

## Heritage Rank Status Factors

**Elcode** AMAFF23021  
**Gname** ARBORIMUS LONGICAUDUS LONGICAUDUS  
**Gcomname** RED TREE VOLE

### Number of Occurrences

D = 81 - 300

**Comments** An unknown number of occurrences, but is still mostly well distributed throughout its range.

### Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

**Comments**

### Population Size

U = Unknown

**Comments** Total adult population size is unknown.

### Range Extent

F = 20,000-200,000 km<sup>2</sup> (about 8,000-80,000 square miles)

**Comments** Western Oregon, on the west slope of the Cascade Mountains southward as far as northern Jackson County and in the Coast Range to the California border (Verts and Carraway 1998); however, possibly this species occurs also in northern California (see Hayes 1996). Precise limits and extent of distribution are uncertain (Hayes 1996).

### Area of Occupancy

D = 20-100 km<sup>2</sup> (about 5,000-25,000 acres)

E = 100-500 km<sup>2</sup> (about 25,000-125,000 acres)

LD = 200-1,000 km (about 125-620 miles)

LE = 1,000-5,000 km (about 620-3,000 miles)

**Comments** Distribution is increasingly patchy, with fragmentation of forest habitats.

### Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

C = Substantial Decline (decline of 50-75%)

**Comments** Population trend unknown, but distribution has been reduced because much of its preferred habitat has been lost and continues to decline due to logging (Corn and Bury 1988, Verts and Carraway 1998). Localized extirpations are known.

### Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Short-term trend in population, range, area occupied, and number and condition of occurrences

unknown.

**Comments** Northwestern extent of range may be exhibiting declines, but area has not been included in recent intensive survey efforts. Habitat is becoming increasingly fragmented rangewide.

### Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

**Scope** High **Severity** Moderate **Immediacy** High

**Comments** Threats include loss of preferred old-growth forest habitat and forest fragmentation by clear-cutting practices (Verts and Carraway 1998, Thomas et al. 1993). Habitat is becoming increasingly fragmented rangewide.

### Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

**Comments** Basic life history information and habitat requirements, including minimum patch size of suitable habitat to maintain colony, are not currently known (Verts and Carraway 1998).

### Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

**Comments** Species disperses slowly and with limited capabilities; low reproductive rate (C. Maser personal communication). Early seral stage forests may be a barrier to dispersal.

### Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

**Comments** Optimum habitat is wet and mesic old-growth Douglas-fir forest.

### Other Considerations

NRANK - N3N4

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### Reasons

Restricted distribution; prefers old-growth forest habitats that are being eliminated and fragmented by large scale timber harvesting.

### BCD Sources

Hayes, J. P. 1996. ARBORIMUS LONGICAUDUS. Mammalian Species 532:1-5.

Thomas, J. W., et al. 1993. Viability assessments and management considerations for species associated with late-successional and old-growth forests of the Pacific Northwest. The report of the Scientific Analysis Team. USDA Forest Service, Spotted Owl EIS Team, Portland Oregon. 530 pp.

Verts, B. J., and L. N. Carraway. 1998. Land mammals of Oregon. University of California Press, Berkeley. xvi +

668 pp.

### **New Sources**

Corn, P. S., and R. B. Bury. 1988. Distribution of the voles *ARBORIMUS LONGICAUDUS* and *PHENACOMYS INTERMEDIUS* in the central Oregon Cascades. *J. Mamm.* 69:427-29.