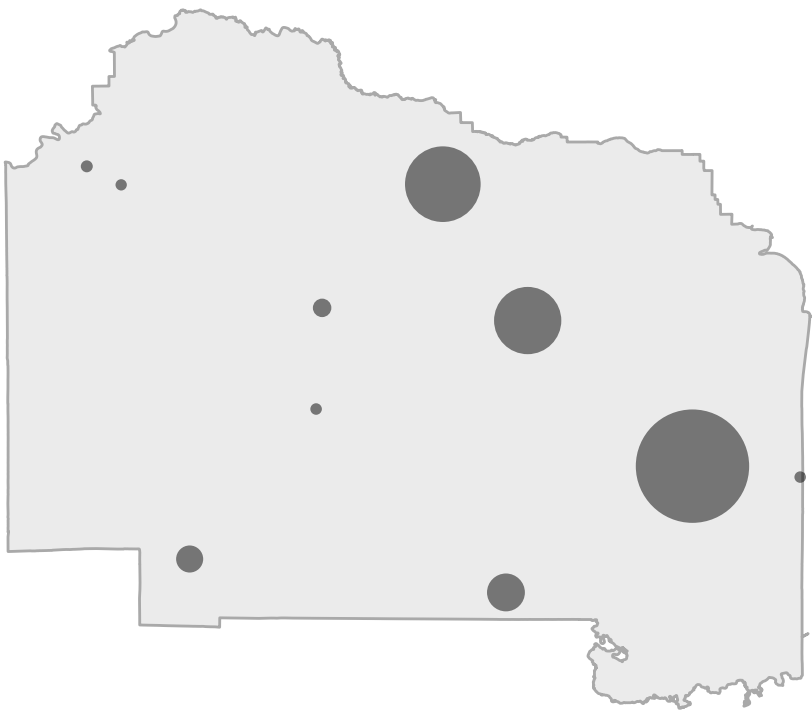


Weekly Mosquito Surveillance and Forecast Report

Florida Department of Health in Alachua County

Contents

Overview	2
Historical perspective	3
Disease details	4
Forecast	5
Model details	6

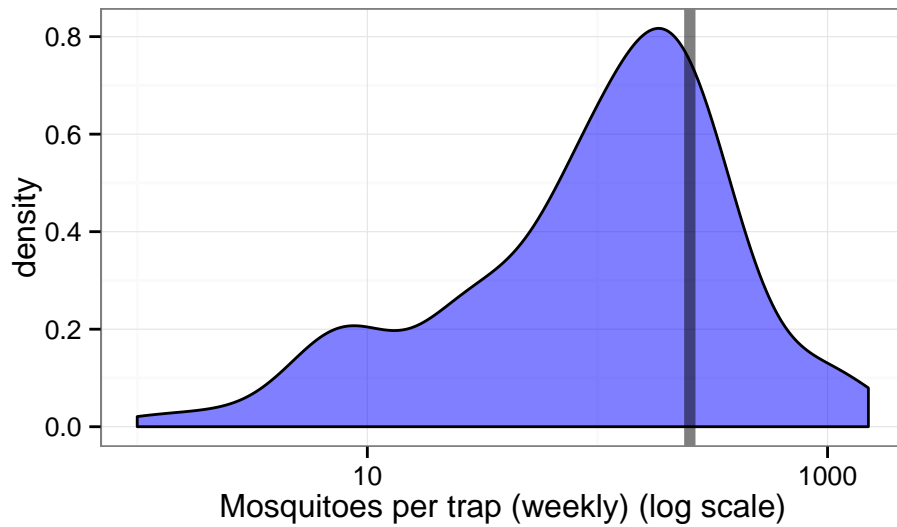


