APIMONDIA
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PP-495 [Beekeeping for Rural Development]

Establishing a Beekeeping Group in the remote tropical Cocos (Keeling) Islands with Islamic Cocos Malay women

Maria checking her colony.

Cocos Bee Ladies

Working with the bees

Methodology:
Following a visit to the islands in 2020, Paula wanted to support the local Cocos Malay women with their beekeeping, using Apimaye beehives, showing that community and empowerment of women strengthens a community and economic possibilities. The islands are said to be at risk from climate change and the Australian Government is recommending evacuation of the islands, despite its investment in the airport runway development and strengthening for military purposes. Historical research on the development and erosion of the islands is producing mixed results, with the overall land mass visibly relocating amongst the islands, creating the debate on marine defences and how to maintain the populations living on these remote islands.
With most food being imported by ship and fortnightly by plane, a need for development of farming and agriculture using the current infrastructure would secure the survival of the population. The community are mostly employed by the government with a selection of small tourism businesses. Many Home Islanders grow their own food, have chickens and fish daily. By teaching the women as a group to take care of and manage the native honeybees, the islands would be able too grow more food, with thanks to the pollination, as well as have the benefit of the medicinal properties of honey and products from the hive.

Young girls learning about bees

Asma's queen

Cocos (Keeling) Islands, 12 degrees south of the equator.

Results:
Living for 12 months within the 500 strong Cocos Malay community, we observed how their support and culture of each other mirrored that of the 'hive'. The overall wellbeing of the community outweighing personal or individual needs. The family and faith being the foundation of the community, with 3 generations of a family living together in most homes. This community is under threat due to the airport expansion plans and the Australian Government recommending evacuation from the islands with threatened sea level rising above the islands 1.5metre elevation. Having been originally brought to the islands as slaves 200 years ago, the Cocos Malay have been unable to claim indigenous rights to the land, making them vulnerable and in a legal battle to retain the right to remain on their home island. Keeping bees is part of several projects providing hope and self sufficiency to the Cocos Malay who until 1984 were cut off from the rest of the world surveying from the Clunies-Ross Coconut plantation.

Asma checking her colony.

Pollen collection

'When a bee sees food she dances more...When a human sees food, they eat more. When the Cocos Malay have food, they share more'

Honey varieties light to dark

Conclusion:
Bee-keeping has connected several of the women of the Cocos Malay community, who would otherwise not be socialising together and enabled shared values and motivation to protect their island home through working with their bees. Honey production has provided a welcome additional income, as well as providing a natural and healthy food source. Lip balms are also made and sold to locals and tourists. Pollen and propolis production are in abundance, but but not yet utilised. There is scope for development of honey production and export of bee products, including queens to mainland Australia, that has lost substantial numbers of bee colonies due to varroa in the past three years. Niche tourism, including Apitherapy also has potential in this unique slice of paradise, where the bees are thriving. A planned documentary of the women's story will highlight the importance of bees and how women bee-keeping can bring together a community and offer hope when there is uncertainty. If the bee species on the Cocos (Keeling) Islands is also a secluded population of a now endangered species, the importance of supporting this community with research and training will have far reaching positive consequences.

Coccos Malay women sharing food

Cut comb honey selling to locals and tourists

Research and project coordinated by Paula Carnell, with grateful support from Apimaye Hives, Beewise, Perth.B.J Sherriff beesuits, A. Topolofski, University of Agriculture, Krakow, Poland. S. Rasic, University of Belgrade. Funded by Golden Bee Productions & Paula Carnell. Ltd. To support the further research with this project please go to 'https://paulacarnell.com/goldenbee or email paula@paulacarnell.com

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Paula Jane Carnell
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The Cocos Keeling Islands, a remote coral atoll in the Indian Ocean, provide a unique environment for beekeeping. The honeybee population was first introduced to the islands in the 1940s, and in recent years, we have worked to establish a sustainable beekeeping group among the Cocos Malay community. This initiative empowers local women through beekeeping while embracing both scientific and spiritual approaches to hive management. Guided by the teachings of the Quran, particularly the chapter 'The Bee,' our program teaches women natural and sustainable beekeeping methods. This holistic approach respects the wisdom Allah imparted to bees and integrates it into practical hive management. By observing bee behaviour, including their natural foraging patterns and the unique fact that they do not consume their own honey when nectar sources are abundant, we are gaining valuable insights into colony health and sustainability. One aspect of our work involves analysing the honey to determine which plants the bees are foraging from. This research helps us understand the ecological interactions between the bees and the island's native flora. The pristine environment of the Cocos Keeling Islands provides an excellent case study of how honeybees thrive without excessive human intervention, demonstrating that when bees thrive, the people connected with them also flourish. The Cocos Malay community, comprising approximately 450 people, faces significant challenges, including the threat of climate change. According to an Australian government coastal erosion report, the islands may be submerged within the next 50 years. Historically, the community descends from workers brought to the islands for the Clunies-Ross coconut plantations and was granted Australian citizenship in 1984. Today, through beekeeping, the women of the community are developing a sustainable source of income and self-sufficiency while reconnecting with nature and traditional wisdom. This presentation will share insights from our journey, highlighting the resilience of both the bees and the community. Through research into bee species, their history, floral nectar sources, and overall colony health, we aim to understand how bees can thrive naturally. This project serves as a model for other remote communities looking to harness beekeeping for ecological and economic development.