



# Pest e-alerts



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## Gulf Coast Ticks and Spinose Ear Ticks in Cattle

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This is the time of year that cattle producers need to start monitoring or treating cattle for ear tick populations. There have been several reports across the state with cattle severely infested with ear ticks. The majority of the cattle have the Gulf Coast Tick but some have been reported to exhibit a “flop eared” condition which is more likely caused by the Spinose Ear Tick.

### Gulf Coast Tick [*Amblyomma maculatum*] (Fig. 1)

This is a three-host tick. As larva and nymph, the Gulf Coast tick is a common pest of ground-inhabiting birds, such as meadowlarks and bobwhite quail, or small rodents. The adults primarily blood feed on cattle, but a variety of other hosts including dog, horse, sheep, deer, coyote and humans can be parasitized. This tick has become increasingly abundant in Oklahoma in the last 20 years and is an important pest of cattle. In addition, the Gulf Coast Tick transmits *Hepatozoon americanum* to dogs and coyotes which is an often fatal, tick-borne protozoal disease of dogs in the United States of America. The adults attach to the ears of cattle and are most abundant in early April to mid-June. When infestations are high on cattle, the ears may become thickened and curled causing a condition called “gotch ear” (Fig. 2).

Insecticide impregnated ear tags are the most effective treatment for Gulf Coast Ticks. Usually ticks will fall off after one week from tagging the animals and a small proportion of the ticks will remain attached but are dead. In some cases where cattle were tagged with an insecticidal ear tag the ticks become agitated and moved to the tail head region. If this is observed additional control should be applied in the form of an approved pour-on or spray for beef animals.



**Fig 1.** Gulf Coast Tick adults male (L) and female (R).



**Fig 2.** "Gotch Ear" in a cow infested with Gulf Coast Ticks.

**Spinose Ear Tick** [*Otobius megnini*] (Fig. 3)

The spinose ear tick is a common pest of cattle, horses, and other domestic and wild hosts throughout Oklahoma. The tick is found in the ear canals of its host. The presence of large numbers can cause severe irritation, inflammation and deafness of the animal. Secondary bacterial infections may cause sloughing of tissue into the ear canal. Infested cattle develop a “flop-eared” condition and show discomfort in movement of the head.

The larva and nymphs stages are blood feeders, with the adult being non-parasitic. Larvae and nymphs are the only life stages found in the ears. The nymph is easily recognized by spines on the skin and the peanut shape of the body. After the last feeding, the nymph leaves the host and molts to the adult stage. Males and females mate on the ground and females lay their eggs under feed bunks, boards and other suitable protected areas. The newly hatched larvae crawl up feed bunks or other objects and await contact with a passing host.

Directed sprays that can be targeted deep into the ear of the animal are the most effective means of controlling this tick. If these ticks are present and an infection is seen or smelled then an additional antibiotic application should be given. Another area that should be targeted with a premise insecticide spray (non-animal applications) should be barns or shaded loafing areas where feed is being fed.



**Fig 3.** Spinose ear tick. Credit: D. Kattes; Tarleton State University.

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## Pest du Jour: Oak Gall Midge

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A unique gall-making insect has been sighted in Oklahoma landscapes this spring - an oak gall midge likely belonging to the genus, *Contarinia*. Last spring, these insects were reported occurring on live oaks in Texas on the website, Insects in the City (Texas Agri-Life Extension, 2011). The report mentioned that tiny, white maggots were seen dropping to the ground, which is typical behavior for larvae of several economically important *Contarinia* species (Gagné and Beavers, 1984; Hara and Niino-Duponte, 2002). In Oklahoma, reports of oak gall midge have been

received from Eufaula and Tulsa. We received a bagged sample collected from shumard oak in Eufaula and found an abundance of larvae crawling inside the Ziploc bag!

There isn't much information about the oak gall midge because it isn't common and hasn't been described scientifically (i.e., no species name has been assigned to this creature). Also, unlike some close relatives like the sorghum midge and blossom midge, oak gall midges do not appear to cause significant harm to their hosts nor does galling activity result in economic loss. The galls may be unsightly, but affected trees will not suffer and die from an infestation of oak gall midge. While not much is known about the life cycle of oak gall midge, larvae likely feed on sap from the developing oak flowers (Texas Agri-Life Extension, 2011). This feeding behavior causes gall formation. Adult flies emerge from the soil and lay their eggs on flower buds before catkins open. Upon hatching, larvae feed and develop rapidly and reach their full size of 1.5 mm prior to dropping to the ground. Once on the ground, larvae remain in a restful state (called diapause) until pupating the following spring. The circle of life then continues with adults emerging from their pupae and laying eggs on the host tree (Texas Agri-Life Extension, 2011).



While some folks may find the galls ugly, there is no need to treat affected oak trees. In fact, gall-making insects are difficult to

manage with insecticides because they are well protected within the gall. Adults can be targeted with contact insecticides, but timing is critical because adults only emerge for a short time. Adults are also tiny so they are difficult to detect. Also, affected trees often are too large to achieve adequate spray coverage. Galls can be removed with pruning shears and destroyed, which will help reduce the abundance of future fly generations if done before larvae drop to the ground. Again, removing every gall is impractical for large trees.

Instead of trying to get rid of these fascinating insects, it would be best to sit back and appreciate one of nature's coolest little quirks, the plant gall. After all, oak gall midges are rarely seen and their ability to sense the short availability of food is simply amazing!

### References:

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