

**Table S3a. Included records (n = 5)**

| ID | Author–Year        | Document type          | Guarani community | Meliponini data? | Management data?                           | Conservation data?                               | JB I Q 1 | JB I Q 2 | JB I Q 3 | JB I Q 4 | JB I Q 5 | JB I Q 6 | JB I Q 7 | JB I Q 8 | JB I Q 9 | JB I Q 10 | JB I total | Rigour   | Notes                                                                                                                                       |
|----|--------------------|------------------------|-------------------|------------------|--------------------------------------------|--------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 6  | Rodrigues 2005     | MSc Dissertation       | Mbya              | Yes              | Yes (knowledge and practices)              | Yes (threats, cultural transmission)             | 1        | 1        | 1        | 1        | 1        | 0        | 1        | 0        | 1        | 1         | 8          | High     | Detailed primary data on folk taxonomy, nest management, and deforestation impacts                                                          |
| 8  | Damasco Nunes 2021 | MSc Dissertation       | Mbya              | Yes              | Yes (meliponiculture implementation)       | Yes (cultural valorization and sustainability)   | 1        | 1        | 0        | 1        | 1        | 0        | 1        | 0        | 1        | 1         | 7          | Moderate | Empirical data on the implementation of Mbya meliponiculture in the Paraná Atlantic Forest; addresses practices, uses, and threats          |
| 9  | Ballivián 2008     | Booklet/ Guide         | Mbya              | Yes              | Yes (practical booklet)                    | Yes (valorization and preservation)              | 1        | 1        | 1        | 1        | 1        | 1        | 0        | 0        | 0        | 1         | 7          | Moderate | Illustrated booklet on Mbya stingless-bee keeping; includes vernacular names, management techniques, and conservation recommendations       |
| 11 | Cebolla Badie 2009 | Ethnographic monograph | Mbya              | Yes              | Yes                                        | Yes (cultural practices related to preservation) | 1        | 1        | 1        | 1        | 1        | 0        | 0        | 0        | 1        | 1         | 7          | Moderate | Ethnography on the cultural use of Mbya-Guarani honey; describes traditional techniques, symbolism, and threats                             |
| 14 | Pedro 2021         | MSc Dissertation       | Kaiowá            | Yes              | Yes (knowledge, practices, classification) | Yes (threats, recommendations)                   | 1        | 1        | 1        | 1        | 1        | 1        | 0        | 1        | 1        | 1         | 9          | High     | Original ethnoentomological data on stingless bees at Tekoha Panambizinho; includes ethnospecies, cultural use, and deforestation pressures |

JB I Q1–Q10: 1 = Yes, 0 = No. Total 0–10. Rigour: High ≥8; Moderate 5–7; Low ≤4.

**Table S3b. Excluded and duplicate records (n = 12)**

| ID | Author–Year                 | Docu-<br>ment type                        | Re-<br>ason<br>code | Exclusion reason                                      | Duplicat<br>e of?    | Databas<br>e   |
|----|-----------------------------|-------------------------------------------|---------------------|-------------------------------------------------------|----------------------|----------------|
| 1  | Correia-Oliveira_et al_2012 | article                                   | E1                  | No Guarani data                                       | —                    | WoS            |
| 2  | Wolff & Gomes 2015          | article                                   | E1                  | No Guarani data /No Meliponini data                   | —                    | WoS;<br>Scopus |
| 3  | Roig-Alsina et al. 2013     | Book chapter                              | E1                  | No Guarani data                                       | —                    | Scopus         |
| 4  | Silva & Meira 2024          | article                                   | E1                  | No Guarani data /No Meliponini data                   | —                    | WoS;<br>Scopus |
| 5  | Sousa 2014                  | MSc Dis-<br>sertation                     | E1                  | No Guarani data                                       | —                    | BTDT           |
| 7  | Halinsk de Oliveira 2017    | article                                   | E1                  | No Guarani data                                       | —                    | BTDT           |
| 10 | Benatti et al. 2010         | article                                   | E2                  | No Meliponini data                                    | —                    | Other          |
| 12 | Nepomoceno & Carniatto 2022 | Review<br>Article                         | E3                  | Review (not a primary study)                          | —                    | Other          |
| 13 | Oliveira 2020               | Undergr-<br>ad thesis<br>/ Lit.<br>review | E3                  | Review (not a primary study)                          | —                    | Other          |
| 15 | Pedro et al 2023            | article                                   | E4                  | Duplicate version (same data set as MSc dissertation) | Pedro 2021           | Other          |
| 16 | Rodrigues et al 2006        | article                                   | E4                  | Duplicate version (same data set as MSc dissertation) | Rodrigu-<br>es, 2005 | Other          |
| 17 | Vera 2020                   | article                                   | E2                  | No Meliponini data                                    | nan                  | Other          |

Codes: E1 = No Guarani data; E2 = No Meliponini data; E3 = Secondary/review; E4 = Duplicate; E5 = Other.

