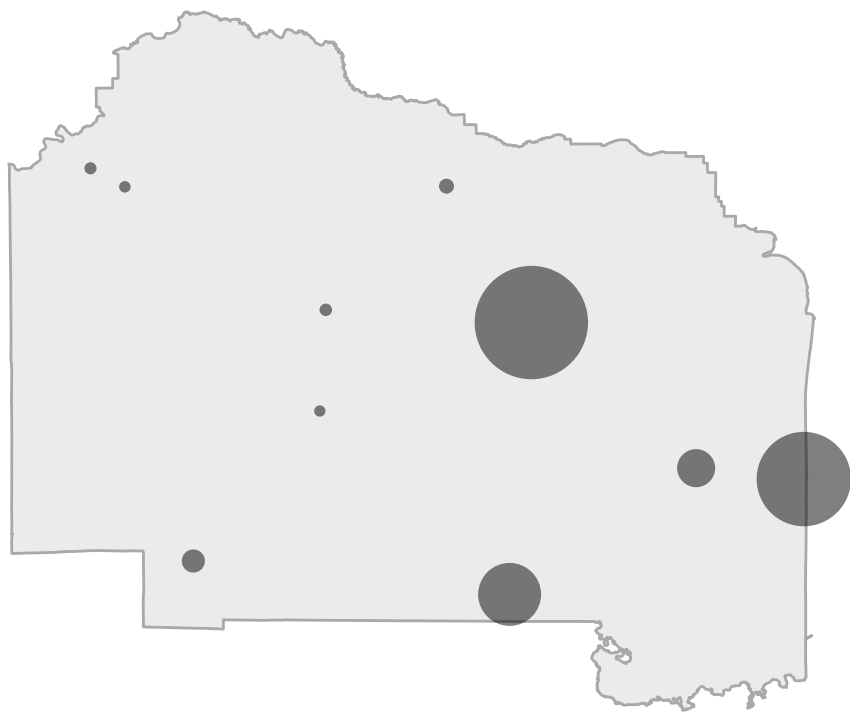


# Weekly Mosquito Surveillance and Forecast Report

*Florida Department of Health in Alachua County*

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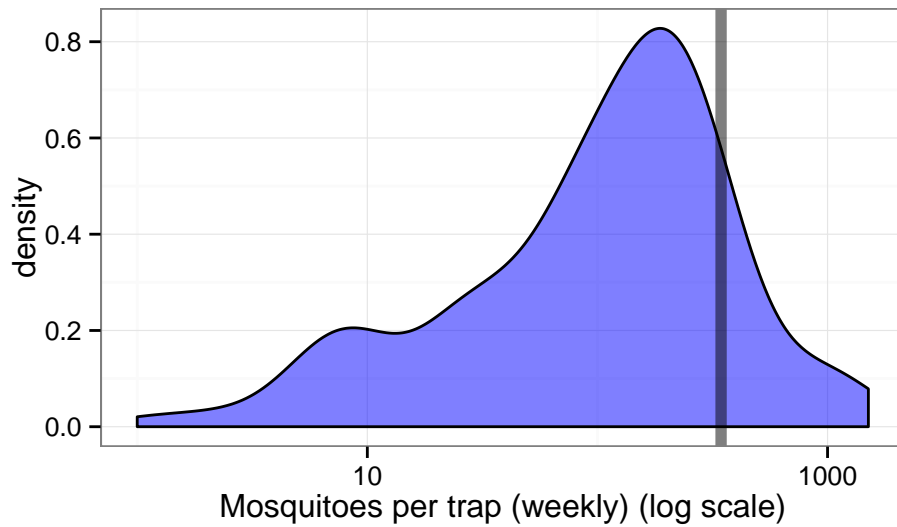


