



Fight the

BITE

East Baton Rouge Parish
Mosquito Abatement and
Rodent Control



A Special Advertising Supplement

EAST BATON ROUGE JOINS THE FIGHT

In 1979, voters in East Baton Rouge Parish voted to establish a dedicated mosquito and rodent control district in their region. These functions had previously been handled by the department of public health, but they needed closer attention. Citizens approved a property tax to fund the creation of the East Baton Rouge Parish Mosquito Abatement and Rodent Control, or EBRPMARC. Today, EBRPMARC serves the parish by suppressing nuisance and disease-vectoring mosquitoes, helping citizens to control rodents and educating through public outreach.

"The district uses an integrated mosquito management process to control the insect's numbers and population growth," says Randy Vaeth, assistant director at EBRPMARC. First, they practice larviciding, treating the water at the larval stage of the mosquito's life cycle with pesticides that target the insect's larvae while posing a very low risk to humans and wildlife. Next, they spray residential areas where large numbers of adult mosquitoes have been reported, using a fleet of 14 night-spray trucks and two specially equipped low-flying planes. The final step in the process is EBRPMARC's residential inspections, where technicians visit thousands of homes and drain or treat sources of standing water where mosquitoes can lay their eggs.

Mosquito control and disease prevention start with knowledge and preparedness. In East Baton Rouge Parish Mosquito Abatement's community outreach program, two science teachers visit schools and health care centers to educate residents on how to protect themselves and eliminate mosquito breeding sites in their homes. They distribute educational materials and brochures, arming citizens with the information they need to help control pests and disease-carrying mosquitoes.

The combination of prevention, aggressive treatment and education has made EBRPMARC a powerful player in the suppression of local mosquito populations. The property tax that funds the district has been renewed by parish voters in 2012, allowing the district to continue to fight for citizens' safety and health.



Assistant Director Randy Vaeth with a spray truck.
PHOTO BY JOSEPH BENNETT



PHOTO BY CDC/JAMES GATHANY

Fast Facts: ALL ABOUT MOSQUITOES

by Ali Brimhall



- There are over **3,500 different species** of mosquitoes around the world – the United States is home to about **150 species**, and **47** of these can be found in East Baton Rouge Parish. Not all mosquitoes are health hazards, but many of them can carry diseases like the West Nile virus that can spread to animals and humans.
- Mosquitoes are one of the oldest creatures on the earth – they were around before the dinosaurs, over **400 million years ago!**
- The itchy, raised bump that you get from a mosquito bite is caused by an **allergic reaction** to the mosquito's saliva.
- Only female mosquitoes bite, **drawing blood for protein needed in egg production**. Both male and female mosquitoes eat nectar and other natural energy sources.
- Female mosquitoes need standing water to **lay their eggs**. That's why the best prevention method for controlling the mosquito population is to **eliminate or treat all standing water** around your home at least once a week.

Mosquitoes of concern in the East Baton Rouge region:

- **The southern house mosquito** (*Culex quinquefasciatus*), the species responsible for most West Nile virus cases in East Baton Rouge Parish. These mosquitoes commonly breed in septic ditches, storm drains and other organic aquatic habitats created by humans.
- **The Asian tiger or forest mosquito** (*Aedes albopictus*), an invasive species native to Southeast Asia that is a disease vector for dengue fever, the yellow fever virus and chikungunya.
- **The floodwater mosquito** (*Aedes vexans*), a species that breeds in large numbers after spring rains and tropical storms, often traveling long distances away from its breeding site.
- **The head-hunter mosquito** (*Psorophora ferox*), a woodland mosquito that breeds in woodland pools. This species is a particularly aggressive biter, with a preference for the neck and face.

1. Egg

Eggs are laid one at a time to form “egg rafts” of up to 200 eggs that float on top of the water. Some species lay single eggs. Others lay eggs in dry soil that will be flooded by water. Most eggs hatch within 48 hours.

Why it's important: Mosquitoes depend on water for their eggs to hatch and develop into future stages, so reducing water sources where mosquitoes lay their eggs is extremely important.

4. Adult

The newly emerged adult rests on the surface of the water. The wings have to spread out and dry properly before it can fly to find food (males eat nectar while females consume nectar and blood). After the female mosquito ingests a blood meal, she can mate to start the cycle again.

Why it's important: At this point, aerial spraying is one of the most common ways to knock down flying adult mosquitoes and kill them.

