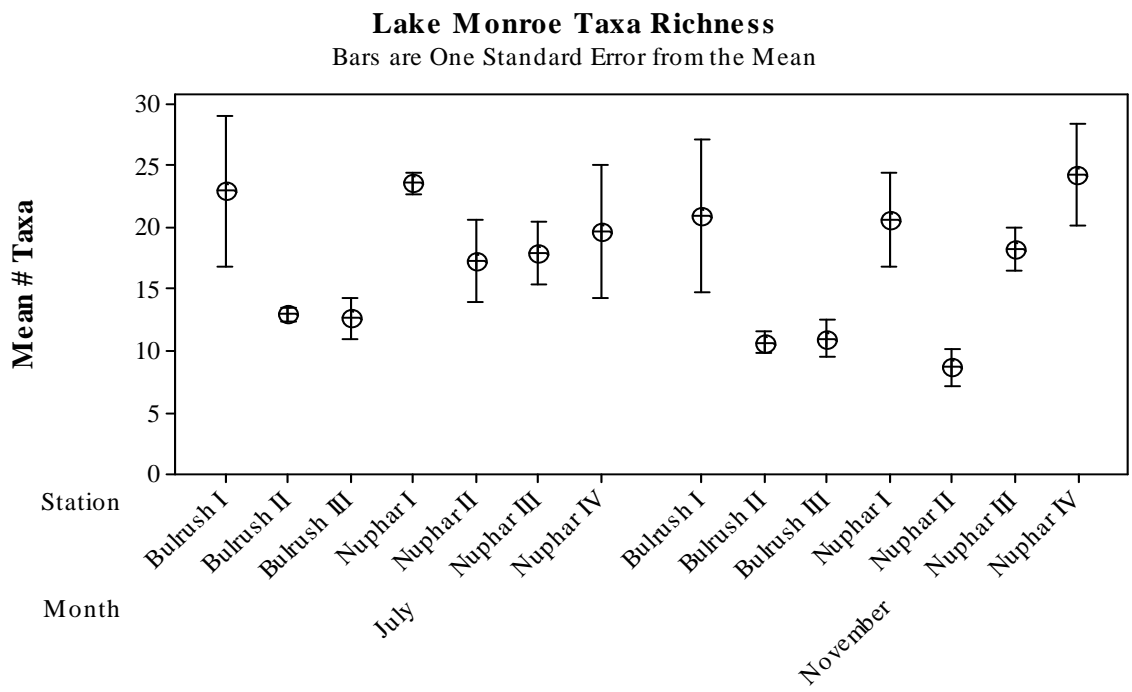
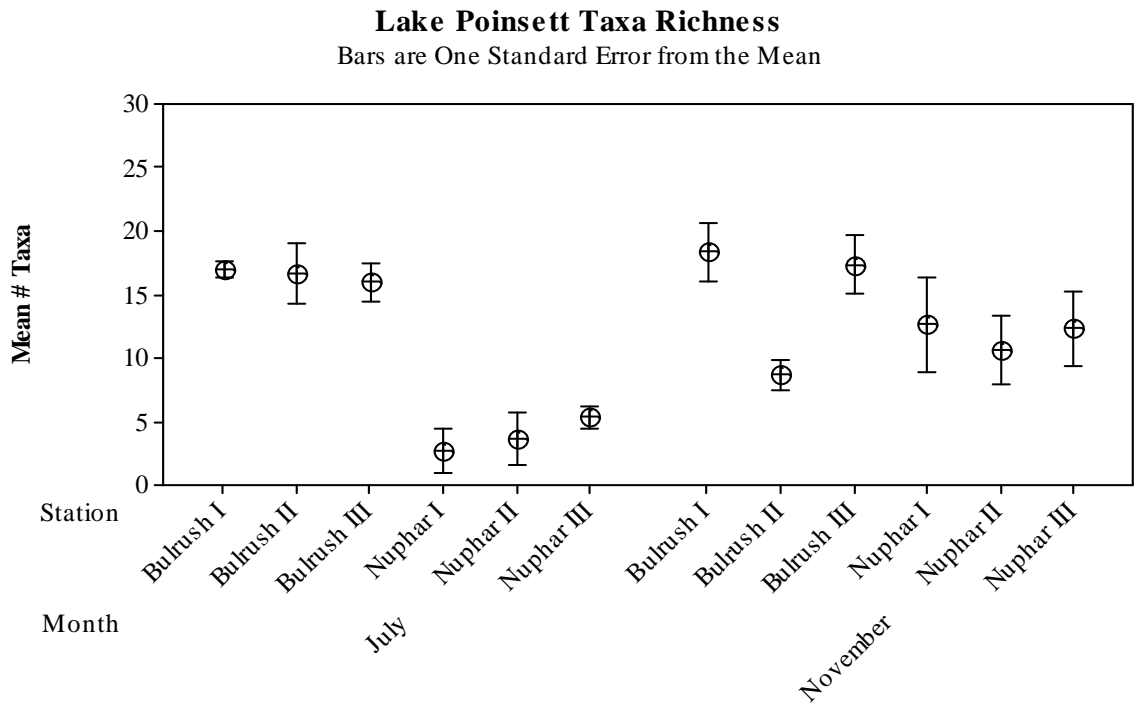


**CHAPTER 11. BENTHIC MACROINVERTEBRATES, APPENDIX 11.C MINITAB PLOTS OF  
METRICS EVALUATED IN 2009 FIELD STUDY**

St. Johns River Water Management District  
Palatka, Florida

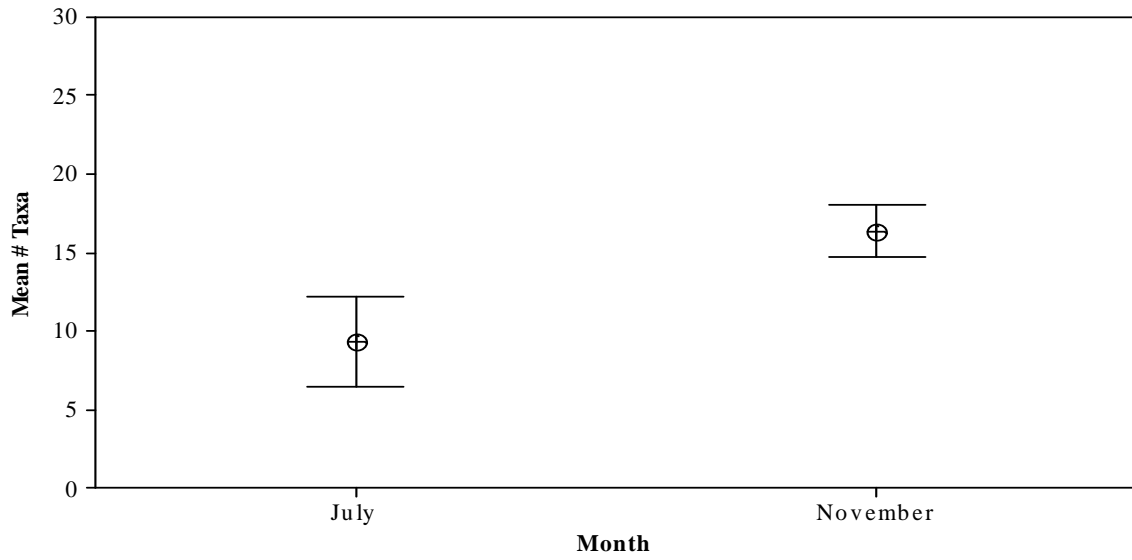
2011



Appendix 11.C Figure 1. Mean taxa richness in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

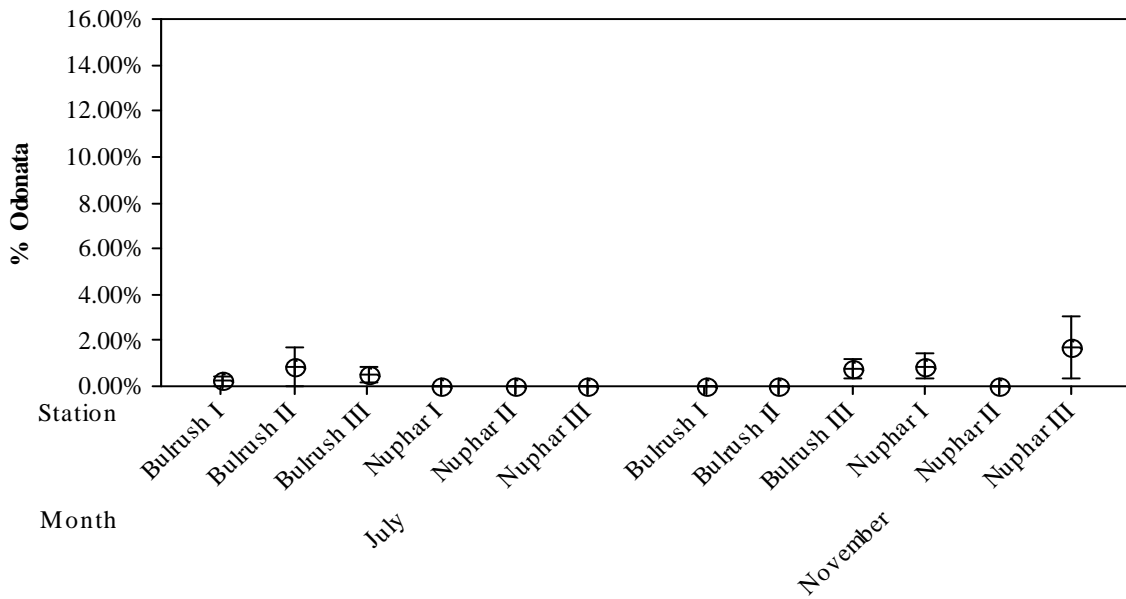
### SJR nr Yankee Lake Taxa Richness

Bars are One Standard Error from the Mean

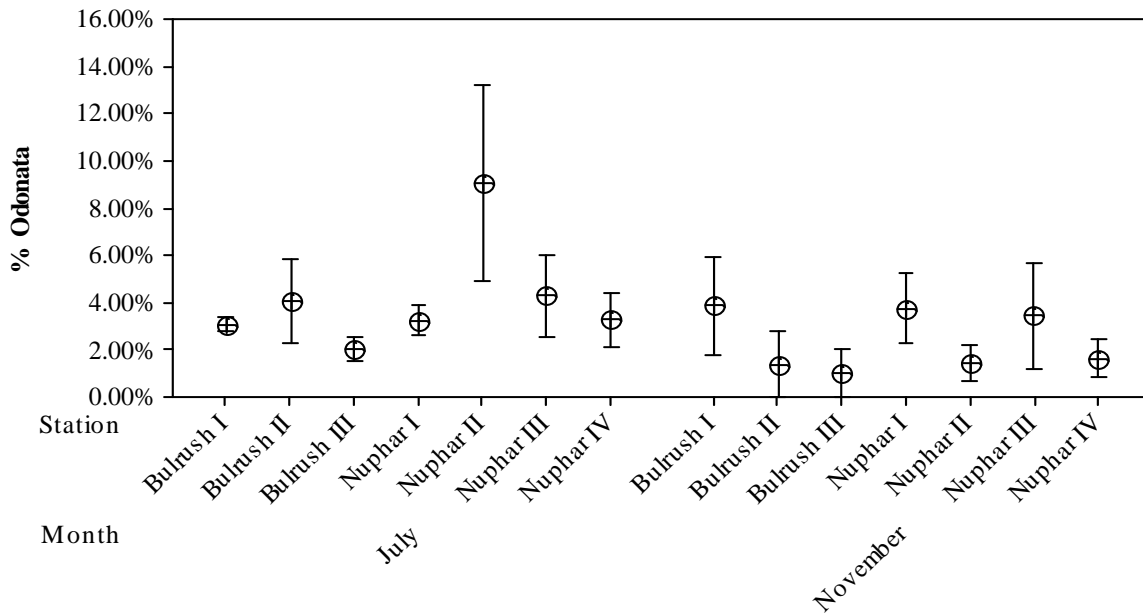


Appendix 11.C Figure 1. Continued.

**Lake Poinsett % Odonata**  
 Bars are One Standard Error from the Mean

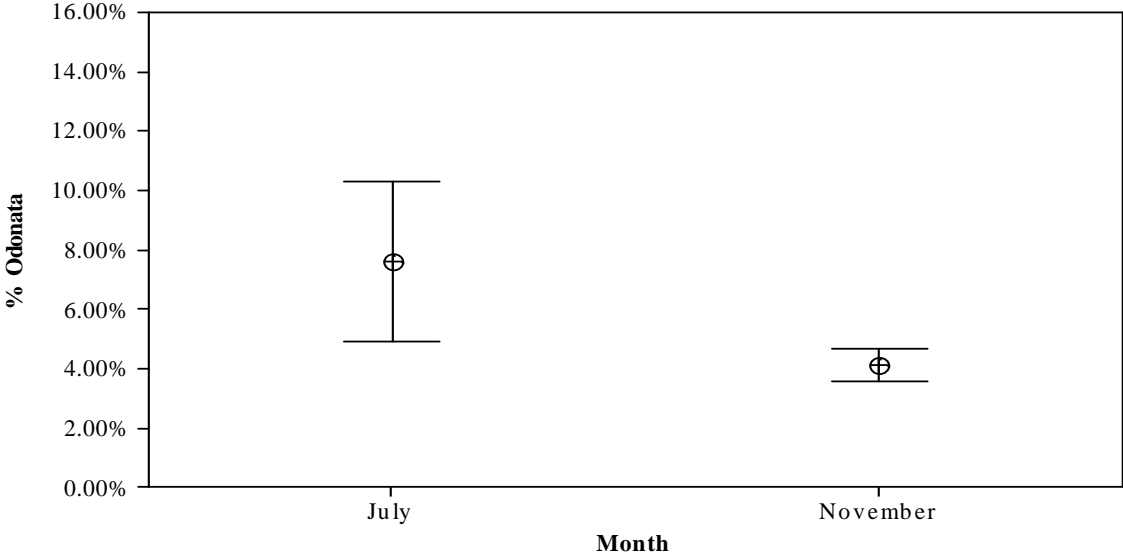


**Lake Monroe % Odonata**  
 Bars are One Standard Error from the Mean



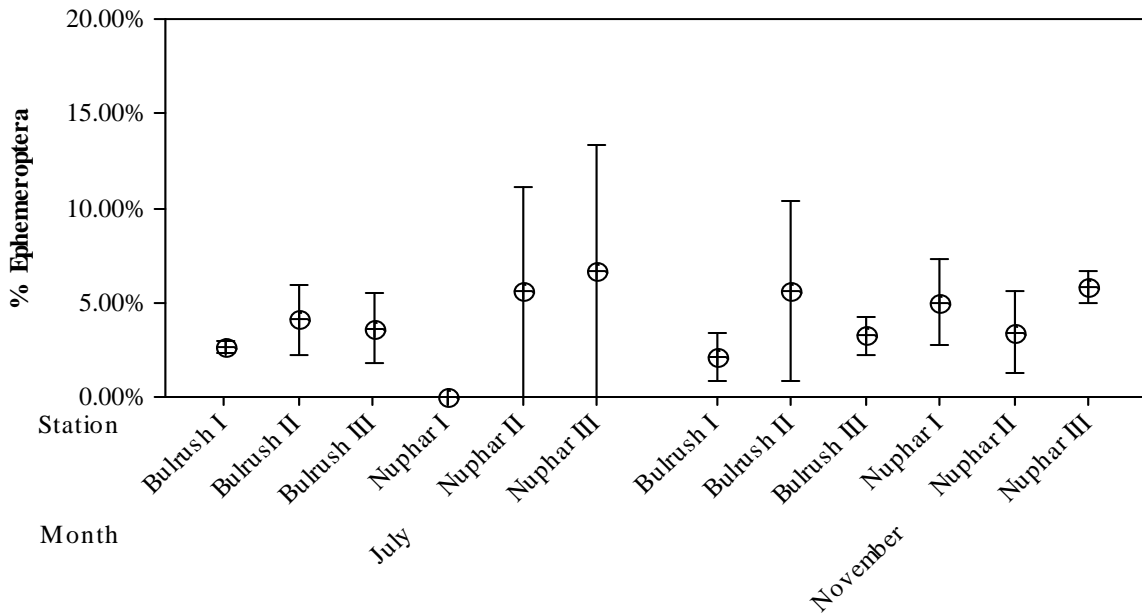
Appendix 11.C Figure 2. Mean relative abundance of Odonata (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Odonata**  
Bars are One Standard Error from the Mean

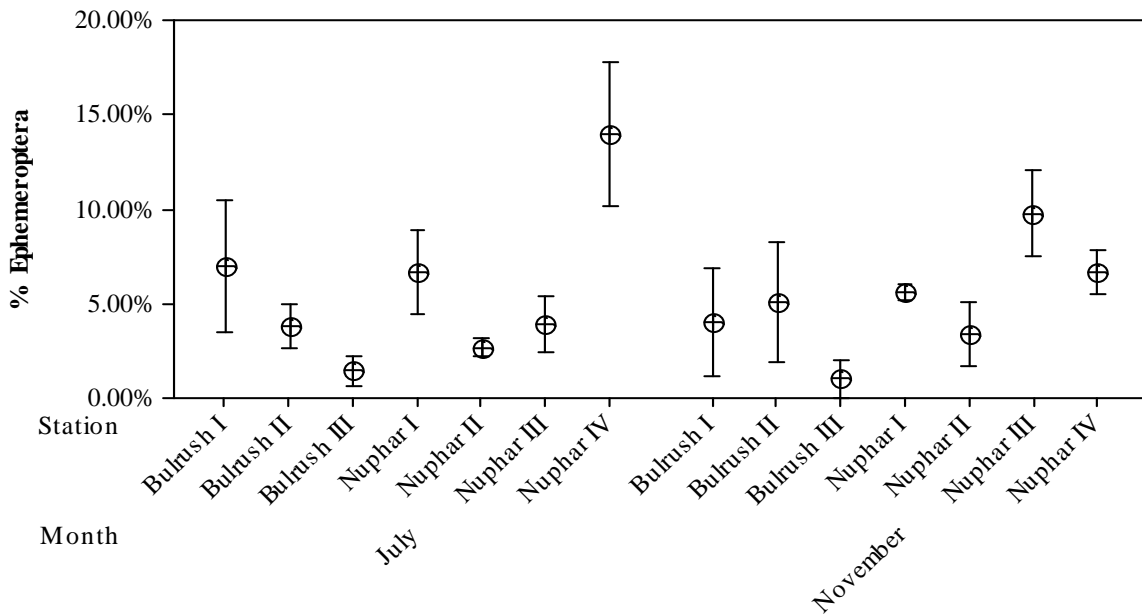


Appendix 11.C Figure 2. Continued.