Joe Brew  
Ben Brew  
Yoni Teitelbaum

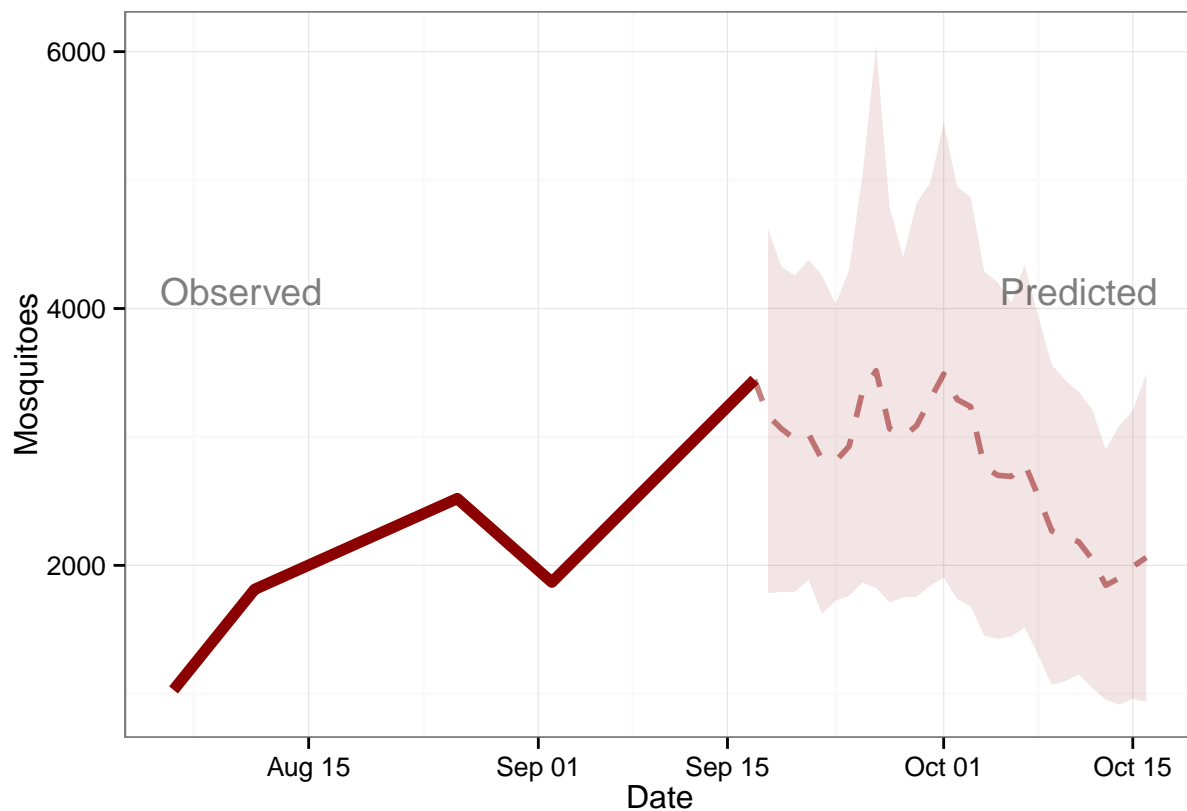


## Overview

The most recent trap collection was on September 17, 2015. The 3445 mosquitoes trapped (approximately 344 per trap) is at the 88 percentile of all historical trappings.