HOW A MOSQUITO GROWS

A mosquito has to go through a lot of changes before it can bite you. Understanding the four life stages of a mosquito helps us know how they breed and how we can eradicate them.

by Michelle Carl

2. Larva

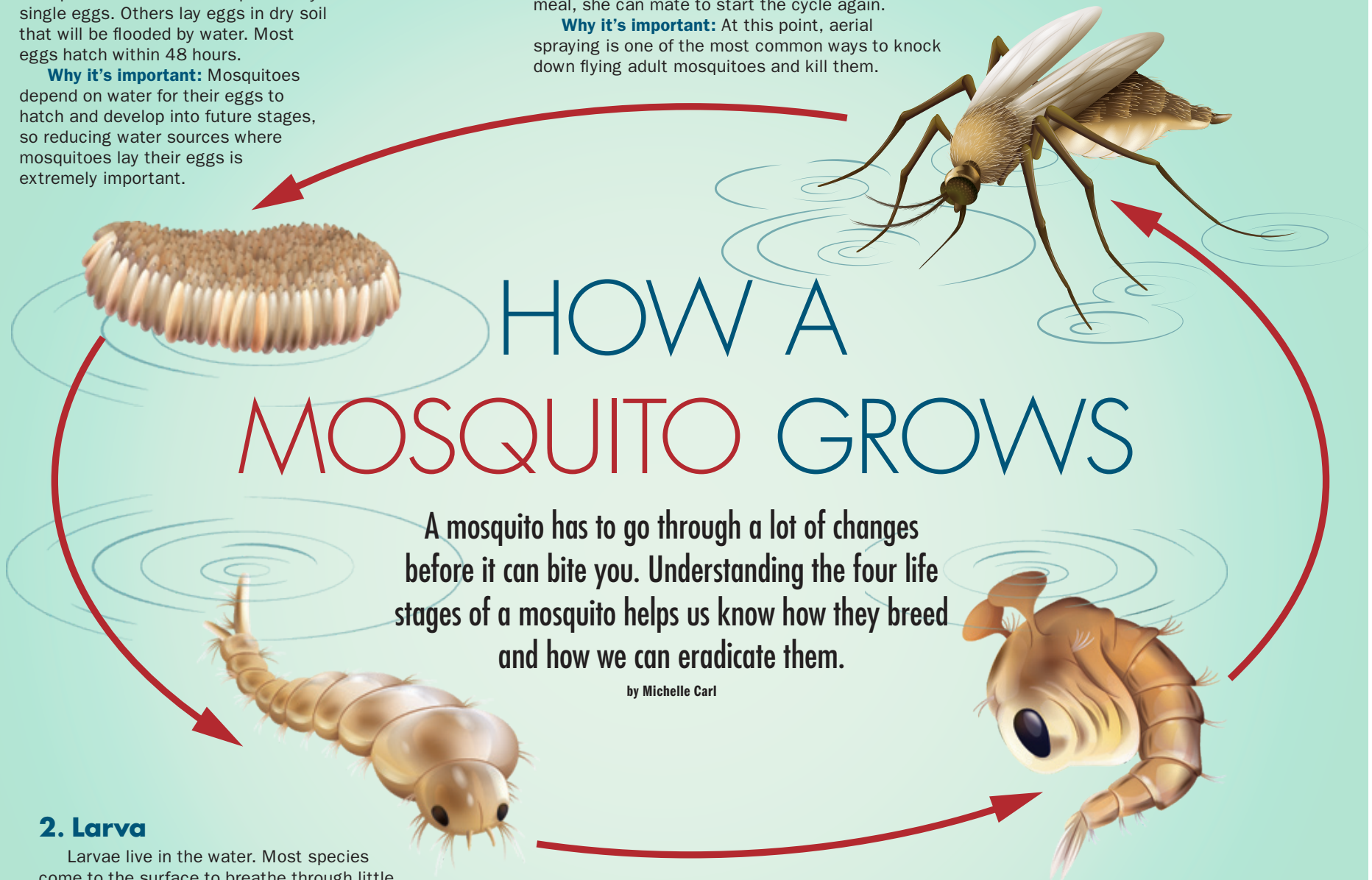
Larvae live in the water. Most species come to the surface to breathe through little tubes. Larvae feed on microorganisms and organic matter. They molt four times before turning into a pupa.

Why it's important: Water sources with organic material make for the perfect environment for hungry young larvae. But mosquito larvae can be food for the mosquitofish. It's a good idea to stock ornamental ponds with these mosquito-eaters. Larvicides also can be applied to the surface of the water, where larvae come to breathe.

