

**P**rogress  
**E**ducation  
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**Quarterly Newsletter  
on Western Gulf  
Forest Pest Management  
Issues**

*PEST* is a quarterly newsletter that provides up-to-date information on existing forest pest problems, exotic pests, new pest management technology, and current pesticide registrations in pine seed orchards and plantations. The newsletter focuses on, but is not limited to, issues occurring in the Western Gulf Region (Arkansas, Louisiana, Mississippi, Oklahoma, and Texas).

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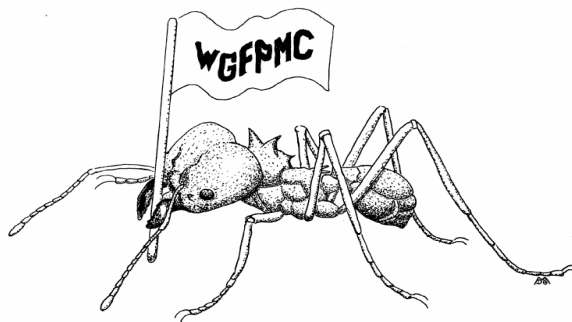
**Announcement:**

**IP's SuperTree Orchards & Nurseries to Join WGFP MC –**  
It's a pleasure to announce that International Paper's SuperTree Nurseries and Orchards have elected to join the WGFP MC in 2007.

IP SuperTree manages 7 nurseries (TX (2), AR, AL, GA (2) and SC) and 5 orchards complexes (TX (2), AL, GA and FL) in the South. It is the world's largest grower of hardwood and pine tree seedlings, producing nearly 290 million tree seedlings annually.

Ms. Beverly Peoples ([beverly.peoples@ipaper.com](mailto:beverly.peoples@ipaper.com)), Manager, TX SuperTree Nursery near Bullard, TX, will serve as their Executive Representative, and Mr. Timothy Slichter ([timothy.slichter@ipaper.com](mailto:timothy.slichter@ipaper.com)) as their Seed Orchard contact.

**Western Gulf Forest Pest Management Cooperative**



**Texas Forest Service, Forest Pest Management,  
P.O. Box 310, Lufkin, Texas 75902-0310**

**Leaf-cutting Ant and Weevil Control: Updates and Reminders**

Tis the season to plant pine seedlings. Tis also the season for leaf-cutting ants to cause havoc in plantations and managers of newly harvested tracts to take necessary precautions against regeneration weevils. Both of these insect pests forage on young seedlings and cause significant mortality. Below is an update on current control options and suggestions for maximizing the efficacy of these options.

The Texas leaf-cutting ant (TLCA), *Atta texana*, is a native species occurring in sandy areas of eastern Texas and west central Louisiana. It normally forages on grasses and hardwoods from spring through fall. However, with the first major frost the ants will often switch to less preferred pine and yaupon as their plant source. These ants can easily strip and kill several acres of pine seedlings in a few short weeks (see photo on right).

With the recent loss of Volcano™ and phase out of methyl bromide from the market, many foresters (pesticide applicators) must currently rely on Amdro® Ant Block to provide control of the TLCA. Unfortunately, the results so far are mixed. When the bait is applied in the spring, summer or fall, the effectiveness of Amdro® Ant Block (hydramethylnon on corn grit) is



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## Pine Seedling Pests (Continued from Page 1)

moderate to poor (see “Summary of 2004 WGFPMC Research Projects: LCA Control” in *PEST* 10.3). However, the efficacy of Amdro® can be maximized if pesticide applicators:

- \* Treat colonies after the first major frost so the bait is not competing with the ant’s preferred plant sources.
- \* Treat colonies at least 4 weeks prior to tree planting.
- \* USE ONLY FRESH BAIT.
- \* Apply bait when ants are actively building mounds and/or foraging (mid-day in the winter; late afternoon in the summer).
- \* Do not apply when rain is expected within 24 hrs and avoid applying to wet soil and vegetation.
- \* Avoid prolonged exposure of bait to direct sunlight.
- \* Do not apply during prolonged cold weather, below 50° F.
- \* Do not pour the bait into the entrance holes.

