

throughout the Indian Empire, the *Records* and *Memoirs* were initiated, and he trained a generation of Indian zoologists.

In 1916, Annandale founded the Zoological Survey of India and was its director until his sudden death, in Calcutta, on 10 April 1924, at the age of 48. He had been nominated to be a Fellow of the Royal Society just before his death. Among those students of herpetological interest trained by Annandale were C. R. Narayan Rao, Bains Prasad, and Sunder Lal Hora, the latter taking responsibility for lower vertebrates in 1921 and, in 1947, succeeding to Annandale's former post as director.

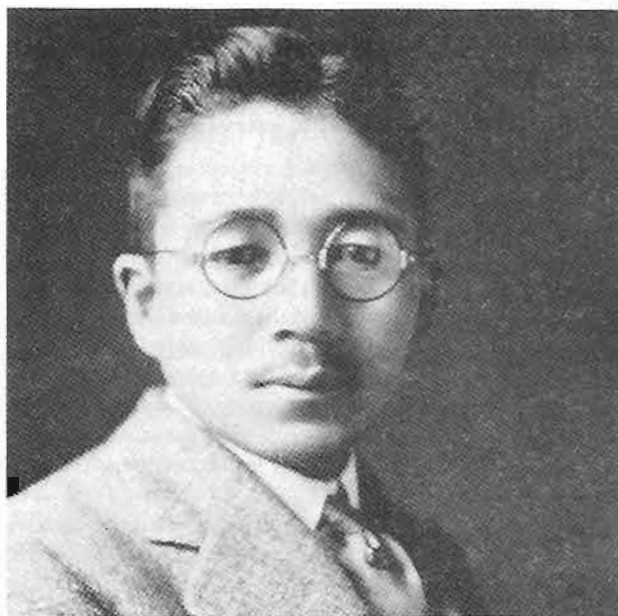
Annandale's earliest interest was anthropology, although his first paper on herpetology was in 1902. In India his work was largely zoological and covered nearly every major group including invertebrates. Thus, reptiles and amphibians were only one of many interests. He was an enthusiastic field collector, penetrating all corners of the Indian Empire and beyond (Malay Peninsula, Palestine, China, Japan, Morocco). His special interest was in Asiatic lakes, but his major comparative review of that subject was unfinished at his untimely death.

Most of Annandale's nearly 70 papers on amphibians and reptiles were taxonomic—he described numerous new species from everywhere he travelled—but he also conducted faunal surveys. Some of his most significant herpetological works concerned the desert tracts in southern India (1906), soft-shelled turtles (1912), and the Far East (1917). His interest in lake faunas naturally led him to the study of frog tadpoles, which were the subject of several of his papers. In 1912 he published an important herpetological survey of Abor (now Arunachal Pradesh), a frontier region north of Assam, territory today occupied by India but largely claimed by China. Annandale also published a report on lower vertebrates from Nepal and the western Himalayas (1907), co-authored with George A. Boulenger and Frank Wall.

• *References*: "Nelson Annandale, 1876-1924," anonymous, *Jour. Bombay Nat. Hist. Soc.*, 30: 213-214, 1924; "Nelson Annandale 1876-1924," by S. Kemp, *Rec. Indian Mus.*, 27: 1-28, 1925; "Thomas Nelson Annandale—1876-1924," by W. T. Clausen, *Proc. Royal Soc. London*, ser. B, 97: xviii-xxi, 1925; "(Thomas) Nelson Annandale," p. 25. *In Who Was Who, 1916-1928*. A. & C. Black, London, 1929. • *Portrait*: From Kemp, 1925, courtesy T. S. N. Murthy. • *Signature* (1908): British Museum (*Nat. Hist.*), courtesy A. F. Stimson.

ŌSHIMA, Masamitsu (1884-1965).

Masamitsu Ōshima, Japanese herpetologist and ichthyologist, was born on 21 June 1884 in Sapporo. After graduating from Tokyo Imperial University in 1908, where he worked with the early Japanese herpetologist Motokichi Namiye, whose own research Leonhard Stejneger initiated during his visits to Japan, Ōshima became a technician at the Central Research Institute of the Japanese colonial government in Formosa (now Taiwan). One of the functions of the institute was to investigate poisonous



Masamitsu Ōshima.

snakes, and Ōshima studied their systematics, which resulted in his first paper, a list of Formosan snakes with descriptions of several new species (1910). He published some additional papers on snakes (particularly sea snakes) and lizards, but his next major work was a monograph of the venomous snakes of Formosa and the Ryukyu Islands (1920).

In the meantime, Ōshima had gone to Stanford University in the United States and earned his M.A. degree (1919) under the renowned ichthyologist David Starr Jordan. Ōshima returned to Japan, where he completed his Ph.D. degree at Tokyo in 1920, and thereafter most of his work was on fishes. In 1924 he became a lecturer at Tokyo Women's University, affiliated with the Misaki Marine Experiment Station, and later he had positions with the Tokyo District High School (1930), Palau Tropical Research Institute (1940) and the Army-Navy Medical School.

During World War II, Ōshima was called upon to write his most extensive work on reptiles, a review of the poisonous snakes of the so-called Greater East Asia Co-Prosperity Sphere, which was intended to stretch from Manchuria to Australia. This book, which includes keys and many illustrations, with detailed island-by-island distributional charts, was produced for use by Japanese troops during the war. After the war Ōshima became a technical advisor to General Headquarters and completed a second Ph.D. (1958) in agriculture, for research on freshwater trout.

Ōshima published many titles on fishes, including a textbook entitled "The Fish" (1940). Some of his other books served to popularize zoology. His last herpetological paper (1952, co-authored with Carl Gans) was on the egg-eating habits of a Japanese rat snake. Ōshima died in Sapporo on 26 June 1965.