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The South Island kokako: some thoughts on mystery birds, pieces of moss, feathers and skeptical audiences

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The South Island kokako *Callaeas cinerea cinerea* was widely dispersed throughout South Island and Stewart Island forests at the time of European colonisation. Following the arrival of additional mammalian predators the birds had become rare by the end of the nineteenth century. The species was last confirmed as extant in 1967, but until the 1980s circumstantial reports of kokako continued to be made. Sufficient evidence for their survival prompted the formation of the South Island Kokako Investigation Team (SIKIT), an informal group of ornithologists dedicated to verifying the bird's existence. Evidence comprised glimpses of birds, kokako-like calls, moss-grubbing not associated with any other animal, and most convincingly, a feather found on Stewart Island in 1986 and shown to belong to a member of the family Callaeatidae (New Zealand wattlebirds). Since 1990, on the West Coast alone, 51 people have reported sightings, calls, or moss-grubbing from 22 locations. SIKIT continues to search for the birds throughout their original range. Publicity about these searches has resulted in a steady stream of new reports. Search effort is handicapped by a shortage of resources and, despite the encouragement of some officials, by the reluctance of government agencies to assist. This reluctance perpetuates a history of institutional skepticism about rare species, exemplified by the private

rediscoveries of Chatham Island taiko, takahe, and other "officially extinct" species. SIKIT now considers the fate of South Island kokako to rest with a few widely scattered pairs and individuals. As time passes and numbers dwindle further, conservation management by official agencies will become significantly more likely to fail.

Palaeobiological perspectives on Westland birds

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Traditionally, fossil bones have been seen as static evidence for the former presence and possibly structure of a species in a particular area. In addition to providing material for dating individual bones, the bones can contain information on the diet and feeding sites of some extinct species. Ongoing research suggests that even aspects of the ecosystem dynamics and palaeoenvironments might have left signals in the bones. Mass spectrometry of stable and unstable isotopes promises a revolution in palaeobiology in New Zealand. Some of the first of the new data have been obtained from bird fossils from the West Coast. Palaeobiological studies can provide insights into a variety of issues. For example fossils of the upland moa *Megalapteryx didinus* may provide information on the return of the West Coast forest after the most recent glaciation. A possible palaeo-rainfall indicator resides in bone protein, and this could also indicate where in West Coast forests some moa fed. Although the Westland petrel is an icon species on the Coast today, before humans reached New Zealand, several other species of petrel bred in large numbers in these forests and their effects may still be detectable in the present environment. The variety of new information from old bones demonstrates the potential of palaeobiology to give an historical and evolutionary context to present ecological and conservation studies on the West Coast and the rest of New Zealand.