

2025

FDACS Formosan Termite Alate Trapping Report



Photo courtesy: Dr. Nan-Yao Su

Johanna Welch, DPM



Contents

Purpose	1
Materials and Methods.....	1
Spring Trapping	2
Results	2
Discussion.....	6
Conclusion.....	6

Purpose

The Formosan termite (*Coptotermes formosanus*) came into the Florida Panhandle about 60 years ago on infested wood packing materials in ships coming from Asia after WWII. Ever since, they have spread rapidly throughout the Southeastern US and thrive in the region's high temperatures and humidity. Formosan termites cause billions of dollars of damage each year in the US alone. This project is designed to detect Formosan termite spread throughout the Western Panhandle by trapping alates during their major swarm season in April to July. Trapped alates are counted on a weekly basis to determine peak swarming periods and correlated with local weather data. The presence or absence of alates is also documented in key communities throughout five counties. This data can aid citizens on Formosan termite presence and activity level in their municipalities.

Materials and Methods

The simple termite trap consists of a sticky card in proximity to a bright, reliable light source. The white, gridded 7" by 4" sticky card is zip tied to a six-foot, plastic coated metal stake and placed under strong, predetermined streetlights. These streetlights are chosen for brightness, location out of the way of human activity, and lack of competing light sources. Traps are checked weekly during the months of April to July. Alates are identified using a microscope when needed, counted and recorded in an Excel worksheet along with pertinent local weather data obtained from Weather Underground: <https://www.wunderground.com/history/>.



Figure 1: Formosan termite alate trap

Spring Trapping

Ten trap locations were selected in 2025, each representing a key Panhandle community within the northern portion of each county.

Results

Out of the total ten traps, four traps were positive for Formosan termite alates throughout the five Panhandle counties (see Figure 2).

