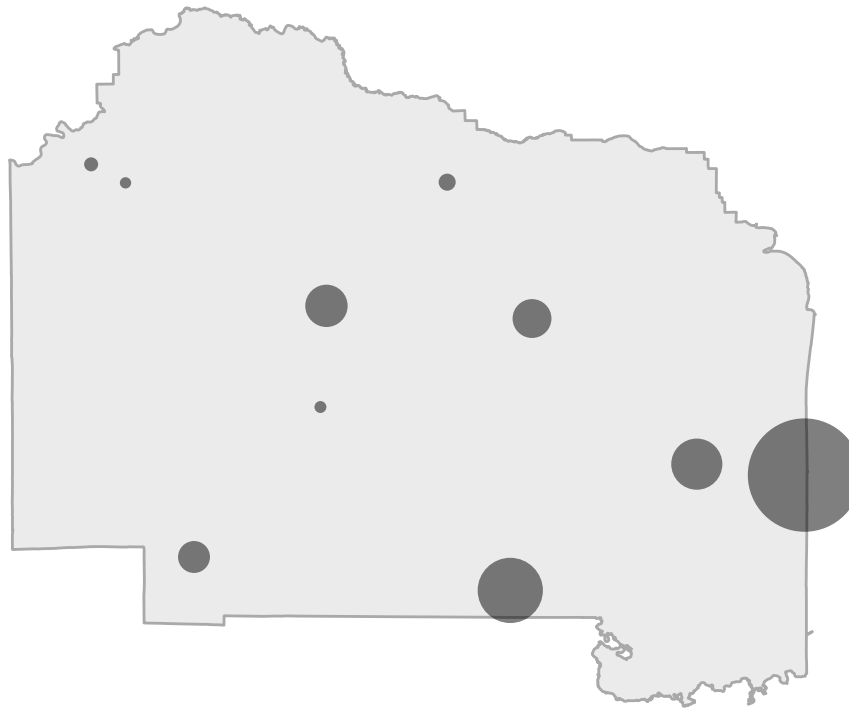


Weekly Mosquito Surveillance and Forecast Report

Florida Department of Health in Alachua County

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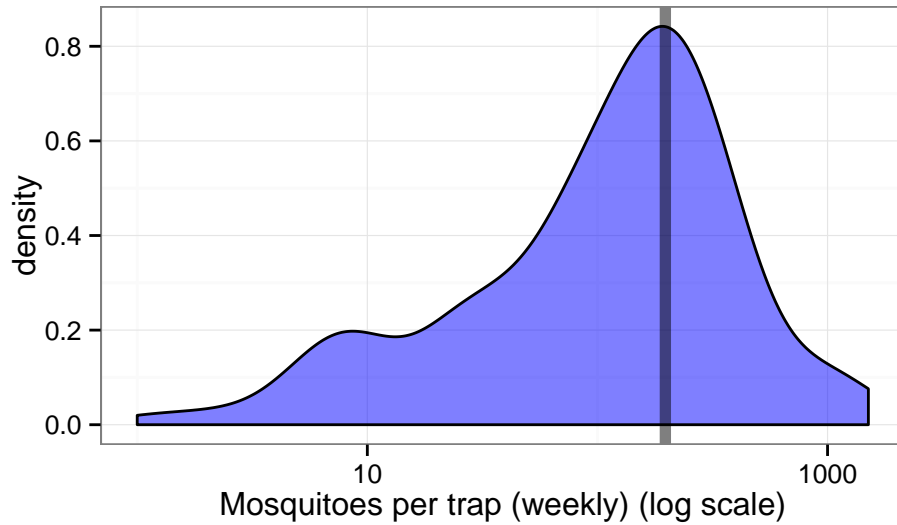


