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THE PRESENCE OF VITAMIN B IN FROZEN FLESH
FOODS.

By A. M. WRIGHT, A.I.C., F.C.S.

A CONSIDERABLE amount of work has been recorded in connection with the vitamin content of fresh and canned meats (1, 3, 6, 7), but none appears so far to have been reported upon meats which have been subjected to cold storage (5). The present paper is a record of an investigation carried out in order to determine the effects of up to nine years' cold storage upon the vitamin B present in beef, mutton, lamb, and pork, the temperatures during cold storage ranging from 2° to 15° F.

The experimental work carried out in connection with the determination of the vitamin content of the foods examined was done as feeding-experiments upon young growing animals—in this instance White Leghorn cockerels from two to three weeks old at the beginning of the experimental feeding were employed.

In the determination of the vitamin content of the meats the experimental animals were fed upon a diet in which the protein was derived wholly from the meat, the fat from the meat supplemented with lard, also butterfat, the carbohydrates from purified starch. In the diet of the control animals the protein was derived from purified casein, the carbohydrates from purified starch, the fats from lard (heated), with or without the addition of butterfat, in accordance with the attempt to add or withhold vitamin A; compressed yeast was used to supply the vitamin B where required in the diet of the control animals. All animals, control and

NATURAL-HISTORY NOTES.

Note on a Worm found in the Same Shell as a Hermit-crab, by Maxwell W. Young, F.C.S., Biologist, Portobello Marine Hatchery and Biological Station, Dunedin.

In 1921 a hermit-crab (*Eupagurus edwardsi*) under observation in one of the tanks at the Portobello Hatchery was noticed to have as a companion in its shell a large worm. I left the strangely assorted couple alone for some months to see if the relationship would continue, and the effects, if any, on the crab. In December the worm was removed and sent to Dr. Benham, of the Otago University Museum, for identification, and he pronounced it to be a specimen of *Chilonereis peristomalis* Benham. The specimen was 16 mm. long when removed for examination. The crab was still in a healthy condition at the time of removal of the worm, so it has evidently been a case of commensalism. Companionships of this kind between Annelids and Paguridae have been noted from the Northern Hemisphere,* but are comparatively rare in our waters. This is the only case I have observed since 1921; and, as all the hermit-crabs brought up in the trawl have been examined very carefully since then, with negative results, I consider this occurrence is of sufficient rarity here to be worth recording.

Australian Native Hen, by Professor W. B. Benham, F.R.S.

It may be well to put on record the occurrence in Southland of a specimen of the Australian black-tailed native hen, or "moor hen" (*Microtribonyx ventralis*). The bird was shot by Mr. Cook at Oraki, near Colac Bay, in June this year, and forwarded to the Otago University Museum for identification and preservation. As the bird is said by Gould to be a feeble flier, and is generally rather rare and local, though in some years it occurs in great numbers in some localities, its arrival in New Zealand is of interest in relation to the dispersal of such birds. Though three specimens of the black Australian coot (*Fulica australis*) have been recorded, this is, I believe, the first time that the native hen has reached a museum.

REVIEWS AND ABSTRACTS.

Elementary Zoology, by OSWALD H. LATTER. Methuen and Co. (Limited), London, 1923.

With the advance in science and improved methods of instruction it is necessary that there should be good up-to-date text-books. Nowhere is this more important than in biology. The present work covers the subject of zoology to the standard prescribed in the University Matriculation

* VAN BENEDIN, *International Science Series*, vol. 20, p. 42, 1876.