

U.S. Fish & Wildlife Service

# Youth in the Great Outdoors

*Experiences of a Lifetime*

Youth Employment Report 2011





*YCC interns commute to their work project site, Kenai NWR*

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## Introduction

The U.S. Fish and Wildlife Service (FWS) has a long history of engaging our nation's youth through employment, education and recreation programs. Last year, nearly 350 FWS offices employed 2,389 young people, offered outdoor learning programs for nearly 750,000 teachers and students, and engaged approximately 10 million school aged individuals in outdoor recreation activities. In typical FWS dedication and innovation, our staff has consistently met youth engagement challenges, far exceeding expectations and goals set by the Department of the Interior since 2009 by increasing youth hires by over 191%.

Our efforts have encompassed employing hundreds of teenagers through our community based Youth Conservation Corps (YCC) programs, to thousands of college-age students who were hired directly by field offices or through internships offered by partnering organizations. Regardless of the hiring program, the FWS has consistently offered quality job experiences, training, and mentoring programs to build lifelong skills and career opportunities. While we have been very successful in the past, we also recognize that new challenges lay ahead, such as engaging more urban and ethnically diverse youth in our work and leveraging limited resources to build new and innovative programs.

As the following pages illustrate, our programs are not just about numbers, but about the dedicated staff, partners, and volunteers all over the country who invest their time and skills to build our programs. Hundreds of individuals regularly provide young Americans with the basic job skills for entering the general workforce, as well as the foundational knowledge and abilities needed to become conservation leaders. More importantly, our programs are designed to build future ambassadors who will champion the conservation of our country's natural and cultural resources.

Personal accounts from hundreds of youth of all ages and from all types of backgrounds throughout the nation demonstrate that they have been challenged in ways they never thought possible. Some, who never traveled further than the city or hometown they came from, had only heard or read about the natural wonders they were now experiencing firsthand at a national fish hatchery or national wildlife refuge (NWR). For some, the challenge to remove themselves from their comfort zones was something they will always be grateful for; they no longer fear taking a walk in the woods alone or holding a snake they now proudly know how to identify. As a result of their field experiences, many gained the practical "hands-on" knowledge of what they were taught in science and math classrooms.

The following highlights are a mere sampling of the thousands of experiences that occurred over the past year throughout the FWS. They were compiled from personal accounts from employed youth, FWS staff, or partners. Read on and you'll be amazed by the bright and energetic young people who are the future of our country.

A listing of the various partners who worked closely with the FWS to hire, educate and mentor youth is located at the end of this report.



*Deanna Russell holds a Kittlitz's Murrelet chick, Kodiak NWR*

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## Youth Conservation Corps

Year after year, hundreds of high-school-aged students from all over the United States take part in the FWS's YCC Program. These summer jobs are obtained by youth between the ages of 15 and 18, and for many, it's the first paying job they've ever had. The students are typically recruited on a local level through newspaper announcements, high school job fairs, science classes and clubs, and state labor offices, or announced during special visits to the schools by FWS staff.

For some communities, the YCC program is a big deal, and parents anxiously await the news of whether their sons or daughters have been chosen. Sometimes local officials such as city mayors are invited to perform the required random and impartial drawing from the pool of applicants. There are several reasons these opportunities are so popular. Not only are the youth provided gainful employment in America's great outdoors for up to eight weeks of the summer, and not only are they exposed to various work practices intended to enhance their individual skills and work ethic, but they also have the opportunity to learn about the importance of wildlife conservation through environmental education, to learn about the methods used by the FWS to manage natural resources, and to participate in hands-on experiences that tie directly to the mission of the FWS, which is to "conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people." Where else can you work, learn, and have a great time doing it in the great outdoors, all for the benefit of wildlife?

This is a win-win situation for the FWS because our NWRs, fish hatcheries, and other field offices benefit too. These teenage crews complete a wide variety of tasks that would otherwise remain undone or require staff be removed from their primary tasks. YCC program participants complete these projects at a considerable cost savings to the FWS. In 2011, the total appraised value of nearly 2,000 projects that were carried out on over 156 FWS sites was \$4 million. The cost for having YCC crews do the work was \$2.7 million, which is a \$1.3 million savings! The following de-

scriptions provide a flavor of the incredible experiences young people can have working for the FWS.

**Alaska Maritime National Wildlife Refuge, AK** - Excerpts from a report written by FWS employees Ingrid Harrald, YCC Crew Leader, and Lisa Matlock, Education Specialist.

The Alaska Maritime National Wildlife Refuge (AMNWR) continued to grow and expand their YCC program in 2011. With additional funding from the YGO Initiative, the refuge was able to continue its successful multi-faceted program, incorporating youth experience and training in the fields of Visitor Services, Biological Sciences, and Maintenance. Four youth were selected for the 2011 YCC program: Ithaca Sorensen and Traven Apiki from Homer, Alaska, and Jewel Jackson and Alaina Kuchenoff from Sand Point, Alaska.

Recruitment was done via flyers, radio, newspapers, and outreach to teachers and community members in Homer, and through a camp partnership with the Qagan Tayagungin Tribe in Sand Point. The Homer-based YCC crew began their internship at the AMNWR

with a thorough training to prepare for the summer's scheduled responsibilities. This training included seabird biology and monitoring techniques, GPS, First Aid and CPR, interpretive techniques, video editing and camera techniques, as well as an overview of the YCC, FWS, and AMNWR programs.

