



2017 SUMMER INTERNSHIP

Research Technician

Penn State University and The American Chestnut Foundation



Background Information: In efforts to restore blight-resistant and locally-adapted American chestnut trees, Penn State University is working with The American Chestnut Foundation (TACF) to capture as much of the original genetic diversity of the tree as possible. Volunteers have put in extensive effort to locate, identify, hybridize, and collect seed from native American chestnut (*Castanea dentata*) tree sprouts across the Pennsylvania and beyond. They have also planted thousands of seeds collected from open-pollinated trees in gene pool repository orchards. Over 80,000 trees have been planted as part of the effort to restore the species.

This internship will provide quality hands-on work experience with applied science, particularly in regards to tree improvement, genetics, breeding, forest tree pathology, and silvicultural and horticultural techniques, especially as they apply to chestnuts.

Internship Description:

- Assist with planting and general orchard maintenance at Penn State University chestnut research orchards and beyond. Most of these will be in Pennsylvania, but others will be in neighboring states or even further away, depending on time available. This maintenance will include the use of equipment such as chainsaws, tractors, and weed-whackers.
- Assist in the inoculation programs at the start of the summer. Inoculation is the process by which we measure blight-resistance of our hybrid chestnut trees.
 - The intern will participate in all steps of the process; from creating and maintaining fungal cultures through tree testing. This summer, we plan on evaluating a novel inoculation method.
 - For more information on the inoculation procedure, please visit this site: <http://ecosystems.psu.edu/research/chestnut/breeding/inoculation>
- There may be travel throughout the mid-Atlantic with a pollinating team, from late June and early July. The intern will learn the biology of chestnut

flowering and the process of controlled pollination; and assist with pollination. The intern will hone their communication skills by meeting and training volunteers in the pollination process.

- Assist in collecting and entering data into the chestnut database (Dentatabase). Information regarding Dentatabase can be found on this site: <http://ecosystems.psu.edu/research/chestnut/reports/dentataBase>
- **Travel:** The successful candidate should enjoy travel and have a valid driver's license. Access to a dependable vehicle will be a plus, but is not required. When applicable, travel expenses such as mileage, lodging, and meals will be reimbursed.
- **Work Schedule:** Although there is no overtime and work weeks are usually 40 hours in length, we are seeking an applicant with a flexible schedule, i.e. be able to work some long days, weekends, and sometimes stay overnight on the road.

Qualifications/Experience: The successful candidate should be precise, observant, and have good training in dendrology, ecology, and mensuration. Good organization skills are a must. The intern should be good at working with people and enjoy working outside. They should know MS Excel and have some experience with GPS and GIS technology. Note, some training in all of these products will be provided.

Experience using and maintaining equipment such as weed-whackers, tractors, and chainsaws is a plus.

Additional Information: This internship provides a well- rounded experience with opportunities to work in both the non-profit sector and University research settings. It provides training lab and field-work techniques including inoculum production and various chestnut silvicultural practices. We encourage interns to challenge their communication and people skills by working with volunteers and the public. Depending on the final project's scope, there will be potential for write-up and publication in *Chestnut*, the magazine of The American Chestnut Foundation.

Remuneration: \$10-\$12/hour (based on experience), mid-May through mid-August, with start and end dates somewhat flexible. Supplies, mileage, and lodging during travel will be provided.

How to Apply: Application is easy. Simply send a cover letter and resume with three references by **Monday, February 27, 2017** to:

Stephen Hoy

E-mail: sdh177@psu.edu

For more information on the American chestnut:

The American Chestnut Foundation: <http://www.acf.org>;

PA Chapter: <http://www.patacf.org>;

The Chestnut Growers website: <http://ecosystems.psu.edu/research/chestnut>