Adult pine regeneration weevils, primarily pales weevil (*Hylobius pales* Herbst.) and pitch-eating weevil (*Pachylobius picivorus* Germar), also can cause serious damage in the southern United States by feeding on the stems and roots of pine seedlings (see photo below).



The standard treatment for the past 10+ years has been the spray applications of Pounce® 3.2 EC (permethrin) onto seedlings in the nursery bed prior to lifting. This treatment provided excellent protection for upwards of 6 months based on laboratory trials (unpublished WGFPMC data).

Similarly, the Pounce® treatment was shown to be an effective deterrent against leaf-cutting ants (unpublished WGFPMC data).

With the phase out of Pounce® in late 2004, 24C (Special Local Need) registrations were quickly approved for Waylay™ 3.2 AG (TX, AR, LA, MS, AL, GA, SC and VA) and Arctic™ 3.2 EC (TX, MS, AL, GA, FL, SC, VA and TN). The MSDSs for Waylay™ and Arctic™ indicate that they have identical ingredients and proportions. However, both are somewhat different compared to Pounce® 3.2EC. Pounce® had 38.4% permethrin, while Waylay™/Arctic™ have 36.8% permethrin. They all use hydrocarbon solvents and surfactants, but the percentages and other inert ingredients are slightly different. It is not known if these differences will affect the overall efficacy and duration of the permethrin treatment against the weevil or leaf-cutting ants. One forest industry contact has indicated that Waylay™ was not as effective in deterring leaf-cutting ants compared to Pounce®. To ensure optimal efficacy against weevils and leaf-cutting ants, the seedlings need to be thoroughly covered with permethrin product in the nursery. Although laboratory trials have indicated that permethrin can provide extended protection, it is suggested that the planting of permethrin-treated seedlings on high risk sites be delayed until late in the planting season (February – early March). This would ensure that the highest concentration of chemical will be present on the seedlings when weevils emerge in the spring.

**Editor’s Note:** Just today (Dec. 12, 2006), I was informed by Control Solutions that production of Waylay™ 3.2 AG has been discontinued. (This is not true according to Red River Specialties. RRS intends to continue selling Waylay indefinitely.) As mentioned above, Arctic™ has 24C registrations in some of the same states (TX, MS, AL, GA, SC and VA) as Waylay™, as well as FL and TN, but NOT in AR and LA. I feel a push should be made to get 24Cs in AR and LA. I’ve informed Dr. Dale Pollet, Louisiana Cooperative Extension Service, of this development. He indicated he would pass the information onto the Louisiana Department of Agriculture. I don’t know yet who to contact in AR, but I’ll check around. DMG

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## Pest Spotlight: Pine Webworm



The pine webworm, *Tetralopha robustella*, occurs throughout the eastern half of the United States wherever pines grow. This insect derives its common name from the habit of the larvae; they weave clusters of pine needles together into silken “nests” (see photo on left). This webbing also protects the larvae from many natural enemies. In the Western Gulf Region,

pine webworm frequently feeds on loblolly, shortleaf, slash, and longleaf pines, often causing problems in young pine plantations. Complete defoliation may kill pine seedlings. Pines grown for Christmas trees have a lower market value and are sometimes difficult to sell when they contain unsightly webworm nests. Infestations on ornamental pines around homes detract from the beauty of the trees.

From one to three generations develop per year in the Western Gulf Region depending on latitude. The moths appear in late spring, but are seldom noticed due to their small size (about 1 inch wingspan) and non-descript color pattern. After mating, the female moth lays from 1 to 20 eggs in single rows along the length of pine needles.

Upon hatching, groups of up to 75 young larvae wander among the needles spinning silken threads. Each larva then bores into a needle and mines it. Once they have grown too large to feed inside individual needles, larvae feed in colonies among loosely webbed clumps of foliage, filling the

webbing with brown, oblong fecal pellets. This mass of webbing and fecal pellets encloses the needles and may be 2 to 5 inches long. Full-grown larvae are 3/4 inch long, and are yellowish-brown with a dark brown longitudinal stripe on each side of the body. When fully-developed, larvae leave the tree and construct silk cocoons in the soil where they remain through the winter.