The first month of the YCC program was spent in Homer working on FWS projects and assisting partner organizations. These projects helped teach the YCC crew many job-related skills. They learned how to use tools safely, how to create trails, and how to determine a straight line. They learned the proper knots to use, how to photo-document for surveying purposes, and how to restore stream banks to prevent erosion. During



*Ithaca and Traven working on sign posts.*



*From left, Ithaca, Jewel, Ingrid, Alana, and Traven*



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*Ithica and Traven on board the M/V Tiglax*

*Ithica and Traven with Chowiet Survey Crew overlooking the M/V Tiglax*



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this time they were also able to observe and learn about a multitude of conservation-oriented jobs.

**Chowiet Seabird Field Camp:** The YCC Crew’s nine-day trip was packed with a multitude of jobs and responsibilities. Once en route on the *M/V Tiglax*, the crew was rotated through boat shifts that included working in the wheelhouse, galley, and on deck.

Activities included plotting the ship’s course and time of arrival, washing dishes, dropping anchor, loading/offloading equipment, and preparing meals. Their first biological job was to deploy two sonar buoys into the Gulf of Alaska to try to track Pacific Right Whale vocalizations. From Chowiet, they headed straight to the Shumagin Islands and spent a week assisting in near-shore surveys of seabirds. This was an amazing experience for the YCC Crew, and by the end of the week both crew members were thoroughly trained and able to perform biological studies as well as the duties of a seasoned biotech. They became confident in their ability to identify dozens of species of seabirds and accurately count thousands of birds on one small island. The true value of the trip, however, was the experience and knowledge gained from living on the boat and listening, sharing, and learning from the stories and experiences of the boat crew and biologists.

**Sand Point:** The AMNWR education specialist, Lisa Matlock, had already begun work with the Sand Point-based YCC Crew when the *M/V Tiglax* arrived. The three crew interns had presented a variety of hula hoop ecology classes and other nature games for the K–4th graders for the first few days of the Sand Point Stewardship Camp. This was also the first time the YCC interns were able to work together. They met to plan the camp lessons for the following week and decide who would take on each of the responsibilities. They decided to focus their second-week lesson plans on the following topics: sea otters, native plants, salmon food chain, GPS activities, fish prints, intertidal life, salmon biology, and marine debris. This was a huge responsibility and a lot of work for the YCC crew; they had a steep learning curve and discovered all kinds of hidden talents they never knew they had. They excelled at interpretive techniques and worked hard at making the learning fun. The YCC crew made sure every class got outside for part of the day, even if it was raining. They also tried to have every class end with a game. The activities were a huge success and campers came away with a clearer understanding of the role of the FWS and how the refuge plays a role in their lives.

The most spectacular experience was on the final day of camp, when the crew took the *Iqyak* (the ancient Aleut name for sea kayak) to be blessed and



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*Jewel and Alaina lead a bug collecting at the Sand Point Stewardship Camp.*



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*Alaina dances at the final day of Sand Point Stewardship Camp.*

launched. An elder blessed the kayaks, while the campers (dressed in full regalia) sang Unangax songs and performed traditional dances. The sun was shining and humpback whales were swimming in the cove, and the YCC crew felt honored to be able to participate in such a cultural and ceremonial event. When the ceremony was over, all the campers were able to take a turn paddling the *Iqqak* around the cove.

Once back in Homer, the crew was busy with year-end wrap up tasks. They looked through the thousands of pictures and videos they had taken and did evaluations. The YCC crew also designed a Powerpoint presentation and two short videos on their summer

adventures for the Homer community. The presentation was very well received, and requests for applications for next year's program are already being made. The interpretive, scientific, and construction skills that the YCC crew acquired during this summer were evident as they presented. After the presentation, two YCC interns were hired as Visitor Services employees at the Islands and Ocean Visitor Center for the remainder of the summer, demonstrating that the program successfully prepares youth for jobs with the FWS.

Here are a few snapshots of other experiences from around the country of the great work YCC crews accomplished this past year:



*Ithica and a camp member exploring the traditional Iqqak on the day of the blessing of the kayaks.*

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*The Crew: Tana Nulph- SCA Crew Leader, Dalton DiPaoli- YCC, Ashley Stoker- YCC, Patrick White- YCC, Tristan Fogerty- YCC, Margaret Chaika- Volunteer, Cody Olson-Jones- YCC, Ron Hopper- Fish Biologist.*

### **Ennis National Fish Hatchery, MT** *by Connie Keeler-Foster, Hatchery Manager*

This year the Ennis National Fish Hatchery (ENFH) hired 5% of the Ennis High School in the summer YCC program! The five youth ranged in age from 15 to 17, including one young woman and four young men. The goal for the YCC program was to provide hands-on experience that would encourage local youth to become environmentally aware, and to recognize the role the FWS plays locally and nationally in natural resource stewardship. ENFH was understaffed this fiscal year, so the hatchery hired Tana Nulph with the Student Conservation Association to act as the YCC crew leader for the summer. She did an excellent job!

Every work experience at a hatchery includes many hours spent working with fish. YCC participants helped feed, sort fish by their sexual readiness, spawn fish, clean raceways, clean baby fish tanks, and collect mortalities. They also participated in stocking adult broodstock into local youth ponds.

