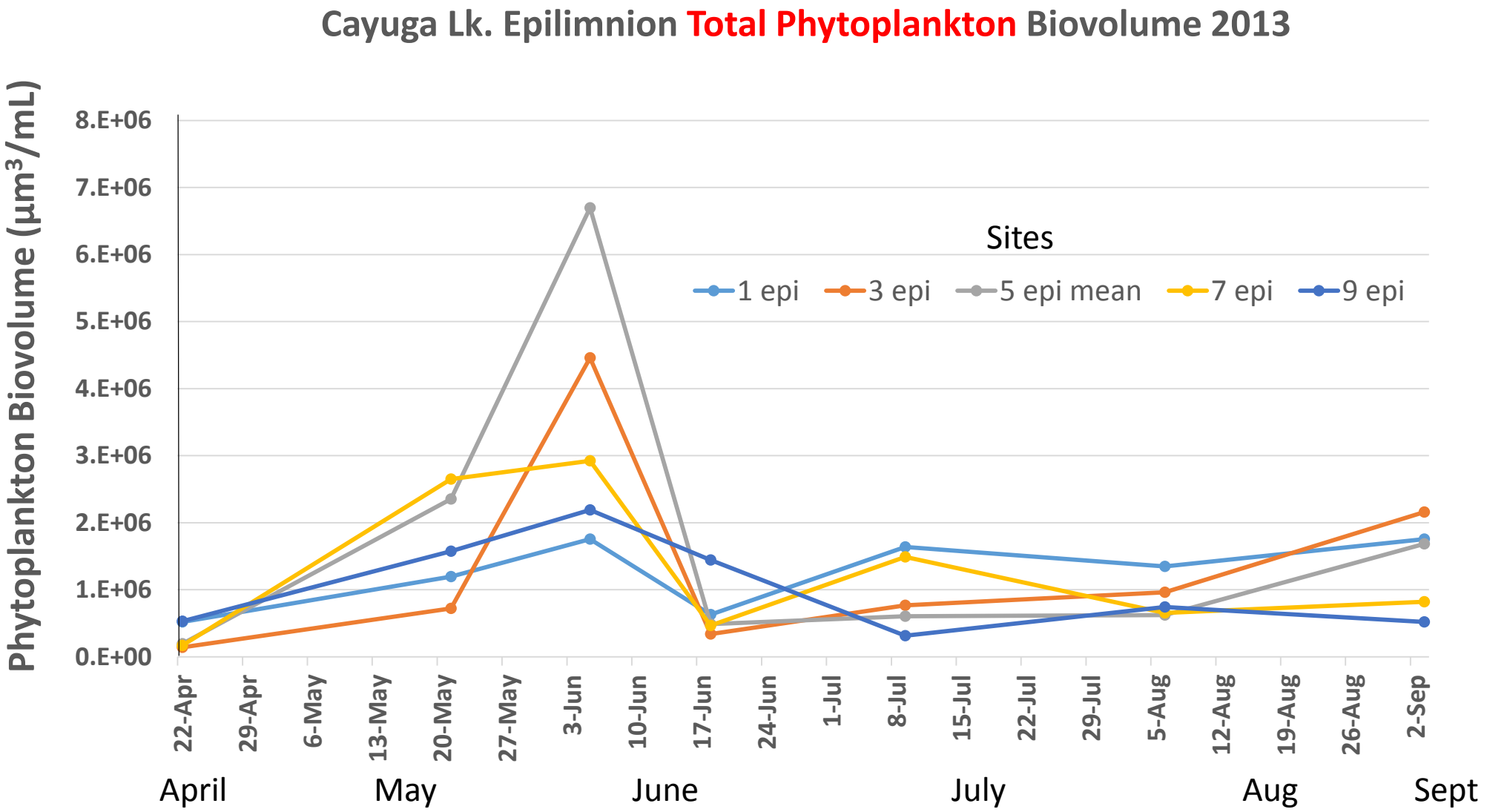
# Cayuga Lake Plankton 2013

**Nelson Hairston**

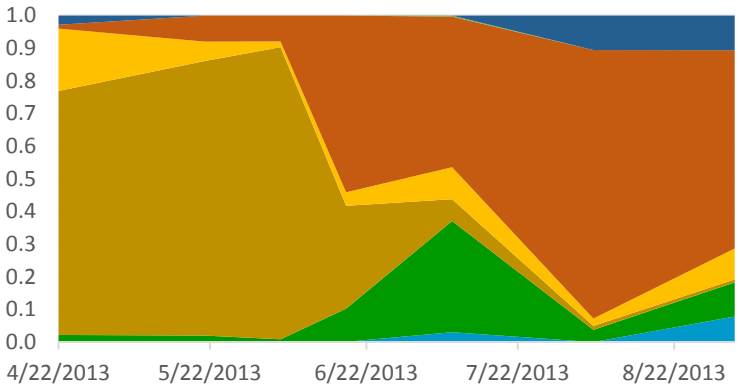
*phytoplankton counts:*
William Schaffner, PhD
Rachel Abbott, BS (PhD student)

*zooplankton counts:*
Lindsay Schaffner, BS (MS student)

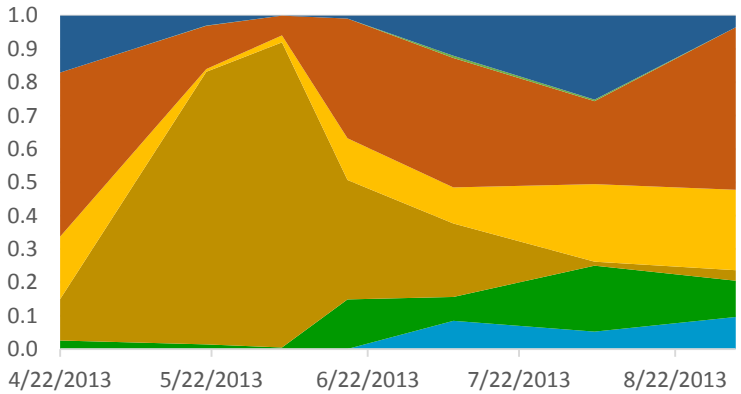

Cayuga Lk. Epilimnion Total Phytoplankton Biovolume 2013
Phytoplankton Biovolume (µm³/mL)
8.E+06
7.E+06
6.E+06
