



WEDGE TAILED EAGLES

Source: Threatened Species Section (2006). *Threatened Tasmanian Eagles Recovery Plan 2006-2010*. Department of Primary Industries and Water, Hobart.

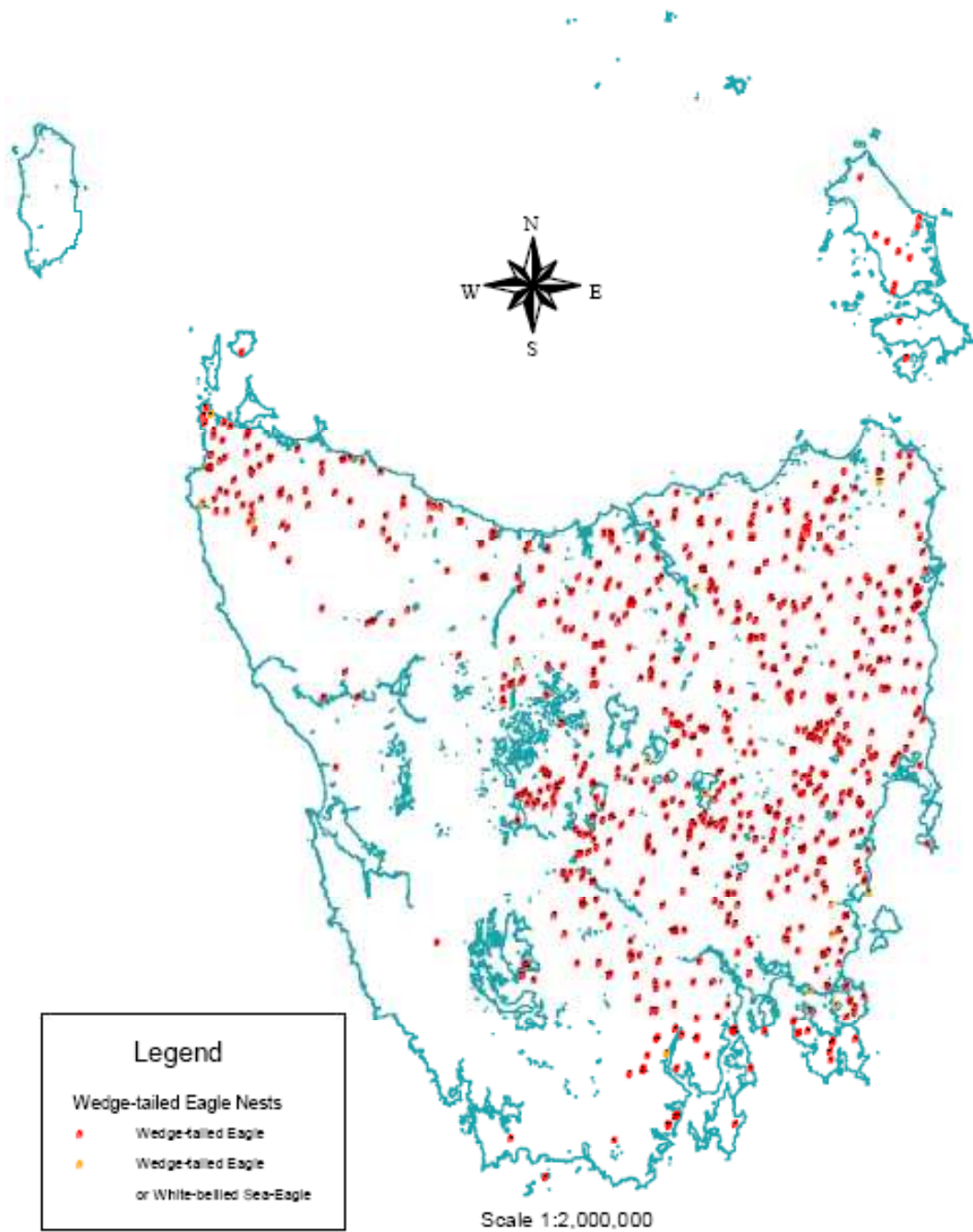
Aquila audax fleayi

- The Tasmanian Wedge-tailed Eagle, is endemic to the State
- It is known to occur in all habitats throughout Tasmania (vagrant on King Island).
- Requires old-growth forest on sheltered sites for nesting and this, combined with territorial behaviour act to limit its breeding range and potential.

