

**Advice from the Threatened Species Scientific Committee (the Committee)  
on the list of Threatened Species under the  
*Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)***

**1. Reason for Conservation Assessment by the Committee**

This advice follows assessment of new information on:

***Coeranoscincus reticulatus* (three-toed snake-tooth skink)**

**2. Summary of Species Details**

<b>Taxonomy</b>	Conventionally accepted as <b><i>Coeranoscincus reticulatus</i> A Gunther.</b>
<b>State Listing Status</b>	Listed as rare under the Queensland <i>Nature Conservation Act 1992</i> and listed as vulnerable under the New South Wales <i>Threatened Species Conservation Act 1995</i> .
<b>Description</b>	A diurnal, burrowing lizard with head and body length of up to 23 cm and a thick, long tail, four very short legs, each with three clawed toes. Teeth are long and curved (Cogger et al., 1993; Cogger, 2000; DEC, 2005). Body colour varies from fawn to dark brown, with individual flecked scales streaked with dark brown, a dark collar on the back of the neck and fine patterning on the belly (Cogger, 2000). Adults have dark eye patch, dark ear markings and a pale snout (Wilson and Swan, 2003).
<b>Distribution</b>	Occurs on the east coast and in the ranges from Macleay Valley in north-eastern NSW to Cooloola in south-eastern Queensland. One population known from Fraser Island (DEC, 2005).  All New South Wales records of the species are in the Northern Rivers Catchment Region where it is predicted in one area and known from seven (DECCW, 2009).  Recorded in Queensland in eight national parks and one forest reserve (Australian Museum, 2009; DERM, 2009). Recorded in New South Wales in eight national parks, one state conservation area and six state forests (Australian Museum, 2009; DECCW, 2009a).
<b>Relevant Biology/Ecology</b>	Details of the ages of sexual maturity, life expectancy and natural mortality of this species are unknown.  Egg-laying skink with clutches of 2–6 eggs (Wilson and Swan, 2003). Gravid females have been captured between October and December (McDonald, 1977; Greer and Cogger, 1985).  Diet consists of earthworms, beetle larvae, insect remains and mud (McDonald, 1977). The species is found in leaf litter, in rotting logs or in soil under fallen timber (Cogger, 2000). <b>Recorded from both logged and unlogged forest (DECCW, 2009a).</b>  In Queensland the species is known to inhabit rainforest and occasionally moist eucalypt forest, on loamy or sandy soils (DEC, 2005). In New South Wales <b>it is found in dry rainforest, northern warm temperate rainforest, subtropical rainforest, grassy wet sclerophyll forest and shrubby sclerophyll forest (DECCW, 2009, 2009a).</b>

<b>Threats</b>	
<i>Known</i>	Past known threats in Queensland are logging on Fraser Island and the mainland near Cooloola, and sand mining on Fraser Island (Kowland, 1999); however, the impact of these threats on the species is unknown. Land clearing in the Blackall Range around Maleny (mainly for dairy farming) had been extensive (Czechura, 1974). These threats have been ameliorated by the prohibition of broadscale clearing of potential and possible habitat on freehold and leasehold land. Queensland also introduced a moratorium on broadscale clearing of remnant native vegetation, but some clearing is still exempt. The impact on the species, of exempt clearing, is unknown (DERM, 2009a).
<i>Potential</i>	Potential threats to the three-toed snake-tooth skink (in Queensland and New South Wales) include: the removal of fallen logs and leaf litter through fire (TSSC, 2008); predation by feral pigs ( <i>Sus scrofa</i> ) feral cats ( <i>Felis catus</i> ) and foxes ( <i>Vulpes vulpes</i> ) (Paltridge, 2002; Read and Bowen, 2001; Mitchell and Dorney, 2006); and the impact of stock grazing. However, stock grazing is not permitted in national parks in New South Wales and is being phased out from national parks in Queensland (DERM, 2009b; DECCW, 2009a). Heavy grazing is known to cause microhabitat change through removal of ground cover such as grass tussocks and leaf litter which leads to a reduction of leaf-litter inhabiting reptiles (James, 2003).

### 3. Public Consultation

Notice of the proposed amendment was made available for public comment for 30 business days. Any comments received that are relevant to the survival of the species have been considered by the Committee.

### 4. How judged by the Committee in relation to the EPBC Act criteria and Regulations

**Criterion 1:** It has undergone, is suspected to have undergone or is likely to undergo in the immediate future a very severe, severe or substantial reduction in numbers

**Not eligible**

<b>Criterion element</b>	<b>Evidence</b>
Reduction in numbers	No data

**Criterion 2:** Its geographic distribution is precarious for the survival of the species **and** is very restricted, restricted or limited

**Not eligible**

Criterion element	Evidence
Geographic distribution AND	Limited – Total extent of occurrence is estimated to be 20 000 km <sup>2</sup> (7000 km <sup>2</sup> in Queensland and 13 000 km <sup>2</sup> in New South Wales). The area of occupancy for Queensland is 1300 km <sup>2</sup> but is not known for New South Wales (Australian Museum, 2009; DECCW, 2009a; DERM, 2009).
Geographic distribution precarious	Insufficient data – The species is known from seven locations in New South Wales. The number of locations in Queensland is unknown. This species has been recorded in eight national parks and one forest reserve in Queensland (Australian Museum 2009; DERM, 2009) and is recorded in eight national parks, one state conservation area and six state forests in New South Wales (Australian Museum 2009; DECCW, 2009a).

**Criterion 3:** The estimated total number of mature individuals is very low, low or limited; **and either**

(a) evidence suggests that the number will continue to decline at a very high, high or substantial rate; **or**

(b) the number is likely to continue to decline **and** its geographic distribution is precarious for its survival

**Not eligible**

Criterion element	Evidence
Total no. of mature individuals AND Continued rate of decline	No data
<b>OR</b>	
Total no. of mature individuals AND Continued decline likely AND Geographic distribution precarious	No data
	No data
	Insufficient data – See Criterion 2

**Criterion 4:** The estimated total number of mature individuals is extremely low, very low or low  
**Not eligible**

Criterion element	Evidence
Total no. of mature individuals	No data

**Criterion 5:** Probability of extinction in the wild that is at least  
(a) 50% in the immediate future; or  
(b) 20% in the near future; or  
(c) 10% in the medium-term future

**Not eligible**

Criterion element	Evidence
Probability of extinction in the wild	No data

## 5. Recommendation

Although there are insufficient data to assess the species against the criteria, the Committee recommends a precautionary approach be applied and hence that **no amendment** be made to the list referred to in section 178 of the EPBC Act and that *Coeranoscincus reticulatus* remains eligible for inclusion in the **vulnerable** category of the list.

Threatened Species Scientific Committee  
2 December 2010

## 6. References cited in the advice

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