

SHORT COMMUNICATION

Confirmation of *Sarcochilus dilatatus* F. Muell. (Orchidaceae) in New South Wales, and an extension in range.

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Introduction

The species *Sarcochilus dilatatus* F. Muell. is an Australian endemic orchid, recorded in south-eastern Queensland and the upper north-east of New South Wales (NSW), between the Kroombit Tops (Calliope Range — inland from Gladstone) Queensland (Walsh 1997) and the Richmond River New South Wales (Jones 1988). The species occurs along the coast and lower ranges, up to 400 m altitude (Weston 1993) where it is epiphytic. It appears to favour *Araucaria cunninghamii* (Hoop Pine) above all other hosts, and germinates on smaller stems about 8–12 mm diameter, which are in the higher, brighter parts of the crown. The largest population of the species I have seen, south-west of Bundaberg, Queensland, was within a plantation of Hoop Pine, a 'habitat' which Walsh (1997) also considers extremely rich in this otherwise rare species.

Identification of *Sarcochilus dilatatus* requires flowers for confirmation, although the foliage is also quite distinctively marked. A net-like pattern of reddish rectangles occurs across the foliage, with a background colour of green. Often this network pattern is only visible when light is transmitted through the foliage. Leaves on most individuals are few, falcate, and borne on a short stem. The roots are long and slender, mainly white, although older roots will be grey. The inflorescences are axillary, generally pendent, and mostly only one is produced from each axil at any one time, although the axil may produce a number of inflorescences in successive years. Older, larger plants may have a number of inflorescences concurrently (the confirmation specimen was carrying three racemes), but the most common situation is for only one or two racemes per plant. The flowers are small, star-shaped, mainly brown or brown-marked on a greenish background, and have a white labellum variously marked with orange. The tepals are distinctly spatulate.

Conservation status

Sarcochilus dilatatus has a national ROTAP code of 3RC- (Briggs & Leigh 1996), that is the species is considered rare (R), has a range in excess of 100 kilometres (3) and is conserved (C), although the adequacy of conservation is not determined (-). The species is listed as conserved only in Lamington National Park, Queensland, but the status of that population is uncertain. Although recorded from NSW, it has been considered extinct in that state.

Prior to this survey the only collection from NSW is listed as being collected in late September 1894 from a locality near Lismore (NPWS 1998). Although listed in Weston (1993), Jones (1988) and Bishop (1996) as flowering in September and October, the slides and records of the species held by the author suggest flowering in December, January or February. Walsh (1997) supports these observations, noting that the southern populations (south from Bundaberg) flower from November to January, while the northern populations (Calliope Range) flower in August and September. Bishop (1994) explains that the specimen collected in Lismore is not of very good quality, and identification is difficult, going on to suggest that the identification may be in error and the material is actually of the closely related *Sarcochilus australis*, which is close to its northern limit in that area (Currell 1993). The specimen collected in 1894 is not a flowering specimen (P. Weston pers. comm.).

Results

The author was undertaking surveys of Crown lands of the Clarence-Moreton Basin to assess the status of orchid populations. This information was to assist in decision making and management processes for lands, which in large part are managed by the Rural Lands Protection Boards, NSW National Parks and Wildlife Service, State Forests of NSW or the NSW Department of Land and Water Conservation.

Preliminary assessments in the Nymboida area had commenced in early October. A number of taxa had been collected for identification from the fallen crown of a Hoop Pine. One of the plants was a small *Sarcochilus* (or related) species with mottled and falcate foliage. However, insects had damaged the immature inflorescences, and fresh material (with intact inflorescences) was sought at the site of the original collection.

During the second visit to the site in early January 1999, a number of other plants were located, including one in flower. A photograph of the plant was identified as *Sarcochilus dilatatus* and later confirmed by Peter Weston at the Royal Botanic Gardens Sydney. The species is therefore extant in NSW and much further south than the original collection. The population is growing on Hoop Pine and associated trees in a small patch of rainforest surrounded by grassy dry sclerophyll forest. It is intended that further surveys will be undertaken to assess the extent of the population.

As a result of the current find, the conservation status needs to be revised and the extinct rating for zone 56 (North Coast NSW) should be removed. An uncertain rating for the conservation status of the New South Wales populations is suggested until further assessment of the distribution and abundance of populations is conducted. There is a case to have the species listed in Schedule 2 (vulnerable) of the *NSW Threatened Species Conservation Act 1995* on the basis that the species is known from only a single population in New South Wales and that it is potentially threatened by collecting, fire and changes to land use.

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References

- Bishop, T. (1996) *A field guide to the orchids of New South Wales and Victoria*. (University of NSW Press: Kensington, Sydney).
- Briggs, J.D. & Leigh, J.H. (1996) *Rare or threatened Australian plants*. (CSIRO: Canberra).
- Currell, R. (1993) *Sarcochilus australis* in the Kyogle district. *The Orchadian* 10(11): 401.
- Jones, D.L. (1988) *Native orchids of Australia*. (Reed: Sydney).
- NSW National Parks and Wildlife Service (1998) *Atlas of NSW wildlife records*. Computerised database (NPWS: Hurstville).
- Walsh, G. (1997) A bit about *Sarcochilus dilatatus*. *The Orchadian* 12(4): 173–174.
- Weston, P.H. (1993) *Sarcochilus* in Harden, G.J. (ed.) *Flora of New South Wales*. (University of NSW Press: Kensington, Sydney).