

**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 provided on:

***Bulbophyllum globuliforme* (miniature moss-orchid, hoop pine orchid)**

**2. Summary of Species Details**

<b>Taxonomy</b>	Conventionally accepted as <i>Bulbophyllum globuliforme</i> Nicholls (Nicholls, 1938).
<b>State Listing Status</b>	Listed as vulnerable under the New South Wales <i>Threatened Species Conservation Act 1995</i> and rare under the Queensland <i>Nature Conservation Act 1992</i> .
<b>Description</b>	A tiny rhizomatous orchid that grows on the bark of trees. It produces green, globular, bulb-like stems 1–2 mm in diameter. Leaves are narrow-triangular, 1–2 mm long, 0.2–0.3 mm wide, papery and concave. The inflorescence is 1–1.5 cm long, bearing one flower. The sepals and petals are white to pale yellow (Weston and Hill, 1993).
<b>Distribution</b>	<p>Endemic to eastern Australia, the species is recorded from near Paluma, north-east Queensland, south to the McPherson Range on the Queensland/New South Wales border (Weston and Hill, 1993; Queensland Herbarium, 2009).</p> <p>This species is known from four locations including Puzzle Creek near Paluma (north-east Queensland), Kroombit Tops near Calliope (central Queensland), Cainbale Creek in Lamington National Park (south-east Queensland) and Levers Plateau (north-east New South Wales) (Jones and Clements, 2001; Queensland Herbarium, 2009).</p> <p>This species is also reported to occur at Maleny, the Noosa area (in Noosa National Park) and Bunya Mountains in south-east Queensland, though these sites are not supported by herbarium collections (Jones, 1988; Stanley and Ross, 1989; Briggs and Leigh, 1996; DECC, 2005).</p>
<b>Relevant Biology/Ecology</b>	<p>A host specific species, only growing on hoop pine (<i>Araucaria cunninghamii</i>), where it colonises the upper branches of mature trees, usually from 100–900 m altitude (Jones, 2006). The host trees occur in rainforest communities that have a discontinuous distribution along the Australian east coast.</p> <p>Generation length is unknown. However, as the plant forms colonies by rhizome growth, each clump may be very long-lived.</p> <p>Flowering occurs in May–November (Nicholls, 1969; Weston and Hill, 1993). Pollinating mechanism unknown. Apart from fragmentation of individual plants, no other vegetative reproduction occurs.</p> <p>The growth form of this species is unusual, as it forms mats of tiny bulbs (leaves) on the wrinkled bark of hoop pine, making it impossible to determine in the field how many individuals are present</p>

	(each discrete mat could be one plant, or many).
<b>Threats</b>	
<i>Known</i>	Threats to this species include destruction of habitat by clearing; disturbance of habitat by timber harvesting; inappropriate fire regimes; and disturbance of habitat by weeds ( <i>Lantana (Lantana camara)</i> ) (ANRA, 2002). Although these threats are identified as potential threats by Barker (1999), others suggest that they are known threats (ANRA, 2002; DECC, 2005).  Damage to the host trees by roadworks and collection or damage by orchid enthusiasts are known threats in New South Wales (DECC, 2005).
<i>Potential</i>	There are no potential threats to this species.

### 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**

Criterion element	Evidence
Reduction in numbers	Insufficient data – There are no quantitative data available to indicate population trends, as trends can only be inferred from loss (or gain) of suitable hoop pine dominated forests (Araucarian microphyll/notophyll vine forests, in particular). Though past harvesting of mature hoop pines from natural stands may have potentially reduced populations of this species there are insufficient data to indicate a substantial reduction in numbers (Queensland Herbarium, 2009).

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

**Eligible for listing as vulnerable**

Criterion element	Evidence
Geographic distribution AND Geographic distribution precarious	Limited – The extent of occurrence is 13 300 km <sup>2</sup> and the area of occupancy is unknown (Queensland Herbarium, 2009).  Yes – Known from only four populations, at four disjunct locations. Although there are no data on fluctuations in numbers or area of occupancy, this species has known threats that are sufficient to indicate that its geographic distribution is precarious.

**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	No data
AND	
Continued rate of decline	Insufficient data – See Criterion 1
<b>OR</b>	
Total no. of mature individuals	No data
AND	
Continued decline likely	Insufficient data – See Criterion 1
AND	
Geographic distribution precarious	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. Recommendations**

The Committee recommends **no amendment** to the list referred to in section 178 of the EPBC Act and that ***Bulbophyllum globuliforme*** remains eligible for inclusion in the **vulnerable** category of the list.

The Committee notes that this species is eligible for inclusion due to its low number of locations and known threats at these sites.

Threatened Species Scientific Committee

26 August 2010

## 6. References cited in the advice

- Barker M (1999). *Bulbophyllum globuliforme*, Species Management Profile, Species Management Manual. Department of Natural Resources. Brisbane.
- Briggs JD and Leigh JH (1996). Rare or Threatened Australian Plants. Centre for Plant Biodiversity Research, CSIRO Division of Plant Industry. Canberra, ACT.
- Department of Environment and Climate Change (DECC), New South Wales (2005). Hoop Pine Orchid Profile.  
Viewed: 10 June 2010  
Available on the Internet at:  
<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10112>
- Jones DL (1988). Native Orchids of Australia. Reed, Sydney.
- Jones DL (2006). Native Orchids of Australia, including the island territories. Reed New Holland. Sydney.
- Jones DL and Clements MA (2001). *Oncophyllum*, a new genus of Orchidaceae from Australia. The Orchadian 13: 9, pp 421–424.
- Nicholls WH (1938). Notes on two diminutive Australian *Bulbophyllums*, including the description of a new species. *Orchidologia Zeylanica* 5(1): 124, fig. 1.
- Nicholls WH (1969). Orchids of Australia. Nelson. Melbourne.
- Queensland Herbarium (2009). Specimen label information. Viewed 2 Nov 2009.
- Stanley TD and Ross EM (1989). Flora of South-eastern Queensland, vol. 3. Queensland Department of Primary Industries. Brisbane.
- Weston PH and Hill KD (1993). *Bulbophyllum*. In: Flora of New South Wales, vol. 4 (ed. GJ Harden). New South Wales University Press, Kensington.