**Lake Poinsett % Ephemeroptera**  
 Bars are One Standard Error from the Mean

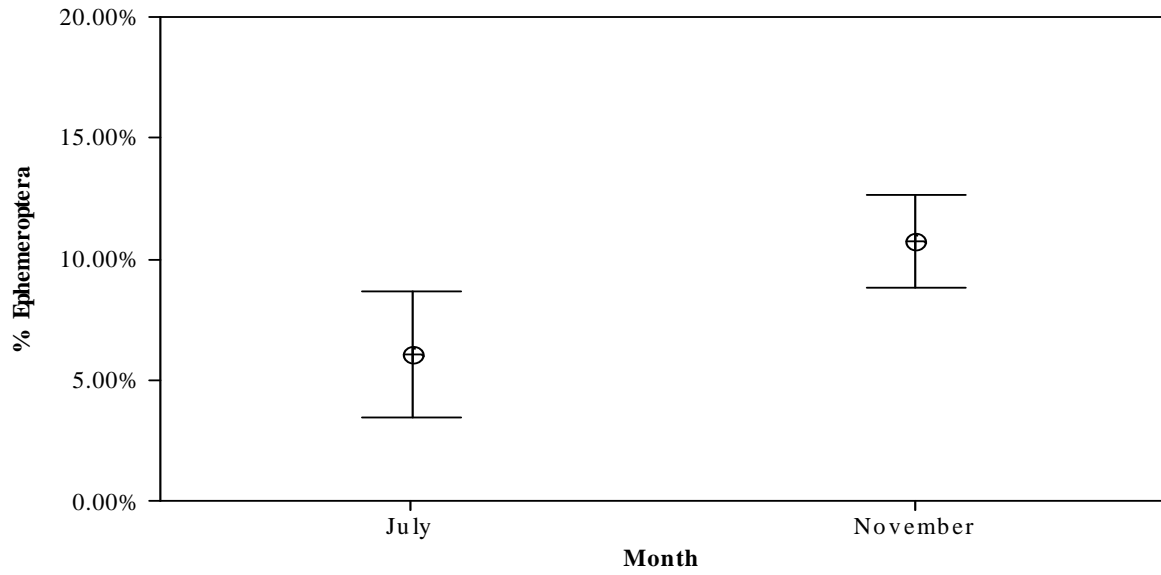


**Lake Monroe % Ephemeroptera**  
 Bars are One Standard Error from the Mean



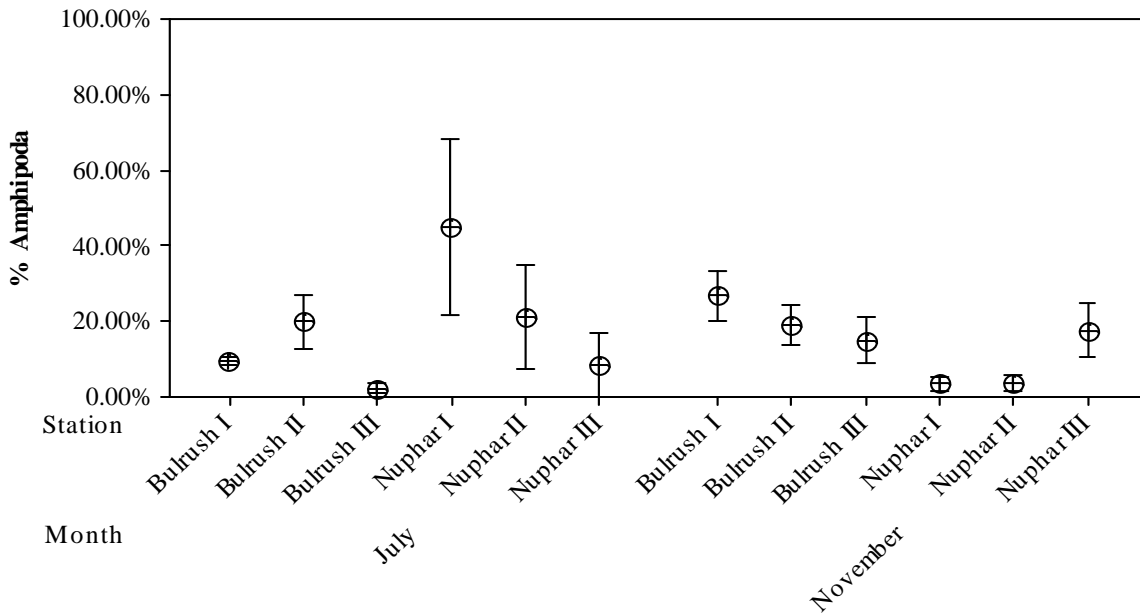
Appendix 11.C Figure 3. Mean relative abundance of Ephemeroptera (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Ephemeroptera**  
Bars are One Standard Error from the Mean

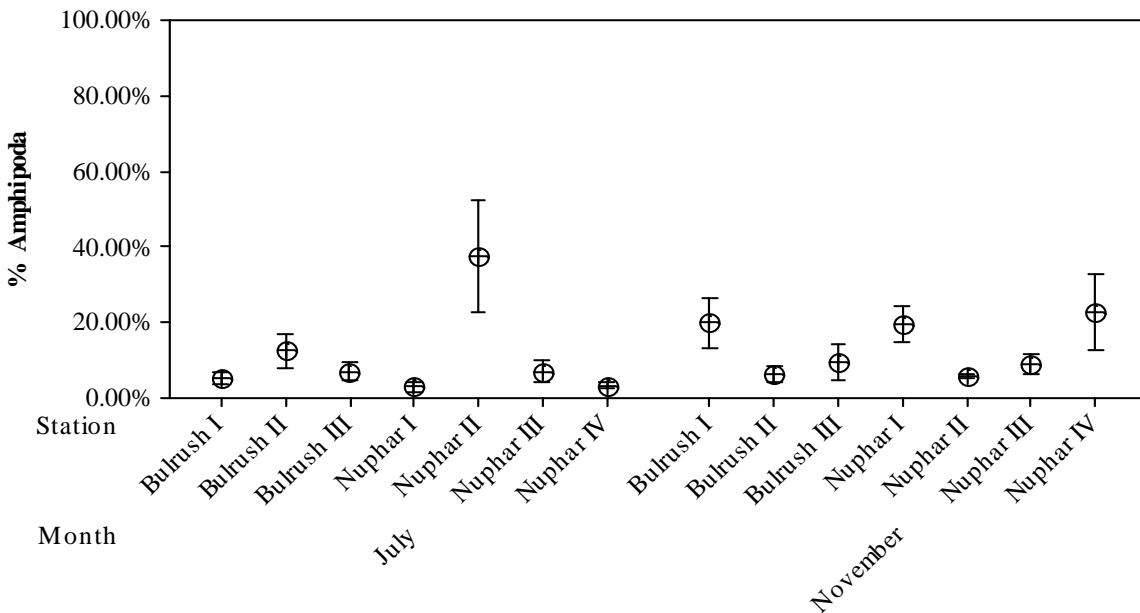


Appendix 11.C Figure 3. Continued.

**Lake Poinsett % Amphipoda**  
 Bars are One Standard Error from the Mean



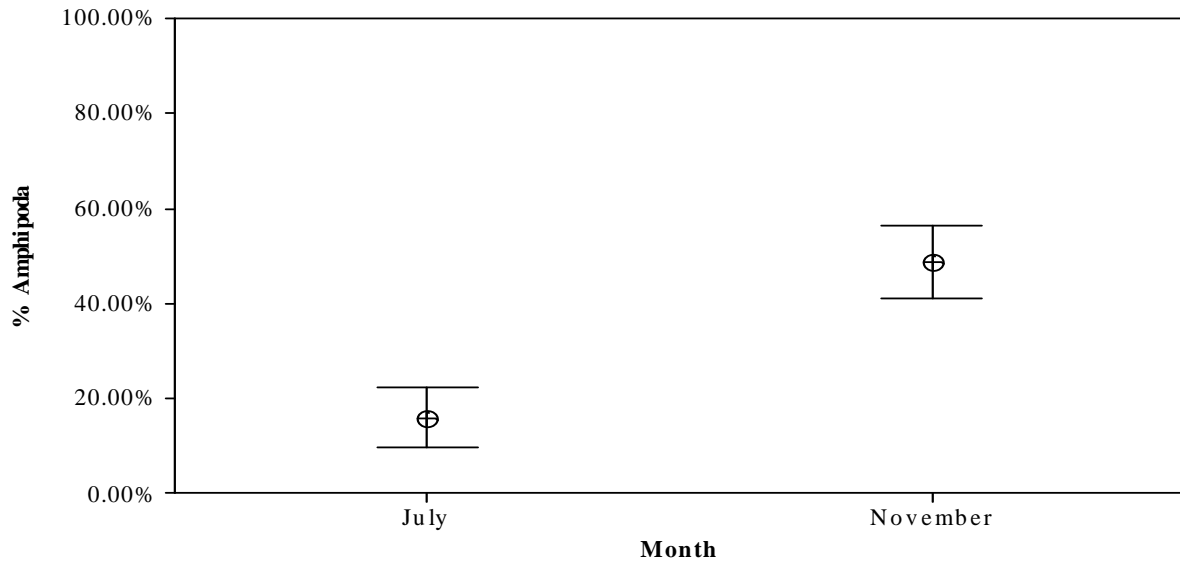
**Lake Monroe % Amphipoda**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 4. Mean relative abundance of Amphipoda (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

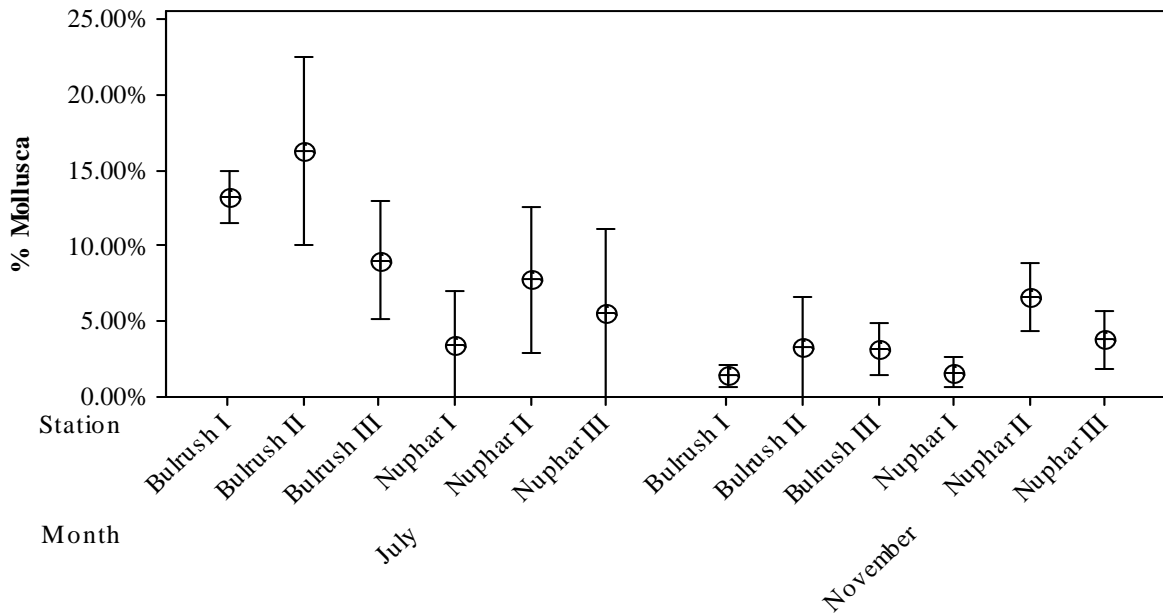


**SJR nr Yankee Lake % Amphipoda**  
Bars are One Standard Error from the Mean

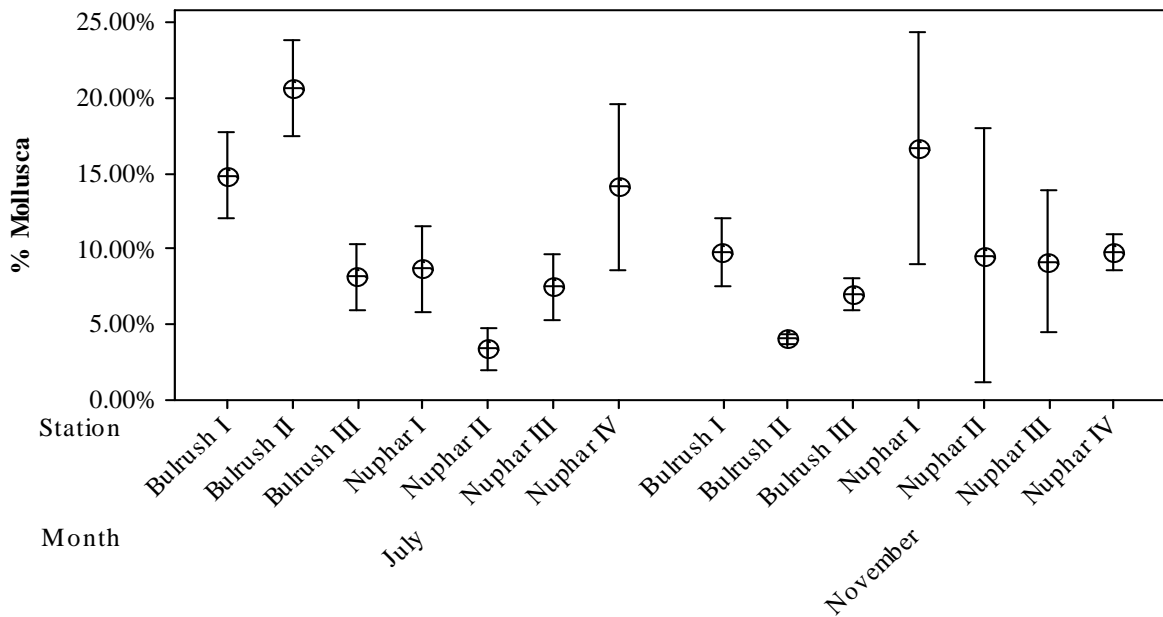


Appendix 11.C Figure 4. Continued.

**Lake Poinsett % Mollusca**  
 Bars are One Standard Error from the Mean

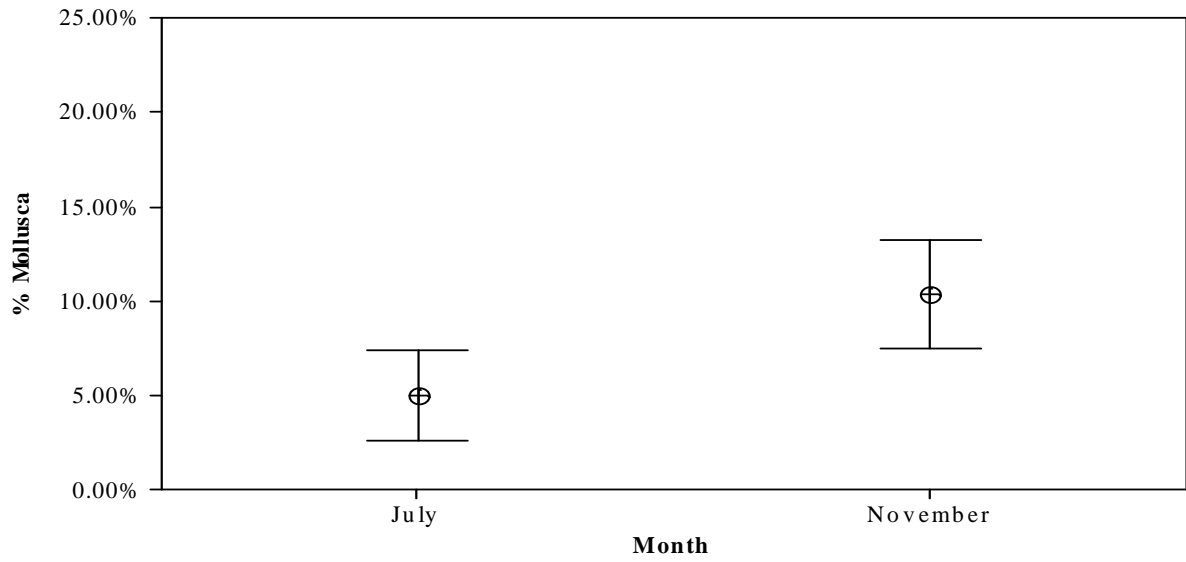


**Lake Monroe % Mollusca**  
 Bars are One Standard Error from the Mean



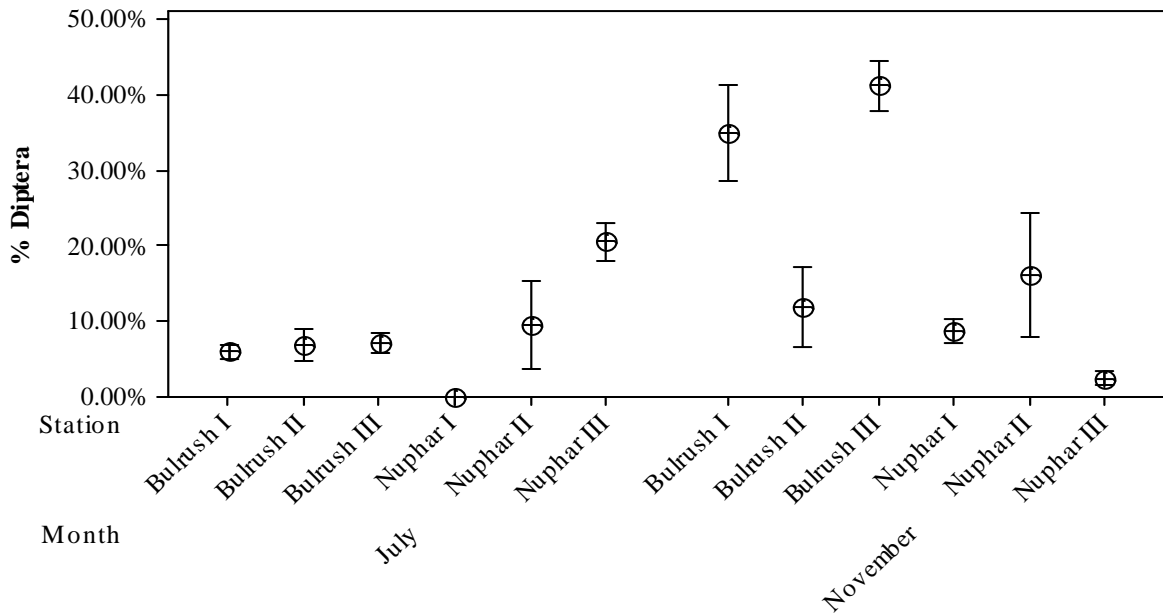
Appendix 11.C Figure 5. Mean relative abundance of Mollusca (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Mollusca**  
Bars are One Standard Error from the Mean

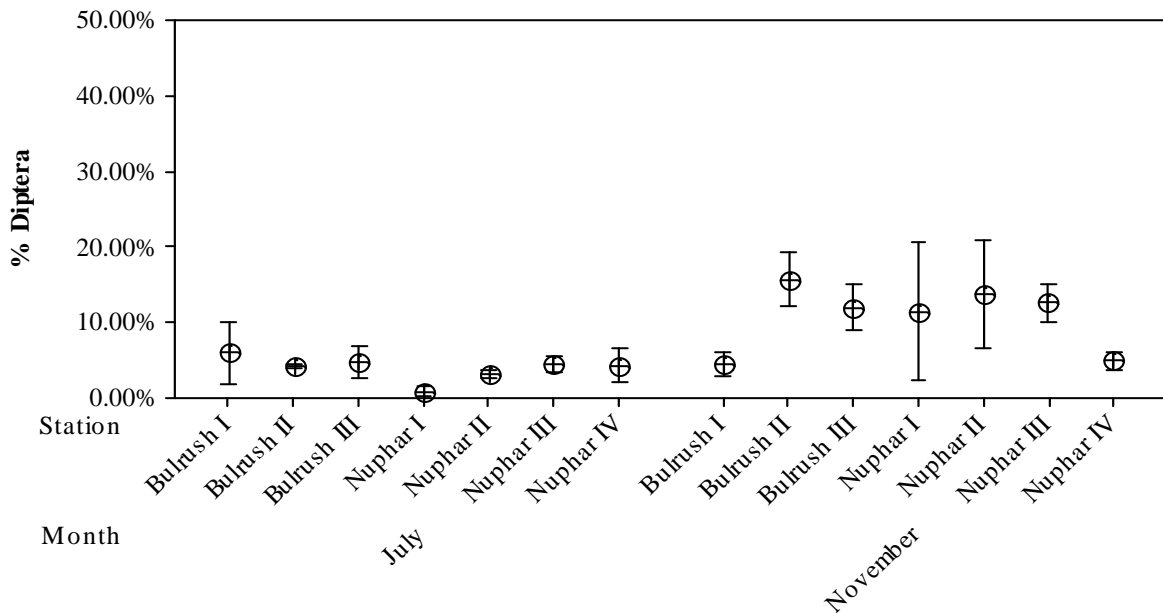


Appendix 11.C Figure 5. Continued.

