

## *Conservation Detection Dog Training to Locate Checkerspot Larvae Spring 2008*

The Nature Conservancy is working in partnership with Fort Lewis and other South Puget Sound conservation partners to develop rare butterfly habitat enhancement methods. To gain a better understanding of habitat needs for relatively unknown, but important life stages of the priority species, Taylor's checkerspot, we investigated the potential for training a conservation detection dog to locate checkerspot larvae in native prairie sites.



**Figure 4: Butterfly detection dog training, Gig Harbor, WA, February, 2008.**

The primary objective was to work with Packleader Dog Training in Gig Harbor to train one of their 'conservation detector' dogs to locate checkerspot larvae in prairie habitat. Primary applications for such training are expected to include locating larvae in the field to better understand characteristics of habitat according to larval stage, especially diapause; conducting searches in habitats in the Puget Sound region where their presence is suspected but not confirmed; and identifying occupied habitat patches to guide on-site implementation of habitat management actions such as fire or herbicide applications. Other potential applications include assisting the reintroduction program to track population dynamics at sites receiving captive-bred larvae.

The initial scent training commenced in February, 2008, with teaching the dog to identify the scent of checkerspot larvae provided by the WDFW / Oregon Zoo captive breeding program. Training then progressed to incorporate field exercises that improved the dog's detection distance under differing wind, temperature, and vegetation conditions, and provide handler training. These training exercises proceeded well, and under ideal conditions, the dog was able to detect captive larvae and piles of frass 'planted' in the prairie from up to 10 – 40 meters. The final stage of training progressed to wild larvae in native habitat on Range 76 at Fort Lewis in March, 2008. In these conditions, the dog displayed more difficulty locating larvae. Despite finding many larvae, there were perhaps an equal number that he missed. Training was put on hold until new colonies of young checkerspot larvae were expected to hatch, in June 2008, to provide a more concentrated source of larvae, and therefore scent. In June, however, Mary Linders, the project lead for the checkerspot reintroduction project, determined that it was imprudent to subject the single known remaining wild population of checkerspot butterflies in the South Sound lowlands to any further research impacts, as they appeared to exhibit low numbers at that time, likely due to extremely cold and wet weather conditions in the spring, 2008. Detection dog efforts, therefore, remain on hold

until such time as it appears that conditions would be favorable for larval detection, and the research population of Taylor's checkerspot butterflies appears to be suitably robust to withstand potential impacts from research activities.