Murray-Stoker, K. M., D. P. Batzer, D. Murray-Stoker, and J. V. McHugh. 2020. Shifts in the community composition of caddisflies (Insecta: Trichoptera) in a subtropical river over three decades. Ecological Entomology 45: 514-524.

Data files and R script for all analyses described in the main text.

Authors
Kelly Murray-Stoker
Department of Entomology
University of Georgia
Athens, Georgia, 30602, U.S.A
E-mail: kmmuray14@gmail.com

Department of Ecology and Evolutionary Biology
University of Toronto
Toronto, Ontario M5S 3B2, Canada

David Murray-Stoker
Department of Ecology and Evolutionary Biology
University of Toronto
Toronto, Ontario, M5S 3B2, Canada
E-mail: dstoker92@gmail.com

Author Notes

We provide the data used for all analyses in the manuscript, along with the R code written for conducting analyses. This file has the metadata to describe what is in each data file and what data is contained in each column.

Citation for the data:
Murray-Stoker, K. M., D. P. Batzer, D. Murray-Stoker, and J. V. McHugh. 2020. Shifts in the community composition of caddisflies (Insecta: Trichoptera) in a subtropical river over three decades. Ecological Entomology 45: 514-524.

File List
Trichop-ASPT_data.csv
Trichop-density_data.csv
Trichop-trait_table.csv
TrichopFFG.csv

Trichop-ASPT_data.csv

Average score per taxon (ASPT) tolerance value data for the taxa in the community. Tolerance values were obtained from:

Bressler, D.W., Stribling, J.B., Paul, M.J. & Hicks, M.B. (2006) Stressor tolerance values for benthic macroinvertebrates in Mississippi. *Hydrobiologia*, **573**, 155–172.

Hilsenhoff, W.L. (1987) An improved biotic index of organic stream pollution. *The Great Lakes Entomologist*, **20**, 31–39.

Lenat, D.R. (1988) Water quality assessment of streams using a qualitative collection method for benthic macroinvertebrates. *Journal of the North American Benthological Society*, **7**, 222–233.

UID = Unique identifier; pattern of year (digits 1-4), month (digits 5-6), and day (digits 7-8)
Year = Year of the study
Season = Season of the sample; fall, winter, spring, or summer
Period = 1980s or 2010s sampling
Neureclipsis = Specific tolerance value
Cyrnellus = Specific tolerance value
Cernotina = Specific tolerance value
Chimarra = Specific tolerance value
Hydropsyche = Specific tolerance value
Cheumatopsyche = Specific tolerance value
Macrostemum = Specific tolerance value
Hydroptila = Specific tolerance value
Neotrichia = Specific tolerance value
Ceraclea = Specific tolerance value
Oecetis = Specific tolerance value
Nectopsyche = Specific tolerance value
Triaenodes = Specific tolerance value
Brachycentrus = Specific tolerance value
Ironoquia = Specific tolerance value
Pycnopsyche = Specific tolerance value
SUM = Sum of the specific tolerance values from taxa present in the sample
NoTaxa = Number of taxa in the sample
ASPT = Mean tolerance value of all taxa present in the sample

Trichop-density_data.csv

Density (abundance standardized by snag area) data for all taxa in the community.

Data used for comparing densities and community composition by season and period. We also evaluated taxon-specific changes in mean densities using these data, along with changes in mean tolerance values of the community.

UID = Unique identifier; pattern of year (digits 1-4), month (digits 5-6), and day (digits 7-8)
Year = Year of the study
Season = Season of the sample; fall, winter, spring, or summer
Period = 1980s or 2010s sampling
Neureclipsis = Mean density; standardized by the area of snags sampled
Cyrnellus = Mean density; standardized by the area of snags sampled
Cernotina = Mean density; standardized by the area of snags sampled
Chimarra = Mean density; standardized by the area of snags sampled
Hydropsyche = Mean density; standardized by the area of snags sampled
Cheumatopsyche = Mean density; standardized by the area of snags sampled
Macrostemum = Mean density; standardized by the area of snags sampled
Hydroptila = Mean density; standardized by the area of snags sampled
Neotrichia = Mean density; standardized by the area of snags sampled
Ceraclea = Mean density; standardized by the area of snags sampled
Oecetis = Mean density; standardized by the area of snags sampled
Nectopsyche = Mean density; standardized by the area of snags sampled
Triaenodes = Mean density; standardized by the area of snags sampled
Brachycentrus = Mean density; standardized by the area of snags sampled
Hydropsychidae = Mean density; standardized by the area of snags sampled
Ironoquia = Mean density; standardized by the area of snags sampled
Pycnopsyche = Mean density; standardized by the area of snags sampled
Hydroptilidae = Mean density; standardized by the area of snags sampled
Leptoceridae = Mean density; standardized by the area of snags sampled
Trichoptera = Mean density; standardized by the area of snags sampled
Polycentropodidae = Mean density; standardized by the area of snags sampled
Density = Summed density of all taxa in the sample

Trichop-trait_table.csv

Functional trait categories (traits) and states (values, either 0 = absence or 1 = presence) for all taxa in the community. Trait categories follow the trait table outline by Poff et al. 2006.

Data were used, in combination with the density data, to calculate functional trait diversity metrics and compare these values by period and season. We also developed the functional dendrogram based on these trait data.

Poff et al. 2006. Functional trait niches of North American lotic insects: traits-based ecological applications in light of phylogenetic relationships. Journal of the North American Benthological Society 25: 730-755.

Taxon = Taxon associated with the trait states
no.swim = Non-swimming
weak.swim = Weak-swimming
sm.size = Small adult size (< 9 mm)
med.size = Medium adult size (9-16 mm)
lar.size = Large adult size (> 16 mm)
high.f.dispersal = High female dispersal (> 1 km)
low.f.dispersal = Low female dispersal (< 1 km)
eros = Found in erosional habitats
depo.eros = Found in both erosional and depositional habitats
depo = Found in depositional habitats
cold.cool = Found in cold or cool water
cool.warm = Found in cool or warm water
warm = Found in warm water
Bu = Burrowing foraging habit
Cb = Climbing foraging habit
Cn = Clinging foraging habit
Sk = Skating foraging habit
Sp = Sprawling foraging habit
Sw = Swimming foraging habit
CF = collector-filterer functional feeding group
CG = collector-gatherer functional feeding group
HB = herbivore functional feeding group
PR = predator functional feeding group
SC = scraper functional feeding group
SH = shredder functional feeding group

TrichopFFG.csv

Percent composition of different functional feeding groups (FFGs) in the community.

Data were used to compare percent composition by season and period.

Genus = Names of focal taxa
FFG = Functional feeding group assigned to the taxon
Tolerance = Tolerance value for the taxon