Rabbits without warrens

S H. Wheeler

Follow this and additional works at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4

Recommended Citation

Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4/vol24/iss1/12

This article is brought to you for free and open access by Research Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 4 by an authorized administrator of Research Library. For more information, please contact jennifer.heathcote@agric.wa.gov.au, sandra.papenfus@agric.wa.gov.au.
IMPORTANT DISCLAIMER

This document has been obtained from DAFWA's research library website (researchlibrary.agric.wa.gov.au) which hosts DAFWA's archival research publications. Although reasonable care was taken to make the information in the document accurate at the time it was first published, DAFWA does not make any representations or warranties about its accuracy, reliability, currency, completeness or suitability for any particular purpose. It may be out of date, inaccurate or misleading or conflict with current laws, polices or practices. DAFWA has not reviewed or revised the information before making the document available from its research library website. Before using the information, you should carefully evaluate its accuracy, currency, completeness and relevance for your purposes. We recommend you also search for more recent information on DAFWA's research library website, DAFWA's main website (https://www.agric.wa.gov.au) and other appropriate websites and sources.

Information in, or referred to in, documents on DAFWA's research library website is not tailored to the circumstances of individual farms, people or businesses, and does not constitute legal, business, scientific, agricultural or farm management advice. We recommend before making any significant decisions, you obtain advice from appropriate professionals who have taken into account your individual circumstances and objectives.

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia and their employees and agents (collectively and individually referred to below as DAFWA) accept no liability whatsoever, by reason of negligence or otherwise, arising from any use or release of information in, or referred to in, this document, or any error, inaccuracy or omission in the information.
Rabbits without warrens

Occasionally, rabbits still cause severe economic damage to crops and pastures in many coastal parts of Western Australia. In other areas they may impose a less obvious cost on crops and pastures. Control techniques such as fumigation, poisoning and warren ripping were developed more than 30 years ago, but sometimes fail to achieve the desired results for no apparent reason. To improve the effectiveness of these costly operations, Drs S. H. Wheeler and D. R. King of the Agriculture Protection Board's research section have studied the behaviour and life style of rabbits on three sites in Western Australia. Their object was to obtain information for predicting the effect of different timing and control techniques on rabbit numbers.

We have known for years that rabbits sometimes use above-ground refuges, rather than burrows, for shelter during the day. Until the recent development of radiotelemetry as a technique for tracking wild animals, it has been difficult to determine the extent of this. The type of shelter rabbits use and the location of these sites has obvious bearing on the success of control techniques such as fumigation, warren ripping, and furrow poisoning with 1080.

Resting habits

Drs King and Wheeler conducted studies on the rabbits' day-time resting locations at three sites in the South-West of Western Australia in 1981 and 1982, using radio transmitters in collars placed on captured rabbits. Rabbits, captured on an area of pasture surrounded by thick coastal scrub, were released and tracked at Cape Naturaliste between February and June. Observation on the area had suggested that rabbits used the scrub as a day-time refuge, but that at least some of the kittens produced on the area were born in warrens in the paddocks. Information obtained from 31 radio-collared rabbits, located a total of 284 times, revealed how extensively they used refuges in the scrub. Most of these relocated rabbits were found resting on the surface (See table). The others were sheltering in warrens in the scrub. The remaining 7 per cent of locations were of rabbits in warrens in the paddocks.

A "radio rabbit", ready for the tracking experiment and APB technician Mike Robinson with the detector.
flowing creek. The native forest was confined to the upper slopes, mainly on lateritic gravelly soils. There was a low, sparse shrub and herb layer in the uncleared areas.

A total of 24 radio-collared rabbits were tracked at this site for varying periods between March of 1981 and June 1982. They used shelter sites very differently to the rabbits at Cape Naturaliste and Esperance. Few rested on the surface in the scrub. They made much greater use of warrens, with 89 per cent of rabbits in burrows (see table). This comprised 73 per cent in paddock burrows and 10 per cent in scrub burrows. There was no obvious seasonal difference in the extent the warrens were used for shelter. The relatively sparse cover in the surrounding Wandoo forest probably prevented rabbits from relying on above-ground resting sites on this area.

Thus on the two coastal areas, rabbits relied heavily on the use of surface sites in the scrub for shelter, whereas those at Chidlow mainly used warrens in the paddocks.

Seasonal changes seemed to make no major differences in the extent the rabbits used above-ground resting sites. Breeding females frequently sheltered on the surface in the scrub in May and June. Within the scrub, each rabbit used several resting sites, covered areas which differed in size and which overlapped the territories of other rabbits to some extent. Some were located in the scrub as far as 290 m from the edge of the paddock. Two individuals were never located closer to the paddock than 210 and 220 m respectively during the day. It was difficult to determine whether rabbits moved out into the paddocks each night, but all were first caught there.

During a study in a coastal area near Esperance in May and June 1981, a larger number of rabbits (70) were tracked for a shorter period. They were relocated a total of 394 times. Of these 17 per cent were in warrens in the paddocks, while the remainder were in the scrub. The proportion sheltering above-ground in the scrub was slightly lower than at Cape Naturaliste. Near Esperance the scrub was growing on deep sand whereas at Cape Naturaliste it was mostly on shallow soils overlying limestone.

The third study area was on resumed farmland surrounded by open Wandoo forest near Chidlow in the Darling Range. The soil on the cleared area consisted of heavy loam on the lower slopes of the ridges and along a winter-