Supplementary data S2-Technical details for spatial analysis and maps:

All houses and mosquito collection sites were geo-referenced using Garmin etrex 20 Global Positioning System units and extracted using DNRGPS (http://www.dnr.state.mn.us/mis/gis/DNRGPS/DNRGPS.html). Geographic references (latitude and longitude) were projected to Universal Transverse Mercator (UTM) projections, meaning that absolute distances between points are in meters. Both "global" (Moran's I) and "local" (LISA: Local indicators of spatial autocorrelation) spatial clustering approaches are based on connectivity matrices that specifies the underlying spatial relationship between individuals in the datasets. Spatial coordinates were collected at the house level, meaning that multiple individuals have the same spatial location if they share a house. Rather than creating summary measures for each house, which could result in the loss of information about inter-house heterogeneity, the data were analyzed at the individual level. Given that individuals cluster within houses, we used a nearest neighbor specification for the connectivity matrix. The average house size from in the study villages was 5.5, and we tested nearest neighbors matrices of 10, 20, and 40. Tests of spatial autocorrelation therefore investigated clustering among individuals and their 20 nearest neighbors (which would include both house members and house members of nearby houses). At 10 nearest neighbors most clusters occurred in individual houses. There were few differences between the clustering statistics when comparing 20 or 40 nearest neighbors. The analysis was primarily focused on levels of clustering above the house level therefore final clustering analyses were run using 20 nearest neighbors.