

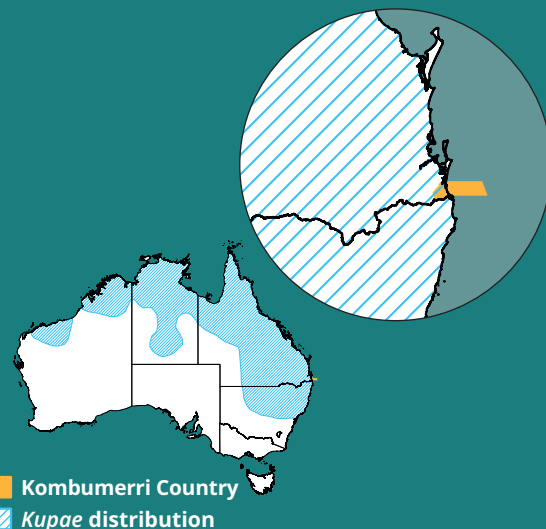
# Kupae (Sugarbag bees) on Kombumerri Country

© Coen Hird (Trawlwoolway) and Max Dillon (Kombumerri)

Common names: Sugarbag bees, native stingless bees, bush bees, sweet bees

Scientific names: *Tetragonula* and *Austroplebeia* spp.

Language name: : *Kupae*\*



## Status



## Description

Australia is home to over 1600 species of bees described by Western science, with possibly up to 2,500 total species. Of these, only 11 are eusocial (forming colonies, producing and storing honey). These native bees are small (~4 mm long), do not sting and belong to two genera: *Tetragonula* and *Austroplebeia*.

*Tetragonula* species are known for their vigorous colony defence, often forming dense entrance tunnels of resin and wax and biting intruders. *Austroplebeia* species are generally lighter in colour (often with pale facial and body markings) and exhibit gentler behaviour. They are noted for sealing nest entrances with a fine, lace-like curtain of resin at night, and sometimes build intricate entrance/exit tubes.

*Kupae* play a vital ecological role as pollinators in subtropical and tropical Australian ecosystems. They visit a wide range of native flowering plants, contributing to pollination, genetic diversity, and ecosystem resilience.

*Kupae* also efficiently pollinate crops like macadamias, watermelons, blueberries, raspberries and mangoes.



*Tetragonula carbonaria* brood spiral. Photo: Tobias Smith.

## Distribution

*Kupae* are restricted to the warmer northern and eastern parts of the continent, including Queensland, New South Wales, the Northern Territory, and the north-west of Western Australia. Their southern limit roughly coincides with the frost line, as they are unable to persist in cooler climates.

## Habitat

*Tetragonula* species are typically found in coastal and subcoastal forests, woodlands, and urban gardens. They are more abundant in areas with high floral diversity and mature trees offering suitable nesting hollows. In contrast, *Austroplebeia* species tend to occur further inland, often in drier or savanna-type habitats, and are better adapted to open woodland and semi-arid environments, though coastal populations are known.

## Threats

Threats to *Kupae* include:

- **Climate change**, including more frequent intense wildfires, droughts and extreme heat events
- **Land clearance**, leading to habitat loss and fragmentation of foraging habitats
- **Agricultural practices**, including pesticide use
- **Introduced plant species**, such as the African tulip tree
- **Invasive species**, including the Small hive beetle
- **Pathogens**.

\* Acknowledging there are many variations and spellings used across the continent

## Cultural Connections

*Kupae* are sacred to many Indigenous communities around the world and within Australia. Aboriginal engagements with *Kupae* are diverse and locally specific and its significance is not monolithic. Generally, across their distribution, *Kupae* hold deep cultural, ecological and spiritual meaning for many Aboriginal peoples.

A sweet food and resource, *Kupae* are entangled in systems of kinship, art, ceremony, ecological governance, and multispecies ethics. Their honey is used to heal and nourish both physically and spiritually, including in ceremonial contexts.

*Kupae* significance reflects broader Indigenous knowledge's that understand Country as a living, sentient network of relationships. For multiple groups, the term "sugarbag" is all-encompassing to contain everything related to the interconnected bee, honey, nest, trees, grass, flowers and Country. Loss of *Kupae* from the land would mean loss of important Lore, stories, and intergenerational knowledge.

Throughout south-east Queensland, hunters open a small hole below the hive entrance to access honey. They use sponges made from soft bark to soak up the honey, sealing the opening back up when finished. Many old 'sugarbag scars' can still be seen on trees across Australia, and honey harvests are still an important part of life for some communities. However, much of the Indigenous knowledge about *Kupae* is sleeping currently due to the ongoing impacts of colonisation.





## Cultural Values

### Country

On Kombumerri Country, [the Creation story of Jabreen](#) the ancestral warrior is inseparable from **Kupae**. In this narrative, **Kupae** honey is woven into the cosmogeny and sacred geographies of Kombumerri, central to how the landscape was formed. The story is told among Kombumerri Elders and is cherished as a foundation of their culture and identity.

