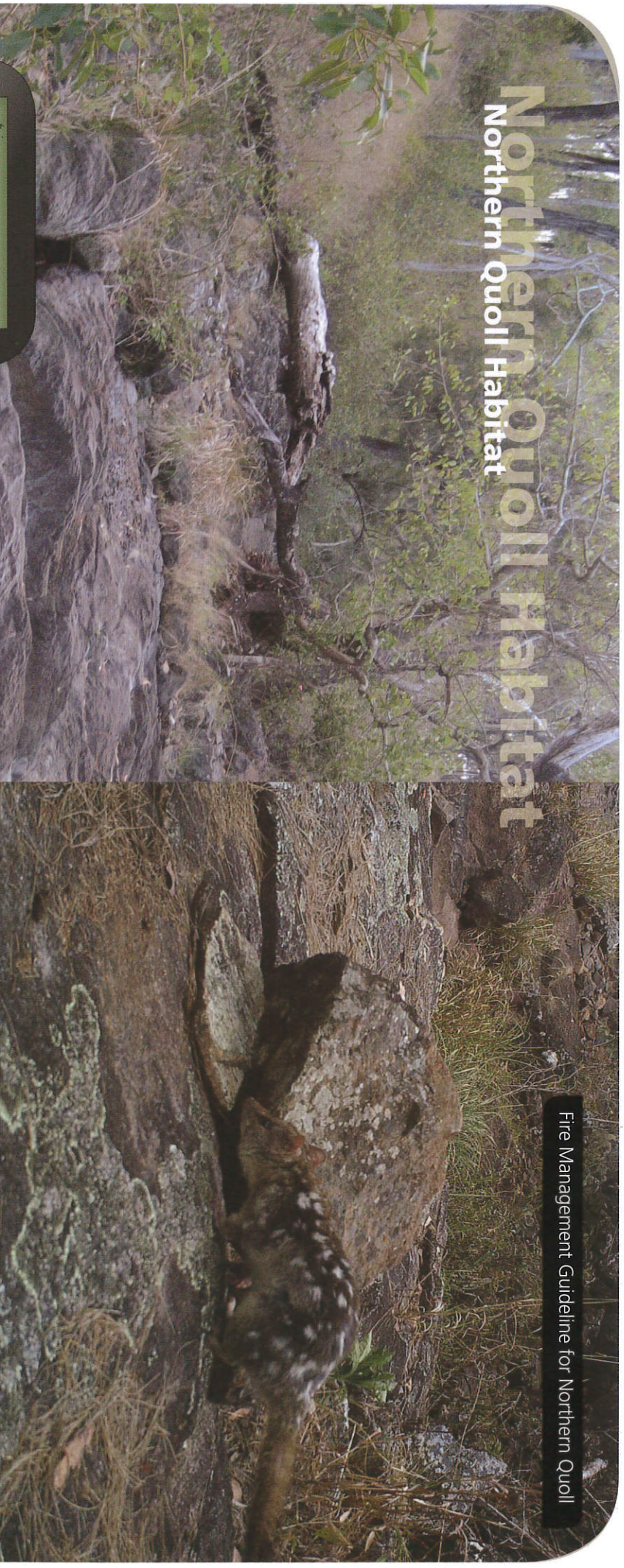


# Northern Quoll Habitat

Fire Management Guideline for Northern Quoll



Eucalypt communities with large boulders/logs within one kilometre of boulder creek lines frequented by the Northern Quoll (*Dasyurus hallucatus*). Northern quolls are small, nocturnal, carnivorous marsupials, the smallest of the four species of quoll only found in Australia.



KNOWN DISTRIBUTION



BURNING MOSAIC - UNBURNT 50%



LOW MODERATE HIGH  
FIRE INTENSITY - °C



SEASON MONTHS



BURN FREQUENCY YEARS



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## Method

Inappropriate fire regimes is a key threatening process that is leading to the decline in Northern Quoll populations across Queensland and the Northern Territory. They are found in Eucalypt ecosystems with access to water and drainage lines. These natural features can improve the desirable patchy burn pattern, leaving sufficient areas of burnt and unburnt patches throughout the burn area. Burning one side of a water course one year, and the other side the following year can also assist in achieving smaller burn areas to cater for Quolls. An indicator of a good fire in Northern Quoll habitat is a well maintained mosaic, where leaf litter is still present. This indicates the fire was of a low to moderate intensity.

## Conservation

Wildfire of a high intensity is known to be detrimental to the Northern Quoll. These fires often occur in the late dry season and can destroy fallen logs, stags, and tree stumps which are utilised by the mammal for denning. This can lead to a premature death, especially of the young as they are unable to get out of their dens. Wildfire can also remove

cover exposing Quolls to predation. Burning in the early dry, early or late wet will allow the microhabitat to stay intact, thus providing Quolls with their prey, and further protection from their predators.

Complementing this is the need to create a suitable mosaic of around 50%, and only burn small areas (100-500ha) in a single burn. Northern Quolls tend to have a home range of between 15 and 60ha, which is often influenced by food availability, gender, and the breeding season. A burn larger than their home range will force them to traverse greater than usual distances to feed. This can create a prolonged time without food, and a lengthy exposure to predators such as the Powerful Owl, cats and wild dogs. Burns of this size can be achieved through the utilisation of small creeks and tributaries to break up fire.

Quolls have a very limited life span, with the majority of the species dying before the age of three. Males tend to live to only one year of age, generally the age of when they mate. Litters sizes tend to be around seven, normally born in the dry season. This is why it is imperative not to burn October through



to November, as young are still in the den and will struggle to make it out to safe territory. Juvenile mortality is expected to be high when they are seeking a territory of their own. Inappropriate fire management reduces their chances of surviving to adulthood.

## Production

It is important to note that burning conservatively for Northern Quolls will not deter from the productivity of grazing country. Conducting fires to promote green pick and burn off old grass growth will also maintain habitat for insects, reptiles, amphibians and small mammals that Quolls feed on. It is recommended that for this reason, burning should be conducted when there is high soil moisture. For example, after a rain event of 50mm or more, and when further rain within a few days is likely. This will also reduce the likelihood of a woody weed infestation. Therefore, burning in the early dry or storm season is ideal.



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