

ASTRONOMY

Perkins Observatory 69-Inch Mirror is Third Largest

See Front Cover

THIRD largest in the world and the first all-American giant telescope, the 69-inch telescope of Perkins Observatory of Ohio Wesleyan University is now in operation.

When its mirror was being placed in position just after being coated with silver, the unusual photograph on this week's cover was taken. Where star images are captured when the mirror is in its mounting, there may be seen reflected a portion of the graduated circles of the telescope's mounting.

Dr. Harlan T. Stetson is director of Perkins Observatory.

The mirror is the first large telescope disc to be made in America. It was cast of high quality boro-silicate optical glass at the U. S. Bureau of Standards at Washington and it was ground, figured and polished at the factory of J. W. Fecker Company, Pittsburgh, Pa. Warner and Swasey Company of Cleveland made the mounting.

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SEISMOLOGY

Five Earthquakes Shake The World

FIVE world-shaking earthquakes in two days was the unusual record for the week-end, July 8 and 9.

Two of these earthquakes were centered in the same location, in the Pacific ocean off the Mexican coast in the region of Colima in the State of Jalisco.

The three other quakes registered on seismographs throughout the world were centered in the region of the island of Urup, near the southern end of Japan's Kurile Islands.

Because these earth disturbances were located in areas where there is little land, probably little or no damage was done.

Their locations were determined through use of seismological telegrams sent to Science Service by leading earthquake stations and interpreted by experts of the U. S. Coast and Geodetic Survey.

The two shocks off the Mexican coast occurred at 34.6 minutes after midnight and 10:21.5 p. m., Eastern Standard Time, July 9. The longitude-latitude was 105 West and 17 North.

The Japanese earthquakes occurred at 8:30 p. m. Eastern Standard Time, July 8, and 4:28.1 a. m. and 7:30.5 a. m., Eastern Standard Time, July 9 at 45 north latitude and 151 east longitude.

Seismological stations reporting included: Jesuit Seismological Association stations at Georgetown University, Washington, D. C., St. Louis University, St. Louis, Mo.; the Dominion Observatory, Ottawa; the University of Michigan, Ann Arbor, Mich.; the University of Wisconsin, Madison, Wis.; the Seismological Observatory, Pasadena, Calif.; San Juan Magnetic Observatory, San Juan, Puerto Rico; U. S. Coast and Geodetic Survey stations at Sitka, Alaska; Tucson, Ariz.; Chicago, and Honolulu, T. H.

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MEDICINE-ARCHAEOLOGY

Children 4500 Years Ago Had Infantile Paralysis

CHILDREN of Egypt 4500 years ago suffered from infantile paralysis. Evidence of this is found by Dr. John Ruhräh of the Johns Hopkins University, Baltimore, in a skeleton now in the Museum of the University of Pennsylvania.

This skeleton dates back to 2600 B. C., which is far earlier than the date of the Egyptian relief of Ruma now in Copenhagen which so vividly shows the ravages of infantile paralysis. This goes back only to the nineteenth dynasty, about the thirteenth century, B. C.

The story of Dr. Ruhräh's discovery is in itself in the nature of an epic on archaeology and medicine. The skeleton was found by Sir Flinders Petrie in Egypt in 1897 and sent to the University Museum. This skeleton attracted interest because it was found with a walking stick or cane and because one thighbone was found to be five centimeters shorter than the other.

At first it was thought this was merely a fracture that had joined up short, this not being uncommon in old skeletons, since the ancients were not particularly proficient in setting broken bones.

Dr. Ruhräh, searching for materials on infantile paralysis happened to read a medical article about this skeleton and arranged to study it. He finds no evidence of fracture, and concludes that infantile paralysis existed in Egypt 4500 years ago.

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ICHTHYOLOGY

Fish That Can't Float Found In Virginia Stream

AFISH that can't float and doesn't want to float lives in the headwaters of the James River in Virginia.

Specimens of this strange fish, believed to exist only in this one corner of the earth, have been secured by E. D. Reid, Smithsonian Institution biologist. Previous to Mr. Reid's collection, this fish has been taken only three times since its discovery in 1896.

The little fish, which belongs to the sucker family, has no air bladder and consequently cannot float like most fishes. It can only sink to the bottom or keep swimming. But this is no crippling handicap for the little sucker. It had to rid itself of the air bladder, in the course of evolution, or it would have gone the way of extinct fishes. The mountain streams that pour into the James River are so swift that the little suckers had to stay at the bottom or be washed away. They rid themselves of their "water-wings" and survived.

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ARCHAEOLOGY

Start Excavating Great Aztec Temple in Mexico

GOVERNMENT archaeologists have begun excavating the most important site of Aztec grandeur in old Mexico City. The site, which now adjoins a Christian cathedral, was once dominated by the greatest of the Aztec temples in the old capital.

When the Spanish conquerors first came to Mexico they found the Aztec capital a beautiful Venetian-type city, built in a lake with many causeways and canals and impressive temples and other public buildings.