**Lake Poinsett % Diptera**  
 Bars are One Standard Error from the Mean

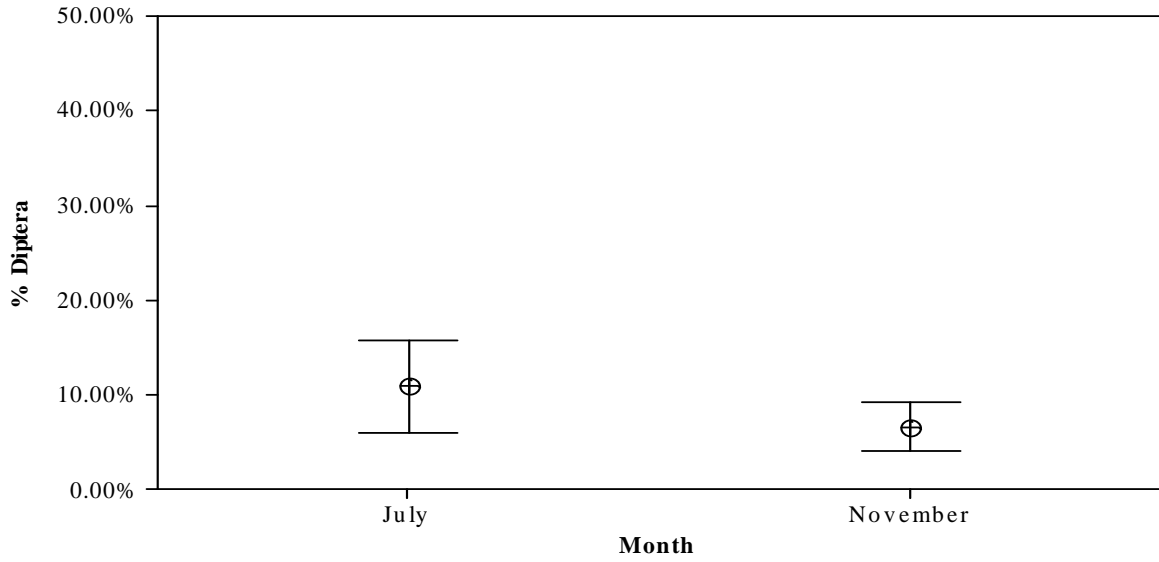


**Lake Monroe % Diptera**  
 Bars are One Standard Error from the Mean



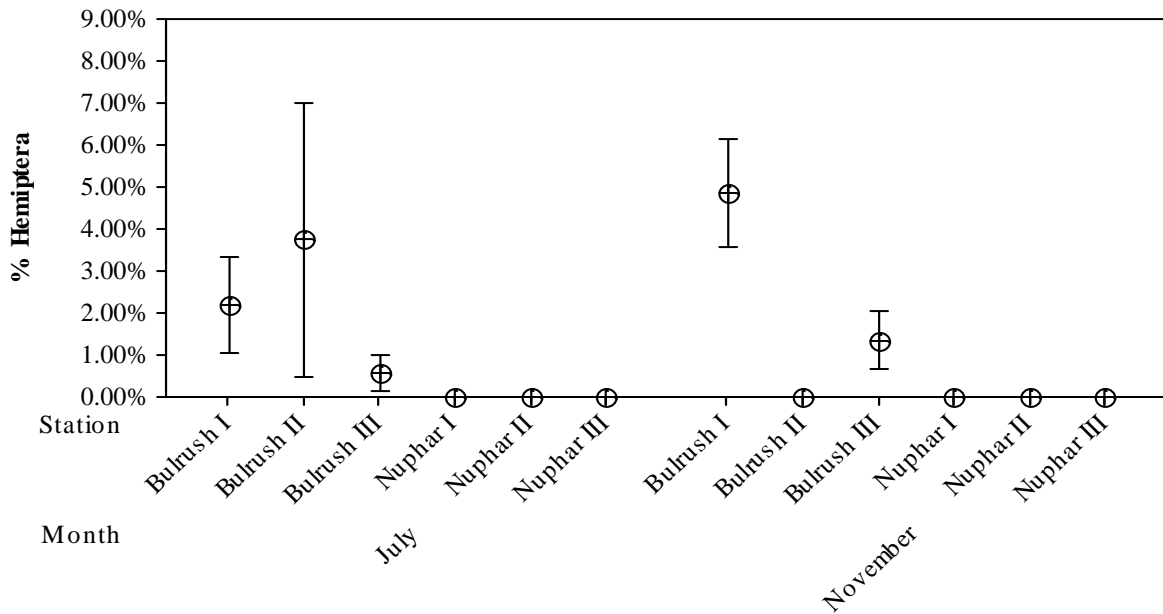
Appendix 11.C Figure 6. Mean relative abundance of Diptera (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Diptera**  
Bars are One Standard Error from the Mean

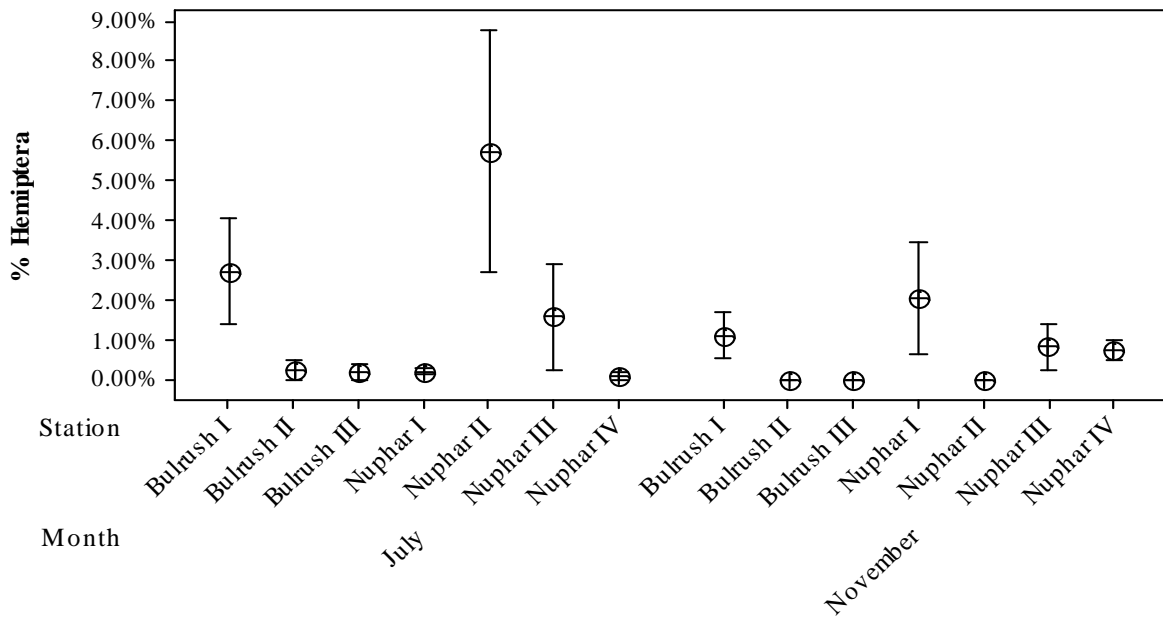


Appendix 11.C Figure 6. Continued.

**Lake Poinsett % Hemiptera**  
 Bars are One Standard Error from the Mean

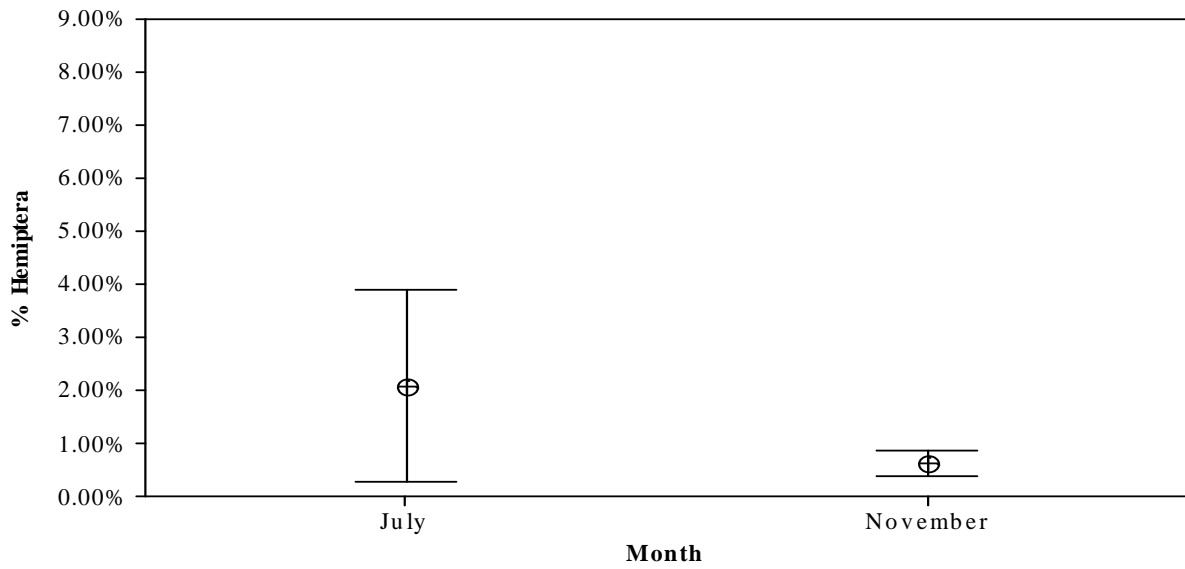


**Lake Monroe % Hemiptera**  
 Bars are One Standard Error from the Mean



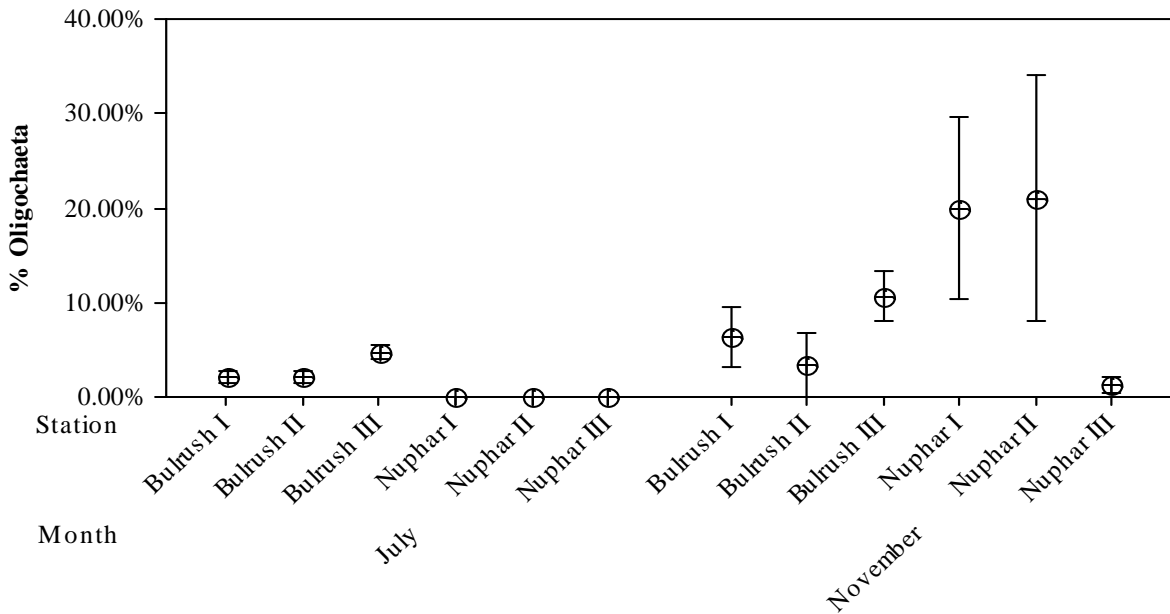
Appendix 11.C Figure 7. Mean relative abundance of Hemiptera (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Hemiptera**  
Bars are One Standard Error from the Mean

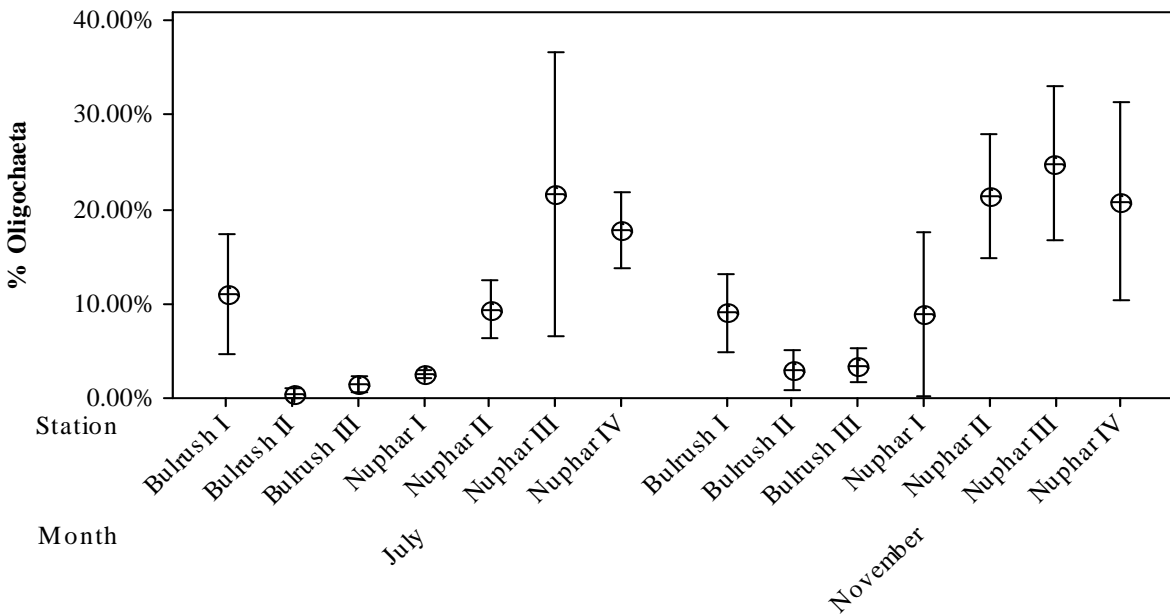


Appendix 11.C Figure 7. Continued.

**Lake Poinsett % Oligochaeta**  
 Bars are One Standard Error from the Mean



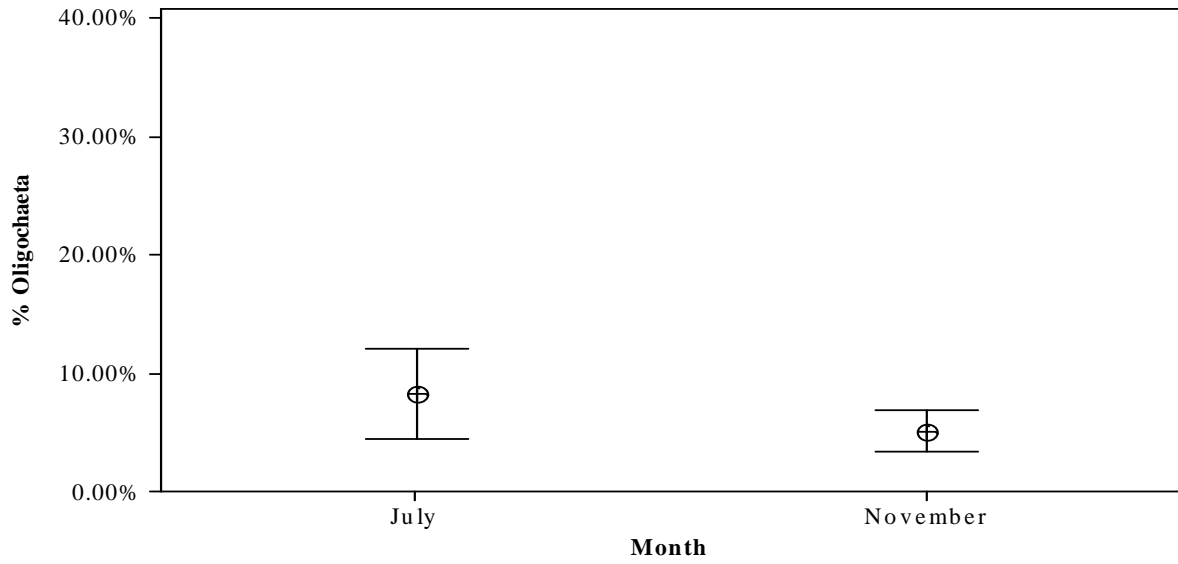
**Lake Monroe % Oligochaeta**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 8. Mean relative abundance of Oligochaeta (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

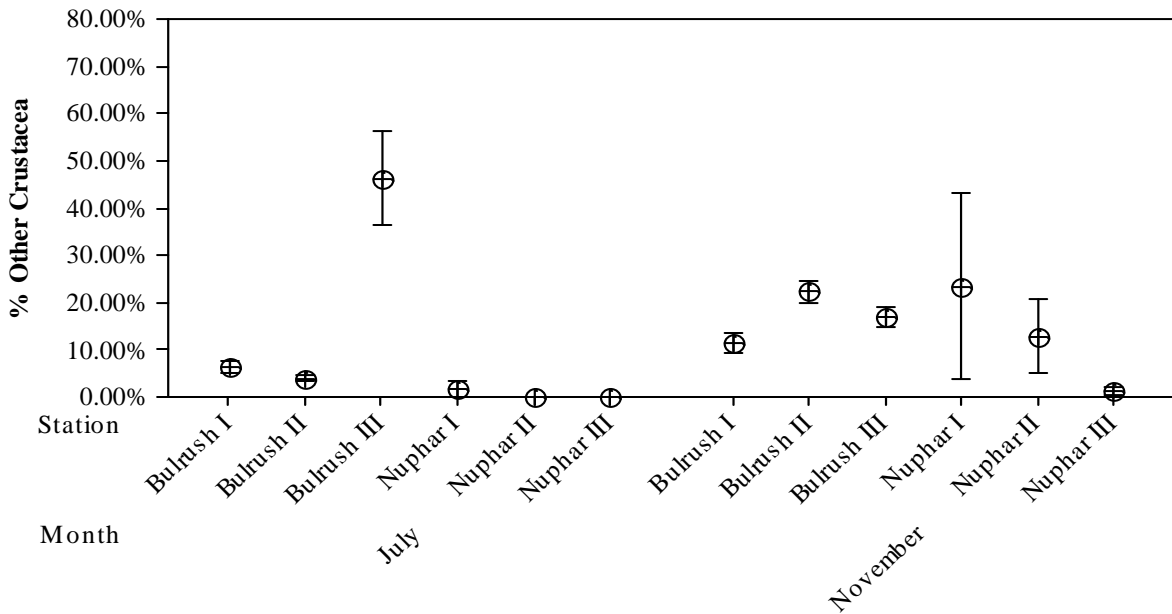


**SJR nr Yankee Lake % Oligochaeta**  
Bars are One Standard Error from the Mean

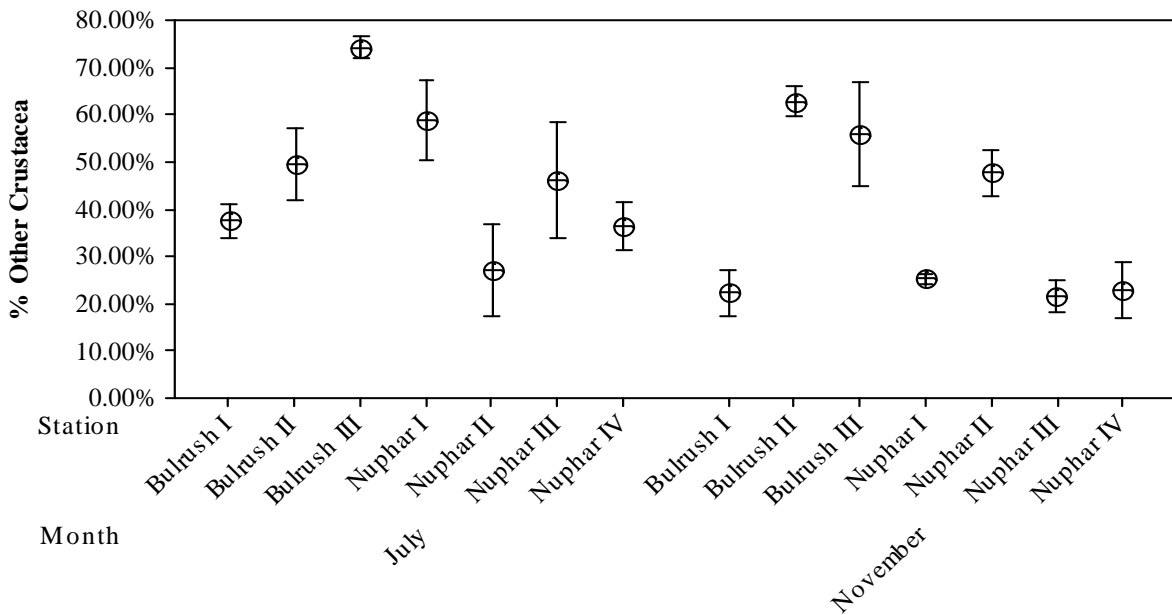


Appendix 11.C Figure 8. Continued.

