

(The drawing from which the foregoing plate was made is the work of Mr. Gilbert P. Whitley, Curator of Fishes at the Australian Museum, Sydney, a very good friend of the Department. We are deeply grateful to Mr. Whitley).

#### ROTTNEST BIOLOGICAL STATION COMMITTEE

Under the chairmanship of the Superintendent (Mr. Fraser), a meeting of this Committee was held at Rottnest Island on Sunday, May 8. Other members present were Professor H. Waring, Dr. K. Sheard and Mr. T. Sten. The Secretary (Mr. B.K. Bowen) was also in attendance.

A report submitted by Professor Waring indicated that the Department of Zoology of the University was continuing its ecological work in relation to the quokka, although the disastrous fire earlier in the year had set the work back considerably. He said an orthodox population count of quokkas had been started to find out whether the animals moved about much, what was the growth rate of the young, and whether the adults migrated to any extent. In 1954 a population crash had occurred in the vicinity of Bagdad Lake. His research staff had analysed the causes of the crash. Water shortage, it was found, had caused dehydration of the animals. This had led to their picking up hook worm, which caused anaemia. It had also been learned that quokkas were ruminants, and that the protein available in what vegetation had remained by the end of a long, dry summer could not be assimilated by the digestive system. Death had been due in fact to protein deficiency.

C.S.I.R.O. Wildlife Survey Section were making an accurate census of the population of quokkas. The census would eventually embrace all animals in the area west of Bagdad and Serpentine Lakes. Meantime Zoology Department staff were undertaking a rough census on the southern part of the Island. In the laboratory the blood sugars and the amount of nitrogen passing through the quokkas were being measured. It was hoped that this work would provide an answer to the question of why the quokka population was such a fluctuating one. Feeding experiments were also in

train to find out exactly what was the minimum requirement for their existence.

Dr. Sheard reported on the routine ruff and crayfish work which was being undertaken at Rottnest by personnel of the C.S.I.R.O. Division of Fisheries. He said that in company with the Conservator of Forests and one of the latter's officers he had visited the Island a short time previously, and the Conservator had now submitted a report incorporating re-afforestation proposals. The only trees he had recommended should be extensively used were tea-tree, pine and tuart.

Mr. Sten commented on his Board's views concerning beautification of the Island and restoration of the habitat.