Joe Brew
Ben Brew
Yoni Teitelbaum

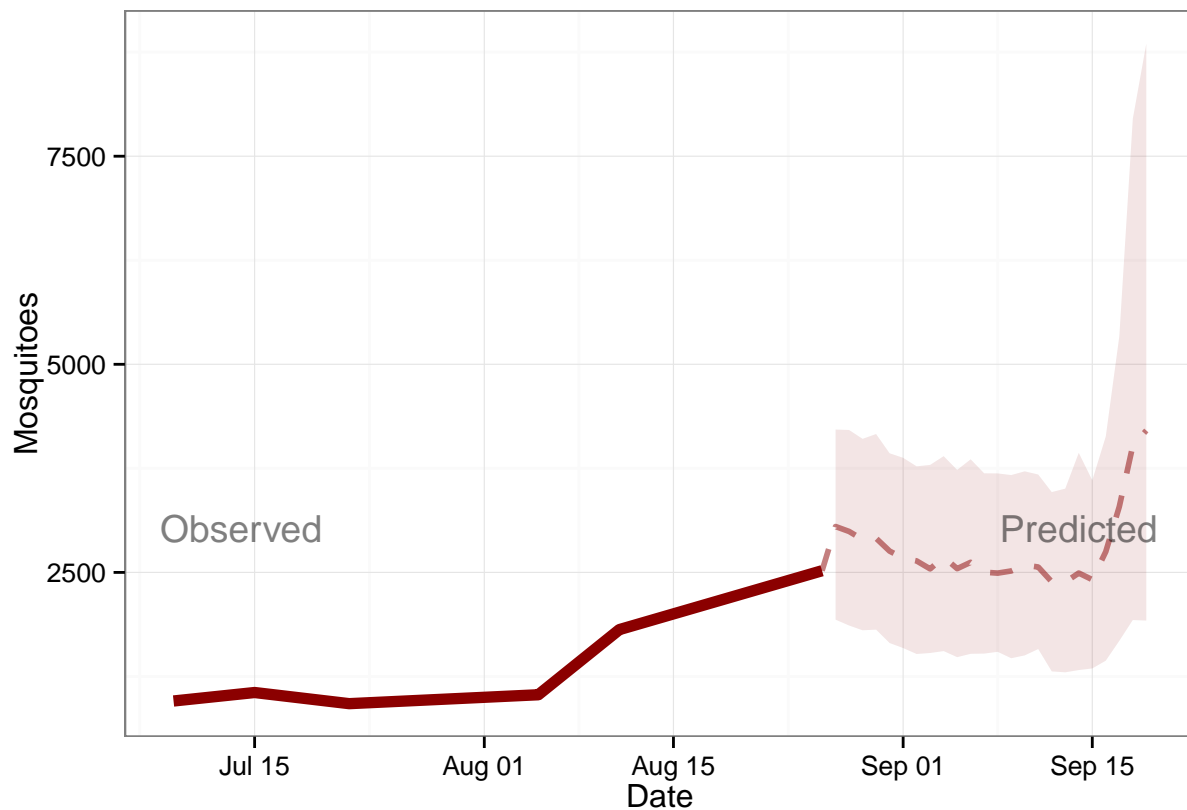


Overview

The most recent trap collection was on August 26, 2015. The 2520 mosquitoes trapped (approximately 252 per trap) is at the 79 percentile of all historical trappings.