**Lake Poinsett % Other Crustacea**  
 Bars are One Standard Error from the Mean



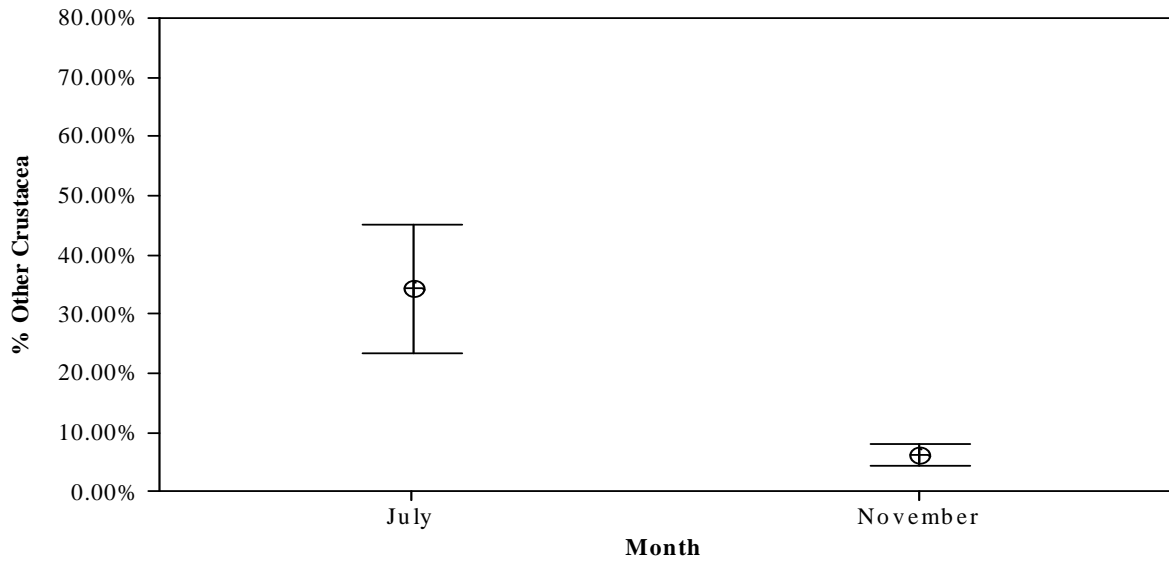
**Lake Monroe % Other Crustacea**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 9. Mean relative abundance of Other Crustacea (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

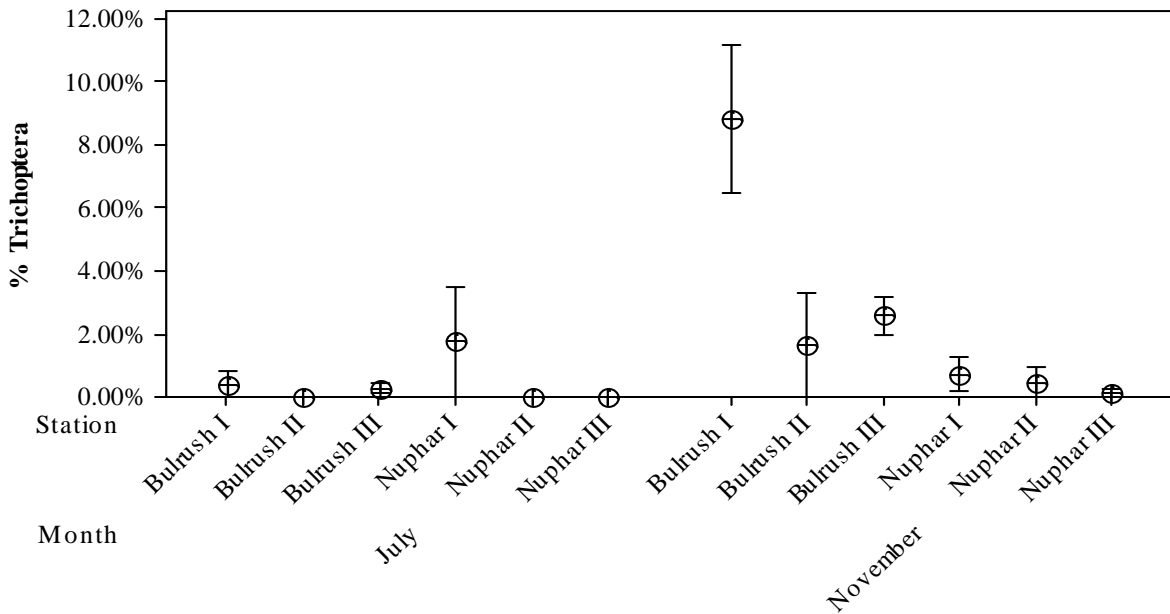
### SJR nr Yankee Lake % Other Crustacea

Bars are One Standard Error from the Mean

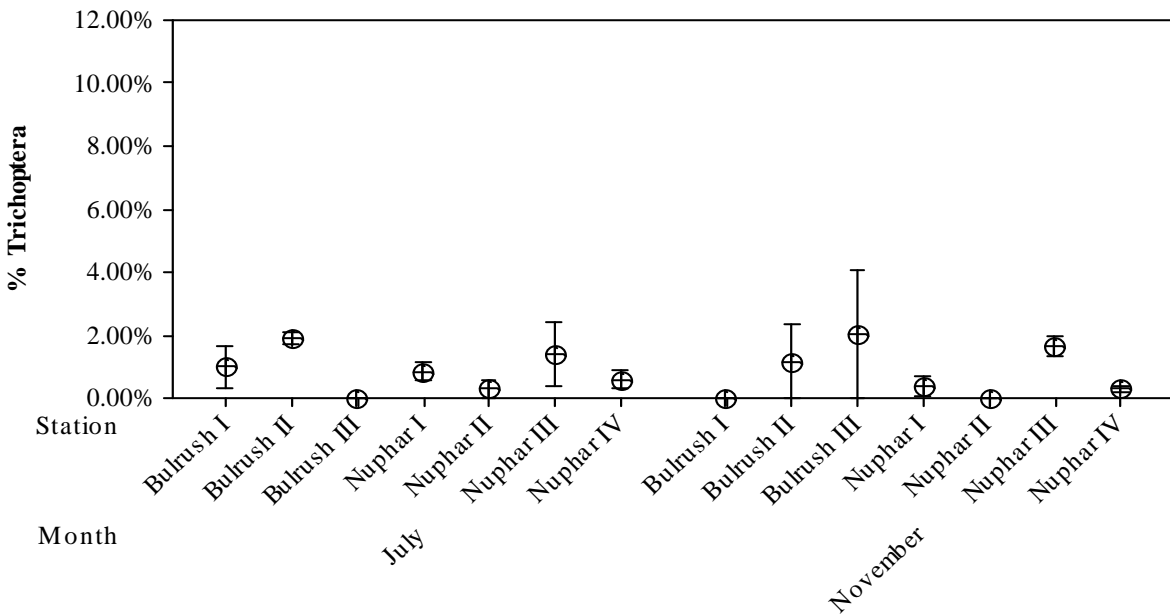


Appendix 11.C Figure 9. Continued.

**Lake Poinsett % Trichoptera**  
 Bars are One Standard Error from the Mean

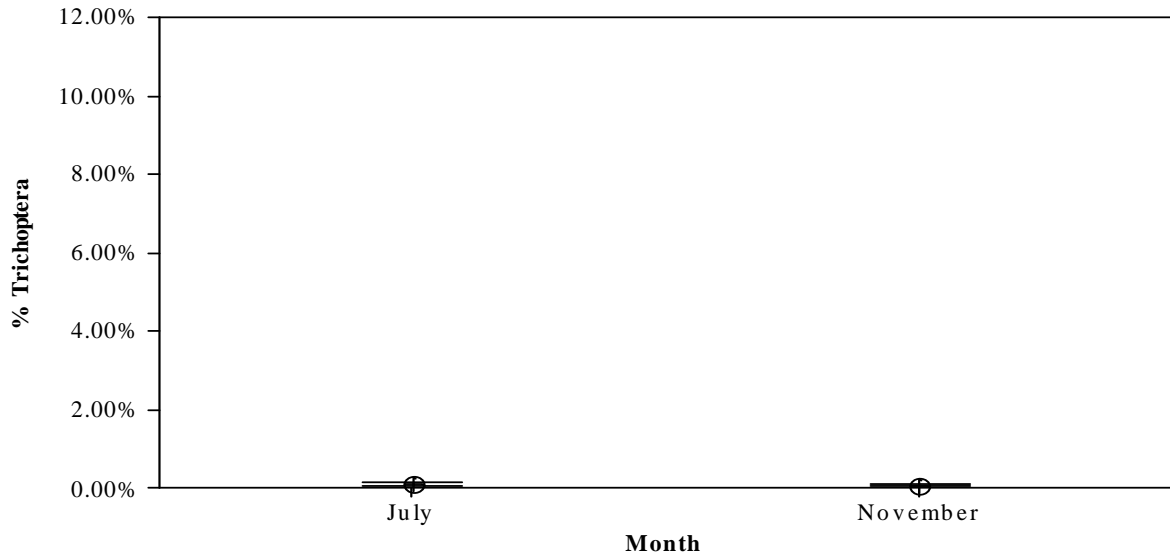


**Lake Monroe % Trichoptera**  
 Bars are One Standard Error from the Mean



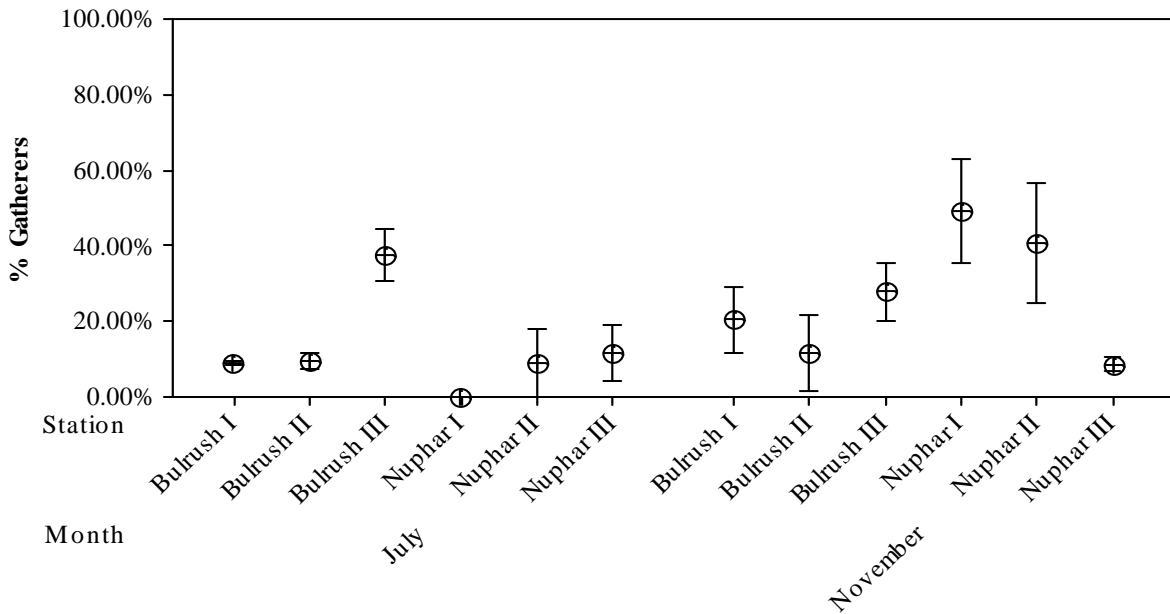
Appendix 11.C Figure 10. Mean relative abundance of Trichoptera (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Trichoptera**  
Bars are One Standard Error from the Mean

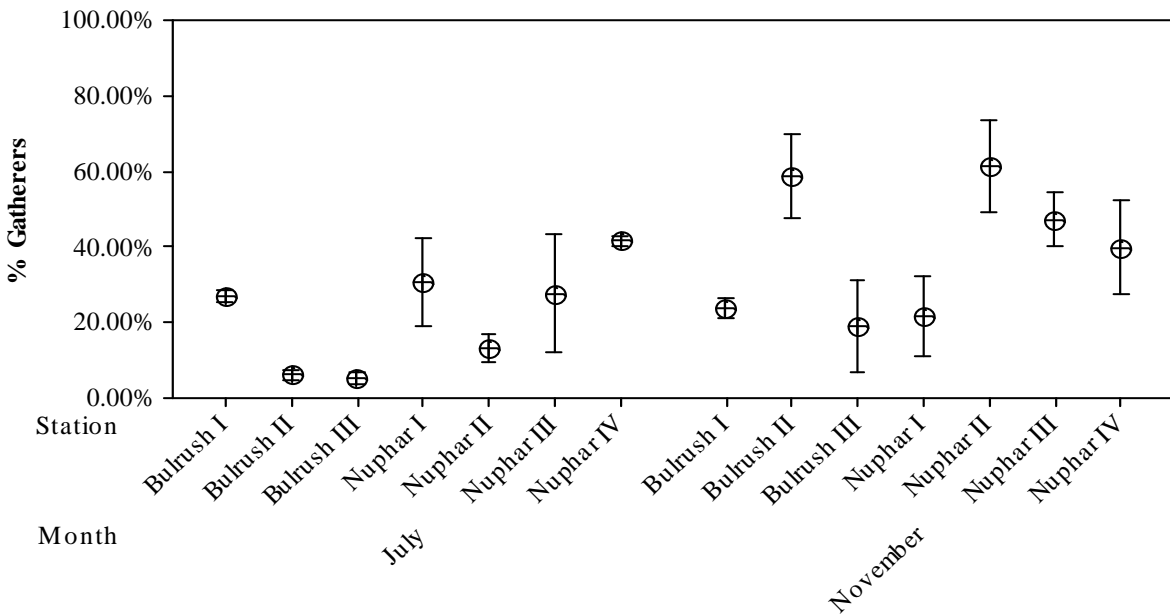


Appendix 11.C Figure 10. Continued.

**Lake Poinsett % Gatherers**  
 Bars are One Standard Error from the Mean

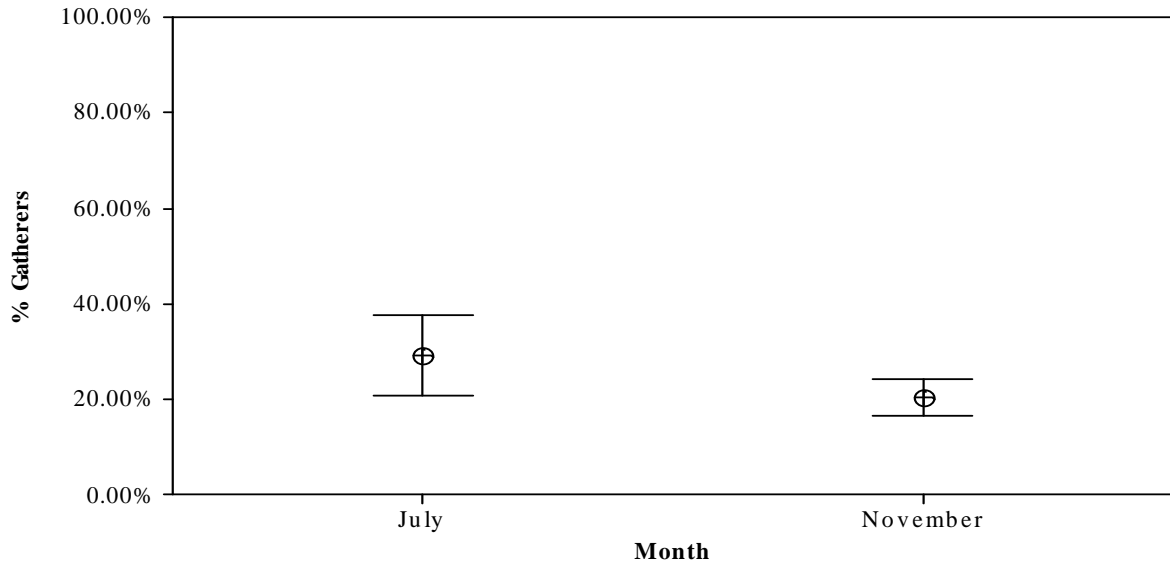


**Lake Monroe % Gatherers**  
 Bars are One Standard Error from the Mean



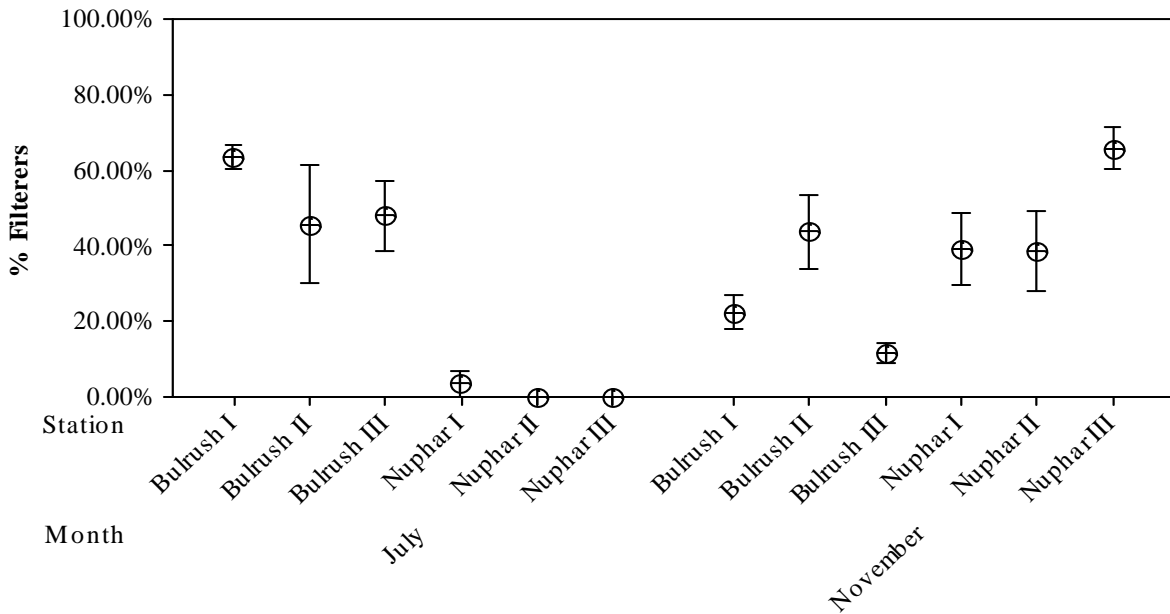
Appendix 11.C Figure 11. Mean relative abundance of Gathering Collectors (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Gatherers**  
Bars are One Standard Error from the Mean