Joe Brew
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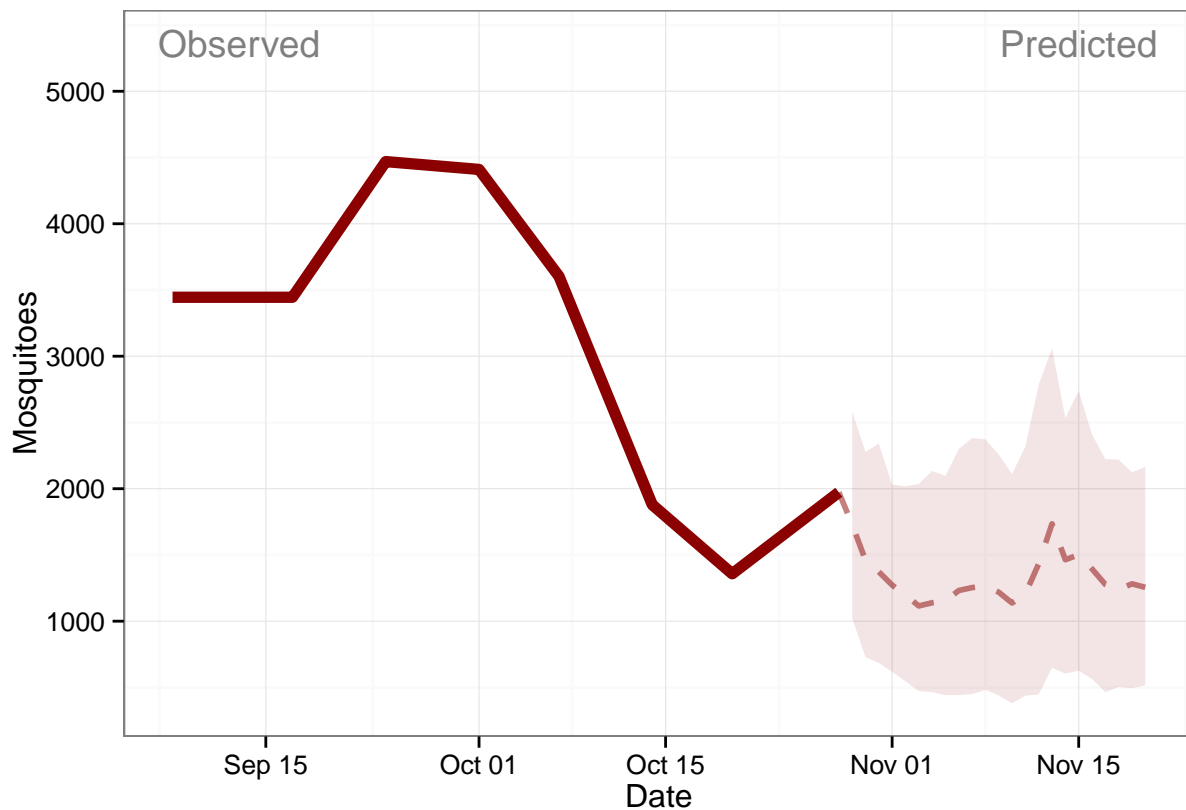


Overview

The most recent trap collection was on October 28, 2015. The 1973 mosquitoes trapped (approximately 197 per trap) is at the 65 percentile of all historical trappings.