Outreach plays a very important role at the ENFH, and when an opportunity arises to share outdoor experiences with the public, all staff members—including the YCC interns—are called upon to assist in any way possible. One outreach effort that all interns participated in was the Father's Day Kids Fishing Derby

hosted by the Lion's Club at the Lion's Club park in Ennis, MT. Hatchery staff and interns stocked the pond with three hundred large adult broodstock just prior to the event. Interns were on hand to weigh and measure the fish, and the Lions Club filleted the day's take. Burgers and hotdogs were provided, and a good time was had by all!

The summer of 2011 was enhanced by the interactions of the hatchery staff, volunteers, Student Conservation Interns, and the YCC Crew from Ennis High School. A great deal of work was accomplished that furthered the mission of the FWS and the hatchery program. Ashley will be returning next year as a youth leader. Cody wants to attend college in the fall to study wildlife. Patrick will attend college in Butte, Montana in the fall with a focus on entomology. ENFH staff concluded that they had met and surpassed the objectives set for the YCC program, which enriches not only the lives of the students, but also all those who participate as well.



*YCC intern Tristan loves fish.*



*Cody: Can you believe these fish?*



*Patrick and Cody eagerly await the next catch.*



*Volunteer Davey Sargent and YCC intern Ashley wait for fish to become anaesthetized.*

## San Diego National Wildlife Refuge (SDNWR) Complex, CA

by Crew Leader Janelle Durrer and Refuge Biologist Jill Terp

The YCC crew received educational lectures and field trips through the program. Some of these experiences included behind-the-scenes tours at Sea-World and San Diego Zoo Safari Park, a docent-led tour of the San Diego Zoo habitats exhibit at the Natural History Museum, and a tour of the South Bay Salt Ponds to show how migratory birds use the habitat.

The crew was able to help in the 2011 release of the federally endangered captive-bred Light-Footed Clapper Rail on the San Diego River Preserve. The breeding program is a joint effort between Sea World, Chula Vista Nature Center, and the FWS. Enrollees assisted in the banding of the birds, transport of their carriers, and release into the marsh.

The crew was also instructed by a FWS biologist on the protocol for oak tree monitoring and learned about the importance of oak in the ecosystem, as well as past and future restoration actions. Afterwards they monitored the two hundred planted oak seedlings on the SDNWR, noting germination and height.



Youth Leader Vanessa follows proper protocol in monitoring an oak seedling.

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San Diego NWRC YCC crew interns from left: Aseret Sperry, Chase Womack, YCC Crew Leader Janelle Durrer, Youth Leader Vanessa Adame, Kristo Garcia and Jasmine Stevens visit a sustainable farm.



Aseret helping with Clapper Rail release.

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## Dale Hollow National Fish Hatchery, TN

by Andrew I. Currie, Hatchery Manager

Clay County Tennessee residents Will Wright, Brooklyn Cherry, Jaylan Hancock, and Daryean Daugherty spent the summer working together as interns on the Dale Hollow National Fish Hatchery's (DHNFH) YCC crew.

The crew helped the hatchery staff with feeding fish, collecting and counting dead fish, cleaning tanks and raceways, moving fish around the hatchery, distributing fish to local waters, performing janitorial work, maintaining the public fishing area, assisting with the annual fish health inspection, and carrying out grounds maintenance.

One of the highlights of this year's program was that the crew got a chance to tour Wolf Creek NFH in Kentucky and spent time in the new visitor/environmental education center. Daryean was brought back as a youth leader this year because of her outstanding performance as a YCC intern last year. The extra help provided by the YCC interns was greatly appreciated by the hatchery staff. Having YCC interns take on some of the everyday chores freed up hatchery staff to address the station maintenance backlog.



*The Dale Hollow crew visiting the new Wolf Creek Fish Hatchery visitor center in Kentucky*

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*Brooklyn and Greg Faulkner cleaning raceways*

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## Canaan Valley NWR, WV

by Crew Leader Kurt Johnson

Five students took part in the YCC program this year. Andrew Hedrick, Cassie McFarlan, Amber Nicely, Rick Nolan, and Gabriel Salovarra had opportunities to work with many of the refuge employees, as well as with interns, volunteers, and members of the community. Here's a personal view point of the program as seen from the eyes of the FWS Crew Leader Kurt Johnson and the rest of the crew:

This was the third year that Cassie participated in the program. This time around she was promoted to the position of Youth Leader. When called upon to guide and supervise the group, Cassie performed admirably, despite some comments and grumblings from other crew interns.

Andrew was a quiet individual who really came out of his shell over the course of the summer. He revealed himself to be a knowledgeable, skilled worker, and over time he participated more and more in group conversation, where his contributions often proved unique. Amber was difficult in the beginning, often refusing to work or participate in activities and discussions. Over time, however, she improved and became a valued member of the team.

Rick and Gabe were very outgoing and gregarious, and well-informed about current events, politics, and cultural trends. It was good to have a city-dweller like Gabe around; he provided an outlook on the world that was perhaps new and unfamiliar to the others, and he seemed to learn and absorb a lot about rural and small-town life.

