

HOUSTON BUMGARNER

Passionate conservationist with experience conducting endangered species research in remote and backcountry environments. Proficient in camera trapping, species identification, GIS mapping, and backcountry navigation.

Adept at collecting and analyzing ecological data to support conservation. Committed to applying scientific research to biodiversity protection while embracing the challenges of fieldwork in rugged landscapes.

EDUCATION

Bachelor of Science in Fisheries, Wildlife, and Conservation Biology Wildlife Concentration

North Carolina State University (NCSU), Raleigh, North Carolina

RELEVANT EXPERIENCE

WILDLIFE BIOLOGIST

Institute for Wildlife Studies - San Clemente Island, CA

May-Present 2025

- Controlled non-native predators that pose risks to endemic species of the island, particularly the **San Clemente island fox**, **Bell's sparrow** and the federally **endangered San Clemente loggerhead shrike**.
- Set, checked, maintained, and strategically placed **live-traps**, **Terad3 Blox**, and pneumatic traps for invasive black rats across the 21 mile long island
- **Live-captured island foxes** solo, collected morphometric data, **6 cc's of blood** from the jugular, administered **intramuscular** and **subcutaneous vaccines**, and **deployed gps collars** all while the fox is moving
- Followed strict US Navy for island access, firearm usage, and living on an isolated island
- **Safely navigated** a desert island covered in thick **cactus**, steep escarpments, volcanic rocky **canyons**, **cliffs**, and **unexploded ordinances**.
- Utilized Avenza maps, Qgis, R, and Microsoft acces to collect and analyze data.
- Lived and worked on island for 10 days at a time.

LYNX CAPTURE TECHNICIAN

US Forest Service Rocky Mountain Research Station - Seeley Lake, MT

January-March 2025

- Researched **Canada lynx habitat use** across the Lolo National Forest in collaboration with the University of Wyoming and USFS.
- Strategically set and maintained **28 live box traps** along three trap lines covering **80 miles** of remote forest roads and trails.
- **Traveled 2,000+ miles on snowmobiles** over 2.5 months, safely navigating busy trails, avalanche-prone areas, and hazardous winter conditions.
- **Tracked lynx in waist-high snow** using snowshoes, following fresh tracks and other sign to determine movement patterns.
- Sedated captured lynx using a syringe pole, then **collected blood and morphometric data**, **monitored vitals**, and **fitted GPS collars**.
- Operated **4WD federal vehicles while towing a trailer** in snowy and icy conditions, safely navigating narrow forest roads and backing into tight trailheads.
- Worked long shifts in extreme winter conditions, often **below 0°F**, while enduring snow, sleet, and rain.
- **Humanely euthanized** live-trapped snowshoe hares and collected **roadkill ungulates** for bait

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LYNX CAMERA TRAP TECHNICIAN

US Forest Service Rocky Mountain Research Station - Polebridge, MT

May-October 2024

- Studied **lynx interactions with other carnivores and prey abundance** in post-wildfire landscapes in collaboration with the University of Wyoming, the Rocky Mountain Research Station, and the US Forest Service.
- Set, checked, and retrieved **~100 trail cameras** across the Flathead and Helena-Lewis and Clark National Forests.
- Conducted **snowshoe hare pellet surveys** at lynx kill sites and green tree islands in historic wildfires to assess prey abundance in the Flathead, Kootenai, and Helena-Lewis and Clark National Forests.
- **Hiked and mountain biked 10–20 miles** daily in rugged, mountainous terrain with jackstraw, thick vegetation, and other obstacles.
- Used **GPS and radio telemetry** to locate and retrieve dropped lynx collars in steep, off-trail locations.
- Conducted field research in **grizzly country**, applying safety protocols while deploying camera traps, performing pellet counts, and measuring tree stands.
- Utilized gps, Avenza Mapping, OnX Hunt, and Survey123 to navigate and collect data in the field

AQUATIC WILDLIFE TECHNICIAN

The National Park Service - Sequoia & Kings Canyon National Park, CA

June-October 2023

- Conducted **alpine lake habitat restoration**, implementing strategies to remove non-native trout and restore habitat for **Sierra Nevada yellow-legged frogs (SNYLF)**.
- **Backpacked 20 miles** into a remote lake basin, navigated a **13,000 ft pass**, large snowfields, river crossings, and boulder fields, carrying a **50+ lb** pack biweekly.
- Deployed and maintained **120+ gillnets** for trout removal, used **electrofishing** in inlet/outlet streams, and conducted **visual encounter surveys** for SNYLFs.
- **Collected tadpoles and metamorphs** for conservation breeding programs.
- Engaged with the public, explaining the project's importance and methods.
- Conducted **eDNA sampling**, performed **snorkel surveys**, and **bird nest searching and Pacific fisher monitoring using camera traps and radio telemetry**.
- Lived and worked **in the backcountry for 8 days** at a time while working 10+ hour days

