Survey for *Scymnus coniferarum* and other predators of Hemiptera: Adelgidae

**Contractor Position Description**
Collection of *Scymnus coniferum* (Coleoptera: Coccinellidae) and other adelgid predators, with emphasis on hemlock woolly adelgid (HWA) (Hemiptera: Adelgidae), in Tacoma, Washington. General duties include travel to six field sites all in one day. The work involves collection of predators from beat sheeting and branch clippings, obtaining sampling supplies, and mailing samples to Virginia Tech. Individual must be comfortable working outside, work well independently, and have a reliable vehicle.

**Project Objective**
Gain a better understanding of the life history of *S. coniferarum* by identifying its presence on all adelgid species in the western U.S. throughout the year.

**Methodology**
To relate seasonal abundance of *S. coniferarum* and *A. tsugae*, each site will be sampled for one full year. Sites include cemeteries, roadsides, and parking lots. Selected trees will be sampled every two weeks from October 2015 to November 2016. This project is already ongoing. Therefore, the person who take this on will be contracted from July – November, for a total of 10 sample visits (6 sites/sample visit). Sample trees may change as the experimental period progresses, depending on levels of adelgid spp. present. Training will be provided in June or July.

Sampling will take place every two weeks. The following tasks must be completed each sample period:
- Gather supplies and prepare for field day.
- Collect samples from all trees:
  - Branch Clippings: Prune adelgid-infested terminal branches from each sample tree. It is important to select branches with heavy adelgid densities, as this is likely where predators will be feeding. Collect at least 100 adelgids / sample tree. The number of branch clippings will vary to reach this density.
  - Beat-sheet Sampling: Beat-sheet every sample tree, and collect any predator insects that fall from taking several beats on all accessible branches.
- Package and ship the collected samples and specimens appropriately.

**Compensation**
You will be paid as a contractor. Your rate will be $25/hr and also $0.55/mile for travel from leaving your home. Supplies and shipping costs are also covered. You should be able to complete sampling in 1 day with a few hours of additional time spent preparing, getting supplies, and shipping samples.
Study Sites & Sample Trees

Hemlock Stands:
- Tanara/Narrows Point Apts.
  o (4) western hemlocks (*Tsuga heteropylla*)
- Secret Garden
  o (2) western hemlocks (*Tsuga heteropylla*)

Non-hemlock Conifer Stands:
- Vassault
  o (3) Shore pines (*Pinus contorta var. contorta*)
  o (1) Douglas fir (*Pseudotsuga menziesii*)
- Cavalry Cemetery
  o (2) western white pines (*Pinus monticola*)
  o (1) Shore pine (*Pinus contorta var. contorta*)
- Clover Tech
  o (4) Shore pines (*Pinus unknown*)

Mixed Stands:
- Mt. View Cemetery (Upper)
  o (1) western hemlock (*Tsuga heteropylla*)
  o (1) western white pine (*Pinus monticola*)
  o (1) Douglas fir (*Pseudotsuga menziesii*)
- Mt. View Cemetery (Lower)
  o (1) western hemlock (*Tsuga heteropylla*)
  o (1) western white pine (*Pinus monticola*)
  o (2) Shore pines (*Pinus contorta var. contorta*)
- New Tacoma Cemetery
  o (1) western hemlock (*Tsuga heteropylla*)
  o (2) Douglas firs (*Pseudotsuga menziesii*)
  o (2) Shore pines (*Pinus contorta var. contorta*)

How to apply:
Please send a letter of interest with a summarized resume to:

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