Funding & Grant Writing August 17th, 2021

Facilitators:

Elise Elwood(she|her|hers)Darien Satterfield(she|her|hers)Maddie Armstrong(she|her|hers)

Preview Day Organizers & Presenters





Alexus **Roberts**

Danielle De La Pascua



Darien Satterfield



Claire Murphy



Keira

Monuki



Katherine Corn



Sivan Yair



Elena Suglia



Madison Armstrong



Hannah

Nelson



Elise Elwood

	Mon	Tues	Wed	Thurs	Fri
Week 1	2	3 Nuts & Bolts of Grad School	4	5 Personal/ Diversity Statement Workshop	6
Week 2	9	10 How to Apply &	11	12 Office Hours	12
Week 3	16	17 Funding & Grant Writing	18	19 Navigating Grad School Identity Panel	20
Week 4	23	24 Find a Good Fit	25	26 Office Hours	27
Week 5	30	31 Is this Right for Me?	1	2 Wrap-Up!	All sessions will be 5:00-6:30pm PST via Zoom

Session Scope & Facilitator Roles

Scope

90 minute workshops are an introduction, with resources to dig deeper!

Roles

We are peer facilitators, here to help guide participants' discovery.

Session Norms



Please have video on, if possible



Stay muted unless speaking



Use the "raise your hand" feature or chat us if you have a question or comment



Be respectful, be curious

Session Goals

By the end of the session, participants will be able to:

- 1. Understand how graduate students are funded
- 2. Identify and understand how to apply for relevant fellowships

Ice Breaker

What is the last thing you bought for yourself that makes you happy?





Session Overview

- What are the main ways grad students are funded?
- Fellowships and grants





Part 1: Graduate student funding

- Overview of the main ways grad students are funded
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Part 1: Graduate student funding

- Overview of the main ways grad students are funded
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Science PhD students are paid!

- Graduate students are part-time employees that get paid via:
 - teaching assistant
 - research assistant
 - \circ fellowship
 - other administrative work



Science PhD students are paid!

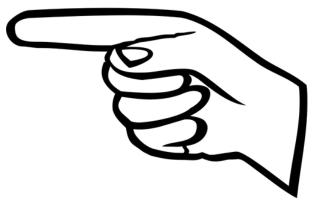
- Graduate students are part-time employees that get paid via:
 - teaching assistant
 - research assistant
 - fellowship
 - other administrative work
- Students receive "tuition remission" meaning that the university pays the tuition and the students are **not** required to pay this.



Funding: Stipend vs. Research Funding

Stipend = Funds YOU!

- TA = "Teaching Assistant"
- RA/GA/GSR = "Research Assistant"
- Fellowships



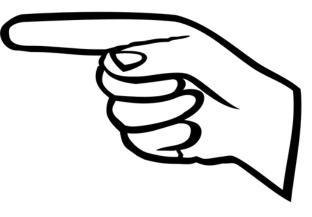
Funding: Stipend vs. Research Funding

Stipend = Funds YOU!

- TA = "Teaching Assistant"
- RA/GA/GSR = "Research Assistant"
- Fellowships

Research funds = Funds YOUR RESEARCH!

- Advisor grants for a specific topic, advisor resources
- Apply to student research grants
- *Your research = your dissertation





Teaching Assistant (TA)

Responsibilities and skills gained:

- Teach a lab or discussion session
- Provide feedback to students
- Grade homework assignments or exams



Workload:

- ~20 hours a week, @UCD this is protected through a teacher's union
- Typically teach a course you are already familiar with the material, but may need to brush up on topics to better support your students!

Research Assistant (RA or GSR)

Responsibilities and skills gained:

- "Hired" by a researcher (typically your PI) to complete research.
- Data collection/analyses, Writing, Organizing undergraduates, etc

Workload:

• @UCD there is a union being created to help regulate workload



Fellowships

Types:

- Fellowships may cover your tuition, fees, and/or salary.
 - Internal: University or Program specific
 - External: Open to all grad students that meet the requirements (GRFP, Ford Fellowship, NIFA, Fullbright...)



Fellowships

Types:

- Fellowships may cover your tuition, fees, and/or salary.
 - Internal: University or Program specific
 - External: Open to all grad students that meet the requirements (GRFP, Ford Fellowship, NIFA, Fullbright...)

Responsibilities and skills gained:

• Particular requirements of the fellowship (reports due, workshops attended or led, volunteer work, internships, etc..)



Fellowships

Types:

- Fellowships may cover your tuition, fees, and/or salary.
 - Internal: University or Program specific
 - External: Open to all grad students that meet the requirements (GRFP, Ford Fellowship, NIFA, Fullbright...)

Responsibilities and skills gained:

• Particular requirements of the fellowship (reports due, workshops attended or led, volunteer work, internships, etc..)

Workload: With a fellowship you are able to spend lots of time on your dissertation



Part 1: Graduate student funding

- Overview of the main ways grad students are funded
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Time-frame and stability of funding

- Most PhD programs take 4-7 years to complete.
- Graduate programs vary in what they guarantee to their students.
 - UC Davis Population biology guarantees 5 years of funding (TA, GSR, Fellowships) but many students continue past that timeframe.

Time-frame and stability of funding

- Most PhD programs take 4-7 years to complete.
- Graduate programs vary in what they guarantee to their students.
 - UC Davis Population biology guarantees 5 years of funding (TA, GSR, Fellowships) but many students continue past that timeframe.
- Most schools offer the ability to take time off during and/or at the end of your PhD, this can be for health reasons, for external opportunities (Fulbrights, internships, etc..).

Housing and moving

- University email lists or bulletins can be a great way to find housing
- Some universities have affordable housing for graduate students



Housing and moving

- University email lists or bulletins can be a great way to find housing
- Some universities have affordable housing for graduate students
- At many universities, there is a delay between the program start and your first paycheck



Student loans

- You can defer student loans while in graduate school
- However, interest may still accruing, so be aware!