Natural enemies of the pine webworm help keep populations at tolerable levels. These include several wasp parasites, a fly parasite, and some birds that tear open the nests to feed on the larvae.

Often pine webworm larvae complete feeding and vacate their nests before the damage is noticed. It is too late to apply any type of control measure if this has happened. If a landowner finds webworm nests that contain larvae, the nests can be pruned from the tree and destroyed. If pruning is not feasible, effective control can be achieved by spraying the foliage and nests with Asana® or Adjourn® (esfenvalerate), Foray®, Dipel®, or Xen Tari® (Bt), Discus® (cyfluthrin), Dimilin® (diflubenzuran), Orthene® TTO (acephate), Sevin® (carbaryl), or Success® or SpinTor® (spinosad). If reinfestation occurs, a second application in mid- to late summer may be necessary.

Chemicals must be currently registered for use on pine webworms/webworms and/or the site (forestry or ornamentals) by the U.S. Environmental Protection Agency and/or the Department of Agriculture in the state in which the infestation occurs. Before using any pesticide, read and carefully follow all application directions, cautionary statements, and other information appearing on the label.

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## Pesticide News

### Need to See the Official, EPA-approved Label? Look No Farther.

(Ga. Pest Management Newsletter, Oct. 2005)

The database (<http://ppis.ceris.purdue.edu/>) includes about 90,000 pesticide products, along with the registration number, company name, registration date, product manager name/phone number, and cancellation date/reason if applicable. You can search for active ingredient, CAS number, trade name, or firm information.



## **New Alternative to DEET.**

(Source: GA Pest Management Newsletter, June 2006)

Until recently, repellents containing DEET were the only very effective choice available in the U.S for mosquitoes. Products with other active ingredients did not repel mosquitoes and other pests nearly as well as DEET. However, some people were concerned about the potential effects of applying DEET to the skin, and there are some atypical reports of injury. Additionally, DEET is off patent, and many companies sell products with this active ingredient. The situation presented an excellent opportunity for anyone that could introduce an alternative with comparable efficacy.

The Bayer Corporation developed picaridin, and it is now for sale in the U.S as a 7% solution as Cutter Advanced (Spectrum Brands). Unlike other DEET competitors, this product is recognized as effective. The U.S. Centers for Disease Control recognize that products containing DEET or picaridin provide longer lasting protection than other products (<http://www.cdc.gov/ncidod/dvbid/westnile/RepellentUpdates.htm>). Additionally, the EPA approved picaridin as a reduced-risk pesticide (<http://www.epa.gov/opprd001/factsheets/picaridin.pdf>).

## **Chemtura and DuPont are Developing New Insecticides**

(*Pesticide & Toxic Chemical News*, Oct. 23, 2006 via OK Coop. Ext. Serv. Pesticide Reports, Dec. 2006)

The University of Connecticut (UC) announced it had partnered with Chemtura Corporation on Venomix Inc., the school's agricultural biotechnology start-up company, to commercialize insecticides based on spider venom toxins. They plan to produce toxins by fermentation of genetically modified *E. coli* bacteria. The toxin, omega-atracotoxin C-Hv1a, extracted from venom of the Australian funnel-web spider, *Hadronyche versuta*, is a calcium channel antagonist that targets the nervous system. Some sees these toxins as the next generation of insecticides for the environmentally conscious 21<sup>st</sup> century. Scientists at UC have genetically modified tobacco plants to be protected from larvae of cotton bollworm and Egyptian armyworm by an endogenous toxin identical to one in spider venom. The caterpillars died within 48 hours of being placed on the plants. The achievement was published earlier this year in *Transgenic Research*.

