

Jacob Perryman

143 Lingle Valley Road
Spring Mills, Pennsylvania, 16875
(814)-360-7215 jmperry143@gmail.com

EDUCATION

PENN STATE UNIVERSITY
Master's in Geographic Information Systems

World Campus
August 2024

PENN STATE UNIVERSITY
PBACC in Geographic Information Systems

World Campus
May 2023

LOCK HAVEN UNIVERSITY
B.S. in Biology: Concentration in Ecology and Environmental Science

Lock Haven, PA
May 2015

CERTIFICATIONS

Part 107 Remote Pilot Certificate with a sUAS Rating
Federal Aviation Administration

July 2024

Laboratory Animal Technician (LAT)
American Association for Laboratory Animal Science

November 2020

PROFESSIONAL EXPERIENCE

Penn State University, Sawers Lab
Research Assistant

State College, PA
June 2024 - Present

UAS mission planning, perform duties related to remote pilot in command, operation of DJI Inspire 2 outfitted with Micasense multispectral camera, risk assessment and mitigation, data collection, generate of multispectral orthomosaics, imagery analysis and interpretation, implement and maintain geodatabase, preparation of thematic maps, use python for geospatial analysis automation, collaboration with Penn State Office for Research Protections, train staff on geospatial software.

Penn State University, Animal Resource Program
ABSL3 and Gnotobiotic Lab Animal Technologist

State College, PA
November 2020- Present

Follow research protocols in the performance of weaning, ear tagging, blood and tissue sample collection, injections, and other treatments in the ABSL-3 and Gnotobiotic facilities, complete surgical preparation, pre-, peri-, and post-operative observations and assist with research procedures as directed, perform animal handling and restraint as required, ensure proper breeding procedures are followed and appropriate colony levels are maintained, follow weaning procedures as required, prepare and provide standard diets, special diets, standard water, or special water requirements as it relates to the research protocol, complete daily clinical observations and health examinations of sick animals in the ABSL-3 and Gnotobiotic facilities; report findings to veterinary staff, provide animal treatments as instructed by the veterinary staff, maintain research animal census for all assigned areas, compile and maintain complete and accurate records, including, but not limited to, animal breeding, health, housing and isolators, prepare and submit reports, charts, logs, and inventories as requested by management, Interact with customers as required to resolve customer requests, inquiries, and complaints, receive animal deliveries; check received animals against order regarding sex, weight, general health, and animal identification, receive, inspect and put away incoming animals; provide for sentinel animals in each rodent housing area as per containment and/or isolator procedures, Assess health status of research animals on a daily basis in accordance regulations and policies. report abnormal observations to veterinary staff, perform quarantine and immune-compromised procedures, euthanize research animals as required, according to the American Veterinary Medical Association (AVMA) Panel of Euthanasia Guidelines, maintain euthanasia equipment. Follow all procedures necessary to maintain containment animal housing and/or isolator environments, including room or facility personnel

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entry pertaining to ABSL3/Gnotobiotic facilities, monitor and report critical facility environmental data such as temperature and humidity affecting the well-being of the research animals, monitor, prepare, and supply sterilized equipment needed for isolator maintenance and/or decontaminate all equipment produced, clean, change, and sanitize all research animals' housing and associated equipment in accordance with regulations and policies, receive and store incoming feed and supplies from the vendor, Maintain inventory records of food and bedding materials, operate, maintain and, troubleshoot equipment including, but not limited to, micro- isolator cages, ventilated cage rack systems, flexible film isolators, animal transfer stations, biosafety cabinets, standard wash room equipment, decontamination chamber, autoclaves, vaporized hydrogen peroxide machine, clothes washer and dryer, and light timers, provide instruction and training to new employees in animal care, animal handling and campus cage wash operations, and operate motor vehicles for the pickup and delivery of cages, racks, bedding, feed, and other miscellaneous items.