3. Pupa

This is a resting, non-feeding stage in the development of a mosquito. The pupa breathes on the surface but is able to flip its tail to move to the bottom of the water, where it's safer. Much like a caterpillar morphing into a butterfly, the pupa transforms into an adult mosquito in about two days.

Why it's important: Because it still breathes at the surface, pupa-stage mosquitoes can be susceptible to larvicides applied on the water. Larvicides can include bacteria that cause the larva to have trouble ingesting food, growth inhibitors that prevent a larva from maturing into an adult, and insecticides that impact the nervous system.



A Life-Changing Diagnosis

One West Nile virus victim's road to recovery

by Ali Brimhall

Something wasn't right. When 41-year-old New Orleans resident Brian Sims woke up one morning in September 2012 with chills and a fever, he thought that he was just experiencing an average cold or flu. But when several days passed and the symptoms only worsened, he decided that he needed to see a doctor.

Brian was diagnosed with the common cold and sent home. He returned a few days later as his illness became more severe. "I told them that they needed to check me out a little bit more," he says. This time, the diagnosis was pneumonia, which seemed more fitting for the severity of his symptoms – until he woke up at home in a sweat-soaked bed, tried to stand up and immediately fell to the ground.

An ambulance took Brian to the hospital. By this time, he was starting to lose his motor skills and was having trouble speaking. He had developed numbness and tingling in his hands and feet and could not bend his fingers.

"They tested me for everything," Brian says. "HIV, muscular diseases ... they did blood tests and a spinal tap, taking fluid from my back."

When the extensive battery of tests came back negative, the hospital finally tested for the West Nile virus, sending the sample to an out-of-state lab. They transferred Brian to a rehabilitation facility, where he started relearning how to walk

and talk. He would not know what was wrong with him until the test results came in almost two weeks later.

Brian had developed the neuroinvasive symptoms that less than one percent of West Nile virus victims experience, weakening his muscle memory and sense of balance. Because there is no cure for the West Nile virus, doctors can only treat the effects it has on the body and cognitive functions. Brian's physical therapy included learning how to squeeze and grab objects, walking up and down stairs and using motion-controlled video games to work on his balance. Eventually, he would be moved from a wheelchair to a walker, then graduate to walking with a cane.

Today, Brian is one of the lucky ones. He has made a full recovery, with no medication or additional rehabilitation necessary. As before the illness, Brian exercises several times a week, keeping his body moving and his mind sharp. He tries to complete all yardwork during daylight, wears long sleeves and light-colored clothing to ward off mosquitoes and is very careful about sources of standing water around his home.

"Be aware of your surroundings," he advises. "This was a life-changing experience, teaching me to look at things differently and respect life for what it is."

"Be aware of your surroundings."

Brian Sims
West Nile virus survivor



KNOW THE SIGNS

Every year, thousands of Americans are infected with the West Nile virus, which is spread by a mosquito's bite. About 80 percent of people who contract West Nile will have no symptoms. In the other 20 percent, **mild to moderate flu-like symptoms may occur**, including:

- Nausea
- Headache
- Fatigue
- Rash
- Muscle aches

However, less than one percent of West Nile virus cases develop a **life-threatening neuroinvasive reaction** to the disease. Symptoms include:

- Disorientation
- Paralysis
- High fever
- Coma
- Seizures

There is no cure for West Nile virus, which makes prevention extremely important.

Other diseases mosquitoes can carry:

- Dengue fever, a tropical disease that causes flu-like symptoms and a rash similar to measles
- Chikungunya, a virus spread by the Asian tiger mosquito that causes high fever and arthritic pain
- Yellow fever, a disease endemic to tropical areas of South America and Africa

Ask the Mosquito Experts

Q&A with Dr. Todd Walker and Kenny Ricard

by Mike Blount

East Baton Rouge Parish Mosquito Abatement and Rodent Control does much more than control mosquitoes. While most people in the area are familiar with the district's trucks spraying pesticide in the evening, it offers so much more. EBRPMARC Director Dr. Todd Walker and Pest Control Inspector III Kenny Ricard talk about additional services and why it's important to educate the public on what the district is doing.

What services does the district offer that residents might not know about?

Dr. Todd Walker: A really unique service we offer that is part of our control operation is based on residents asking for control at their residence. We will use hand foggers, rather than trucks, to provide control over a specific area. We also provide mosquitofish that are very efficient at feeding on mosquito larvae.