**Kupae** on Country harvested at the right time provides honey that nourishes people and shows that Country is healthy. For Kombumerri, thriving hives signal balance across forests, grasslands, and water places. If conditions are poor, hives may fail.

### Knowledge

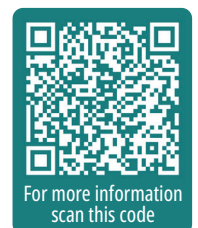
For millennia, Aboriginal peoples have cared for **Kupae** and vice versa through reciprocal relationships with bees underpinned by Traditional knowledge, including those knowledges held by totem holders of **Kupae**.

Honey and wax are used for healing, tools, food, medicine, and ceremony, carrying Lore/Law across generations. Beeswax has long been worked for multiple purposes: as adhesive, for body care, in healing, and in ceremonial practice.

### Kin

For Kombumerri, **Kupae** are kin. A sculpture of **Jabreen** made for the Griffith University Campus, which houses a live hive, references this Dreaming location in the landscape. **Kupae** habitat overlaps with Kombumerri cultural sites, showing the interconnection between kinship, Country and bees.

© Artwork by Sean Kinchella  
Design and layout by Nani Creative



*This document contains Indigenous Cultural and Intellectual Property (ICIP). All rights are reserved by the relevant Indigenous custodians; any unauthorised use or reproduction is prohibited.*

## Results of Poor Management

### Lack of recognition of Culturally Significant Entities

Animal ethics in *Kupae* and insect research more generally does not consider culturally significant species which are kin to Aboriginal peoples across the continent. This highlights the need to broaden conservation and scientific research frameworks to include species valued for cultural and relational reasons, not just ecological ones.

Aboriginal Elders and knowledge holders from a number of communities have in recent years reported concerning declines in their traditional honey harvests and wild nests. This is troubling, as *Kupae* are integral not only to cultural practices but also to the health of Country. Despite this, native bees are rarely recognised in conservation legislation or prioritisation frameworks. This creates barriers for Kombumerri wanting to access funding for recovery, resources, and other Aboriginal peoples protections for *Kupae*, and limits opportunities for their knowledge to inform management.

### Lack of inclusion in decision-making

*Kupae* are deeply connected to landscape health and water availability. Changes in water management, land clearing, and pesticide use affect both wild and managed colonies. While stingless beekeepers in areas such as south-east Queensland have reported significant declines in managed colonies, Aboriginal communities have long observed parallel declines in wild populations that underpin significant cultural practices such as honey harvesting. Aboriginal voices, despite their deep and sustained observations of ecological change, remain sidelined in discussions about land and water management that directly impact *Kupae* populations.

### Other impacts

Due to ongoing threats and degradation of Country, including habitat loss, chemical exposure, and altered fire regimes, native bees may be shifting their nesting patterns and foraging ranges beyond what is currently recognised. Reliance on outdated or limited ecological data risks underestimating the spatial and habitat requirements of these species. This leads to insufficient buffers and offsets in planning frameworks, leaving *Kupae* colonies and foraging habitats vulnerable. Without the inclusion of Aboriginal knowledges, which provides long-term insights into the health of bee populations and their cultural importance, conservation strategies are likely to fall short of holistic understandings. Aboriginal communities including Kombumerri should be active participants in the protection of *Kupae*, ensuring that both ecological and cultural values are recognised and sustained.

## Kombumerri Vision

If Indigenous knowledge is applied with Western understanding, health of *Kupae* will increase. We need:

- Recognition of Culturally Significant Entities as Matters of National Environmental Significance
- Access to Country and *Kupae* resources
- Appropriate resourcing for ranger programs and cultural harvest
- Management planning that is inclusive and respectful of Kombumerri.

We need systems and policies that recognise the social, cultural and economic benefits of *Kupae* to Kombumerri so that we are supported to look after species that are of cultural significance.

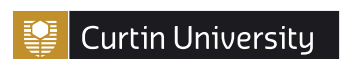
Kombumerri see *Kupae* as central to new ways of managing Country and creating sustainable economies rooted in traditional and contemporary systems of land management. This means designing land and fire management guided by Traditional practices, ensuring *Kupae* habitats and pollination systems are protected.

It also means addressing inequities in funding after major bushfires to stop overlooking sacred pollinators in recovery plans.

Kombumerri envision an emerging industry around *Kupae* that is Indigenous-led and community-controlled to deliver proper benefit to mob while protecting *Kupae* from full commercialisation or loss of cultural meaning. Kombumerri want the right to manage *Kupae* in natural areas like their Ancestors have done for millennia.



National Environmental Science Program



This project is supported with funding from the Australian Government under the National Environmental Science Program.