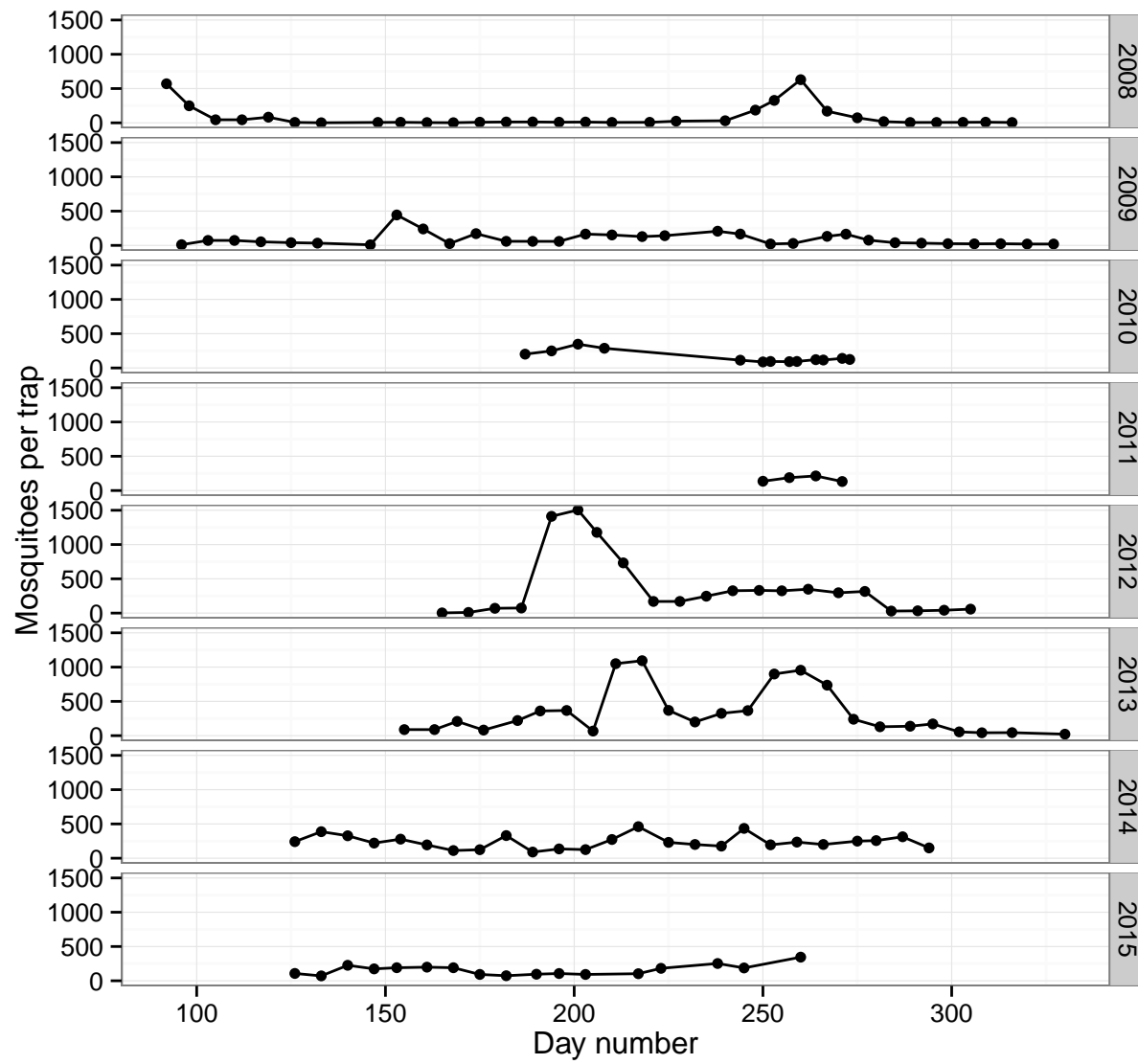


As predicted, the number of mosquitoes rose through mid-September. Our model suggests that numbers will remain elevated through the end of the month and into the first few days of October, but will thereafter gradually decline.



