

Only when one travels the inland plains can the vastness of the outback be visualized. Birds could live on those plains for years before coming under the notice of ornithologists. Observers number little more than nil over the range of the Flock Pigeon.

It has been suggested that cattle and sheep may be responsible for the "disappearance" of the Flock Pigeon, but the carrying capacity of the plains is held at a low level, and not many stock owners are guilty of overstocking. Much of the grass must be left to stand for long periods to ensure stock feed in times of drought that follow the seasons of plenty—and the grass grows very quickly after the big rains, after which the seed falls to the ground. Cattle, in my opinion, have little effect, if any, on the birds' food supply.—LLOYD NIELSEN, Jandowae, Qld., 8/6/63.

Obituary

MR. GEORGE MACK

The death occurred, on October 24, 1963, of Mr George Mack, the Director of the Queensland Museum, at the age of 64 years.

Mr Mack was born in Scotland in 1899. He came to Australia after having served in France in the first World War with the Argyll and Sutherland Highlanders, and the Black Watch. He joined the staff of the National Museum at Melbourne, and, while there, attended the University, and took the degree of B.Sc. In 1946 he was appointed Director of the Queensland Museum, a position he held until his death.

George Mack was a professional ornithologist and collector, and belonged to the "skin" school of thought when it came to solving problems of bird identification. It was not surprising that he came into conflict, on occasions, with the "bird-lover" or "humanitarian" school of thought; or the observer who relied solely on field identification to solve such problems. He was quite emphatic, and possibly dogmatic, in stating his views on such a contentious subject; but, at times, there was quite a lot of logic in what he said. However, one of his first actions in taking over the position of Director, was to re-organise and modernise the ancient collection of skins in the Museum. The well-ordered cases, now in the gallery of that establishment, will stand for years as a monument to the genius of George Mack and the skill of his assistants.

It was a tragedy that routine work as Director robbed Queensland of the services of a skilled ornithologist and taxonomist. Nevertheless, he found time to write his "Birds from Cape York Peninsula, Queensland", an intelligent and well-produced work, printed in the *Memoirs of the Queensland Museum*, 1953.

Many of his articles, generally on taxonomy, were printed in *The Emu* and other journals from 1930 to 1945. One has to be a courageous person to tackle taxonomic problems in Australian ornithology, and Mack proved that he did not lack this quality.

Ideological differences with the "bird lover" school of thought did not prevent him putting at the disposal of the Queensland Branch the bird room at the Museum, where we have been meeting for about 15 years. He also spent a good deal of time in arranging lectures, and other entertainments, for the younger generation, and one admired his geniality and patience with children on these occasions. No doubt, many a potential ornithologist has been set on the right track because of these activities.

He was also quite outspoken in making, as Museum Director, statements

in regard to matters of public interest. One of his last statements was to deal quite scathingly with certain misguided people in high places, who wanted to liberate introduced deer in the Mt. Coot-tha Reserve. In this frank statement he had the support of all of us. Personally I like to remember him on this note.

He is survived by his wife and two daughters, and to them we extend our sympathy.—N. JACK.

Reviews

Bird Speciation on the Australian Continent.—Under this title (in *Bull. Mus. Comp. Zool.*, Harvard, 123 (8), 1961: 302-495) Allen Keast has published a monumental tome invaluable to overseas and local ornithologists. To the former the main appeal of this paper is the clear demonstration how the evolution of vertebrate species may take place on continents. The Australian ornithologist, additionally, will find in it an invaluable discussion, in lucid detail, with a wealth of maps and diagrams, of the speciation pattern of the local avifauna. Not all the species are dealt with, as the taxonomy of some groups has still to be worked out, but 80 per cent of the fresh-water and land birds (or 425 species) are treated. It would be easy to criticise some details of the paper or to disagree, perhaps violently, with some of the author's theories. This, however, would be a rather unfair reception at this stage to a notable contribution which, on a broad canvas that compels one's admiration, pioneeringly paints an intelligible taxonomic picture of our bird fauna.

The paper is presented in a form which is ideal for a beginning student of the subject. There is a clear definition of terms, a good summary of the physical and biotic background, and a brief commentary on the relationships of Australian birds to those of other continents. It is held that our bird fauna is related to the Asian and was derived by waves of colonization, with subsequent evolution under isolation. Within the continent the waxing and waning of the arid interior has cut off populations from the parental stock ("isolates", with the potential of developing into separate species), and caused them to meet again subsequently, with varying results. In some this secondary contact has shown the components to behave towards each other as good species, in other cases "allopatric hybridization" has taken place, indicating that the pre-existing isolation had not lasted long enough to produce specific distinctiveness. The various things that may have happened in respect to particular groups are clearly discussed.

The latter part of the paper, almost half of the whole, is devoted to various generalisations arising out of the detailed species treatments, grouped under the heading of "The Mechanism of Speciation on the Australian Continent". There are pithy discussions on such topics as superspecies, double invasions, habitat specificity and speciation (considered as ultra-important by the author), the various isolating barriers, hybrid zones and stepped clines, environments in the past, the refuge concept, the zoogeographic regions concept (somewhat played down by the author, one of the defects of his paper in the reviewer's opinion), ecological speciation and some comparison between speciation on continents and on archipelagos. Several useful summary tables complete the paper.—D. L. SERVENTY.

Biology and Comparative Physiology of Birds.—Edited by A. J. Marshall. Academic Press, New York and London. Vol. II, 1961. pp. x + 468*

13. The Central Nervous System, by Adolf Portman and Werner Stingelin (pp. 1-36). This chapter is thorough and includes clear and helpful

* Vol. I was reviewed in *The Emu*, 62: 217-8.