

## OPOSSUM RESEARCH IN THE ORONGORONGO VALLEY, WELLINGTON

M. C. CRAWLEY

*Animal Ecology Division, D.S.I.R., Lower Hutt*

A population of approximately 200 opossums (*Trichosurus vulpecula*) in 60 acres of indigenous forest in the Orongorongo Valley, Wellington, has been intensively live-trapped since February 1966. Frequent recapture of ear-marked animals has provided information on movements, population size, sex ratio, colour phases, physical characteristics, reproduction and growth and development of young.

Approximately 60% 'greys' and 40% 'blacks' (including brown, ginger and other varieties) are present in the population which has a 1:1 sex ratio. Adult weights average 2.5 kg. In 1966 births occurred from mid-April to the end of June with a peak in May. Between 1 May and 30 September 70% of the females examined carried pouch young. Detailed measurements of pouch and "back" young were obtained and many young aged using Lyne and Verhagen's methods.

Pouch young could be sexed by the 15th day of pouch life; vibrissae were evident at 50 days; the eyes opened at 75 days; there was a complete covering of fur at 90 days; emergence from the pouch was observed at 150 days. Although young aged 200 days still used the pouch on occasion, others aged 160-180 days were caught alone. Some young aged 10-11 months continue to associate with the mother.

Most movements were of less than 100 metres from the main nest site. Males moved further than females, particularly just prior to the breeding season. Newly independent young are apparently restricted in range but their infrequent capture suggests either emigration or avoidance of traps.

The study is continuing, with data being collected on aspects of feeding, behaviour and activity rhythm.

## RESEARCH UPON FERAL GOATS

(*CAPRA HIRCUS L.*)

M. R. RUDGE

*Animal Ecology Division, D.S.I.R., Lower Hutt*

As part of its research on introduced animals, the Animal Ecology Division has recently begun a study of the ecology, distribution and status of feral goats. The field research is centred upon the Division's research area in the Orongorongo Valley, Rimutaka Range, where the main study area is a broad stream basin bounded by steep forested ridges rising to 2,766 ft. Within this basin is a wide range of habitats, including running scree, raw and healing slips, seral scrub, induced grass terraces and dense native forest. A population of some 80 goats is watched from observation hides from dawn until dusk over several successive days in each month. The area is scanned with mounted binoculars and the numbers of animals seen, their activity, group structure and position are recorded on gridded panoramic maps. Animals are individually recognised by their distinctive coat colours

and patterns and a personal dossier is compiled for each without recourse to laborious marking techniques.

From the first year's study the broad pattern of daily activity and movement is as follows: Goats are strictly diurnal, rising shortly after dawn and bedding down just on darkness. Activity is greatest at the beginning and end of the day, separated by a period of mid-day rest. During longer summer days, 2 rest periods occur. More than 75% of the day is spent in moving and feeding in a roughly circular course which takes in most of the habitat types. Upon this basic picture are superimposed the effects of reproduction, age of animals and climatic conditions all of which exert a profound influence upon daily and seasonal activity and behaviour. The study is continuing.