

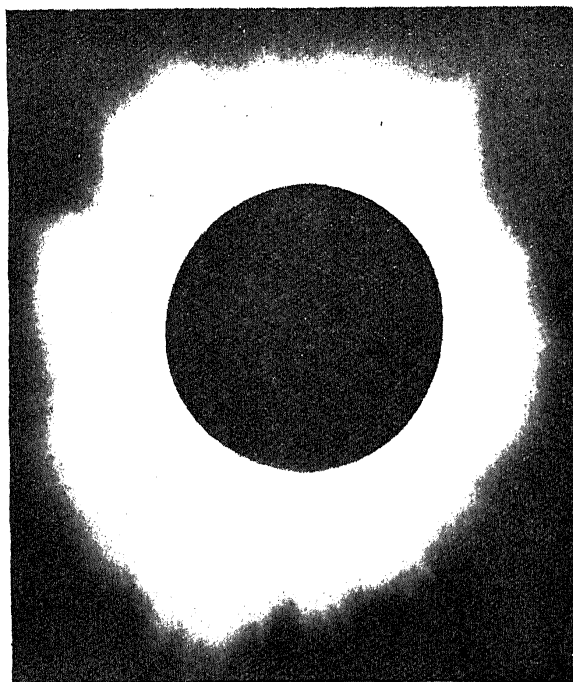
"If the Conference helps to bring about a change in the views of some of the Governments, that will in itself be an appreciable advance." (Pp. 73-74.)

The final chapter reviews the chief diseases affecting the rural population of Far Eastern countries and the measures for combating them. These diseases are: malaria, plague, ankylostomiasis, tuberculosis, pneumonia, yaws, described as "the rural disease *par excellence*" leprosy.

One of the chief results expected from the Conference is the improved contacts that will be established between the Health Administrations of different countries and colonies and even of different provinces in, for instance, India. At present, Health Administrations frequently work at similar or identical problems without the advantage of knowledge of each other's activities and their results.

## The National Geographic Society—U. S. Navy Eclipse Expedition of June 8.\*

**H**UGE streamers of the sun's corona, reaching out as much as 5,000,000 miles from the sun, and great flamelike tongues of super-heated hydrogen gas extending 30,000 to 50,000 miles above the sun's surface were among the phenomena seen and photographed during the sun's eclipse of June 8 by the National Geographic Society—U.S. Navy Eclipse Expedition which observed it from Canton Island in the mid-Pacific.



First Photograph of June 8 Eclipse as seen from middle of Pacific.

The expedition's observations of the eclipse are reported to be highly successful, although the complete scientific results will not be known until after months of study of the hundreds of photographs, spectrographic records and other data that were obtained during the three and one half minutes of darkness.

As in previous eclipses the astronomers again found evidence of the presence of "coronium", a mysterious element in the sun's corona. Coronium is believed by many astronomers to be some element already known, but existing in the sun's corona in a chemical state not familiar to scientists on earth. The expedition has not yet had time to determine whether its records show existence of any elements on the sun not previously known.

Using a process new in eclipse work, the expedition successfully measured the percentage of the light of the sun's corona that is polarized. These records are expected to prove valuable in study of the composition of the corona, which at present is a scientific puzzle.

### CORONA STREAMERS CRISSCROSSED.

The shape of the corona was nearly circular, which is usually the case when the number of sunspots is approaching a maximum, as at present. Photographs show that the streamers of the corona are crisscrossed in many directions, perhaps because the surface of the sun is now extremely turbulent. The total amount of light from the corona was measured and found to be about one-half that of the full moon.

A painting of the eclipse was made by Charles Bittinger, Washington artist. He noted the colours and general appearance of the eclipse during totality and is now adding the finishing touches to the picture.

Dr. Gardner, with the aid of an apparatus which equalized the amount of light reaching the plates from different parts of the corona, photographed both long streamers of the corona and the prominences, or hydrogen flames extending up from the sun's surface, on the same plate with good definition. He also photographed the eclipse on colour separation plates, which record the red, yellow and blue ranges of colour separately. These pictures were made with special plates which carried their own filters, thus eliminating the loss of definition which usually arises when filters are used with lenses of extremely long focal length. Later, these can be combined in such a way as to give an accurate colour photograph of the eclipse, with the aid of the colour values as depicted in Mr. Bittinger's painting.

### USEFUL TIME DATA GATHERED.

Mr. Willis and Captain Hellweg checked the times at which the eclipse began and ended and found that the Naval Observatory had predicted these within a few seconds of their actual occurrence. This check on eclipse timing will be extremely useful to the Observatory in its calculations of the movements of the sun, moon and earth, which are used in determining accurate time for everyday use.

Many photographs were obtained of the total eclipse with various lengths of exposure, and with several colour filters, showing the corona and prominences in good detail, and motion pictures of the entire eclipse were taken.

Tests of radio reception during the eclipse indicated that apparently there was less fading of signals during the time that the sun was darkened by the moon than during daylight.

\* From the *Geographic News Bulletin* No. 3106, by the Courtesy of the National Geographic Society.