

SIR CHARLES FLEMING'S CONTRIBUTIONS TO THE ORNITHOLOGY OF THE CHATHAM ISLANDS

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Charles Fleming's first, and perhaps greatest, contribution to the ornithology of the Chatham Islands was made during a visit to the Islands from 28 November 1937 to 24 January 1938. The results of this expedition were published in *Emu* as a three-part paper (Fleming 1939) which remains to this day essential reading for anyone interested in Chatham Island birds. Highlights of the expedition included the climbing of precipitous Little Mangere Island, a landing on Pyramid Rock, and two weeks spent camping on remote South East Island. These achievements were possible through the help of his two companions, Graham Turbott of the Auckland Institute and Museum and Allan Wotherspoon who was then in charge of the Kaingaroa School. The climbing of Little Mangere Island revealed the survival there of small populations of both the Black Robin and Forbes' Parakeet, species which some people supposed then to be extinct, as indeed they were everywhere else. The prions breeding on Pyramid Rock were found to be a new race of a subantarctic species (now known as *Pachyptila crassirostris*) and not the subtropical *P. turtur* which was nesting only a few miles away on Mangere Island. The stay on South East Island provided an opportunity, accepted with enthusiasm, to make a much needed study of the Shore Plover, a little-known species formerly present on the New Zealand mainland but confined to South East Island since the 1850s or earlier (Fleming 1982: 242).

Less spectacular, perhaps, than the work on rare or new forms, but nevertheless a very important aspect of Fleming's 1939 paper is that it presents an overall picture of the then current distribution and abundance of all the Chatham Island birds, in addition to supplying a great deal of information about the morphology and behaviour of particular species. Thus it has provided a bench mark which has allowed later investigators to assess the directions and rates of change in the distribution and abundance of species, and hence priorities for their conservation. In 1937 the New Zealand Government had no professional ornithologists to work on the bird populations of remote islands, so Fleming's private studies in this field were particularly important, filling as they did the gap between the observations of the bird collectors of the nineteenth and early twentieth centuries, and the reports of the government scientists who visited the islands with increasing frequency in the years after World War II. Further, Fleming incorporated in his paper the observations and recollections of Chatham Island residents, so preserving valuable information which otherwise would have been lost. Examples are the account of the harvesting of young albatrosses, and observations on the former numbers and distribution of

species such as the Blue Penguin, Forbes' Parakeet, Black Robin, and Bellbird, to name but some. The preservation of local information about the former distribution of the Chatham Island "Taiko" (now known to be *Pterodroma magentae*) became particularly important more recently when attempts were being made to discover where the surviving birds nested.

One further aspect of Fleming's 1939 paper deserves special mention. Apart from the accounts of the individual species, the author made some interesting comments on certain characteristics of the fauna as a whole. For instance, he pointed out that the meeting of the subtropical and subantarctic oceanic surface waters in the vicinity of the Chathams is reflected in a comparable mix of northern and southern avian elements as exemplified by the prions and other seabirds. Again, he showed how the isolation of the Chathams has led, on the one hand, to the survival there of species such as the Shore Plover and Snipe, forms which had become extinct on the New Zealand mainland, and on the other, to the development of local races so that the Islands now have a high proportion of endemic forms. He quoted examples of how recent environmental changes at the Chathams, particularly those caused by the advent of man and his accompanying predacious mammals, have led to dramatic population declines in some species such as the Black Robin and Forbes' Parakeet, and to the extinction of others such as the Bellbird and Fernbird. This vulnerability of the endemic birds to changes emphasised the urgent need for conservation, particularly the establishment of predator-free reserves.

Although the 1939 paper was the only one that Fleming devoted solely to the birds of the Chathams, he later published other papers on the systematics and distribution of several avian taxa that had representatives in the Chatham Islands. Such studies, based on both field data and examination of museum skins, included papers on the *Cookilaria* petrels (1941a), the prions (1941b), Little Shearwaters (with D.L. Serventy, 1943), Pied Fantails (1949) and flycatchers of the genus *Petroica* (1950). These papers are important in elucidating the history of colonisation and differentiation of avian species at the Chathams. This theme was further advanced in the text Fleming wrote for the book "George Edward Lodge – The Unpublished New Zealand Bird Paintings" (1982), particularly with regard to the several species of rails at the Chathams (Fleming 1982: 214).

Fleming's written contributions to the ornithology of the Chatham Islands are available for all to see. These, however, were by no means his only contributions. Of equal importance perhaps, though much more difficult to document, are the contributions he made through his influence on other people. This influence was exerted in two ways: first, through the very personal interest and encouragement he extended to the younger scientists and field officers who, during the post-war years, have so ably built on his earlier work; and, secondly and more formally, through his position as a member of the Fauna Protection Advisory Council. Apart from one short break, he was a member of this Council from 1955 until his death in 1987 at which time he was Acting Chairman. The Council advised the Minister of Internal Affairs, the minister in charge of the New Zealand Wildlife Service which, until 1987, was the organisation responsible for the conservation of native fauna. Fleming had a very great influence on the deliberations of this

Council, partly because of his personal prestige as one of New Zealand's most distinguished scientists, but even more because of his first-hand knowledge and his ecological understanding of many of the places where the conservation problems existed. The Chatham Islands was one such place. Particular mention must be made of his roles in achieving reserve status for South East Island and, later, in supporting D.V. Merton's plans for increasing the Black Robin population.

Although not yet fully documented, there seems little doubt that Fleming played an important role in having South East Island declared a reserve for flora and fauna. Certainly it was Fleming who initiated and then persistently advocated this move. As early as 1939, he suggested that some Black Robins be moved from Little Mangere Island to South East Island where, with a much greater area of bush, and *given reserve status*, the robins might increase to a viable population (Fleming 1939). Achieved in 1954, the South East Island reserve has proved highly beneficial to nature conservation in the Chathams. Fleming also seems to have supported, though perhaps less directly, the successful bid in 1966 by the Royal Forest and Bird Protection Society and the New Zealand Wildlife Service to have Mangere Island purchased for management as a nature reserve.

With the world population of Black Robins falling to only five birds in 1979-80, it clearly required great courage to employ untried management techniques on the last two surviving females. According to Merton (*in litt.* 17.12.91), it was largely due to Fleming's personal support and his influence with senior government officials that Merton and his team were authorised and encouraged to proceed with Merton's novel management programme. This involved cross-fostering robin eggs, at first to warblers but later – more successfully – to tits; it was ultimately spectacularly successful, despite the initial risks.

Fleming's post-war interest in ornithological research at the Chathams was not merely an armchair one. In 1977 he visited the islands to see current work on the conservation of the Black Robin. Again, in 1984, he returned to Pitt and South East Islands with members of the Fauna Conservation Advisory Council. On this, his last visit to the Chathams, it was a pleasure to see his enthusiasm for the work of Alison Davis who was then extending Fleming's own pioneer work on the breeding biology of the Shore Plover. It was clearly a great joy to him to sleep once again in what remained of the old woolshed and to find that Broad-billed Prions were still raising their young under the floor boards as noisily and as successfully as when he last slept there some 46 years before.

In conclusion, it is worth recording the great conscientiousness with which Charles Fleming ensured that all his observations eventually appeared in print so they would be readily available for other workers to use. In view of this, we may be sure that this special number of *Notornis*, providing as it does an opportunity and an incentive for publication of original research on the birds of the Chathams, would have been a great source of satisfaction to him. A detailed biography of Charles Fleming, including a photograph, is to be found on pages 22-43 of the 1988 Proceedings of the Royal Society of New Zealand.

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