

Leadbeater's Possum (*Gymnobelideus leadbeateri*)

Conservation Status

NATIONAL: Endangered (*Environment Protection and Biodiversity Conservation Act 1999*)

Description

The Leadbeater's Possum is Victoria's faunal emblem. It is a small omnivorous arboreal marsupial with a head and body length between 150 and 170 mm and a tail length between 145 and 180 mm. It is grey to greyish-brown above and paler below with a prominent dark stripe along the middle of its back. Leadbeater's Possum is distinguishable from the related Sugar Glider (*Petaurus breviceps*) by the absence of a gliding membrane and a club-shaped tail that is broader at the tip than at the base.



Habitat

Ideal habitat for the Leadbeater's Possum is where there is young regenerating or uneven aged ash eucalypt forest that contains wattles for feeding and an ample supply of old hollows trees for nesting. The occurrence and quality of this habitat is dependent on disturbances such as fire or even timber harvesting. The Leadbeater's Possum requires a dense middlestorey to allow it to move easily from one tree to another.

Distribution

The Leadbeater's Possum was thought to be extinct for about 50 years, when it was re-discovered in 1961 near Marysville, Victoria. Since then it has been recorded at approximately 300 localities in the tall eucalypt forests of Mountain Ash, Alpine Ash and Shining Gum in the Central Highlands of Victoria.

Behaviour

This shy, fast moving animal lives in colonies of up to eight animals, typically consisting of a breeding pair, their offspring and up to two unrelated males. They live in a communal nest built of shredded bark in the hollow centre of a large dead or living tree, 6-30 metres above ground. The nest forms the centre of a 1-2 hectare territory that is actively defended from adjoining colonies. Females are more aggressive in defence of the home territory. They also attack and forcibly disperse their own daughters when they reach sexual maturity. As a result females leave the colony earlier than males and therefore suffer a higher mortality as a result of being excluded from established colonies. Grooming and associated spread of salivary odours is used to maintain group cohesion.

Diet

These possums emerge from their nest at dusk, moving rapidly through the forest canopy, often making spectacular leaps from tree to tree, in search of food. They eat a range of arthropods, including crickets, beetles, spiders, that are harvested from beneath the shedding bark of eucalypts. Gum, sap and nectar from wattles and eucalypts also form a significant part of their diet. The possums will chew on the bark to encourage these exudates to flow freely. They also eat the sweet substance known as honeydew produced by tiny insects called lerps.

Threats

Following the 2009 bushfires in Victoria, Leadbeater's possum lost 42% of their habitat and estimates of their population in the wild is now under 1,000 individuals. Ash trees do not form hollows until they are at least 120 years old. Hollows suitable for the Leadbeater's Possum may not develop until a tree is over 150 year old. Less than 3% of the Leadbeater's Possums's range occurs in nature reserves. 75% is in timber-production forests and 20% in water catchment forest. Hence the survival of the Leadbeater's Possum is largely dependent on if and how well timber-harvesting practices take into account the needs of this possum. Present timber-harvesting practices do not allow sufficient time for formation of tree hollows. The most recent threat to their survival now is the logging of their Central Highlands Mountain Ash habitat by VicForests, with the latest 2011 Timber Release Plan Amendments showing incredibly threatening logging in known Leadbeater's possum habitat and through areas being used for research by Australian National University.

Recovery Plan

As part of the recovery plan a habitat reserve system has been established including twenty Leadbeater's Possum Management Units (LMU) where ash trees older than 120 years are excluded from timber harvesting. A captive breeding program has been established with Healesville Sanctuary, Melbourne Zoo, Perth Zoo, Sydney's Taronga Zoo, London Zoo and Toronto Zoo being involved. In the 2009 bushfires approximately 40-50% of the Leadbeater's Possum's prime habitat was lost in the fires. FAME provided funding for provision of post fire recovery nesting boxes and population monitoring of Leadbeater's Possum at Lake Mountain, Yarra Ranges National Park.

References & More Information

Friends of Leadbeater's Possum Inc. <http://leadbeaters.org.au/>

Macfarlane M., Smith J., & Lowe K. 1997. *Leadbeater's Possum (Gymnobelideus leadbeateri) Recovery Plan*. Department of Natural Resources and Environment Victoria. www.environment.gov.au/biodiversity/threatened/publications/recovery/leadbeaters-possum/index.html

Victorian Government Department of Sustainability and Environment 2006. *Leadbeater's Possum: Classroom activities*. Victorian Government. www.dse.vic.gov.au