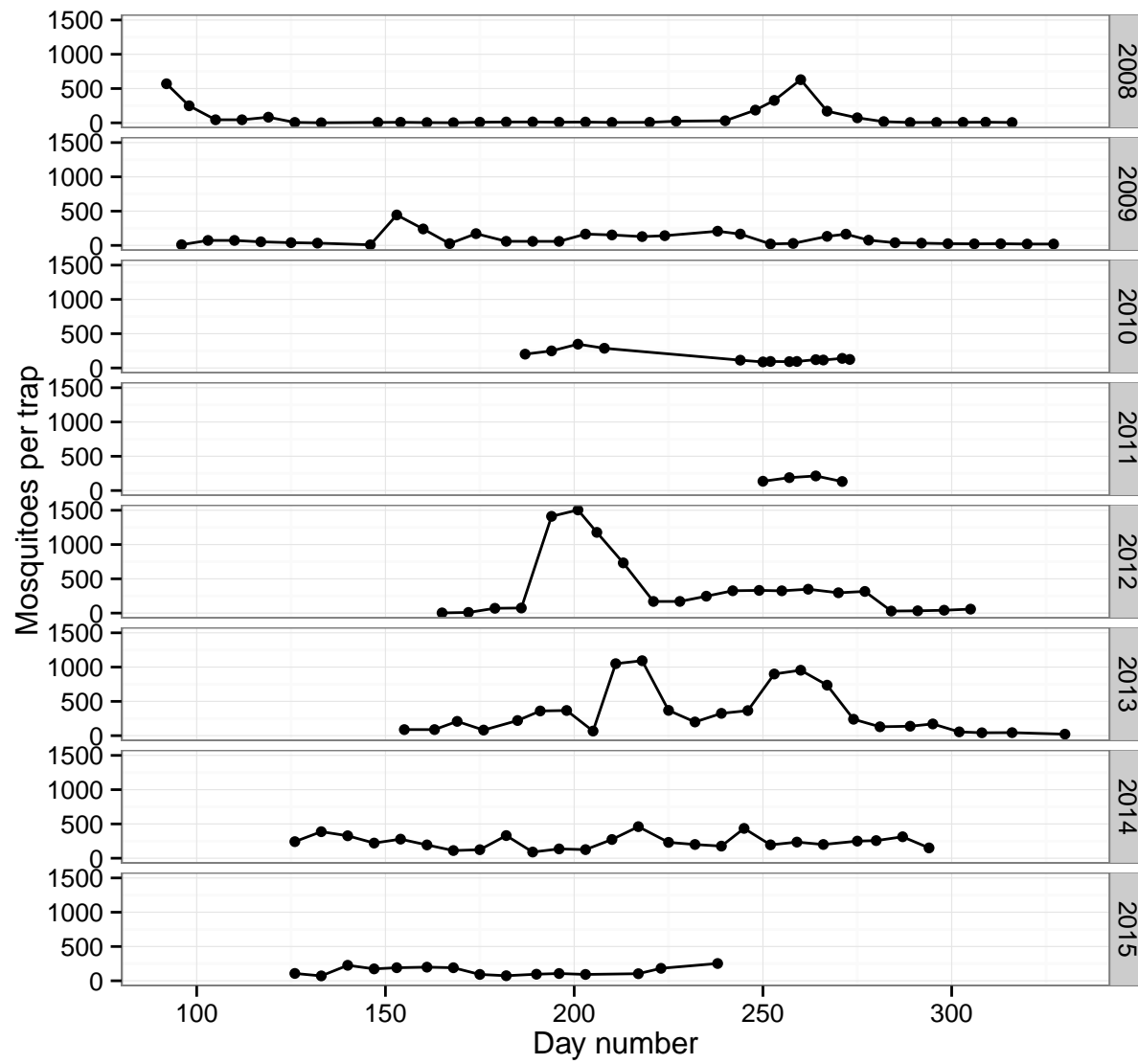


As predicted, the number of weekly trapped mosquitoes has begun to rise. Recent precipitation suggests a continued rise in the mosquito population, with the potential for a sharp uptick mid-month.



