Metadata table summary **White et al. 2022**

Here, we describe the results of a metadata analysis of all milfoil weevil (known) augmentation studies completed North America. Augmentation was completed in 133 experiments, and within the 133 cases, 34 lakes throughout the US and Canada are represented. The mifloil weevil is known to be a natural biocontrol for Eurasian Watermilfoil (EWM), and studies record lake characteristics, as well as augmentation strategy and if the weevil was successful at EWM reduction (studies completed within a single growing season).

The spreadsheet table consists of a list of a predictors (we call features), that are believed to predict milfoil weevil success at watermilfoil reduction (units are also stated in the spreadsheet). In addition, success (in terms of watermilfoil reduction) is recorded in one of 5 ways.

Sheets:

1. All Augments - Contains values for all studies that augmented lakes with weevils (N=133).
2. Output Stem Density - Contains only studies that had data in the column "Difference dry Milfoil density (stems/m^2)". Here, N=47.
3. Output Dry Weight Density - Studies that had data in the column "Difference dry Milfoil density (g/m^2)". Here, N=44.
4. Output Percent - Studies with data in column "% Difference Milfoil density". Here, N=95
5. Relative Abundance - Studies with data in column "Change % Relative Abundance". This is the difference (as a percent) in the proportion of EWM in a m^2 grid, from the start to the end of the experiment, compared with native plants. Here, N=50.

Estimates: Highlighted cells are estimated values for a certain feature.

Columns include:

Source entries

Study no. ID - Unique number for each study case

Author(s) and date

Full Citation (APA style)

Locations entries

Lake Name

Lake Group ID - Unique number for each lake

Latitude

Longitude

Physical parameter entries

Area (ha) - Area of lake in hectare

Z(m) - Average depth of the lake, Units meters

Zmax (m) - Max depth of the lake, Units meters

Shore length (km) – Units kilometers

Buffer (km) - Length of the shoreline defined as Buffer, land considered as at least 5 meters of forested land along the shoreline of the lake

Riparian Wetland (km) - Length of shoreline defined as Riparian zones, flat wetland along the shoreline.

Open (km) - Length of shoreline defined as Open land, uninhabitable features such as houses, roads, farmland, rock, etc.

Elevation (m) – Units meters

Recreational (Y/N) - 0 lake is not used recreationally. 1 lake is used recreationally.

Chemical parameter entries

[P], ug/L - Amount of phosphorus found in the lake. Units, micrograms per liter

Secchi depth (SD) - Secchi of the lake. Units, meters

Milfoil density (% Biomass) [initial] - The percentage of EWM compared to other plants in the lake at the start of the experiment.

Weevils/Stem Initial – Proportion of weevils per stem already in the lake before augmentation

Treatment parameter entries

Type (N,A) - 0 means there were no weevils augmented for this section or year of the experiment. 1 means there were weevils augmented

Study length (months) - The number of months between the initial and final measurements.

Start month

End month

Treatment freq. (no. of reps) - The number of times weevils have been augmented to this lake.

Avg. Weevil Aug. Pop. (weevil/stem) - The average amount of weevils augmented for this case. Units, weevils per stem

Avg. Weevil Aug. Pop. (# weevils) - The average amount of weevils augmented in this case. Units, number of weevils

Initial Milfoil Density (Stems/m^2)

Final Milfoil Density (g/ m^2)

Difference dry Milfoil density (g/ m^2)

Difference dry Milfoil density (stems/ m^2)

% Difference Milfoil density

Weevil/stem Final - The proportion of weevils per stem at the end of the case

Biological success (Y, N) - 0 describes that there was an increase or no change in EWM population. 1 describes that there was a decrease in EWM population.