



A. J. MARSHALL

OBITUARY

PROFESSOR A. J. MARSHALL

It came as a shock to many people, in various countries, to learn that Professor A. J. Marshall had died, at Melbourne, on 20 July 1967. The shock was occasioned basically by the loss of a highly useful life at the early age of 56 years, and also by the fact that there had appeared to be reason to suppose that the sturdy 'Jock' Marshall was winning the fight against a disease that had afflicted him for some months. He himself had been moderately optimistic when writing to Sydney earlier in the year. 'I am glad to be able to tell you', he said, 'that the rather rigorous barotherapy treatment I had in the Peter McCallum Clinic has made a great difference to my condition . . . I am much too much the old soldier and biologist to count my chickens prematurely, but at least there are hopeful signs.' Very regrettably, however, those hopeful signs did not mature, and so, in the words of a Sydney journalist, 'Jock Marshall lost the battle—one of the few battles he ever lost in the 56 years of his life'.

The first serious affliction endured by Marshall occurred when he was aged 16. At that time a resident of suburban Sydney—where he was born on 17 February 1911—he met with a gunshot accident that resulted in the loss of his left arm. A period of moping followed. How was a lad lacking an arm to gain and hold a useful job? This question was answered in some degree through the intervention of his mother; she wrote to Neville Cayley stating that her son appeared to be strongly attracted to natural history and asking if this could be developed.

In the event young Alan John came into our ken soon afterwards (introducing himself as 'Jock'), and within a brief period he had become an active youthful member of Sydney's zoological circle. He called frequently at the Australian Museum, where he gained stimulus and knowledge from Tom Iredale, and he acquired much outdoor experience in, particularly, the extensive National Park south of Sydney, where we enjoyed occupancy, mainly at weekends, of a two-roomed building known casually as the Bird Cabin. Much of Jock's work then was photographic, and in this he was often associated with another one-armed worker in Albert Gwynne.

Because of his natural leaning towards zoology, together with the fact that he was able (in the absence of economic ties) to devote practically all his time to the subject, the rugged young Marshall progressed at more than average pace. Such progress, acting upon something of a headstrong nature, with, perhaps, a psychological reaction against his one-armed condition, caused the youth to be, at times, rather too assured, and so somewhat 'diffi-

cult'. But, on any such occasion, he always took restraint by any of his elders in good part, and years later, in his last address in Sydney (to an annual meeting of the Royal Zoological Society), he went out of his way to acknowledge what he owed to the senior ornithologists of his native city for instruction and advice in his youthful days.

It more or less follows that if the young Marshall was headstrong he was also keen and enterprising. Accordingly, when a small party of American zoologists reached Sydney in the late 1920s and he met them at the Australian Museum, he persuaded the leader to allow him to accompany the group into the north-west of New South Wales and the south-west of Queensland. That experience enriched the youth: it not only strengthened his taste for field-work but taught him how to collect to the best advantage. Shortly afterwards, therefore, he carried out an expedition single-handed, travelling up through the Queensland interior and working his way to the north-east. Being hampered by the loss of an arm he was using a sawn-off gun for collecting, and when a woman saw him she contacted the police, and Jock was locked up. However, the local guardians of the law allowed him to send a telegram to Sydney explaining his predicament; and that became eased when we made representations to the authorities.

By now, of course, the young Marshall had become a dedicated zoologist. And his ambition in this regard was further confirmed when, in the early 1930s, he met in Sydney Dr John R. Baker, leader of an Oxford University expedition, and was allowed to join the party for a visit to the New Hebrides. Inevitably that experience was quite fruitful on a personal basis, extending as it did the young man's scientific training. Thus on 9 May 1934 he wrote me from Hog Harbour, Espiritu Santo, where at the time he had been alone for six weeks, relating that he was engrossed in following up the expedition's objectives, namely, attempts to find the cause of breeding seasons in animals, study of the anthropology of the Sakau tribe, and exploration of country hitherto unexplored. The letter continued:

'I am, of course, most interested in the first and third objectives, particularly the first. It's fascinating work—measuring every aspect of the climate (including ultra-violet light) in that it may be expected to affect animal life. Each month between the 10th and the 20th I have to dissect and preserve the gonads of 30 fruit-bats, 50 insectivorous bats, 60 lizards, 30 *Pachycephala (pectoralis)*, and 30 *Trichoglossus* . . . Also I have been studying, in collaboration with Tom Harrisson, the moult rhythm of about 30 species, and also the food, ecology etc. of many others . . . Further, we are making a detailed study of *Collocalia esculenta*, an ally of your Dunk Island birds—weights, sex ratios, breeding seasons, stomach contents, etc. . . .'

There you have an indication of how Jock Marshall acquired, at the age of 23, a basis for particular work that was to give him international status in later years. Incidentally, it was characteristic

that the letter quoted was signed 'The Pup', a title bestowed on him by a Sydney man with whom he had clashed.