Other financial resources

- Many, but not all, PhD programs provide health insurance
- Some universities have food pantries that grad students are eligible to use



Other financial resources

- Many, but not all, PhD programs provide health insurance
- Some universities have food pantries that grad students are eligible to use
- Universities and graduate groups may have hardship grants or loans
 - <u>https://financialaid.ucdavis.edu/wellness/ECRT</u>
 - Ask department personnel and current students for advice
 - Fill out the FAFSA yearly
- Graduate student income is taxed, fellowships will not withhold taxes and thus you should be prepared to make tax payments.

Part 1: Graduate student funding

- Overview of the main ways grad students are funded
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Session 3 Funding & Grant Writing



Funding is like a taco bell menu..



• You don't necessarily know what something is until you ask!

Session 3 Funding & Grant Writing



- You don't necessarily know what something is until you ask!
- You DO NOT want to leave your order to chance!

Session 3 Funding & Grant Writing



- You don't necessarily know what something is until you ask!
- You DO NOT want to leave your order to chance!
- Everyone's combo is a little different and your own may change.

Session 3 Funding & Grant Writing



- You don't necessarily know what something is until you ask!
- You DO NOT want to leave your order to chance!
- Everyone's combo is a little different and your own may change.
- There are always new surprises!

Part 1: Graduate student funding

- Overview of the main ways grad students are funded.
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Comparing stipends between programs

- Stipends vary by university and program and even between labs and students
- And you will have your own specific needs

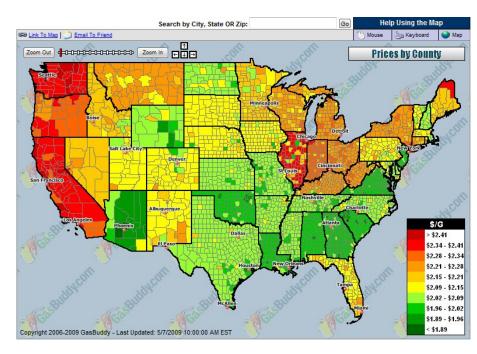


Comparing stipends between programs

UC Davis Population Biology

Stipend = \$32,321

Cost of Living (1 Adult, 0 children) = \$28,053



- Stipends may be listed online, you can contact the academic coordinator for up-to-date information
- You can get a sense of the cost of living with the MIT Living Wage calculator
 - <u>https://livingwage.mit.edu/</u>
 - These numbers are averages and may not reflect your situation
 - Talk to grad students at programs you're applying to!



• Master's programs are less likely to offer stipends and when they do, often offer less money than PhD programs.



- Master's programs are less likely to offer stipends and when they do, often offer less money than PhD programs.
- Your funding sour programs funding, can vary by professor, by year in the program, by experience, by funding source (TA,RA,Fellowship).



- Master's programs are less likely to offer stipends and when they do, often offer less money than PhD programs.
- Your funding ***** your programs funding, can vary by professor, by year in the program, by experience, by funding source (TA,RA,Fellowship).
- You can combine multiple funding sources (@UCDavis 10-30 hrs).



- Master's programs are less likely to offer stipends and when they do, often offer less money than PhD programs.
- Your funding ***** your programs funding, can vary by professor, by year in the program, by experience, by funding source (TA,RA,Fellowship).
- You can combine multiple funding sources (@UCDavis 10-30 hrs).
- Stability of stipends.



Part 1: Graduate student funding

- Overview of the main ways grad students are funded.
- Other financial considerations
- Every student's situation is different
- Comparing stipends
- Understanding responsibilities, income, and your personal priorities

Example student's stipend and research funding:

1.10

Example student's stipend and research funding:

Ava

- They have a busy summer field season and their advisor only has support for a research assistantship for 1 quarter. Ava TA's in the fall and spring quarters, and chooses to TA 30 hours a week for a higher salary during the fall and spring.
- Ava was awarded small internal grants to fund their dissertation research in addition to travel funding from a collaborator at a different university.

Example student's stipend and research funding:

Ben

- He has a external fellowship that pays part of his salary and a partial research assistant position with his PI. He earns \$27,000. He helps his PI with some work but mostly spends his time on his dissertation.
- His PI has grant funding that Ben uses to fund his fieldwork and his wet lab work.

Example student's stipend and research funding:

Elesha

- She was awarded a GRFP and is on a fellowship year, she makes \$34,000.
- She has also been awarded small grants from her department and graduate group to fund her dissertation research.

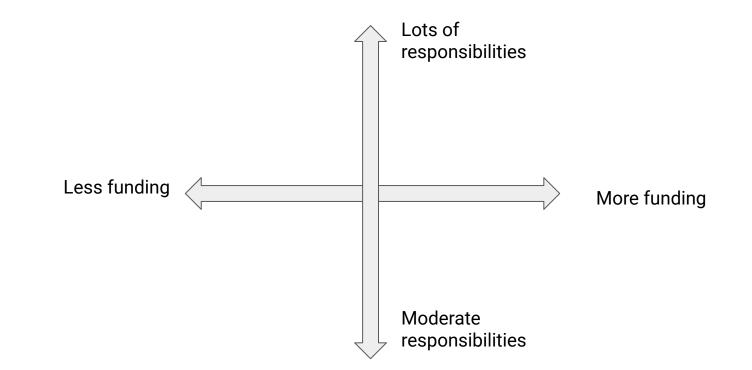
2.10

Example student's stipend and research funding:

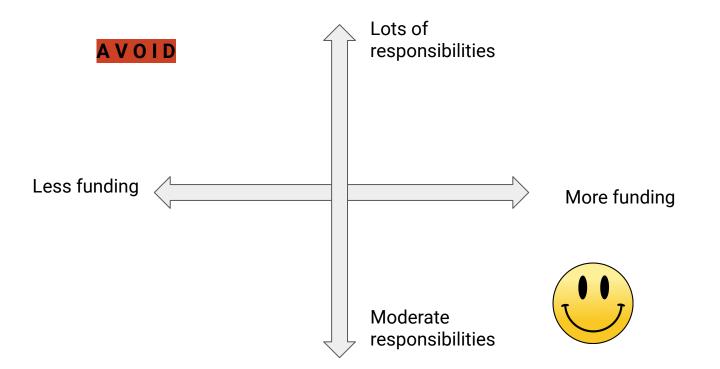
Filip

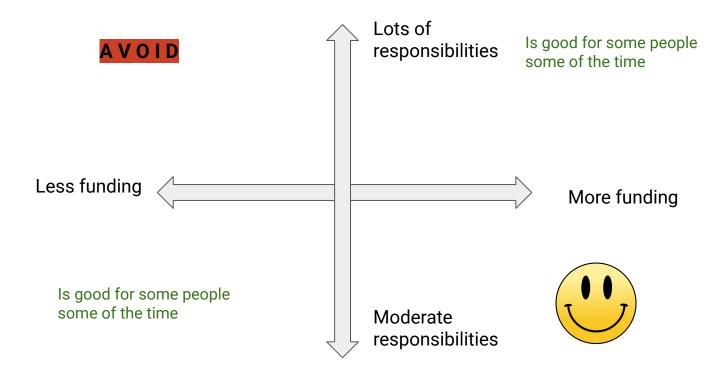
- His offer letter said he would make \$23000, however his PI has a big grant and wants everyone in the lab to have an equal salary, he makes \$30000 through a combination of teaching and research assistant positions related to his PI's grant.
- He does mostly computational work and does not require money to fund his dissertation.

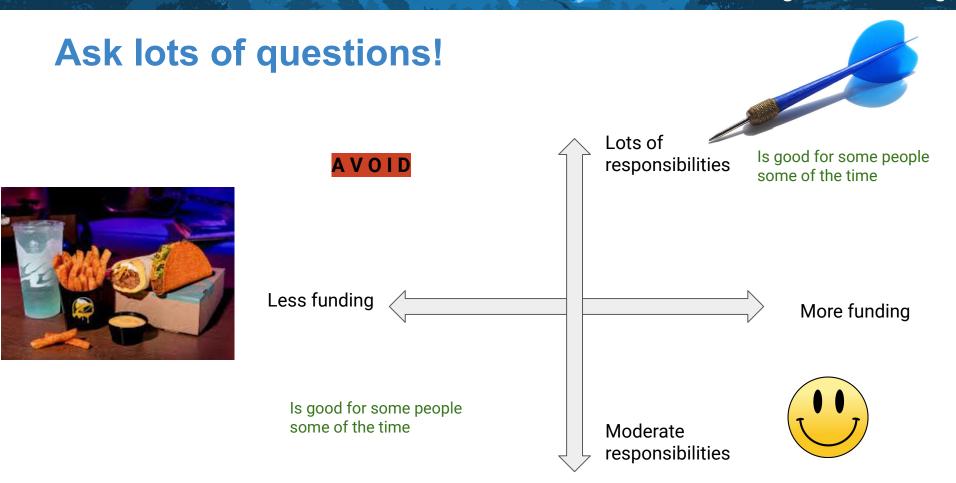
1.0



Session 3 Funding & Grant Writing







Breakout session 1- Brainstorm!

In your breakout rooms, brainstorm 3 questions about funding that you want to be able to confidently ask in each of the following situations:

- 1. Before applying
- 2. During interview weekend Questions for your potential advisor
- 3. During interview weekend Questions for graduate students.

Session 3 Funding & Grant Writing

Questions ideas!

Red flags

- Advisor is unwilling to engage in a conversation about funding.
- Vague statements such as: "we are well funded", "We'll figure it out",
 "You will have to TA some of the time", etc..

Red flags

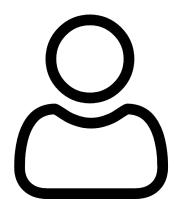
- Advisor is unwilling to engage in a conversation about funding.
- Vague statements such as: "we are well funded", "We'll figure it out",
 "You will have to TA some of the time", etc..
- Current graduate students seem stressed about having enough money to live on.
- Current graduate students rely on support from parents or spouses.

Part 2: Fellowships and grants

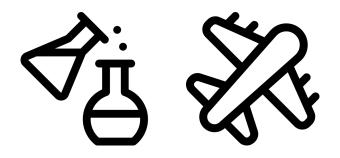
- Fellowships and grants: an overview
- Finding and applying for funding opportunities
- Fellowship focus: National Science Foundation Graduate Research Fellowship Program

Fellowships and Grants

Fellowships: Can cover stipend, tuition. "Awarded to the person."



Grants: Can cover the cost of research and attending conferences and workshops. "Awarded to the project."



Funding

Poll: Are you planning to apply for a fellowship/grant for graduate school?

- A) Yes, I'm applying for a fellowship this year
- B) Yes, I plan to apply when I apply for graduate school in the future
- C) No, I do not plan to apply for a fellowship
- D) I'm not sure yet

Funding: Why apply?

Type in the chat why you think you might apply for your own funding

Session 3 Funding & Grant Writing

Funding: Why apply?





Fund you so that you can focus on your research!