5.E+06
4.E+06
3.E+06
2.E+06
1.E+06
0.E+00
Sites
1 epi
3 epi
5 epi mean
7 epi
9 epi
22-Apr
29-Apr
6-May
13-May
20-May
27-May
3-Jun
10-Jun
17-Jun
24-Jun
1-Jul
8-Jul
15-Jul
22-Jul
29-Jul
5-Aug
12-Aug
19-Aug
26-Aug
2-Sep
April
May
June
July
Aug
Sept

# Cayuga Lake Phytoplankton Epilimnion 2013 % Biomass Composition

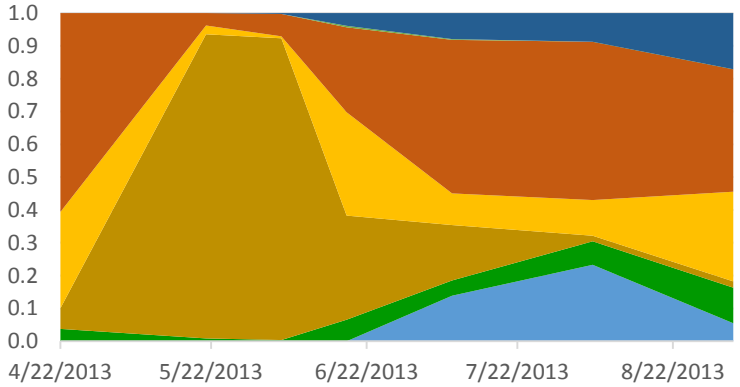
Cayuga Lake 2013 Phytoplankton composition - Site 1 epilimnion