Besides fogging, what else does the district do to control mosquitoes?

Dr. Todd Walker: A major part of our operation is conducting intensive surveillance for both adult mosquitoes and larvae. In order to know the areas to treat, we need to know where they are. We try to locate sources where mosquitoes are breeding, such as roadside ditches, standing water and tires. We encourage residents to dump out containers of water and to replace the water in birdbaths every couple of days. We also operate two different kinds of traps for the collection of adult mosquitoes to test them for disease and to determine their abundance.

Where does the district do public outreach?

Kenny Ricard: We're everywhere. We're at neighborhood committee meetings, we do presentations at elementary schools and for church groups. We're at health fairs. Anywhere there's three people and a table, we're there talking about everything to do with mosquitoes — why females bite, why they need blood and where they live. We were doing around 20 presentations a year when we started and now we're up to about 60. I love it.

What do you talk about at these presentations?

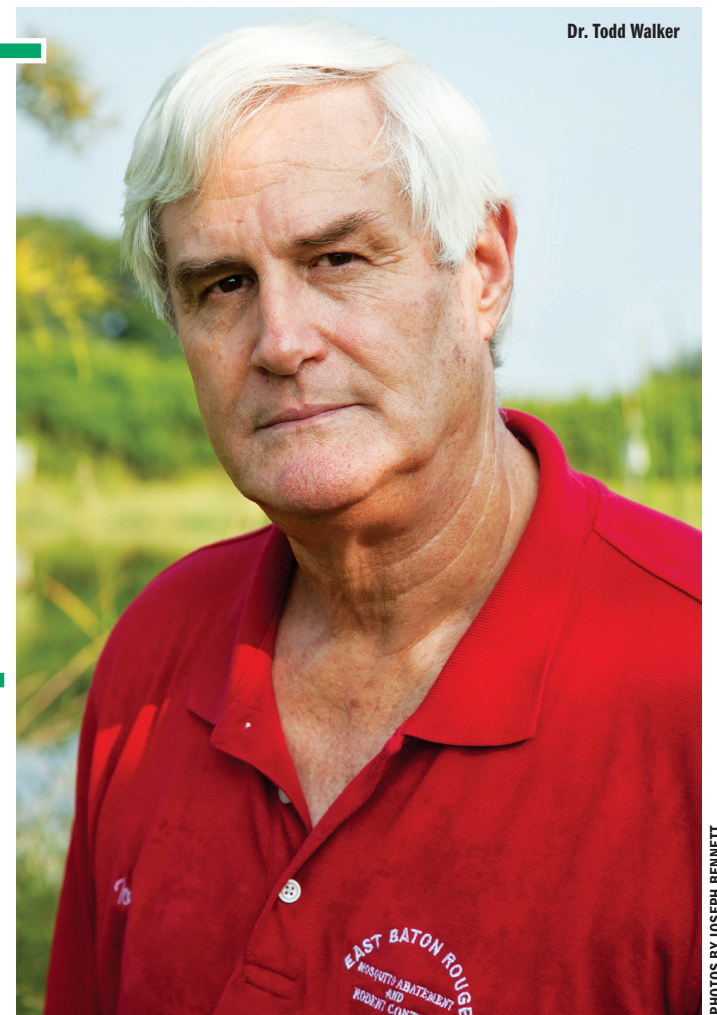
Kenny Ricard: We try to be entertaining and exciting. We have slides that show the mosquito life cycle, but we also have aquariums with mosquito larvae on one end and mosquitofish on the other. We show how they charge in and feed on the larvae. We'll also have our mascot, Misty the Mosquito, come out. But the showstopper is when we bring out a dog's heart in alcohol that has heartworms. People walk by and they are curious. We [use it] to show what can happen when mosquitoes are not taken care of. It's all about entertaining and educating the public.

Why is it important to educate the public?

Kenny Ricard: We want them to know about mosquitoes so they can protect themselves from the diseases that are out there that they carry. We're showing them what they can do to help us. It's a joint effort to fight mosquitoes, and we need everyone's help.

But you do more than mosquitoes, right?