Another toxin that is even more potent than omega-atracotoxin CHv1a is being studied and works on two ion channels. The toxin's two activities are synergistic and target different sites. This makes the development of resistance to the pesticide unlikely as an insect would have to develop beneficial mutations at the two sites simultaneously. Synthetic versions of the peptide will mimic the activities of the toxin. The spider venom toxins have shown no effects in mammals, but they haven't been tested on birds or aquatic organisms. Incorporating genes for the peptide toxins into crops is the ideal way to eliminate any potential impact of the pesticide on these animals, keeping the toxin confined in crop plants.

Other companies are also working to develop safer insecticides. DuPont plans to bring a new insecticide, rynaxypyr, to market in 2008. It belongs to a group of nitrogen-containing aromatic compounds that target ryanodine receptors in insects. Ryanodine receptors are calcium ion channels used in muscle function. Anthranilamides bind easily to insect ryanodine receptors, causing muscles to contract, leading to paralysis and death for pests, including caterpillars and Colorado potato beetles. According to researchers, the anthranilimides are extremely potent insecticides that are very safe for mammals. Insect ryanodine receptors are very sensitive to rynaxypyr. Anthranilamides are very selective for that site in insects and not at the ryanodine site in mammals.

## **Methyl Iodide Not To Be Registered with EPA**

(Source: GA Pest Management Newsletter, April-May 2006)

The EPA has decided not to register methyl iodide, a potential replacement for methyl bromide. The use of methyl bromide has been greatly restricted because it may break down ozone in the earth's protective atmospheric layer. Methyl bromide was a valuable agricultural tool because it is an excellent soil sterilant, and it dissipates from the soil quickly. Various chemicals and tactics can control the same pests, but none is as good as methyl bromide. Methyl iodide has a very similar chemical structure, but it does not degrade ozone. Many people felt that it could replace methyl bromide and be used in the same way. Unfortunately, there are concerns about methyl iodide as a human carcinogen. The Agency will reconsider registration of methyl iodide in 2007 when the assessment of other soil fumigants is complete. [http://www.epa.gov/oppsrrd1/reregistration/soil\\_fumigants/](http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/)

## **Can A Pesticide Be Used in a Manner Not Covered on the Label?**

(Source: EPA Web site, "Pesticide Labeling Questions & Answers" via The Label, Nov. 2006)

We have understood for years that one must use a pesticide as per the label. That's still true. A pesticide label is recognized in courts of law. One is required to abide by the requirements of a pesticide label. It's understood that any use of any registered pesticide in a manner inconsistent with its labeling is illegal. However, there are exemptions (within reason).

A portion of the federal pesticide law, [FIFRA Section 2\(ee\)](#) addresses the use of any registered pesticide in a manner inconsistent with its labeling. The term "to use any registered pesticide in a manner inconsistent with its labeling" means to use any registered pesticide in a manner not permitted by the labeling, except that the term shall not include:

1. Applying a pesticide at any dosage, concentration, or frequency less than that specified on the labeling unless the labeling specifically prohibits deviation from the specified dosage, concentration, or frequency,
2. Applying a pesticide against any target pest not specified on the labeling if the application is to the crop, animal, or site specified on the labeling, unless the administrator has required that the labeling specifically state that the pesticide may be used only for the pests specified on the labeling or after the administrator has determined that the use of the pesticide against other pests would cause an unreasonable adverse effect on the environment,
3. Employing any method of application not prohibited by the labeling unless the labeling specifically states that the product may be applied only by the methods specified on the labeling, or
4. Mixing a pesticide or pesticides with a fertilizer when such mixture is not prohibited by the labeling.

Supplemental "bulletins" can then be distributed with a pesticide label to consumers that contains recommendations for the label's use as per the four above points. Extension personnel, industry representatives, etc. are allowed to distribute these recommendations provided the bulletin is factually correct and conforms to the restrictions of FIFRA Section 2 (ee).

So, the above Section 2(ee) exemptions would allow a pesticide, if not specifically prohibited on the label, to be applied at less than the recommended label dosage, against a pest not identified on the label but on the labeled site, to be applied in any method of application, and mixed with a fertilizer.

