Psuedemoia pagenstecheri
Image © Alexander Dudley

TASMANIAN THREATENED SPECIES LISTING STATEMENT

Pseudemoia pagenstecheri
Tussock skink

Scientific name: ***Pseudemoia pagenstecheri*** **(**Lindholm**,** 1901**)**

Common name: Tussock skink

Group: Vertebrate, Reptilia, Squamata, family **Scincidae**

Status: *Threatened Species Protection Act 1995*: **vulnerable**
Environment Protection and Biodiversity Conservation Act 1999: **Not listed**
IUCN Red List: **Least Concern**

Distribution: Endemic status: **Not endemic**
Tasmanian NRM regions: **South, North, Cradle Coast**
Tasmanian IBRA regions: **King, Furneaux, Ben Lomond, Southern Ranges, South East, Northern Midlands, Central Highlands, West**

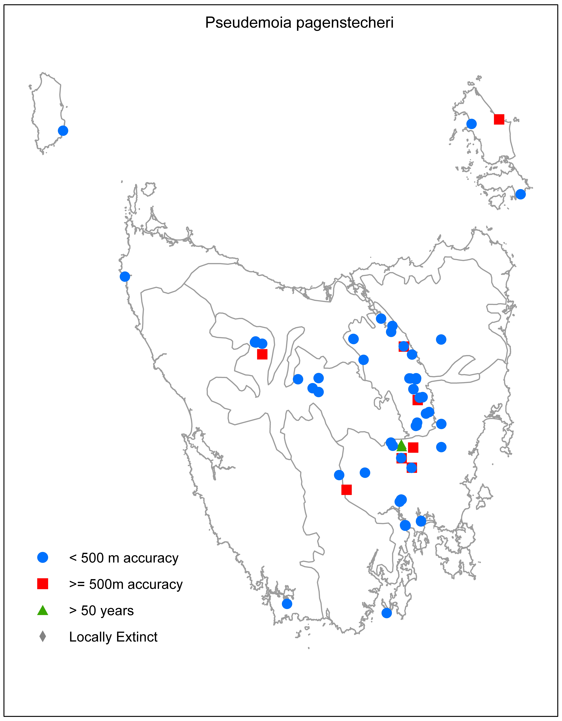

Figure 1. The known Tasmanian distribution of *Pseudemoia pagestecheri*, showing IBRA regions (from the Natural Values Atlas 2025)

Plate 1. Tussock skink *(Pseudemoia pagenstecheri)*
Image © Alexander Dudley

Tasmania

SUMMARY: In Tasmania, the tussock skink (*Pseudemoia pagenstecheri*), a ground-dwelling lizard, occurs in grassland and grassy woodland habitats at a range of elevations. Earlier records of this species in Tasmania are from small, disconnected patches of habitat in the Midlands, inland near Cradle Mountain and the eastern Bass Strait islands. The range has extended through informal citizen scientist reporting in recent years, but formal survey and confirmation of species is required due to similarity to other skink species such as the southern grass skink (*Pseudemoia entrecasteauxii*).
The primary threat to the tussock skink is continuing loss and degradation of grassland and grassy woodland habitat, resulting from activities such as inappropriate fire regimes altering biodiversity composition, grazing, urban encroachment, land clearance, as well as the spread of gorse.
Protection of known sites and potential habitat from such activities is the key requirement to maintain the species.

IDENTIFICATION AND ECOLOGY

Skinks in the genus *Pseudemoia* are small lizards (approximately 120 mm long, with tail) that live on the ground in dense grass dominated vegetation, hence the common name of grass skink. The tussock skink is a moderately sized, smooth-scaled skink. Adults are sexually dimorphic, with females larger and more elongate than males (females reaching 68mm snout-vent length, males 55 mm) (Sullivan 1999, Hutchinson et al. 2001, Turner 2012). The species has rather short legs that in males contact, but in adult females fail to meet when adpressed. As with all members of the genus in Tasmania, the lower eyelid has a large transparent disc such that the eye is visible when the lid is closed (hence the name of window-eyed skinks) and paired frontoparietal shields (head scales). The body is pale grey, grey-brown to olive above, lacking a metallic lustre to the scales. There is a narrow but distinct black vertebral line always present, with an additional pair of narrow dark lines on each side of the back present in some specimens. A narrow but distinct straw-coloured to whitish dorsolateral line forms the upper margin of a dark brown upper lateral zone, which fades ventrally to be edged by an off-white (orange in males) mid-lateral line that usually lacks a distinct dark lower edge, with no trace of lighter lateral speckling. The underside is whitish to pale yellow. There are 28 to 34 mid-body scale rows (Hutchinson et al. 2001).