The chief Aztec temple will be excavated under the supervision of Eduardo Noguero, well-known Mexican archaeologist.

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CE FIELDS

CHEMISTRY

\$50,000 Needed to Aid Unemployed Chemists

OVER \$50,000 will be needed by New York's Committee on Unemployment and Relief of Chemists and Chemical Engineers to take care of some 155 neediest cases during the next six months before recovery in business is expected to bring definite technical re-employment and ease the critical situation.

Because the New York City Emergency Work Bureau is curtailing its activities and leaving practically all the burden of taking care of the unemployed chemists to the emergency committee organized under the sponsorship of chemical societies of the New York area, the committee has issued an urgent appeal to the chemical profession for contributions.

Of 935 unemployed chemists registered, 305 are distress cases.

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DERMATOLOGY

Cosmetics Defended By Woman Physician

COSMETICS have found a new defender in an English woman physician.

Dr. A. Carleton has investigated them and as a result has a good word to say for the cold creams and vanishing creams which continue to be used by women the world over despite the frequent condemnations by "mere male" doctors. Dr. Carleton has reported her study of cosmetics to the British Medical Journal published in London.

Dr. Carleton does not deny that injurious effects have been observed from the use of cosmetics; indeed she quotes a rather formidable record of undesirable results, but with a suggestion that the harm is confined to rare cases, while harmless or even beneficial effects have gone unreported.

The statement, made on good authority, that cold creams and vanishing creams "block the sebaceous and sweat

glands" was tested experimentally, but could not be confirmed.

The belief that vanishing creams are drying to the skin was tested on 40 women, who, every night for four weeks in the spring, applied a standard vanishing cream to one cheek, leaving the other half of the face untreated for comparison. While in 24 of the 40 no change was discovered from the use of the cream, 12 found that the treated half of the face justified all the claims of the advertisers for smoothness while the cheeks that had had no cream were distinctly rougher. In only one case was a drying effect due to the cream evident.

One woman ended the experiment with both sides dryer than normal and promptly cured the condition with cold cream.

As to the argument that it is "unnatural" to anoint the skin with cosmetics reply is made that it is equally unnatural to treat the natural oils of the face with soap and water.

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MEDICINE

Great Hunger Features Newly-Discovered Disease

EXCESSIVE hunger is the chief symptom of a newly-recognized disease which Dr. Seale Harris of Birmingham, Ala., has just reported to the American Medical Association.

The disease, according to Dr. Harris, is the exact opposite of diabetes. While in diabetes the pancreas supplies too little insulin for the body's needs, in the new disease, the pancreas produces too much insulin for the body's normal needs. Consequently Dr. Harris calls the new disease hyperinsulinism.

Besides hunger, the patient may suffer from weakness, nervousness, tremors, sweating and mental lapses, Dr. Harris reported. In severe cases the mental lapses may be prolonged into unconsciousness and convulsions like those of epilepsy. Dr. Harris suggested that illnesses that have been diagnosed as epileptic attacks are sometimes the attacks associated with hyperinsulinism.

The most important factor leading to the development of the new disease seems to be inflammation of the pancreas, Dr. Harris' studies showed.

A diet low in carbohydrates and high in fats is advised by Dr. Harris for mild cases with surgical removal of part of the pancreas in more severe cases.

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PSYCHIATRY

More and Better Trained Psychiatrists Needed

BBETTER TRAINED psychiatrists and more of them are urgently needed in this country to care for the growing number of patients suffering from nervous and mental diseases, Drs. Ralph A. Noble and Franklin G. Ebaugh of the National Committee for Mental Hygiene have found.

Their report of a two-year survey of the status of psychiatric education, financed by the Commonwealth Fund, the New York Foundation and the American Foundation for Mental Hygiene, was just made public.

An alarming rise in psychological quackery was noted. Factors suggested as responsible for this are the great increase of popular interest in the subject in recent years and the inadequacy of present-day medicine in dealing with mental and nervous diseases.

Lay persons are not qualified to practice psychiatry, the report pointed out, and even physicians need several years of special training before they are competent to handle patients requiring treatment for complex disorders of mind and nervous system. All physicians, however, should be trained while in medical schools to consider the patient as a whole, taking into account the physical, psychological and social reactions.

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GENERAL SCIENCE

Emergency Group Formed To Aid German Scholars

DECLARING that the ancient university traditions of freedom of learning and teaching are being challenged in Germany, an Emergency Committee in Aid of Displaced German Scholars has been formed to administer funds for rescuing so far as possible the intellectual refugees of the Hitler Nazi regime.

Dr. Livingston Farrand, president of Cornell University, is chairman and Dr. Stephen Duggan, director of the Institute of International Education, is secretary, with offices at 2 West 45th St., New York City.

Twenty-seven other leaders in university life are joining actively in this university protest which has nothing to do with other groups having religious, racial, economic or other affiliations.

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