CLUB PRESIDENT (Volunteer)

Backcountry Hunters and Anglers (BHA) of NC State, NC

June 2022-May 2023

- Led a **student conservation organization** focused on public lands advocacy, ethical hunting, and conservation outreach.
- Secured and executed a **\$500 grant** to support a habitat restoration project and camping trip.
- Partnered with organizations including the **NC Wildlife Federation, USFWS, and Wildlands Network** to expand conservation efforts.
- Organized a **red wolf camera trap** project on Pocosin Lakes NWR, leading a team of **10 students** in setting up monitoring sites.

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FISHERIES TECHNICIAN

May-August 2022

US Forest Service Fish and Aquatic Ecology Unit - PIBO Effectiveness Monitoring Program, OR, ID

- Monitored land-use impacts on **ESA-listed steelhead and bull trout habitat** across the Columbia River Basin.
- Collected data on **stream geomorphology, water chemistry, macroinvertebrates, and fish habitat quality**.
- **Backpacked with 75+ lb loads of gear** into remote backcountry sites, navigating through burn areas and blowdowns.
- Used **topographic maps, GPS, and compasses** to locate sampling sites on poorly maintained forest roads.
- Worked **independently from supervisors** for months, using an InReach Delorme for backcountry communication.
- Lived and worked **in the backcountry for 8 days** at a time while working 10+ hour days

RED WOLF/QUAIL TECHNICIAN

May-August 2021

Wildlands Network - Alligator River National Wildlife Refuge, NC

- Researched **red wolf** impacts on prey species across the Pamlico-Albemarle Peninsula.
- Conducted **500+ auditory point count surveys** for **northern bobwhite quail** and monitored **44 camera traps**.
- Operated in remote, high-density black bear habitat, navigating swamps, extreme heat, biting insects, and venomous snakes.
- Engaged with local landowners and the public to communicate conservation goals.

MICROBIOLOGY LAB TECHNICIAN

June-August 2019

Enzerna Biosciences Inc. - Morrisville, NC

- Researched **RNA gene therapies** for mitochondrial diseases such as **Huntington's disease and Myotonic Dystrophy**.
- Conducted experiments using **Cold Fusion DNA Cloning, PCR, Gel Electrophoresis, DNA Isolation, Mammalian Gene Transfection, and Cell Culture**.

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ORGANIZATIONS

- **President:** NC State Chapter of Backcountry Hunters and Anglers 2022-2023
- **Member:** National Chapter of the Wildlife Society 2023-2025
- **Eagle Scout** (2018): Boy Scouts of America

TECHNICAL & FIELD SKILLS

- **Software & Data Analysis**
 - ArcGIS, RStudio, MATLAB, Tableau, Movebank
 - Microsoft Office & Google Suite
- **Relevant Courses**
 - Ecology, Plant Life, Dendrology, Forest System Mapping and Mensuration
 - Wildlife Habitat Management, Wildlife Management, Wildlife Science, Human Dimensions of Wildlife, Conservation of Natural Resources
 - Insects and People, Vertebrate Natural History, Mammalogy, Herpetology, Intro to Oceanography, Intro to Fisheries Science
 - Intro to GIS, Communication for Science and Research, Statistics, Intro organic chemistry, Soil Science, Climate Change and Sustainability
- **Field Research & Wildlife Handling**
 - Live trapping(box, have-a-heart, Sherman traps, and drop nets)
 - Chemical immobilizations of mammals, humane euthanasia (mammals, invasive amphibians and fish)
 - Radio telemetry, small mammal trapping, point count surveys, camera traps, visual encounter surveys
 - Habitat assessments & plant identification (170+ trees, vines, herbaceous plants)
 - Identification of dozens of reptiles, amphibians, mammals, and fish from around the United States
- **Navigation & Outdoor Experience**
 - 10+ years of backcountry travel (camping, backpacking, primitive skills)
 - Hunting, fly fishing, kayaking, boating, diving, birding, photography
 - Advanced navigation: compass, topo maps, GPS
 - 4WD vehicle operation and trailering on forest roads and rough terrain
 - Winter fieldwork: backcountry skiing, snowshoeing, snowmobiling

CERTIFICATIONS

- IACUC training (2025)
- Federal Defensive driving (2024) trailer operation (2025)
- Wilderness First Aid (2023)
- Certified Type II Wildland Firefighter (S-130 & S-190), RT-130 (2022)
- Hunting for Conservation (HFC) Certification - Completed (2022)
- PADI Advanced Open Water Scuba Diving (2018)