Reading the literature

Eleutherodactylus Research Studio · Fall 2026

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Late-work policy starts today

Added to the syllabus Sep 9; today is the first day it applies (anything due before today was still accepted at full credit through Fri Sep 18).

- **Individual work** (worksheets, weekly assignments, AmphibiaWeb drafts): late submissions lose 10% per day, nothing accepted more than 3 days late. Canvas deducts automatically — no need to email me
- **Team milestones** (proposals, QC notebook, figures, drafts), peer review, and evaluations: firm deadlines. A late milestone is still submitted and loses a flat 10%, but the team sits out that milestone's in-class review (proposal discussion, data audit, figure critique)
- Accommodations (Disability and Access, religious holy days, official university activities) are separate — contact me *before* the deadline

Full text: syllabus.

Where we are

Phase 1 was skills: tidy data, ggplot2, spectrograms, measuring a call. Phase 2 is a project, and a project needs a plan.

- **Wednesday:** work session — teams draft project proposals
- **Monday Sep 28: Milestone 1** due — 1–2 pp: question, data, methods, product

Today is about the input to that proposal. You have all read papers before. Today changes *why* you are reading them: not to answer a worksheet question, but to figure out what your own team's paper needs to do.

Two ways to read a paper

As a student: start at the abstract, read straight through, extract the answer, move on.

As a researcher writing your own paper: read backwards from your own gap.

- What is this paper's *product* — a new call description? A range extension? A species account? That is the shape your own product takes
- What did they measure, and how, that you will also need to measure
- What did they compare their species/population *to*, and is that the same comparison you need to make
- Where are they thin — small *n*, no temperature, no comparison series — because that is where a reviewer will also come for you

Anatomy of a call description

Köhler et al. (2017, *Zootaxa* 4251) is the style guide our whole field uses. Every advertisement-call description follows the same skeleton:

1. **Recording conditions** — location, date, time, air/substrate temperature, equipment, distance to animal
2. **Call structure** — note types, note vs. call vs. call series, how they are organized in time
3. **Parameters, with *n* twice** — *n* calls *and* *n* males, mean ± SD (range) for each
4. **Comparison** — the same parameters, for the same congeners, usually in a table

If a description is missing piece 1 or the second *n* in piece 3, you cannot repeat their measurement or trust their comparison. You will notice this a lot once you are looking for it.

What makes a call description publishable

Not “correct measurements.” *Reproducible and comparable* ones.

- **Documented, not just done.** Window length, band-pass, selection rule — every knob from two weeks ago, stated so someone else gets your numbers
- **Sample size that supports the claim.** Four calls from one male describes that male. A species-level claim needs several males, and the paper should say how many
- **The right comparison set.** Congeners that could plausibly be confused with the focal species, not every named species in the genus
- **Temperature, when it exists.** A call rate without temperature is a number nobody else can use

Read a description with these four in mind and you will immediately see which papers you can build on and which you cannot.

Same checklist, a species account

An AmphibiaWeb-style species account is a call description with the frame pulled back: not just the voice, but distribution, habitat, life history, conservation status, taxonomic history. Same reading habits apply:

- Is each claim attached to a source, or asserted?
- Does “similar species” name the actual confusable congeners, with the character that separates them?
- Is the range described at a resolution someone could act on, without giving away a locality that should not be public?

You will be held to this same checklist in November, on your own account.

For Wednesday

Use Consensus to search, not a generic web search — it is built for finding and summarizing primary literature. I have posted a few starter papers per team on Canvas; treat those as a floor, not the answer, and use Consensus to check whether something closer exists.

Each team brings **two papers** to the work session:

1. The closest analog to your product — a call description or species account for your species group or a close relative
2. One paper you had to mark down on the checklist above — thin sample size, no temperature, no comparison table, whatever it was

Your proposal's methods section is, in large part, "we followed paper 1 and fixed the gap we found in paper 2." That is a real, fundable-sounding plan, and it is also just accurate.

Consensus, in practice

Name the species (or group) and the kind of paper — Consensus rewards specificity the same way a good literature search always has. A few prompts to try live, on your own species:

- `Eleutherodactylus nitidus advertisement call description`
- `Eleutherodactylus verrucipes guttilatus advertisement call`
- `Eleutherodactylus interorbitalis advertisement call temperature`

Weak prompt: `frog calls Mexico`. Too broad — you'll get scientometric reviews and unrelated genera, not your species.

Strong prompt: species name + `advertisement call` (the standard term, not "sound" or "song") + one more constraint — a group name, a location, or a variable you care about (temperature, geographic variation). If the first search returns nothing on-species, back up to the species group or the nearest named relative before giving up.