Outside reports from relatives and community members praised the program and the staff involved, revealing that the YCC program here is respected as a valuable educational and work opportunity in an area where such jobs are rare. For the most part, this group demonstrated that they were conscientious, trustworthy workers. It is always a fine line to walk between being a boss and treating the crew like employees and/or friends on the one hand, or being a counselor/teacher/babysitter on the other. This summer, because of the perceived maturity of the students involved, I felt



Amber Nicely, Gabe Salovarra, Rick Nolan, Cassie McFarlan, Andrew Hedrick



Rick, Cassie, Maintenance Worker Kevin Koontz, and YCC Supervisor/Maintenance Worker Kurt Johnson pose with an American Hiking Society volunteer crew on a newly constructed and installed bridge on the Brown Mountain Trail.

comfortable giving them a bit more freedom, while also trying to remain vigilant for times when that trust was used or taken for granted.

Here is a sampling of comments from the program feedback forms:

*'This is one of the most wonderful job experiences that I have ever had.'*

*'Being able to do something different every day made the job constantly exciting.'*

*'I looked forward to work every morning because of the good nature of my supervisors and co-workers.'*

*'I have grown a lot from this experience and I will never forget this summer.'*



Park Ranger Jackie Burns, Rick, Andrew, Gabe, and volunteers P. J. Hallberg and Andy Dalton pose triumphantly over a defeated mountain of weeds.



Digging out a vernal pool. A mud fight ensued.

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**Dexter National Fish Hatchery and Technology Center, NM**

*by Crew Leader Greg Barela*

To recruit this year's YCC crew, announcements were made by the Dexter High School and Hagerman High School guidance counselors and the Biology and Vocational Agricultural teachers who explained the program and its benefits. A job fair was also conducted at Dexter High School. In order to maintain impartiality in the selection process, the mayors of Dexter and Hagerman were responsible for randomly drawing names from the applicant pools from both towns. Rebecca Turpin (Youth Leader), Shelby Williamson, Shaunee McCaul, Tevin Vaughn, Travis Reynolds, and Greg Barela all accepted positions for the summer.

The Dexter National Fish Hatchery and Technology Center contains 72 outdoor fish ponds that house 18 different federally listed species. The YCC interns were responsible for sweeping eight ponds and preparing them for use. Interns removed organic matter, dirt, feed, rocks, weeds, moss, and fecal matter from the ponds to prevent bacterial growth, diseases, and poor water quality. In order to help prevent any contamination of the lined ponds from debris, the pond edges were cleaned on a continuous basis by YCC interns, who were also responsible for decontaminating cleaning tools with a bleach solution prior to moving from pond to pond.

Throughout the program, YCC interns assisted in the counting, sorting, and transporting of fish from the raceways to the ponds on hatchery property and from the ponds to the raceways. The counting and sorting of the fish was conducted to get an accurate account of fish inventory for the purpose of determining the number of fish available for stocking out.

Two thousand catfish were harvested from one of the ponds and placed into a raceway on hatchery property in preparation for the stocking of lakes located within the state of New Mexico. Of those two thousand, five hundred were transported to nearby Lake Van, where they were released by YCC interns and Hatchery Staff; eight hundred were transported to Zuni Pueblo; two hundred were transported to New Mexico Game and Fish; and one hundred were transported to Clovis, NM.



*YCC Members during the harvesting process of razorbacks*



*YCC members removing vegetation growth from around ponds.*



*YCC Members removing razorbacks from the transporting vehicle to raceway*



*YCC members sweeping ponds and preparing for use*



*YCC Members harvesting catfish from pond 9b and later placing them in raceway (above)*

## Toppenish National Wildlife Refuge (TNWR), WA

by Crew Leader Blythe Monoian

The Toppenish YCC crew consisted of Ayla Lewis, Philip Lewis, Emily Black-eagle, and Tiffany Martinez, all of whom live in Toppenish, WA. Throughout the summer, the crew received environmental education through hands-on experiences, discussions, a Spike camp, and activities and trips to locations of environmental importance and conservation. Educational days were taken once or twice every two weeks, most often on Fridays. The crew traveled to various locations, including the Yakama Nation closed area, Whitman Mission, Lewis and Clark State Park, Satus TNWR Units, and the Columbia and McNary NWRs. At these sites, environmental professionals educated the crew on topics related to the site through hands-on experience and presentation. The educational experiences included identification of plant and animal species, awareness of invasive plant and animal species, GPS mapping, knowledge of local Native American history, and a growth of understanding in regard to the importance of the various programs promoting environmental conservation.



Crew setting up duck traps

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Crew relaxing around a camp fire at a spike camp

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Crew interns assisting with banding a duck

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Crew interns taking in the scenery on a kayak trip

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## Youth Employment through Partnerships

Another opportunity for youth to become employed to support the mission of the FWS is through our partnerships with other organizations. Currently, nearly one half of the youth who work on FWS-related projects are hired by third parties who establish cooperative agreements with our field stations and Regional Offices, and some even find jobs at the national level. Some of these relationships involve multiple organizations and funding sources that provide opportunities for youth that otherwise couldn't be funded.

In some cases, having these partners, whose sole reason for being is to provide conservation-related employment opportunities for youth, provides the FWS with a professional service that requires only a minimum amount of effort. For instance, the FWS provides some basic essentials, such as housing at the field site and the equipment, specific training, and supervision for the tasks at hand, and the partner then takes care of all the other administrative logistics. They send out the job announcements based on station needs, provide the station with a pool of applicants, recruit and provide general training, take care of stipends and paychecks, and complete all the other administrative tasks that would normally cost the FWS a great deal of time and money. This also allows our staff more quality time to nurture the youth through environmental education, mentoring, career advice, and exposing them to opportunities that in some cases are life-changing experiences.

