PHYSIOLOGY

Parenthood Seems to Depend On Inorganic Manganese

Male Rats Bereft of Manganese Become Sterile While Females Have Litters But do Not Show Maternal Solicitude

STUDIES indicating that the formation of a hormone by the pituitary gland is in some way related to the manganese of our daily diet were described by Dr. E. V. McCollum of the Johns Hopkins School of Hygiene and Public Health at the meeting of the National Academy of Sciences in Washington last week.

Dr. McCollum pointed out the relation of iodine to the thyroid gland, of calcium to the parathyroid glands, and said that apparently another glandular system had been linked with an inorganic element which is essential to the diet.

Rats which are deprived of manganese exhibit strange behavior and bodily changes, Dr. McCollum and his associate, Dr. Elsa Orent, found. The sex glands of the male rats degenerate until complete sterility results. The females, however, continue to have litters of living young but do not show any sign of ordinary maternal solicitude.

"The mothers do not build a nest or collect their young or hover over them, and the stomachs of day-old young never contain any milk, and the young die from neglect," Dr. McCollum reported. "These mothers not only decline to nurse their own young but will not care for foster young from the stock colony."

"The normal mothers also seemed to detect something wrong with the young of manganese-free mothers and abandoned them, although normal rats will ordinarily care for each other's young when the litters are exchanged.

"The addition to the manganese-free diet of as little as five thousandths of one per cent. of manganese results in correcting the behavior of the female rats toward their young," Dr. McCollum said.

Other workers have reported that male sterility in middle life is related to deficiency of the pituitary hormone, and that the pituitary gland stimulates milk secretion. Dr. McCollum suggested that since manganese deprivation had the same effect, the dietary manganese may be related in some way to hormone formation by the pituitary gland.

However, there is no need to worry over possible lack of manganese, as you worry over lack of vitamins, it appears; for Dr. McCollum reported that at the beginning of the experiments great difficulty was encountered in removing manganese completely from the diet.

Science News Letter, May 9, 1931

INSATIABLE CURIOSITY

An outstanding characteristic of the original wearers of all 'coonskin coats, but not always found—so the humorists tell us—in those who fall heir to them. This raccoon in the Bear Mountain State Park, N. Y., was photographed by M. Peter Keane of the American Museum of Natural History

ASTROPHYSICS

Earth's Magnets Quiver Day After Outburst on Sun

IF ASTRONOMERS peering through their telescopes see bright clouds of hydrogen on the surface of the sun today, they can tell you that tomorrow the sensitive magnetic needles of their observatories will quiver and move from the true position.

This prediction, now possible as the result of a discovery by Dr. G. E. Hale of the Mount Wilson Observatory, Pasadena, Calif., was announced to the meeting of the American Geophysical Union in Washington last week, by Dr. Seth B. Nicholson, of the same observatory.

Dr. Hale has found that exceptional magnetic storms on the earth occur a little over one day later than the flaring of the hydrogen. He has collected accounts of several extraordinary outbursts of this nature which were followed by exceptional magnetic disturbances on the earth.

Science News Letter, May 9, 1931

GENERAL SCIENCE

California Astronomer Chosen National Academy President

DR. WILLIAM WALLACE CAMPBELL, director of the Lick Observatory and former president of the University of California, was elected president of the National Academy of Sciences at its closing session in Washington. He succeeds another noted California scientist, Dr. Thomas Hunt Morgan of the California Institute of Technology, Pasadena.

Dr. Campbell established his place in American science principally through his work in astronomy, particularly in the study of various types of heavenly bodies with the light-analyzing instrument, the spectroscope. He has also done notable work in solar eclipse problems.

Born in Ohio in 1862, he has been a Californian since 1891, when he went to Mt. Hamilton as a Lick Observatory astronomer. In 1901 he was made director of the observatory, and in 1923 president of the University of California. He retired from the latter post recently, to return to active astronomical work.

For vice-president the Academy elected Dr. David White of the U. S. Geological Survey, former home sec-