

Discussion

Presumably, egg fertilisation occurs at a definite stage of egg development. If females store sperm, fertilisation could take place at any time after copulation, but if they do not store sperm and fertilisation occurs only after copulation, we should be able to use Figure 1 to predict the approximate time of fertilisation.

Two aspects are worthy of note: (i) both females which were raped had last copulated seven days before egg laying, and (ii) the male partners of both the raped females were absent at the beginning of the females' final stay at the nest immediately before laying. If copulation does have to occur less than five days before egg laying (rather than in the period of 9-14 days, also on Figure 1) to allow fertilisation, both females may have allowed cloacal contact during rape because normal fertilisation was not possible in the absence of their mates. In fact, each female did not resist the advances of the rapist very strongly, but immediately after copulation with it, they savagely rejected the advances of it and all other males. If the female does not store sperm and fertilisation occurs soon after copulation, I suggest that fertilisation occurs 1-5 days before egg laying.

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MARSH CRAKE AT LAKE WAIRARAPA

On 19 March 1983, while studying habitat use by wetland birds at Lake Wairarapa, I came across a Marsh Crake (*Porzana pusilla*) in the western margin of Boggy Pond, 1 km inland from the south-eastern shore of the lake. This was an exciting find because on three previous occasions in March, between 2000 and 2200 hours, I had not found Marsh Crake in other parts of Boggy Pond and the adjacent Matthews Lagoon, although using tape-recorded calls made at Lake Alexandrina in 1979. There have been four other reports of Marsh Crake around Lake Wairarapa. Two birds were seen at the lagoon



in the Lake Reserve, adjacent to the northern shore, on 23 February 1974 (OSNZ Bird Distribution Mapping Scheme). In February 1976, one was seen in the south-west of the Matthews Lagoon complex, and one was seen in a small raupo (*Typha orientalis*) swamp between Boggy Pond and the lake on 16 December 1976 (I. M. Buchanan, pers. comm.). This area was bulldozed in February 1983. The most recent record was of one on 25 January 1979 in Boggy Pond (D. R. Sutherland in Wildlife Service file 33/5/5).

Not far from where Sutherland made his observation, I first saw the Marsh Crake foraging at the edge of a patch of raupo. It was shortly after sunset and, although the crake was aware of my presence, it was unperturbed and continued to feed as darkness fell. I visited the same spot the next day at 1630 hours and again found a Marsh Crake. It was remarkably tame and allowed me to approach it closely to watch it and take photographs. At first, the noise of the camera shutter made the crake jump backwards and run into the raupo, but after a few minutes it returned, foraging, to the margin and soon it almost ignored the shutter noise. If I remained completely still it approached to almost within arm's reach to feed around the raupo plants, periodically craning its neck to look intently at me.

Generally, the crake waded in both clear water and among floating vegetation such as *Azolla rubra* and algae to a depth of up to 3 cm, at a level between its upper tarsus and lower thigh. It also fed briefly on exposed saturated mud and occasionally waded in water up to body level. While walking, it kept pecking at the surface of the water for small seeds and perhaps insects and at one point snapped unsuccessfully at a flying insect, possibly a damselfly. Periodically, it ran a few paces before resuming feeding, most of which occurred close to the bases of the raupo plants. The Marsh Crake made periodic comfort movements in the shade and shelter of the raupo, including preening the chest with the beak, stretching a leg and wing on the same side, scratching the neck with a foot and ruffling the feathers by vigorously shaking the body.

Spotless Crake (*Porzana tabuensis*) were also present in the raupo and, in contrast to the silent Marsh Crake, they made bubbling noises and occasional harsh *harr* calls. The Marsh Crake became nervous whenever a Spotless Crake was nearby and usually moved quickly away. On one occasion, when a Spotless Crake approached closely, the Marsh Crake stood erect, defaecated and ran smartly away.

Three weeks later, on 8 April, the water level of Boggy Pond had receded, resulting in most of the raupo patch being above the water level, although still with damp substrate. Two Spotless Crake were seen foraging in the remaining submerged margin but there was no sign of a Marsh Crake.

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[A photo taken in similar circumstances in Southland appeared in *Notornis* 10 (7): 340 (1963) — Ed.]

