**Supplementary Tables**

**Supplementary Material for "First evidence of chimpanzee extractive tool use in Cantanhez, Guinea-Bissau: cross-community variation in honey dipping”**

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**Table S1.** Summary of study effort at each of the study site in Cantanhez National Park, Guinea-Bissau. Information is provided on camera trap (CT) number, operational period and days active; total number of videos recorded that contained chimpanzees; number of recces and kilometres (km) walked; indirect data points collected; number of extractive tools collected; number of confirmed behaviours.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Recce study effort | | | Indirect data collection | | Camera Trap study effort | | | | | |
| Chimpanzee  community | No. of recces | Distance Walked (km) | Estimate ranging areas  (km2) | No. of indirect trace  s | No. of tools | No. of CTs Deployed | First CT Day | Last CT Day | Total CT Days | Total Videos with Chimpanzees | Total videos of tool use |
| Caiquene-Cadique | 48 | 230.8 | 14.8 | 538 | 0 | 3 | 16/04/2017 | 10/03/2018 | 399 | 179 | 0 |
| Cambeque | 49 | 260.4 | 7.1 | 230 | 100 | 3 | 13/03/2017 | 24/09/2018 | 648 | 25 | 2 |
| Lautchandé | 48 | 236.6 | 8.4 | 230 | 1 | 3 | 18/04/2017 | 04/11/2018 | 363 | 105 | 0 |
| Madina | 50 | 361.5 | 19.0 | 749 | 103 | 4 | 20/02/2017 | 29/09/2018 | 513 | 77 | 10 |
| Total | **195** | **1089.3** | **49.3** | **1747** | **204** | **13** | **20/02/2017** | **04/11/2018** | **1923** | **386** | **12** |

**Table S2.** Total number of MM, BH and BM hives found in each chimpanzee community, and standardised densities against home range size and kilometres of recces walked. MM – *Meliplebeia sp*, small stingless bee; BM – *Meliponula* sp., large stingless bee; BH – *Apis mellifera*,

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Hives | | | | | | | | |
| **MM** | | | **HB** | | | **BM** | | |
| Chimpanzee  community | **Total Number** | **Number per Km walked** | **Number per Km2 of home range** | **Total Number** | **Number per Km walked** | **Number per Km2 of home range** | **Total Number** | **Number per Km walked** | **Number per Km2 of home range** |
| Caiquene-Cadique | 17 | 0.07 | 1.1 | 7 | 0.03 | 0.5 | 0 | 0 | 0 |
| Cambeque | 40 | 0.15 | 5.3 | 4 | 0.02 | 0.6 | 6 | 0.02 | 0.8 |
| Lautchandé | 1 | 0.004 | 0.1 | 2 | 0.01 | 0.2 | 0 | 0 | 0 |
| Madina | 22 | 0.06 | 1.2 | 10 | 0.03 | 0.5 | 1 | 0.003 | 0.05 |

**S3 – Description of each tool use event captured via camera traps.**

**Observation 1 (18/07/2017, 14:10:44)** Cambeque (secondary open forest). Adolescent male inspects a BM hive, inserts his finger into the small opening, pulls it out and smells it, looks around, with his right hand breaks a twig with many attached leaves, puts the proximal end in his mouth, inserts the same end into the hive, brings the tool back to his mouth, smells it, inserts it again, this time deeper, inspects it again, discards tool, tries to widen the hive’s entrance with his middle finger, extracts some of the wax, smells finger and leaves.

**Observation 2 (06/08/2017, 13:47:59)** Cambeque (secondary open forest). Juvenile individual (sex undetermined) approaches an abandoned BM hive with a small green stem, with some attached leaves, in his/her mouth. With the right hand, the individual removes the leaves and inserts the proximal tool end into the hive’s narrow entrance, moves it around in a circular motion, takes it out, smells the tool end, inserts it again now with greater force, pushes it as far as it will go, pulls it out, looks at it and leaves. See video S1.

**Observation 3 (18/11/2017, 14:23:14)** Madina (mangrove).Adolescent female approaches tree with MM hive, climbs up, breaks a twig with attached leaves, holds it in her mouth and climbs further until she is out of view (the camera trap has been knocked out of position and its view is no longer centred on the hive). The distal end of the tool (with leaves) is seen falling towards the ground.

**Observation 4 (04/12/2017, 12:12:16)** Madina (mangrove). Adult female with an infant climbs up tree, sits down, breaks a branch with her right hand, and climbs up carrying it towards the hive, out of view. Leaves are seen falling.

**Observation 5 (04/04/2018, 10:01:32)** Madina (mangrove). Young adult female is seen sitting next to hive, she stands up, breaks off a twig with no attachments with her right hand, quickly inserts the proximal end into the hive with back-and-forth and circular motions, takes the stick out, puts proximal end into her mouth and leaves.

**Observation 6 (08/04/2018, 07:07:40)** Madina (mangrove). Adult female is seen dangling from tree branches (approximately 4m from the ground), breaks twig with right hand while holding herself with left, inserts proximal end into hive entrance, brings it to mouth, discards tool, rapidly descends and runs away.

**Observation 7 (18/06/2018, 16:44:42)** Madina (mangrove). Juvenile female is seen in front of hive inserting a small stick into hive’s entrance, puts the whole stick in her mouth, breaks a larger twig with attached leaves, descends the tree carrying larger twig in her mouth. A second adolescent female approaches the same location carrying a broken twig with attached leaves, inserts the proximal end into the hive’s entrance with considerable force, pulls it out, inspects it and discards it.