

Forest Entomology Laboratory



The Forest Entomology Laboratory under the supervision of Steve Seybold had some new additions this year. **Angie Ambourn** is a new M.S. student who will be studying the response of oak bark beetles *Pseudopithyophthorus* spp. and other beetles to the 2000 wildfire in Carlos Avery Wildlife Management Area, north of the Twin Cities. She will also assess these bark beetles as vectors of oak wilt. Angie completed her undergraduate degree in Biology at the University of Wisconsin, Eau Claire. **Elizabeth Vaughan**, a M.Ag. student in the Department of Horticulture started work as a Junior Scientist in September 2001. She is sorting and pinning beetle specimens from a trapping study on larch beetle from north central Minnesota. Elizabeth is being assisted by **Lynn McNaughton**, another M. Ag. student in the same department. Lynn is taking Forest and Tree Shade Entomology (ENT 4251) with Steve this Fall.

Lana Barkawi is a Ph.D. student who is currently finishing up her thesis on the biogenesis of the aggregation pheromones produced by *Dendroctonus* spp. bark beetles. She expects to defend in January 2002. Lana is also currently working as a Laboratory Instructor in Chemistry at the College of St. Catherine. In February 2002, she will join Jerry Cohen's laboratory in the Department of Horticulture as a post-doctoral scientist working on developing a high-throughput analytical screening technique to identify *Arabidopsis* seedlings with abnormal hormone levels. Lana and Steve recently co-authored a paper in *Insect Biochemistry and Molecular Biology* on the isolation and endocrine regulation of a HMG-CoA synthase cDNA from the male Jeffrey pine beetle, *Dendroctonus jeffreyi*. **Darren Blackford**, an M.S. student, had a productive field season collecting spruce budworm in north central Minnesota. His thesis focuses on understanding the effects of thinning white spruce on population dynamics of spruce budworm. He is currently analyzing the pupal, egg and defoliation mass survey conducted in summer 2001. Darren is also spending considerable time digitizing imagery for the forest entomology teaching collection for the ENT 4251 web site (<http://www.entomology.umn.edu/classes/ent4251/index.html>), and assists everyone in the lab with digital photography. Darren anticipates doing another field-season next summer. **Kamal Gandhi** is a Ph.D. student, has just finished her field-season in northeastern Minnesota in

the Superior National Forest. Her thesis focuses on the influence of the 1999 wind-disturbance and post-wind-disturbance silvicultural activities such as salvaging and prescribed-burning on forest beetle species. She is also assessing beetle colonization patterns on various spatial classes of trees in wind-disturbed and undisturbed stands. Currently, she is sorting, pinning and doing taxonomic work on adult beetles collected from the past two summers. Kamal is also T.Aing ENT 4251. In November, Kamal and Steve submitted a paper to the journal *Canadian Entomologist* about the occurrence of *Ips* spp. in non-host larch trees. **Andy Graves** is a Forest Resources undergraduate student working on a UROP project on the application of behavioral chemicals to the management of *Ips perturbatus*, a pest of white spruce in Minnesota and other boreal regions. Andy spent the summer of 2001 in Alaska working on his project in collaboration with the USDA Forest Service. He is also assisting on a project that surveys potential exotic insects in the twin ports of Duluth and Superior. **John Kyhl**, an M.S. student, expects to defend his thesis in December 2001. In December, John will join the Wisconsin Department of Natural Resources in Milwaukee as a Regional Gypsy Moth Suppression Coordinator and Forest Entomologist. He coordinated the 2000-2001 Forest Health Discussion Group at the University of Minnesota and gave two presentations to the Minnesota Shade Tree Advisory Committee. John and Steve recently submitted a paper to the journal *Economic Entomology* on wood-destroying beetles within structures. Furthermore, Steve, John and Darren co-authored an USDA Forest Service extension publication on how to identify common nitidulid beetles associated with oak wilt in Minnesota (available as a PDF file at <http://www.entomology.umn.edu/Faculty/Seybold/CompletePubList.html>).

Camille Jensen worked during the summer as a laboratory technician and left in late October for the University of California, Davis to work in a forest pathology laboratory on Sudden Oak Death. She assisted Darren, Elizabeth, Kamal and Andy in field- and lab-work during the summer and early fall.

In March 2001, Darren and Kamal presented posters at the Minnesota Forestry Association 'Million Acres in Minnesota' Conference in Duluth. In May, they also presented posters at the North American Forest Insect Work Conference in Edmonton, Canada. During the summer, Kamal's project was the focus for one of the field-trips for the North American Forest Ecology Conference in Duluth while Darren's work was the focus of one of the field-trips for a White Spruce Management Workshop in Grand Rapids. Furthermore in October, Darren, John and Kamal presented posters at the North Central Forest Pest Workshop in Big Bay, Michigan where they participated in field-trips (see photograph above).

Steve has continued his work on pheromone production in bark beetles assisted by **Lane Staehle** and **Julie Tillman**. Results of this work was presented at the 2000 ESA meeting in Montreal and at the Annual Meeting of the International Society of Chemical Ecology in Lake Tahoe. This work has been summarized in several recent publications (see web site above).