



### **ECO AmeriCorps Program Year 2021–2022**

Environmental Careers and Opportunities (ECO) AmeriCorps is an AmeriCorps program within the Vermont Department of Environmental Conservation (VTDEC). The emphasis of the program is on building capacity in nonprofit organizations and municipalities throughout rural Vermont communities. Program focus areas include the following:

- engagement, outreach, and education
- improvement of water quality
- protection and restoration of public lands

ECO AmeriCorps is funded in part by an AmeriCorps state grant provided through SerVermont from the Corporation for National & Community Service.

All ECO AmeriCorps members have some college education (preference given to college graduates with a science background) and will receive technical training and mentorship from VTDEC throughout their term of service. VTDEC handles the administrative components of the program, including providing living stipends, health insurance, and monthly trainings to members.

**Full-Time Member Benefits***Living Stipend: \$17,300**Education Award: \$6,345**Other Benefits:* Training, networking opportunities, health care, childcare assistance, program support, mileage reimbursement for ECO AmeriCorps–related travel.

VTDEC administers the member’s living stipend, health care benefits, childcare benefits, time sheets, activity reports, and other AmeriCorps and employee-related benefits and documentation.

Applicant Information		
Name of Organization or Municipality: <b>Vermont Center for Ecostudies</b>		
Primary Supervisor Name: <b>Jason Hill</b>	Primary Supervisor Title: <b>Conservation Biologist</b>	
Mailing Address: <b>PO Box 420</b>		
City: <b>Norwich</b>	State: <b>VT</b>	Zip: <b>05005</b>
Phone: <b>802-649-1431 ext 207</b>	Fax:	
Email: <b>jhill@vtecostudies.org</b>	Website: <b>vtecostudies.org</b>	
Sponsoring Organization’s Mission:		
<p>The Vermont Center for Ecostudies advances the conservation of wildlife across the Americas through research, monitoring and community engagement. The Vermont Center for Ecostudies advances wildlife conservation with the combined force of scientific research and informed communities. Our biologists study birds, insects, amphibians, and other wildlife from Canada to South America. Enhancing our work is a legion of volunteer community scientists and naturalists.</p>		

Please provide a brief description of your role at your site:
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Jason Hill is a quantitative ecologist who leads the Mountains Program at the Vermont Center for Ecostudies (VCE). This includes directing the Mountain Birdwatch community science project, involving over 100 community scientists in high-elevation bird surveys each year across the northeastern US. Beyond Mountain Birdwatch, Jason's research includes quantitative modeling of avian population trends and ecosystem studies to understand what drives those trends; science-based management recommendations for land managers and other decision makers; mentoring students and interns through two internship programs and his role as adjunct professor in the Rubenstein School of Natural Resources at UVM; organizing and hosting our monthly Suds & Science public discussion series; and pursuing collaborative, applied conservation science research with colleagues at VCE and partnering organizations.

What is the title of the position you are requesting? **VCE Mountain Ecology Field Technician**

Describe your proposed service position:

The AC member will have an opportunity to engage in three major initiatives that will advance understanding of mountain ecosystems and the processes that are changing them. One of these projects is a long-standing community science project, Mountain Birdwatch, in which the AC member will have the opportunity to interface with > 100 community scientists, offering training, support, and education to these volunteers, and gain leadership skills by co-supervising two summer interns on that project. The AC member's work on two other projects will gather critical baseline data for two new pilot studies examining drivers of change in mountain systems: 1) invertebrate sampling, including invasive earthworms and 2) forest canopy gaps as drivers of avian abundance in the spruce-fir zone. On these projects, the AC member will network with researchers across the Northeastern US to refine protocols, learn identification skills for the species in question (earthworms, birds, bats, and plants), develop training materials for and provide training and support of community scientists involved in these projects, collect data in the field, learn to use technologies such as extracting data from audiorecording devices and ArcGIS online mapping tools, explore interesting and remote mountainous landscapes in NY, VT, NH, and ME, and develop writing skills to effectively communicate science to lay audiences.

Essential Functions. Functions that the applicant must be able to perform. These may be listed in bullet form:

Be able to hear and visually and aurally identify all 11 species that are monitored by Mountain Birdwatch (listed here: <https://vtecostudies.org/projects/mountains/mountain-birdwatch/volunteer-materials>). (These can readily be learned by someone with the desire, commitment, and hearing capabilities using training materials at the website provided.)