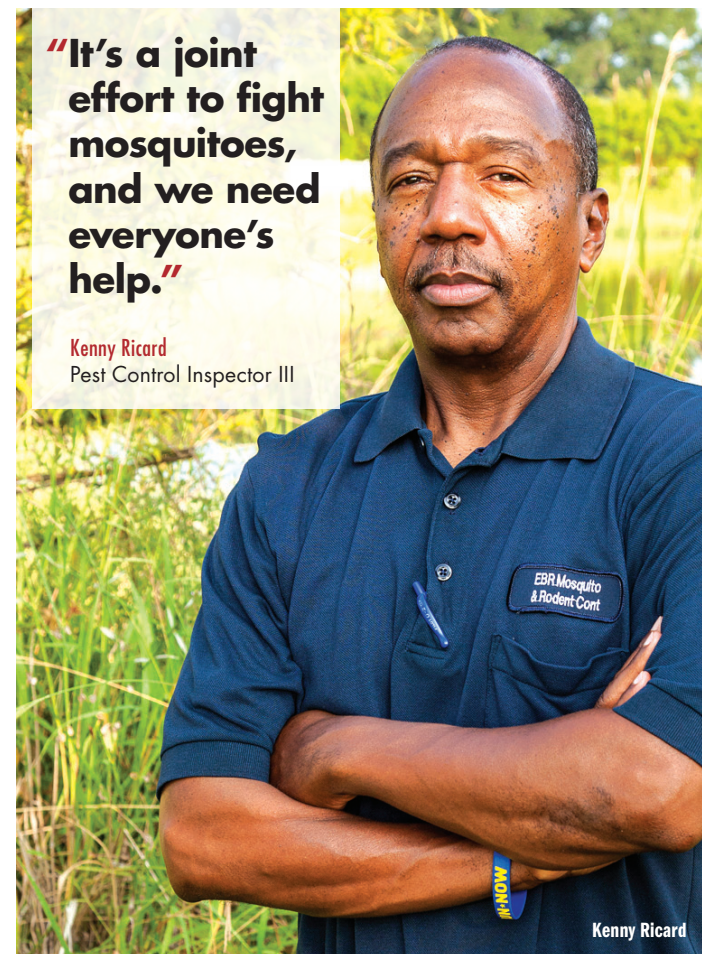
Dr. Todd Walker: Rodent control is an additional service we provide where we'll provide a resident with a bait station every two weeks. We conduct an inspection of the home to try to determine where the rodents may be entering the home. Rodent control is an important service because rodents cause structural damage, food contamination and they carry several diseases.



PHOTOS BY JOSEPH BENNETT

"It's a joint effort to fight mosquitoes, and we need everyone's help."

Kenny Ricard
Pest Control Inspector III



Kenny Ricard

Keeping Your Home Safe

by Ali Brimhall

Some of the locations where mosquitoes can breed might surprise you. Female mosquitoes can lay their eggs in pools of water just a few inches wide, putting your property at risk of becoming a hot spot for disease-spreading insects. The more places that standing water collects around your home, the more serious this problem can become. Draining these common breeding sources at least once a week will greatly reduce the risk. Pick a dedicated day, like the day of your trash or recycling pick-up, to help you remember to do this each week.

Check and Drain:

- Saucers under potted plants
- Birdbaths, feeders and fountains
- Pets' water bowls
- Open trash cans and wheelbarrows
- Kiddie pools, wagons and other toys
- Used tires

Don't Forget To:

- Check window screens and repair holes.
- Inspect hoses and faucets for leaks.
- Be aware of places on your property where water might naturally collect, like low-lying areas and rot holes in trees.
- Check rain gutters regularly, clearing leaves and other debris that might interrupt the flow of water.
- Drain or treat out-of-use swimming pools and ornamental ponds. The district can also provide mosquitofish at no charge to residents.
- Report neglected pools and other standing water sources in your area that can't easily be drained, like open septic ditches, ponds and storm drains. Call the district at 225-356-3297 and an EBRPMARC representative will be sent to treat these sites with mosquito-targeting pesticides.

If everyone does their part in the fight against mosquitoes and the diseases they carry, the result will be a healthier community and fewer nuisance insects throughout the year. Be vigilant, be consistent and remember that you are the first line of defense against mosquitoes in your neighborhood.



USED TIRES AND MOSQUITOFISH

If you have used or spare tires outside your home, you could be providing a prime breeding site for nuisance and disease-spreading mosquitoes. Water that collects inside tires after the rain is the perfect place for female mosquitoes to lay their eggs, and these tires can be hard to dry or remove. Do your part in controlling mosquito populations in your neighborhood – recycle tires. Up to four tires may be placed curbside for weekly collection. Call 311 or 225-389-3090 to report a missed collection. Or take tires to a recycling facility,

such as Environmental Industries (225-344-8298) or the North Landfill, 16001 Samuels Road, Zachary (225-389-4813).

