**Table S2.** Temporal distribution of dung beetles per site. MOCE: Morro do Cerrito; VAFE: Val Feltrina, MFBR: Moreno Fortes Biological Reserve; TSPK: Turvo State Park.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **MOCE** | | | | | | | | | | | | **VAFE** | | | | | | | | | | | | **MFRB** | | | | | | | | | | | | **TSPK** | | | |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **1** | **2** | **3** | **4** |
| *Ateuchus* aff. *apicatus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  |
| *Ateuchus* aff. *carbonarius* |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Ateuchus* aff. *robustus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Canthidium* aff. *trinodosum* |  | 39 |  | 25 | 28 | 65 | 46 | 68 | 119 | 90 | 33 | 164 | 1 |  | 1 |  | 9 |  | 7 | 3 | 4 | 10 | 5 | 3 | 19 | 48 | 18 | 37 | 19 | 20 | 38 | 8 | 26 | 39 |  | 33 | 14 | 56 | 7 | 43 |
| *Canthidium deplanatum* |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| *Canthidium dispar* |  |  |  |  |  |  |  |  | 2 |  |  | 1 |  |  |  |  |  |  |  |  |  |  | 2 |  |  | 1 |  |  |  |  | 5 | 1 | 1 |  | 3 |  |  | 2 |  |  |
| *Canthidium moestum* |  |  |  | 1 |  | 15 |  |  | 1 |  |  |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  |  | 1 | 1 | 1 |  |  |  |  |  |  |  |
| *Canthon* aff. *luctuosus* |  | 1 |  | 1 |  | 7 |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  | 2 | 1 |  |  |  |  |  |  |  |  |
| *Canthon angularis* |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  | 2 |  | 4 |  | 2 |  |  |  |  |  |  | 14 |  |  | 1 |
| *Canthon conformis* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Canthon laminatus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  |  |  |  |  |  |  |
| *Canthon lividus* |  |  |  | 2 |  | 3 |  | 1 | 2 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 1 |  |  | 1 | 2 | 3 |  |  |  |  | 3 |  |  |
| *Canthon oliverioi* |  |  |  |  |  | 2 | 8 | 5 | 10 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  | 2 |  |  |  |
| *Canthon quinquemaculatus* |  |  |  |  |  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 44 | 118 | 4 | 1 |
| *Canthon rutilans cyanescens* |  |  |  | 1 | 3 | 39 | 148 | 75 | 40 | 11 | 7 |  |  |  |  |  | 12 | 1 | 5 | 5 |  |  | 2 |  |  |  | 3 |  | 6 | 5 | 6 | 1 |  |  |  |  | 9 | 27 |  |  |
| *Canthon seminitens* |  |  |  |  |  | 1 |  |  |  | 1 |  |  |  |  |  |  |  |  |  | 6 | 1 | 6 |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  | 9 |  |  |
| *Chalcocopris hesperus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 | 1 | 7 | 5 | 17 | 18 | 5 | 4 | 33 | 45 | 5 |  |  |  |  |
| *Coprophanaeus saphirinus* |  |  |  | 1 |  | 8 | 8 | 4 | 1 |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  | 3 | 11 | 1 |  | 2 |  | 1 |  |  |  | 7 |  |  |  |
| *Deltochilum brasiliense* |  |  |  | 3 |  |  | 1 | 1 | 1 | 4 | 1 | 4 |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 14 | 13 | 6 | 2 | 8 | 9 | 1 | 8 | 12 | 1 |  | 21 | 4 | 1 |  |
| *Deltochilum furcatum* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  | 1 |  |  | 11 | 10 | 1 |  |
| *Deltochilum morbillosum* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | 5 | 2 | 1 |  |  |  | 14 | 2 |  |  |
| *Deltochilum rubripenne* |  |  |  |  |  |  | 2 | 2 | 22 | 1 | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  | 1 | 16 | 1 | 6 | 2 |  |  |  | 1 |  |  |
