

# endangered

by Melanie Smith



## Quartz-loving synaphea

The quartz-loving synaphea (*Synaphea quartzitica*) is a small shrub from the Proteaceae family. It is named after the chert (a type of rock containing quartz) hills in the Moora-Watheroo area, to which it is endemic. The heath community on the slopes of the chert hills is also a threatened ecological community containing other species of conservation significance (see 'endangered', *LANDSCOPE*, Spring 2000).

Quartz-loving synaphea is a small shrub generally less than 50 centimetres in height that has lobed leaves, with two or three pairs of lobes along the length. Small yellow flowers are widely spaced along a long inflorescence spike about six to 18 centimetres long and appear between July and August.

The species was first collected in 1908 from a site known as Cairn Hill, just north of Moora. Despite flora surveys in the area, the species had not been

recorded from any other location when it was described by Alex George in 1995. In June 1998 it was listed as declared rare flora (giving it special protection under government legislation) and ranked as critically endangered due to its small population size of only 45 plants, as well as its specialised habitat requirements and a number of threats associated with the population, such as mining, grazing and inappropriate fire regimes.

Not long after the quartz-loving synaphea was listed, three new populations were located in Watheroo National Park, bringing the total number of known populations to four and increasing the number of plants to nearly 200. It is not expected that any new populations will be found as little of the plant's preferred habitat exists, most likely due to past clearing for agriculture and chert mining.

Efforts to aid the conservation of the species led to negotiations with the mining company that had tenements over the area, the landowners of Cairn Hill, and

several government agencies which resulted in Cairn Hill being gazetted as a class 'A' nature reserve in 2004. As a result of the greater security of the largest known population and more populations being found, the quartz-loving synaphea was re-ranked as endangered.

Although the species was well reserved, quartz-loving synaphea was still considered to be at risk of extinction and approval was given to undertake a translocation to increase the number of plants and populations. Botanic Gardens and Parks Authority staff used tissue culture techniques to grow seedlings from leaf shoot material taken from the natural populations. The seedlings were planted in 2005 at a separate site, free from threats such as mining and the *Phytophthora* pathogen which causes the disease *Phytophthora* dieback. A population of 54 plants now exists at the new location.

Photos by Melanie Smith

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