

## PHYSIOLOGY

# Gland's Past Influence Told From Condition of Skull

## X-ray Photographs of Skull Changes Studied to Learn About Health and Physical and Mental Development

**S**KULL change is a new key to the past function of the gland which influences growth, sexual development and possible mentality. Studies showing this were reported by Dr. Hector Mortimer of Boston to the Association for the Study of Internal Secretions.

It appeared from Dr. Mortimer's report that the history of the functioning of an individual's pituitary gland throughout his life with all that tells of the individual's health and physical and mental development, can be read in changes in his skull that may be seen in X-ray photographs.

Four basic types of skull change were found by Dr. Mortimer and Drs. George Levene and Allen Winter Rowe of Boston after reviewing a collection of documented acromegalic crania in museums in America, England, and Scotland.

The first type is characterized by expansion of the face and sinuses, especially the frontal sinuses. This expansion changed, affecting all bones and mechanically producing the well-known deformities of acromegaly including the large jaws.

The second type is characterized by a small head, small face and very dense skull. This chiefly affects women, who are usually fat, and is a sign of failure of the gland, not of over-activity as in the first type.

The third type begins as a type one, with over-active gland; the gland subsequently fails and the bones become dense like old bones, even in young people of eighteen.

Failure of the gland is in other words premature aging of the individual. The skull becoming dense, which means not that it is thick but that it is so compact as to be almost like ivory, is an indication of failure of the gland. This is a feature of both groups two and three. In these groups there are ten times as many women as men. The mechanism behind all this accounts for women's ageing more quickly than men and being more liable to get stout.

The fourth type of skull change is

found in dwarfs and other persons whose pituitary gland has never been fully active. This type can be recognized by failure of the frontal and other sinuses to develop completely. In many of these persons the frontal sinuses never develop at all. This gland failure also means that the sexual development is below par or even absent.

Dr. Mortimer showed a well-known family of four dwarfs who have played in the movies. The second eldest, tallest of the family with her four feet two inches of height, had grown an inch in this last year. She has a trace of frontal sinus on one side. None of the others has any.

*Science News Letter, June 24, 1933*

## METEOROLOGY

## International Weather Data Would Help Forecasting

**I**NTERNATIONAL cooperation in the exchange of weather data would help the weather man a great deal in his task of forecasting rain or shine a day or two ahead, it was indicated by a paper presented before the meeting of the Amer-

ican Meteorological Society in Chicago, by Thomas A. Blair of the U. S. Weather Bureau, Lincoln, Neb.

"If the data were assembled promptly from the entire northern hemisphere, so as never to be over a month old, they would be of considerable value to the forecaster in connection with the daily weather maps," Mr. Blair said. "They would help him to decide on the type of weather likely to prevail in the immediate future, that is, whether the cyclones and anticyclones would follow the same paths as in the recent past, or be temporarily deflected to other paths, or show a definite and persistent change of track and character."

*Science News Letter, June 24, 1933*

## MEDICINE

## Blue Dye May Relieve Stubborn Skin Disorder

**T**HE BLUE DYE, methylene blue, which has been successfully used to treat victims of carbon monoxide and cyanide poisoning, may also prove useful in treating cases of a stubborn skin disorder, pemphigus.

Investigations suggesting this use of the dye and confirming its usefulness in carbon monoxide and cyanide poisoning were reported by Dr. David I. Macht of Baltimore to the National Academy of Sciences. Dr. Macht's investigations were made on the growth of seedlings of *Lupinus albus*. In previous researches, Dr. Macht found that the growth of these seedlings is checked by various poisonous substances and also by human blood.

*(Turn Page)*



### THE PRIBILOFS COME TO NEW YORK

*In the new Hall of Ocean Life of the American Museum of Natural History in New York, one of the most striking groups is a family of fur seals, shown against a naturalistic background as they might be seen on the great rookery islands of the Pribilofs, far away in Alaskan waters. The group is dominated by the bulky-bodied old bull seal, surrounded by his seraglio of wives, whom he has won in open fight with the other males of the herd.*

Blood which contained carbon monoxide and blood serum from patients suffering with pernicious anemia, leprosy and pemphigus also checked the growth of the seedlings. But when methylene blue was added to the blood sera, the growth-checking or toxic effect was decreased.

This suggests that the blue dye might be helpful in treating other conditions in which the blood gives a toxic reaction besides carbon monoxide poisoning. While science now has successful methods of treating pernicious anemia and leprosy, treatments for pemphigus are not satisfactory, Dr. Macht pointed out.

