calumnies. Its appetite for a dead rabbit or the like has doubtless given some basis for misinterpretation. We doubt whether it is quite correct to say that the rolling-up musculature (*orbicularis panniculi*) of the hedgehog is also used in raising the spines, but perhaps Miss Pitt means merely that the contraction of the cap-like sheet is a factor in making the spines stand out firmly. We like what is said in regard to the individuality of hedgehogs and other beasts of the field. Miss Pitt is to be congratulated on a book which takes its place in the first rank of works on field natural history. It is a personal record of clever, patient, and sympathetic observation. J. A. T.

Obituary.

PROF. YVES DELAGE.

BY a large number of zoologists, who have known the charm of Roscoff Marine Station during the last twenty years or more, the death of Prof. Yves Delage on October 8 will be felt as a personal loss. It was not merely that Prof. Delage grudged no time or trouble if he could help one with a piece of work; it was the impressive sincerity of the man and the simplicity with which he wore his learning. He had an encyclopædic knowledge of the shore-fauna and of the literature of biology, but he encouraged the learner with a Darwin-like humility. His devotion to science was singularly complete. All through his life, with an extraordinary intensity, he was preoccupied with biological and psycho-biological problems, and he did not often unbend his bow except for the simple pleasures of domesticity and the open air.

Yves Delage was born at Avignon in 1854 and educated at various provincial schools. He was greatly influenced in his student days by de Lacaze-Duthiers, whom he afterwards succeeded both at the Sorbonne and at Roscoff. It was under this master that he acquired a great liking for "microtomy" of a rather different sort from that which the word now suggests. We mean what Delage himself called "patient dissections under the microscope," the kind of investigation which he illustrated in his thesis (1881) on the vascular system of sessile-eyed Crustaceans. That he did not, however, stand so aloof as Lacaze-Duthiers did from the use of the microtome was shown in subsequent researches, such as those dealing with the development of sponges (1887). After a period of assistantship to Lacaze-Duthiers, of whom he always spoke with great reverence, Delage became professor at Caen and director of the adjacent Marine Station at Luc. He soon returned, however, to the Sorbonne, and was actively at work there until quite recently. He was elected a member of the Institute in 1901, about the time when he assumed full charge at Roscoff; he received the degree of LL.D. from Aberdeen University when he attended the quatercentenary celebrations in 1906; and he was awarded the Darwin medal by the Royal Society in 1916. For some years past his eyesight had given way badly, but his mental vision was unimpaired.

Delage's scientific industry was at once a reproach and an inspiration to those who knew him; it was almost incredible. His great book on "Heredity and the Great Problems of General Biology" (1895, second edition 1903) is a monument. It is marked by erudition, clearness of exposition, fair-mindedness, and keen criticism. We have temperamentally a great admiration for his judicial way of balancing evidence, sometimes so judicially that the reader's mind is left in a state of indecision. His own view was definitely neo-Lamarckian, and he had many a thrust at Weismannism. Then there are the twenty volumes or so of "L'Année Biologique," a very valuable series of critical summaries of current biological memoirs, even the last volume containing many contributions from Delage himself. Again, there are the half-dozen volumes of the "Traité de Zoologie Concrète," in which he was ably assisted by M. Hérouard and others. Besides these there were smaller undertakings, such as the very successful volume, written along with M. Goldsmith, on "Modern Theories of Evolution" (1909), and a similar volume on "Parthenogenesis" (1913).

Delage's most important contributions to zoology and biology have been (1) his fine study of the life-history of the extraordinary Crustacean parasite Sacculina, (2) his precise work on the development of sponges, and (3) his remarkable experiments on artificial parthenogenesis, with which his name (along with that of Jacques Loeb) will always be associated. We recall also the strange experiments on "merogony" and researches on the semicircular canals and otocysts. The study of the ear had a great fascination for him. Nor can we forget a long paper on a whale stranded near Luc, for it was in this connection, about 1885, that we had in our student days, working at the Luc laboratory, our first knowledge of Delage. We suppose that he made mistakes in his work like other distinguished men, but surely his life was marked by what he said Lacaze-Duthiers had by example taught to his school—"la persévérance, la suite dans le travail, la conscience dans l'observation, la sobriété dans les inductions théoriques."

Delage was at work at Roscoff this summer and autumn, and it is surely not unfitting that the last subject of his eager scientific analysis should have been *dreams*, on which we believe he had recently completed a treatise. A young student who returned last month from a working holiday at Roscoff has given us a pleasing glimpse, with which we close our appreciation. Every day after lunch it was Delage's habit to sit for a while in front of the laboratory so that any student might know he was then and there at home.

J. ARTHUR THOMSON.