May pay you more than your program can





Help you get into grad school

Learning Opportunities and Resources

Part 2: Fellowships and grants

- Fellowships and grants: an overview
- Finding and applying for funding opportunities
- Fellowship focus: National Science Foundation

Graduate Research Fellowship Program

Finding the right fellowship for you

Mentors and Facilitators: Please put in the chat how you heard about or found the grants and fellowships you apply for

https://eeb.ku.edu/funding-opportunities

UC Davis Internal Fellowships

Look For Grants from Research and Academic Societies

Finding the right fellowship for you

01	Priorities	 Supporting innovation in STEM research Training leaders in higher education Specific research areas Diversity in STEM/higher education
02	Responsibilities	 Adequate degree progress Annual reports Internships or practicums Specific course of study
03	Eligibility	 Citizenship or residency requirements <u>https://immigrantsrising.org/2020scho</u> <u>larships/</u> Limits on amount of previous graduate education

University of California, Davis se miarmstrone@ucdavis.edu

Madison Armstrong

1. Curriculum Vitae

Education

- 2019-present Ph.D. Population Biology, University of California, Davis, Davis, CA. Cumulative GPA: 40 NRT Sustainable Oceans Cohort Member Advisor. Dr. Rachael Bay
- 2015–2019 B.S. Biology, Washington State University, Pullman, WA. minor in Genetics & Cell Biology, Camulative GPA: 3.75, Summa Cum Laude Graduate, Dean's list all semestrar. Thesis Telle: The Evolution of Plastic Expression as an Explanation of Invasion Success Advisor: Dr. Mark Dybdahl

Publications

In Prep Armstrong, M., Smithson, M., and Dybdahl, M., Variation in shell morphology and upstream movement within and between clonal lineages of an invasive snail, Biobgical Invasions.

Research Experience

2016 - 2019 Undergraduate Researcher, Laboratory of Dr. Mark Dybdahl.

Conducted an independent research project on the evolution of plastic gene expression as an explanation of invasion success of the clonal New Zealand mustimal, Recamopygus antipodarum. Authored and received funding for multiple research proposals (see Honory/Grants section). Presented my research findings at the university, local and national level since 2015 (see Presentations section).

- 2017-2018, Research Assistant, Laboratory of Dr. David Crowder.
- Summer 2019 Alded in a wide-range of research projects addressing plant-insect interactions in agricultural systems. Assisted with greenhouse experiments and molecular techniques.
 - 2016 Undergraduate Research Assistant, Laboratory of Dr. Paul Nabity. Conducted PCR analysis and gui electrophonesis to Investigera species differentiation of plant species Infected by Phylloware Collaboratively created and utilized a DAN solution protocol.
- 2015-2016 Undergraduate Research Assistant, Laboratory of Dr. Mark Dybdahl. Measured protein differentiation to differentiate consil ypes of the model organism, New Zualand freehwater smail, through slowyme electrophoresis. Aided in data analysis for the Great Lakes Invasion Study.
 - 2014 Research Assistant for Operation Wallacea In Ecuator. Traveled to Ecuator with a and a small group of students to work with a conservation-focused company based out of the U.K. and scientists from around the world. Actended lactures and alided in specimen sampling in the cloud torest and lowlands of Ecuador for two weeks.

Teaching Experience

2020, 2021 Teaching Assistant for Introduction to Evolution (EVE100) with Dr. Santiago Ramirez and Dr. Artyom Kopp.

Taught a variety of topics under the broad field of evolution ranging from parismony, hardy weinberg equilibrium and phenotypic plasticity. Led weekly virtual discussion sections and wrote homework and exam questions to assess student learning.

2017 Teaching Assistant for Mammalogy (Bio 428 at WSU) with Dr. Daniela Monk... Prepared lab materials each week with the proper specimen by communicating with the campus musuum curator (Dr. Keily Cassidy) to retrieve the necessary specimen from the research collection. Formatted workshees and exame to accomplish learning outcomes and increase student success.

Darien Satterfield

1 Sheilds Ave, Davis, CA 95616 (661) 312-4134 | Drsatterfield@ucdavis.edu | https://www.linkedin.com/in/dariensatterfield

EDUCATION

University of California, Davis PhD, Marine Biology	Present
California State University, Long Beach Master of Science, Marine Biology	August 2019
California State University, Northridge Bachelor of Science, Marine Biology	May 2015
RESEARCH / PROFESSIONAL INTERESTS	

Ichthyology

- Fisheries ecology and biomechanics
- Biological and socioeconomic modelling
 Statistics

PUBLICATIONS

Satterfield, D. R., Johnson, D. W. (2020). Local adaptation of antipredator behaviors in populations of a temperate reef fish, *Embiotoca iacksoni, Oecologia*, doi.org/10.1007/s00442-020-04757-y

Johnson, D. W., Stirling, B., Paz, J. & Satterfield, D. R. (2019). Geographic variation in demography of black surfperch (*Embiotoca jacksonj*): Effects of density, food availability, predation, and fishing. *Journal of Experimental Marine Biology and Ecology*. <u>doi.org/10.1016/j.jembe.2019.04.008</u>

Satterfield, D. R., Steele, M. A. (2019). Effects of size and sex on the courting success and foraging behavior of *Embiotoca jacksoni, Journal of Fish Biology*. doi.org/10.1111/jfb.13981

- 1. Curriculum Vitae (CV)
- 2. Transcripts

DARIEN ROSE SATTERFIELD

GRADUATE ACADEMIC RECORD

CURRENT COLLEGE(S): GRADUATE STUDIES CURRENT MAJOR(S): POPULATION BIOLOGY

ADMITTED: FALL QUARTER 2019

INSTITUTION CREDIT:

		FA	ALL C	UARTER 2019			
EVE	231	PRINCI	PLE	BIO DATA ANA	ALY S	3.00	.00
PBG	200A	PRINCI	PLES	S POP BIO	A	5.00	20.00
PBG	290	SEMINA	R		S	1.00	.00
PBG	290C	RESEAR	RCH (CONFERENCE	S	1.00	.00
PBG	292	TOPICS	S IN	ECOL & EVOL	S	1.00	.00
PBG	299	RESEAR	RCH		S	1.00	.00
	COM	PL A	TTM	PSSD	GPTS	GPA	
TERM:	12.1	00 5	5.00	5.00	20.00	4.000	
UC CUM:	12.	00	5.00	5.00	20.00	4.000	
		WIN	TER	QUARTER 2020)		
EVE	103	PHYLOC	ENY/	SPECIATION	A	4.00	16.00
PBG	200B	PRINCI	PLES	S POP BIO	A	6.00	24.00
PBG	290	SEMIN/	R		S	1.00	.00
PBG	290C	RESEAR	CH (CONFERENCE		1.00	.00
PBG	292	TOPICS	S IN	ECOL & EVOL	S	1.00	.00
	COM	PL A	TTM	PSSD	GPTS	GPA	
TERM:	13.	00 10	0.00	10.00	40.00	4.000	
UC CUM:	25.	00 15	5.00	15.00	60.00	4.000	

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement

Research Proposal

Summary of Proposed Work: Morphology has been long believed to be the strongest predictor of variability in swimming behavior in reef fish. For example, many have asserted that butterfly fish are the most maneuverable fish given their laterally compressed, deep-bodied shape. However, no empirical data has ever been collected on the relationships between morphology and swimming behavior in situ. My preliminary data suggests morphology does not constrain behavior as previously thought. Thus, I am proposing to collect data on damselfish morphology and swimming behavior as they are a keystone family, largely responsible for maintaining algal abundance on reefs. Damselfish are morphologically diverse, and their swimming behaviors contribute to their important functional role. This study will provide an overview of how variation in damselfish morphology constrains behavior. The resulting data should allow for better prediction of how damselfish body shape limits their ability to groom algae on coral reefs.

Introduction: Swimming is considered the primary mechanism by which fishes interact with their habitat. Specifically, a fish's swimming behavior is believed to be tightly associated with various characteristics of the niche it occupies such as habitat complexity (e.g., reef habitats vs open ocean), predator presence, and prev capture strategy based on food availability (Fulton 2010). To date, variation in fish swimming behavior has been simplified to three performance axes: maneuverability, sustained swimming, and acceleration (Webb 1982,1984; Blake 2004). It is hypothesized that swimming ability on any one performance axis is determined by morphological characteristics such that fishes with intermediate fin and body morphologies are "generalists" which use multiple swimming modes with less efficiency than "specialists" which perform one swimming mode very well (see Webb 1984). Specifically, deep bodied, laterally compressed fishes (e.g., butterflyfish) are hypothesized to be more maneuverable, whereas stiff bodied fishes with streamlined or torpedo shaped bodies (e.g., tuna) are best at sustained swimming, and flexible fishes with larger anterior mass and large fin surface area (e.g., grouper) are most efficient at periodic but rapid swimming (Webb 1982, 1984; Blake 2004). However, these hypotheses have never been empirically tested and some studies even suggest that swimming mode may be less constrained by morphology than previously thought (e.g. Gerstner 1999). My research aims to compare the use of swimming behaviors among fishes with variable body and fin shapes to determine if there are relationships between specific swimming modes and body morphology.

Hypotheses to be Tested: I will test the hypothesis that as distinct body and fin shapes are optimized for performance on the three axes of swimming, swimming behaviors are constrained by morphology.

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement

1) CPB RESEARCH AWARD PROPOSAL

Research proposal: Do not include graphics or JPG images. Text only. Include a title. Two (2) pages maximum (excluding references) explaining specific objectives. Describe research methodology, proposed timetable, and the process by which interpretation of the data will be made.

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement
- 4. Personal Statement

UC Davis Internal Fellowships

Statement of Purpose: Please describe your academic status and objectives, your research interests and accomplishments, your plans for the fellowship period, and the way the fellowship funding will enhance your work and overall career goals.

Personal History Statement: Please discuss how your personal background and/or present circumstances informs your graduate education and research. Please include any educational, familial, cultural, economic, or social experiences, challenges, or opportunities relevant to your academic journey; describe how your life experiences contribute to the social, intellectual, or cultural diversity within your chosen field.

Personal statement

- Highlight your achievements
 - Take items from your CV or personal history and explain why they are important for what you want to do
- Explain how you will contribute to the goals of the fellowship
- Show your passion! This is a chance to explain what motivates you to do research, education, etc. Give the reviewers a sense of who you are.

Dear Faculty Member:

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement
- 4. Personal Statement
- 5. Letters of Recommendation

The Center for Population Biology has announced its annual call for research and travel award applications. You are being presented this instruction sheet because your graduate student is a graduate student affiliate of the Center and is requesting funding support consideration. Proposals for the annual fellowship call are administered by the Center for Population Biology and reviewed by the CPB/PBGG Fellowship Committee.

Please e-mail a PDF or MS Word letter of recommendation on your departmental letterhead

to ______. In your letter, please briefly address the following qualities of this graduate student affiliate:

- 1) Promise of scholarship
- 2) Quality of previous work
- 3) Ability in research
- 4) Merit and overall quality of research proposal
- 5) Student's progress towards the research objectives and/or degree

In writing your letter, keep in mind that a short, informative letter is often more effective than an overly long one.

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement
- 4. Personal Statement
- 5. Letters of Recommendation
- 6. Budget and Justification

BUDGET DETAIL	4.2	
Equipment	Unit Cost	Item Total
Describe Equipment		
polycarbonate sheets 36inX36in x 2	\$210.00	\$420.00
aluminum rods 3/8 X 12in x 6	\$4.00	\$24.00
professional printing adhesive vinyl	\$50.00	\$50.00
1x1 80/20 aluminum extrusion rail 3ft x 3	\$15.36	\$46.08
1x1 80/20 aluminum extrusion rail 2ft x 4	\$11.00	\$44.00
t-slot 90 degree bracket x 4	\$12.00	\$48.00
t-slot 60 degree bracket x 2	\$12.00	\$24.00
t-slot 30 degree bracket x 2	\$12.00	\$24.00
1X2 inside corner bracket x 2	\$9.00	\$18.00
	Total equipment	\$698.08

- 1. Curriculum Vitae (CV)
- 2. Transcripts
- 3. Research Statement
- 4. Personal Statement
- 5. Letters of Recommendation
- 6. Budget and Justification

Narrative Budget Justification

If you would like to add a narrative statement justifying your budget or particular items in it such as unusual requests for travel to field sites, extraordinary supply or equipment costs, etc., please use the box below.