Not only are our partners passionate about and dedicated to the conservation of our nation's natural resources, but they are also devoted to providing employment opportunities to our nation's underserved youth. Our partners are often in a better position and better equipped than our station managers to access avenues of recruitment from a diverse population of students. We have several internship opportunities through which our partners specifically target minority groups; two of these programs, the Career Discovery Internship and the Tribal College Internship Programs, were highlighted in the *U.S. Fish and Wildlife Service Youth in the Great Outdoors 2011 Annual Report*.

Our partners come in all shapes and sizes, from the large nationally known Student Conservation Association (SCA) and AmeriCorps to our small locally based non-profit Refuge Friends' groups; from high schools to universities; and from state and local programs to tribal entities. The FWS established over seventy partnerships in 2011 in all fifty states and hired over 1,100 youth (see the full list of our partners at the end of this report). Over three hundred FWS units were served by these partner youth, who provided nearly 340,000 hours in support of a diversity of FWS programs. Following are just a few examples of these great partnerships and the wonderful eye-opening experiences the youth had while supporting the FWS.

The SCA is one of our most frequent partners. In 2011, over 250 youth were hired through SCA, serving at over 280 FWS sites throughout the nation and contributing over 131,000 hours of work. Here are just a couple examples of the great contributions made through SCA:

### **John Heinz National Wildlife Refuge, PA** *by Refuge Manager Gary Stolz*

This past summer, John Heinz NWR was responsible for coordinating an effort that employed forty inner city high school youth, eight youth crew leaders, and one overall group leader for a six-week conservation camp program.

These high-school-age crews were supervised by college-age crew leaders who were all hired through the SCA, which leveraged FWS support with funding from Amtrak, the William Penn Foundation, Exelon, Boeing, PNC Bank, Timberland, and the Philadelphia Youth Network. Four crews of twelve were divided into four work areas.

One crew concentrated on the Refuge, and the other three were coordinated through the Refuge to do offsite work at various locations throughout the Philadelphia area, including Valley Forge National Historic Area and Fairmount Park (part of Philadelphia Parks and Recreation). The bulk of all four crews' work involved trail maintenance, invasive species removal, and native plant restoration.

Each crew was provided with four hours of environmental education programming per week, plus one field trip as well as a three-day camping trip at the end of the program.

The high school students that were hired represented twenty-seven different inner city schools from Philadelphia, and they were all paid the state's minimum wage of \$7.25 per hour.



*The John Heinz NWR Crew posing for a photo in between clearing brush from one of many Refuge trails*



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*Crew working on clearing competing vegetation from a native plant restoration site*

## **Student Conservation Association Wilderness Fellows**

*by National Wilderness Coordinator  
Nancy Roeper*

The Natural Resources and Conservation Planning Division of the National Wildlife Refuge System, in cooperation with nineteen refuges across six regions, and in partnership with the SCA, the Aldo Leopold Wilderness Research Institute, the National Park Service, the Bureau of Land Management, and the U.S. Forest Service, established a Wilderness Fellowship Program to provide opportunities for students to gain valuable career experience while helping advance stewardship of wilderness resources. Natural processes predominate in wilderness areas, making them an important part of a national strategy for monitoring long-term ecological change. Each Wilderness Fellow spent up to six months on a wilderness refuge to support the development of wilderness character monitoring and associated tasks. Fellows had the opportunity to take part in training courses, develop an inventory and monitoring strategy, produce baseline wilderness character data and assessments, and gain a better understanding of FWS culture. Here is a blog account from one of the fellows, *Monica Patel*, which sums up the types of experiences these students are having. Monica worked this year at Great Swamp and Edwin B. Forsythe National Wildlife Refuges in New Jersey and Moosehorn National Wildlife Refuge in Maine. She has a master's degree in environmental management from the Nicholas School of the Environment at Duke University:



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*Refuge Manager Gary Stolz providing environmental education to the Philadelphia crew*

## **Self-Discovery and Solitude in the Wilderness**

What does 'wilderness' mean to you? You've got to love this answer, credited to a 16th-century European settler: a "dark and dismal place where all manner of wild beasts dash about uncooked." In recent decades, most of us have grown more appreciative of the country's last remaining wild places.



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*Monica enjoying the great outdoors on the coast Maine near Moosehorn NWR*

Lately, I have been thinking about how I view wilderness. It all started with a hike into the woods.

As I hiked in Maine's Moosehorn National Wildlife Refuge congressionally designated wilderness this past summer, I stood stunned at the threshold of a lush forest of magnificent balsam fir. I watched the sun's rays filter through the dense canopy, illuminating life on the forest floor. Distinct scents filled the forest. I sat on a bed of needles coating the foot trail and in the silence asked myself, "How did I get here?"

I grew up in a bustling city, full of noise and congestion—like so many young people these days. My fondest memories are of playing and exploring my backyard and the few urban parks of the city's

concrete jungle. But the parks' manicured green patches—complete with cautionary signs and fences—were by no means wilderness, a place where one can retreat from civilization.

