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## REVIEWS

Bower-Birds—Their Displays and Breeding Cycles. A Preliminary Statement. By A. J. Marshall. Oxford University Press, 1954. 30s.

At a meeting of the Zoological Society on 25th August, 1840. John Gould, who had just returned from his expedition to Australia, gave an account of the remarkable structures built by the satin bower-bird, known to the stock-men as "runs", but which Gould preferred to call "bowers". Apparently Charles Coxten, Gould's brother-in-law, was the first naturalist to draw attention to these bowers and had presented one to the Sydney Museum. There are some seventeen or eighteen different species of bower-birds belonging to the family Ptilonorhynchidæ all restricted to Australia, New Guinea and adjacent islands. Dr. Marshall divides the family into three groups according to the type of bower, or display ground, they make: namely, the avenue builders, maypole builders and the stage-makers. With this last single species he includes the two Australian cat-birds which make no bowers or stages and their display is confined to the birds flying from tree to tree uttering cat-like calls. stagemaker also makes no bower but, as its name implies, prepares a stage or display ground, an oval or round area about three feet by eight to which it brings different kinds of leaves. The display has no spectacular posturing but the birds call attention to the leaves on the display ground by constant calls from adjacent trees. The ordinary type of bower constructed by the "avenue-builders" is an arrangement of two arched parallel walls of dry twigs and at either end a cleared space to which the bird brings bright objects, such as flowers and bleached bones and, should the bower be in the vicinity of human habitations, pieces of glass, brass cartridge-cases and indeed anything bright. There is a record of a satin bower-bird stealing a glass eye out of a cup of water on a window-ledge where the owner had put it for the night, and a grey bower-bird has been known to purloin a pair of spectacles to decorate its display ground! At least two species decorate the walls of their bowers with paint made from fruit pulp, or a mixture of saliva and charcoal and, in the case of the satin bower-bird, this is applied by means of a tool formed from wads of bark. The bowers of the maypole group are more varied and elaborate and are always built round a sapling. Some are developed into a sort of hut, while others are made of moss interspersed with twigs and built around the sapling. The Queensland bower-bird or Gardner, decorates its bower with orchids and

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other flowers, and a New Guinea species makes a platform of moss to which it brings flowers, bright coloured fruits and fungi.

Many Australian ornithologists consider that bower-birds are "specially intelligent and their display activities are largely relaxative, consciously esthetic and unconnected with the sexual drive." With this Dr. Marshall does not agree and the whole object of the book is to show that the building of bowers and stages are all part of the nuptial display when the reproductive organs are in the early stages of the seasonal development often some weeks before the nest is built and the eggs laid. The nest is always some little distance from the bower, or display ground, and the male takes no part in the building or the feeding of the young.

Two chapters are devoted to a discussion on the seasonal development of the reproductive organs in birds and more particularly in bower-birds. This is followed by another chapter on the seasonal effect on the reproductive organs. Dr. Marshall has done much work both in this country and in Australia on this subject, but unfortunately these two chapters are written in such highly technical language that few laymen will be able to understand many of the terms used. The greater part of the book is devoted to a very readable account of the different species, their habits and description of these bowers and playgrounds. A final chapter gives the author's views on the evolution of the different kinds of bowers.

This work, as Dr. Marshall points out, is only a preliminary statement and much more work is needed before we can come to a proper understanding of this remarkable phenomena.

N. B. K.

THE SEALS AND THE CURRAGH. R. M. LOCKLEY.

J. M. Dent and Sons. 15s.

If you do not know what a curragh is you will be puzzled by the title of this book and may pass it by. The curragh is a fine, light Irish boat of laths and pitch-tarred canvas. It plays an important but subordinate part in this story.

We know we can expect from Mr. Lockley entertaining and accurate accounts of islands and of birds, in lucid even poetic style. He does not fail us here. We have the day-to-day story of individual seals on a lonely Welsh beach. The ceremony of recognition, the water dance, the mating of the seals could not be more delightfully described. There are