70 per cent. were of female birds and 30 per cent. males; whilst of 68 empty stomachs 60 per cent. were of females and 40 per cent. males. Of 123 partly filled stomachs of the black-headed gull 73 per cent. were of female birds and 27 per cent. of male birds, and of 82 empty stomachs 65 per cent. were of females and 35 per cent. of males. Only 16 guillemots were obtained with empty stomachs, and here again 75 per cent. were of female birds and 25 per cent. male. Of the remaining empty or partly filled stomachs of eleven species, namely, thirty-six in all, 62 per cent. were of female birds and 38 per cent. of males.

The range of variation of the food according to locality is interesting. Of the 539 herring gulls examined, 351 were obtained on the coast, or nearby, and 188 were obtained from agricultural districts. In the former, food fishes constituted 13 per cent. of the total food consumed, other fishes 4·7 per cent., and injurious insects 14·1 per cent. Those from agricultural districts gave the figures 9·2 per cent. of food fishes, 7·2 per cent. of other fishes, and 12·5 per cent. of injurious insects, showing that the diet of this species gives only a small range of variation. With the black-headed gull the figures are more striking. Those from the coast show 11·5 per cent. of food fishes, 8·3 per cent. of other fishes, and 24 per cent. of injurious insects. From agricultural areas the percentage of food fishes is only 4, other fishes 2, and injurious insects 32·7.

In all the gulls, annelids, crustaceans, molluscans, echinoderms, etc., figure largely, and in nearly all cases a considerable percentage of this is obtained from shore refuse. In the common gull the percentage is 60·69, the herring gull 48·36, the lesser black-backed gull 39·75, and the black-headed gull 44·04.

For the first time we have a volumetric analysis of the food of the common tern, and the results are all in this bird's favour. The whole of the food is of an animal nature, and 53·70 consists of fish. Of this item 18 per cent. is made up of food-fishes and 35·70 per cent. of non food-fishes. Summarising the figures for the total food content, it is shown that 81·99 per cent. of the food is of a neutral nature, and (if we regard the food-fishes eaten as an injury) 18·01 per cent. injurious. It is very significant that no traces of fresh-water or flat fishes were met with.

As a result of this investigation, and the expression of opinion of those who have devoted a lifetime to fisheries investigation, we are of opinion that no action of sea-birds can produce any appreciable effect upon the plenitude of the fishes of the sea. Moreover, many of the species of birds are exceedingly valuable from an agricultural viewpoint, and their wholesale destruction may be fraught with the gravest possibilities.

Obituary.

PROF. C. J. EBERTH.

PROF. CARL JOSEF EBERTH, whose death occurred in Berlin at the beginning of December, was born in 1835 and completed his ninety-first year last September. His earlier work was carried out in Zürich, but for many years he held the post of professor of pathological anatomy in the University of Halle. Zoology, anatomy, histology, pathological anatomy, and bacteriology were all enriched by his researches, and his published papers include investigations on nematode worms, fœtal rickets, the structure and development of blood capillaries, thrombosis, the histology of the lung and liver, mitosis, and on inflammation.

Eberth's name is probably best known in connexion with the discovery of the bacillus of typhoid fever. In 1880 and 1881 he published papers in Virchow's *Archiv* describing a bacillus which he found present in the spleen and mesenteric glands of cases of typhoid fever. The bacilli occurred in scattered groups, and were not distributed generally in the tissues, and appeared to be characteristic and distinct from other organisms which were occasionally seen. Of 40 cases of typhoid fever investigated, this bacillus was found in 18 only; it was also absent from 24 cases of tuberculosis and other diseases. Koch, about the same time, also noted the presence of a similar bacillus in typhoid cases and published photo-micrographs of it. Gaffky, in 1884, confirmed Eberth's observations, finding the bacillus in 26 out of 28 cases of typhoid fever investigated, and isolated and cultivated the organism, which since has sometimes been known as the Eberth, or Eberth-Gaffky, bacillus.

Prof. Eberth, who had lived in retirement for many years, was created a "Geheimrath," and a *Festschrift*, with excellent portrait, was dedicated to him on the occasion of his ninetieth birthday last year (*Beiträge zur path. Anat.* Bd. 74, 1925). R. T. HEWLETT.

MR. LESLIE D. CURRIE, palæontologist on the staff of the Burmah Oil Company, was drowned while bathing in Burmah on November 9. Mr. Currie had only three weeks before arrived in the country, after a brilliant career in the University of Glasgow, during which he had done some promising research work on some undescribed Silurian Crustacea. His death, at the age of twenty-two years, removes a palæontologist of great promise.

WE regret to announce the following deaths:

Dr. Walther Bremer, Keeper of the Irish Antiquities in the National Museum, Dublin, whose archæological work included the identification of Asturian flints at Island Magee.

Dr. Franz Exner, emeritus professor of physics in the University of Vien a and a member of the Vienna Academy of Sciences, on November 15, aged seventy-seven years.

Dr. James F. Kemp, professor of geology since 1891 in Columbia University, distinguished for his work in economic geology, on November 17, aged sixty-seven years.

Dr. C. L. Withycombe, formerly of the Imperial College of Tropical Agriculture, Trinidad, and recently appointed lecturer in advanced and economic entomology in the University of Cambridge, on December 5, aged twenty-eight years.