Up to that stage Jock had written only a few articles (each of them slender yet promising), but the Hebridean adventure so impressed him from both the zoological and human aspects that he resolved to attempt a book on the subject. And, having concluded that task, he decided to visit England, if only to renew associations with his colleagues of the New Hebrides outing.

Thus in 1935 he arrived in Melbourne and deposited on my table a bulky manuscript bearing the title *The Black Musketeers*. He appeared to be wondering whether it would be realized now that the brash youth of those days in Sydney's National Park, a few years earlier, had really grown up, had indeed 'arrived'. And, in fact, that feeling was more or less reciprocated. At any rate, it was certainly a matter of pleasure to mark this progress, and pleasurable too to read the book when it appeared, under an English publisher's imprint, in 1937. Clearly, it seemed, this work would be simply a prelude; and thus no surprise was felt when a year or two later the enterprising Jock took New Guinea in his stride (almost literally) and produced another book, *The Men and Birds of Paradise* (1938).

He then became a student at Sydney University, a member of the literary staff of the *Sydney Daily Telegraph*, and a broadcaster on current affairs. In that period he wrote *Australia Limited* (1941), a small but pungent book that strengthened his reputation as a hard-hitting critic.

Meanwhile World War II had broken out, and in this Marshall took a notable part; he was a captain in the AIF Intelligence Corps in New Guinea, where his strong legs atoned for the absence of an arm. He was, indeed, reputed to be the only one-armed man on active service in the Australian Army, and he rendered such distinctive service that his group became known as the 'Jock Force'.

His post-war academic career, which brought him international status, has been summarized in most obituaries. He began his studies at Sydney University for a B.Sc. degree as an unmatriculated student under a little-used provision in the by-laws. For his major research he took up the breeding cycle of the Satin Bowerbird, continuing his pre-war observations in National Park. He was able to make his own dissections, gonadectomies, and even study-skins. He went to Oxford for post-graduate studies under Dr Baker and began to publish a stream of papers on the gonad cycle in bower-birds. Several years later these bower-bird studies formed the basis of a book, *Bower-birds: their Displays and Breeding Cycles* (1954).

Between 1947 and 1949 he worked under a Beit Memorial Fellowship for his D.Phil. degree on the gonad cycle of the Fulmar and made one of his notable discoveries. He was experimenting

with various techniques of revealing the interstitial lipids, in which he was primarily interested, when in one specimen he detected tubule steatogenesis. At first he thought this abnormal or pathological, but when he found the same thing in every tubule he realized it was a normal part of the post-nuptial metamorphosis, and that these luteinized tubules may be an endocrine organ of the same general nature as the mammalian *corpus luteum*. In 1949 he was appointed Reader in Zoology and Comparative Anatomy at St Bartholomew's Medical College in the University of London, following a fellow Australian, Dr P. D. F. Murray, who had moved to Sydney as Professor of Zoology. He maintained his contact with Australian zoology by collaborating in histological work with Australian field-workers, such as Angus Robinson (on the Western Magpie), Allen Keast (on breeding in desert birds) and D. L. Serventy (on the gonad cycle in the Tasmanian Muttonbird).

He visited Australia in 1958 and made a memorable journey which is described in a book written in conjunction with his friend Russell Drysdale, *Journey Among Men* (1962). In 1960 he became foundation Professor of Zoology and Comparative Physiology at Monash University, Victoria. In Australia he threw himself into the cause of fauna conservation, edited *The Great Extermination* (1966), planned exploratory journeys into the Centre and the north, and carried through preliminary forays.

Very sadly, however, fate intervened. Shocked colleagues found it hard to realize that Jock had gone. Typical of the feelings aroused is the following quotation from a letter from one of his old associates to another (Allen Keast to D. L. Serventy): 'It is exceedingly distressing that one will never again enjoy an evening with him, rejoice in his vitality and profound knowledge of birds and endocrinology, or gain secret delight from his deflations of the pompous, boat-rocking, and wondrous tales. He was by far the most exciting professor of zoology in Australia. A visit to him was something one looked forward to for weeks in advance. To me it is a considerable personal loss as he has always been a model to try and achieve.'

Our late colleague left a widow, who had been his skilled collaborator, and children, to whom warm sympathy has been extended.

A.H.C.

[The following tribute to A. J. Marshall was paid by Dr B. Lofts and Dr R. K. Murton in a paper entitled, 'Photoperiodic and physiological adaptations regulating avian breeding cycles and their ecological significance', *J. Zool., Lond.*, 155, 1968: 327. 'We wish to dedicate this paper to the memory of Professor A. J. Marshall whose untimely death occurred while it was in press . . . Probably the most valuable of his many contributions to the field of avian physiology was his ability to relate laboratory experimentation to the natural environment. Much of the thought contained in the present paper has been stimulated by his approach and pioneer studies.'—Ed.]