

# MOSQUITO

NEWS AND INFORMATION FROM ADAPCO

# bytes



## VECTORS



Isaac Asimov wrote, "It is change, continuing change, inevitable change, that is the dominant factor in society today. No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be..." His point, of course, is that we must continually look forward if we are to adapt and thrive. With this in mind, I'm happy to tell you that ADAPCO was acquired in July by Maryland-based Calvert Street Capital Partners, Inc.

Founded in 1995, CSCP manages private investments in manufacturing and service companies. Following Asimov's advice, we plan to meet your changing needs for years to come while continuing to provide the outstanding service and products that you've come to expect from ADAPCO.

Another exciting change – ADAPCO's newest product, Vulchur™, for use in the wastewater processing industry – you can read about it in this issue. Also inside, a wrap up of summer's West Nile activity in the United States and a wider view of vector-borne diseases worldwide.

As the autumn leaves change, remember to enjoy the season's bounty.

Sincerely,

Bill German  
Marketing and Business Development Manager



## WEST NILE VIRUS AND EASTERN EQUINE ENCEPHALITIS

### *Still Concerns this Summer Despite Lower Numbers Nationwide*

The summer of 2006 saw it all, from intense heat waves and drought to days of unrelenting rain and flooding. With the increased groundwater providing excellent mosquito breeding sites, pest professionals are calling the 2006 mosquito season one of the heaviest in years. News stories across the nation focused on West Nile virus (WNV), leading to widespread anxiety. But by early September, the Centers for Disease Control and Prevention (CDC) had recorded just 1,267 WNV cases and 36 fatalities. Even allowing for lag time in case reporting and a late-summer activity peak, it seems unlikely that this year will match the 3,000 cases and 119 fatalities of 2005. So the question is, which areas of the United States should be genuinely concerned?



*Developing mosquito larvae*

The truth is everyone should take common-sense precautions because WNV continues to pose a serious threat. While California, South Dakota, Illinois and Louisiana were 2005 "trouble states," this year's vector load appears to have shifted. The state suffering most is Idaho with a reported 292 cases as of September 5. Another WNV death reported in Idaho on August 17 brings its total to three.

Rushing to help, ADAPCO Vector Control Services' (VCS) Chief Pilot Malcolm Williams met with Idaho Governor Jim Risch in preparation for large aerial applications over the counties of concern. The media, both locally in Idaho and nationally, have time and again turned to VCS personnel for their expertise to explain vector control to the public.

Daniel Markowski, the national IPM director of ADAPCO's Vector Control Services, says that peaks are fluid and change over time. "It's natural for hot spots to shift from year to year.

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# WEST NILE VIRUS AND EASTERN EQUINE ENCEPHALITIS

*Still Concerns this Summer Despite Lower Numbers Nationwide*

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This year's biggest hot spot is definitely Idaho, but you can almost always count on other states like California and Texas to be busy."



*Bites can be more than just annoying*

Thus far 34 states have reported human WNV cases. As of September, Nevada had already reported 85 cases, compared to 31 for all of last year. Other states recording significant WNV activity include Colorado, North Dakota, South Dakota and Utah.

Another well-known vector-borne disease has gotten the attention of public health officials and researchers – equine encephalitis. Three human cases of Eastern Equine Encephalitis (EEE) were recently confirmed in Massachusetts.

New Hampshire officials have confirmed that birds infected with EEE were found dead in their state, but no humans have as of yet contracted the illness that kills about 30 percent of those who contract it.



*Robins are known to carry WNV into populated areas*

It takes four to 10 days after being bitten for individuals to develop symptoms of EEE, which begins with the sudden onset of fever, general muscle pain and headaches of increasing severity. Many individuals will progress to more severe symptoms, such as seizures and coma. Approximately one-third of all people with clinical encephalitis caused by EEE will die from the disease and of those who recover, many will suffer permanent brain damage with many of those requiring permanent institutional care. In 2005, the CDC tallied 21 human cases found in New Hampshire, Massachusetts, South Carolina, Georgia, Alabama, Louisiana and Florida.

As mosquito season begins to wrap up, particularly in northern states, anxieties should calm. This doesn't mean WNV or EEE should be forgotten. Heavy mosquito populations continue to pose a threat year round in warm-weather states. In these places heavy late-summer rains typically increase case reporting in September and early October. With aggressive preventative spraying programs, the nation will be able to decrease the spread of WNV and EEE.

These two states report the second and third most cases, with 138 and 101, respectively. Despite fewer total cases than California or Idaho, Texas has had the most fatalities, 11.

