

# *Fire Ant Trails:* News from the Texas Imported Fire Ant Research & Management Plan

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## **FIRE ANT AWARENESS WEEK 2002!**

The second week of September has been declared as "Fire Ant Awareness Week" by House Concurrent Resolution 259, which was signed by then Governor George W. Bush on May 27, 1999. Each year, the Texas Fire Ant Project celebrates this event with new program components and special events to highlight program activities and advancements during the previous year. This issue was developed to announce several new products and special program emphasis for "Fire Ant Awareness Week 2002".

## **EDUCATIONAL PROGRAMS FOR SPANISH SPEAKING CLIENTELE**

Although a number of fact sheets and releases for Spanish-speaking people are already posted on the Fire Ant Project's web site, <http://fireant.tamu.edu>, several new products have recently been developed and released to enhance educational resource materials for this part of our society:

- ◆ Spanish translated leaflet: "The Two-Step Method Do-It-Yourself Fire Ant Control for Homes & Gardens" (L-5070). This leaflet is the most popular of Extension fire ant publications and promotes the least toxic, most cost-effective alternative approach for suppressing imported fire ants in larger, heavily-infested areas.
- ◆ The videotape: "Fire Ant Control Made Easy" (Control Fácil de las Hormigas Bravas" (VHS2559). This 15 min. 10 second video tape was initially developed by the

Alabama Extension System and has been edited and re-voiced in Spanish by the Texas Cooperative Extension Agricultural Communications.



Extension Agents - IPM (Fire Ant Project), Nathan Riggs (Bexar County), Dr. Paul Nester (Bexar County) and Beth Hickman (Dallas County) have completed development of a curriculum, entitled KIDzANTS, for elementary school use containing lesson plans and activities to promote the understanding of imported fire ants and their relationships with other native and exotic competitor ant species in Texas. The curriculum includes:

- Lesson 1:** History of Red Imported Fire Ants in the United States
- Lesson 2:** Body Structure of Ants
- Lesson 3:** Life Cycle of the Red Imported Fire Ant
- Lesson 4:** Red Imported Fire Ant Mound
- Lesson 5:** What Do Red Imported Fire Ants Eat and Where Do They Like to Live?
- Lesson 6:** Common Ants in the Landscape
- Extra Activities:** Imported Fire Ant Model
- Extra Activities:** BE AN ANT DETECTIVE ! (by Sherry Ellison)
- Extra Activities:** Chocolate Covered Ants - Secret Recipe of the goddess of the Glenn

To supplement these lessons and activities, a booklet entitled, "Identification Guide to the Common Ant Genera of Texas" has been developed by Sean T. O'Keefe, Jerry L. Cook

and S. Bradleigh Vinson.

These materials will be available this fall for evaluation in selected schools in the San Antonio, Houston and Dallas/Fort Worth areas.

## **EXTENSION REDUCES FIRE ANT PESTS FOR WATER SKI SPECTATORS**

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happens when you cross a fire ant with a water ski competition? You get a lot fewer ants, thanks to Dr. Paul Nester, integrated pest management-fire ants agent, at Texas Cooperative Extension in Harris County.

Lydia Heard and Jay Gilbert approached Nester with a fire ant problem last February. They are property owners at Lago Santa Fe, a private ski community in Galveston County. Gilbert and Heard are involved in site preparation and hospitality for the 2002 National Ski Championships being held Aug. 13-19. They explained that fire ants were overrunning the place, and they wanted to do something about it.

"The ants ran rampant, our community looked like a prairie dog village," Gilbert said. "They were a safety risk because you could not go out onto your own land without watching where you stepped. They also interfere with the ski lakes, which was a huge problem."

Nester and Dr. Bastiaan Drees, fire ant project director, put together a team that went out in April to evaluate the situation. At first count, there were more than 168 ant mounds per acre. With each mound capable of sustaining 100,000 to 500,000 ants or more, the grounds would pose a major hazard for the crowds expected at the competition.

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The team developed a strategy to use a combination of the methods developed by the Texas Imported Fire Ant Research and Management Plan over the last five years. By May the team had achieved a control rate of 70 percent over the ant mounds, by June it was up to 89 percent.

"We were presented with an event which had a set date, and a problem that we needed to have under control before that time," Drees said. "After analyzing the situation and viewing the property we decided on a strategy that put everything to work."

The first step was to involve the residents of Lago Santa Fe. Normally the agents recommend that residents within a community plan to bait at the same time. By getting neighbors together, fire ant control is more effective.

A second strategy employed by the team was the Texas Two-Step Method. This involved baiting with both a slow acting, long-lasting bait and a fast-acting toxicant. The ant mounds were monitored and then baited a second time. The team used a fast acting-toxicant again but only on problem areas, such as high traffic sites.

Two new pieces of equipment were used for this project, both developed specifically for fighting fire ants. The first is a bed-mounted bait blower that can scatter bait along roadsides in a 40-foot spread.

Second, an ATV was modified to pull a spreader developed to spread bait in yards and smaller areas or adapted for use in urban settings.