The tussock skink is an opportunistic carnivore, hunting small invertebrates such as flies, crickets and caterpillars (Turner 2012). Dissected faecal pellets have been found to contain various insect fragments.

The tussock skink is cryptic in habits, choosing relatively sheltered basking sites close to the ground surface and foraging within long grass and other ground cover (Hutchinson and Donnellan 1992). Individuals are easily startled and flee into shelter in response to any minor disturbance (Redburn 1999). Snakes are known predators of the tussock skink (Turner 2012).

The tussock skink is viviparous (giving birth to live young rather than laying eggs) (Hutchinson et al. 2001). Males develop the characteristic orange to red mid-lateral stripe within their first year, which usually persists throughout the year, but is more vivid during late summer to early winter, coinciding with the mating period. Female tussock skinks ovulate in spring and give birth in summer (Turner 2012). Litter size varies between sub-populations, with the mainland montane populations producing between two to nine offspring (avg. 4.5) per mating event, while numbers of offspring are markedly higher (four to 11 per event) in the lowland basalt plains and lowland Tasmanian populations (Hutchinson and Donnellan 1992).

Survey techniques

Most collections of the tussock skink from Tasmania have been opportunistic (e.g. as part of other fauna/reptile surveys or serendipitous). Hutchinson et al. (2001) provide general information on surveying for skinks. More objective and stratified survey methods for skinks include pitfall trapping and use of temporary artificial habitat (e.g. tiles placed amongst tussock grass). These methods require specialist input with respect to the design of the

sampling regime. Specialist confirmation is recommended for any specimens suspected to be the tussock skink. Please seek further advice from the Threatened Species Section if you wish to conduct surveys of this species. A permit is required to take or disturb threatened fauna for scientific purposes, issued under the *Threatened Species Protection Act 1995* and *Nature Conservation Act 2002*.

Taxonomic issues

The species was first described in 1901 by Lindholm as *Leiolopisma entrecasteauxii*. In 1990, Donnellan and Hutchinson using allozyme electrophoresis, showed that there were at least three distinct biological species in the eastern Australian skinks identified as *Leiolopisma entrecasteauxii*, one of which was described as *Leiolopisma rawlinsoni* (Hutchinson and Donnellan 1988). The initially monotypic genus *Pseudemoia* was erected by Fuhn (1967) and revised by Rawlinson (1974). Hutchinson and Donnellan (1992) resurrected *Pseudemoia pagenstecheri* as a distinct species (it had been long subsumed within the concept of what is now known as *Pseudemoia entrecasteauxii*), placing it in *Pseudemoia* based on electrophoretic, karyotypic and morphological data (Hutchinson et al. 1990), at the same time rejecting the genus *Claireascincus* proposed by Wells and Wellington (1985).

Confusing species

Specimens of *Pseudemoia* can be difficult to identify. Within Tasmania, the genus is distinguished by the combination of divided frontoparietal head scales, a large clear window in the lower eyelid and normally developed limbs (Rounsevell et al. 1996). There are six species of *Pseudemoia* across Southeastern Australia, three of which occur in Tasmania. The tussock skink is differentiated from other species of *Pseudemoia* in Tasmania by the lack of orange or red coloration on the throat or venter (even in breeding males), by the orange coloration being restricted to the mid-lateral stripe on breeding males (not on the dorsolateral stripe as in *Pseudemoia entrecasteauxii*), and by possessing the dorsolateral stripe on scale row 4, or scale rows 3 and 4, (rather than just on scale row 3 as in *Pseudemoia rawlinsoni*). Rounsevell et al. (1996) and Hutchinson et al. (2001) provide keys to the 3 species of *Pseudemoia* in Tasmania.

