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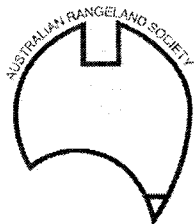
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DISTRIBUTION OF LARGE VERTEBRATE PESTS IN THE PASTORAL ZONE OF WESTERN AUSTRALIA

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BACKGROUND

Camels, donkeys, goats, feral pigs, wild dogs and emus are large vertebrate pest species that impact adversely on the rangelands of Western Australia. The Vertebrate Pest Research Section of the Department of Agriculture (DAWA) in conjunction with the Department of Conservation and Land Management (CALM) recently conducted a survey to ascertain the known distribution and abundance of these species, in the pastoral rangelands of Western Australia. This survey provides baseline data in order to gain a better understanding of the potential impact of large vertebrate pest species on the rangelands. This information has the potential to be a valuable tool for risk management, for both biosecurity and economic reasons.

THE APPROACH

Regional DAWA staff, based in pastoral zones were surveyed to provide an assessment of the present distribution and abundance of large feral species on selected pastoral properties. Protection Officers, from 12 regional offices of DAWA, collected information for 382 properties (approximately 70% of the total number of pastoral properties). Distribution and relative abundance data, in the form of high, medium and low, were spatially represented using the GIS platform Geomedia.

Distribution of the large vertebrate pests

- Wild dog numbers are generally high throughout the pastoral areas, especially on the eastern half of the zone.
- Feral pigs are limited to catchment areas, with particularly high numbers in the Kimberley (Fitzroy River catchment).
- Feral camels are in low to medium density throughout the eastern half of the pastoral zone, with the highest numbers near the eastern fringes.
- Feral donkeys are distributed throughout the Kimberley pastoral area, generally in low numbers but with patches of high numbers. Moderately high numbers are found throughout the Ashburton and Upper Gascoyne regions.
- Emus are at low to medium numbers throughout the whole southern area, with high numbers on the western edge of the Murchison area, especially adjacent to the agricultural area.
- Feral goats are in moderately high density throughout the southern pastoral area, especially the Murchison and Upper Gascoyne regions.

ISSUES

The results of this study describe only the distribution and perceived abundance of large vertebrate pests from the perspective of regional DAWA staff. The reality may not always match that perception, particularly when describing animal abundance. For example, wild dog populations in one region may be described as medium or high but as low in another region. However, when the true density of wild dogs is considered, or the actual abundance, the two regions may be the same. The perception of high versus low is therefore relative to the region. To overcome this problem, ground truthing of actual animal densities is required, particularly in areas associated with high risk.

THE FUTURE

Our approach has been successful in describing the perceived distribution and abundance of large vertebrate pests in the rangelands of WA and will provide the framework for future research. Results presented here represent a cost-effective, snap-shot of the rangelands of WA from the perspective of

DAWA staff. Ongoing commitment to similar work is vital in capturing the knowledge of DAWA staff for the identification of risks and the development of management strategies for large vertebrate pests in the rangelands of WA. We intend to integrate these data in to DAWA's CRIS (Client and Resources Information System) management system to maximise the potential of this information.