All of these methods were employed by Nester and his team in Lago Santa Fe, the first time these have been used in combination on a project of this scale.

The Texas Imported Red Fire Ant Research and Management Plan seeks to develop ways to reduce fire ant populations so that the insect no longer is a serious pest in terms of economic and health threats, Nester said.

"This is what we aimed to do at Lago Santa Fe," he said, "and we accomplished it with phenomenal results."

NOTICE: This and other news stories, streaming audio and video, and digital photos for your use are available at <http://agnews.tamu.edu/>

**OTHER NEW RELEASES NOW AVAILABLE:**

or can be viewed on the Project's web site.

- ◆ Most of the **Fire Ant Plan Fact Sheets** (FAPFS under "materials" and "fact sheets" on <http://fireant.tamu.edu> have been updated, revised and posted.
- ◆ **"The Enemy" postcards** available for support of the Fire Ant Plan Fact Sheet, FAPFS015, "Community-Wide Imported Fire Ant Management Kit" - Post cards, designed for use by organizers of community-wide programs to control fire ants are now available. These cards can be sent to all residents in communities planning to coordinate imported fire ant treatments, with blanks for the treatment date(s) and contact information for the organizer(s). They can be requested by contacting the Fire Ant Project office (contact information below).
- ◆ **B-6043, "Managing Imported Fire Ants in Urban Areas", and B-6099, "Broadcast Baits for Fire Ant Control"** have been revised and reprinted. They are now available from Publication and Supply Distribution, Texas Cooperative Extension, P. O. Box 1209, Bryan, TX 77806-1209 (Debbie Mitchell, telephone: 979/845-6573 FAX: 979/862-1566; e-mail: [d-mitchell@tamu.edu](mailto:d-mitchell@tamu.edu)). An order form can also be downloaded at <http://texaserc.tamu.edu>. Publications can also be viewed and/or downloaded by visiting either <http://insects.tamu.edu> or <http://texaserc.tamu.edu>.
- ◆ **FY2002 Progress Reports** (June 2002), a compilation of reports submitted by Principal Investigators of programs funded for FY2002-2003 will be posted on the Project's web site, and limited copies will be available for the Fire Ant Project office.
- ◆ **"Red Imported Fire Ant Management Applied Research and Demonstration Reports 2000-2002"** - This 55 page booklet contains 13 reports of result and method demonstrations conducted by Texas Cooperative Extension Fire Ant Project personnel. Copies are available upon request

## **SUPPLEMENT ISSUE OF THE SOUTHWESTERN ENTOMOLOGIST TO RELEASE PROCEEDINGS OF THE FIRE ANT SYMPOSIUM**

This symposium, highlighting the Texas Imported Fire Ant Research & Management Project, was held during the combined meetings of the Southwestern Branch of the Entomological Society of America, the Southwestern Entomological Society and the Annual Imported Fire Ant Research Conference at the Gunter Hotel in San Antonio, Texas, Feb. 28, 2001. Proceedings articles have been peer-reviewed and will be published as a Supplement issue (No. 25) this fall. Reprint copies will be available to members of the Southwestern Entomological Society and upon request from the Fire Ant Project office. Reprints of individual manuscripts can be requested from underlined authors. Articles include:

OVERVIEW OF THE TEXAS IMPORTED FIRE ANT RESEARCH AND MANAGEMENT PROJECT, Bastiaan M. Drees and Ray Frisbie, Department of Entomology, 2475 TAMU, Texas A&M University, College Station, TX 77843, 979-845-5878 or [b-drees@tamu.edu](mailto:b-drees@tamu.edu)

PHORID FLIES FOR THE BIOLOGICAL SUPPRESSION OF IMPORTED FIRE ANT IN TEXAS: REGION SPECIFIC CHALLENGES, RECENT ADVANCES AND FUTURE PROSPECTS, L. E. Gilbert and R. J. W. Patrock, Patterson Labs, Department of Zoology, University of Texas Austin, Texas 78712, 512-471-7131 or [lgilbert@mail.utexas.edu](mailto:lgilbert@mail.utexas.edu)

DEVELOPMENT OF *BEAUVERIA BASSIANA* FORMULATIONS AND GENETICALLY MARKED STRAINS AS A POTENTIAL BIOPESTICIDE FOR IMPORTED FIRE ANT CONTROL, Harlan Thorvilson, David Wheeler, and Michael San Francisco, Dept. of Plant and Soil Science, Texas Tech University, Box 42122, Lubbock, Texas 79409-2122, 806-742-2828 or [rthgt@ttacs.ttu.edu](mailto:rthgt@ttacs.ttu.edu)

COMMUNITY-WIDE RED IMPORTED FIRE ANT PROGRAMS IN TEXAS - Nathan Riggs, Lisa Lennon, Charles L. Barr, Bastiaan M. Drees,

**Scott Cummings and Curtis Lard**, Texas Agricultural Extension Service, 3427 Northeast Parkway, San Antonio, TX 78218, 210/467-6575 or [n-riggs@tamu.edu](mailto:n-riggs@tamu.edu)