DISTRIBUTION AND HABITAT

The tussock skink occurs from western Victoria through the highlands of southeastern New South Wales to the New England Tableland (Figure 2) (Hutchinson et al. 2001). A single old record was the only evidence that the species might extend into South Australia (Hutchinson and Donnellan 1992), until recent years where there have been a small number of additional credible sightings.

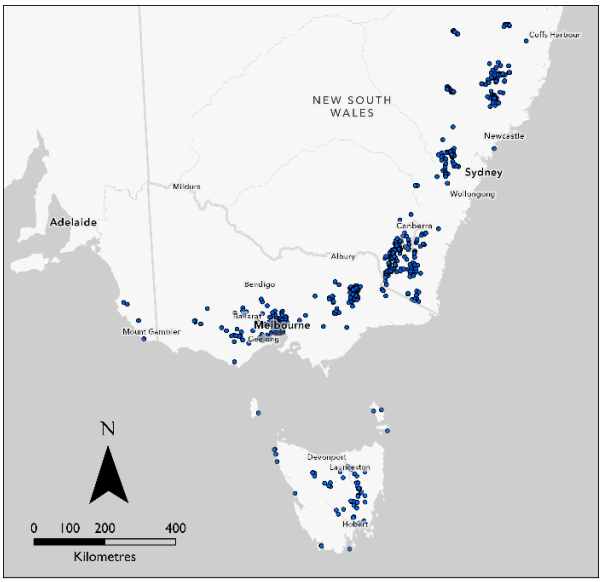

Figure 2. Records of the tussock skink in Australia, from the Atlas of Living Australia and the Natural Values Atlas databases (2025).

In Tasmania, the tussock skink has a wide distribution known from several sites ranging from The Domain near Hobart, through the lowland Midlands, extending to higher elevations near Cradle Mountain, and the Bass Strait Islands (Figure 1, Table 1). Throughout its range, the tussock skink is confined to treeless tussock grassland and grassy open woodland (Rounsevell et al. 1996). Historically the species was thought to be restricted to lowland sites however, the tussock skink may occur at virtually any elevation where suitable habitat is present. Further surveys are needed to understand ecology and habitat requirements.

Table 1. Population summary for the Tussock skink

	Location	Tenure	NRM region	1:25 000 mapsheet	Years seen
1	**Cape Barren Island** (1 km NE Petticoat Bay)	Private property	North	Passage	1996
2	**Flinders Island**	Private property, Conservation Area	North	Emita, Patriarchs	1988, 1995
3	**King Island**	Private property	North	Grassy	1988
4	East of **Evandale**	Private property	North	Evandale	2019
5	**Bracknell**	Private property	North	Liffey	2019
6	**Smiths Lagoon**	Private property (conservation covenant)	North	Cleveland	2019
7	**Deddington** Road	Private Property	North	Evandale	2019
8	**Launceston** (Jinglers Creek Reserve, Waverly Lake Park)	Crown Land, Local Government	North	Launceston / Prospect	2018, 2019
9	The Town Common, **Westbury**	Local Government	North	Westbury	2018
10	**Campbell Town / Ross** area	Private property	North	Conara, Jacobs, Campbell Town, Ross	1998, 1999, 2021, 2022
11	**Tunbridge Lagoon**	Township Lagoon Nature Reserve	South	Tunbridge	1995, 1999, 2014
12	**Merrivale Road** (6 km N Lower Marshes)	Private property	South	Table / Dennistoun	1988
13	**Oatlands area**	Private property	South	Oatlands	1970, 1999
14	**Lemont**	Private Property	South	Lemont	2021
15	**Jericho**	Private property	South	Stonor	1983
16	**Tiberias** area	Private property	South	Stonor	1988
17	**Pontville** (Small Arms Range Complex, Jordan Nature Reserve)	Commonwealth Department of Defence, Nature Reserve	South	Tea Tree	1998, 2009
18	**Cambridge** (aerodrome)	Private property	South	Hobart	2007, 2016
19	**The Domain**	Hobart City Council	South	Hobart	1995, 1998
20	near Mount Bethune, NE **Ellendale**	Private property	South	Ellendale	2000
21	500 m N **Cluny Dam**	Private property	South	Ouse	2010
22	**Hamilton** area (Hollow Tree Road)	Private property	South	Montacute	2009
23	Pillans Lake, **Central Plateau Conservation Area**	Conservation Area	South	Pillans	2024
24	Melaleuca Airstrip	National Park	South	Melaleuca	1988
25	Cradle Mountain area (**Learys Corner**)	National Park	Cradle Coast	Pencil Pine	2010
26	**Vale of Belvoir**	Private property (conservation covenant)	Cradle Coast	Lea / Pencil Pine	2013
27	**Temma area**	Conservation Area	Cradle Coast	Temma	2016
28	**West Point State Reserve**	State Reserve	Cradle Coast	Marrawah	2011
Locations where the species have been reported, but require further survey to confirm species identification					
	Walls of Jerusalem	National Park	Cradle Coast	Pillans	2022
	Arthur River	Conservation Area	Cradle Coast	Bluff	2023
	South Bruny Island	National Park	South	Cloudy	2022
	O'Dells Lake, Talinah Lagoon	Conservation Area	South	Ada	2011, 2024