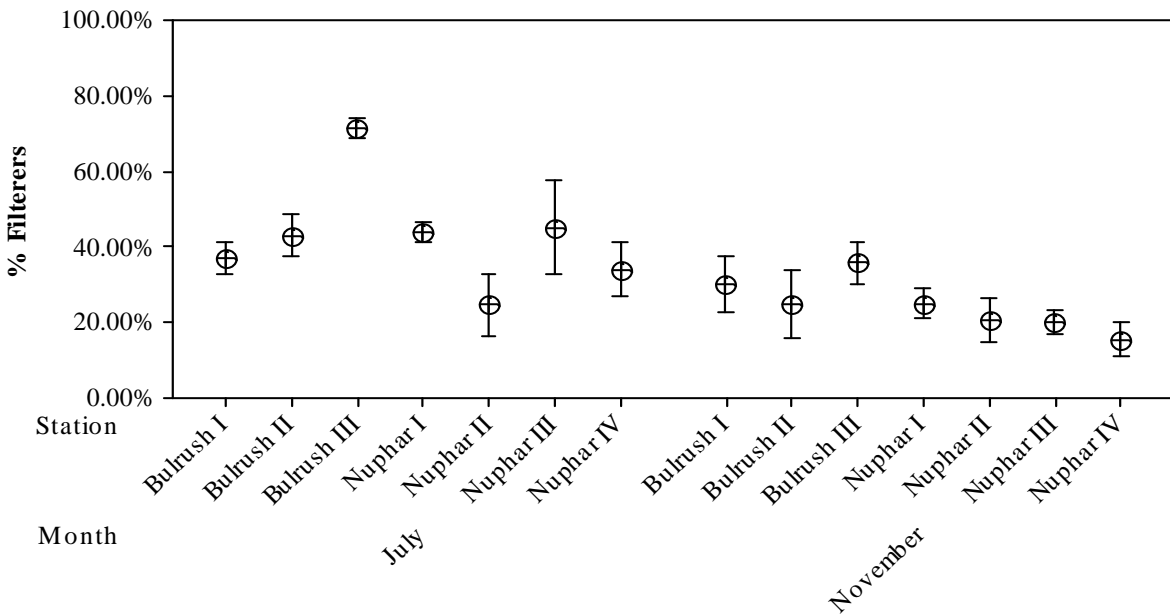


Appendix 11.C Figure 11. Continued.

**Lake Poinsett % Filterers**  
 Bars are One Standard Error from the Mean



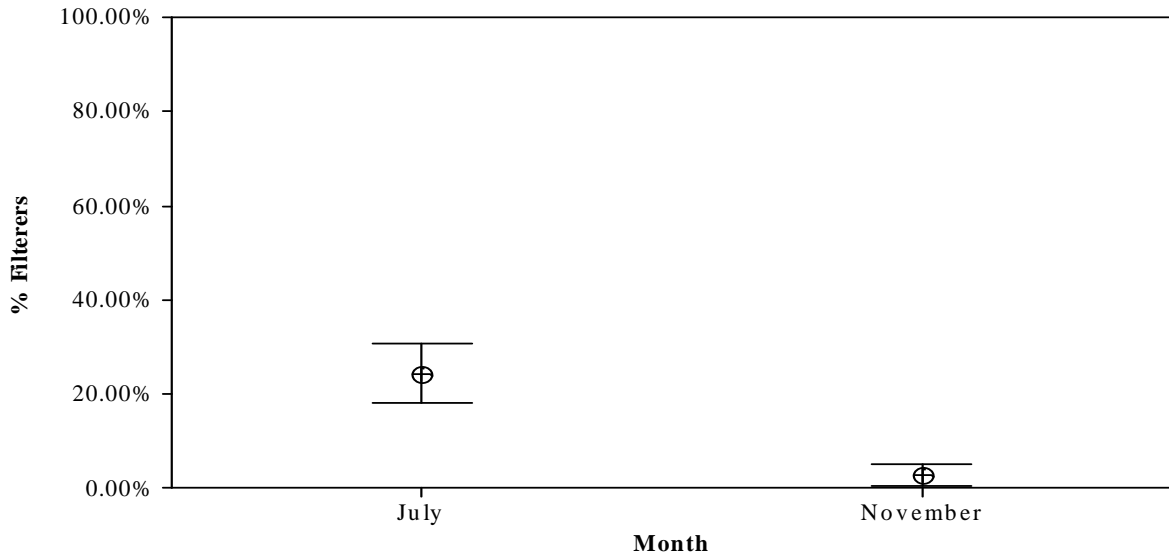
**Lake Monroe % Filterers**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 12. Mean relative abundance of Filtering Collectors (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

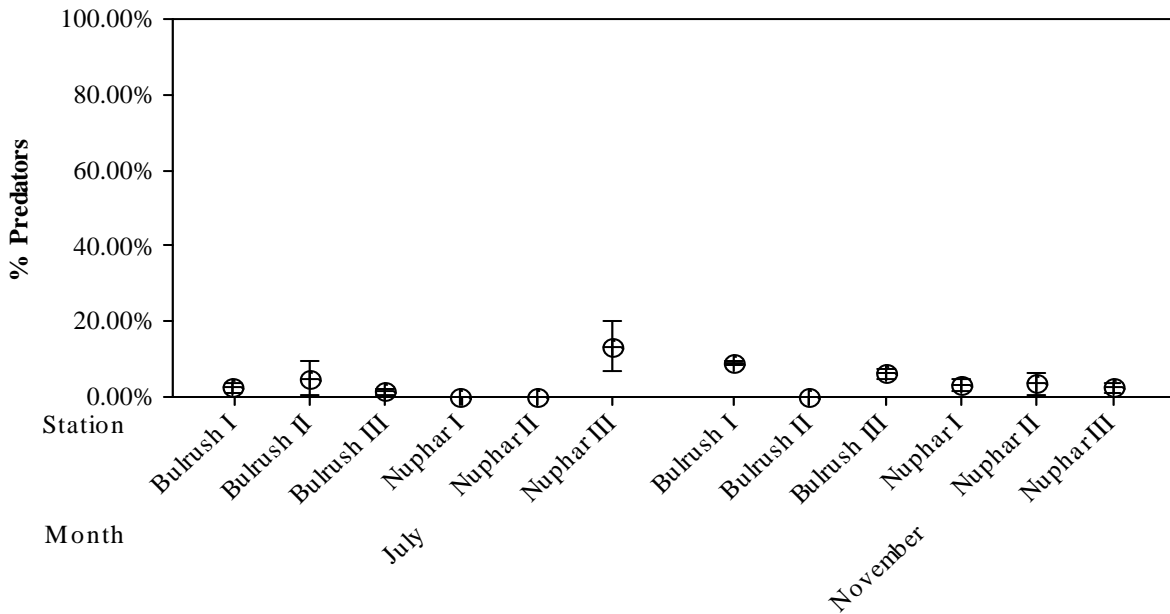


**SJR nr Yankee Lake % Filterers**  
Bars are One Standard Error from the Mean

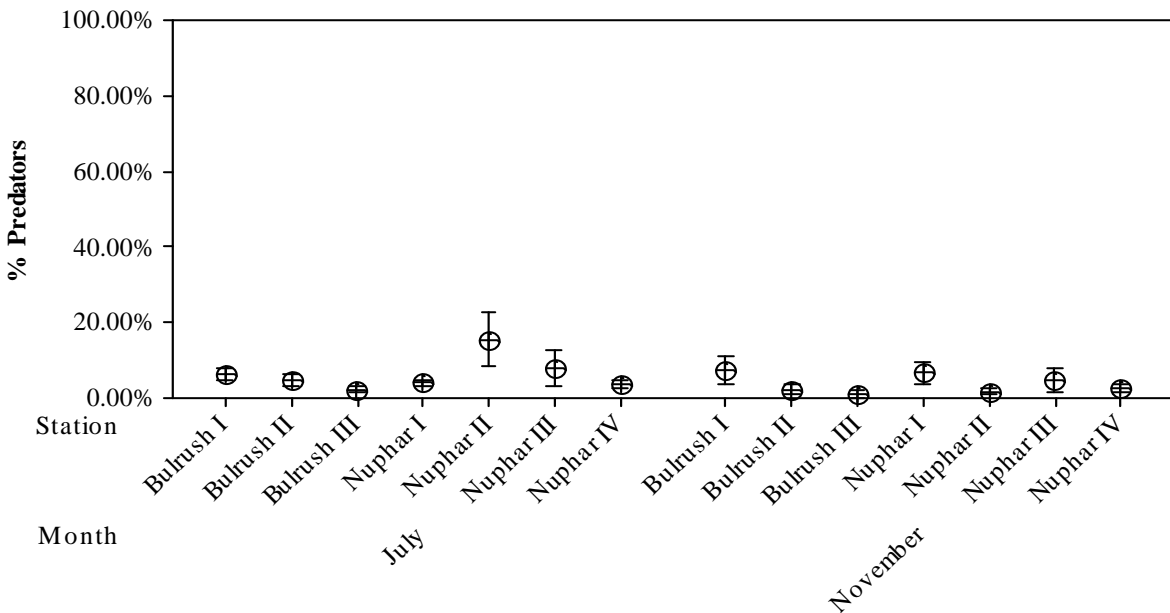


Appendix 11.C Figure 12. Continued.

**Lake Poinsett % Predators**  
 Bars are One Standard Error from the Mean

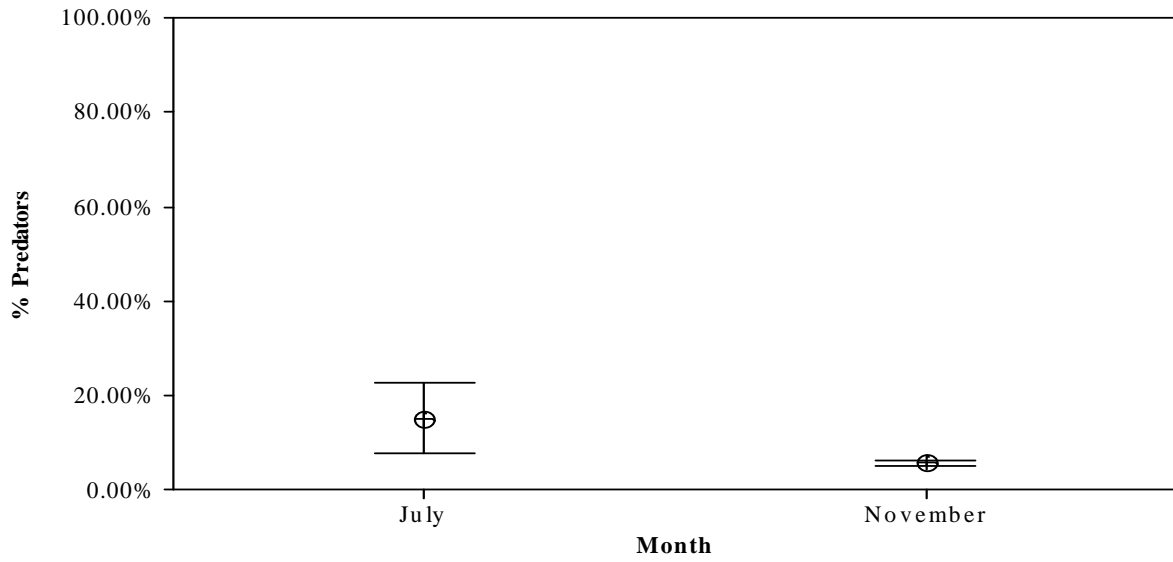


**Lake Monroe % Predators**  
 Bars are One Standard Error from the Mean



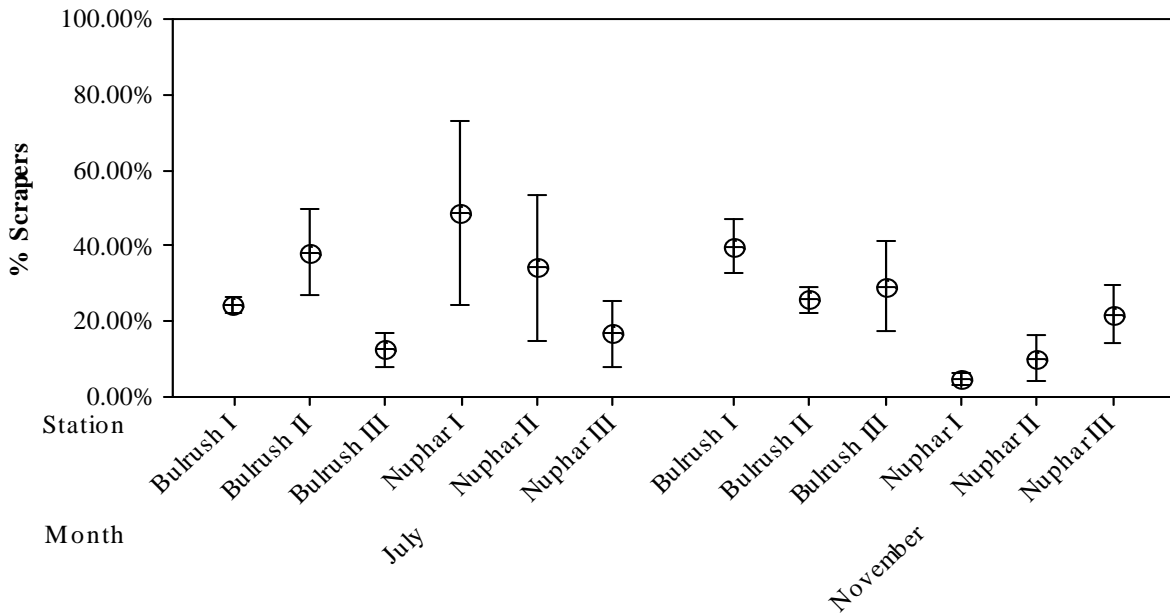
Appendix 11.C Figure 13. Mean relative abundance of Predators (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Predators**  
Bars are One Standard Error from the Mean

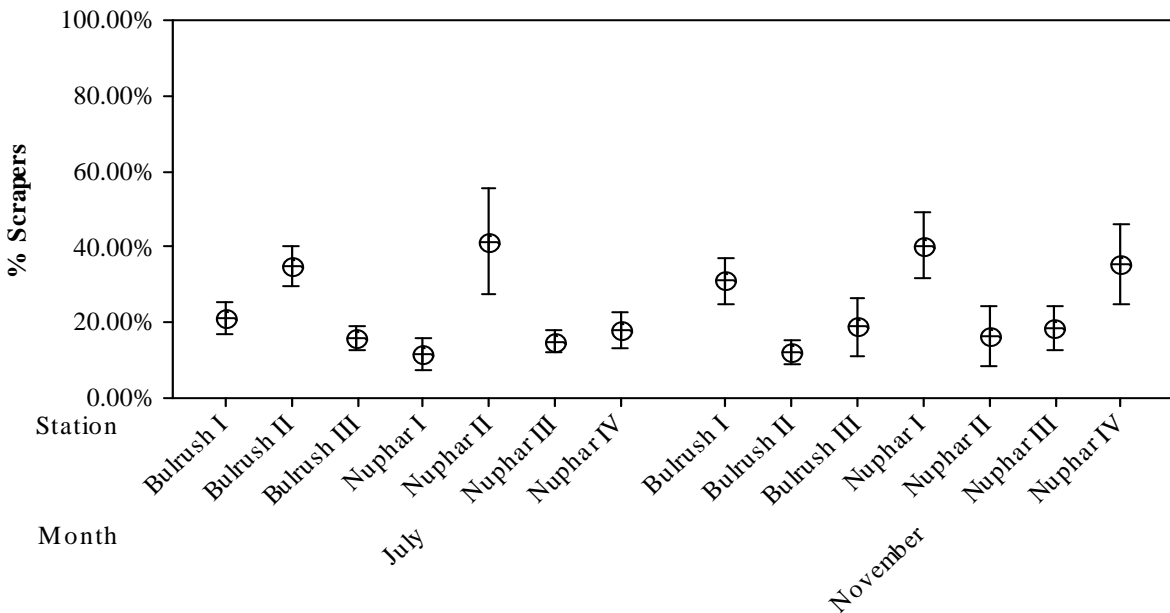


Appendix 11.C Figure 13. Continued.

