

## **Insect Identification Educational Volunteers Created in Train-the-Trainer Workshops in Oregon and Washington**

### **Abstract**

The "train-the-trainer" model successfully created volunteer educators in insect identification. Intensive training programs prepared 71 individuals during 2 1/2-day (20 hour) training sessions. Trainees included university Extension faculty (13), agricultural professionals (13), and certified Master Gardeners (45). The sessions were intense, hands-on learning in insect identification. A post-training survey demonstrated that 1 year post training trainees had conducted insect education (86%) and provided identification services (96%). About 700 community service hours by the trainees had been conducted. The key to success was volunteers with prior training in agronomy and/or gardening, plus an established track record in volunteerism.

### **Mary K. Corp**

Professor & Extension  
Regional Administrator  
Oregon State  
University  
Pendleton, Oregon  
[mary.corp@oregonstate.edu](mailto:mary.corp@oregonstate.edu)

### **Silvia I. Rondon**

Associate Professor &  
Extension  
Entomologist  
Specialist  
Oregon State  
University  
Hermiston, Oregon  
[silvia.rondon@oregonstate.edu](mailto:silvia.rondon@oregonstate.edu)

### **Stephen M. Van Vleet**

Associate Professor &  
Regional Ag-Natural  
Resource Extension  
Specialist  
Washington State  
University  
Colfax, Washington  
[svanvleet@wsu.edu](mailto:svanvleet@wsu.edu)

## **Introduction**

The demands for insect identification and education far exceed the number of faculty available to address them in the Pacific Northwest. With shrinking numbers of professorial faculty and reduced travel budgets, it was decided that creating a specialized group of volunteers and professionals to focus on insect identification and insect education would be beneficial. The Insect Train-the-Trainer program was created to prepare this group of future volunteers. With a higher level of localized knowledge about insects, a multiplier effect was anticipated by the volunteers that would allow Extension faculty to improve program efficiency (Dorn, Relf, McDaniel, & James-Deramo, 1999; Schrock, 1997; Stack, 1997), and increase capacity to deliver informal education about insects (Woods & Cortada, 1998).

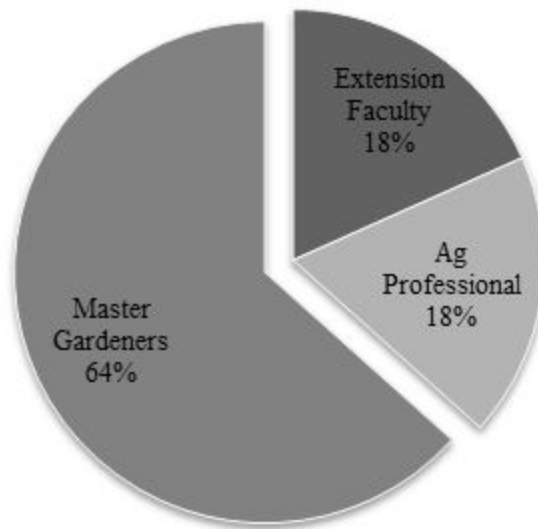
## **Method**

Correct identification of insects is a crucial starting point for insect education. Trainees learned that beneficial insects play an important part in the ecosystem and insects can be extremely damaging to

plants if not managed properly. They learned about ecological insect management to the level that they could teach others. Two requirements were emphasized in the training program: create an insect collection with a minimum of 10 insect orders and commit to completing a minimum of 10 service "payback" hours. All participants had a background in agriculture, gardening, or university Extension. Participants learned how to collect, pin, and identify different types of local insects and then used them to create an insect collection for use in their future training events.

We used the "train-the-trainer" model where an intensive training program prepared our future trainers. Potential participants were required to apply to the program with an application similar to an application used in the Master Gardener program. The application asked for information on prior training or education, related work experience, and community involvement or volunteer activities. This allowed us the opportunity to select participants who already had a demonstrated background in basic biology and community volunteerism (Figure 1.)

**Figure 1.**  
Trainee Backgrounds



Online resources <http://extension.oregonstate.edu/umatilla/insect-id> were made available before the training workshop to allow participants to start collecting insects and acquire basic knowledge about preparing a collection prior to attending the hands-on course <http://extension.oregonstate.edu/umatilla/insect-id>. Online videos were also created as resources for training participants and as educational tools in their future programs. The classroom training was intense and was interspersed with field collection and hands-on activities. Trainees were provided assistance with preparing and identifying their collected insects, pre- and post-class.

A follow-up project was assigned during the course for trained participants to collect, mount, and identify 50 insect families over a 6-month period following the short course. The trainees were also assigned the task of volunteering for a minimum of 10 hours of educational assistance in insect identification (ID) and training others in insect ID and collecting.

A survey was conducted a year after the class to evaluate the impact of the course on insect

identification and educational efforts across Oregon, Washington, and beyond.

## Results and Evaluation

In 2010 and 2011, we trained 71 individuals in four different 2 1/2-day (20 hour) training sessions in Oregon and Washington. The audience (Figure 1) included University Extension faculty/staff (13), agricultural professionals consultants/agronomists (13), and certified Master Gardeners (45).

A post-training survey (47 responses/71 participants) demonstrated that trainees had used their training to 1) identify an insect brought to them (96%), 2) train others in insect ID identification (62%), and 3) provide identification education both at work (59%) and in their communities (86%). (See Table 1 and Table 2). Types of educational activities included workshops(4), classes(5), plant/garden clinics (9), school classroom trainings(3), 4-H youth(3) and general youth (8), farmers markets (5), and county fairs(2). Master Gardener volunteers used their training in Master Gardener-related activities such as presentations, plant clinics, garden clinics, and garden shows, which enhanced their programming efforts similar to the Ripple Effect Training by the Oregon Master Gardener program in the late 1990's (VanDerZanden, 2001). Volunteer service hours by the trainees averaged about 11 hours each, and ranged from 5 hours to over 20 hours per individual at 1 year post training. Based on survey results, we estimate over 700 volunteer service hours related to insect identification and IPM have resulted due to the training program.

**Table 1.**

Percentage of Trained Volunteers Who  
Conducted Different Educational Activities

Type of Service Activity	% of Trainees*
Identified insects (ID)	96%
ID education in community	86%
Trained others in ID	62%
ID education at work	59%
*N = 47	

**Table 2.**

Number of Trained Volunteers Who Conducted  
Educational Events

Types of Education Activities	# of Volunteers*
Plant/garden clinics	9
Youth education	8
Farmers markets	5

Classes	5
Workshops	4
Schools	3
4-H youth	3
County fairs	2
Garden shows	2
*N = 47	

## Conclusion

The keys to making this type of train-the-trainer program successful based on our results are the following.

- Select participants motivated to learn with a demonstrated background in volunteerism;
- Increase their knowledge of insects to the level that they are comfortable sharing with others;
- Create a passion for the science of insect identification with enthusiastic expert instructors;
- Provide quality on-line teaching materials, and training resources such as their personal collections created in class and online videos;
- Benefit from support of the program from Extension faculty.

Based on the success of the program described here, similar train-the-trainer projects should be developed and implemented by Extension professionals in agriculture and other program areas as a means of expanding outreach during times of shrinking faculty numbers and limited travel budgets. The key to success in such efforts will be selecting participants who fit the program's objectives, provide adequate training and resources, and plan from the beginning to provide a level of on-going support of volunteers to insure their success in the long term. This program was sponsored in part by Western SARE.

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