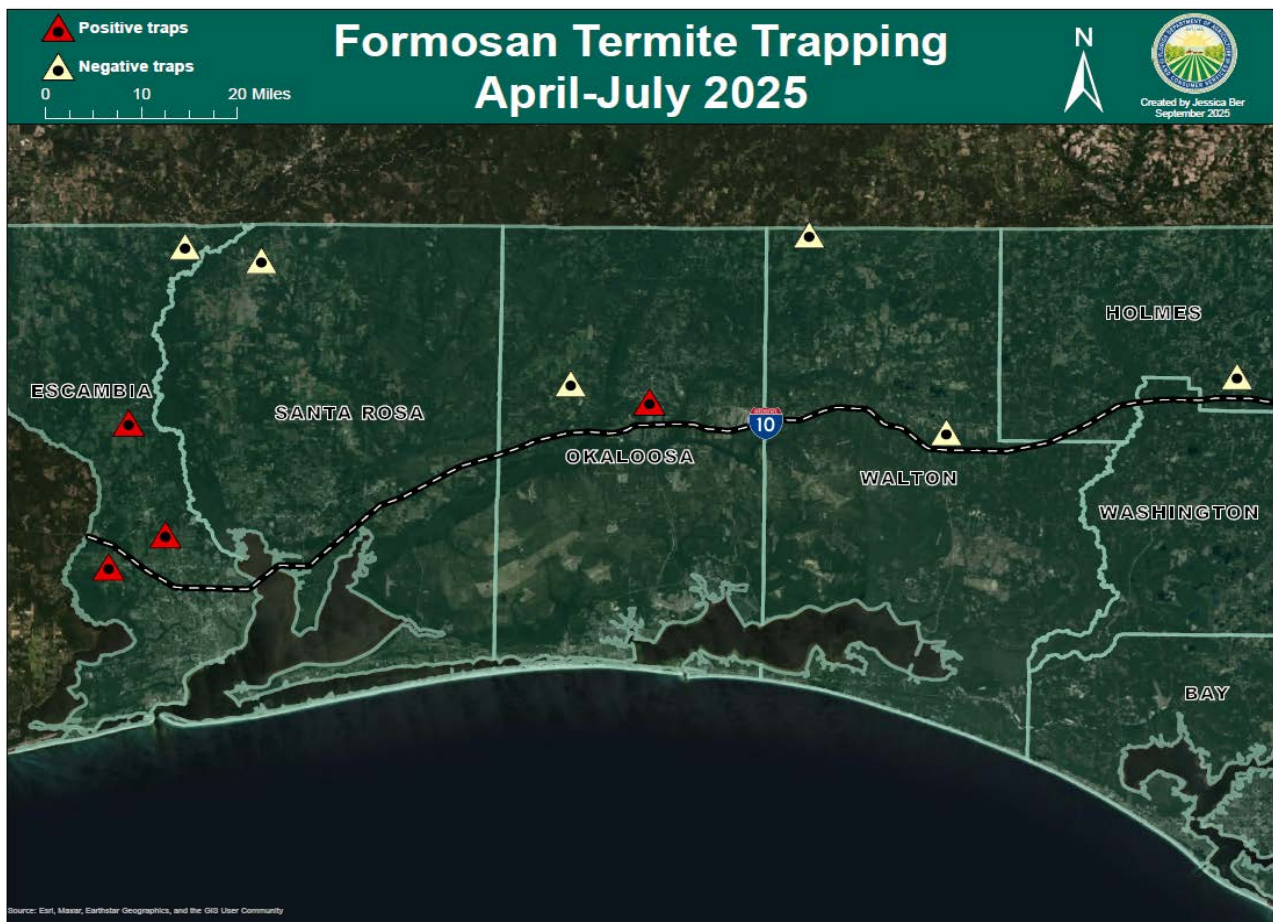
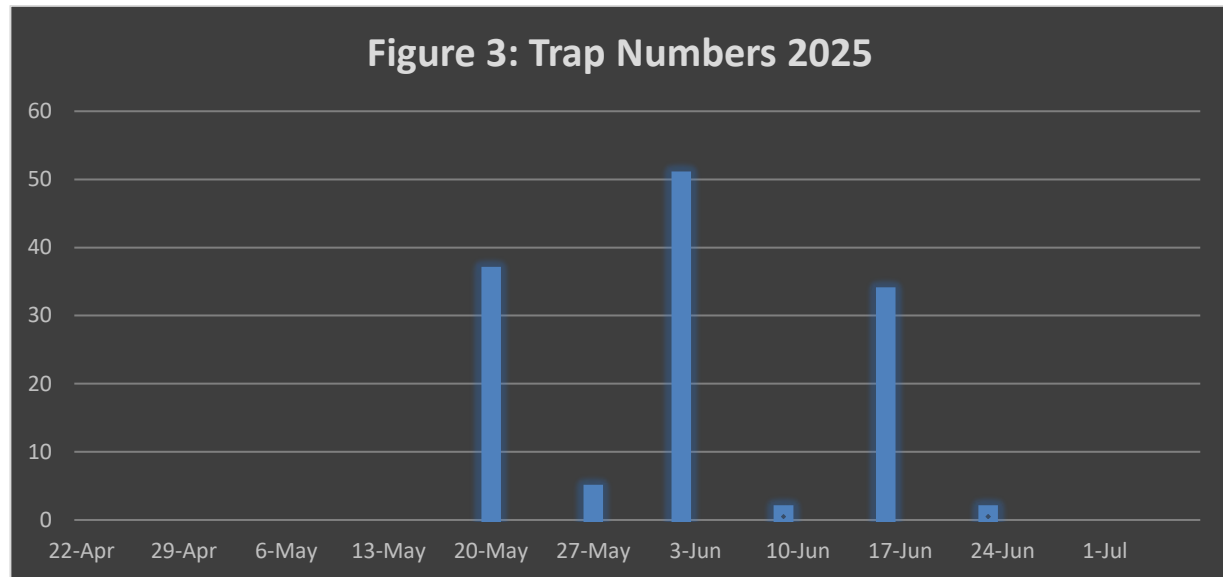
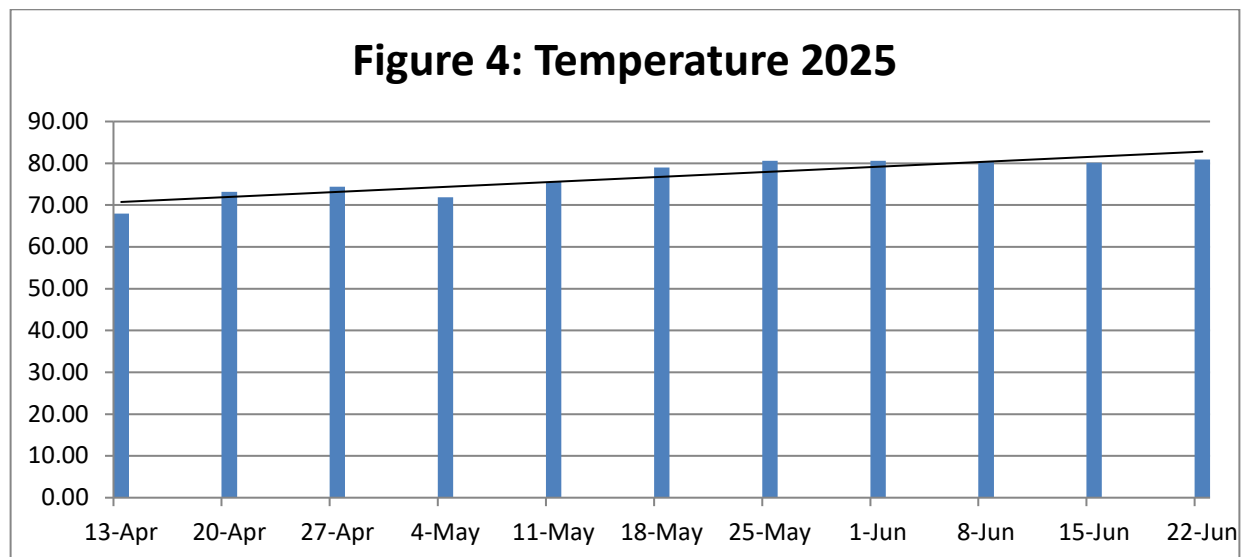