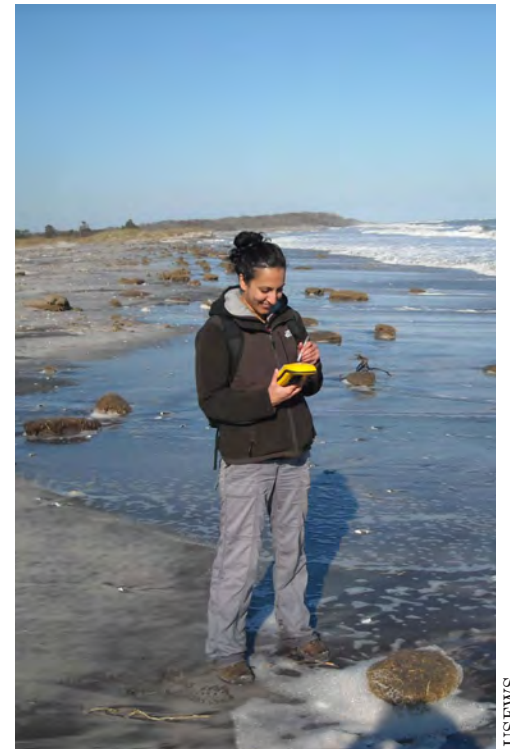
Retreating from civilization has become harder in this age of technology, when wireless internet, smart phones, and social networks have forever changed the way people perceive and interact with each other and nature.

Luckily, I decided to unplug. I shut off my cell phone, picked up my compass and map, and headed for wilderness. Five minutes into my hike, all my senses kicked into high gear. With each step I could feel the chatter of my mind subside. At first, I was apprehensive. Accustomed to all sorts of safety nets, I was entering a new "society,"

where nature prevails and requires self-reliance from every visitor.

Before long, the forest opened up to a bog where green sphagnum moss blanketed everything from decaying tree trunks to rocks. There was no beaten-down path or honking traffic; as far as I could tell, only a moose had traversed these parts recently. This was an awesome moment. I felt incredibly connected to something larger and more intricate than I could ever understand, than any technological invention could provide.

Since that moment, wilderness has become for me more than just a place for plants and wildlife. It is a whole greater than the sum of its parts—a place for solitude and self-discovery. As I continue to discover the meaning of wilderness, I am also uncovering a part of who I am.



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*Monica is conducting a shoreline survey mapping the spring and fall mean high tide in order to access how the shoreline is changing*

**Kaua'i National Wildlife Refuge Complex, HI**  
*by Kaua'i staff*

Two AmeriCorps interns, Anastasia Chase and Scott Clapsaddle, in partnership with the non-profit organization Kupu, worked with the Refuge's Environmental Education program to develop a curriculum series based on the life cycle of the Laysan Albatross. Kupu is a 501(c)(3) Hawaii-based non-profit that aims to provide experiential education, as well as job training, leadership, teamwork, and life skills development opportunities to help youth and young adults succeed in life while also serving their communities. Here's what these two interns accomplished:

The Albatross Life Cycle Program was developed during the 2010–2011 school year and was offered to second grade classes on Kaua'i. In its pilot run, the program worked with five schools, including public, private, and charter schools, and twelve individual classes on the north and east sides of the island, reaching approximately 245 students. The purpose of the Albatross Life Cycle Program is to teach about bird biology, life cycles, and native species, as illustrated by the Laysan Albatross. As students learn about the anatomy, adaptations, and behaviors of albatross, they also gain a better appreciation for birds, native species, science, the environment, and stewardship.

Lessons for this six-part program were developed using the framework of the life cycle of the Laysan Albatross. Second grade was selected as the target age group in order to correlate with Hawaii State Standards and Benchmarks for science. One of the second grade requirements is understanding "how plants and animals go through life cycles," which can be illustrated very clearly in the natural history of seabirds, and the Laysan Albatross in particular. Each lesson built upon previous knowledge and included an interactive or movement-oriented component, as well as visual aids, props, rhymes, and active games.

The series included multiple classroom visits engaging the children in different facets of the Laysan Albatross's life, from arrival at the Refuge to fledging. The last lesson of the series involved a field trip to the Refuge, where students observed the Laysan Albatross on-site and demonstrated their knowledge (based on the culmination of lessons learned in class) in the form of a scavenger hunt. The interns assisted in contacting and coordinating multiple school class visits, as well as handling the on-site logistics of the scavenger hunts utilizing various volunteer-manned activity stations. In addition to the Albatross Life Cycle Program, they assisted with many other on- and off-site EE programs throughout their internship.

The interns were also given individual assignments, including updating and completing a Nursery Handbook to be given to volunteers as an orientation document; assisting volunteer groups with nursery maintenance, outplanting, and weeding; scheduling and leading various educational groups (e.g., Road Scholar) in an interpretive program; working with partnership programs in summer camps; and assisting the Visitor Services program with day-to-day operations (e.g., answering phones and directing visitor parking).



*AmeriCorps intern, Anastasia Chase, outplanting Hawaiian native plants at Kilauea*



*AmeriCorps intern, Scott Clapsaddle, presenting a lesson in the Albatross Lifecycle Program to 2nd graders of Kilauea Elementary School*

## Student Temporary Employment Program

For students who are not quite sure whether they want to pursue a career with the FWS but are willing to gain some valuable professional experience, the Student Temporary Employment Program (STEP) is the best option. This program was designed to introduce talented students to the advantages and challenges of working for the federal government, to provide opportunities for students to combine academic study with on-the-job work experience, and to give students the chance to earn money while continuing their education. It provides maximum flexibility for the students because work schedules may be part-time, full-time, alternating, or concurrent with course work, and the positions are not required to be related to the student's academic or career goals.