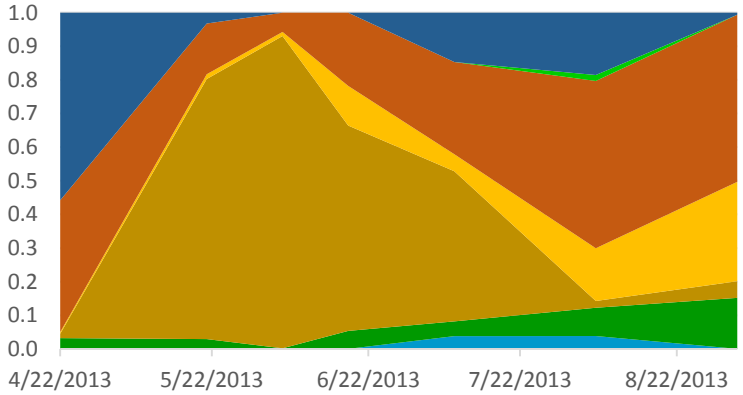

Cayuga Lake 2013 Phytoplankton composition - Site 5 epilimnion



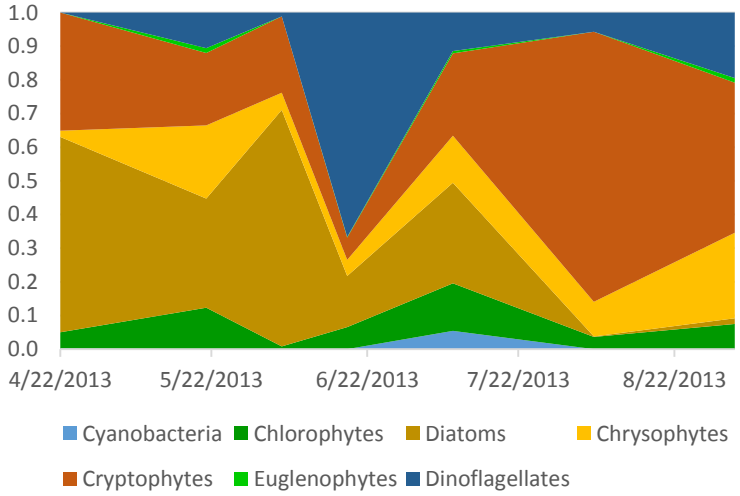

Cayuga Lake 2013 Phytoplankton composition - Site 3 epilimnion




Cayuga Lake 2013 Phytoplankton composition - Site 7 epilimnion




Cayuga Lake 2013 Phytoplankton composition - Site 9 epilimnion



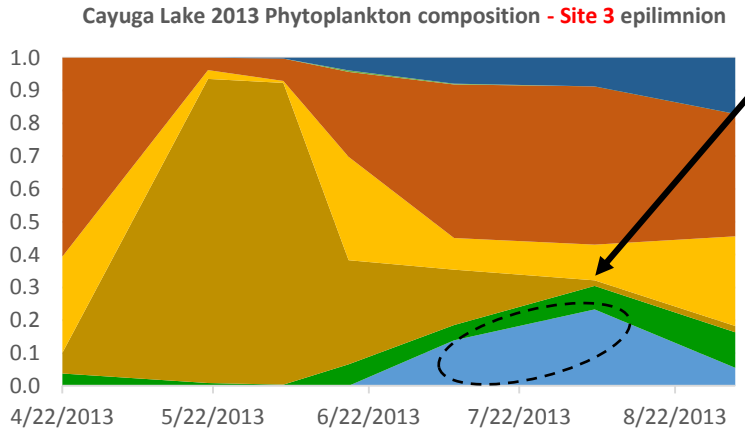
# Phytoplankton Observations:

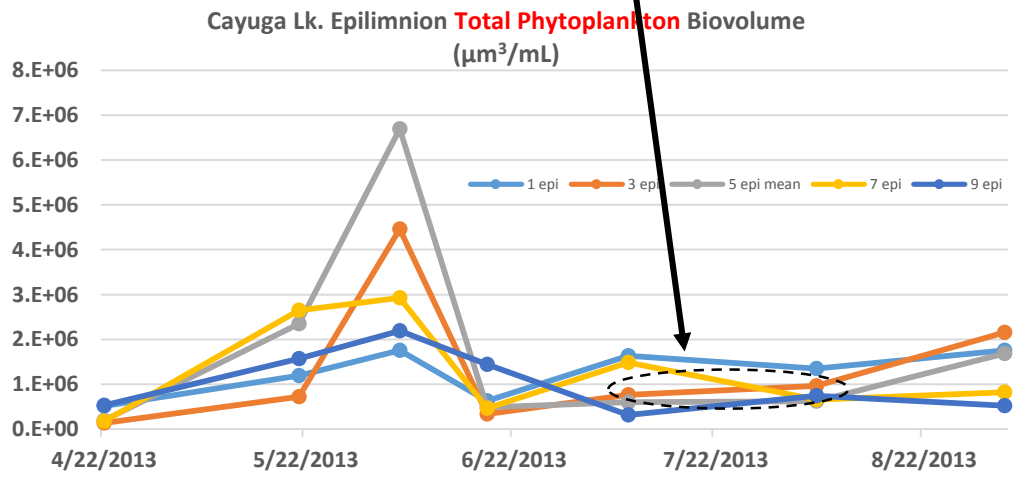
**Seasonal patterns are very similar at all sites**

