PHYSIOLOGY

Could Halve Number of Deaf By Treating Ears of Child

THE NUMBER of deaf adults could be reduced by 50 per cent. if the ears of school children in the primary grades were periodically examined and, when necessary, treated.

This is the opinion expressed by Drs. S. J. Crowe and John W. Baylor of Johns Hopkins University School of Medicine, Baltimore, in the leading article in the *Journal of the American Medical Association*.

The most common type of middle ear deafness in adults begins during childhood, the Johns Hopkins research workers find.

Often it progresses so gradually and insidiously that it may not become evident until it is too late to correct the primary trouble and to restore the hearing.

The Baltimore otologists suggest that children in the primary grades be examined at least once a year with a nasopharyngoscope. Those with hyperplastic lymphoid tissue in and around the orifice of the eustachian tubes should be treated with radiation as often as it is necessary to insure normal functioning of the tubes.

Partial obstruction of the eustachian tube in children causes a progressive loss of hearing, beginning with high tones and gradually involving the low tones. If the causal condition is recognized and properly treated before the age of 15, hearing usually returns to somewhere near the normal level.

The conclusions drawn are based on detailed observation of 60 children in some cases for ten years.

Science News Letter, March 4, 1939

ASTRONOMY

New "Nova" Star Is "Slow Motion" Version

THE WACHMANN nova, an exploding star found last month in Orion, may provide a "slow motion" version of one of the sky's most spectacular dramas, Harvard Observatory reported.

Checkup in Germany and Harvard on the nova discovered Jan. 18 by Dr. A. A. Wachmann, Bergedorff Observatory, Germany, reveals that this star is probably a peculiar "slow nova." If so, changes will take place in the star about fifty times as slowly as in the normal nova, enabling very careful observations.

Harvard explained that the ordinary nova, like famous Nova Herculis of 1934, flares up suddenly, usually increasing in brightness by several hundred thousand times in a few days; then it fades, in a month or two, to about half its maximum brightness. The star passes through several different stages of physical condition, difficult to observe in the short time. Only one "slow nova" has previously been found, the star "RT Serpentis" discovered in 1919.

Photographs showed it had flared up in 1909. If the Wachmann nova follows the schedule of RT Serpentis, great spectrum changes will take place in the next decade or two, changes which in the life of the ordinary nova are compressed into about a year. At present, Yerkes observations show, Wachmann nova differs little in spectrum from other highly luminous stars.

When discovered, the Wachmann nova was of tenth magnitude. Plates at Sonneberg Observatory, Germany, actually first photographed the star at 12.5 magnitude Jan. 16, 1937, after which it brightened quickly until May 26, 1937. Since then the brightness has remained practically constant. Harvard photographs confirm these observations and show that between 1889 and 1934 the star was fainter than 12th magnitude, and in 1934 was actually fainter than 15th magnitude.

Science News Letter, March 4, 1939

AGRICULTURE

Seedless Watermelon Developed in Michigan

DEVELOPMENT of a seedless watermelon through experiments carried on at Michigan State College has been announced. The discovery is credited to a Chinese graduate student, Cheong-Yin Wong.

Scientists long have sought a seedless watermelon. They have succeeded in producing seedless tomatoes, peppers, eggplant, and long-necked summer squash, but up to now both watermelon and pumpkin have persisted in retaining their seeds.

The new watermelon is reported to have smaller whitish veiny sections than the normal melon, but to taste practically the same. Its exterior shape has been changed, being more pear-like than oval.

Experiments were carried on with Michigan watermelon, which average about eight pounds in weight and are smaller than southern watermelon. Mr. Wong said that field production of the seedless watermelon might be difficult but that it has decided advantages for greenhouse production.

Science News Letter, March 4, 1939

IN SCIENC

AERONAUTICS

Wind Sounding Method May Aid Planes Landing at Sea

DEVELOPMENT of a new method of taking wind soundings at night to show not only direction and force of the wind, but of eddies and turbulent areas, is reported to the Engineering Foundation by Prof. Athelstan F. Spilhaus of New York University.

A thin rubber balloon carrying a series of magnesium flares fired at frequent regular intervals and a pair of 180-degree cameras to record the progress of the balloon as shown by the lighting of the flares constitute the new system.

Essential wind soundings for airplanes at sea and for boats can be obtained easily at night by the new method. Until now a balloon carrying a light, and a theodolite—an instrument for measuring horizontal and vertical angles—have been used to measure the balloon's progress and therefore the wind. But theodolite observations cannot be made more frequently than every 30 seconds, too infrequently to secure really detailed data. Detailed data are particularly important for planes attempting to land on the deck of a carrier. The carrier's bulk causes eddies in the air around it.

Science News Letter, March 4, 1939

ENTOMOLOGY

Ant That Stings Like Wasp Lives in American Tropics

AN ANT that stings like a wasp is described by Prof. Neal A. Weber of the University of North Dakota. (*Science*, Feb. 10)

Prof. Weber was stung twice by individuals belonging to this species—which was twice oftener than he liked. Once, in British Guiana, a worker insect drove its sting through a heavy khaki trouser-leg into his knee. The second sting was acquired in the Canal Zone, where a female insect crawled up inside his jacket sleeve and stung him on the arm.

The stings hurt like those of a vicious wasp, Prof. Weber reports, and the effects lasted for nearly five hours.