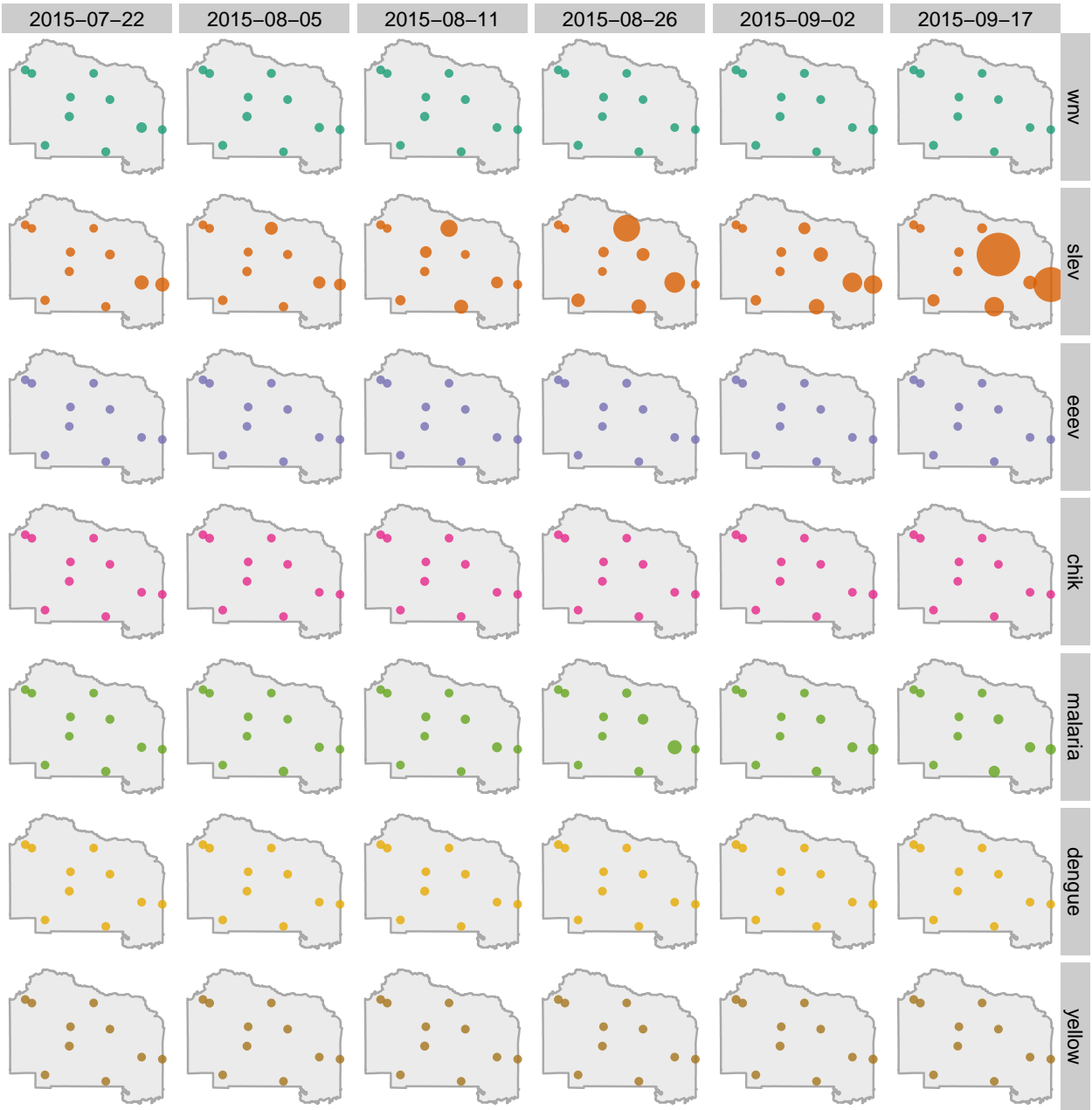
## Historical perspective

Numbers so far this summer have been relatively low compared to previous summers.