Current Species Status

Wedge-tailed Eagle (*Aquila audax fleayi*)

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* - Endangered
- Tasmanian *Threatened Species Protection Act 1995* - endangered



Distribution of known Wedge Tailed Eagle Nests

Population Estimates

- There appear to be a number of estimates quoted.
- Some based on total numbers , some on nest activity, some on Breeding pairs.
- Four sources are quoted.

RFA Ten Year Review

- Revision of the population estimates was undertaken in 2005 based on the then current knowledge of nest distribution and activity.
- There are an estimated 458 territories
- representing **86 per cent** of the pre-settlement number.
- Former territories have been lost due to habitat modification, urban development and disturbance from human activity.
- Activity data indicates that only around 50 per cent of territories are occupied by breeding pairs.
- By extrapolation, from the demography of similar species, the population is between 1200-1500 individuals with approximately half being mature-aged birds.
- By extrapolation of the proportion of successful nests to the total known territories, (assuming randomness of disturbance levels), approximately 230 offspring are fledged each breeding season from the 255 active territories.
- When mortality is taken into account, (as much as 50 per cent in first-year birds), only about 60 of these will survive to breeding age.

Recovery Plan

- The total population for Tasmania is estimated at between 1000 and 1500 birds,
- Derived from approximately 426 territories
- A theoretical contribution of non-breeding birds of 50% to the population.
- The population range is calculated from the apparent territory occupancy of 54.75% and maximum territory occupancy of 90.0%.

Linking landscape ecology and management to population viability analysis (The Bekessy Report)

- There are an estimated 363 wedge-tailed eagle territories in Tasmania,
- the number of breeding pairs is naturally low (500-700 mature birds) and the breeding success rate is quite low (approximately 140 fledglings/year State wide).
- death from unnatural causes remains high.
- An estimated 14.3% of fledglings currently reach maturity; natural survival should be around twice this level.
- This is of concern because unnatural causes of death (*e.g.*, accidents and shooting) may apply different selective pressure to natural selection (*e.g.*, starvation).
- The main threats to the subspecies are from nest habitat destruction, nest disturbance and increased mortality as a result of accidents, poisoning and shooting.
- Annual unnatural losses have been estimated at up to 35% of immature birds and 5-10% of adults.
- Juvenile birds are most at risk of illegal shooting as they are still learning to hunt for themselves and are more likely to scavenge on dead lambs
- A high proportion of eagles are killed by accidents (three yearly average 53%,) involving man-made structures such as electrocution or collision with vehicles, overhead wires and fences
- Individuals also die from lead poisoning after consuming prey containing lead shot and as a non-target species during illegal poisoning of native wildlife. At least 30 mortalities are reported each year.
- Increasingly, electrocution and collision are becoming the major unnatural causes of death

Weilangta Trial Evidence by Court appointed Expert

- The pre European level of Wedge tailed eagles was likely to be about 530 pairs, plus un-attached adults and juveniles. (Table 3 Page 17)
- Prior to the Tasmanian RFA process, the scientific literature reported about only 138 pairs in 1991. (Paragraph 63)
- The evidence before the court and accepted by the Judge was that there were now 457 pairs. (Paragraph 61)
- This represents an increasing from 26% of pre European population prior to the signing of the NFPS to today's 86% of 1750 breeding population.
- Mooney states in his evidence "the different estimates [between 1989 and today] do not reflect an increase in numbers but rather better estimates."
- over and above natural death rates, estimates about 30 eagles are killed by collision with wires and fences per year, about 50 by collision with vehicles, another 1 by collision with wind turbines, about 32 by electrocution, about 40 are poisoned and another 20 shot.
- This totals to about 173 killed prematurely per year, an amount that has increased by about 18% in 15-20 years. (Paragraph 95)

Commitment by the Forest Sector

- Forestry Tasmania invests over \$250,000 annually in aerial and ground-based eagle nest searches.
- To date, this program has located 445 eagle nests around the State.
- It is also estimated that there are around 457 breeding pairs in Tasmania.
- The Private Sector commits similar Resources into pre harvesting searches for Nests
- From the map on slide 4, the majority of known eagle nests are on private land or State forest

Commitment by the Forest Sector

- Forestry activities must not occur within 500m or 1km line-of-sight during the breeding season.
- The basic requirement for nest security is a reserve of 10ha (a circle of 360m diameter or an oval of about 300 m x 400m) of undisturbed habitat around the nest concentrated uphill.
- Where feasible an additional surrounding buffer zone of an additional 10ha giving a circle of 500 m diameter in total or an oval of about 400 m x 600 m.