Penn State University, Hudson Lab
Research Technologist

State College, PA
May 2018 –November 2020

Lab Work: Small mammal organ and gastrointestinal dissections, tick rearing, training of undergraduate researchers and research assistants in organ and gastrointestinal dissections, sterile technique, small mammal and tick handling, maintaining accurate records, cleaning, changing, and sanitation of animal housing, small mammal euthanasia, RNA purification, PCR, cDNA synthesis, adapter ligations, data entry and analysis.
Field Work: Trapping, handling, sampling, ear tagging, and tattooing of small mammals (mice, flying squirrels, chipmunks, etc.), retro-orbital sinus bleeding, supervision of undergraduate researchers and research assistants, use of GPS equipment to compose field reports, tick attachment to small mammals to examine virus communities, tick collection, and mouse husbandry.

Laboratory Safety Officer: Proficient with CHIMS (chemical inventory), assure laboratory safety training of all lab members, prepare for EHS lab safety audits, perform weekly safety checks of lab areas.

Penn State University, Cameron Lab
Research Technologist

State College, PA
April 2016 – April 2018

Lab Work: Bacterial protein expression in E. coli and purification of recombinant proteins (affinity, ion exchange, and size exclusion chromatography), PCR, restriction enzyme digestions, gel electrophoresis, western blots, assistance in preparation of manuscripts, ordering supplies, ATPase assays, helicase unwinding assays, nucleotide incorporation assays, and cloning.

Laboratory Safety Officer: Proficient with CHIMS (chemical inventory), assure laboratory safety training of all lab members, prepare for EHS lab safety audits, perform weekly safety checks of lab areas.

LignoLink, Inc.
Lab and Field/Greenhouse Assistant

State College, PA
May 2015 – March 2016

Lab Work: Maintained poplar tissue culture, executed plasmid/DNA preps, PCR, gel electrophoresis, enzyme digests and gel purification, assisted with bacterial culture, performed data analysis.

Field/Greenhouse Work: Implemented watering/fertilizer schedule for greenhouse, assisted with controlled pollinations, planting, transplanting, field mapping, plant observations, harvest and post-harvest processing of plant material.

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Sanders Environmental
Netting Technician

Mingoville, PA
May 2012 – August 2014

Identification of northeastern cave and tree dwelling bats, communicated with clients for property access, observations of tragus length, forearm length, weight, and wing condition of captured bats, banding of monitoring of bat foraging habits via telemetry, utilized mist netting to effectively capture bats in forest corridors, utilized harp trapping during the fall to capture bats entering and exiting a cave ecosystem, GPS data collection

Lock Haven University
Research Supervisor

Lock Haven, PA
August 2013 – May 2015

Supervised a group of 9 students on their research, explained and taught sterile technique, and subculturing, baiting Fungi: Exploring the most efficient techniques in confirming White -Nose Syndrome in a cave ecosystem, mapping of White-Nose Syndrome: Developed a map of the distribution and prevalence of White-Nose Syndrome, chemical Control of Fungi: Further analysis of the causal agent of White-Nose Syndrome, *Pseudogymnoascus destructans*, and chemical control, Polyethylene Glycol 8000.

PUBLICATIONS

Jingjing Shi, Jacob M Perryman, Xiaorong Yang, et al. 2019. Rational control of poliovirus RNA-dependent RNA polymerase fidelity by modulating motif-D loop conformational dynamics. *Biochemistry*. 58(36), 3735-3743.

RESEARCH EXPERIENCE/AWARDS

Anadarko Symposium

Oral: Evaluation of *Epicoccum nigrum* and Polyethylene Glycol 8000 in the control of *Pseudogymnoascus destructans*

Lock Haven, PA
Spring 2014

Commonwealth of PA Univ. Biologists

Oral: Evaluation of *Epicoccum nigrum* and Polyethylene Glycol 8000 in the control of *Pseudogymnoascus destructans*

Bloomsburg, PA
Spring 2014

White-Nose Syndrome Working Group

Oral: Evaluation of *Epicoccum nigrum* and Polyethylene Glycol 8000 in the control of *Pseudogymnoascus destructans*

St. Louis, MO
Fall 2014

ABASM

Oral: Evaluation of *Epicoccum nigrum* and Polyethylene Glycol 8000 in the control of *Pseudogymnoascus destructans*

Lycoming, PA
Fall 2014

Commonwealth of PA Univ. Biologists

Oral: The use of Calcofluor white to visualize Cupping Erosions and Fungal Mycelium on Bat Wings Infected with *Pseudogymnoascus destructans*

Clarion, PA
Spring 2013