## THE SHINING CUCKOO FEEDING ITS YOUNG

ONE ADULT CATERS FOR FIVE FLEDGELINGS.

(By David H. Graham.)

[As it has always been regarded as fact that the shining cuckoo terminates the effort to reproduce its kind immediately it deposits its egg in the nest of the Grey Warbler or some other species of bird, the following remarkable observations by Mr. David H. Graham will be read with more than usual interest. Mr. Graham is accustomed to making accurate observations for scientific research purposes.—Editor.]

FROM 1910 to 1924 the writer spent three years in the heart of the bush in the Bay of Plenty and had ideal opportunities of studying the habits of birds in the virgin forest, thus obtaining original observations on the shining cuckoo. Once the actual feeding of the young was seen. Part of the road to my farm was through two miles of bush, untouched by man, before one came out into grass-clad bush country of a hilly nature in which there were odd clumps of bush, making ideal sanctuaries for birds.

One day in November, 1922, a slip occurred on the road in about the middle of the bush part, and the writer spent a day in clearing enough space to allow a buggy and pair to get through to the main road. Right from where I began working I had heard the notes of the shining cuckoo, but as these birds were abundant I took very little notice other than to enjoy their beautiful silvery notes, a series of upward slurs which have been vocalised into Maori as "Kui, Kui, Kui." They are uttered quickly a number of times, commonly from eight to ten, but in Opotiki, away from the haunts of man, I have counted up to thirty. It is usual for the primary notes to be followed by a downward slur, which is often repeated. This has also been vocalised by the Maoris as "Whiti, whiti, ora." Quite a number of variants of these slurs may be heard and are often concluded by a strain of joyous notes.

After some little time I was startled to hear a number of incessant cries, much as though several birds were being hurt. I hurried as quietly as possible, peering through some second growth, which had grown up where the bush had been fallen below in the construction of the road and where senecia had taken possession.

I stood still for a while and was able to observe an adult shining cuckoo. Presently I was

amazed to see a number of young shining cuckoos, five in all, sitting on a branch of a tall senecia, with wings flapping or outstretched. Here they were all crying out as though in pain. I was more surprised, however, to observe the adult flying with something in her beak and feed one of the young birds. While the adult was away, I approached as quietly as possible to obtain a closer and better view. The noise of the young birds was heart-rending, an incessant crying, always loud, but occasionally much louder and repeated more rapidly.

From my new position I was able to see the feeding quite distinctly and to recognise the food as the black hairy caterpillar, the larva of the black and white moth, sometimes called magpie moth. As far as I could see, each young cuckoo received a caterpillar in turn.

I must have stood in this position for at least half an hour, and the adult parent never stopped for one minute in the task of taking caterpillars to the young ones.

One may wonder how five young cuckoos came to be together. The only reason I can suggest is that shining cuckoos were always plentiful in that part of the bush where second growth had taken possession, that the five cuckoos had hatched from five different nests of other birds and had been mustered by the parent.

There is another possibility that is worth considering—that of a pair of birds reverting to nest-building, and the rearing of their own young.

One cannot help but wonder how many of these caterpillars were collected by the parent and devoured by these five young cuckoos in one day. Although the writer stayed in the locality for at least another six hours, the incessant calling for more food was continued without ceasing.

As far as I know, no other bird will eat this hairy caterpillar, but it seems to be relished by the cuckoo, and large numbers must be gathered from grounsel, ragwort and fireweed. The juicy parts alone are swallowed by the adults; the hairy skins can be seen to drop to the ground. Why the young shining cuckoos swallow the whole caterpillar and the adult rejects the skin, I am unable to say.