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These data were collected from metamorphs of the species *Leptodactylus fuscus* exposed experimentally to the combined effects of temperature variation (30 °C vs. 35 °C), water level (high vs. dry-down), and predator presence (presence vs. absence of predator cues). We evaluated multiple traits of the *Leptodactylus fuscus:* tadpole survival, developmental time, body mass, morphology, lipid reserves, and locomotor performance at metamorphosis. The database presented here contains the variables measured.

**GENERAL INFORMATION**

1. Title of the dataset:

Data for: Tadpole plasticity in complex environments: how temperature, desiccation risk, and predators shape development in the tropical frog *Leptodactylus fuscus*

2. Author information:

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3. Date of data collection:

July – September 2022

4. Geographic location of data collection:

Reserva Natural Bojonawi, Puerto Carreño, Colombia.

5. Funding sources that supported the collection of the data:

Facultad de Ciencias from Universidad de Los Andes‐Colombia, National Program for Women in Science UNESCO - L'ORÉAL-MINCIENCIAS-ICETEX, 2021, Colombian Ministry of Science, Technology and Innovation (grant # 80740-201-2019 code 120480863597), Plan Nacional I+D of the Spanish Ministry of Science and Innovation (grant # PID2020-119517GB-I00).

**SHARING/ACCESS INFORMATION**

1. Licenses/restrictions placed on the data: CC0 1.0 Universal (CC0 1.0) Public Domain

2. Publications that use the data:

Paper in review, submitted to Freshwater Biology (19-04-2025):

Delgadillo Méndez, A., Méndez-Narváez, J., Cruz-Suárez, F., Gonzalez-Arango, C & Gomez-Mestre, I. (2025). Tadpole plasticity in complex environments: how temperature, desiccation risk, and predators shape development in a tropical frog.

DATA AND FILE OVERVIEW

1. File list and description:

A) Delgadillo et al., dataset\_fuscus.xlsx: Responses to temperature, water level and predation in tadpoles of *Leptodactylus fuscus*: life history traits, fat bodies, morphology and development traits.

2. Are there multiple versions of the dataset? No

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DATA-SPECIFIC INFORMATION FOR: 1. Delgadillo et al., dataset\_fuscus.xlsx

1. Number of variables: 32

2. Number of rows: 227

3. Variable list:

\*Temperature: Temperature treatments: 30: 30 °C, 35: 35°C

\*Pool: number of the pool where replicates were randomly assigned

\*Predator: predator presence treatment: P: presence of predator cues, NP: absence of predator cues.

\*water\_level: water level treatment: HW: High water. DD: Drying treatment.

\* Nest: the experiment was carried out with tadpoles of three different clutches. Each clutch is identified with the letters LF and a number: 50, 51 or 77.

\*Replicate: random identity assigned to each replicate. Each replicate was a container with three tadpoles.

\*ID\_Tadpole: the identity of tadpoles inside each replicate.

\*Tadpole\_density: number of tadpoles that survived until the end of the experiment per each replicate.

\*fat\_bodies (g): mass of fat bodies obtained at metamorphosis

\*fb\_mass/total mass: fat body mass divided by total body mass.

\*start\_date: start date of the experiment

\*date\_G42: date of arrival at 42 Gosner developmental stage. We used the Gosner staging table (Gosner 1960) to assign a developmental stage to each individual.

\*time\_to\_42: time from the beginning of the experiment until reaching the 42 Gosner developmental stage.

\*mass\_42: body mass of metamorph at 42 Gosner developmental stage.

\*date\_G46: date of arrival at 46 Gosner developmental stage. We used the Gosner staging table (Gosner 1960) to assign a developmental stage to each individual.

\*time\_to\_46: time from the beginning of the experiment until reaching the 46 Gosner developmental stage.

\*mass\_46: body mass of metamorph at 46 Gosner developmental stage.

\*survival\_G46: 1: The tadpole was alive at 46 Gosner developmental stage. 0: The tadpole died before reaching 46 Gosner developmental stage.

\*BL: Snout vent length (mm) at 46 Gosner developmental stage

\*HW: Head width (mm) at 46 Gosner developmental stage

\*FL: Femur length (mm) at 46 Gosner developmental stage

\*TL: Tibia-Fibula length (mm) at 46 Gosner developmental stage

\*FTL: Foot length (mm) at 46 Gosner developmental stage

\*TW: Tibia\_fibula width (mm) at 46 Gosner developmental stage

\*FW: Muscular femur width (mm) at 46 Gosner developmental stage

\*SL: Snout length at 46 Gosner developmental stage

\*LL: Total length of the right leg at 46 Gosner developmental stage

\*PC\_Body\_Size: We used a principal component analysis to reduce the dimensionality of morphological measurements using the Factominer package (Husson et al., 2016). The analysis involved a Varimax rotation of the retained components to facilitate interpretation. PC1 explained 72.35% of the total variation and positively correlated with snout-vent length, head width, upper hind leg length, lower hind leg length, leg length, maximum width of the upper hind leg, maximum width of the lower hind leg, and foot length. The correlation coefficients were between 0.667 and 0.968. This PC1 was therefore interpreted as "body size".

\*PC\_Snout\_length: Principal component 2 explained 10.25% of the total variation and positively correlated with snout length, with a correlation coefficient of 0.986. Therefore, this PC2 was interpreted as "Snout length."

\*T\_animal: temperature of each animal at the end of the locomotor performance experiment

\*velocity: maximum velocity obtained per animal in a jumping experiment.

\*acceleration: maximum acceleration obtained per animal in a jumping experiment.

4. Missing data codes: NA.

5. Specialized formats or other abbreviations used: None

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