented in this issue.

"How to interest the student in the use of the library?" is a question that interests every pharmaceutical educator. Like everything worth while it cannot be done without an effort on the part of the individual instructor and the effort of the instructor cannot be spasmodic. It must be constant and persistent.—

At the Cleveland meeting, Dr. Edward Kremers of Wisconsin, at the request of the Chairman of the Executive Committee, gave an informal talk upon this subject. The talk was illustrated with original drafts of bibliographic sheets, with a copy of the sheets—showing how the sheets are used by the student in writing his thesis, with published bibliographies, and, finally, with typed and printed cards which showed how each institution can build up its own system of bibliographic information for the use of students as well as instructors. Any method that will bring to the student the value of an acquaintanceship with pharmaceutical literature is well worth while. In fact the future of scientific pharmacy depends largely upon our being able to do this. Dr. Kremers is pointing the way and we may well take notice.

Again Dr. Kremers, in his fascinating way, told of an experiment which he carried out in the summer session at the University of Wisconsin in 1922. Experiments such as this one would, if they could become general, interest greater numbers of high school students in Pharmacy—and what is more important—would direct a better type of student into Pharmacy.

At the request of the Editor, Dr. Kremers has abstracted both of these informal talks for publication in the present issue.

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American Conference Pharmaceutical Faculties.*]

## SOUTH AMERICAN EXPLORATION.

BY DR. H. H. RUSBY.

Let us begin with some illustrations of Indian life on the Andean table-land of Bolivia, at an altitude varying from 11,000 to 19,000 feet above sea-level, and in about 18° S. latitude. Here the climate is very cool, even in mid-summer. Although the sun's rays are very powerful at mid-day, the nights are cold, and frosts are liable to occur in any month. Trees are wanting, except for a few under cultivation, and the range of cultivated crops is narrow. Potatoes do well. Oats and other grains are grown for the straw, but do not produce grain. The chief crop is quinoa (*Chenopodium Quinoa*), its seed constituting the staple food of the Aymara Indians. There are some cattle, with the production of butter and cheese, but sheep-raising is the principal grazing industry. Many hogs are also raised, and hens do well. The pig is a household pet, and when young, is very playful, accompanying children as do their dogs. Navigation on Lake Titicaca is by small boats, with or without sails, composed entirely of dried sedges. Mining industries are exceedingly varied and important, providing the chief wealth of the region. Some of the ranges, especially of the eastern cordillera, are perpetually snow-covered, and there are many large glaciers.

The party received valuable assistance from the Guggenheim Brothers, of New York, who own a large tin mine near the top of the eastern slope.

On the eastern slope, tree growth begins at about 11,000 feet, where the country is richly supplied with mountain streams. Travel is very difficult, owing to the numerous high ridges and deep valleys, with precipitous sides, which have to be crossed. This makes transportation the most difficult of Bolivia's problems. During the rainy season, the country to the east of the mountains is entirely cut off from the capital for months together and in the most favorable season many weeks are required to make the round trip over a route of 150 miles.

Transportation is chiefly by mules and human porters, until streams are reached which are capable of carrying rafts. These rafts are made of the wood of several species of *Ochroma*, in the Bombaz family, this wood being almost as light as cork. Navigation of these streams is very rough and laborious, and not free from danger. At the high altitudes, where the climate is cold, the llama, an animal in the camel family, is the beast of burden, carrying 100 pounds. Here also the alpaca is raised.

At about 5000 or 6000 feet, the cinchona trees make their appearance, both species of *Calisaya* occurring in this southern district. Formerly there were large plantations of these trees in Mapiri, but oriental competition has destroyed the industry. An abundance of trees in the wild state was encountered between 4000 and 5000 feet. In the same region, the coca leaf is largely grown as a masticatory.

