

## SHORT CONTRIBUTIONS

### OBSERVATIONS ON THE FOOD OF THE FOX, *VULPES VULPES* (L.), IN AN ARID ENVIRONMENT\*

By P. N. MARTENSZ†

McIntosh (1963) reported on the stomach contents of samples of foxes, *Vulpes vulpes* (L.), collected mainly from well-watered areas of New South Wales, where sheep are grazed at the rate of one to three per acre. He found that the fox was an opportunist predator and scavenger, and sheep carrion and rabbit were the most important foods.

This paper records observations on the food of foxes in an arid environment with an annual rainfall of less than 10 in. and where the stocking rate with sheep is only one to 30 acres.

The foxes were taken by spotlight shooting on Tero Creek and Gum Poplah Stations, approximately 200 miles north-east of Broken Hill in north-western New South Wales. The sample, obtained between February 1965 and February 1966, was taken from an area of low sand dunes and desert loam, interspersed with canegrass, *Eragrostis australasica*, depressions, and watercourses lined with black box, *Eucalyptus largiflorens*.

In the field, standard measurements of weight, total length, length of foot, leg, and ear were made. The stomach was removed and tied off at each end, and after being injected with ethyl alcohol was then preserved in ethyl alcohol. A total of 55 stomachs were available for analysis.

In the laboratory the contents of each stomach were sorted in a large white enamel tray. Most remains of mammals were in large readily identifiable pieces. The remains frequently had attached hair of which the patterns of cuticle scales and of medullae were compared with those of samples collected from particular species.

The stomachs contained a wide variety of animal material. The majority of stomachs contained kangaroo; this was presumably derived from carrion, as a professional kangaroo shooter was operating in the area throughout the year.

Despite the continuous availability of kangaroo as carrion, stomachs contained remains from many other animal species. Many stomachs also contained pieces of grass, twigs and fruits of *Bassia* spp., and often a large quantity of sand. One contained a piece of newspaper.

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*Food Species and their Occurrence*

The species of animals and the number of stomachs in which they occurred are listed below:

## MAMMALS

<i>Capra hircus</i> , goat	2	Feral goats were grazing in the district.
<i>Oryctolagus cuniculus</i> , rabbit	19	One stomach contained young from at least two litters.
<i>Ovis aries</i> , sheep	6	Remains in one stomach were of digested meat, fat, bone fragments, one lamb hoof, and wool.
<i>Megaleia rufa</i> , red kangaroo	38	Present as flesh, fur, bone, kidney, liver, intestines, and portions of the tail and foot pads.
<i>Sminthopsis crassicaudata</i> , fat-tailed marsupial-mouse	1	Species was common in area and often seen when spotlighting.

## BIRDS

<i>Dromaius novaehollandiae</i> , emu	9	Remains consisted mainly of feathers; in only one stomach was this species a major component.
<i>Ardea novaehollandiae</i> , white-faced heron	1	
<i>Podargus strigoides</i> , tawny frogmouth	1	
<i>Gymnorhina tibicen</i> , black-backed magpie	1	Remains of beak and feathers.
Unidentified passerine	1	

## REPTILES

<i>Ctenotus</i> sp.	1	
<i>Rhodona</i> sp., a skink	5	
<i>Trachydosaurus rugosus</i> , shingle-back	2	
<i>Varanus</i> sp., sand goanna	1	
<i>Amphibolurus barbatus</i> , bearded dragon	1	
<i>Amphibolurus</i> sp. (probably <i>A. pictus</i> )	1	
<i>Lucasium damaeum</i> , beaded gecko	5	
<i>Rhynchoedura ornata</i> , beaked gecko	1	
<i>Pygopus nigriceps</i> , black-headed scaly-foot lizard	1	
<i>Denisonia suta</i> , myall or curl snake	1	
<i>Typhlops proximus</i> , a blind snake	2	

## AMPHIBIANS

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|---|---|--|
| <i>Cyclorana platycephalus</i> , water-holding frog | 7 | One stomach contained 14 frogs in various stages of metamorphosis. |
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## MYRIAPODS

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| Chilopoda, centipedes | 11 |  |
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## INSECTS

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|--------------------------|----|---|
| Orthoptera, grasshoppers | 6  |   |
| Coleoptera, beetles      | 29 | Melolonthinae (chafers) and Scarabaeinae (dung beetles); one stomach contained 143 individuals of one melolonthine species, occupying 200 ml. |
| Lepidoptera, moths       | 11 | Both adult moths and caterpillars.  |

## ARACHNIDS

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| Scorpionidae, scorpions, and Araneida, spiders | 14 |  |
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*Reference*

McINTOSH, D. L. (1963).—Food of the fox in the Canberra district. *CSIRO Wildl. Res.* **8**, 1–20.