

receive thorough attention. At present there is an extensive trade in pearl shell and trochus, in *bêche-de-mer* and in turtles, and the possibility of increasing these by methods of cultivation and of establishing a sponge fishery—of native or, if feasible, imported sponges—will be examined.

The commercial potentialities of the fisheries will be estimated so far as opportunities permit. The Great Barrier Reef is immensely rich in life and should prove a source of vast wealth if properly exploited, and for this a thorough biological survey is the essential preliminary.

### Obituary.

MR. R. A. HERMAN.

CAMBRIDGE mathematicians of the past forty years will have learnt with deep regret of the sudden death of Mr. Herman, of Trinity, on Nov. 29 last, at the age of sixty-six years. Versatile and skilful, Herman devoted to teaching powers that were ample to have made him one of the celebrated mathematicians of his time, and his monument must be sought in the multitude of his pupils who have won distinction for themselves.

Herman took the Tripos in 1882, and was described at the time as the last 'real' Senior Wrangler, for the Tripos was about to be divided, and the title, though surviving until 1909, depended after Herman's year on only the first part, the second part being a postgraduate examination. After gaining in due course a Smith's Prize and a Trinity fellowship, Herman went to Liverpool as professor, but he stayed there only two years, and returned in 1886 to Cambridge, where he spent the rest of his life. He was given the honorary degree of LL.D. at St. Andrews in 1920.

At the time of Herman's return, and until 1909, mathematical teaching in Cambridge was of two kinds: in theory the ground for the Tripos was covered by college lectures, but in practice success depended on the private coach. Herman served a full period of office as a college lecturer, and he was a University lecturer for many years, but it was as a coach that he became famous. Reputation in this field was difficult to acquire, but Herman had a genius for teaching which won its reward when J. E. Wright was Senior Wrangler in 1900, and from 1903 until 1909 one or more of his pupils, alone or bracketed, headed the list: of the last eleven Senior Wranglers, he coached nine.

For a few years after 1909, force of custom still sent the best scholars to be coached, but the new regulations put the premium on specialisation, and the use which Herman could make of his powers under the changed conditions was still uncertain in 1914. During the War he was engaged on various routine tasks; he lost his only son, reported missing and never heard of again, and suspense and grief affected his subsequent career. After the War he continued to read and to enjoy mathematics, but his diminished energy found sufficient scope in his University lecturing.

Herman was beyond question a great teacher, at once conscientious and inspiring, methodical and brilliant. His revision papers were miracles of thoroughness, and by means of weekly problem papers he imparted all that it was possible to impart of his own facility in the problem-solving that was formerly essential to distinction in Cambridge

examinations. As a mathematician he was an artist to the finger-tips, scrupulously rigorous, little satisfied by a mechanical solution, and quick with praise when he saw beauty. There was no branch of Tripos mathematics in which he was not proficient, and there were many subjects in which his knowledge extended far beyond the range of any examination. He was an astronomer in a university where astronomers flourish, his only book was on geometrical optics, and he was an authority on the most difficult problems of discontinuous motion in fluids, but it was to differential geometry as investigated by kinematical methods that he was most devoted.

A teacher's fame is local and ephemeral, but so long as any of Herman's pupils are alive he will be remembered with gratitude and affection.

MR. J. H. DURRANT.

THROUGH the death at his residence at Putney on Thursday, Jan. 19, of John Hartley Durrant, entomological science loses a worker who has long been known for his extensive knowledge, not only of the Microlepidoptera, but also of entomological literature and matters in general connected with taxonomy and nomenclature. Mr. Durrant was born at Hitchin on Jan. 10, 1863. He was one of the few remaining fellows of the Entomological Society of London who could date their association with that Society back to 1883, when he became a member. In 1886 he took charge of the late (the sixth) Lord Walsingham's extensive collection of Microlepidoptera at Merton Hall, Norfolk, and when this collection, which comprised some 260,000 specimens, was transferred, together with the Walsingham entomological library, to the British Museum (Natural History), he became a member of the scientific staff there.

Mr. Durrant was closely associated with the late Lord Walsingham in the preparation of the Microlepidoptera volumes of both the "Fauna Hawaiianensis" and the "Biologia Centrali-Americana," and he was personally responsible for the completion of the latter work after the transfer of the Walsingham library and collections to the British Museum. He was a most careful worker, and one has only to look at the manner in which the extensive synonymies given in the "Biologia" are drawn up, to be impressed by the evidences of painstaking care and sound judgment there exhibited. In an interleaved copy of the volume on the Microlepidoptera of the "Biologia Centrali-Americana," as well as in his note-books, there is also evidence that he was an accomplished artist, many of his sketches