

unique assemblage it was one of the first to suffer from the attacks of the various predaceous animals and vermin introduced by Europeans. Its diet is almost entirely vegetarian, consisting largely of grass, moss, and similar vegetation, which it grazes almost like a mammal and of which it devours large quantities.

*The Kaka (Nestor meridionalis Gm.).*

The kaka, with its almost wholly olive-brown plumage, the bright red of the under-surface of the wings when seen in flight, and the grey crown which inspired the founder of the genus to which it belongs to dedicate it to the venerable Grecian orator, is one of the most easily recognized birds of the forest. This is the more so since its clamorous notes are not easily mistaken. The white eggs are laid on the more or less bare floor of a hole in a tree, often at or below ground-level in an entirely hollow trunk, the entrance being a comparatively small hole high up the tree.

The feeding-habits of the kaka may be conveniently discussed under the three heads of berry-eating, honey-eating, and insect-eating.

With regard to the first, the efficiency of the kaka as a seed-disperser must be impaired by its habit of breaking up with its powerful mandibles the larger seeds on which it feeds, and in this direction it would perform much less service than that prince of seed-distributors the pigeon. It must be emphasized, however, that this point should be investigated, as at present practically no data are available regarding the treatment of the different forest-fruit kernels by the kaka and by the parrakeets. It is a matter in which the closest field observations are necessary.

The tongue of the kaka is modified in a very remarkable manner as an organ for extracting the nectar from flowers. Of the latter the rata (*Metrosideros* spp.) is a favourite. The dispersal of the rata-seeds is not easily explained; they appear too heavy to be blown far by the wind, while juicy flesh which would be attractive to birds is lacking. Guppy has therefore suggested that the seeds may become to some extent entangled in the feathers of the kaka when these heavy and active birds are busy in clamorous activity among the later blossoms of the rata.

As an insect-hunter the kaka has few rivals. Buller graphically described these birds "climbing up the rough vine-clad boles of the trees, freely using their powerful mandibles, and assuming every variety of attitude, or diligently tearing open the dead roots of the close epiphytic vegetation in their eager search for insects and their larvæ."

In summing up the activities of the kaka we cannot do better than use the words of the same ornithologist (Buller): "It is strictly arboreal in its habits, and subsists to a large extent on insects and their larvæ, so that it is probably one of our most useful species. Where they exist in large numbers they must act very beneficially on the timber forests; for in the dominion of nature important results are often produced by apparently trivial agencies. Like all the honey-eaters, while supplying their own wants they do good service with their brush tongues by fertilizing the blossoms of various trees, and thus assisting in their propagation; while, on the other hand, the diligent