## ADAPCO'S Newest Product Soars into WEFTEC 2006



ADAPCO Environmental Solutions (AES) will launch its revolutionary wastewater treatment solution Vulchur™ at the Water Environment Federation's Technical Exhibition and Conference (WEFTEC). The show, which takes place October 22 – 25 in Dallas, is the leading water-quality exhibition and conference, drawing thousands of water professionals.

Municipal water authorities, water management companies and private firms that process wastewater as a byproduct of their operations will use Vulchur to eliminate odor-causing bacteria in their systems. Vulchur is the only wastewater product that



*Aeration bays at a wastewater treatment plant*

prevents and controls corrosion in the system while effectively removing hydrogen sulfide (H<sub>2</sub>S) and mercaptans. Its patented formulation eliminates the need for secondary chemical treatments, is safe for workers and the environment, and is more economical on a cost-per-use basis than alternative products.

### UNIQUE FEATURES OF VULCHUR:

- Does not increase pH level
- Does not create solids or build-up in the system
- Uses 25 percent less chemical than other wastewater products



## Don't Let Your Guard Down

### Vector-borne disease still a risk in U.S.

While reported cases of West Nile virus (WNV) in the United States are down in the first half of 2006, vector-borne diseases are still a threat to Americans.

Domestically generated malaria has been virtually eradicated in the United States since the 1950s, but the risk of infection has not. Two of the 10 species of *Anopheles* mosquito responsible for malaria transmission (*Anopheles quadrimaculatus* in the eastern states and *An. freeborni* in the west) are still widely prevalent in the continental United States. These vectors can become carriers by biting an infected human.

But what are the odds? In 2004, the Centers for Disease Control and Prevention (CDC) reported more than 1,300 U.S. malaria cases, most of which were acquired abroad. But if you think that they all came from Africa and other far-flung places, think again. Trendy vacation destinations such as Belize, Costa Rica, Dominican Republic, Southern Mexico and Great Exuma, Bahamas, are all listed as places with

malaria risk by the CDC. Malaria and WNV aren't the only vector-borne

risks. Rift Valley Fever (RVF) is being watched closely since it first moved off Africa to Yemen and Saudi Arabia in 1999. With thousands of U.S. military personnel serving in the region, the potential for importing the disease to America has multiplied. The March 2005 issue of *Discover* magazine quotes Mike Turell, a specialist at the U.S. Army Medical Research Institute in Fort Detrick, Maryland: "To say that Rift Valley fever makes West Nile look like a hiccup is an understatement."

RVF is carried by the *Aedes* species and *Culex tritaeniorhynchus*. Symptoms range from weakness and fever to Ebola-like hemorrhaging. Victims are 10 times more likely to die from it than West Nile.

Obviously, abatement programs are key to containing risks, but personal protection continues to be the best protection.



## ADAPCO RECEIVES GREEN LIGHT FOR DISTRIBUTION OF NEW MOSQUITO-CONTROL FORMULATION

### Cognis granted EPA approval for new Agnique® granules

Cognis Corporation, an affiliate of Cognis GmbH worldwide and manufacturer of specialty chemicals, has been granted Environmental Protection Agency (EPA) approval for a new granular formulation of its liquid mosquito control product, AGNIQUE® MMF (monomolecular film). ADAPCO, Inc., the world's largest distributor of mosquito-control products and the exclusive distributor in the United States and Caribbean of AGNIQUE products since 2000, is signed on to distribute the new granular product, AGNIQUE MMF G.

According to the manufacturer, AGNIQUE MMF G is the only known granular mosquito-control product on the market that kills all mosquito life stages – larvae, pupae and resting adults. "We are very eager to get this product into our customers' hands for trials and evaluations," said Tom Wells, national sales manager of ADAPCO, Inc. "This product offers many significant advantages over other granular formulations and it will give our customers another valuable tool to effectively control immature mosquito populations."

An additional benefit of AGNIQUE MMF G is its ability to be used effectively in

a variety of habitats and in a more cost efficient way. "Many customers have asked for a granular version of AGNIQUE MMF, and we are now pleased to be able to offer the right solution," said Cognis NA business manager, Dean Oester. "MMF G will offer the same level of control as our liquid MMF with the added benefits of extending the modes of application and allowing easier treatment of hard to reach mosquito breeding habitats."

The product is administered through any ground or aerial granular application equipment to heavily mosquito-populated areas. The granule design will allow the product to penetrate canopies formed by trees and other foliage, guaranteeing that the product reaches its desired target. Once in contact with water, the product is self-spreading, has a long residual period and provides mosquito control at all life stages.

The product is being submitted for state registrations and should be available in fall 2006. For more information about AGNIQUE MMF G, please contact your local ADAPCO representative, or customer service at 800.367.0659.