## **Updated Resource to Help Control Fire Ants.**

(Source: Georgia Pest Management Newsletter, Oct. 2005)

Texas led a multi-state effort to update "Broadcast Baits for Fire Ant Control." It includes all of the latest bait products and information about when, where, and how to use fire ant baits effectively from the yard to the wide-open spaces. It is available on the web at [http://www.sripmc.org/pubs/fireant\\_tamu.pdf](http://www.sripmc.org/pubs/fireant_tamu.pdf).

## **EPA to Revise Data Requirements for Biochemical and Microbial Pesticides.**

(Source: Georgia Pest Management Newsletter, April-May 2006)

Currently, these pesticides typically have waivers for some of the data required for the registration of conventional pesticides. As scientific knowledge increases and more of these pesticides are registered, it is important to have more precise definitions and requirements. See <http://www.epa.gov/fedrgstr/EPA-PEST/2006/March/Day-08/p2185.htm> for more information.

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## Thought You Might Be Interested to Know . . .

### Flying “Beavers” in Your Yard Trees?

by H.A. (Joe) Pase, III - TFS, Forest Pest Management

If you have noticed small branches on the ground this fall neatly cut from your hickory, pecan, oak, and elm (among other trees), you have NOT been invaded by an alien. An insect known as the “twig girdler” has likely visited your tree. This insect is commonly called a longhorned beetle in its adult stage and each fall, usually September through November; these beetles neatly girdle tree branches about the diameter of a pencil. The branches will fall to the ground and by the time the homeowner finds them, the beetle that girdled the branch has left. Because of this, the adult beetle is seldom seen. It seems that damage from twig girdlers in some areas has been more common than usual this fall.

The adult beetle is about 1/2 to 3/4 inch long, has antennae about as long as its body, and is grayish brown with a broad ash gray band across the middle of its back. The adult beetles emerge in the late summer and fall and locate a host tree. The female deposits eggs, singly, beneath the bark in a slit she has prepared in a terminal or a lateral branch. Each branch may have 3-8 eggs. The female then chews around and around the branch forming a v-shaped notch. They usually do not completely sever the branches.

branch, but leave a small section connected in the center. The chewing looks somewhat like a miniature beaver has gnawed on the branch. The partially severed branch soon dies, usually breaking off from the tree and either falls to the ground, lodges in the tree crown, or hangs loosely attached where it was girdled. The female lives 6-10 weeks, and during this time may deposit as many as 200 eggs. The eggs hatch in the severed branch in about three weeks and the larvae feed on the woody portion of the branch, tunneling toward the severed end. They make a few small circular holes in the bark to eject pellets of frass. In late summer, the larvae pupate and emerge as adults in about two weeks. There is usually one generation per year. For those who are interested, the twig girdler is in the family Cerambycidae and the species is *Oncideres cingulata*.

These insects seldom do any serious harm to trees and are mostly a nuisance. They have been known to cause severe damage in pecan orchards and nurseries. Spraying with a chemical insecticide is not recommended. Instead, collect and destroy girdled

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## A Little Humor Goes a Long Way

### Frustrations of a Duck Hunter (or “Sometimes Duck Hunting Ain’t All It’s Quacked Up to Be!”)

by Ron Billings - Principal Entomologist, TFS and Avid Duck Hunter



Lake Sam Rayburn was unusually low that December and the shallow water on the lake's upper end promised lots of ducks. I was steering the small boat north out of Etoile, hurrying toward my favorite hunting area in the predawn darkness. Suddenly, the outboard motor struck a submerged stump, leaped off the stern, and vanished in the boat's dying wake. This was my first clue that this day of duck hunting would be one to remember.

In my younger years, I would have reacted immediately by cussing the person who neglected to secure the motor at the launch ramp. But as a veteran of such hunting mishaps, I have become more

tolerant and forgiving. Besides, on this particular morning, I was hunting alone!

