

Northern California Botanists

**BOTANY and PLANT ECOLOGY
UNDERGRADUATE AND GRADUATE
RESEARCH SCHOLARSHIPS**

**Application for
Academic Year 2018 - 2019**

Deadline: March 31, 2018



Northern California Botanists

P.O. Box 8042

Chico, California 95927-8042

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BOTANY and PLANT ECOLOGY UNDERGRADUATE AND GRADUATE RESEARCH SCHOLARSHIPS

Northern California Botanists

Northern California Botanists (NCB) is an organization with the purpose of increasing knowledge and communication among agency, consulting, academic, and other botanists about botanical issues concerning science, conservation, education, and professional development. Our primary objectives are to establish a communication forum via occasional meetings, provide a scholarship fund for students working on botanical problems in northern California, provide a job forum, and hold a regular symposium that focuses on the botany of northern California.

Botany Research Scholarship Program

NCB provides competitive botany and plant ecology research scholarships to undergraduate and graduate students who are studying botany and/or plant ecology.

Research scholarships will be funded by NCB with the goals of:

- encouraging undergraduate students to pursue academic endeavors toward a career in botany;
- promoting undergraduate and graduate botany and plant ecology research; and
- implementing the objectives of the NCB mission.

Scholarship Awards

Research scholarships consist of \$1,000 awards designed to support undergraduate and graduate research. NCB intends to award at least one scholarship in each degree category (undergraduate, master's, and PhD) as long as qualifying applications meet or exceed application guidelines.

Students may reapply and receive a scholarship award up to a maximum of two years for undergraduates and graduates pursuing a master's degree, and up to a maximum of four years for graduate students pursuing a doctoral degree. Awardees must demonstrate satisfactory research and academic progress.

Shasta Chapter California Native Plant Society (CNPS) Award: The Shasta Chapter of CNPS funds one NCB scholarship award per year for an applicant meeting their criteria. The Shasta Chapter Award is in addition to the awards funded by NCB and is to be selected from the same applicant pool using the same evaluation methods as the NCB

scholarships. The Shasta Chapter's additional eligibility criteria are found on their website at www.shastacnps.org/ under "Applications"; these are summarized in Attachment A of this application.

NOTE: Check the criteria for the Shasta Chapter Award in Attachment A or www.shastacnps.org before claiming eligibility. Applicants will be asked to verify their claims for eligibility for this award by specifying counties included in research sampling and taxa, or counties of previous residence including high school or community college attended.

Eligibility and Awards Process

Eligibility: The scholarship program is open to undergraduate and graduate students enrolled as full-time students in a college or university performing academic research in botany, plant ecology, or another plant-focused field. Junior and senior undergraduate and master's and PhD graduate students are eligible. Projects must be part of independent study, thesis, or dissertation coursework. The funded work must occur during the academic year **following** receipt of this scholarship award; awards will not be granted for work performed in previous years, although the funded work may be part of a multi-year study.

Application Review Process: Applications must be received by NCB by March 31, 2018. Awards will be announced in May 2018, with funding provided to students for the 2018-2019 academic year in August 2018.

Scholarship Recipient Requirements: Scholarship award recipients are asked to participate in a NCB Symposium, which may include a talk or poster to present the recipient's supported research project.

Application Guidelines

Applications for the 2018-2019 NCB student research scholarships must be received by NCB by midnight March 31, 2018. Only proposals that involve research on some aspect of northern California plant life will be considered.

A complete application must include the following:

- **Completed application form** (at www.norcalbotanists.org/scholarships.htm), including a statement regarding qualification for the Shasta Chapter CNPS scholarship if applicable – provide counties of project work or residence as requested on form.
- **Single-page cover letter** with brief description of the research and its significance.
- **Research proposal** not exceeding two to three typewritten pages. The proposal must include the following sections: 1) research summary including study objectives, 2) budget, 3) timeline, and 4) methods. A literature cited section may be added as an additional page if necessary. Further details on the research summary and budget are as follows:

- Study goals/objectives: The research summary should clearly state the main goals or objectives for the project, either in the form of question(s) posed to be answered, hypotheses, or similar statements, as long as the research focus is concisely worded and clearly identified.
- Contribution of research: The research summary should contain a statement regarding how the research will improve, build on, and/or add to existing knowledge, and will contribute to the conservation, restoration or management of natural vegetation communities or plant populations or species.
- Budget: For a large or complex project, this section should include the overall budget for the project, demonstrate that the overall project has secure funding, and clearly identify the portion of the work to be funded by NCB. NCB will only fund items used to defray the costs of research. Example budgets for a smaller/more simple project and a larger/more complex project are provided in Attachment B.
- **Two recommendations** from academic advisors or professionals familiar with your project and your qualifications (at least one must be from an academic advisor). The recommendations should provide insight into your academic potential and prior research experiences and other information that will help in our review of the application. The recommendations must be submitted by filling out the one-page form provided at www.norcalbotanists.org/scholarships.htm. The recommendation form should be submitted directly by each reference via email to NCB at ncbotanists@gmail.com or mailed to P.O. Box 8042, Chico, CA 95927-8042.

All parts of the application materials must be clearly written using correct English grammar and spelling.

All application materials should be submitted to NCB at ncbotanists@gmail.com or to P.O. Box 8042, Chico, CA 95927-8042 **by midnight March 31, 2018**. Electronic submittal in PDF format is preferred.

Questions?

Questions concerning the preparation and submission of scholarship research proposals and forms, and the administration of this scholarship program, should be directed to Northern California Botanists at ncbotanists@gmail.com or to P.O. Box 8042, Chico, CA 95927-8042.

