

Predation by Possums

An Opportunity Lost

Colin Bassett recounts how opportunities to interrupt the ravages of possums on unique birdlife of New Zealand were sadly missed.

The sight on television of a possum massacring kea chicks has jogged my memory and moved me to relate something that happened a long time ago.

When I was a trainee in the Forest Service Head Office about 1950, I was given the task of searching old files to find a certain topic. What the subject was I have now no idea, but I recall it was fascinating to trawl through what I thought of as very ancient documents - although they were certainly not more than 30 years old.

I probably wasted a lot of time reading extraneous stuff and I never did find the material I was looking for, but I recall a report that was written, perhaps in the late 1920s, by Arthur F. Clark, entomologist to the Forest Service (possibly stationed at the Cawthron Institute).

Clark for some reason suspected that possums might prey on birds' nests and set up an experiment at his home. He held a possum captive in a quite large netting-enclosed area in his back yard and kept it well supplied with fresh palatable plant material. After about a week, he one evening placed in the cage a nestful of baby birds (either thrushes or blackbirds - not native) supported in the fork of a limb of a woody shrub. In the morning the baby birds had been killed. Each had a gaping wound over what he called the vent and its viscera were missing as though sucked out. They might also be damaged in other ways as well.

The report had very clear photos of each dead baby bird, showing the consistent mutilation. He repeated the experiment - how many times I don't know but probably only once or twice - and the same thing happened. I believe he also on separate occasions placed nests containing eggs in the enclosure, but I cannot now be certain of that.

Clark concluded that because of the consistency in the way the birds had been attacked, the possum was probably an habitual killer of nestlings.

He submitted his report to C. M. Smith of the Forest Service who instructed that it was not to be promulgated under any circumstances because the trial had been carried out under unnatural conditions. And there the matter rested - until about sixty years later when John Innes of Landcare demonstrated, with a night-time video camera focused on a kokako nest high in the forest canopy, that possums do indeed prey upon the nests of birds.

And what did I do about the earth-shattering evidence

I had stumbled across? Forgot it, mostly. But, when many years later as Director of Forestry Research, I was in a position to do something about it, and the subject of possum research was under intensive discussion, what did I do then? The most I recall is that I made mild mention of Clark's long-ago experiment. We actually held many possums in captivity at Rangiora for research purposes and Dave Morgan of FRI reported that one had killed and eaten a sparrow. With hindsight, I should have instructed that an appropriate experiment be established to test for nest predation.

So - this is a little tale of four men. The first man had a very original idea and went to great lengths to test it in the best way available to him. The second man took a narrow view. The third man did nothing. The fourth man - John Innes - also had a very original idea (the same one as the first man) and under great difficulties tested it successfully. But this time the research was done under natural conditions - and nobody stopped him from telling the world about it.

Apparently, the Australians subsequently confirmed it with their own birds (threatened glossy black cockatoos).

Had we known the full truth about possums (and other predators) many decades earlier, we would have had a less narrow perspective on the causes of bird declines and more powerful ammunition in the campaign against that under-arm bowler of the pest world, the Australian brushtail possum.

I am grateful to John Innes for helpful comments and for providing the references.

Further reading

Brown K, Innes J, Shorten R 1993. Evidence that possums prey on and scavenge birds' eggs, birds and mammals. *Notornis* 40: 169-17.

Morgan DR 1981 Predation on a sparrow by a possum. *Notornis* 28: 167-168.

Sadler R 2000. Evidence of possums as predators of native animals. Pp 126-131 in Montague TL (Ed). *The Brushtail Possum*. Manaaki Whenua Press, Lincoln, New Zealand.