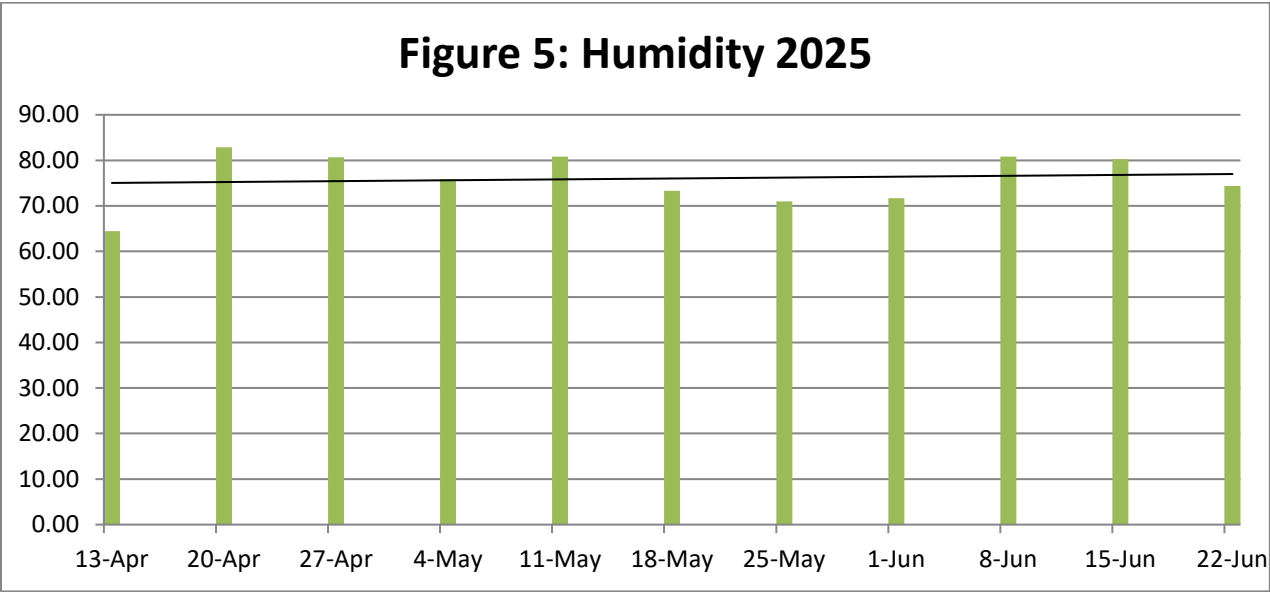
Figure 2. Map of positive traps.

Formosan alates were caught during 6 of the 11 weeks of trapping. Alate numbers from all 10 traps were counted weekly and are represented in Figure 3 below. Swarming started and alates were found in traps in mid-May and peaked on the first week of June with swarms ending in the last week of June.