Hike 5 miles on back-to-back days in rugged, mountainous terrain. Be comfortable working alone and with others in the backcountry. Think hierarchically and follow dichotomous keys (for the purpose of identifying species).

- Organize, plan, and manage the task flow of the project, in collaboration with the Project Leader.
- Follow directions and take advice and then serve independently to implement the project, checking in regularly for progress reports with supervisor, seeking input or feedback as needed.
- Collaborate with partners and project leader to develop database for community scientist-gathered data. Be able to teach others how to access and use the database and perform quality assurance/quality control on volunteer-submitted data.
- Be able to organize and train novice members of the public to serve as citizen scientists for projects. Plan, carry out, and follow up the training sessions with support for the citizen scientists in implementing it.
- Be familiar with reading maps and be able to navigate through unfamiliar terrain to access field sites.
- Be sufficiently detail oriented to manage project data.
- Communicate clearly with multiple stakeholders throughout the process: scientific advisors, community scientists in recruiting, training, and managing their work, VCE colleagues in functioning as a full member of the organization's staff team, the public in presenting the project in outreach programs.
- Contribute to a collegial, positive team environment.
- Be willing and able to transport oneself to field sites, and flexible enough to conduct field tasks and volunteer training and support at odd hours and in all kinds of weather.

Marginal Functions. These are secondary to Essential Functions, may be negotiable, and can be completed as time allows. These may be listed in bullet form:

- Write engaging and educational blogs and other articles to be used in VCE's outreach materials and biannual newsletter.

Please list any clothing/equipment the member will need that you cannot provide (e.g., hiking boots, waders, rain gear, etc.). As the host site, you are responsible for providing all tools and technical equipment needed for the position (e.g., computer, phone, GPS, etc.).

Outdoor personal gear such as boots, backpack, and camping equipment.

Desired qualifications:

Interest in conservation science, field tasks, and learning relevant new skills  
Interest in and commitment to VCE's mission  
Experience co-supervising interns or technicians  
Experience hiking, camping and navigating in the backcountry  
Solid public speaking and writing skills  
Exposure to some sampling theory and statistical analysis (proficiency is not needed)  
Data collection for scientific research projects  
Strong naturalist skills and beginner-to-intermediate bird identification skills  
Ability to learn new software programs for creating data summaries  
Experience editing web pages

Describe how the position will contribute to the program's National Performance Measures:

1. Number of individuals educated on environmental stewardship; number of individuals with an intention to change behavior
2. Number of miles of trails/streams/rivers improved
3. Number of acres of publicly owned or managed land improved

1: This AC position will provide outreach services for the Mountains research program, including for Mountain Birdwatch and the invertebrate sampling project. Our goal is for these outreach events to reach broad audiences, such as birding, hiking, botanical, and mountain biking clubs.

2: N/A

3: N/A

Provide approximate impact numbers (e.g., miles of rivers treated) in each focus area. Refer to the 2021–2022 Performance Goals document for an explanation on each focus area.		
Focus Area	Projected Impact Numbers	
Water Quality Improvement	Miles of river/stream/trail treated and/or improved	0
Protection and Restoration of Public Land	Acres of parks or public land treated and/or improved	0
Engagement, Outreach, and Education	Number of individuals receiving environmental stewardship education or training	100

Provide additional information (data, statistics, reports, etc.) that demonstrates the compelling need for the proposed position(s).

There is strong scientific evidence that montane ecosystems are warming at 2-5 times the rate of lower elevation zones due to global climate change. (e.g., <https://www.nature.com/articles/srep19219> and [https://www.geo.umass.edu/climate/papers2/MRI\\_NatureCC\\_2015.pdf](https://www.geo.umass.edu/climate/papers2/MRI_NatureCC_2015.pdf)) Globally, many hundreds of research papers have documented that plant and animal species are responding to these changes by moving upslope and towards the poles as they seek out areas with their preferred suite of environmental conditions. We can reasonably expect these changes to occur sooner and faster for species whose core populations already exist at relatively high elevations and latitudes. Indeed, our colleagues have used sophisticated models to predict that global climate change will lead to substantial ranges shifts for montane species in the northeastern U.S. For example, we can expect to lose 50% of our sub-alpine spruce-fir forests over the next 200 years to the upslope movement of hardwood forest communities, and we may entirely lose Blackpoll Warblers from New England as their populations shift further into Canada. (<https://link.springer.com/article/10.1007/s10980-016-0429-z> and <https://link.springer.com/article/10.1007/s10980-016-0429-z>) We created Mountain Birdwatch in 2000 to address these challenges, with the goal to monitor the distribution and abundance of montane birds across northern New England and New York. The inaccessibility of this largely roadless ecosystem poses a barrier to monitoring the unique assemblage of bird species that breeds in these spruce-fir forests.

