Spotted Lanternfly (SLF) Oviposition Data

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Datasets:

"fecundity_data_full_v1_3.csv" contains spotted lanternfly oviposition (egg) data as well as site and tree observational and statistically derived data. We used it for our statistical analyses.

Data collection:

Data was collected through observational field studies, statistical derivation (spatial interpolation), and a buffer calculation using Google Earth Engine.

Data-specific information:

"fecundity_data_full_v1_3.csv"

Note "SLF" = spotted lanternfly

Site_ID = Unique three letter code identifying each field site visited during study

Tree_ID = Unique identifier for each individual tree sampled/surveyed during study (three letter site code-tree number)

Num_eggs_Col_season = Season during which the number of SLF eggs per egg mass were counted; "1" refers to Fall 2018-Spring 2019 and "2" refers to Fall 2019-Spring 2020

Num_seen_Col_season = Season during which the number of SLF egg masses were observed on trees; "1" refers to Fall 2018-Spring 2019 and "2" refers to Fall 2019-Spring 2020

Number_eggs_per_mass = Number of individual SLF eggs per egg mass

EMass_ID = Unique identifier for each SLF egg mass collected (site code-tree number-egg mass number)

Number_covered_masses_seen = Number of covered SLF egg masses seen on a given tree; "covered" refers to the egg mass being covered in the wax the female coats the eggs with during oviposition; these eggs are presumed to have been laid during the current season

high_masses = A binary variable referring to eggs being visible in a tree but too high to collect without assistance ("y" = yes, there were eggs visible but too high; "n" = no, there were not eggs visible but too high to reach)

Coll_ID = Unique identifier for each egg mass collection event (site code-tree-site code-date)

Questionable_Num_egg = A binary variable distinguishing egg masses for which the number of individual eggs was questionable/too difficult to count (e.g., squished or broken eggs) ("y" = yes, questionable; "n" = no, not questionable)

Date_of_Banding = Date (day-month-year) sticky band was placed around tree to sample for live SLF

Questionable_Band = A binary variable distinguishing sticky bands for which the number of SLF trapped may be unreliable (e.g., the sticky band fell off of the tree before collection) ("y" = yes, questionable; "n" = no, not questionable)

Total_slf_Band = Total number of live SLF trapped on a given sticky band regardless of life stage

Tree_Species = Species of each tree sampled/surveyed

Tree_DBH_cm = Diameter at breast height (DBH) in centimeters of each tree sampled/surveyed

Tree_Genus = Genus of each tree sampled/surveyed

age_2015 = Establishment age/duration the site had been invaded by SLF in 2015 (derived using spatial interpolation)

age_2016 = Establishment age/duration the site had been invaded by SLF in 2016 (derived using spatial interpolation)

age_2017 = Establishment age/duration the site had been invaded by SLF in 2017 (derived using spatial interpolation)

age_2018 = Establishment age/duration the site had been invaded by SLF in 2018 (derived using spatial interpolation)

age_2019 = Establishment age/duration the site had been invaded by SLF in 2019 (derived using spatial interpolation)

age_2020 = Establishment age/duration the site had been invaded by SLF in 2020 (derived using spatial interpolation)

mean_buffer = Mean canopy cover surrounding a site in a 500 m buffer at a 30 m resolution, calculated as the average pixel value within the buffer using the Global Forest Cover Change (GFCC) Tree Cover dataset using Google Earth Engine