Some basic requirements include being enrolled or accepted for enrollment in a program of study leading to a degree, taking at least a half-time course load, and maintaining good standing with the academic institution by upholding the grade point average requirements of the school.

In 2011, the FWS hired 375 STEPs who participated in a wide variety of positions in all occupational groups (Professional, Administrative, Technical, Clerical, and Wage Grade). Here are some examples of what these students are doing.

**Amber Green** is a student at the University of Maryland Eastern Shore (UMES), where she is pursuing a Bachelor of Arts degree in English. She is a writer and contributing editor for the university's *Spotlight Magazine*. She has served as the secretary of Satellite, a spoken



word and poetry organization, and most recently served as the vice president of an all-arts organization named *Rhythm and Reason*.

This past summer, Amber worked as a STEP intern for the FWS, where she helped people connect with nature on their own terms at Chincoteague National Wildlife Refuge. Amber's exciting summer was filled with multifaceted activities that included providing informal interpretation from atop the historic Assateague Lighthouse, welcoming and orienting refuge visitors to the Herbert H. Bateman Educational and Administrative Center, and conducting short presentations to educate visitors about refuge habitats and the diversity of wildlife within them.



**Chao Xiong** is currently a student at the University of Wisconsin–River Falls. He is studying agriculture engineering and technology, but is also interested in conservation and biology. He just finished his first year of college and is now employed as an intern maintenance mechanic at the St. Croix Wildlife Management District through the STEP. He started out by undergoing a great deal of the training required for that position, including skid steer, doze, excavator, and tractor operation. Chao is now certified to operate those vehicles and has done brush mowing with a mower on a skid steer, landscaping with the dozer, maintenance on vehicles (oil changes, tire pressure checks, etc.), seeding with a seeder attached to a tractor, hauling dirt and concrete with the dump truck, and a lot more.



**Daniel Zoto** is a recent graduate of the University of Massachusetts, Amherst, with a degree in anthropology that focused on the sub-field of archaeology. Dan is currently working as a STEP intern for the FWS's Cultural Resources department, assisting regional archaeologists in excavations, background research, lab work, mapmaking, and other office tasks associated with cultural resource management on national wildlife refuges in the Northeast. As he puts it, "My time as an archaeological technician with the U.S. Fish and Wildlife Service's Cultural Resources department has been exceedingly positive. My real work experience with the Service has greatly increased my understanding of archaeology and federal regulations on managing cultural resources and historic sites. I have been very fortunate to be able to travel with the Service and have participated in archaeological surveys on national wildlife refuges in the states of Massachusetts, Virginia, and West Virginia. This experience has led to a position as an archaeologist with University of Massachusetts Archaeological Services."



## Student Career Experience Program

For those students who know that they want a job in the conservation field and are considering the FWS as one of their options, acquiring a position in the Student Career Experience Program (SCEP) is the best option. This program was established to recruit high-quality employees into the federal service, support equal employment opportunity objectives, provide exposure to public service, and to promote education. Managers and supervisors use this program to bring undergraduate, as well as graduate or postgraduate-level students into the workforce, while also offering them the opportunity to evaluate employee performance in real work situations.

The eligibility requirements for SCEP students are similar to the STEP program. The SCEP requires the student to be assigned a position related to the student's academic field of study; a written agreement initiated by the FWS and signed by the student, the school, and the FWS; and completion of at least 640 hours (sixteen weeks) of career-related work with the FWS prior to completion of (or concurrent with) academic course requirements.

The FWS provides financial assistance (which always includes salary and may include tuition assistance), travel and transportation expenses between the school and duty station, and low- or no-cost housing. Students are also eligible for health insurance, life insurance, retirement, and leave accrual on the same basis as permanent employees with comparable work schedules. Once the student has graduated, they are eligible for non-competitive conversion to a career or career conditional appointment within 120 days after meeting graduation requirements and satisfactory completion of SCEP requirements. They may be converted and assigned to duty locations deemed most beneficial to the FWS, or to a position in another federal agency. Here are the profiles of a few students who are currently in the program:



**Kylie Biggert** is working with the Ohio Private Lands Office in Newark, Ohio, this summer as a private lands biologist. She started working with the FWS two years ago as a biological science technician STEP employee at Ottawa NWR. She graduated from Ohio State University with a Bachelor's of Science in environment and natural resources. She had great opportunities working with the FWS, some of which include bird banding, orchid surveys, water management, invasive species management, and helping out during the Gulf oil spill. She had the opportunity to meet with landowners all over the state of Ohio to discuss the importance of wildlife habitats and how they can make a difference in their area of the state. She worked on wetland and upland restoration projects, surveying, installing water control structures, and planting native grasses.