Science News Letter, March 4, 1939

E FIELDS

PHYSIOLOGY

Arsenic And Other Poisons Needed in Human Diet

YOU NEED arsenic in your food. Not much of it—so little, indeed, that ordinary chemical analysis won't detect it. But if those few thousandths of a snowflake's weight aren't there you won't be healthy.

The same is true for a couple of other poisonous elements, lead and manganese.

These elements are present in most soils, but in extremely small quantities, and ordinary tillage exhausts them, says G. Douglas Jones (*Agricultural Engineering*). To make them more available to plant roots, deeper tillage is needed. Mr. Jones is at work on several types of new soil-stirring implements. One of them, which he calls the ripper, works to depths of three feet.

Science News Letter, March 4, 1939

PHYSIOLOGY—CHEMISTRY

Complex Chemistry Of Mother Love

NUTRITION and the chemistry of the body seem to get more complex with every new fact discovered by scientists. Take the maternal instinct as an example. Poets for ages past have sung its praises under the name of mother love, and psychiatrists have had their say about it too, not all of it laudatory. From the psychiatric viewpoint, mother love often gets out of hand or is used as a mask for other less desirable emotions, with disastrous results.

Reducing mother love to a matter of chemistry seemed simple but apparently is not. One group of scientists has found that a small gland in the brain, the pituitary, produces a chemical called a hormone which, among other things, stimulates maternal instinct or mother love in laboratory animals.

Another group of scientists found that mother love was tied up with the amount of a mineral, manganese, in diet. Manganese is considered an essential part of the diet, although only very tiny amounts of it are needed. No one needs to worry about not getting enough manganese, apparently, because these scientists had a difficult time preparing a diet that did not contain a small trace of manganese. When they finally made up such a diet, in order to learn whether, and if so why, manganese was a dietary essential, they found that rats deprived of it failed to develop the maternal instinct.

Latest addition to mother love chemistry ties it up with vitamins, Vitamin B_1 specifically. Overabundance of this necessary vitamin, it has been reported, after one generation interferes with lactation, causes loss of maternal instinct, cannibalism and progressive loss of fertility. The findings were made on rats. But manganese came to the rescue and reversed the process due to too much vitamin B_1. The results are said to show that manganese is essential for utilization of B_1 in the body tissues.

The studies were all on animals. What the findings mean for humans has not yet been determined.

Science News Letter, March 4, 1939

PHYSIOLOGY

Gland Extract Tried For Weight-Reducing

A NEW extract from the pituitary gland is being tried out in Montreal as a weight-reducing medicine.

No reports in terms of pounds-lost-per-week are yet available. The editor of the *Canadian Medical Association Journal,* however, says the tests of the new gland extract "give promise of great advance in the difficult problem of weight-reduction."

The extract, known as No. 622, was obtained from pituitary glands of animals by Drs. J. B. Collip and D. K. O'Donovan at McGill University. They found that when given to animals this extract increased the heat production and energy expenditure of the animals' bodies. It did this, apparently, at the expense of fat.

Tests of the new gland extract have now been made on three human subjects. The same speeding up of heat production and energy expenditure at the expense of fat occurred.

In cautious scientific language Dr. Collip and associates, Drs. I. M. Rabinowitch, Marjorie Mountford and D. K. O'Donovan, report their results to the *Canadian Medical Association Journal.*

"The possible uses of this extract in the treatment of obesity and in conditions in general where an increase of metabolism is desirable are now being investigated," they state.

Science News Letter, March 4, 1939

PUBLIC HEALTH

Influenza Is Epidemic But Cases Are Not Reported

STATISTICALLY there has been no influenza epidemic this year. Clinically there has.

This is the way officials of the U. S. Public Health Service sum up the situation in which many persons have been sick, and, in Washington at least, hospitals have been crowded, nurses and doctors badly rushed, but reports for the entire nation showed only 3,802 cases for the week ending Feb. 11.

That figure is lower than the 4,310 cases reported throughout the nation the previous week, and it is insignificant compared with the number reported during one week at the peak of the 1937 epidemic, which was 37,101.

During the week of Feb. 18 influenza jumped up 81 per cent., according to reports received by the U. S. Public Health Service. The total for that week was 6,895.

The number of cases should now begin to drop off, public health officials said, because this week marks the usual peak of the influenza season. They are not inclined to consider the present number of reported cases, in spite of last week's increase, as indicating an epidemic. If the cases had followed the five-year median there would have been 8,591 cases reported during the week of Feb. 18, instead of 6,895.

The cases this year, reported or not, are officially considered influenza. The disease is mild, however, and is accompanied so far by only a little pneumonia and has not yet caused any rise in the death rate.

The mildness of the disease accounts in part for the lack of reports, although reports of influenza even during severe epidemics always fall far behind the actual number of cases.

Another reason why cases are not being reported is that considerable confusion exists as to what is influenza, what is grippe and what is a bad feverish cold. Every year at this season there is an increase in the number of these ailments which physicians lump together as upper respiratory diseases.

To avoid getting influenza, the Public Health Service advises staying away from patients, especially in the early stages of their sickness. Those who have influenza are advised to keep very quiet and take a prolonged rest, avoiding undue exertion for some time after they begin to feel better.

Science News Letter, March 4, 1939