Plate 2. Grassland in the Midlands, habitat of the tussock skink. Image © Karen Fagg

Typical habitat in the warmer lowland part of the range of the tussock skink is native grassland (Plate 2) dominated by *Poa labillardierei* and species of *Rytidosperma*, *Themeda triandra* and *Microlaena stipoides*. Prime habitat is characterised by medium to tall native grasses. The species is easily disturbed, and tall grass tussocks provide shelter and protection from predators. Individuals bask on shrubs (and even leaves of thistles) amongst grassland, which reduces the risk of predation.

HISTORICAL DISTRIBUTION

Historically, the tussock skink was first thought to only occur in the Midlands, inland near Cradle Mountain and Flinders Island. Its range is now known to be more widely distributed across Tasmania. There is no definitive evidence of a decline in the extent of occurrence of the tussock skink in Tasmania, although Redburn (1999) failed to detect the species at two of 11 previously reported sites. The historic and continuing loss and modification of extensive tracts of potential habitat has been implicated as a reason for the disjunct distribution of the species in the State (Rounsevell et al. 1996, Hutchinson et al. 2001).

TASMANIAN POPULATION PARAMETERS

Extent of occurrence: 93,000 km^2

Area of occupancy (as per IUCN criteria): 240 km^2

Number of mature individuals: Unknown

The extent of occurrence of the tussock skink in Tasmania is approximately 93,000 km^2 (although this covers some areas of sea). Its area of occupancy, based on records, is 240 km^2, although lack of formal monitoring means this is likely underrepresented. It is difficult to estimate the population of the tussock skink as there has been no assessment of abundance of subpopulations.

Collections to date have been opportunistic (e.g. as part of general fauna or reptile surveys) or serendipitous. The collecting history suggests that additional subpopulations may be found, resulting in range extensions and/or infilling, especially into highland grassland areas. An increase in citizen scientist reporting platforms such as iNaturalist has resulted in some credible sightings outside the known range (Ozolina et al. 2025), however given the species similarity to *Pseudemoia entrecasteuaxii,* further surveys in these areas to confirm the species is required.

Some sightings have provided adequate photos for a species expert to provide a high confidence of species confirmation, and these have been included in Table 1.

RESERVATION STATUS

The tussock skink is primarily found on grassland on private property. However, it has also been recorded in formal reserves including land reserved under the Tasmanian *Nature Conservation Act 2002* including Cradle Mountain/Lake St Clair and Southwest National Parks, as well as Arthur-Pieman and Central Plateau Conservation Areas and West Point State Reserve. It is also known from the Township Lagoon and Jordan Nature Reserves, two areas of private property subject to conservation covenants, and native bushland/grassland managed as reserves by the

Launceston, Hobart City and Meander Valley Councils.

