

GENERAL SCIENCE

Science Internationalism Aided By "Scientific Immigrants"

Professors Einstein and Ladenburg Come to Princeton To Augment Large Group of Foreign Scientists Here

SCIENTISTS are more nearly true internationalists than any other class of workers, not even excepting dancers and musicians whose arts, like mathematics, escape the barriers of language.

The recurring visits of Prof. Albert Einstein to America and his imminent addition to the staff of the unique Institute for Advanced Study established at Princeton are merely material evidences of the increasing importance of American scientific work.

While American institutions have stepped into the lead in many branches of science, particularly astronomy and biology, science in this country has not ceased to call eminent leaders from other countries to become scientific immigrants and make America their home.

Although Prof. Einstein will still consider Berlin his home, he will be an American worker in science in a practical sense when he begins to spend the academic years at Princeton next fall. With him will come his associate, Dr. Walter Mayer, of Berlin.

To Princeton there came this fall another scientific immigrant, Prof. Rudolf Ladenburg, distinguished German physicist, formerly at the Kaiser Wilhem Institut in Berlin. He is Cyrus Fogg Brackett professor of physics of Princeton University and atomic research will benefit from his projected researches on high voltage electric energy and the development of a liquid hydrogen laboratory that will give special attention to the structure of solids.

To Baltimore from Leipzig there has come Dr. Henry E. Sigerist to head the Johns Hopkins University Institute of the History of Medicine, succeeding Dr. William H. Welch, "dean of American medicine" who founded it and has retired as director.

Dr. Walter Baade, German astronomer, is aiding in the important probings of the universe's depths being conducted at Mt. Wilson Observatory, Pasadena, Calif., while Dr. Beno Gutenberg of the famous Frankfurt school of geophysical studies last year joined the

Seismological Laboratory at Pasadena.

Such intellectual immigrants are welcomed by their American colleagues. They will be absorbed into American life. Eventually as world economic conditions improve America may be expected to add to its present quota of intellectual exports, scientific emigrants who will repay our favorable intellectual trade balance.

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ZOOLOGY

Field Museum Visitors See Bit of Abyssinia

See Front Cover

VISITORS to Chicago can make an effortless side-trip to the wilds of Abyssinia by walking down the Carl Akeley Memorial Hall of African Animals in the Museum of Natural History. At the end, a remarkable new group of African mammals has been arranged so as to give a most naturalistic illusion of a vista across a water-hole where the beasts meet in a truce imposed by the common foe of all life—thirst.

In a space as big as the proscenium arch of an ordinary theater, with background skillfully portraying the endless African plain dotted with acacias, mimosas and other characteristic trees, are set giraffes, two-horned rhinoceroses, elands, gazelles, zebras and an oryx.

The cover illustration shows the giraffe group.

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STANDARDS

Industrial Inch Loses Two Millionths of Length

THE INCH has lost two millionths of its former length.

Though the shrinkage is not legal, industry of this country at a meeting of its representatives with the American Standards Association in New York, N. Y., decided to use a new ratio between the American inch and the millimeter in order that the precise measur-

ing of both England and the United States be done on the same basis. Their new definition says that the inch is exactly 25.4 millimeters long instead of 25.40005 millimeters. This is a difference of about one-eighth of an inch in a mile.

Adoption of the new ratio is the second and last step necessary to put precision measuring of industry of England and the United States on the same basis, H. W. Bearce, co-chief of the Division of Weights and Measures of the U. S. Bureau of Standards, told Science Service. The first and most important step was taken by England, he said, when that country's industrial representatives decided to use 68 degrees Fahrenheit as the standard reference temperature for dimensions. Their standard to which corrections for expansion and contraction had been made was 62 degrees, while engineers in the United States used 68 degrees.

"These changes were necessary," Mr. Bearce explained, "because manufacturers of precision gage blocks are attaining an accuracy of one or two millionths of an inch per inch of length, while manufacturers of precision limit gages are regularly working to an accuracy of a few hundred-thousandths of an inch. Obviously in work of this character, uncertainty or indefiniteness to the extent of the difference between the



CASTLE OF ACCURACY

This is the kind of apparatus that prompted engineers to change the definition of one common unit in terms of another. It measures a difference in the length of metal blocks of two millionths of an inch, past the accuracy of the old ratio between the American inch and the millimeter.