**Lake Poinsett % Scrapers**  
 Bars are One Standard Error from the Mean

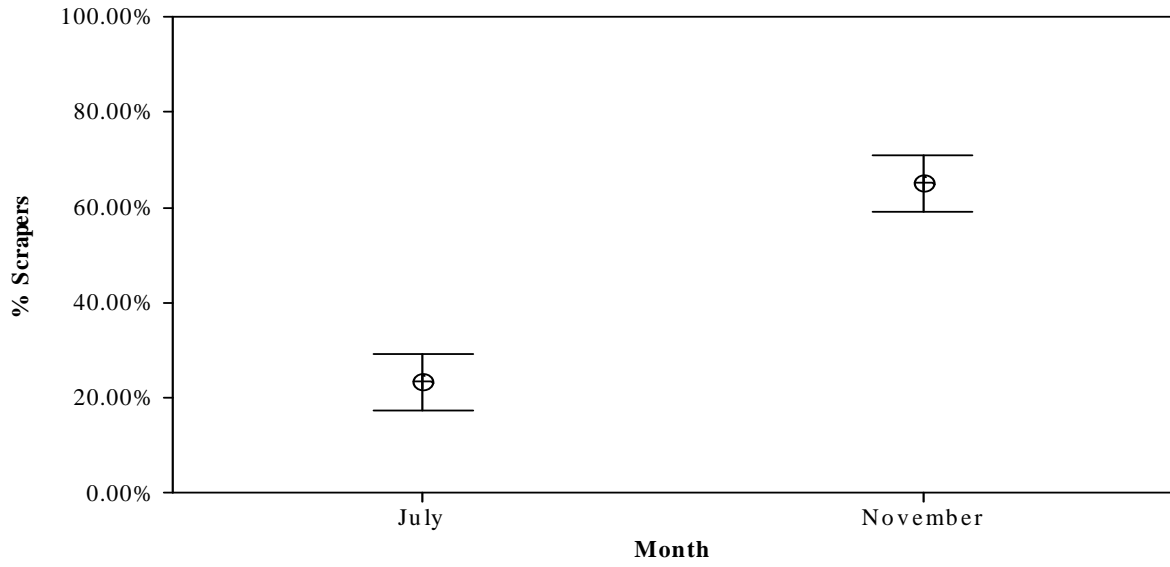


**Lake Monroe % Scrapers**  
 Bars are One Standard Error from the Mean



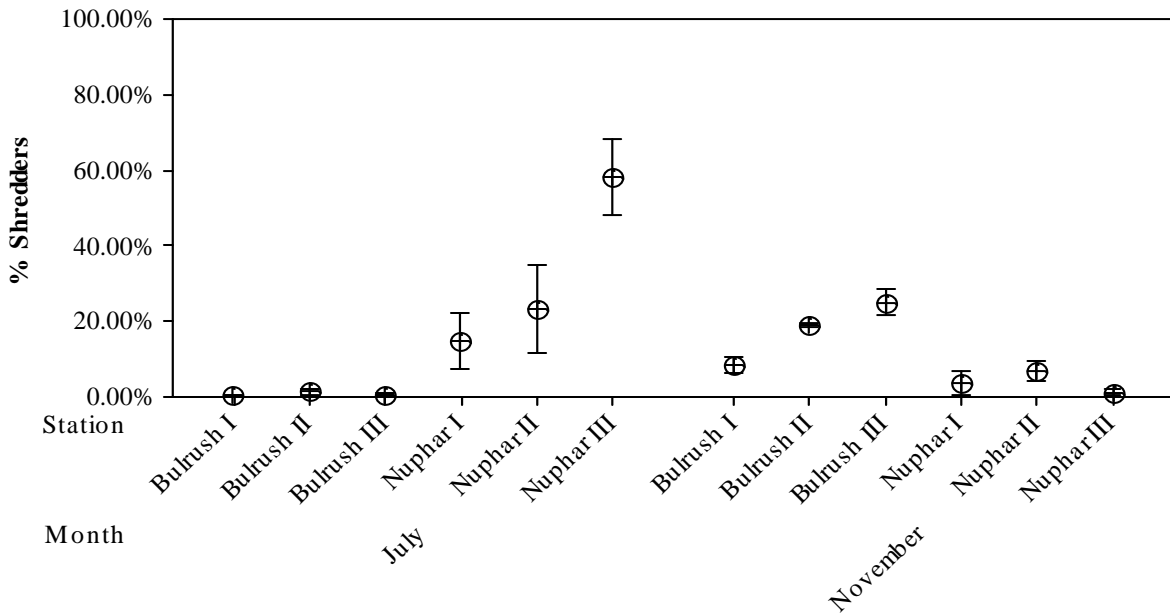
Appendix 11.C Figure 14. Mean relative abundance of Scrapers (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

**SJR nr Yankee Lake % Scrapers**  
Bars are One Standard Error from the Mean

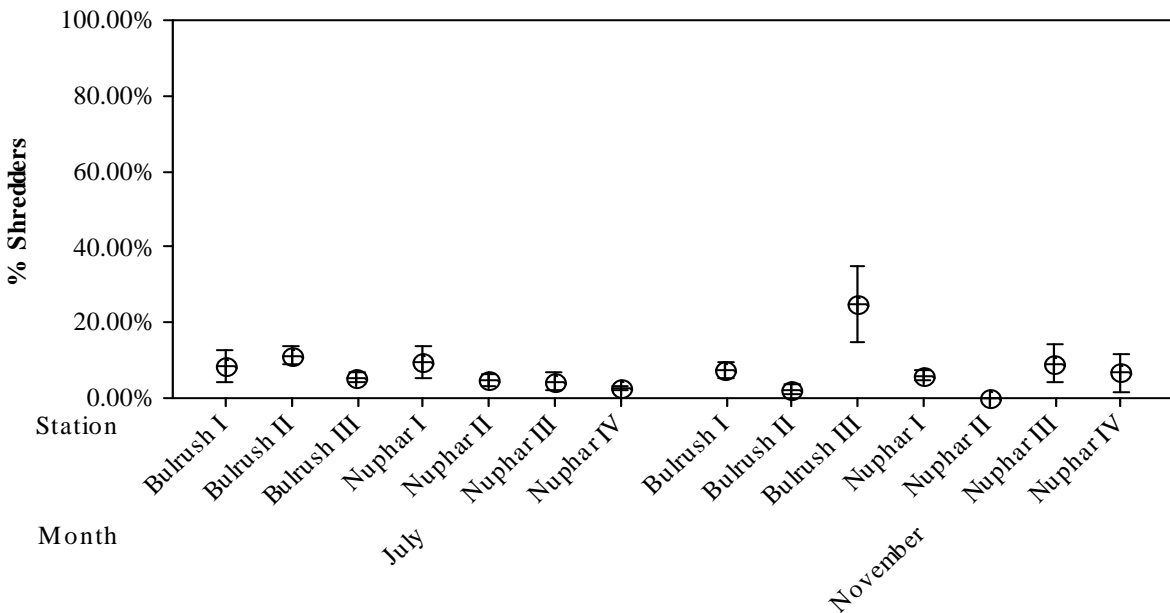


Appendix 11.C Figure 14. Continued.

**Lake Poinsett % Shredders**  
 Bars are One Standard Error from the Mean

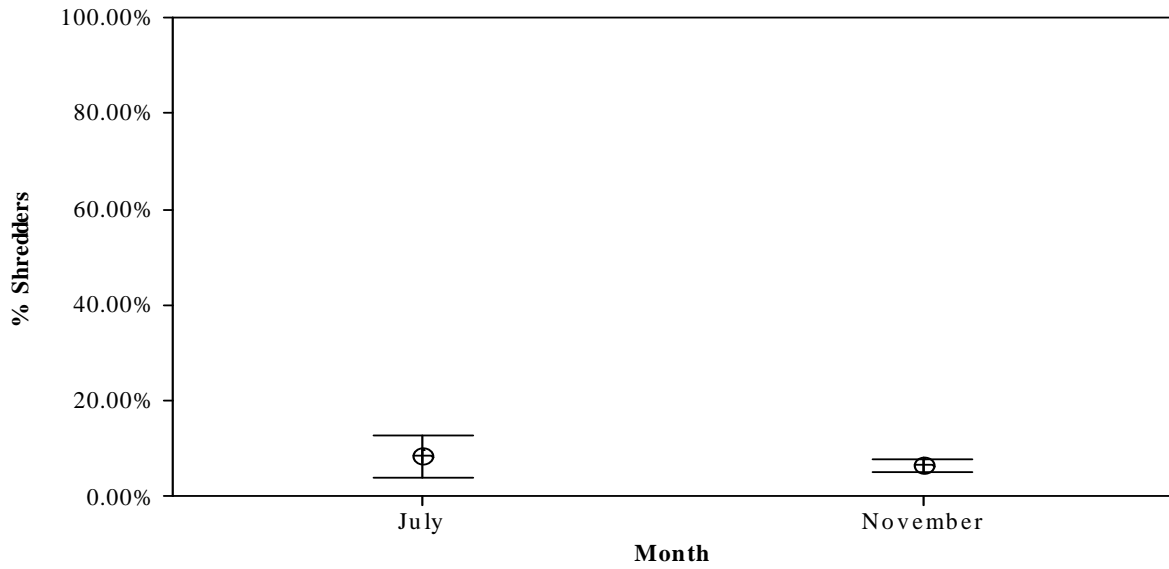


**Lake Monroe % Shredders**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 15. Mean relative abundance of Shredders (%) in the benthic communities in bulrush and *Nuphar* habitat in Lakes Poinsett and Monroe, and *Nuphar* at SJR near Yankee Lake. N=3 at each station.

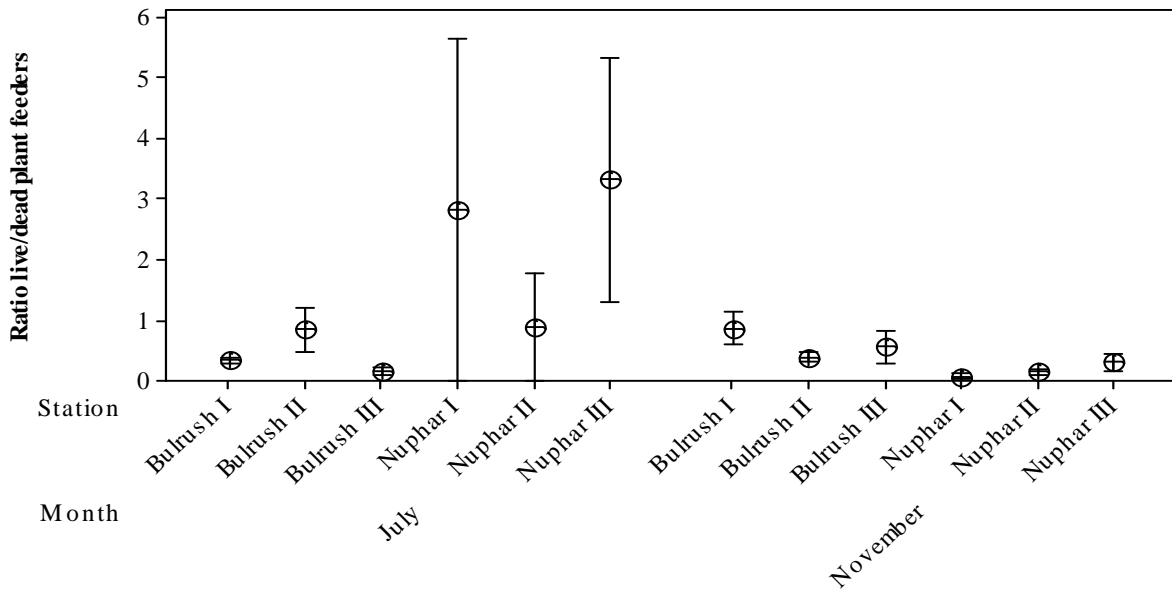
**SJR nr Yankee Lake % Shredders**  
Bars are One Standard Error from the Mean



Appendix 11.C Figure 15. Continued.

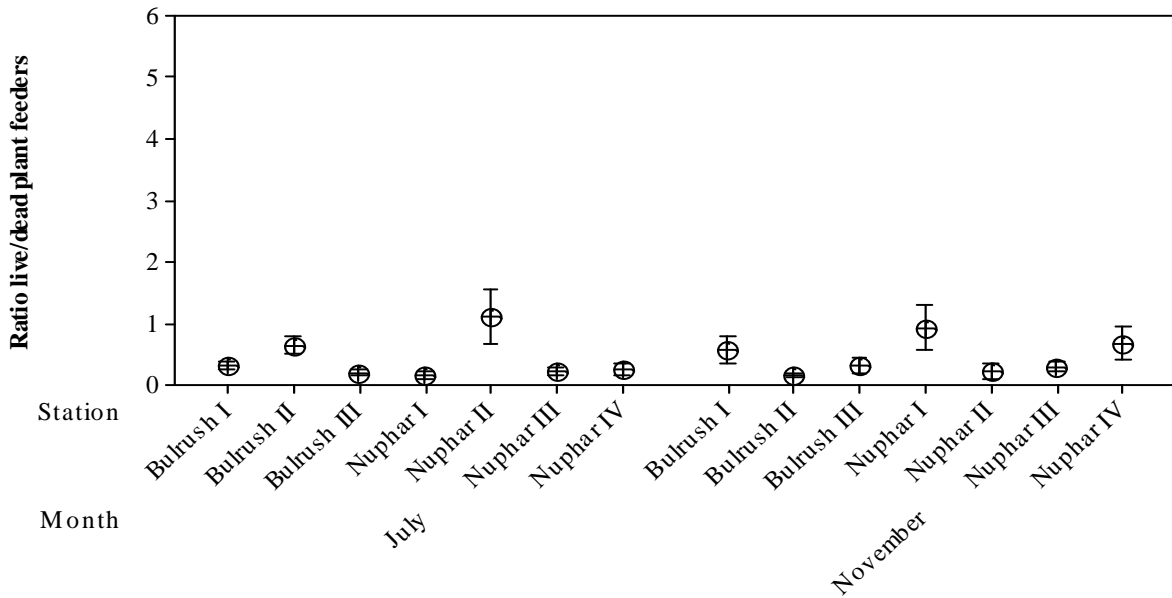
### Production/Respiration Ratio Poinsett

Bars are One Standard Error from the Mean



### Production/Respiration Ratio Monroe

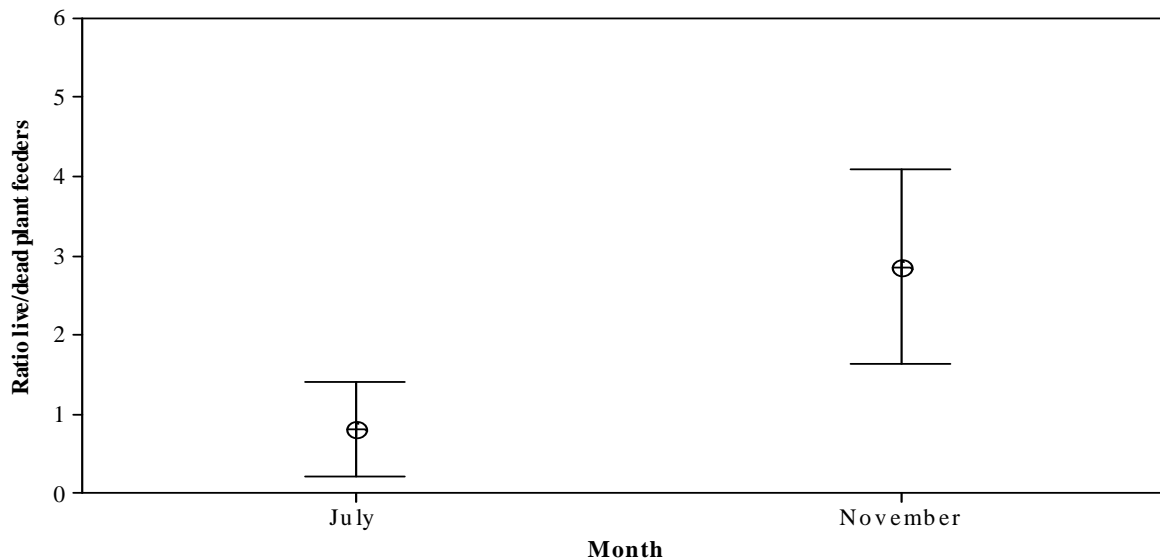
Bars are One Standard Error from the Mean



Appendix 11.C Figure 16. Production/Respiration Ratio surrogate index calculated as ratio of live plant feeders (live plant shredders + scrapers) to detrital plant feeders (detrital shredders + total collectors). N=3 at each station.

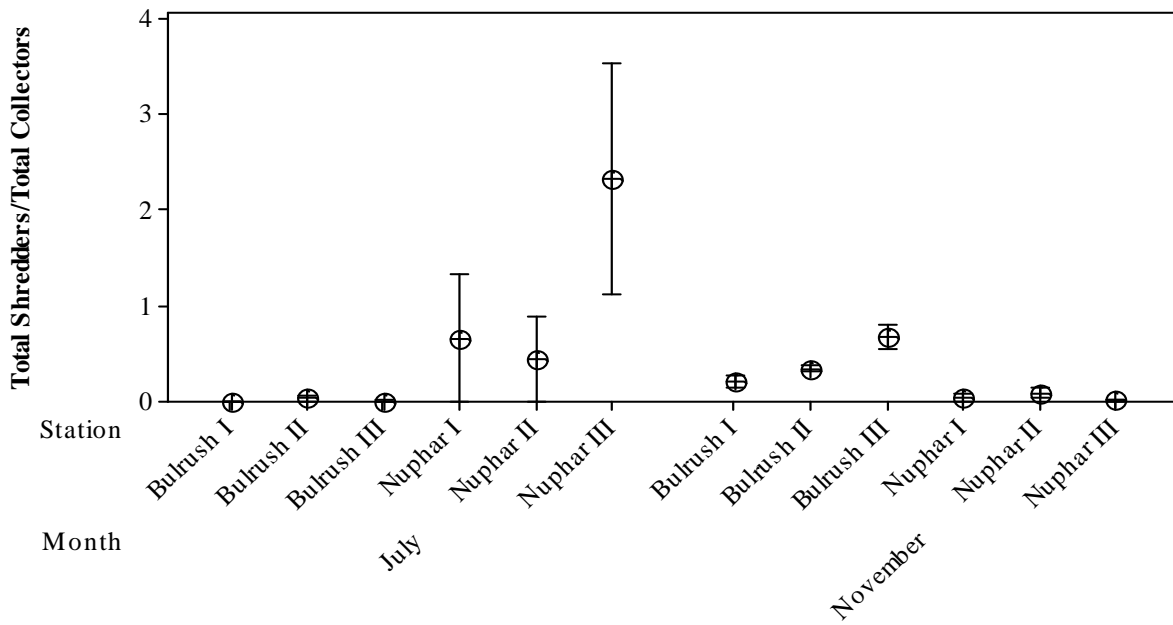


**Production/Respiration Ratio SJR nr Yankee Lake**  
Bars are One Standard Error from the Mean

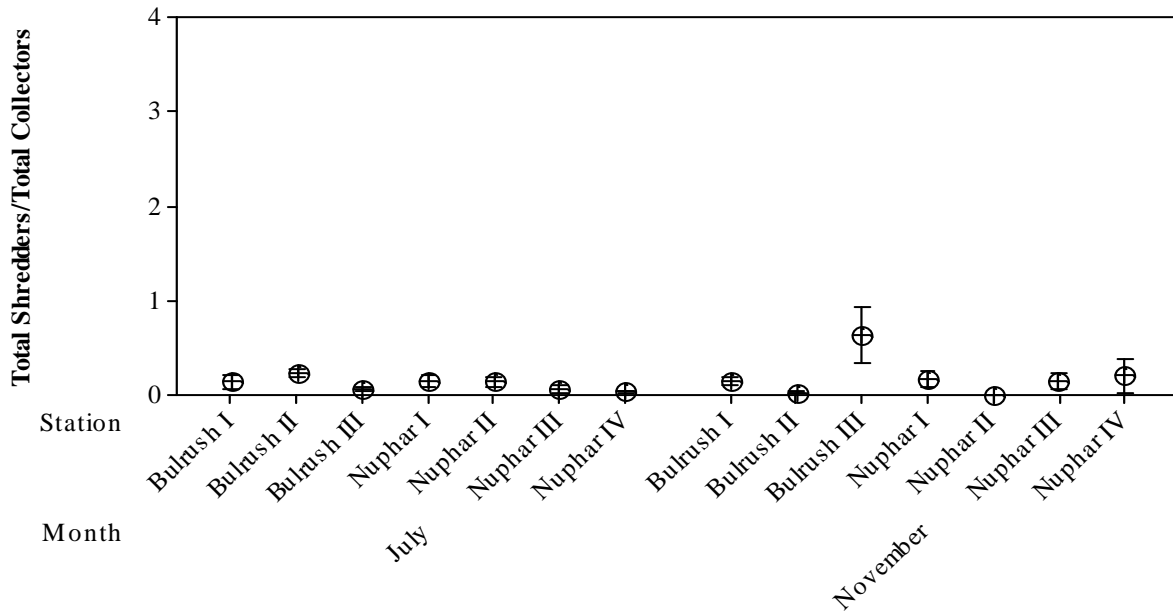


Appendix 11.C Figure 16. Continued.