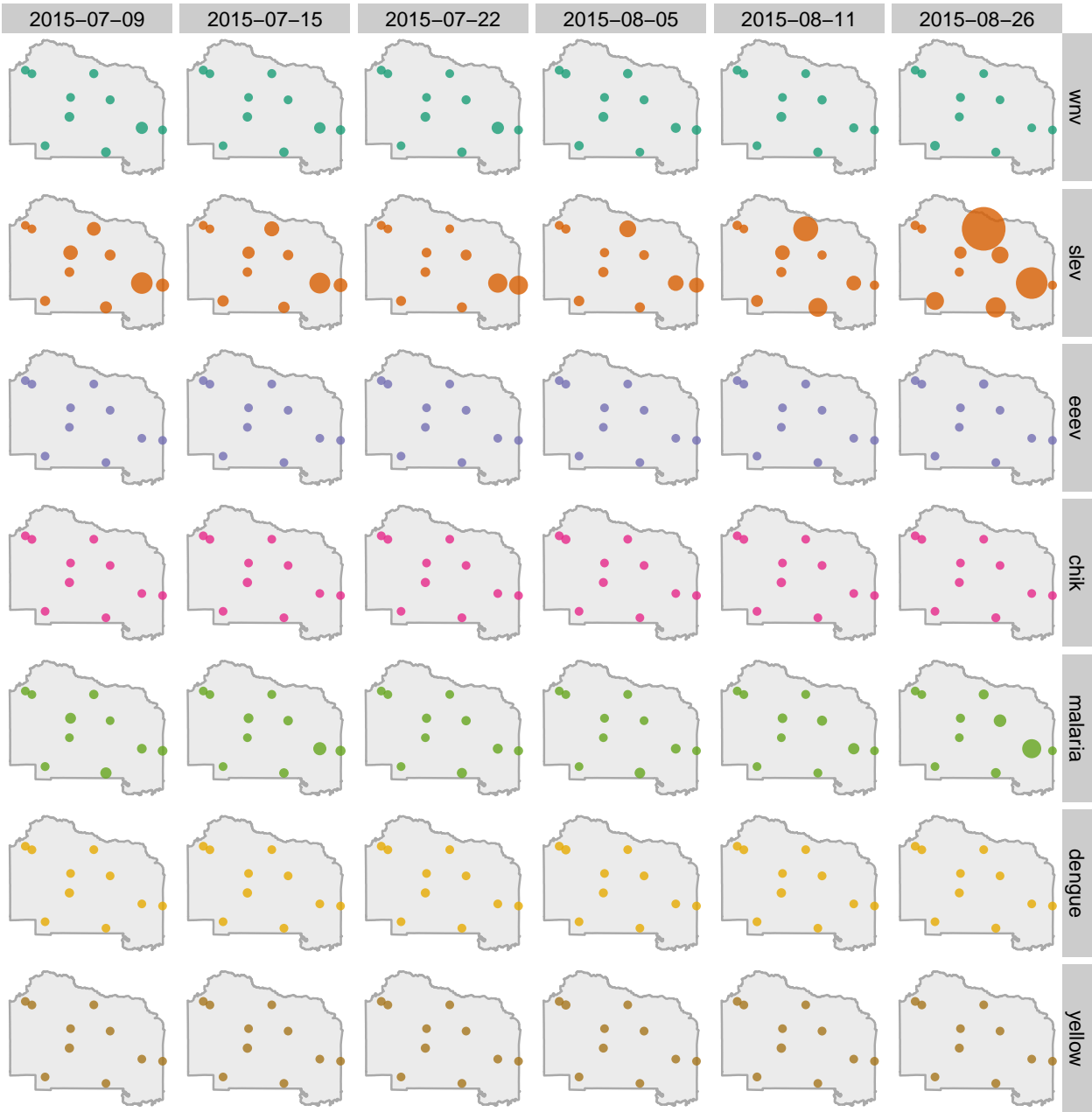
Historical perspective

Numbers so far this summer have been relatively low.