Describe how the supervisor has adequate time and leadership experience to manage an ECO member?  
Please explain how:

Yes. The AC member's engagement in training and supporting the two summer interns on MountainBirdwatch and providing support to 100+ community science volunteers will free up Jason Hill's time to supervise, support, and collaborate with the AC member. Jason Hill has directly supervised ~50 field techs and interns over the course of his career. He takes this role seriously, and is equally committed to supervision, training, and support in order to ensure high performance and accurate data collection by the AC member and to ensure that the member has a rich, rewarding, and positive learning experience that advances them professionally and personally.

Describe networking opportunities that will be available to the member during service?

Yes. The Mountain Birdwatch community scientists include state biologists (from New York, Vermont, New Hampshire, and Maine), federal biologists (from the White and Green Mountain National Forests, USGS, and the US Fish and Wildlife Service) and representatives from numerous private conservation organizations and universities (e.g., SUNY ESF, Antioch and Plymouth State). In addition, there will be substantial coordination with other biologists in New England who study earthworms and disturbances (e.g., fire waves) in the spruce-fir montane forest zone.

Does your organization currently host or plan to host a member from a different AmeriCorps program? If yes, explain the duties of the other AmeriCorps position(s).

No.

In what ways does your organization support diversity, equity, inclusion, and environmental justice?

We at the Vermont Center for Ecostudies know that biological communities and organizations are strongest and most resilient when they are most diverse. However, we have much work to do to create and sustain diversity and equity in the field of ecology itself—one of the least diverse fields of science. As an organization that aims to “unite people and science for conservation,” we recognize that to truly advance that goal we must create a culture that celebrates diversity, fosters inclusivity, and values dissenting opinions and rigorous examination within our own community. Diversity drives innovation. We will more actively seek to increase the diversity of our staff, board, volunteers, and supporters to more closely resemble the diverse communities that utilize our science and research. We are committed to a workplace free of discrimination based on race, ethnicity, or nationality; gender, gender identity, or sexual orientation; socio-economic class; age; accessibility needs; religion or worship practices; veteran or military service status; education; or political affiliation. Equity is our ethos. We strive to implement policies and practices that ensure everyone has fair, equitable access to opportunities to contribute and thrive. To achieve this goal, we must identify and break down barriers that prevent some groups from fully engaging with us through employment, volunteer, and educational opportunities. Inclusion empowers. People who feel included are creative and inspired by the culture around them to grow and to reach outside their community. Only by feeling included can any of us reach our potential as individuals, and as collaborative actors. We will know we are inclusive when we see it develop in our colleagues—as they shed their skins and become inspired speakers and actors in their professional work, willing to take risks, and to grow.

We have already  
increased the diversity of our full-time staff within the last 6 months;  
begun to develop two intern positions specifically reserved for Black, Indigenous, People of Color professionals; these interns will start in 2022;  
greatly increased our promotion of the science, research, and importance of Black, Indigenous, People of Color naturalists and biologists, and have and will continue to amplify their voices through VCE’s social media and other outreach channels;  
prominently displayed our Commitment to Diversity, Equity, and Inclusion statement on our website;  
started a dialog with local indigenous leaders to develop a land

acknowledgement and are working together to further our shared biological interests; incorporated a spoken land acknowledgement statement to our online events;

We further endeavor to

explore avenues for increasing diversity within the birding and naturalist communities and improving access to naturalist pursuits in Vermont;

bring increased focus to the biodiversity value of urban landscapes and we just hosted an online science discussion event with Dr. Vivek Shandas about his work on urban heat waves impacts on human and environmental health;

expand recruitment for employment opportunities beyond the Northeast and to historically Black colleges and universities and urban community colleges;

reexamine our partnerships to collaborate with racially diverse institutions;

and evaluate our outreach, employment, and programming practices and priorities to build diversity across our organization—including volunteers, interns, staff, board, and constituents.

The program will begin mid-September 2021 and end in August 2022. We look forward to meeting with you!