BOWIE COUNTY, TEXAS, PRECINCT 4 IMPORTED FIRE ANT MANAGEMENT INITIATIVE, **Carl Teel, Linda Remer, Charles L. Barr, Eric Lum**, Bowie County, Precinct 4, 801 S. Highway 8, New Boston, TX 75570, 903-628-2278 or [pct4@txk.net](mailto:pct4@txk.net)

PRODUCT EVALUATIONS, FIELD RESEARCH AND NEW PRODUCTS RESULTING FROM APPLIED RESEARCH, **Charles L. Barr and Rody L. Best**, Texas Cooperative Extension, P.O. Box 2150, Bryan, TX 77806, 979-845-6800 or [c-barr@tamu.edu](mailto:c-barr@tamu.edu)

SURVEY AND REGULATORY PROGRAMS FOR THE RED IMPORTED FIRE ANT IN TEXAS AND RESEARCH PROJECTS ADDRESSING REGULATORY CONCERNS, **Awinash P. Bhatkar**, Regulatory, Programs Division, Texas Department of Agriculture, P.O. Box 12847, Austin, TX 78711, 512-463-5025 or [abhatkar@agr.state.tx.us](mailto:abhatkar@agr.state.tx.us)

INVASION OF RED IMPORTED FIRE ANT NESTS BY SELECTED PREDATORY ANTS: PROSPECTS OF UTILIZING NATIVE ANTS IN FIRE ANT MANAGEMENT, **Asha Rao and S. Bradleigh Vinson**, Department of Entomology, 2475 TAMU, Texas A&M University, College Station, TX 77843, 979-845-9754 or [bvinson@acs.tamu.edu](mailto:bvinson@acs.tamu.edu)

THE BIOCHEMICAL CHARACTERISTICS OF VITELLOGENIN IN THE RED IMPORTED FIRE ANT, *SOLENOPSIS INVICTA* (HYMENOPTERA: FORMICIAE) - **Danielle K. Lewis, Jon Q. Campbell, Sheila M. Sowa, Mei-Er Chen, S. B. Vinson, and Larry Keeley**, Department of Entomology, Texas A&M University, College Station, TX 77843-2475, 979-845-9727 or [lkeeley@tamu.edu](mailto:lkeeley@tamu.edu)

DIGESTIVE ENZYME IDENTIFICATION AND EFFECTS OF FEEDING SERINE PROTEINASE INHIBITORS TO *SOLENOPSIS INVICTA* (HYMENOPTERA: FORMICIDAE), **Erik Meyer Dherry Ellison, S. Bradleigh Vinson, and Edgar Meyer**, Dept. of Biochemistry & Biophysics, Texas A&M University, College Station, Texas 77843-2128, 979-845-1744 or [meyer@bioch.tamu.edu](mailto:meyer@bioch.tamu.edu)

CLONING OF TROPONIN C AND OTHER GENE FRAGMENTS FROM THE RED IMPORTED FIRE ANT *SOLENOPSIS INVICTA* BUREN (HYMENOPTERA: Formicidae), **Patricia V. Pietrantonio, Steven P. Holmes, Christopher Jagge and Sam K. Frazier**, Department of Entomology, 2475 TAMU, Texas A&M University, College Station, TX 77843, 979-845-

9728 or [p-pietrantonio@tamu.edu](mailto:p-pietrantonio@tamu.edu)  
ANALYSIS OF ANTENNAL PROTEINS OF THE RED IMPORTED FIRE ANT, **Robert Renthal, Daniel Velasquez, Stephen Hogg, Christopher Carroll and Susan T. Weintraub**, Division of Life Sciences, The University of Texas at San Antonio and Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, TX 78249, 210/458-5452 or [rrenthal@utsa.edu](mailto:rrenthal@utsa.edu)

NORTHERN BOBWHITE AND RED IMPORTED FIRE ANT INTERACTIONS IN THE TEXAS COASTAL PLAINS, **Brad Dabbert, Robert B. Mitchell, James M. Mueller, Andrew R. Forbes and Joseph H. Treadway**, Dept. of Range, Wildlife, & Fisheries Mgmt., Texas Tech University, Box 42125, Lubbock, Texas 79409-2125, 806-742-1983 or [Brad.Dabbert@ttu.edu](mailto:Brad.Dabbert@ttu.edu)

THE KILLING OF NESTMATE QUEENS IN ANT COLONIES, **Richard J. Deslippe**, Department of Biological Sciences, Texas Tech University, Lubbock, TX 79409-3131, 806-742-2690 or [cmrjd@ttacs.ttu.edu](mailto:cmrjd@ttacs.ttu.edu)

ECONOMIC ASSESSMENTS OF RED IMPORTED FIRE ANT IN TEXAS' URBAN AND AGRICULTURAL SECTORS, **Curtis Lard, David B. Willis, Victoria Salin, and Sara Robinson**, Department of Agricultural Economics, Texas A&M University, College Station, TX 77843-2421, 979-845-4746 or [c-lard@tamu.edu](mailto:c-lard@tamu.edu)

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