|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Locality | Temperature | Sex | n (adults) | 25% or min of 20 individuals |
| **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 | 20 |
| M | 76 | 20 |
| **SJU** | A | F | 97 | 24 |
| M | 87 | 22 |
| B | F | 73 | 20 |
| 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 |
| Total |  |  | 1819 | 634 |

**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 1,819 samples (not including the Amazonas samples that I am working on).

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 larger – so more than 455. The reason is the small samples sizes in some localities – you’ll need to do all the individuals. So if my math is correct, this will be 634 individuals.

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. YES, both sexes very important to include.

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. Good.

(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 microscope.
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.