### Forest Genetics Research Technician JOB ANNOUNCEMENT The Pennsylvania State University Department of Ecosystem and Science Management January 2014

The Forest Genetics Research Technician is responsible for: operation and maintenance of forestry greenhouses; maintenance and care of experimental field sites; operation, maintenance and care of field equipment; collection and entry of scientific data. Candidates must have a driver's license and clean driving record. Candidates should also have experience with use and maintenance of field equipment such as tractors, chainsaws, etc and be able to lift upwards of 50lbs. Ability to learn and use new computer programs a must, as is an eye for detail when entering scientific data. This position requires an individual who can work independently both in the office and in the field, once initial instruction is given.

This is a part-time position working an average of 20 hours per week with the option to work longer weeks during the main growing season of March – August.

To apply, send a cover letter, resume, and a list of three references to Sara Fitzsimmons at <u>sff3@psu.edu</u>. Please see below for a detailed Job Description outlining specific duties and equipment to be used. Application deadline is February 15, 2014.

Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

#### Forest Genetics Research Technician JOB DESCRIPTION The Pennsylvania State University Department of Ecosystem and Science Management January 2014

Characteristic Duties and Responsibilities:

## • (50%) Develop, plan, coordinate funding, install, and manage experimental plantations and long-term field studies.

Actively manage chestnut plantations located primarily on Penn State University property. Management of existing plantations requires budget development, hiring and training wage payroll employees, procurement and maintenance of specialized equipment, periodic site visits to screen for pathogens or other damaging agents, planting, mowing, watering, and pesticide application. Coordinate and instruct volunteers to help with various duties at these planting locations.

## • (25%) Maintain databases of chestnut research activities, on Penn State property and beyond.

Thorough record keeping of all plantations and research projects is required. Several projects are long-term and may have multiple managers over time. Efficient development of spreadsheets and entry into on-line databases is necessary for ease of statistical processing and reporting.

# • (15%) Supervise, schedule, instruct, and manage greenhouse facilities and equipment used for chestnut research.

Work with other users of all greenhouse facilities (glasshouse, polyhouse, shadehouse) to ensure efficient use to the largest number of users for the space available. Maintain basic greenhouse operations and specialized equipment, treat for insect/disease, and follow all safety procedures. Supervision and maintenance of the facilities involves frequent inspections to screen for insect and/or disease outbreaks and subsequent control measures, making or scheduling repairs to facilities or equipment, installing specialized equipment, training wage payroll employees on sanitation procedures, and watering.

# • (10%) Coordinate research activities with external research organizations and perform outreach functions

Gain a thorough knowledge of TACF's breeding strategy and occasionally act as a spokesperson for chestnut research projects in addition to the core duties of managing the plantations and silvicultural trials. Give tours of orchards when available and at major events such as Ag Progress Days.

Outreach and technology transfer is also performed on an ongoing basis as it relates to tree improvement, forest regeneration, silviculture, woody plant propagation, and greenhouse management.

## Outline of specific areas on which to provide oversight:

- *Greenhouse facilities totaling* ~5,000 sq.ft. of floor space
  - General oversight and management of facilities
    - Glasshouse
      - Floor space: 1500 sq.ft.
      - Bench space: 8 benches, each 5'X 20', total=800 sq.ft.
      - Equipment: automatic watering system, reverse osmosis filtration, swamp coolers
    - Polyhouse
      - Floor space: 1650 sq.ft.
      - Bench space: 8 benches, each 5'X 10', total=400 sq.ft.
      - Equipment: automated grow lights, wet-wall evaporative cooling system, pesticide storage cabinet, pressure-washer
      - Shadehouse (shared with Plant Pathology)
        - Floor space: 1650 sq.ft.
        - Bench space: 8 benches, each 5'X 8', total=320 sq.ft.
        - Equipment: none
  - *Experimental chestnut plantations (year established in parentheses; purpose, responsibilities, duration pertain to each plantation at the site)* 
    - Toftrees B2F2 (1998) 3 acres, 600 trees
      - Purpose: Progeny test
      - Responsibilities: control weeds through mowing, data collection, analysis, reporting
      - Time commitment: 0.5 hrs./week
      - Duration: ongoing
    - Rock Springs Kuhns B3 (2000) 2 acres, ~25 trees post cull
      - Graves B3 (2001) 4 acres, ~100 trees post-cull
        - Purpose: advanced hybrid backcross generation – grow, inoculate, select, cross-pollinate, collect seed for next generation
        - Responsibilities: control weeds through mowing, application of herbicides/fertilizer, data collection, analysis, reporting
        - Time commitment: 2.0 hrs./week
        - Duration: ongoing coordination with Rock Springs staff.
    - Arboretum B3F2 (2002+) 10 acres, currently 2500 trees
      - Purpose: advanced hybrid backcross generation
        grow, inoculate, select, open-pollinate, collect seed.
      - Responsibilities: control weeds and pests, data collection, analysis, reporting
      - Time commitment: 5.0 hrs./week

- Duration: ongoing
- silviculture trials
  - Stone Valley
    - o 1997 trial 0.5 acre, 100 trees
    - o 1999 trial 1 acre, 240 trees
    - 2005 trial 8 sites, each 0.1 acres with 100 trees; so 1 acre, 800 trees
  - Tuscarora S.F.
    - o 1998 trial 0.5 acre, 100 trees
      - Purpose: establish reforestation guidelines for blight resistant chestnut
      - Responsibilities: data collection, analysis, reporting
      - Time commitment: 20.0 hrs./ year
      - Duration: ongoing

### Specialized equipment

- Shed 1000 sq.ft. (Bay #3)
  - Nissan Frontier FR03
  - Kubota tractor FR35 (Steiner, Carlson, Powell)
    - (Bushhog mower deck, bucket, forks, tank sprayer)
  - o 2-ton hydraulic utility cart
  - o 325 gallon water tank
  - o Honda water pump
  - o Honda pressure washer
  - o Honda/Bachtold brush cutter
  - o 034 Stihl chainsaw w/ Canon tree planter
  - o 029 Stihl chainsaw
  - Spyker fertilizer spreader
  - $\circ$  3 40' aluminum ladders, 4 20' wooden ladders, 1 10' orchard ladder
  - Stihl weed eater
  - Stihl brushsaws
  - o Homelite weed eater
  - o Some others
- Garage (shared with Plant Pathology)
  - o Soil sterilizer
  - Power tools (sander, circular saw, router, drill)
  - o Refrigerators/freezers/incubators (Revco, Jordan, Amana, Puffer-Hubbard)