

ASTRONOMY

Eclipse Expedition

Group of leading Mexican astronomers is on way to Peru to observe the total eclipse of the sun occurring on Jan. 25. This is the only known expedition.

➤ AN EXPEDITION of leading Mexican astronomers will observe the total eclipse of the sun on Jan. 25 from Peru, and the party is now en route to that South American country on board a Mexican warship.

Headed by Dr. Joaquin Gallo, director of the Mexican National Observatory at Tacubaya, the group also includes Dr. Luis Enrique Erro and Dr. Carlos Graeff Fernandez, director and assistant director of the newly established Astrophysical Observatory at Tonanzintla, in the state of Puebla.

Both observatories have provided instruments and equipment, which includes modern eclipse cameras and spectrographs.

The eclipse expedition has the joint sponsorship of the Mexican federal government, the state of Puebla and the University of Mexico. The initiative for the expedition came from Dr. Gonzalo Bautista, governor of Puebla, who has also sponsored the Tonanzintla Obser-

vatory, which has had the cooperation of Harvard Observatory. President Avila Camacho has aided the plans on behalf of the federal government and Ambassador Luis Fernan Cisneros of Peru promised a welcome from that country to the Mexican astronomers.

The astronomers expect to set up their instruments at Cajamarca in Peru, well within the narrow path of total darkness created by the moon coming between the sun and the earth.

The voyage to Peru from an unannounced Mexican port will be a training cruise for Mexican midshipmen as well as an astronomical trip.

Because of war conditions it is expected that otherwise the Jan. 25 eclipse, whose totality extends across South America through Brazil and Peru, will be poorly observed. So far as known, there will be no eclipse expeditions from the United States.

Science News Letter, December 25, 1943

MEDICINE

Damaged Liver Glued

New method, employing sticky substance made from blood plasma and cell extract, avoids bleeding which is common when parts are stitched together.

➤ A NEW METHOD for treating war wounds in which the liver or spleen is ruptured has been developed by Dr. Machteld E. Sano and Dr. Clarence A. Holland, of Temple University.

Instead of stitching the torn or cut edges of the liver together, these surgeons stick them together with a kind of natural glue made of blood plasma and cell extract. (*Science*, Dec. 10)

The method was originally developed for making skin grafts stick and grow fast to the underlying tissues. Adaptation of the method to treatment of ruptured liver or spleen was made at the suggestion of Dr. W. Wayne Babcock, professor of surgery at Temple.

Formerly the cut edges of a ruptured liver were sewn together, which fre-

quently promoted, rather than controlled bleeding. Another method, packing the injured part of the liver with gauze instead of sewing it to control bleeding, is also often complicated by bleeding when the pack is removed.

The new method is said to present none of these difficulties, making use of the physiologic principles of blood clotting and wound healing. The method is also extremely simple. The plasma and cell extract mixture is rapidly brushed over the bleeding surfaces of the liver which are to be joined. A sterile camel-hair brush is used. The two surfaces are then held firmly together for about three minutes, after which they will stick firmly to each other without being held.

Damaged liver surfaces will sometimes

stick together after being pressed against each other even without the plasma mixture. The Temple University scientists, however, found in trials on 15 dog livers and one human liver that adhesion was 100% when the plasma and cell extract mixture was used, but in one-fifth of the cases (20%) the liver had to be restuck when the mixture was not used.

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POPULATION

Jap Population Program Meeting Serious Setbacks

➤ JAPAN'S recently adopted population program calling for a population increase of 27,000,000 by 1960 to bring the anticipated total in Japan to 100,000,000 is meeting serious setbacks due to the war, Dr. Jesse F. Steiner of the University of Washington has reported to the American Sociological Society.

The Japanese government, which has announced that it is prepared to sacrifice 10,000,000 men in order to defeat the enemy, is at this time, Dr. Steiner stated, faced with a rising death rate both on the home front and war front, as well as a declining birth rate due to the war.

Factors contributing to a declining birth rate, he said, are the hundreds of thousands of Japanese soldiers stationed in remote places and unable to get home and the increasing number of soldiers' widows, who in accordance with long-established custom will not be likely to marry again.

Therefore, Dr. Steiner stated, it would seem safe to conclude that Japan's period of swarming has definitely ended and may be succeeded by a period of actual population decline in the near future.

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ENGINEERING

Portable Germ-Killing Air-Conditioner Invented

➤ A PORTABLE air-conditioning apparatus, in which germ-killing ultraviolet lamps are added to cooling elements for summer use and heating coils for use in winter, is the invention on which Joseph B. Grison of Braintree, Mass., has been granted patent No. 2,335,056. There are also arrangements for deodorizing the air and adding perfume if desired, and a fan to draw air through the apparatus. The whole set-up is housed in a compact wheeled cabinet.

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