# New Insectary Enhances Breeding & Research Capabilities



More than 300 years old, Georgetown is South Carolina's third oldest city after Charleston and Beaufort. It was founded in 1729 and became an official port of entry in 1732. In addition to its beauty and charm, Georgetown is known for its booming lumber industry, tourism, commercial fishing and now, it is the official home of ADAPCO's latest cutting-edge initiative – the ADAPCO Insectary.



15,000 mosquito eggs

“This insectary is a necessity to ADAPCO,” said Research and Development Manager Todd Gwinn. “Through this new facility, we are able to implement a greater variety of research projects, enhance our research capabilities and supplement our employee training programs.”

ADAPCO's insectary research capabilities include adult and larval formulation comparisons; equipment evaluations; ground and aerial adult mosquito evaluation and comparison; and residual trials of both adult and larval populations.

While Mother Nature is still the largest insectary for ADAPCO research, the

breeding station allows for greater control and improved time efficiency. “We are able to research both larval and adult populations all year round as opposed to three to six months out of the year,” said Gwinn. “We still utilize natural populations when they are available, but this can turn into a waiting game and is highly variable based on the natural conditions that year – potentially wasting time and money.”

The insectary maintains, monitors and manipulates the environmental conditions necessary for successful mosquito lifecycles – from the egg to adult to egg. Humidity, air and water temperatures are all carefully controlled to create thriving mosquito populations. The facility is capable of producing 30,000 to 40,000 mosquitoes a week.



Larval pans

Planning for the facility began in the fall of 2005 and the first batch of ADAPCO-bred mosquitoes hatched this past spring. Several ADAPCO employees now staff the insectary seven days a week, all year round.



Adult rearing cage

The station's field studies benefit the industry as a whole. “We work with the leading manufacturers in mosquito control and have established a successful research and development program that is truly invaluable to the industry,” said Bill German, marketing and business development manager of ADAPCO.

## ADAPCO ANNOUNCES MOVE

ADAPCO moved into its new 15,000-square-foot home on September 22 consolidating employees from several different locations. Just down the road from ADAPCO's old home, the new corporate headquarters has double the office, manufacturing and warehouse space.



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# ERR CONTROL



## **WINGMAN™** UNPARALLELED AERIAL MOSQUITO CONTROL PRECISION, SAFETY AND EASE. GX

To err is human. But when it comes to aerial mosquito control, it can also be costly, dangerous and time consuming. Which is precisely why ADAPCO® created Wingman™ GX, the world's most advanced aerial precision guidance and recording system for mosquito control. With the capability to receive real-time meteorology, process USDA Forest Service AGDISP spray fate model, and graphically display optimization results in real-time, Wingman GX offers you greater precision, safety and security than any other product of its kind. *Contact us for a demonstration of everything Wingman GX can do to help take the err out of your aerial mosquito control operation.*



**ADAPCO**  
*more in control*™

800 367-0659  
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## mini bytes

- ADAPCO welcomes junior software engineer, Greg Parrow. Greg is interning at ADAPCO through the University of Central Florida's Cooperative Extension program where he is also pursuing a degree in Computer Science. He is responsible for writing the high-level



Greg Parrow

software used in the Monitor 4 system – a GPS based variable flow controller that works with ADAPCO's tracker software. Aside from school and work, Greg is a drummer in Ariya, an Orlando-based rock band that recently played at Hard Rock Live. He is also a beekeeper and has 2 hives that he plans to harvest for honey in the upcoming weeks.

- Ariel Brillante joins the team as the production logistics manager for ADAPCO's manufacturing and development department and is responsible for coordinating production projects and times. He previously worked for LTS Imaging Products, Inc. in Longwood, Florida as an operations manager. He has his Associate of Arts degree from



Ariel Brillante

Valencia Community College and is currently pursuing a Bachelor's of Science in electrical engineering from the University of Central Florida. Ariel enjoys spending time with his family and friends, and plays as much golf as he can. He currently resides in Debary, FL.

- The South Carolina Mosquito Control Association will hold its annual meeting at the Ocean Creek Resort in Myrtle Beach, November 1-3, 2006. For more information on the annual meeting and other SCMCA news, please visit SCMCA's web site, [www.scmca.net](http://www.scmca.net) or contact Carolyn Morgan, SCMCA secretary and treasurer, at (803) 896-0655 or [morgancl@dhec.sc.gov](mailto:morgancl@dhec.sc.gov).



## DO YOU KNOW SOMEONE OR SOMETHING THAT "BYTES"?

The creators of *Mosquito Bytes* are always on the lookout for new story ideas. There is no story too big or too small, so submit your idea today and you just might see it in an upcoming issue! Please send your suggestions to [bgerman@myadapco.com](mailto:bgerman@myadapco.com).