

salary as director of the Institut Pasteur was trifling, for he had little use for it. He was a bachelor and lived in two small rooms in the hospital of the Pasteur Institute where he was devotedly cared for and nursed by one of the sisters.

All his old friends and early contemporaries were dead and when his last old colleague, Calmette, died, on October 29, this broke Roux up, and he survived only another four days and passed away on November 3 in his eightieth year.

Roux was elected a foreign member of the Royal Society in 1913, and was awarded the Copley medal of the Society. He also held the much coveted 'Grand-croix de la legion d'honneur'. Roux was held in such esteem in France that he was awarded an imposing national funeral which, personally, it is certain he would not have desired. His remains are to be finally deposited in the garden of the Institut Pasteur which he had loved so much.

W. B.

#### PROF. W. MIELCK

PROF. W. MIELCK, director of the Biological Station at Heligoland, who died on October 5, was educated at Hamburg, Göttingen and Kiel, and carried out his first research work at Kiel under Prof. K. Brandt. In 1907 he was appointed to the staff of the Biological Station at Heligoland, with which institution his life-work was bound up. From 1910 he was associated with the late Prof. Heincke in fishery investigations, especially in relation to the plaice and the over-fishing problem, carrying on, however, at the same time the plankton researches which he had commenced at Kiel.

During the War, Mielck's duties kept him in Heligoland, where he not only continued such research work as was possible, but also organised a successful local fishery. This direct experience gave him much interest and insight into the effect of the War on the stocks of fish, a question which was energetically studied by the Heligoland staff in the ensuing years. He succeeded Prof. Heincke

as director in 1921 and threw his whole energy into the rebuilding and reorganisation of the Biological Station, which has become the most important institution in Germany for marine biological research.

When Germany rejoined the International Council for the Exploration of the Sea in 1926, Mielck was appointed one of the two delegates from that country, and played an important part in the organisation and direction of his country's share in the international investigations. In 1928 he succeeded Mr. Borley as chairman of the Southern North Sea Committee, and carried out the duties attached to this post in a manner which at once earned for him the respect and support of his foreign colleagues. It was characteristic of Mielck's thoroughness and strong sense of duty that he set himself to master the English language in order to preside more effectively over his Committee.

Mielck was a hard worker and found time to carry out intensive researches on herring larvæ in addition to his onerous official duties as director of the Biological Station. His premature and sudden death at the age of fifty-four years has robbed Germany of a first-class worker, the International Council of a valued collaborator, and his co-workers of a staunch friend. His British colleagues on the International Council, of whom the present writer was one, regarded Mielck with admiration and affection, and deeply mourn his loss.

E. S. R.

WE regret to announce the following deaths :

Dr. G. S. Coleman, director of the Department of Municipal Engineering in the College of Technology (University of Manchester), on November 7.

Mr. R. B. Mellon, who, with his brother, Mr. Andrew Mellon, formerly American Ambassador in London, founded the Mellon Institute of Industrial Research, Pittsburgh, on December 2, aged seventy-five years.

### News and Views

#### Heavy Hydrogen and Heavy Water

IN connexion with the forthcoming discussion on December 14 at the Royal Society on "Heavy Hydrogen" and the letter by A. and L. Farkas in this issue of NATURE, p. 894, it is interesting to have the results of additional experiments with heavy water, containing the hydrogen isotope  $H^2$  (isohydrogen or deuterium) reported from the United States (Harkins and Doede; Barnes; H. S. Taylor, Caley and Eyring; Selwood and Frost; G. N. Lewis and Macdonald; Olson and Maroney: *J. Amer. Chem. Soc.*, Oct.-Nov.). An apparatus for the separation by electrolysis is described in which an alkaline solution is electrolysed between concentric nickel tubes. The solubilities of a few salts are found to be distinctly less in heavy water

than in ordinary distilled water, the difference in the case of barium chloride being 19 per cent. Various physical properties such as density, refractive index, viscosity, surface tension, dielectric constant and magnetic susceptibility have been measured with specimens of heavy water containing 31, 63.5 and 92 per cent of the hydrogen in the form of  $H^2$ . Previous results are confirmed in general, and some additional information obtained. The viscosity is larger, and the dielectric constant smaller, than for ordinary water. The molar magnetic susceptibilities are equal. An advance report through Science Service, Washington, states that heavy water is lethal to fish, tadpoles and worms, but paramecia resisted it for twenty-four hours.