Weather data was collected during the peak alate swarming time of 8 pm and averaged for each week. As temperature and humidity increased throughout the trapping weeks, Formosan alate counts increased as well. Optimal temperatures this year for the peak in flights were in the 75°F range with humidity at or above 70% as indicated in Figures 4 and 5 below.





Wind speed was consistently low and decreased through time; barometric pressure decreased through time as indicated by Figures 6 and 7 below.

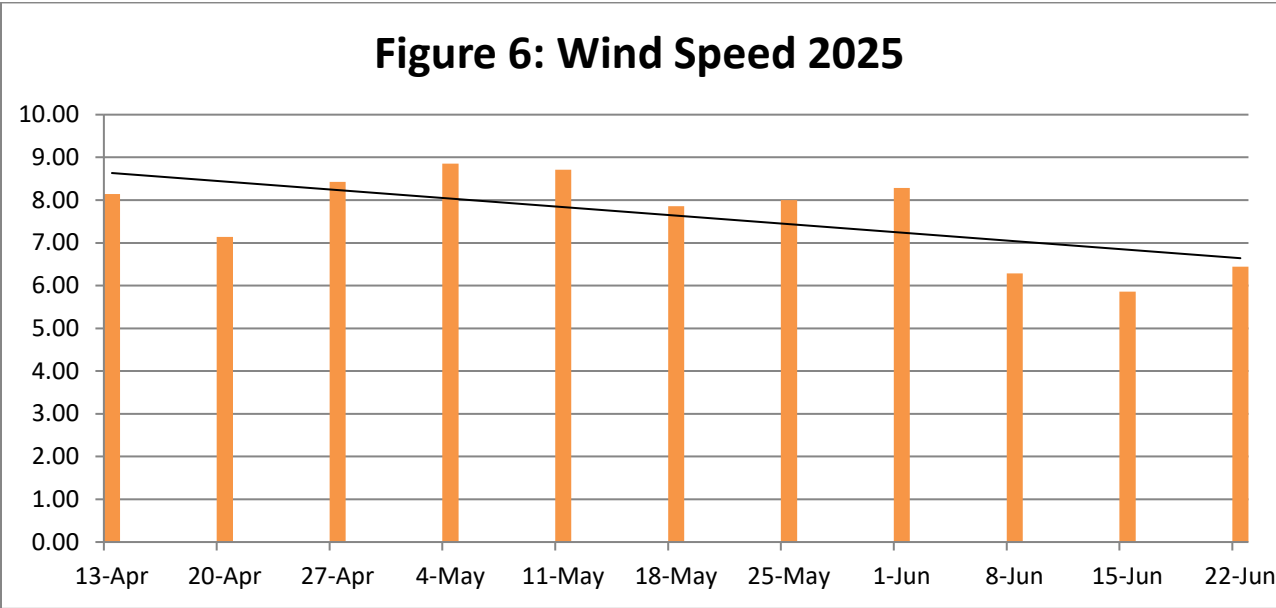
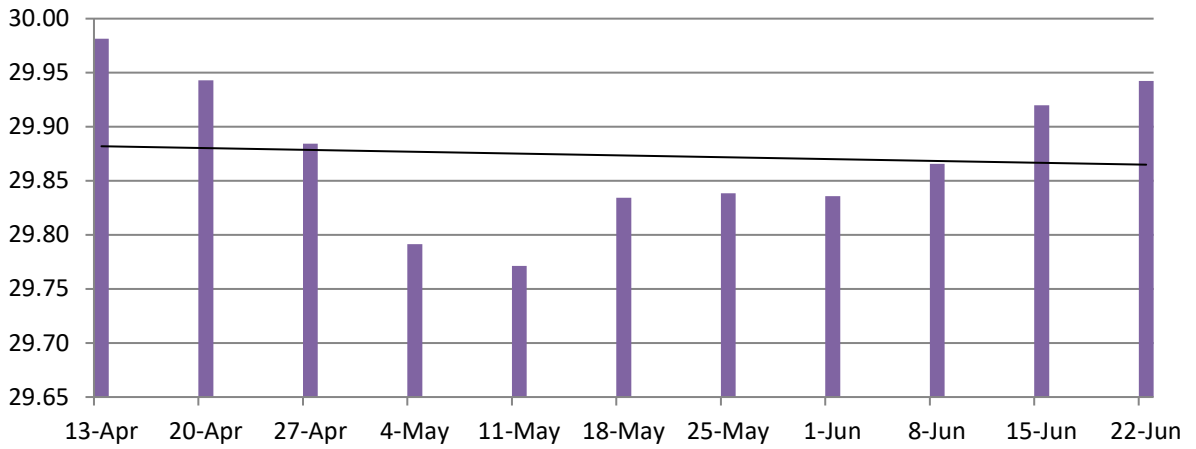
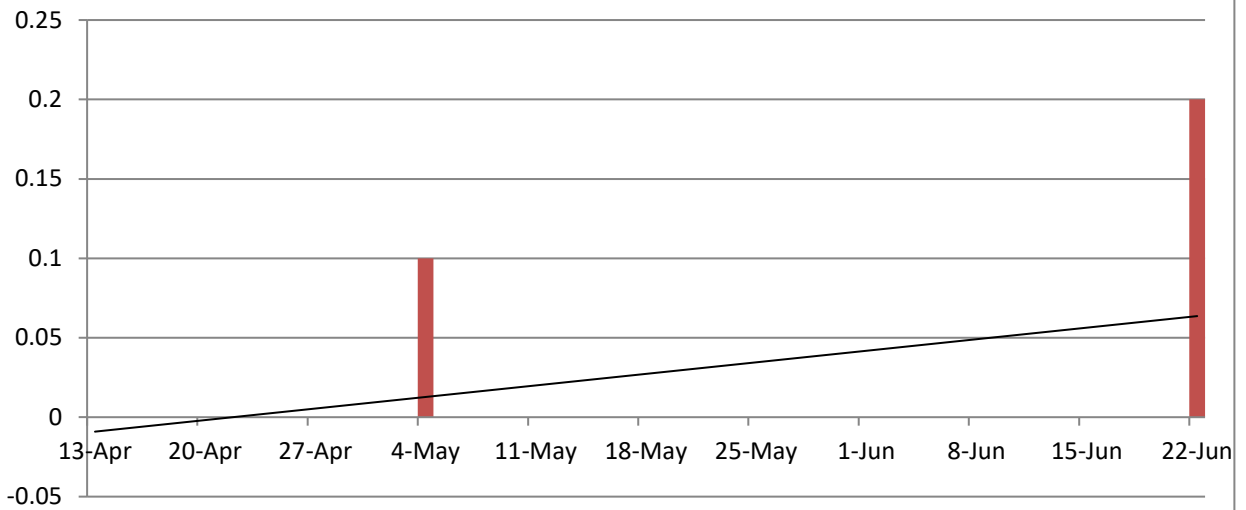