| *Deltochilum sculpturatum* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Dichotomius* aff. *acuticornis* |  |  |  |  |  |  | 2 | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  | 2 | 1 |  | 1 |  |  |  | 1 |  |  |  |
| *Dichotomius assifer* | 1 | 7 |  | 6 | 10 | 24 | 113 | 15 |  | 24 | 12 | 37 |  |  |  |  |  |  |  |  |  | 1 |  |  |  | 3 |  | 2 | 1 |  |  |  |  | 13 | 10 | 1 | 6 |  | 4 |  |
| *Dichotomius depressicolis* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  | 31 | 4 |  |  | 6 | 1 |  |
| *Dichotomius fissus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |
| *Dichotomius mormon* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  |  |  | 4 | 3 |  | 3 | 15 | 28 |  |
| *Dichotomius nisus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| *Dichotomius sericeus* |  | 2 |  |  |  |  |  |  | 2 | 1 |  |  |  |  |  |  |  |  |  | 3 | 1 |  |  |  |  | 1 |  |  |  | 1 | 2 | 1 | 1 |  |  |  | 1 | 55 | 15 |  |
| *Eurysternus aeneus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |
| *Eurysternus caribaeus* |  |  |  |  | 1 | 51 | 75 | 9 | 10 | 13 | 5 | 9 |  |  |  |  | 1 | 1 |  | 7 | 2 | 3 | 6 | 2 |  | 6 |  | 18 | 21 | 4 | 30 | 5 | 3 | 6 | 1 |  | 55 | 61 | 9 |  |
| *Eurysternus parallelus* |  |  |  |  | 2 | 6 | 34 |  | 6 | 6 | 1 |  |  |  |  |  | 2 |  |  |  |  | 1 | 1 |  |  | 3 |  |  | 5 |  | 11 |  |  |  |  |  | 630 | 109 | 2 | 1 |
| *Homocopris* sp. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 4 |  |  |  |  | 1 |  |  |  |  |  |  |  |  | 4 | 4 |  |  |  |  |
| *Ontherus azteca* |  |  |  |  |  | 2 | 23 | 1 |  | 3 |  |  |  |  |  |  | 2 | 1 |  |  |  |  | 6 |  |  | 3 | 4 |  | 2 | 3 | 3 |  |  | 6 |  |  | 7 | 1 |  |  |
| *Ontherus sulcator* |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Onthophagus catharinensis* |  | 1 |  | 1 |  | 159 | 71 | 37 | 4 | 15 |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 360 | 14 | 1 | 2 |
| *Onthophagus tristis* |  | 9 |  |  | 8 | 99 | 52 | 20 | 3 | 20 | 2 | 1 |  |  |  |  | 1 |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 69 | 10 | 1 |  |
| *Phanaeus splendidulus* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Scybalocanthon nigriceps* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 1 |  | 81 | 71 | 92 | 107 | 26 | 28 | 10 |  | 2 |  | 1 |  |  |
| *Sulcophanaeus menelas* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |
| *Trichillum* sp. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  |  |
| *Uroxys* aff. *dilaticollis* |  |  |  |  |  |  |  |  | 1 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Uroxys* aff. *terminalis* |  | 1 |  |  |  |  | 1 | 1 | 1 | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| *Zonocopris gibbicollis* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |
| **Abundance** | **1** | **61** | **0** | **41** | **52** | **481** | **593** | **242** | **226** | **191** | **67** | **223** | **1** | **0** | **1** | **0** | **30** | **6** | **14** | **31** | **12** | **22** | **24** | **7** | **22** | **90** | **45** | **170** | **135** | **164** | **258** | **60** | **84** | **162** | **71** | **45** | **1272** | **507** | **74** | **48** |
| **Species richness** | **1** | **8** | **0** | **9** | **6** | **14** | **17** | **14** | **17** | **14** | **11** | **10** | **1** | **0** | **1** | **0** | **9** | **4** | **4** | **10** | **5** | **6** | **7** | **4** | **3** | **13** | **9** | **12** | **12** | **13** | **18** | **15** | **13** | **14** | **8** | **5** | **21** | **21** | **12** | **5** |