# Outsmarting Our Insect Pests

Outsmarting our insect pests will be easier and your visit to Fort Frederica more pleasant if, during times of greatest insect activity, you will wear protective clothing and apply some kind of insect repellent. Protective clothing should include long-sleeved garments of tightly woven materials and trousers. Commercially prepared insect repellent that contains Diethyl-metatoluamide, fortunately called "DEET" for short, helps one gain an advantage over our biting pests. The higher the percentage of "DEET" in the repellent, the more effective it appears to be in warding off attacks, particularly of mosquitoes

Mosquitoes, deerflies, and sand gnats are the insects most frequently encountered here. Ticks and chiggers are not usually found in very great numbers unless you stroll into areas where the grass is tall.

Always check yourself for ticks within four hours after leaving such an area.

"...a trifling accident of a Bite from one of our flying insects (of which there is a great Variety in this part of the world) which occasioned a small Swelling, from whence ensued an extream Itching, and that was attended with Scratching ... "

William Stephens Colonial Records of Georgia

To give you an idea of what to expect, take a look at our Insect Nuisance Forecast located in the visitor center before making your tour of Frederica. The forecast will indicate if mosquito, sand gnat, or deerfly populations are light, moderate, or heavy for the day.



# The Settlers' Daily Skirmish With Teeming Insect Populations



Insects have always been a part of life in the town of Frederica. Settlers arriving from England cursed the insects which plagued their new home. The spring and summer months were the worst, since abundant rainfall only increased the numbers of mosquito hatches. Following a rainstorm, often a daily occurrence, deerflies attacked with renewed vigor and, when the temperatures were right, out came the sand gnats.

Smoky fires were built to drive away insects, but the warmth from the fires only increased the settlers' misery. They performed their daily tasks encumbered by heavy clothes that were suitable for a cool, English clime but hardly practical in the hot, humid colony of Georgia!

### Sand Gnats

Days with temperatures in the 60s or 70s are greatly appreciated by most humans. Unfortunately, the tiny sand gnat seems to share this feeling and appears in large numbers. Focusing its attention on the legs and ankles, the gnat swiftly works its way up to the face, ears and any other exposed area.

Insect repellents frustrate the efforts of the sand gnat, also called the "sand fly" or "no see-um."

#### Biting Flies

Also called "yellow flies" or "deerflies," they appear in April and steadily increase in size becoming most vicious during the month of May and June. By July, they are only an unpleasant memory but come August, their bite heralds their return, much to the chagrin of humans and animals alike.

Persistent creatures, deerflies fly rapidly around the head area in great swooping circles, occasionally zooming in to score a hard, mean bite. Close observation reveals that this active insect is yellow in color and about 1/2" long.

They will respond to insect repellents.

## Mosquitoes

Both male and female mosquitoes are pollinators of many wildflowers overlooked by bees.

Only the females bite. Egg development requires a protein rich meal, and humans, birds and reptiles are the providers. Certain mosquitoes attack only one host (like us), while others travel from bird to mammal with equal frequency, thus are vectors of disease. Eastern Equine Encephalitis, (EEE), is transmitted from birds to horses and to humans.

Mosquito populations are monitored at Fort Frederica as a part of the Integrated Pest Management program. Night time numbers are obtained with the help of a light trap, and bite landing counts are made during the day.

Use of natural and biological controls is emphasized, while pesticide application is considered a last resort. Predation of adults and larvae by fish, frogs, insects, and even other mosquitoes helps to keep the numbers low.



#### Chiggers and Ticks

Chiggers, which are mites resembling mechanized paprika, attach themselves to a host and inject a digestive juice which breaks down the contents of the cells. This repast is slurped up by the chigger, who then departs. Several hours later, the bite begins to itch, but by then the chigger is long gone, thus rendering "chigger cures" ineffective. Apply an ointment to relieve the itching lest the bites become infected due to scratching. Dusting the ankles and insides of shoes with sulphur powder helps to repel chiggers and ticks.

Adult ticks are about 1.8" long, reddish brown in color and sometimes have a white spot on their back. Should one become embedded in the skin, grasp it crosswise with tweezers as close to the point of attachment as possible. Retract or pull the tick firmly in the direction of attachment being careful not to leave the head behind. Serious diseases such as Rocky Mountain Spotted Fever are transmitted by ticks. Check your clothing and exposed skin for ticks while walking in an area of tall grasses or other vegetation.