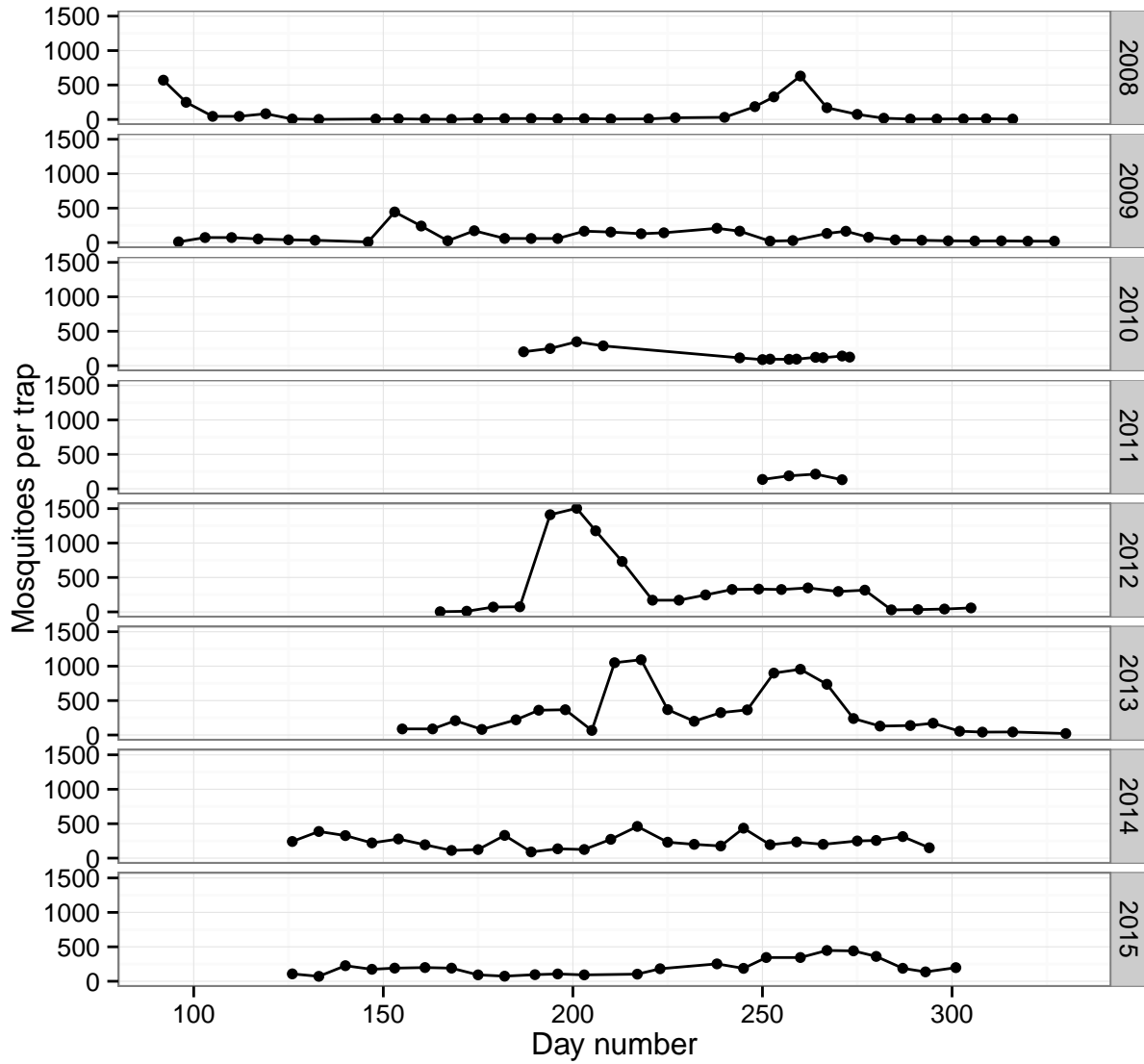


The number of mosquitoes remains at non-peak levels. Though there was a slight rise in the last week, it was well within the range of the model's predicted flatlining. Our model predicts medium-low levels throughout the rest of November.