A few miles above the junction of the La Paz and Meguilla Rivers, forming the Bopi, the party was entertained at a large sugar-cane plantation, the cane being used in the manufacture of alcohol. In this work the bark of a Mimosaceous tree (*Piptadenia macrocarpa* Benth) known locally as Vilca, is used to hasten and increase the alcoholic fermentation of the juice. Here also is found an abundance of the genuine matico leaf (*Piper angustifolium* R. and P.). This section was found to be rich in orchids, but very few were in bloom at that season. A number of interesting species of cactus were found here, one of them apparently an undescribed species, being probably the largest of tree-cactuses.

A species of aroid, called Hualusa, is cultivated in this region, which the author found to yield the best potato substitute that he has known.

At the head of the Bopi, rafts were substituted for mules, and the party floated down this and the River Beni for many days, employing crews of native Indians and camping along the river when night overtook them. The weather was fine during most of the time and often it was not necessary to erect their tents. Up to this point the botanical collectors had been handicapped by the dry season, very little of the flora being in condition for making collections, but along the Bopi things were much further advanced, and large and important collections were obtained. In the cataracts of the Bopi one of the rafts was smashed and much valuable property was lost, the collections also suffering some damage. Two varieties of native cinnamon were collected here, pertaining to the genus *Acroclidium*. There was also a tree that yields a so-called "Balsam of Peru." The Bopi valley was described as a rich game country, deer, tapirs, capibaras and two species of wild hogs being frequently encountered, and excellent game-birds being very abundant. An abundance of excellent fish was found here. A long stay

was made at Juachi, where the Cochabamba and Bopi Rivers unite to form the Beni. Here the party was entertained by Sr. Mostaja, a representative of the house of Denniston & Co., of New York and La Paz. Large and important collections were made at this place, the most important being the barks of the genuine and spurious Cotos. From the materials here collected the species yielding these barks (*Nectandra Coto* and *Ocotea Pseudo-Coto*) were described by the author. Here also was collected a quantity of Siaya flowers, belonging to a small palm, and one of the most fragrant of known flowers. A root called Mire (pronounced mee-ray) was found that possesses strange and powerful physiological powers. Its identity could not be established, as it bore neither flowers nor fruits, but the lecturer thought it to be related to Manaca.

The next stop was at Rurrenabaque, a town on the shore of the Beni, just at the base of the Andean foot-hills. Here the party established its headquarters, and remained for many weeks. Long expeditions were made into the surrounding regions. Dr. O. E. White, of the Brooklyn Botanic Gardens, who was collecting orchids for Dr. Oakes Ames, of Harvard, made most of his collections in this region. Dr. William M. Mann, of the United States Bureau of Entomology, made very large collections of insects, especially of ants and termites. Dr. N. E. Pearson, of the University of Indiana, who was collecting fishes for Dr. Eigenmann, made important collections. The lecturer made a careful study of Cocillana and its allies, which grow in abundance in these forests. His general botanical collections at this place were very large, although he was so crippled and in such poor health that work was very difficult.

This region was described as producing the greatest variety of wild edible fruits that the lecturer had ever encountered in a similar area, and an important collection of these was preserved in formaldehyde solution. These fruits, after being botanically determined, will be placed on exhibition in the Economic Museum of the New York Botanical Garden.

An expedition was made to the little-known Lake Rogogua, in central Bolivia, but the season was such that its outlet could not be traversed or explored. Early in December, the author's physical condition had become such that further work was impossible and he returned home, stopping for short periods at a number of towns en route. The rest of the party remained and continued work into the spring months. Mr. Gordon MacCreagh and his two assistants in motion-picture work ascended the Rio Negro and Manaos, and thence made their way into southeastern Colombia, where they obtained authentic information regarding, and motion-pictures illustrating the strange ceremony of Caapi-drinking, and secured material of this plant for chemical and physiological investigation.

The total number of plants collected was about 2,300, represented by some 15,000 specimens and representing about 1,500 species.

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## THE USE OF THE LIBRARY BY STUDENTS.

BY EDWARD KREMERS.

In this textbook-ridden age it is difficult indeed to get students to use the general library. Moreover, since so much of our original literature is published in foreign languages, which so many students seem to hate more than poison,