

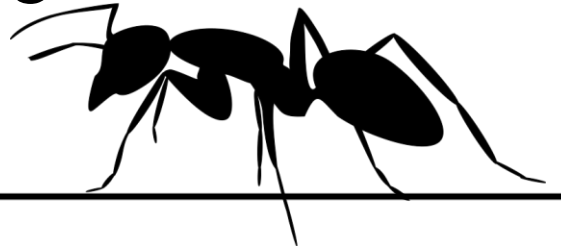
Anya Nova Metcalfe

Ecologist/Entomologist

United States Geological Survey

Northern Arizona University

anyanova.metcalfe@gmail.com



Education:

- Northern Arizona University: M.S. Candidate for Aquatic Ecology in Marks lab** Graduating May 2017
-Thesis on aquatic insect emergence in the upper Colorado River basin
- Prescott College: BA in Environmental Studies with emphasis in Water Resources** 2012
-Minor in Adventure Education
-Senior thesis on the biogeography of aquatic beetles in springs of the Colorado River Watershed
- Universidad de Guanajuato** 2010
-Semester of hydrology focused foreign-exchange program in Guanajuato, Mexico

Work Experience:

- Biologist** Nov 2012 - Present
United States Geological Survey (USGS): Grand Canyon Monitoring and Research Center (GCMRC) Flagstaff, AZ
-Using a microscope to sort and identify insects captured by light traps along the Colorado River. Have processed more than 1400 samples from light traps (>630,000 insects) as of 8/10/2015
-Using expert knowledge of Grand Canyon aquatic insect fauna to identify taxa down to species
-Managing a large inter-state citizen science project in the Colorado River watershed
-Designed and executed original research on life history and mating strategies of a moth. Publication in process titled "Phenology and life history of a bivoltine moth (Erebiidae: *Cisthene angelus*)"
-Have spent more than 200 days in remote sections of Grand Canyon and Glen Canyon collecting aquatic and terrestrial invertebrate specimens using a myriad of traps and methods including drift nets, Hess samplers, ponar, light traps, sticky traps, and emergence traps
-Initiating and designing a pilot study on the correlation of bat and insect activity in Grand Canyon, collecting and analyzing over 40 nights of bat/insect data
-Inspiring youth through scientific outreach. Have given four in-class presentations for Flagstaff Festival of Science, participated in various community events, and spent over 20 days in the field with youth
-Curating and managing a small in-house reference entomological collection. Properly storing thousands of samples utilizing a barcode system. Collaborating with local and international researchers to disperse excess specimens to various projects and collections.
-Designed the curriculum for and led a 2 day long workshop on Trichoptera identification
- Assistant Curator of Natural History and Ecology** May 2012 - Feb 2013
Museum of Northern Arizona Flagstaff, AZ
-Handling, sorting, labeling, and identifying entomological specimens for museum collections
-Organizing and maintaining a collection of more than 200,000 specimens
-Collected over 2,000 invertebrate specimens in the field
-Overseeing and organizing museum volunteers
-Working with Microsoft Access databases
- Lead Researcher** Nov 2012, Oct 2013, Nov 2014
Grand Canyon Wildlands Council Flagstaff, AZ
-Leading in collection of interdisciplinary datasets on flora, fauna, hydrology, and human impact
-Collecting insects using Malaise traps, UV traps, pitfall traps, and randomized sampling

- Field Technician – Spring Inventories in Arizona and Nevada** May 2012 – July 2012
Springs Stewardship Institute Flagstaff, AZ
- Collected invertebrate specimens from over 40 springs in Kaibab National Forest, Spring Mountain National Recreation Area, and Humboldt-Toiyabe National Forest
 - Gathering interdisciplinary datasets on the biology, geology, hydrology, and archaeology of springs
 - Aided in the facilitation of 2 workshops. One on restoration of spring ecosystems in Nevada, and the second on protocols for completing spring inventories on USFS land
- Interpretation Internship for Respect the Rio** May 2011-Aug 2011
US Forest Service/Student Conservation Association + Americorps Santa Fe National Forest, NM
- Created and delivered 8 educational programs for mixed-age audiences
 - Designed and illustrated a field guide to freshwater macroinvertebrates
 - Made 2,000+ contacts with forest visitors

Additional Scientific Research and Field Experience:

- Field Technician** Oct 19-25 2012
Seeds of Success/Northern Arizona University
- Identifying and collecting seeds from native plants in Southern Utah
 - Using a field press to collect voucher specimens for Flagstaff herbarium and Smithsonian collections
- Field Assistant – Monitoring populations of Humpback Chub in the Colorado River** Apr 2012, Sept 2012
US Fish and Wildlife Service
- Ten day trip in April camped at the Little Colorado River in a remote area accessed by helicopter
 - Seven day river trip on the Colorado River from Lee’s Ferry to Bright Angel Creek
 - Capturing fish using hoop nets and trammel nets
 - Handling, identifying, sexing, measuring, and PIT tagging fish
- Field Technician – Monitoring populations of Rainbow Trout in Glen Canyon/CO River** Intermittent 2012-2014
USGS/GCMRC
- Handling, identifying, sexing, measuring, and tagging rainbow trout
 - With a team, processing up to 5,000 fish a night (collected by electroshocking)
 - Working nocturnally (8 pm – 4 am)
- Bug Camp Instructor** July 2012, July 2013
Summer Among the Peaks Discovery Camp
- Single handedly instructed 10 students during week long bug camps with daily field trips
- Elk calf-mortality study at the Valle Caldera National Wildlife Refuge, NM** June - July 2011
- Tagging calves with ear tag transmitter, locating wildlife using telemetry, appropriately handling calves
- Independent research project on benthic invertebrates of the Colorado River and its tributaries** Fall 2011
- Sampled insects from ten tributaries and 9 sites along the Colorado River during a 21 day river trip
 - Authored an unpublished 8 page report and presented at Prescott College Grand Canyon Symposium
- Collecting baseline resource data in remote technical slot canyons of Grand Canyon** 2013-present
- Collecting data on the ecology, hydrology, geology, and recreation impacts of technical slot canyons
 - Rappeling as much as 200 ft/pitch, swimming in cold water, hiking long distances, and packrafting
- Colpomenia tuberculata* as a microhabitat in Estero Santa Rosa, Sonora, Mexico** 2011
- Collecting, identifying, and recording the marine macroinvertebrates that live within a brown alga
 - Collection methods required hiking, kayaking, snorkeling, and extensive wading
 - Co-wrote a 15 page unpublished report
- Electro-shocking with a backpack unit to remove invasive fish** Intermittent 2010-2015
- Participated in 14 collective days of fish removal in Prescott National Forest, AZ, Santa Fe National Forest, NM and Bright Angel Creek in Grand Canyon National Park, AZ.
- Monitoring tamarisk beetle populations on the Colorado River** 2011
- Assisting a masters student(CSU) in collecting tamarisk beetles
- Surveying beaver population in the Verde River, AZ** 2010
- Three weeks locating, surveying, and monitoring beaver dams for the Nature Conservancy
- Verde River and Butte Creek Restoration Field Technician** 2009

Volunteer Work:

Founder and president of marine conservation group "Make a Wave" in Pompano Beach, FL	2007-2009
-Initiated and led 64 member club for 3 years	
-Applied for and received grant for \$2,000 water testing equipment	
-Led weekly sampling and analysis of a local inlet for presence of E. Coli for one year	
-Participated in multiple community events, raising awareness of local marine conservation issues	
-Featured in 3 local newspapers and international magazine Teen Vogue	
-Secured sponsorships from 7 organizations	
Guest teacher for ecology club "Los delfines jovenes" in Bahia de Kino, Sonora, Mexico	2011
-Preparing and facilitating lessons on marine biology in Spanish for middle school students	
Giving presentations at middle schools in Arizona	2011-2013
-Two 1 ½ hour presentations on entomology for Flagstaff Festival of Science	
-2 hour presentation on Environmental Careers in a rural school district (Dewey, AZ)	
Instructor and activities coordinator at children's museum "Young @ Art"	2006-2008
-Volunteered 300+ hours	
-Assisted in organization of 3 events and fundraisers	

Academic Honors & Awards:

Western Bat Working Group Bob Berry Award (Bat detector and scholarship for bat software training)	2015
AmeriCorps Award Recipient, Student Conservation Association (\$1200 for AmeriCorps service)	2011
Community Service Education Award (\$1200 for community service)	2011
Sustainability Scholar, The North American Mobility Program	2010
-Spent a semester abroad at the Universidad de Guanajuato on a full scholarship	
-Created an independent study with the Dean of Hydrology to research local water reclamation systems	
Prescott College Designated Class Archivist (\$300 photography award)	2010
John Wesley Powell Scholarship (\$8,000 for academic achievement)	2009
Environmental and Social Justice Scholarship (\$8,000 for community leadership)	2009
George Snow Foundation Scholar (\$12,000 for academic achievement)	2009
Ford Salute to Education Scholar (\$1,000 for academic achievement)	2009
Charles Franklin Parker Scholar (\$4,000 for community leadership)	2009

Specialized Training:

-Titley ANABAT software training, 6 day	2015
-Wilderness First Responder	Current, Since 2012
-Trichoptera of the Southwest Workshop	2014
-Grand Canyon Semester Student, Consortium for North America Sustainability Program	2011
-Springs Restoration Workshop (Las Vegas, NV)	2012
-Aldo Leopold Land Ethic Leader Workshop (Albuquerque, NM)	2011
-Completed B-3 Combination Helicopter/Airplane Safety Course	2012

Memberships

- Entomological Society of America (ESA)
- American Association for the Advancement of Science (AAAS)
- Citizen Science Association(CSA)

Additional Skills and Interests:

- Fluent in Russian and Spanish
- Published photographer
- Outdoor enthusiast. Skilled hiker, canyoneer, and rock climber
- Proficient with Microsoft Office Suite and R