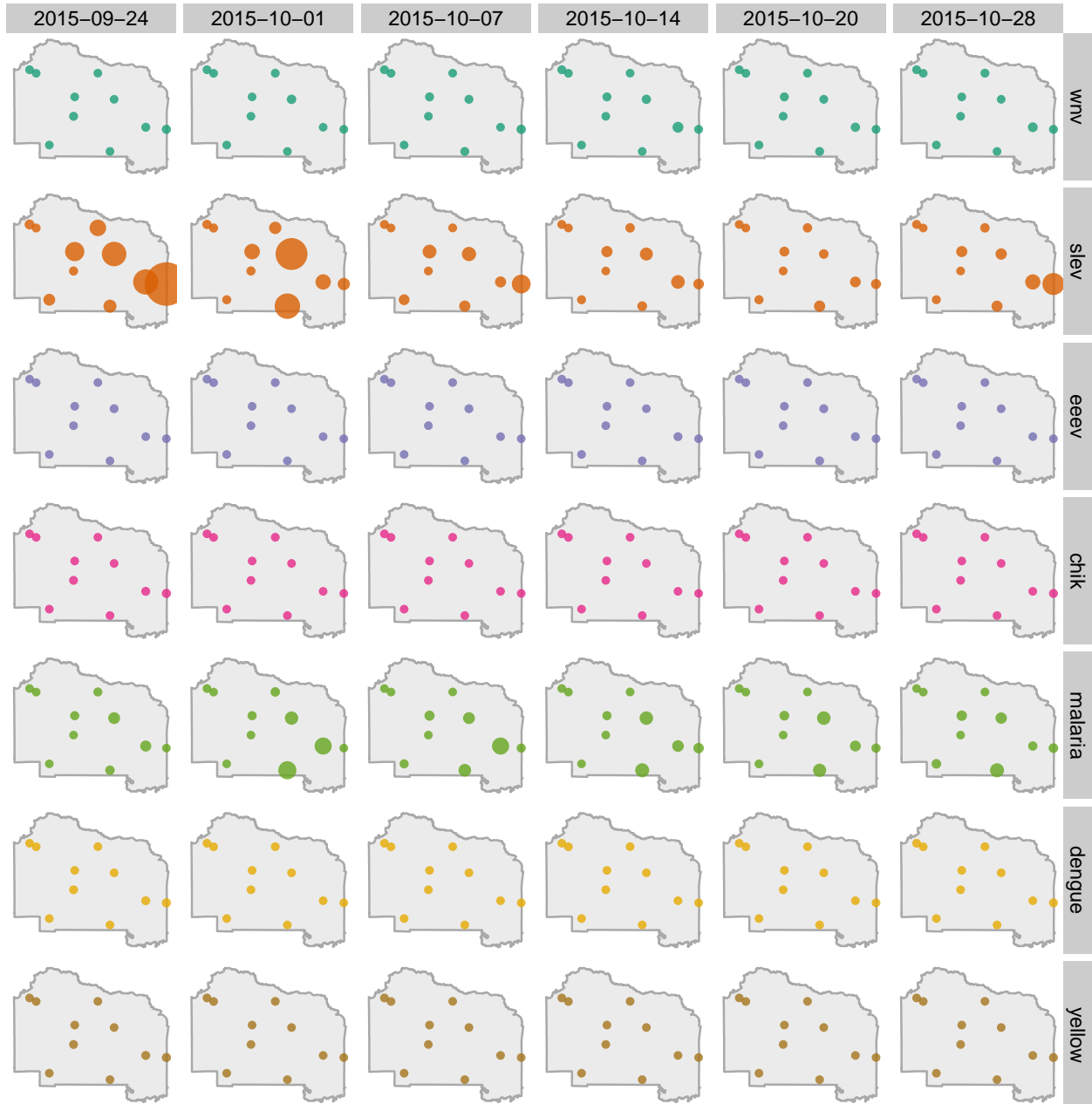
Historical perspective

Numbers so far this summer have been relatively low compared to previous summers. The recent spike is similar in magnitude to the 2014 spikes.



