

News Release

for: Week of September 24, 2001

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Florida's Most Infamous Creature

West Nile Virus and Eastern Equine Encephalitis (EEE) have been hot topics in the local news this summer. The main culprit in these disease occurrences is the tiny, annoying mosquito.

Mosquitoes have played a prominent role in Florida's history since the days of the early Spanish explorers, both as pests and carriers of disease. We often forget that Florida wasn't always a leading tourist destination. As little as 100 years ago, mosquitoes almost single handedly impeded development of Florida and life in the state, was considered unbearable.

For many years mosquitoes restricted settlements in Florida to the northern part of the state. Although settled, northern Florida was anything but a pleasant place to live. The major cities of Jacksonville, St. Augustine, Tallahassee, and Pensacola were known as the "malaria belt".

Yellow fever outbreaks in the 1870s and 1880s took a tremendous toll in human suffering and death. The 1888 yellow fever epidemic in Jacksonville killed 400, sickened 5,000, and caused 10,000 to flee the city. Fortunately, all of that has changed thanks to mosquito control.

Mosquitoes are insects belonging to the order Diptera, or "true flies". They have long slender bodies, narrow wings, and long, thin legs. The females have an elongate proboscis, usually well-adapted for piercing skin and sucking blood. The males cannot suck blood but both sexes feed on nectar of various plants.

The mosquito life cycle consists of four stages: egg, larva, pupa, and adult. Eggs may be laid singly or in rafts, deposited in water, on the sides of containers where water will soon cover, or on damp soil where they hatch when flooded by rainfall or high tides. The eggs normally hatch within 48 hours into larvae or wigglers. The larvae live in the water and most species come to the surface to breathe. Larvae shed (molt) their skins four times before changing into the comma-shaped pupae. The pupae transform into adults in about two days. The entire life cycle averages about two weeks, but varies depending on species and temperature.

There are 73 species of mosquitoes in Florida, belonging to 12 different genera. Close to 50 species are distributed in Northwest Florida. Anopheles quadrimaculatus, which transmits malaria and Aedes aegypti, which vectors both yellow fever and dengue, are still present throughout the state. If persons carrying these diseases in their bloodstream should come into Florida from other areas, it would be possible for mosquitoes to bite them and become infected.

Only a few species of local mosquitoes are believed involved in the transmission of EEE and West Nile Virus. The “black-swamp mosquito”, Culiseta melanura, transmits EEE virus among infected birds. Then, other species such as the “salt-and-pepper mosquito”, Coquillettidia perturbans, and those in the genus Aedes, feed on infected birds and transmit the virus to humans and horses.

Entomologists believe that West Nile Virus is transmitted from birds by entirely different species of mosquitoes than those that transmit EEE virus. These include members of the Culex species complex. Culex quinquefasciatus and Culex nigripalpus are two common species in our area.

County mosquito control offices, health departments, and other public agencies are doing a tremendous job in reducing the threat of mosquito-transmitted diseases. However, individuals should take the following steps to eliminate standing water and mosquito breeding sites on their own property.

- Clean out eaves, troughs and gutters.
- Remove old tires, or drill holes in those used for playground equipment to allow them to drain.
- Turn over or remove empty plastic pots.
- Pick up broken, unused or discarded toys.
- Pick up all beverage containers and cups.
- Check tarps on boats or other equipment that may collect water in pockets or indentations.
- Pump out bilges on boats.
- Replace water in birdbaths and pet or other animal feeding dishes at least once a week.
- Change water in the bottom of plant containers, including hanging plants, at least once a week.
- Remove vegetation or obstructions in drainage ditches that prevent the flow of water.
- Fix dripping outdoor faucets that create pools of water.

If you need information on this or other topics, please feel free to call your local County Extension Office.

Extension Service programs are open to all people without regard to race, color, sex, age, handicap or national origin.

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