Data from: Development of sexual dimorphism in two sympatric skinks with different growth rates

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Abstract

Sexual-size dimorphism (SSD) is widespread in animals, especially in lizards (Reptilia: Squamata) and is driven by fecundity selection, male-male competition or other adaptive hypothesis. However, these selective pressures may vary through different life history periods, thus it is essential to assess the relationship between growth and SSD. In this study, we tracked SSD dynamics between a “fading-tail colour skink” (Blue tail skink whose tail is only blue during its juvenile stage: Plestiodon elegans) and a “non-fade colour” tail skink (retains a blue tail throughout life: P. quadrilineatus) under a controlled experimental environment. We fitted growth curves of morphological traits (Body mass, SVL, and TL) using three growth models (Logistic, Gompertz and von Bertalanffy). We found that both skinks have male-biased SSD as adults. Body mass has a higher goodness-of-fit (as represented by very high R2 values) using the von Bertalanffy model than the other two models. In contrast, SVL and TL for both skinks had higher goodness-of-fit when using the Gompertz model. Two lizards displayed divergent

life history tactics: P. elegans grows faster, matures earlier (at 65 weeks), and presents an allometric growth rate, whereas P. quadrilineatus grows slower, matures later (at 106 weeks), and presents an isometric growth rate. Our findings imply that species- and sex-specific trade-offs in the allocation of energy to growth and reproduction may cause the growth patterns to diverge, ultimately resulting in the dissimilar patterns of SSD.

Usage Notes

Data

Morphological data for Plestiodon elegans and P. quadrilineatus.

References

This dataset is supplement to https://doi.org/10.1002/ece3.5358

Location

Chengdu

China

Keywords

Pelates quadrilineatus, growth curves, Plestiodon elegans

Files

1 files for this dataset

Data.xlsx	133.92 kB	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet

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