**CPOM/FPOM Ratio Poinsett**  
 Bars are One Standard Error from the Mean

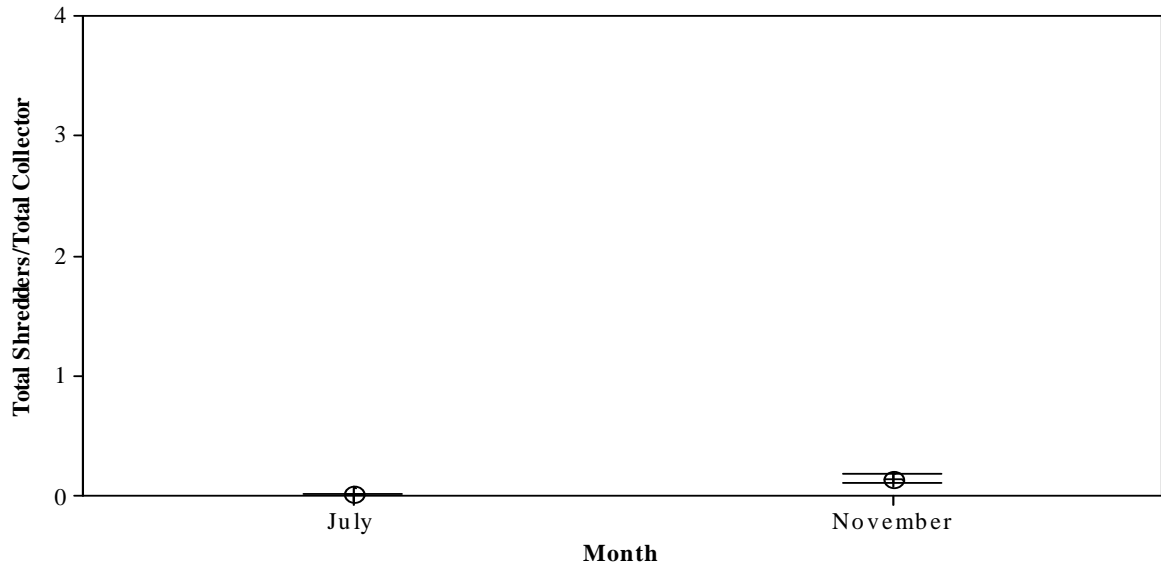


**CPOM/FPOM Ratio Monroe**  
 Bars are One Standard Error from the Mean



Appendix 11.C Figure 17. CPOM/FPOM Ratio surrogate index calculated as ratio of shredders to total collectors. N=3 at each station.

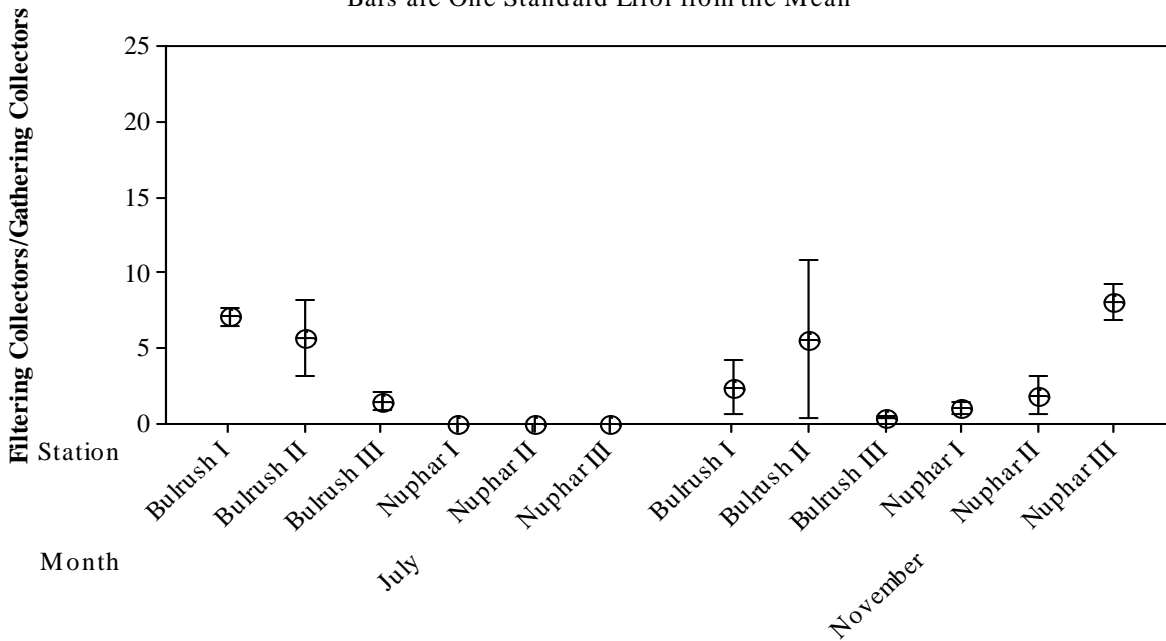
**CPOM/FPOM Ratio SJR nr Yankee Lake**  
Bars are One Standard Error from the Mean



Appendix 11.C Figure 17. Continued.

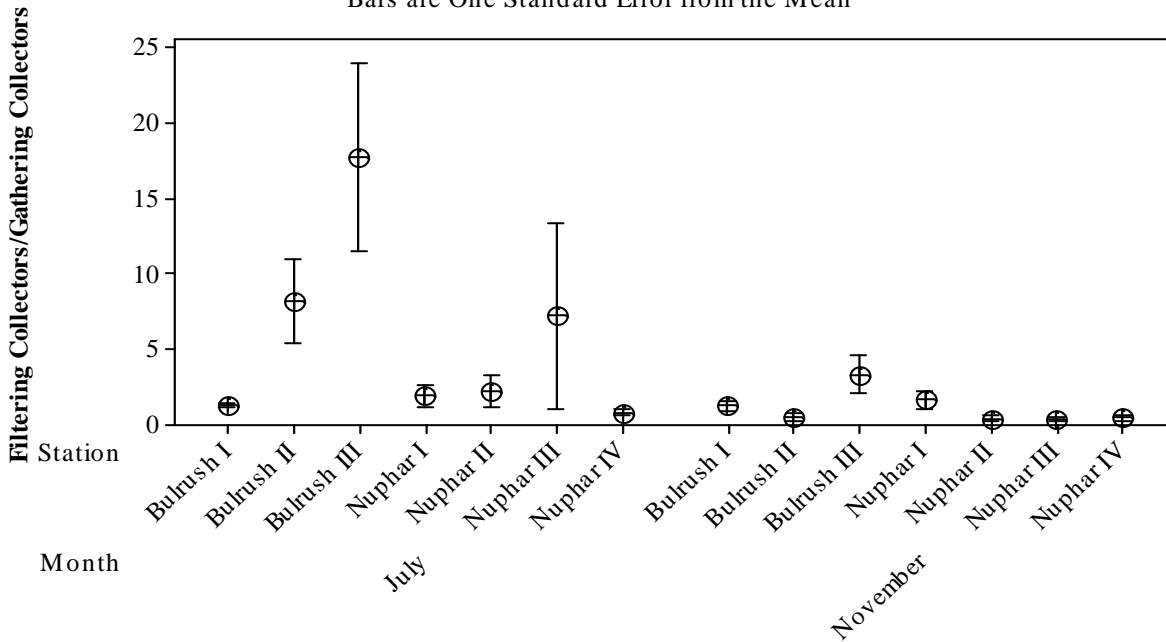
### SPOM/BPOM Ratio Poinsett

Bars are One Standard Error from the Mean



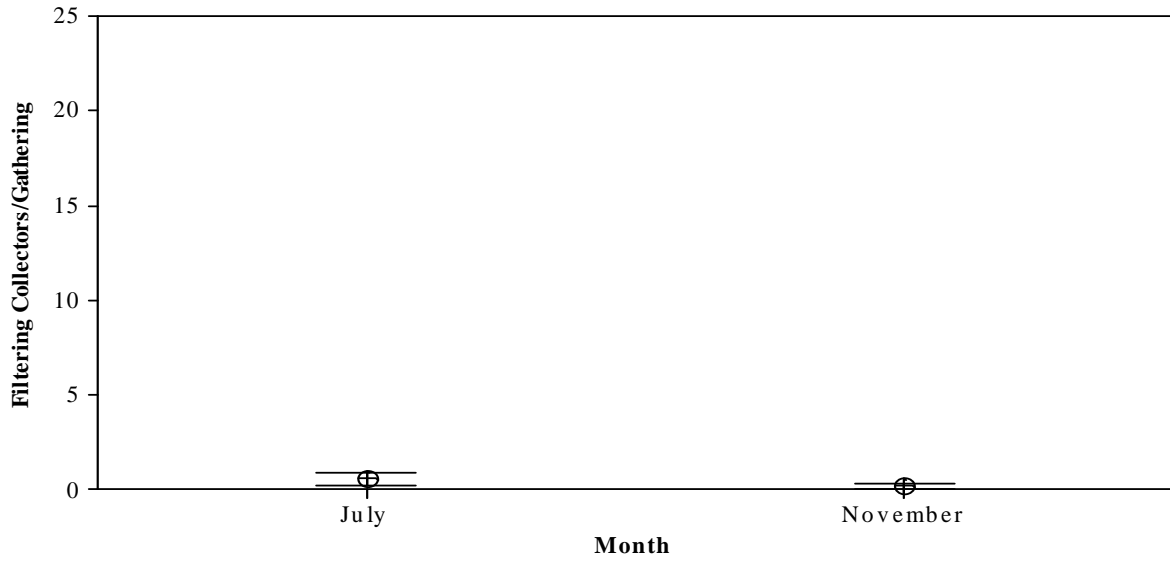
### SPOM/BPOM Ratio Monroe

Bars are One Standard Error from the Mean



Appendix 11.C Figure 18. SPOM/BPOM Ratio surrogate index calculated as ratio of filtering to gathering collectors. N=3 at each station.

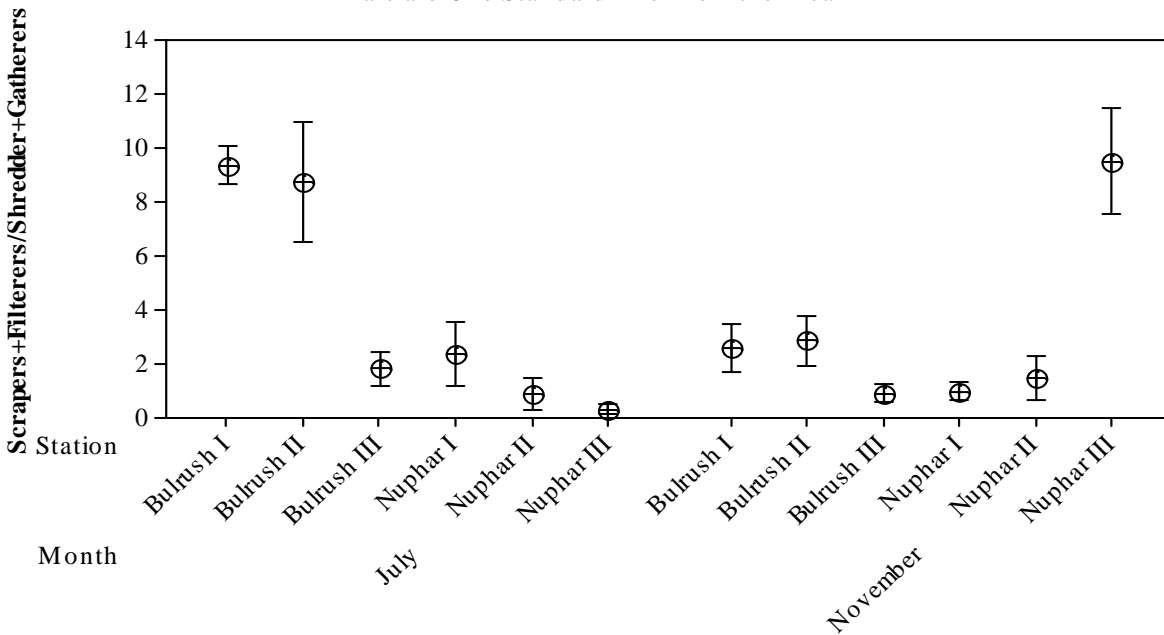
**SPOM/BPOM Ratio SJR nr Yankee Lake**  
Bars are One Standard Error from the Mean



Appendix 11.C Figure 18. Continued.

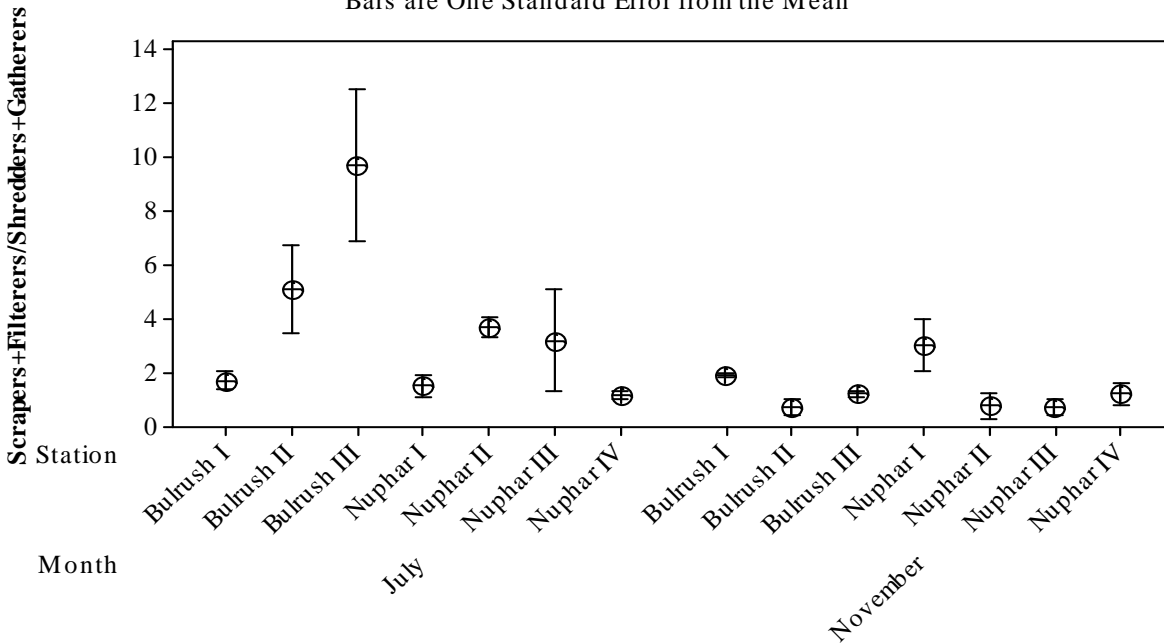
### Habitat Stability Index I Poinsett

Bars are One Standard Error from the Mean



### Habitat Stability Index I Monroe

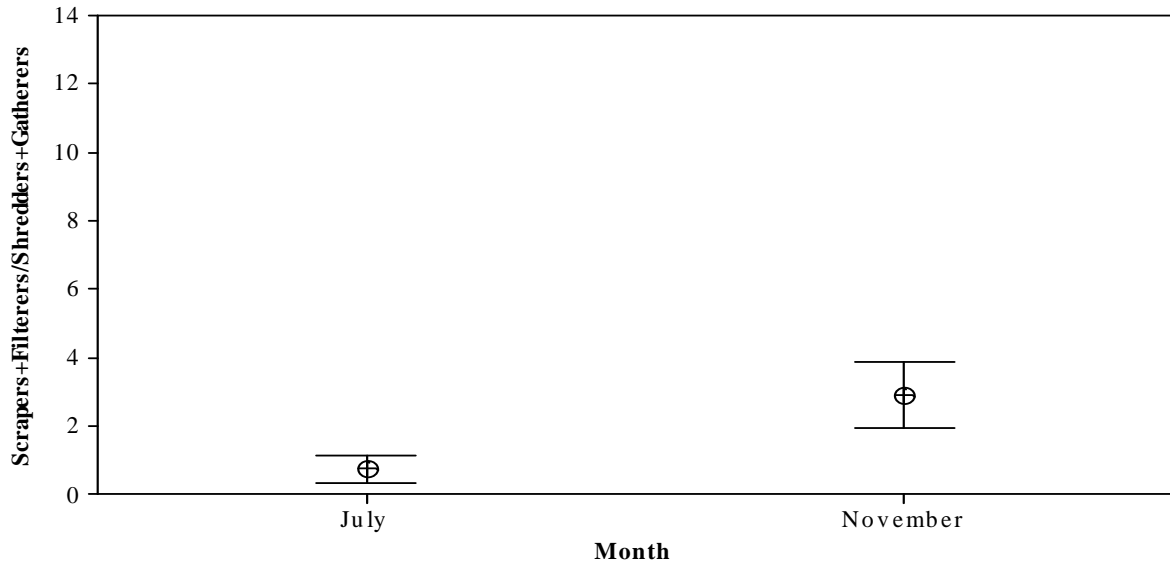
Bars are One Standard Error from the Mean



Appendix 11.C Figure 19. Habitat Stability Index I calculated as the ratio of scrapers+filtering collectors (“filterers” on graph) to shredders+gathering collectors (“gatherers” on graph). N=3 at each station.

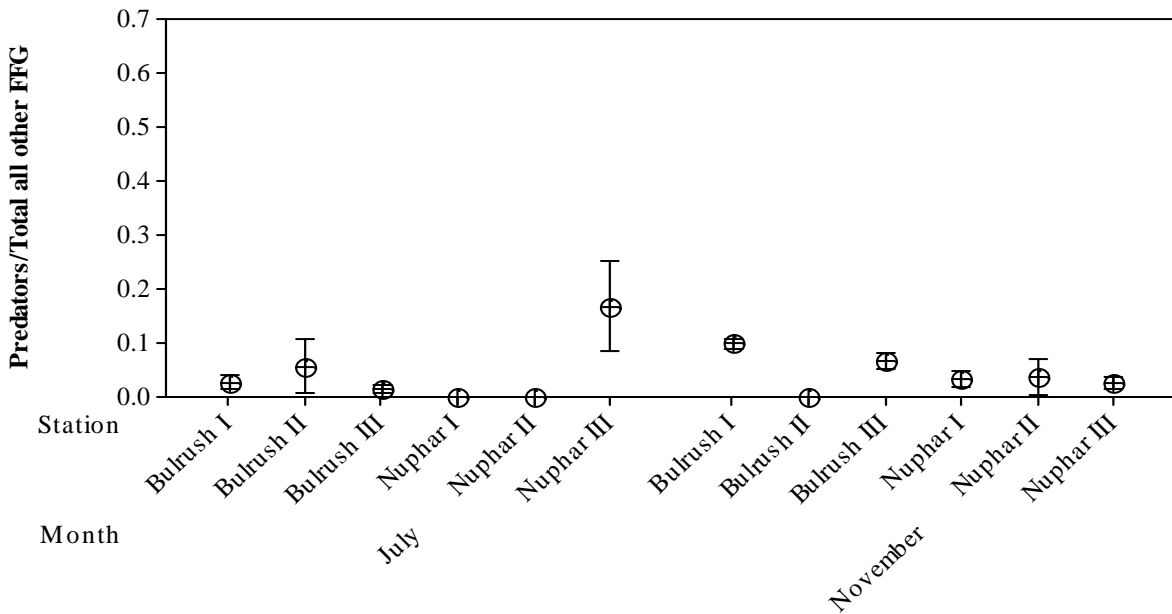
### Habitat Stability Index I SJR nr Yankee Lake

Bars are One Standard Error from the Mean

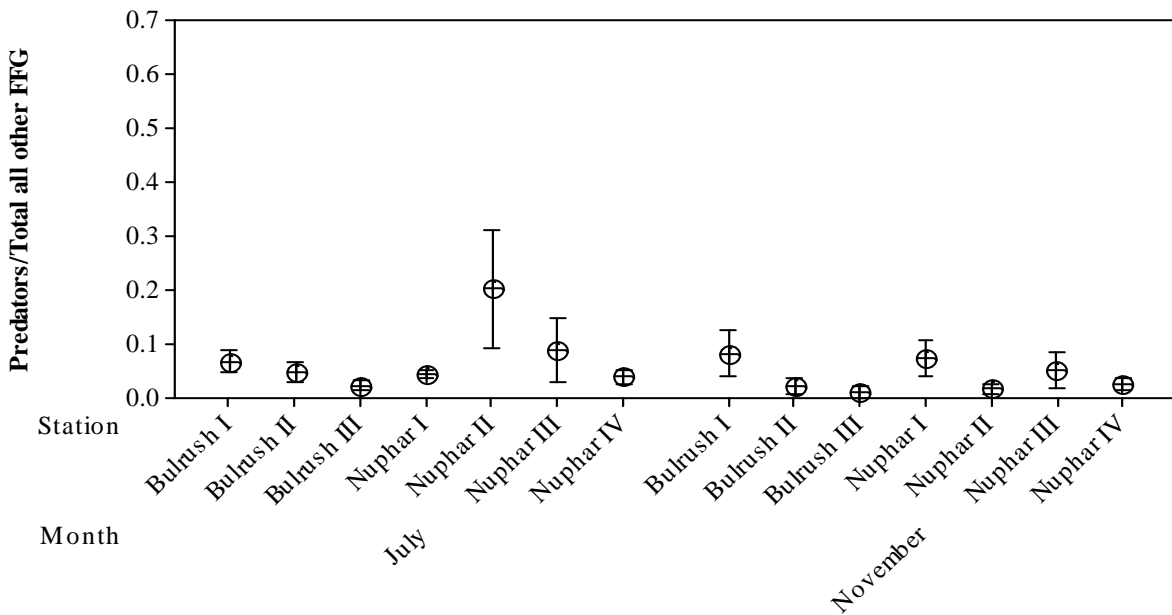


Appendix 11.C Figure 19. Continued.

