ASSESSMENT OF POLLEN ASSEMBLAGES FROM THE HIVES OF *TETRAGONULA CARBONARIA* FOR THE PRESENCE OF THE THREATENED SPECIES *GREVILLEA PARVIFLORA* SUBSP. *PARVIFLORA*

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Tetragonula carbonaria are the most common species of stingless bees in Australia. They are generalist flower visitors and play an important role in the pollination of native vegetation and agricultural crops. *Tetragonula carbonaria* can forage up to 500m from their hives, collecting pollen, resin and nectar from the surrounding plants. Overseas studies have shown that the pollen content in native stingless bee honey is an effective predictor of vegetation in a geographical area around the hive, and can be used to identify rare species of plants.

In this study, managed hives of *Tetragonula carbonaria* were placed in bushland at Lake Macquarie, New South Wales, Australia, in known populations of the threatened species *Grevillea parviflora* subsp. *parviflora* (small – flower grevillea) during the main flowering period in 2014. Samples of honey and propolis (a resinous waxy substance used to build internal structures of a hive), were collected from the hives at the end of this period. Pollen analysis techniques were used to test the samples for the presence of *Grevillea parviflora* subsp. *parviflora* pollen. The pollen was detected in all propolis samples from the study sites but was not found in the honey samples. This study demonstrated an innovative method of using Australian stingless bee propolis samples to quantify floral diversity and monitor the presence of a threatened plant species relevant to conservation within a foraging area.

Internal nest structure of a Tetragonula carbonaria *hive*

Threatened species Grevillea parviflora *subsp.* parviflora