



S. L. Stevens

(Frontispiece)

OBITUARY

DR G. A. STEVEN, F.R.S.E.

George Alexander Steven was born at Freshwick, Caithness, on 13 April 1901. His boyhood was spent among crofter fisherfolk, and fishing and boats were part of his youthful environment. During 1924-28 he studied Zoology in the University of Edinburgh, being Vans Dunlop Scholar in 1926. After graduation he came to Plymouth, first as student probationer and then, a year later in 1929, he was appointed to the permanent staff of the laboratory. In 1931 he was elected a Fellow of the Royal Society of Edinburgh, and in 1952 was awarded the Doctor of Science degree of the University of Edinburgh. After a long illness he died on 7 April 1958 at his home in Yelverton, Devon, leaving a widow and two sons.

The bulk of Steven's scientific work at Plymouth was closely concerned with the commercial fisheries of Devon and Cornwall, but many of his findings have wider application, both in the field of biology and of economics. The work is grouped around the following four major subjects: (1) rays and skates, (2) shags and cormorants, (3) seals, (4) mackerel. He had early realized the importance in the south-west of the ray and skate fishery and the prevailing general ignorance concerning the biology of the fishes on which it is based. His researches established that rays tend to congregate in unispecific and unisexual shoals, that they are slow-growing and that, at any rate in the Thornback Ray, juveniles stay for years on the same ground with little tendency to move away. A result of this habit is the depletion of stocks in areas of intense trawling unless care be taken to return all young rays to the water at once. Investigations into the food of shags and cormorants followed a request from the Cornwall Sea Fisheries Committee. In the belief that these birds menaced the inshore fisheries, especially flatfishes, the Committee had paid away hundreds of pounds for thousands of their heads. Steven was able to show that shags, by far the most numerous of the two birds, eat largely non-marketable fishes and flatfishes scarcely at all. The latter do form an appreciable element in the food of cormorants but these birds are too few to have any marked effect on the fishery. His studies of the seal population of Cornwall similarly arose from complaints of fishermen that seals gravely menaced their livelihood. While making his census Steven visited, often by swimming into them under uncomfortable and risky circumstances, all the caves along the north Cornish coast. He concluded that there were (in 1935) between 300 and 500 Grey Seals in the area. Steven's work on the biology of the mackerel undoubtedly ranks as his major contribution to fishery science.

Through a fog of earlier pre-conceived ideas and conflicting statements he made his way to a rational interpretation of the annual movements of the mackerel shoals, showing that they winter in dense congregations near banks and gulleys on the bottom, rising in the spring to the surface to migrate to a common spawning ground near the 100-fathom contour, which in the western region lies west of the Isles of Scilly. After spawning they migrate into shallow water inshore during the summer, later returning to winter quarters. He also made important observations on spawning, feeding, age and growth.

Steven's scientific work at Plymouth suffered interruption during the war years. He had served in the Army in France during the 1914-18 war, and during the first years of the Second World War he saw active service with the Royal Navy. During 1942-45 he was seconded from the Navy to develop the fisheries of Sierra Leone under the Colonial Office. From his base in Freetown, despite many difficulties and much discouragement, he played a leading part in preparing the groundwork for the post-war fisheries of that region, in so doing producing two comprehensive Reports for the Colony of Sierra Leone.

Just prior to the outbreak of war in 1939 he had accepted the post of Director of the Newfoundland Fisheries Research Laboratory at St Johns. Within a few days a disastrous fire destroyed the St Johns Laboratory and the war intervening before other arrangements could be made he never took up this post.

The research vessel 'Sarsia', the finest ever owned by the Association, owes much in her design and equipment to Steven's practical knowledge of work at sea. He was much interested in net-making, and a useful small handbook he wrote on the subject has been very favourably received.

From 1930 to 1948, exclusive of the war years, Steven took an active part in the Courses in Marine Biology for university students, held at the Plymouth Laboratory each year during the Easter Vacation. There are many zoologists who to-day remember with gratitude his care for them while on their first dredging and trawling expeditions, and the excellence and stimulating manner of his teaching. His many friends and colleagues at the Laboratory and elsewhere will sorely miss him.

D.P. WILSON