Luckily, I was able to recover the engine by the gas hose, still attached to the tank in the boat. Not surprisingly, the motor failed to start after this early-morning baptism and I had to paddle the boat the remaining distance. Enough time remained before first light to arrange my decoys in a seemingly irresistible pattern in the shallow water. While strategically placing the last decoy, I was forced to revise my initial estimate of water depth when I sank over the top of my waders. Although now wet and cold, my expectations of a bountiful hunt remained undampened. I had even brought along some sandwiches and was prepared to spend the day. Bring on the ducks!

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## Duck Hunter (Continued from Page 6)

The dawn came right on schedule. The ducks didn't. For three hours, I sat hunkered down in my blind waiting for at least one lonesome duck to visit my spread of decoys. But, no such luck. Near by, another hunter was trying to create some action with his duck call. Not one to be outdone, I offered my best impression of a love-sick mallard. Still no ducks. Perhaps my efforts would have been more convincing had I brought along a duck call! By ten o'clock, it felt like rigor mortis had set into my cramped legs. Leaving my decoys in place, I decided to walk along the lake shore, stretch my legs, and maybe even flush up a resting duck or two.

Pow! Pow! Pow! Less than 20 minutes later, the quiet morning was disrupted by the sound of a shotgun. (Not mine, unfortunately). At least, I thought, some other hunter was having some luck or, more likely, emptying his gun out of boredom.

Upon returning later to my blind, I found two stiffening wood ducks neatly laid out on the front seat of my boat. Presumably, while stretching his own legs, my duck-calling neighbor had dropped by at the same moment the pair of ducks decided they could no longer resist my decoy spread. No doubt feeling guilty for shooting over my decoys, the hunter opted to leave me his ducks - a day's legal limit. As I gathered up my unfired shotgun, decoys, and the other guy's ducks to paddle the long way back, I noticed one other detail. The hunter's dog had helped himself to my sandwiches! Only another duck hunter would understand why, after these experiences, I still remain addicted to duck hunting.

**Editor's Note:** When Ron Billings isn't chasing southern pine beetles for the Texas Forest Service, he enjoys the great sport of duck hunting, although some of his hunts are more successful than others. The above story was printed in the Lufkin Daily News in 1997 as one of the better hunting stories submitted in a contest. Sorry Ron, I just had to run this one again.

## Darwin Award Runner Up (Source <http://www.darwinaward.com>)

Here is a true story about a person who was a runner up for a Darwin Award after attempting their brand of pest management. What's a Darwin? Darwins celebrate life by reminding us how close we've each come to death as a result of our own foolish actions. Aren't you relieved that YOU have (thus far) managed to avoid the "wet feet & light switch" accident? This fool fared worse... Enjoy, but remember - think before you leap.

### The Flyswatter

(April 2004, California) An adult education teacher gave 25 students an impromptu lesson in safety during safety class. Using opaque reasoning, he figured (a 40-mm shell) he found on a hunting trip must be inert. He kept the round, and even used it as a desk paperweight. Ordnance is such a unique

conversation piece; and more notably, the teacher's ticking ticket to fame.

On a spring morning, a bug crawled across his desk. Should he squash it with a tissue? Sweep it out the door? Leave it to pursue its happy existence, and continue with the lesson? No, the teacher picked another alternative. He took up the "inert" shell and slammed it onto the insect.

The impact set off the primer, and the resulting explosion caused burns and shrapnel lacerations to his hand, forearms and torso. No one in the classroom was hurt. To the teacher's further consolation, his actions did succeed in one respect: the bug was eliminated.

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## Wanted: INPUT!

Even though we have been running the Western Gulf Forest Pest Management Cooperative for more than ten years, we still have questions about how we can improve. Everyone is so busy with his/her own responsibilities that little time is available to provide feedback or comments. In the end, we are often left to guess at which problems/services are most important/needed to our clientele. Keep in mind that you, as members of the Cooperative, foot the bill. You are the boss. Let me know if there are additional services that the Coop can provide to make your life easier, safer, and more productive. Thanks. Don ([dgrosman@tfs.tamu.edu](mailto:dgrosman@tfs.tamu.edu))