CONSERVATION STATUS

The tussock skink was originally listed as endangered on schedules of the Tasmanian *Threatened Species Protection Act 1995* in 2002, when it was known only from the Midlands region of Tasmania., when it met criteria B1 (severely fragmented distribution) and B2 (habitat in decline). It was subsequently downlisted to vulnerable in 2008 (after the discovery of new subpopulations), meeting criteria B1 (severely fragmented) and B2 (decline in area of occupancy; extent and/or quality of habitat, and number of locations or subpopulations.

THREATS, LIMITING FACTORS & MANAGEMENT ISSUES

The key threat to the tussock skink is loss and degradation of its native grassland habitat.

Modification of habitat: Historically, significant areas of potential habitat have been cleared or substantially modified, mainly through agricultural, forest harvesting and urban activities. Inappropriate stock grazing, and fire regimes that cause declines in biodiversity in native grasslands and spread of weeds such as gorse have the potential to further degrade habitat. The impact may be exacerbated during periods of drought.

The degree to which habitat modification (including clearing), grazing and fire regime may have affected sites or habitat of the tussock skink is unknown. The species can persist in degraded habitat (e.g. "rough pasture") but whether these sites represent relict or typical populations is not known.

Climate change: A warmer climate and longer periods of drought may impact on the wetland and swampy habitat supporting the tussock skink, through effects such as a shift to the composition of native grassland (e.g. may become weedier or dominated by species that do not form tussocks), alteration to invertebrate biodiversity composition, and an exacerbation of the potential risk of the frequency and intensity of fire events.

Stochastic risk: Due to the widespread distribution of the tussock skink, the risk of stochastic extinction is low at a Statewide level but may be higher at the level of subpopulation.

MANAGEMENT STRATEGY

Management objectives

The main objective for the management of the tussock skink is to protect and manage existing populations. Further surveys are needed to improve understanding of the species' ecology and habitat requirements.

What has been done?

Targeted surveys & monitoring: Knowledge of the tussock skink has resulted from opportunistic and serendipitous detection of the species rather than targeted surveys.

Forest Practices Management: Under the Tasmanian Forest Practices System, there are requirements to identify and manage tussock skinks in areas managed under the Tasmanian *Forest Practices Code 2020* (FPA 2020). This includes undertaking biodiversity evaluations and surveying for known and potential habitat prior to activities and applying conservation management prescriptions where required. Management prescriptions are developed by NRE Tas and the Forest Practices Authority (FPA) through the 'Agreed Procedures' and implemented via the Forest Practices Authority's *Threatened Species Adviser*, a decision support system used to guide land management and planned burns in accordance with the Forest Practices Code (FPA 2020; FPA 2021).

What is needed?

To better understand the distribution, habitat requirements and conservation management needs of the species;

- Undertake extension surveys in potential habitat and areas with unconfirmed sightings.

- To minimise risk of population decline – protect known sites and associated habitat from inappropriate disturbance. Consult with owners/managers of private property with tussock skink to support practices such as grazing which promote a healthy grassland ecosystem. Include tussock skink in relevant public land management plans, where it is known to occur.

- To reduce habitat disturbance on agricultural land – promote the development of practice management, including guidelines for appropriate grazing regimes to achieve healthy native grassland habitat.

- To ensure protection of known populations and potential habitat – provide information and extension support to relevant Natural Resource Management committees, local councils, government agencies, the local community and development proponents on the locality, significance and management of known subpopulations and potential habitat of the tussock skink.

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View: www.naturalvaluesatlas.tas.gov.au

https://www.threatenedspecieslink.tas.gov.au/Pages/Tussock-Skink.aspx

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Permit: It is an offence under Tasmanian legislation to collect, catch, damage, injure, destroy, or kill a threatened species listed under the *Threatened Species Protection Act 1995*, without a permit.

Version history

Version	Date	Author	Purpose/Change
1.0	20 April 2026	Threatened Species Section	First version. Draft first prepared in 2011 by Mark Wapstra, and reviewed by TSS in 2014 but not finalised. Updated in 2025 by Karen Fagg (TSS). Reviewed and endorsed by the Scientific Advisory Committee at Meeting 92