Morphological variations in a novel geographically-separated *Papilio* species from Maluku Utara province, Indonesia

# Abstract

You could put the abstract here, if you wanted to.

# Introduction

We studied some butterflies in Indonesia.

# Methods

We caught the butterflies and measured them. We used telepathy to figure out the other things that we couldn’t measure with a ruler. Three collectors independently collected samples at each of three locations on daily hikes.

We used regression to do the statistics analysis (1).

# Results

Demographic statistics are shown in **?@tbl-table1**. We found that the butterflies were different at each of the sites.

| sample\_id | wing\_length | wing\_width | antenna\_length | body\_length |
| --- | --- | --- | --- | --- |
| Tid\_001\_EM | 28.23 | 12.04 | 6.08 | 9.29 |
| Ter\_002\_EM | 12.24 | 6.23 | 2.44 | 4.89 |
| Ter\_003\_ZB | 12.80 | 6.69 | 2.68 | 4.70 |

We also did some regressions, and those are in [Table 1](#tbl-table2).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1: Crude and adjusted regression estimates where wing length (cm) is the outcome variable.   | **Characteristic** | Crude | | | Adjusted | | | | --- | --- | --- | --- | --- | --- | --- | | **Beta** | **95% CI**1 | **p-value** | **Beta** | **95% CI**1 | **p-value** | | Wing width (cm) | 2.7 | 2.5, 2.9 | <0.001 | 0.26 | 0.07, 0.44 | 0.006 | | Age | 0.12 | -0.01, 0.24 | 0.073 | -0.01 | -0.03, 0.01 | 0.2 | | Antenna length (cm) | 4.8 | 4.7, 5.0 | <0.001 | 3.9 | 3.5, 4.4 | <0.001 | | Body length (cm) | 2.9 | 2.6, 3.2 | <0.001 | 0.18 | 0.00, 0.36 | 0.049 | | Population |  |  |  |  |  |  | | Tidore | — | — |  | — | — |  | | Ternate | -14 | -15, -13 | <0.001 | -1.1 | -2.1, -0.07 | 0.036 | | Kayoa | -5.2 | -7.2, -3.3 | <0.001 | -1.3 | -2.0, -0.58 | <0.001 | | 1 CI = Confidence Interval | | | | | | | |

# Discussion

This paper is so good, it should be in Nature (Billings, personal communication, 2024).

# References

1. Gelman A, Hill J. Data analysis using regression and multilevel/hierarchical models. Cambridge University Press; 2007.