

A NOTE ON TICK INFESTATION OF THE FAIRY PENGUIN, *EUDYPTULA MINOR* FORSTER*

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Montagu Island, off the south coast of New South Wales, was visited early in March 1957, at the request of the National Trust of Australia, to investigate mortality among young fairy penguins, *Eudyptula minor* Forster.

The inhabitants of the island had first noticed an abnormal mortality in newly hatched birds at the beginning of January; and deaths continued until the last weeks of February. A similar report came independently from Gabo Island, off the Victorian coast, in January.

On a field inspection a large number of carcasses, representing approximately one-third of the original chick population for the year, were found on the surface of the rookeries. About 100 living birds, mostly chicks, were handled but none of them showed symptoms of an acute or recent illness. The only finding of possible pathological significance was an infestation of ticks, identified as *Ixodes kohlsi* Arthur (Arthur 1955). The ticks, together with fleas (*Parapsyllus* sp.), were also found in the nest material.

Of 50 chicks and eight adults more carefully examined for ectoparasites, nine and two respectively were infested with *I. kohlsi*. One chick had more than 80 ticks on it. The locations of the parasite on the host's body, in order of frequency, were: base of the bill, inside the external ears, crown of the head, neck, chin, and once only under the wing—i.e. those parts of the body not accessible to preening. Where ticks had attached, the skin was obviously irritated, being reddened and swollen. Oedema extending over the head and neck was noticed in some cases of multiple infestation. Blood-covered feathers and squashed bodies of ticks indicated that the birds were attempting to free themselves of the parasites. However, their weight was apparently not affected. The average weight of nine infested chicks was 1.2 kg, compared with an average of 1.15 kg for 41 tick-free individuals. As plasmodia have frequently been reported from penguins (Halloran 1955), blood was obtained from three adults and 15 chicks by clipping the tips of the claws. Smears, stained by the Giemsa method, were examined for the presence of blood parasites. All were negative.

Nothing is known about the ecology of *I. kohlsi*, but it is probable that, as in other species of tick, the peak numbers would coincide with the warmest season, i.e. December to February. The level of infestation found on chicks approximately 2 months old in March might well have caused some mortality among younger chicks in January.

Apart from *I. kohlsi*, four other species of ticks, *I. eudyptidis* Maskell, *I. percavatus* Neumann, *I. putus* Pickard-Cambridge, and *Ornithodoros talaje* Guerin-Meneville, have been reported by Fielding (1926) as infesting fairy penguins in the Australian region.

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