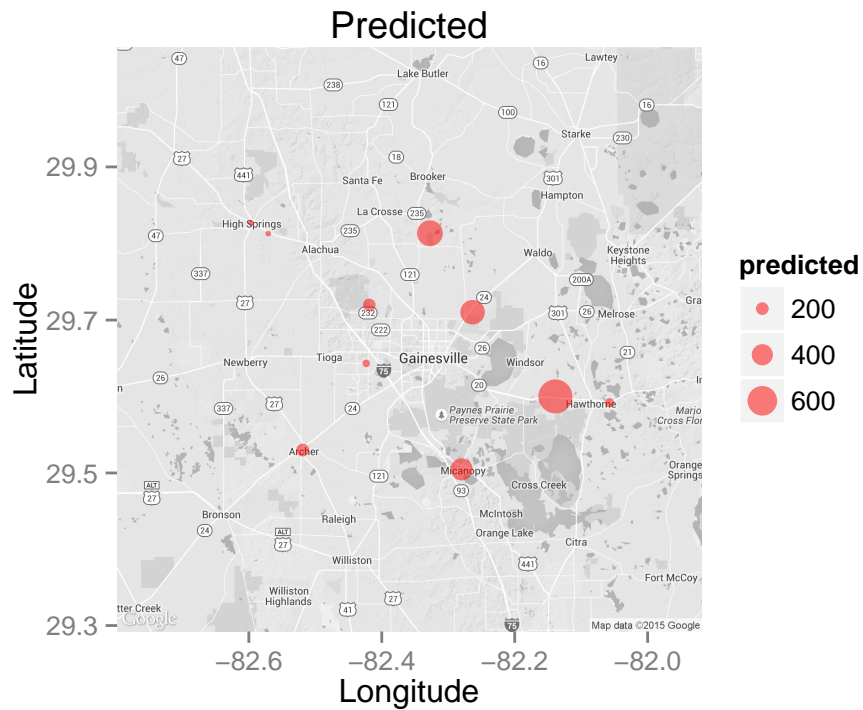
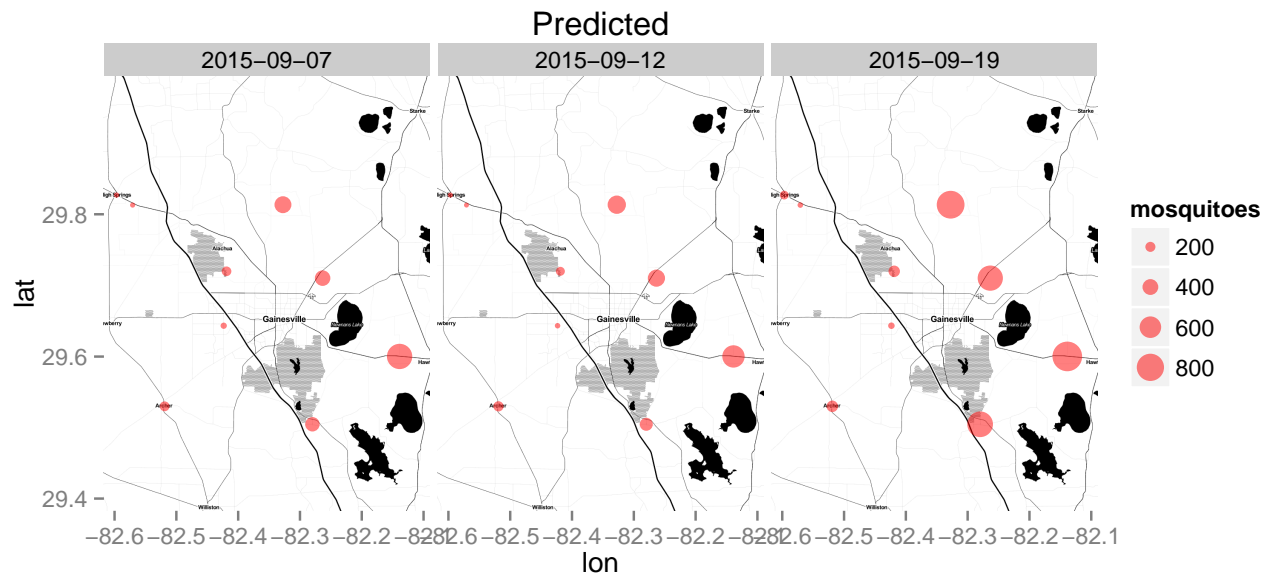
Disease details

Vectors of diseases of concern appear relatively evenly distributed throughout the county.



Forecast

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