**Kara Zwickey** is currently stationed at Neal Smith NWR in Prairie City, Iowa. Her summer duties include interpretive writing, delivering day-use programs to school groups, and working with visitors and volunteers. The best part of Kara's job is interacting with students on a daily basis. "Through each interaction, I have this phenomenal opportunity to instill awe and wonder of the natural world in my students!" she

says. Kara is originally from Galesville, Wisconsin, and has previously worked at Rice Lake NWR as a Visitor Services SCEP and at Upper Mississippi River NWR—LaCrosse District as a YCC crew leader and biotech. Kara has a Bachelor's degree in environmental sciences from the University of Oregon—Eugene, and is currently pursuing her Master's of Education in environmental education at the University of Minnesota—Duluth. She is focusing her thesis work on creating a transferrable digital photo journaling curriculum to foster connectedness to nature. She hopes that this curriculum will be used by refuges across the nation to connect kids with nature.



**Lionel Grant** originally hails from outside Chicago, Illinois, but is currently stationed at the Prairie Wetlands Learning Center (PWLC) in Fergus Falls, Minnesota. He enjoys this station because it is unique to the FWS. The PWLC was established for the sole purpose of providing environmental education. Outside of the prairie pothole region, Lionel attends school at Southern Illinois University Carbondale (SIUC), home of the Salukis. He received his Bachelor's of Science from SIUC in zoology in the spring of 2009. He is currently pursuing his Master's in Forestry, studying human dimensions of natural resources, with an emphasis on the effects of persuasive tailored messages. Lionel's first FWS experience was as an SCA intern in the Northeast Region, at Cape May NWR in New Jersey. It was there that he realized his passion for nature and communicating its importance to youth and the community. Lionel's experience in New Jersey helped pave the way for his entry into his first year in the SCEP program. Lionel was stationed last summer at Minnesota Valley NWR, where he began his SCEP experience in Visitor Services.

**Tylar Greene** successfully combined multiple summer job opportunities and career programs with the FWS to create a pathway to a full-time career with the agency. Tylar began her career with the FWS in 2010 as an SCA intern in the Career Discovery Internship Program at Umbagog Lake National Wildlife Refuge in northern New Hampshire and Maine, and worked this summer as a SCEP intern at Back Bay National Wildlife Refuge in Virginia. Tylar hails from the Bronx and graduated earlier this year with a dual degree in journalism and geography from George Washington University in Washington, D.C.

Here's what Tylar wrote in a blog about her first day at her new job:

### **New Service Voices: An Unexpected First Day**

After spending a summer working at beautiful Back Bay National Wildlife Refuge on the Virginia coast, I was a little concerned that my new job as a public affairs specialist stationed at the Service's Northeast Regional Office in Hadley, Massachusetts, wouldn't allow me to get out to the field very often. But, I was wrong.

On August 19—my first day on the job—I had the opportunity to meet Interior Secretary Ken Salazar at Great Bay National Wildlife Refuge in New Hampshire during his tour that week of several New England states.

Secretary Salazar toured Great Bay by boat and then met with Youth Conservation Corps crew members at the Great Bay Refuge. He walked with the high-school-aged crew on an accessible trail they had completed over the summer and had personal conversations with them about their YCC experience.



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“Stay in school, stay in school,” were the Secretary’s last words to the crew before he departed. I couldn’t agree more with Secretary Salazar as my new full-time position is a direct result of that. Four years ago, I started out like many college freshmen at The George Washington University in Washington, DC. I wasn’t necessarily sure what I wanted to get out of being there. I tentatively decided to follow my interests, and I picked up a major in Geography (Environmental Science) and a second in Journalism. I wasn’t sure how I would blend the two to make a career but I was determined to try!

After working as an advancement assistant at the Student Conservation Association, I decided to apply for their Conservation Internship Program with the U.S. Fish and Wildlife Service. I chose Umbagog National Wildlife Refuge, a remote refuge tucked away in the woods of northern New Hampshire and Maine. The term “culture shock” doesn’t do my experience justice! My New York City

roots didn’t help me much there, but I had an adventure-filled summer. That experience validated my interest in pursuing a career in conservation. I knew after that summer that environmental journalists have a place in this world. I was able to take my training from school and put it to good use at Umbagog Refuge doing public environmental education programs and publishing newsletters to keep local residents informed about refuge news and updates.

After my CIP experience, I had the opportunity to work briefly at the Service headquarters in Arlington, Virginia, as well as Back Bay National Wildlife Refuge. I never would have guessed that my undergraduate education and my internship experience with the agency would lead to me being a full-time employee and having the chance to meet Secretary Salazar on my first day as a public affairs specialist!

*We would like to express our gratitude to all of our partners for helping us surpass our goals in reaching out to thousands of youth across the country. We couldn't have done it without you!*

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*woodcock, by Serena Doose, Moosehorn NWR*



*Serena Doose*

## Last Thoughts

"After making homemade blueberry pie, spotlighting for woodcock, duck trapping, and spotting a bear and two cubs, this internship has come to an end. It's definitely bittersweet. It's absolutely incredible how much I've learned this summer—about living on my own, biology, northern forests, cooking, FWS, technology, career paths, trucks, the government, Canada, birds, trapping, field work, etc. This is really the first time that I've spent an entire summer, except for two weeks, away from home, working, and it really has been an eye-opening experience. Also, being elevated from the duties of a typical intern to a biotechnician was something that I never expected. Having more responsibility really pushed me much farther and for that, I'm exceedingly grateful. In the end, I'm still not sure what career path that I want to take... I have tons more to learn and I think I'm OK with not having a set path for now."

By **Serena Doose**