**Top Down Control Ratio Poinsett**  
 Bars are One Standard Error from the Mean



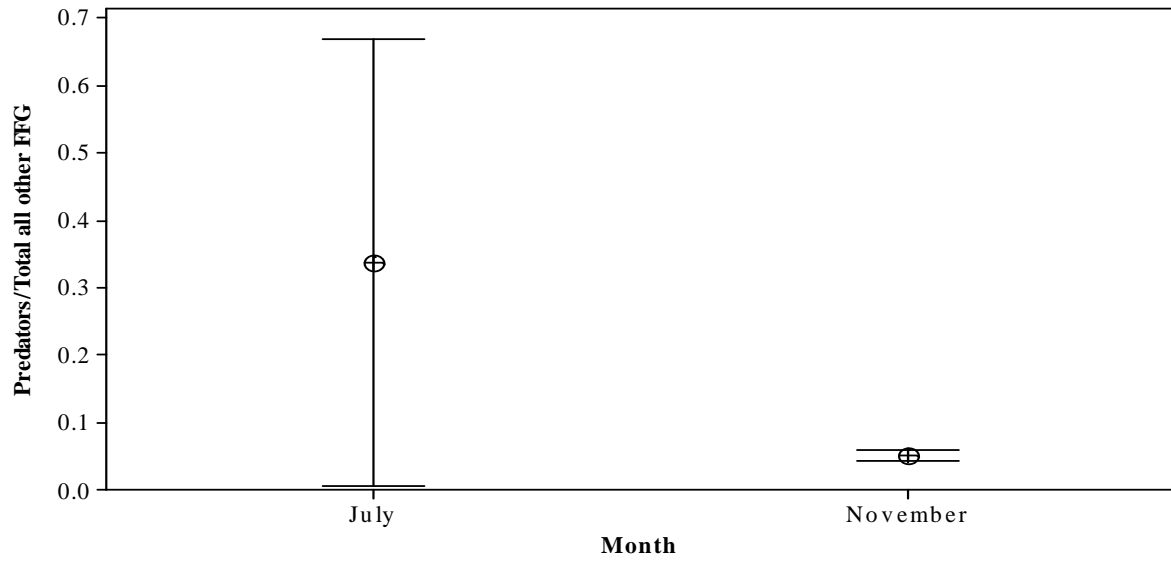
**Top Down Control Ratio Monroe**  
 Bars are One Standard Error from the Mean



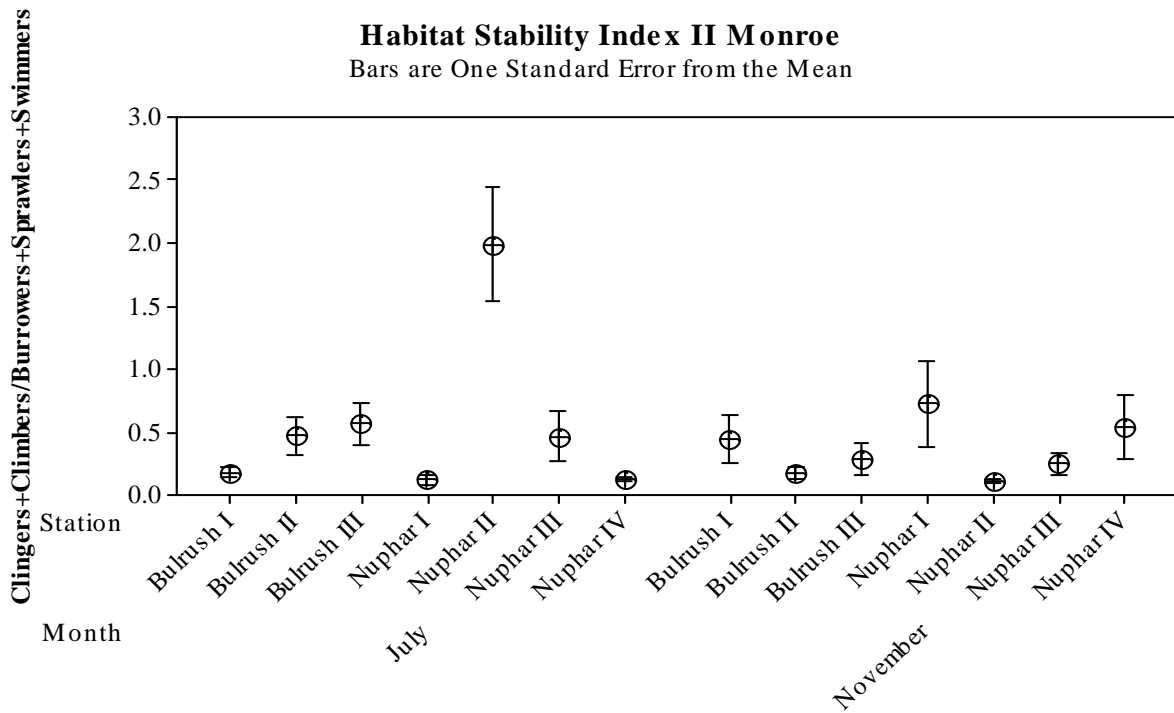
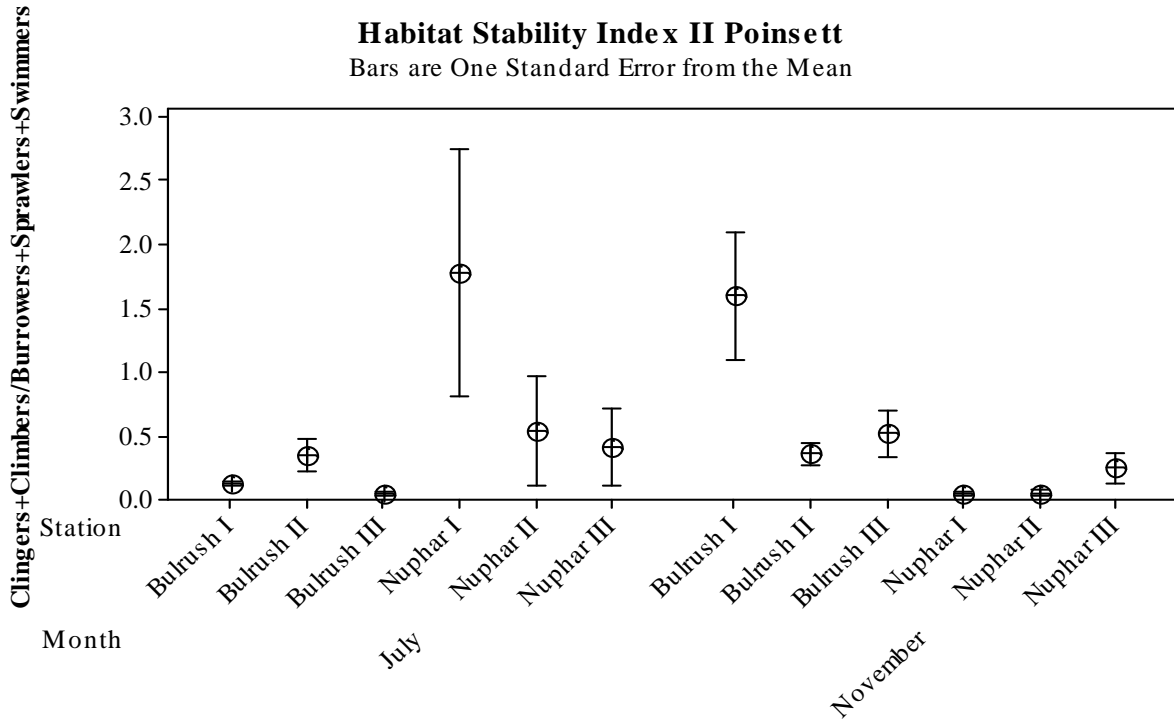
Appendix 11.C Figure 20. Top Down Control index calculated as the ratio of Predators to Total all other FFGs. N=3 at each station.



**Top Down Control Ratio SJR nr Yankee Lake**  
Bars are One Standard Error from the Mean



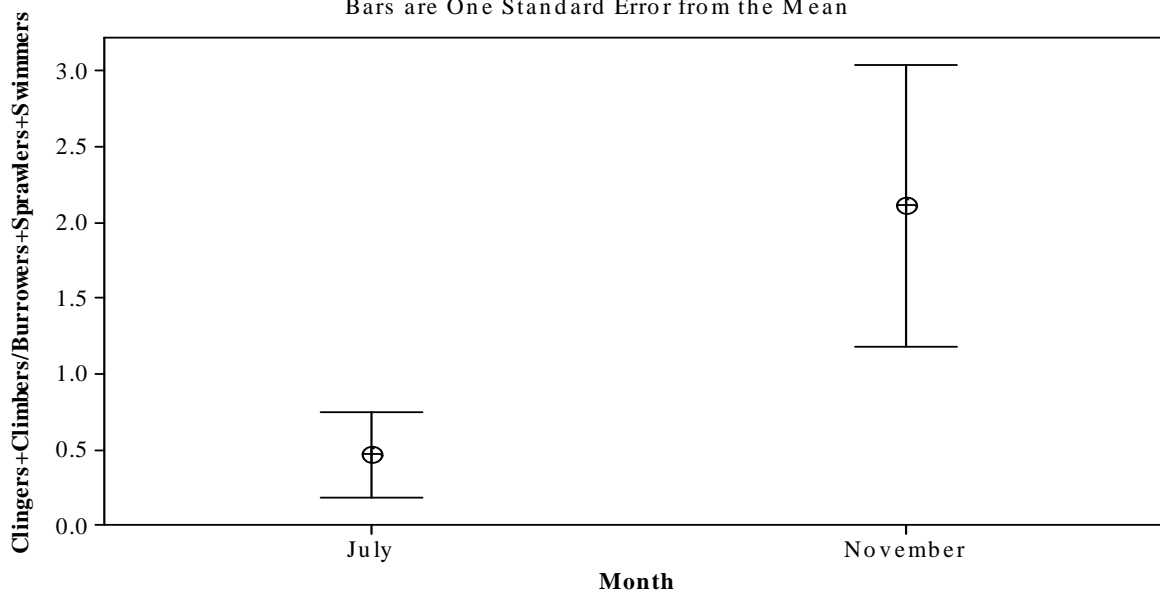
Appendix 11.C Figure 20. Continued.



Appendix 11.C Figure 21. Habitat Stability II Index calculated as ratio of Clingers+Climbers to Burrowers+Sprawlers+Swimmers. N=3 at each station.

### Habitat Stability Index II SJR nr Yankee Lake

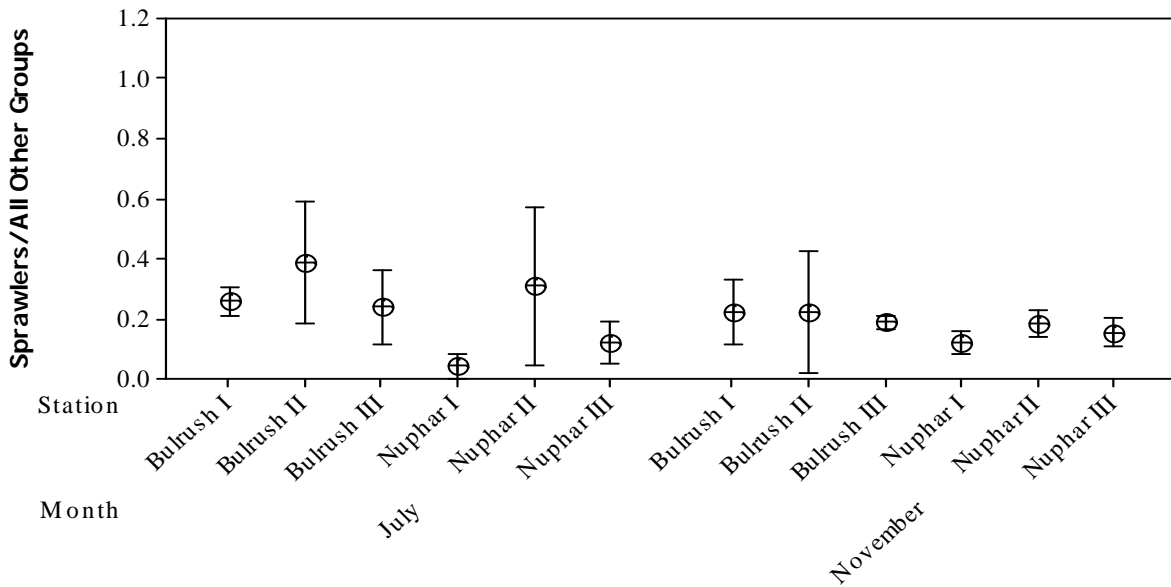
Bars are One Standard Error from the Mean



Appendix 11.C Figure 21. Continued.

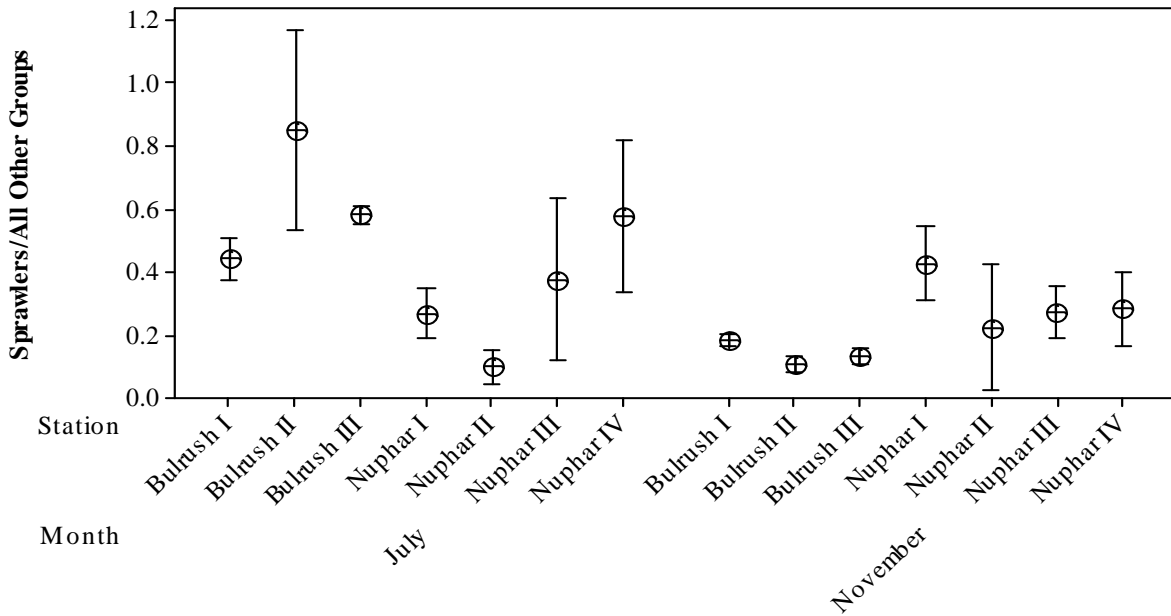
### Benthic Food Availability Index Poinsett

Bars are One Standard Error from the Mean



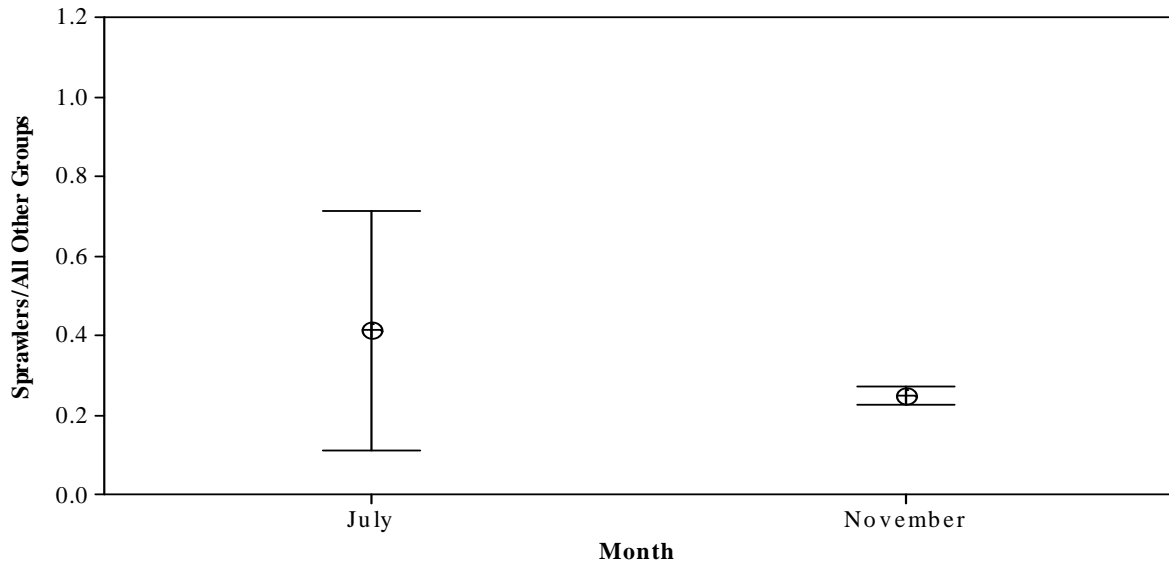
### Benthic Food Availability Index Monroe

Bars are One Standard Error from the Mean



Appendix 11.C Figure 22. Benthic Food Availability Index calculated as the ratio of sprawlers to all other life habit groups (clingers+climbers+burrowers+swimmers). N=3 at each station.

**Benthic Food Availability Index SJR nr Yankee Lake**  
Bars are One Standard Error from the Mean



Appendix 11.C Figure 22. Continued.