The first cost of my research will be the materials needed to build the camera system I will be using to film videos on the reefs. This system has been designed by the makers of VidSync though I will be optimizing their design for ease of travel and will need to make a few modifications in materials. For now I have used the materials list provided on the VidSync website as a guideline. The system includes a sturdy camera mount with two go pros and a calibration frame made of polycarbonate panels with printed vinyl calibration images. This is what the funds I am requesting from CPB will be used for. Secondary cost of completing this research will be in travel expenses to field sites. I will be collecting data from field stations in the Hawaiian islands. Thus, I will need to purchase flights and pay for facilities fees at the research stations. Each station provides gear for diving and have on site housing, most provide meal accomodations. As I cannot dive alone, I will need to bring a dive buddy/field assistant with me on my trips. I'm hoping that this person can either be an undergraduate volunteer who will gain research and field experience or a fellow graduate student who could also collect data while at the field sites. I will seek additional funding from other sources for travel and facility fees.

Fellowship Structure Can Vary

Dear Darien,

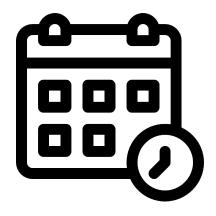
Congratulations! On behalf of Graduate Studies and the Population Biology Graduate Group, I am pleased to offer you a Graduate Research Mentorship Fellowship for academic year 2021-2022. This fellowship supports promising doctoral students who meet the "Diversity" criteria. Please read this award letter carefully, and follow the instructions.

The details of your award are as follows:

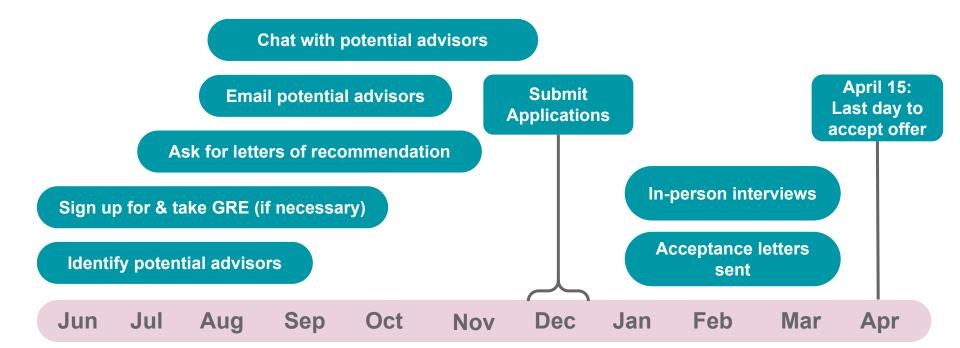
Stipend	\$28,800.00*
Full Graduate Student Tuition and Fees (includes UC Student Health Insurance Plan fees)	\$19,000.00**
Research Allowance	\$600.00***
TOTAL AMOUNT OF AWARD (approximation)	\$48,400.00
 * paid directly to you **estimated – automatically paid directly to the university on your behalf ***transferred to your home department after budget proposals are submitted 	ed and approved

How to apply for fellowships: timeline

- Generally, give yourself at least a month to write an application
- Give letter writers as much time as possible (again, at least a month is good)
- You will need to go through several drafts and should get feedback from multiple people
- Don't submit at the last minute!



How to apply for fellowships: timeline



How to apply for fellowships: timeline



How to apply for fellowships: getting help

Advisors	If in grad school, work with your advisor. If not, you can ask a prospective advisor.
Peers	Work with friends. Can be helpful if in same or different field.
Workshops	Some universities or graduate programs have workshops.
Read successful applications	Find someone who's previously gotten the fellowship or look online.
Ask the funder	If you can't find the answer, ask the funding source.

Session 3 Funding & Grant Writing

Fellowships

National Science Foundation Graduate Research Fellowship Program: Many STEM fields, open to U.S. citizens and permanent residents



UC Davis internal fellowships: Varying fields, priorities, and eligibility requirements Ford Foundation Predoctoral Fellowships: Many academic fields, prioritizes teaching and diversity, open to U.S. citizens/permanent residents, DACA recipients, asylees/refugees, Indigenous individuals under Jay Treaty



And more!

- UC Davis internal fellowships
 - <u>https://grad.ucdavis.edu/financial-support/internal-fellowships</u>
 - Plant Sciences Departmental GSR: <u>https://www.plantsciences.ucdavis.edu/departmental-graduate-student-research-assistantships-awards</u>
- Lists of fellowships
 - <u>https://grad.ucdavis.edu/financial-support/external-fellowships</u>
 - https://immigrantsrising.org/2020scholarships/

Session 3 Funding & Grant Writing

Breakout Session 2 -Questions about Fellowships and Funding

Part 2: Fellowships and grants

- Fellowships and grants: an overview
- Finding and applying for funding opportunities
- Fellowship focus: National Science Foundation Graduate Research Fellowship Program

National Science Foundation Graduate Research Fellowship Program (NSF GRFP)

- Open to students in many scientific fields
- One of the largest funders of graduate fellowships in Evolution and Ecology



Session 3 Funding & Grant Writing

NSF GRFP: Eligibility

Applicant must be:

- Enrolled in graduate program or currently applying
- U.S. citizen or a national/permanent resident