Figure 7: Barometric Pressure 2025



Rainfall was recorded during two weeks of the trapping period as indicated in Figure 8 below.

Figure 8: Rainfall 2025



Discussion

This is the first year of utilizing ten new trap locations located within the northern portion of each county. The previous ten years of trapping were focused in the southern portion of each county and the results can be found in an additional summary report online. From the trapped alate counts for 2025, four traps were positive and the documented swarm season was six weeks. The swarm season started in mid-May and the biggest spike in swarming occurred in the first week of June.

Collected 2025 weather data revealed as temperatures increased through May, alate swarming activity started and then increased. Temperature and humidity coincided with the major peak in swarming in the 75°F temperature and 70% humidity ranges. Wind speed was low and barometric pressure decreased throughout the weeks of trapping. Rainfall was only documented in two weeks of the trapping period.

Conclusion

This first year of Formosan alate trapping in the northern portion of the selected counties was more successful than anticipated. All trap locations within the chosen communities had never been documented with Formosan termite activity before and four of these locations were positive. This data has been submitted to update the State and National Formosan termite maps and will be used to inform residents and pest control companies in these growing and developing county regions. Significantly high trap catches were found in the farming community of Molino in northern Escambia County. This trap location was at a gas station surrounded by no till cornfields rotated with peanuts and opens up a new area of knowledge in the world of Formosan termites as possible pests of agriculture.

In order to continue to provide a more complete picture of alate swarming in the Panhandle, this project must continue to be performed on an annual basis to more fully understand changes in alate numbers, influences of weather conditions, and trap activity in each location over time. The project can also help identify new areas of Formosan activity in the future. This will contribute to increased and more widespread education, understanding of the range of Formosan territories and possibly even a swarm forecasting system for citizen and pest control groups in the Florida Panhandle.