## Electronic Supplementary Material 3 – Screening and quality matrix

**Table S3a. Included records (n = 5)**

| ID | Author–Year    | Document type          | Guarani community | Meliponini data? | Management data?                     | Conservation data?                               | JB1 | JB2 | JB3 | JB4 | JB5 | JB6 | JB7 | JB8 | JB9 | JB10 | JB1_t total | Rigour    | Notes                                                                                                                                 |
|----|----------------|------------------------|-------------------|------------------|--------------------------------------|--------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------|
| 6  | Rodrigues 2005 | MSc Dissertation       | Mbya              | Yes              | Yes (knowledge and practices)        | Yes (threats, cultural transmission)             | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 0   | 1   | 1    | 8           | High      | Detailed primary data on folk taxonomy, nest management, and deforestation impacts                                                    |
| 8  | Damasco 2021   | MSc Dissertation       | Mbya              | Yes              | Yes (meliponiculture implementation) | Yes (cultural valorization and sustainability)   | 1   | 1   | 0   | 1   | 1   | 0   | 1   | 0   | 1   | 1    | 7           | Mode rate | Empirical data on the implementation of Mbya meliponiculture in the Paraná Atlantic Forest; addresses practices, uses, and threats    |
| 9  | Ballivián 2008 | Booklet/ Guide         | Mbya              | Yes              | Yes (practical booklet)              | Yes (valorization and preservation)              | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 1    | 7           | Mode rate | Illustrated booklet on Mbya stingless-bee keeping; includes vernacular names, management techniques, and conservation recommendations |
| 11 | Cebolla 2009   | Ethnographic monograph | Mbya              | Yes              | Yes                                  | Yes (cultural practices related to preservation) | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 1   | 1    | 7           | Mode rate | Ethnography on the cultural use of Mbya-Guarani honey; describes traditional techniques, symbolism, and threats                       |

| ID | Author–Year | Docu-<br>ment type    | Guarani<br>community | Meli-<br>poni<br>ni d<br>ata? | Man-<br>age-<br>men-<br>t dat-<br>a?                                               | Con-<br>serv-<br>atio-<br>n da-<br>ta?                         | J<br>B<br>I<br>Q<br>1 | J<br>B<br>I<br>Q<br>2 | J<br>B<br>I<br>Q<br>3 | J<br>B<br>I<br>Q<br>4 | J<br>B<br>I<br>Q<br>5 | J<br>B<br>I<br>Q<br>6 | J<br>B<br>I<br>Q<br>7 | J<br>B<br>I<br>Q<br>8 | J<br>B<br>I<br>Q<br>9 | J<br>B<br>I<br>Q<br>10 | JB I_ total | Rigou-<br>r | Notes                                                                                                                                                            |
|----|-------------|-----------------------|----------------------|-------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Pedro 2021  | MSc Dis-<br>sertation | Kaiowá               | Yes                           | Yes<br>(kno-<br>wle-<br>dge,<br>prac-<br>tice<br>s, cl-<br>assi-<br>ficat-<br>ion) | Yes<br>(thr-<br>eats<br>, rec-<br>om-<br>men-<br>dati-<br>ons) | 1                     | 1                     | 1                     | 1                     | 1                     | 1                     | 0                     | 1                     | 1                     | 1                      | 9           | High        | Original<br>ethnoentomological<br>data on stingless bees<br>at Tekoha<br>Panambizinho;<br>includes ethnospecies,<br>cultural use, and<br>deforestation pressures |

JB I Q1–Q10 scored 1 = Yes, 0 = No. Total = 0–10. Rigour: High  $\geq 8$ ; Moderate 5–7; Low  $\leq 4$ .

**Table S3b. Excluded and duplicate records (n = 12)**

| ID | Author–Year                 | Document type                  | Reason code | Exclusion reason                                      | Duplicate of?   | Database    |
|----|-----------------------------|--------------------------------|-------------|-------------------------------------------------------|-----------------|-------------|
| 1  | Correia-Oliveira_et al_2012 | article                        | E1          | No Guarani data                                       | —               | WoS         |
| 2  | Wolff & Gomes 2015          | article                        | E1          | No Guarani data /No Meliponini data                   | —               | WoS; Scopus |
| 3  | Roig-Alsina et al. 2013     | Book chapter                   | E1          | No Guarani data                                       | —               | Scopus      |
| 4  | Silva & Meira 2024          | article                        | E1          | No Guarani data /No Meliponini data                   | —               | WoS; Scopus |
| 5  | Sousa 2014                  | MSc Dissertation               | E1          | No Guarani data                                       | —               | BTDT        |
| 7  | Halinsk de Oliveira 2017    | article                        | E1          | No Guarani data                                       | —               | BTDT        |
| 10 | Benatti et al. 2010         | article                        | E2          | No Meliponini data                                    | —               | Other       |
| 12 | Nepomoceno & Carniatto 2022 | Review Article                 | E3          | Review (not a primary study)                          | —               | Other       |
| 13 | Oliveira 2020               | Undergrad thesis / Lit. review | E3          | Review (not a primary study)                          | —               | Other       |
| 15 | Pedro et al 2023            | article                        | E4          | Duplicate version (same data set as MSc dissertation) | Pedro 2021      | Other       |
| 16 | Rodrigues et al 2006        | article                        | E4          | Duplicate version (same data set as MSc dissertation) | Rodrigues, 2005 | Other       |
| 17 | Vera 2020                   | article                        | E2          | No Meliponini data                                    | nan             | Other       |

Reason codes: E1 = No Guarani data; E2 = No Meliponini data; E3 = Review/secondary; E4 = Duplicate; E5 = Other.