Applicant cannot:

- Have a Master's or professional degree
- Completed more than 1 year of graduate education UNLESS interrupted for 2 years
- Applied previously as a graduate student

PSA: You can only apply ONCE during graduate school, TWICE overall





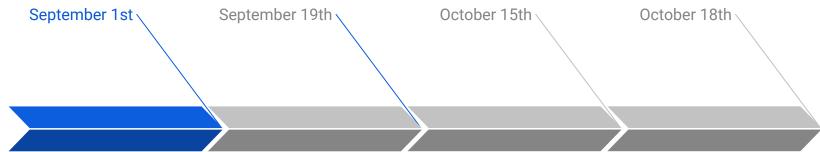
Session 3 Funding & Grant Writing

NSF GRFP: Benefits

- \$34,000/year stipend for three years
- \$12,000/year towards tuition for three years
- Opportunity to apply for additional grants and professional development opportunities

NSF GRFP: Timeline





Decide whether to apply

Begin application

Read about the fellowship, brainstorm ideas, talk with advisor or consider reaching out to prospective advisors Research your project, ask for letters of recommendation, draft your essays Strengthening application

Get feedback from advisor, peers, mentors

Be prepared to write many drafts and make substantive changes

Application due

Only minor changes

Don't wait until the last minute to submit!

Session 3 Funding & Grant Writing

NSF GRFP: What you need:

- Application components
 - Research Statement
 - Personal Statement
 - Letters of Recommendation
 - Transcript
 - Education and Work Experience

Deadline 2022: Oct 18th (Life Sciences)

Welcome to the NSF Graduate Research Fellowship Program (GRFP).
NSF GRFP Competition Results
Award Offers and Honorable Mentions List
Applicant Deadlines
Applications Must Be Received by 5:00 p.m. Local Time of applicant's mailing address
October 18, 2021 (Monday): Life Sciences
October 19, 2021 (Tuesday): Computer and Information Science and Engineering
October 19, 2021 (Tuesday): Materials Research
October 19, 2021 (Tuesday): Psychology
October 19, 2021 (Tuesday): Social Sciences
October 19, 2021 (Tuesday): STEM Education and Learning Research
October 21, 2021 (Thursday): Engineering
October 22, 2021 (Friday): Chemistry
October 22, 2021 (Friday): Geosciences
October 22, 2021 (Friday): Mathematical Sciences
October 22, 2021 (Friday): Physics and Astronomy
Withdrawal Deadline
November 15, 2021 (Monday): Application Withdrawal

Graduate Research Fellowship Program

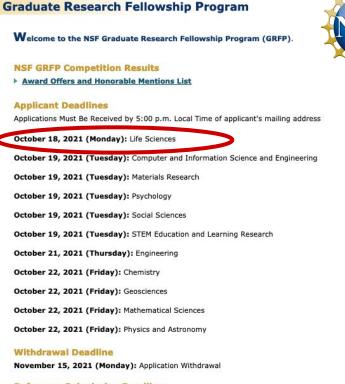
Reference Submission Deadline

Reference Letters Must be Submitted by October 29, 2021 (Friday) 5:00 p.m. Eastern Time Reference Writers: You will be provided a new login to submit a reference letter.

NSF GRFP: Why Apply?

- Experience writing fellowship applications and thinking about your research
- Reviews on your application will help you apply in the future
- You could get the GRFP!

Note: the GRFP funds the person, not the project.

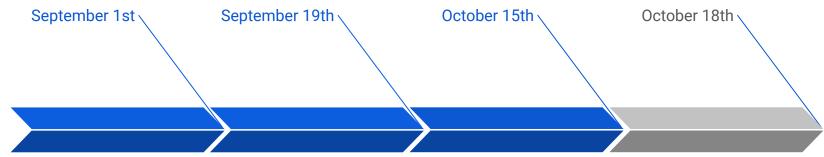


Reference Submission Deadline

Reference Letters Must be Submitted by October 29, 2021 (Friday) 5:00 p.m. Eastern Time Reference Writers: You will be provided a new login to submit a reference letter.

NSF GRFP: Timeline





Decide whether to apply

Begin application

Read about the fellowship, brainstorm ideas, talk with advisor or consider reaching out to prospective advisors Research your project, ask for letters of recommendation, draft your essays Strengthening application

Get feedback from advisor, peers, mentors

Be prepared to write many drafts and make substantive changes

Application due

Only minor changes

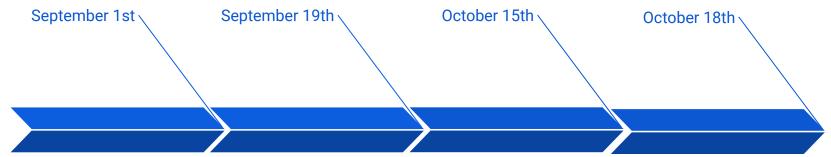
Don't wait until the last minute to submit!

NSF GRFP: Writing the application

Advisors	If in grad school, work with your advisor. If not, you can ask a prospective advisor. For the GRFP, it is strongly recommended that you work with an advisor and name them in your research proposal.
Peers	Work with friends. Can be helpful if in same or different field.
Workshops	UC Davis Graduate Group in Ecology has a workshop for applicants. <u>https://eebmentormatch.com/</u>
Read successful applications	https://github.com/ybrandvain/GRFP
Ask the funder	If you can't find the answer, ask the funding source.

NSF GRFP: Timeline





Decide whether to apply

Begin application

Read about the fellowship, brainstorm ideas, talk with advisor or consider reaching out to prospective advisors Research your project, ask for letters of recommendation, draft your essays Strengthening application

Application due

Get feedback from advisor, peers, mentors

Be prepared to write many drafts and make substantive changes Only minor changes

Don't wait until the last minute to submit!

