

## ANTHROPOLOGY

# Study of Human Behavior May Shape Man's Future Course

Retiring President of A.A.A.S. Says Scientists Must Seek Those Varieties of Behavior Common to All Humanity

THE FUTURE course of mankind on earth may be shaped by the work anthropological science is now endeavoring to do, Prof. Franz Boas of Columbia University said in his address as retiring president of the American Association for the Advancement of Science.

Stressing the fact that many lines of human behavior that appear to be based on human nature are really not universal at all, but are merely characteristics of some specific culture, Professor Boas said:

"It is our task to discover among all the varieties of human behavior those that are common to all humanity. By a study of the universality and variety of cultures, anthropology may help us to shape the future course of mankind."

The anthropologist, studying man, works with history in its broadest sense, Professor Boas pointed out. His problem is to understand the steps by which man has become what he is, biologically, psychologically, and culturally. Only by tracing the course of man's development can science reach any conclusions as to conditions controlling the general history of culture.

The complexity of human cultures was emphasized by Professor Boas. Biologists, he said, are liable to insist on a relation between bodily build and culture. Geographers try to show that human culture derives from its geographical environment. Economists believe that economic conditions control the forms of culture.

While all these factors are important in shaping culture, Professor Boas declared that "every attempt to deduce cultural forms from a single cause is doomed to failure, for the various expressions of culture are closely inter-related and one cannot be altered without having an effect upon all the others."

Little hope that science will ever be able to reduce the data of anthropology to a formula for routine application was held out by Professor Boas.

"The material of anthropology is

such," he said, "that it needs must be a historical science, one of the sciences the interest of which centers in the attempt to understand the individual phenomenon rather than in the establishment of general laws which, on account of the complexity of the material will be necessarily vague, and, we might almost say, so self-evident that they are of little help to a real understanding."

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## METEOROLOGY

## June Temperatures Predict Chances for Corn Frost

CORN FARMERS in Iowa can now tell, within a few weeks after they have their crop planted, whether or not

## ENDOCRINOLOGY

# Warts on Toad's Head Produce Human Glandular Secretion

EPINEPHRINE, a powerfully stimulating hormone secreted by the suprarenal glands of human beings and other higher vertebrates, is produced also by the big "warts" on the sides of a toad's head, which are really glands. Five species are known to produce it in this way, and one of them, a big tropical American toad, may produce more than three times the amount of epinephrine that can be found in a pair of human suprarenal glands.

This was one of the facts about toad gland secretions that were presented before the American Association for the Advancement of Science by a research team consisting of two Chinese and one American: K. K. Chen, A. L. Chen and H. Jensen. The work was done at Eli Lilly and Company research laboratories, Indianapolis, and at the Johns Hopkins University.

Another secretion produced by toad glands is cholesterol, mixed with er-

gosterol. This was found in six toad species. Ergosterol, irradiated with ultraviolet, is vitamin D, the preventive of rickets. The three scientists found that their toad cholesterol-ergosterol mixture, so irradiated, was potent against rickets.

When June mean temperature has been two degrees or more above the average of 69.4 degrees, 95 per cent. or more of the corn has escaped frost damage. This generalization has held good for every one of the twelve cases studied during 43 years of record.

When June mean temperature has been normal, 69.4 degrees or higher, corn not frosted has been more than the 43-year average of 87.3 per cent. This has held good 95 per cent. of the time. Except in 1923, when only 75 per cent. of the corn escaped frost, 90 per cent. or more escaped in each of the 22 years recorded.

All the outstanding frost damage came in years when the June temperature was below 67 degrees. The worst of five bad years on record, 1924, had a crop only 33 per cent. of which was not frosted; the least evil, 1912, showed a 66 per cent. escape from frost injury.

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EPINEPHRINE FROM HIS WARTS