However, he warned that the blue dye is a very potent substance and should be used in small amounts, particularly when trying it for the first times in the treatment of disease or poisoning. Treatment of pemphigus patients with methylene blue is warranted as a result of the laboratory findings, Dr. Macht said, but such treatment has not yet been actually tried.

The botanical findings support the laboratory results of Mrs. Matilda M. Brooks of the University of California and the clinical experiences of Dr. J. C. Geiger of San Francisco relative to usefulness of methylene blue in treating victims of carbon monoxide poisoning.

*Science News Letter, June 24, 1933*

#### CHEMISTRY

### Coal and Carbohc Acid Make New Resin

**C**OAL is the raw material of a new kind of artificial resin manufactured in Germany to compete with more familiar synthetic materials made from phenol and formaldehyde.

The new coal resin, trade named "Kolinit," is the invention of Dr. Franz Fischer, O. Horn and H. Küster. Dr. Fischer is one of Germany's leading chemists and director of the coal research institute at Mülheim-Ruhr.

Wood, peat, lignin and brown coal, as well as ordinary coal, can be worked into the new resin, information transmitted to the American Chemical Society indicates. In process of manufacture pulverized coal is heated with an excess of phenol or carbohc acid. The cost of manufacture is said to be lower than that of competitive materials and it can be used to make buttons, dishes and large objects. The material is electrified by friction as is hard rubber.

*Science News Letter, June 24, 1933*

#### SOCIOLOGY

## Marriage More Popular Today Than at Turn of Century

**"Go West, Young Man," Where Women Are Scarce, Is Advice To Those Who Would Remain Bachelors**

**D**ESPITE the alarm of parents over the doings of "flaming youth," despite the relative ease of divorce, and despite the discouragement of economic conditions, a larger proportion of young people are married today than in the good old days of 1890. The figures are revealed in a newly published book by Dr. Warren S. Thompson, director of the Scripps Foundation for Research in Population Problems, and his associate P. K. Whelpton (McGraw-Hill).

#### Percentages Drop

Especially are bachelors rushing into the yoke of matrimony. In 1890, about 42 per cent. of the men of all ages were single, but by 1930 this percentage had dropped to 34. Among the men of the more "eligible" ages, the drop between 1890 and 1930 is even more striking—from 81 per cent. of those aged 20 to 24 down to 71 per cent., and from 46 per cent. of those aged 25 to 29 down to a mere 37 per cent.

"Go west, young man," might now be interpreted as advice to the bachelor who wishes to retain his freedom. In the West and in the Northeast, the proportion of married males is lowest. In the West this may be accounted for, the authors believe, by the fact that there girls are more scarce, and this is borne out by the fact that in this region the proportion of married women is higher, not lower, than in any other part of the country. In the Northeast there are many cities with much light industry and office work by which women may become self-supporting. Financial independence makes marriages seem less attractive for girls.

#### Knowledge of Birth Control

"The trend toward earlier marriage no doubt arises from a complex of social conditions," Dr. Thompson and Mr. Whelpton conclude, "but the authors wish to call attention to the fact that earlier marriage has been taking place concomitantly with the rapid spread of contraceptive information. It seems rea-

sonable to believe that young people, knowing that marriage does not necessarily involve continence, parent-hood, or abortion, are more ready to marry than they would be were they reasonably certain they would have children born at rather regular and frequent intervals if they do not practice continence or abortion.

"The relation between early marriage and the spread of contraceptive information seems all the more likely in view of the fact that a growing proportion of the population live in the cities where the raising of a large family is not to be lightly undertaken."

*Science News Letter, June 24, 1933*

#### ARCHAEOLOGY

### Authors of Old World Civilization Sought

**A**BELIEF that highlanders from the north moved down to Mesopotamia to start off the great pageant of ancient civilization there was expressed by Prof. E. A. Speiser of the University of Pennsylvania in an address before the American Association for the Advancement of Science.

Eagerness of science to identify those mysterious pioneer settlers whose civilization led to the glories of Nineveh, Ur, and Babylon is no mere academic curiosity, Prof. Speiser explained. By tracing Near Eastern civilization to its source, pre-historians are at the same time taking the most direct route to find the source of civilization of today. The modern world acknowledges its debt to Greece and Rome. But in their turn Greece and Rome borrowed heavily from the Near East.

The art of writing, which made historic records possible, began in this region about 3000 years before Christ. It is the unrecorded events of a millenium or two before 3000 B.C. that Dr. Speiser and two other archaeologists are endeavoring to explain. They have found pottery and other objects in no less