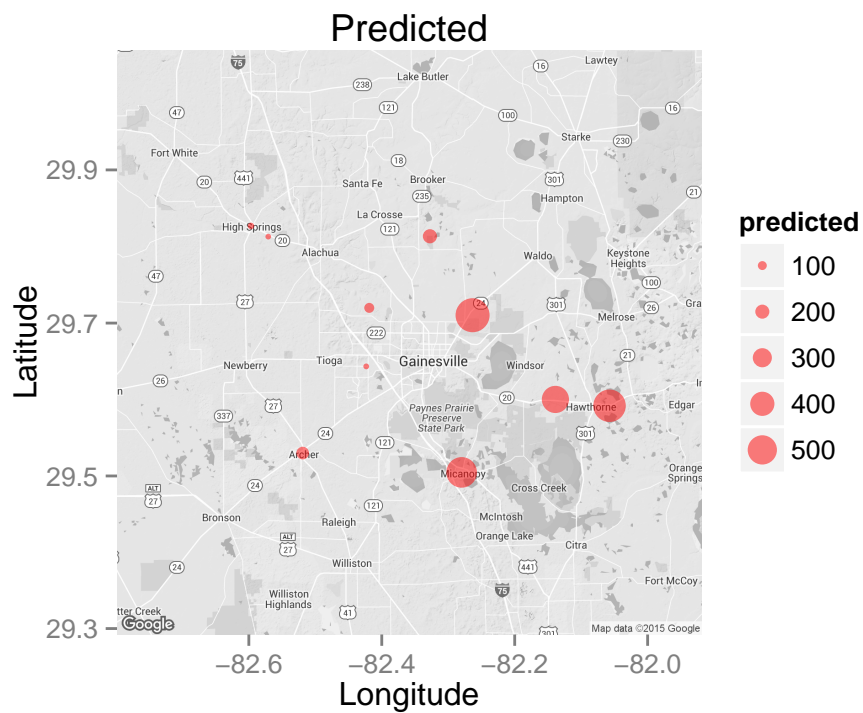
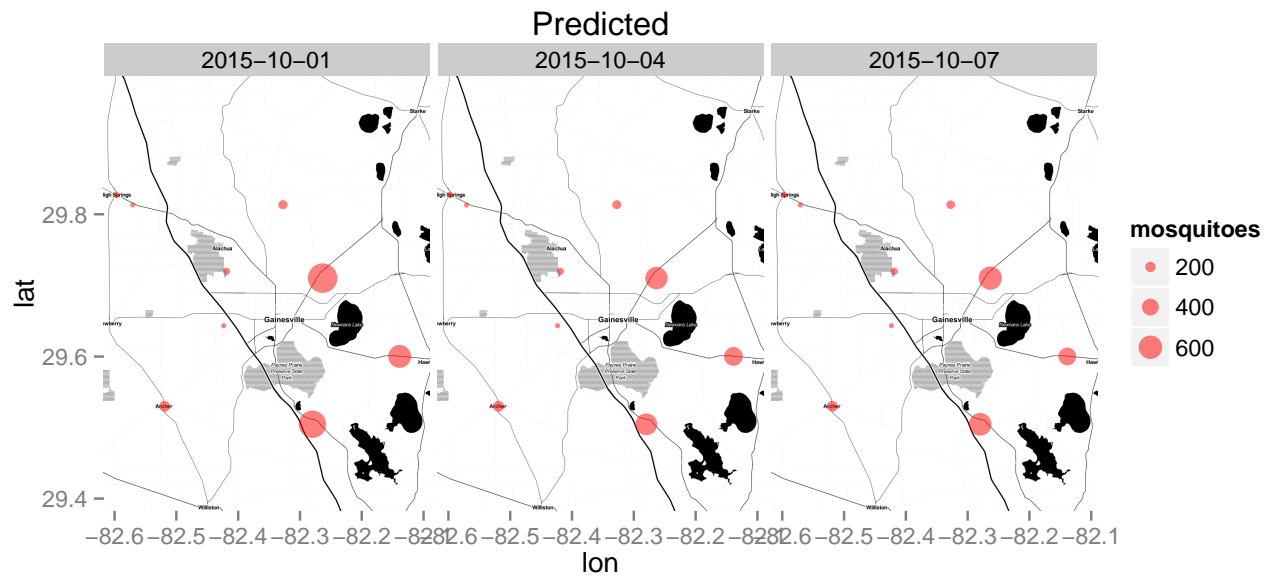
# Disease details

Vectors of diseases of concern appear relatively evenly distributed throughout the county. In recent weeks, the number of mosquitoes capable of carrying SLEV has increased substantially.



## Forecast

Over the next two weeks, we predict the mosquito population to grow slightly, with the greatest growth occurring in the east and south of the county.



## Model details

The forecast model has undergone several improvements since last year. The inputs have been substantially expanded (now taking into account humidity, precipitation, wind speed, temperature and its fluctuations), and the model has been improved (in lieu of linear regression, the predictive model now employs ensemble machine learning methods).

The model is cross-validated and backtesting confirms a decent fit.