ATTACHMENT A: Shasta Chapter CNPS Award Criteria

The Shasta Chapter of CNPS funds one NCB Research Scholarship (\$1,000). In addition to the general NCB scholarship criteria, the recipient of the Shasta Chapter-funded scholarship must meet at least one of the following two criteria:

- 1) the research topic must include or be directly relevant* to the flora within the boundaries of the Shasta Chapter (Shasta, Lassen, Modoc, and Siskiyou counties), with preference given to topics concerning rare species or communities, or
- 2) the student comes from the Shasta Chapter area. Having graduated from a high school or community college in the Shasta Chapter area is the typical means for demonstrating eligibility under the second alternative.

For criterion (1), order of preference for study-plant taxa or communities will be:

- rare
- not necessarily rare but endemic to Shasta Chapter area
- common CA native plants which also occur in the Chapter area
- invasive weeds known to occur and impact native species in the Chapter area; could be common in the rest of CA or not.

*Relevance should include some specified activity occurring in the Shasta Chapter area, such as sample sites, collections, surveys or other site visits, herbarium specimens, data gathering.

ATTACHMENT B: Example budgets

Note to applicants: These are only examples to give you an idea of what a study budget can look like, not templates to follow. Especially for Example 2 for the more complex study, the budget itemizing does not necessarily need to be as detailed, and the supplemental sources of funding do not necessarily need to be as explicit. Mostly we want to know that you have considered what your project will cost to carry out, that your expenses total at least the amount of the award, and are reasonable.

Example 1: Smaller/More Simple field project

BUDGET – The total cost of my field project is expected to be \$1,250. Any funds awarded for this proposal will be used for funding field research to be performed in the 2017-2018 academic year. The table below contains a summary of my expenses.

SUPPLIES	
PVC and glue for sampling frames	\$200
Wire screen	150
Rite in Rain notebook	25
Marking flags	75
<i>Total supplies</i>	\$450
FIELD TRAVEL	
Mileage (1000 miles @\$0.50 per mile)	\$500
Camping (6 nights @\$25 per night)	300
<i>Total travel</i>	\$800
TOTAL PROJECT	\$1,250

Example 2: Larger, multi-phase project with field and lab component

BUDGET - Any funds awarded for this proposal will be used entirely toward the funding of my final round of ddRADseq, which will be performed in the 2017-2018 academic year. An outline of my expenses and funding is provided in the table below. A final grant proposal was submitted to the Botanical Society of America on March 15. My adviser, through his lab fund, provided additional funding for this research.

CONTRIBUTION TO LAB REAGENTS & SUPPLIES	
Lab Notebooks (2)	\$30
Gloves (Box of 10 Packs)	\$210
Pipette Tips (bulk bags in 3 sizes)	\$97
Microcentrifuge Tubes (1 bulk bag)	\$20
Silica Gel	\$60
<i>LAB SUPPLIES TOTAL</i>	\$417
SEQUENCING	
Library preparation (33 samples @ \$86/sample)	\$2,838
Contribution to shared Illumina lane	\$330
RADseq QC/Fragment analysis/Lib Prep (71 samples)*	\$852
Illumina Sequencing of RAD library (1 lane)	\$1,550
<i>SEQUENCING TOTAL</i>	\$5,570
FIELDWORK	
<i>Southern California</i>	
- Mileage (53 @ \$0.30/mi)	\$16
<i>Central and northern California</i>	
- Mileage (1,137 @ \$0.30/mi)	\$341
- Camping (5 nights @ \$25/night)	\$125
- Food (5 days @ \$25/day)	\$125
<i>FIELDWORK TOTAL</i>	\$607
<i>PROJECT TOTAL</i>	\$6,594
FUNDING TO DATE	
California Native Plant Society, 2013	\$850
American Society of Plant Taxonomists, 2014	\$800
California Native Plant Society, 2014	\$400
Southern California Botanists, 2015	\$1,000
Advisor Lab Fund (to date)	\$1,125
<i>FUNDING TO DATE</i>	\$4,175
*The \$1,000 NCB Award would be used to fund RADseq.	

NOTE: ITEMS NOT FUNDED BY NCB SCHOLARSHIPS:

1. Everyday living expenses (e.g., rent or regular housing expenses, groceries, utility bills, etc.)
2. Other ongoing expenses not specifically related to the research project.
3. Academic tuition.

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APPLICATION FORM

Name: _____

Current Address _____

City _____ State _____ Zip _____

Telephone _____ Email _____

Project Title _____

College or University (2018-2019) _____

Declared Major: _____

_____ Undergraduate _____ Graduate (MS) _____ Graduate (PhD)

SHASTA CNPS CHAPTER AWARD ELIGIBILITY (check box if appropriate, see Attachment A):
I am eligible based on

Research Relevant to CNPS Shasta Chapter Area. On line below, list counties within Shasta chapter area in which your research will occur: _____
AND/OR

I am from the Shasta Area. On line below, list city/county within Shasta chapter area of previous residence including name of high school or community college attended:

Faculty Advisor _____ Title _____

Department _____ Email _____

Additional Reference:

Name: _____ Title _____

Affiliation: _____ Email _____

Undergraduate juniors and seniors, and graduate students are eligible. Projects must be part of independent study, thesis, or dissertation coursework to occur in academic year following receipt of scholarship funds.

Applications must be received by NCB no later than midnight March 31, 2018 at nbotanists@gmail.com or Northern California Botanists, P.O. Box 8042, Chico, CA 95927-8042.