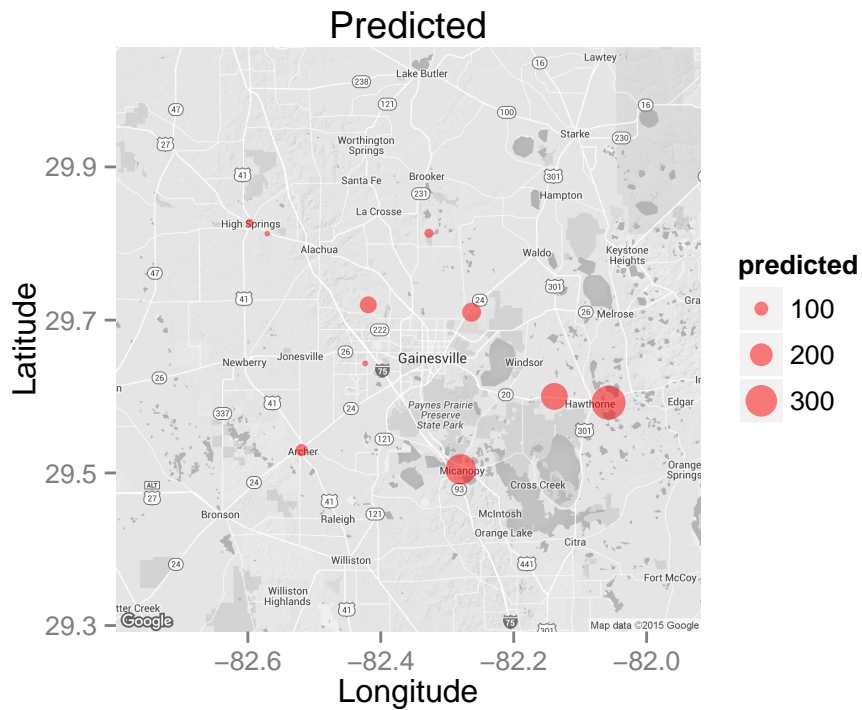
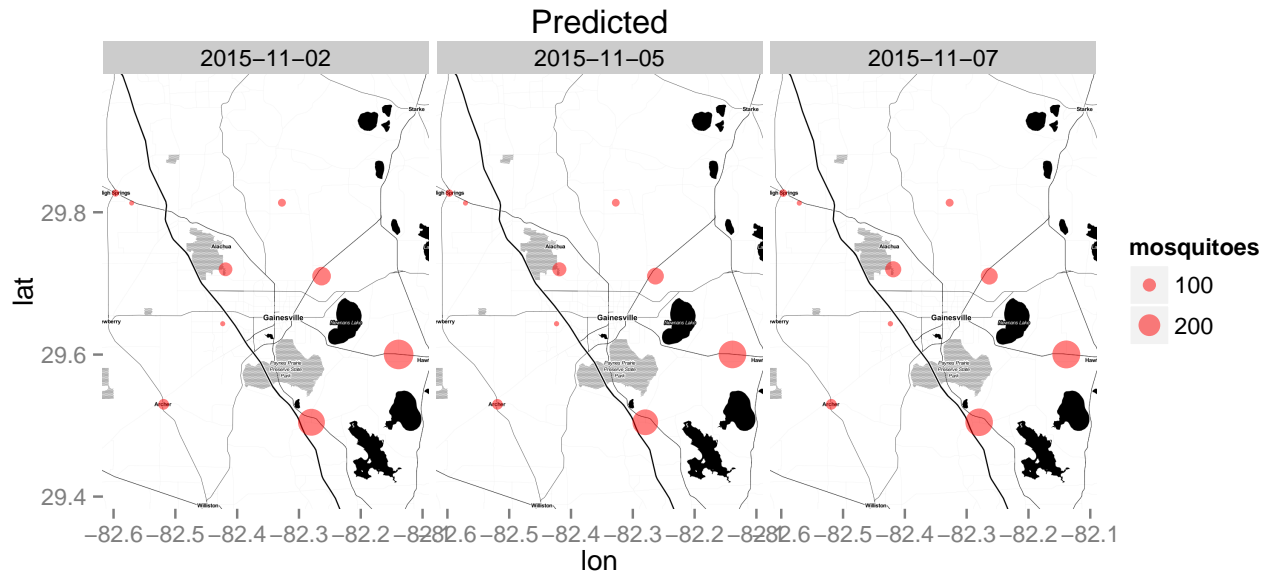
Disease details

Vectors of diseases of concern appear relatively evenly distributed throughout the county. In recent weeks, the number of mosquitoes capable of carrying SLEV increased substantially but no longer remains as elevated as during September.



Forecast

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