For other sources of standing water that can't be drained, like ornamental ponds and swimming pools that are not in use, mosquitofish are a great way to reduce the mosquito population. Mosquitofish are small freshwater fish that eat the larvae of mosquitoes as a part of their diet. Call EBRPMARC to have mosquitofish brought to your home, free of charge.



Protect Yourself: REPELLENTS 101



by Ali Brimhall

When it comes to fighting against nuisance and disease-spreading mosquitoes, prevention is key. Just like wearing sunscreen to prevent being burned in the sun, thinking ahead and wearing insect repellent during outdoor activities is one of the most important things you can do to protect yourself. Mosquitoes only need an exposed patch of skin about the size of a dime to land and cause an irritating, potentially life-threatening bite. Learn how to protect yourself from mosquito bites and how to apply the right type of repellent by following these tips:

- Mosquitoes are most active at dusk and dawn. Remember to wear long sleeves and pants if you are outside at these times, covering as much skin as possible. Avoid wearing strong perfumes and dark colors.
- Use an EPA-approved repellent with the active ingredient DEET, picaridin or IR3535. For a more natural repellent, choose one containing oil of eucalyptus or PMD – however, these repellents are not as long-lasting or effective.
- Follow the label's directions to apply repellent to skin and clothing.
- Do not spray aerosol repellents in an enclosed area.
- Do not apply repellent on broken or irritated skin, or under your clothes.
- Keep all repellents out of the reach of children. Use extra caution when applying on younger children: spray repellent on your hands before rubbing onto their skin.
- Do not spray repellent directly on the face. Apply it on your hands first, then rub on face. Avoid sensitive areas like the eyes, ears and mouth.
- Wash skin with soap and water after returning indoors.
- If you or a member of your family experiences an adverse reaction to a repellent, discontinue use and consult a doctor or poison control center.

Choosing the Right Repellent

EBRPMARC follows Centers for Disease Control and Prevention guidelines for EPA-registered mosquito repellents, meaning that the products have been tested and determined to not pose serious health risks to consumers. These repellents contain DEET, picaridin, oil of eucalyptus (OLE), PMD and IR3535 as their active ingredients. The following is a list of some of these approved repellents:

- 3M Ultrathon
- All-Terrain Herbal Armor
- Avon Skin-So-Soft Bug Guard Plus
- Citrapel
- Coleman
- Cutter
- Cutter Natural
- Natrapel
- Off!
- Off! Botanicals
- REI
- Repel
- Sawyer
- SkinSmart

PESTICIDE SAFETY

If there's a question about the pesticides used in mosquito control, Dr. Robert K. D. Peterson knows the answer. Since 2002, Peterson has studied the risks pesticides pose to humans and the environment at Montana State University, and what he's found is that they are safe. Peterson's research looks at several factors, including human health, wildlife health and changes in the environment.

In terms of modern pesticides, very low amounts are used to control mosquito populations.

"When you're dealing with that low of a concentration you're putting in the environment, people's exposure ... is very, very low, and because risk is a function of exposure, the risk is very low," Peterson says. "These are not particularly toxic materials — they're toxic to insects, but not particularly toxic to things with backbones."





We All Can Help Fight the Bite

East Baton Rouge Parish Mosquito Abatement and Rodent Control relies on the public to help control disease-spreading mosquitoes

What you can do:

- Wear repellent when outdoors
- Reduce sources of water around the home
- Contact the district to report mosquito problem areas

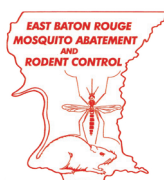
District Services:

- Inspections and treatment for mosquito problems around residences, businesses, recreational areas and schools
- Inspections for rodents (rats and mice) around residences
- Distribution of rodenticide baits to homeowners



East Baton Rouge Parish Mosquito Abatement and Rodent Control

2829 Lt. General Ben Davis, Jr. Ave.
Baton Rouge, LA 70807
225-356-3297 Office
225-356-9864 Fax
7 a.m. - 3:30 p.m. M-F
brgov.com/dept/ebrmarc/



Other local districts:

West Baton Rouge Mosquito Abatement Program

3147 Ted Denstel Road
Port Allen, LA 70767
225-214-5900 Office
225-215-0040 Fax
www.wbrcouncil.org/Departments/Mosquito-Abatement

Ascension Parish Mosquito Control

14233 Highway 431
St. Amant, LA 70774
225-621-9613 Office
225-622-5371 Fax



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