NSF GRFP: After applying

- Take a deep breath: you did it!!!
- NSF announces its decisions in early April
- You will receive reviews on your application:

Summary Comments

I am convinced that the candidate has a bright future and a great grasp of the science approaches. Just needs to think about the proposed research in a broader ecological context.

Summary Comments

Summary Statement: The proposed research lack of creativeness and challenges, and the applicant should try to build a strong intellectual merit via research proposal and future goals in scientific career. Broader impact aspects of the application are fairly strong.

Summary Comments

This is an excellent application and one of the strongest cases for a fellowship that I have encountered. The intellectual merit of

the applicant lies in the strong academic and research records along with well-developed plans for a dissertation and future research. Broader impacts are multifaceted but still focus primarily on and row directly from the applicant's research.



Intellectual Merit Criterion

Overall Assessment of Intellectual Merit Very Good

Explanation to Applicant

Miss Armstrong currently pursue her BS degree on Evolutionary Biology at the Washington State University and expected to be graduate in May, 2019 with a high GPA (3.7). She presented her research once at National Evolution Conference and was listed as a co-author on a manuscript. She won some undergraduate research grants and scholarships provided by the University. The research she proposed is to investigate plasticity as an explanation of invasion success to variable environmental conditions using asexual New Zealand snails as a model, and she received relevant training from Dr. Dybdahl lab. The proposed research was properly designed and feasible, but apparently the proposal is in-line with Dr. Dybdahl on-going projects and lacks of creativeness from the applicant. Thus, intellectual merit of such research is hard to be rated high.

Broader Impacts Criterion

Overall Assessment of Broader Impacts Very Good

Explanation to Applicant

Broader Impacts Comments: Miss Armstrong showed some enthusiasm in teaching as a teaching assistant and has been involved in various college events including lectures for local middle and high schools as well as at local community science center. She also showed strong leadership in the STEM community, and she is the president of Biology club and a mentor for more than 275 incoming students, as well as being a role model for future students and ambassador of WSU. She received three supporting

letters from her teachers and advisors, and all these letters provided further support for the applicant's strong leadership in scientific communities and her profound training relevant to the proposed research. The proposed research will provide insight in evolution of asexual organisms, and Miss Armstrong has some plan to expand the broader impacts of the study in undergraduate education and public education.

Summary Comments

Summary Statement: The proposed research lack of creativeness and challenges, and the applicant should try to build a strong intellectual merit via research proposal and future goals in scientific career. Broader impact aspects of the application are fairly strong.

Session 3 Funding & Grant Writing



Intellectual Merit Criterion

Overall Assessment of Intellectual Merit Very Good

Explanation to Applicant Interesting topic. Plasticity is a fascinating subject and this seems like a good study animal.

Broader Impacts Criterion

Overall Assessment of Broader Impacts Very Good

Explanation to Applicant

She has contacts with several organizations and seems willing and able to work with STEM students.

Summary Comments

Nice job. Should be funded.

NSF GRFP: After applying

If you don't receive the NSF GRFP this doesn't mean your research ideas aren't interesting and worth pursuing!

- https://telis.blog/2018/04/03/the-price-of-a-grfp-part-1/
- <u>https://massivesci.com/articles/grfp-disparity-nsf/</u>





Workshop Feedback

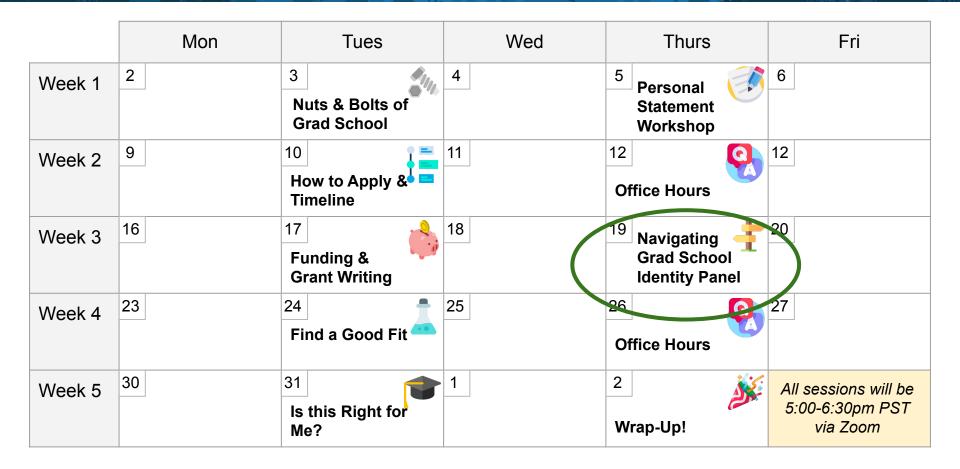
Your feedback is important to us. Please take a few minutes to complete evaluations for this session.



Nuts & Bolts of Grad School

tinyurl.com/preview21feedback

1.0











Navigating Grad School Identity Panel



Dig Deeper with Us



Chat with your **mentor**



Visit our website: eegradpreview.weebly.com



Follow us on Twitter: @eegradpreview



Contact us by email: eegradpreview@gmail.com

More funding examples:

- Carlos- He was admitted to 2 programs with the same PI, he wanted to be in the one that had a lower stipend but didn't want to lower his income. He negotiated with his PI to receive the higher stipend while being in her top choice program.
- Gilia- Gilia is a 5th year student who had the opportunity to be the main professor for a course. She earns an extra \$1000 for teaching this course. Gilia's PI provides research funds for Gilia's sequencing needs.
- Henrietta Her advisor has limited funds and she teaches 3 quarters and has a research assistant in the summer where she spends 20 hours a week working with her advisor. She has research fellowship money for her dissertation projects.
- Ingrid is a first year student on a first year fellowship, she focuses on classwork and earns \$31,000.