

2022 SCRP Applications for the CORAX Lab

Slender-billed Nuthatch Project (3 positions)



Professor David Craig's team is piloting a new project focused on a unique bird named the slender-billed white-breasted nuthatch (*Sitta carolinensis aculeata*). This nuthatch is considered to be rare across most of the Willamette Valley, but can be locally common in stands of Oregon white oak (*Quercus garryanna*) like those found on our main campus, in Bush Park, and at the Zena campus. Many aspects of the nuthatch's natural history are unknown, but because they are declining quickly, they have been designated as an Oregon species of concern. Recent genetic discoveries suggest the subspecies will be elevated to a full species, which means in the near future, we may have an officially listed threatened species breeding on campus. Factors causing the decline of nuthatch populations are reported to be loss of large-diameter oaks. Students need to be ready to spend the majority of their time outdoors and enjoy early morning hikes in all types of weather. If you are curious about birds and trees and are concerned about climate change, no experience is necessary. As a pilot project, there is excellent potential for motivated students to be creative and influence the long-term trajectory of my research group which is called CORAX: Craig's Outstanding Research Associates in X.

The application procedure consists of the following tasks which can be done in any order:

Task 1. Please review the following six resources and compose a list of 10 questions that come to mind. There are no 'dumb' questions. I am interested in where your curiosity starts and believe I can learn a lot about your creativity and thoughtfulness based on what you want to know. Email me if the resources are not attached or the embedded links don't work (dpcraig@willamette.edu).

1. Carr Thesis PPT 2019 (pdf)
2. Carr & Craig Slender Billed Nuthatch Oregon Birds 2019 (pdf)
3. Bisbee Grant: Wineries as oak and nuthatch refugia (pdf)
4. Video: Oregon's Oak: A Vanishing Legacy
5. Video: Oregon's Oaks: A Neighborhood Legacy in Gaiety Hill
6. Website: Audubon Climate Watch Project

Task 2. The entirety of this field-based project will occur in the traditional homeland of the Kalapuya people, who are now represented by the Confederated Tribes of the Siletz Indians, and the Confederated Tribes of the Grand Ronde. At Willamette University it's important to recognize we were originally established as a Native American Manual Labor School and that we respectfully acknowledge and honor past, present, and future Indigenous students of Willamette. More broadly the history of scientific achievement includes a record of many types of oppression that requires us to do historical research into the legacies of those resources we will use in our research.

Although the narrow focus of the research is about using animals as indicator species of climate change caused by human cultural changes I also want my team to think creatively about fighting the damages of historical environmental harm, racism, and sexism. What are notable intersections of environmental and social justice that matter to you either locally or globally? Your answer can be short, but I would appreciate you sharing how and when you came to learn about the topics. Your topics do not have to be connected to wildlife or Salem, as I am interested in getting insight into who you are by learning how you view the larger world of challenges we face.

Task 3. Coordinate a time to go wildlife watching with me on and around campus and or to talk on zoom about wildlife watching. We'll do the walkabout without binoculars, but I will bring a pair for you to use if you like. We can go during my Office Hours at <http://tinyurl.com/9k9l5k5> and or Tuesday or Thursday 8-9 AM during my weekly research walk. If these times don't work for you, text me at 503-949-7659, and we can search for something that does work out.

Task 4*. If you use she/her/them/them as preferred pronouns, intend to declare a major in biology, chemistry, environmental science, or physics you are eligible for a special Webber Fellowship. Read over the guidelines for the Webber Program which has some special extra resources and expectations. Key eligibility includes that you are of 2nd or 3rd-year academic standing and during the fall semester, all scholars are required to register for and attend a 0.5 credit course that meets weekly for three hours (Thursday 1:00-4:00 PM) to develop elementary science outreach materials related to this research. <https://willamette.edu/cla/additional-academic-opportunities/wsop/apply/index.html>. If you are eligible for this program please do apply.

Task 5. Submit your application both the [SCRP Webform](#) and David P. Craig via email (dpcraig@willamette.edu).

A complete application that has the following sections:

- A. Your name, preferred pronoun, year in school, and your major and minor interests.
Note: I have had environmental science, exercise & health science, biochemistry, math, computer science, women & gender studies, studio art, Spanish and undeclared majors in my lab. Everyone is welcome.
- B. The name of a faculty member who I can talk to about your abilities in the field, laboratory, and or classroom. You do not need a letter of recommendation as instructed in the general SCRP application.
- C. A one-page statement explaining why you want to be part of the program, and what your qualifications are (e.g., intense curiosity, comfortable outdoors, relevant course work, previous research experience, and or special skills).
- D. An appendix with your Task 1 Questions (n=10) and your Task 2 notes on the intersections of environmental and social justice.
- E. An unofficial transcript.