|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locality | Temperature | Sex | n (adults) | 25% or 20 |
| **RMO** | A | F | 103 | 26 |
| M | 90 | 23 |
| B | F | 97 | 24 |
| M | 101 | 25 |
| C | F | 82 | 21 |
| M | 79 | 20 |
| **RPV** | A | F | 90 | 23 |
| M | 92 | 23 |
| B | F | 99 | 25 |
| M | 86 | 22 |
| C | F | 65 | 16 |
| M | 76 | 19 |
| **SJU** | A | F | 97 | 24 |
| M | 87 | 22 |
| B | F | 73 | 18 |
| M | 87 | 22 |
| C | F | 19 | 19 |
| M | 19 | 19 |
| **TLC** | A | F | 45 | 20 |
| M | 46 | 20 |
| B | F | 42 | 20 |
| M | 43 | 20 |
| C | F | 27 | 20 |
| M | 44 | 20 |
| **TPN** | A | F | 25 | 20 |
| M | 20 | 20 |
| B | F | 22 | 20 |
| M | 25 | 20 |
| C | F | 16 | 16 |
| M | 22 | 20 |
| **APR** | A | F | 89 | 22 |
| M | 112 | 28 |
| B | F | 103 | 26 |
| M | 98 | 25 |
| C | F | 87 | 22 |
| M | 99 | 25 |
| **ARS** | A | F | 99 | 25 |
| M | 106 | 27 |
| B | F | 93 | 23 |
| M | 110 | 28 |
| C | F | 94 | 24 |
| M | 109 | 27 |
|  |  |  | **TOTAL** | **925** |

**Wing measurements and morphometry**

Here is a table with the number of wings I have from lab rearing based on Locality, Rearing Temperature, and Sex. In total, I have 3,018 samples (not including the remaining locale in Rio de Janeiro samples).

Taking a subset of each group, including males and females, gives a rough 50/50 divide between the sexes for most situations. I am thinking about randomly sampling 25% or a minimum of 20 individuals, whichever is greater. Current total is 925. Anticipate an additional 120 from the next Rio de Janeiro collection for a final total of 1045.

This does not include the 2 localities from Amazonas and the last locality for Rio which I think will be an additional 150 samples. I think it is important to investigate both sexes across all temperatures.

I have reached out to Dr. Gomez and he has been helpful in answering some questions and providing me with some literature. I plan on following his protocol and using the same software detailed in Gomez 2013. (per Gomez 2013)

1. Wings were mounted on glass slides with commercial glue.
2. Left wings were used. When there was damage, the right wing was substituted but this occurred in less than 2% of the wings.
3. Wings will be imaged with a camera mounted microscope at same magniciation.
4. Images will be digitized and landmarks identified (13 wing type I, Bookstein 1991). The COO module of the CLIC package will be used.
5. Wing size will be assessed by wing length, width, area, and centroid size.