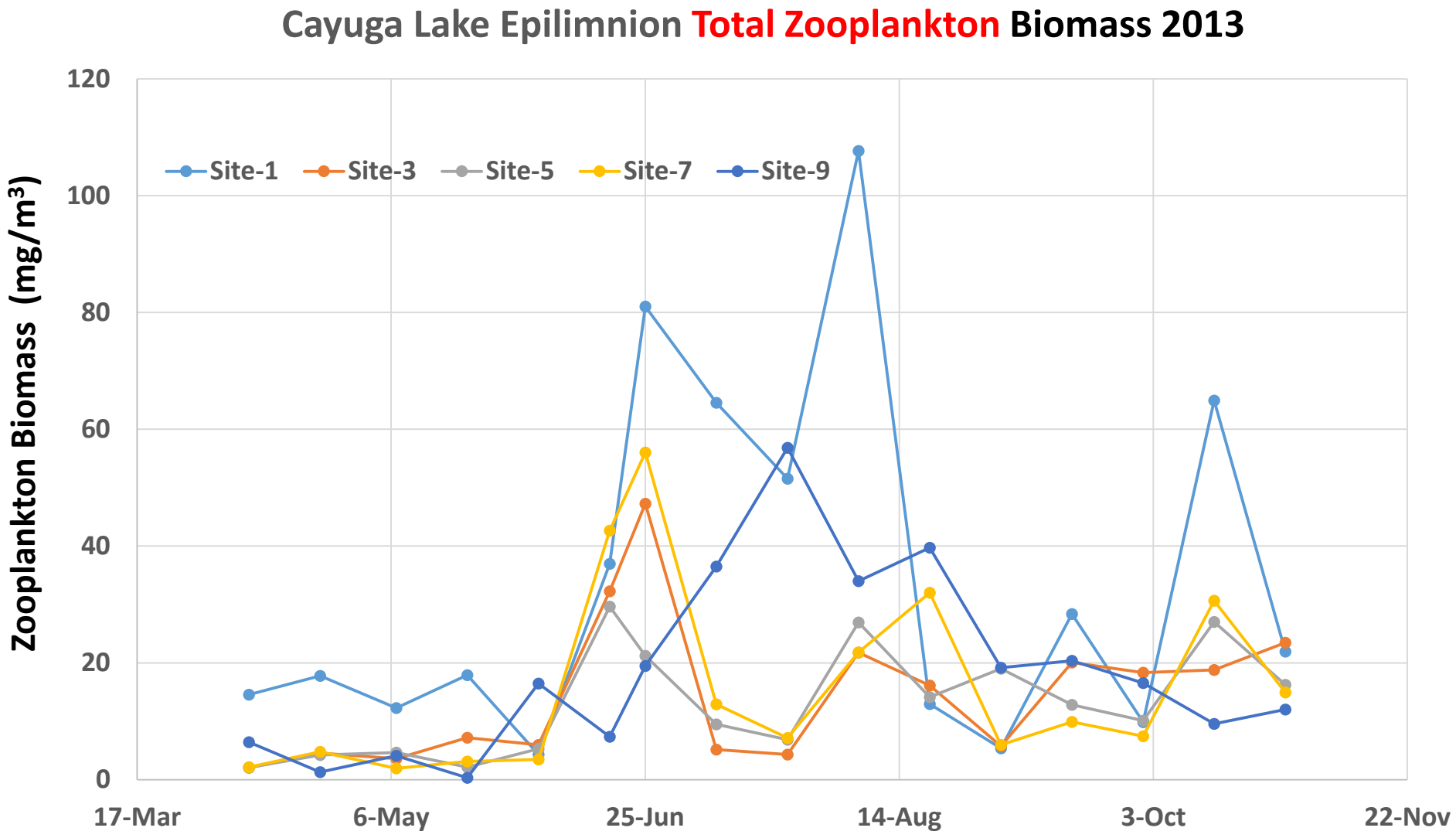
**Diatom bloom in spring (maximum in June, starts earlier at N and S shallow sites), followed by mixed assemblage of Greens, Chyrsophytes and Cryptophytes**

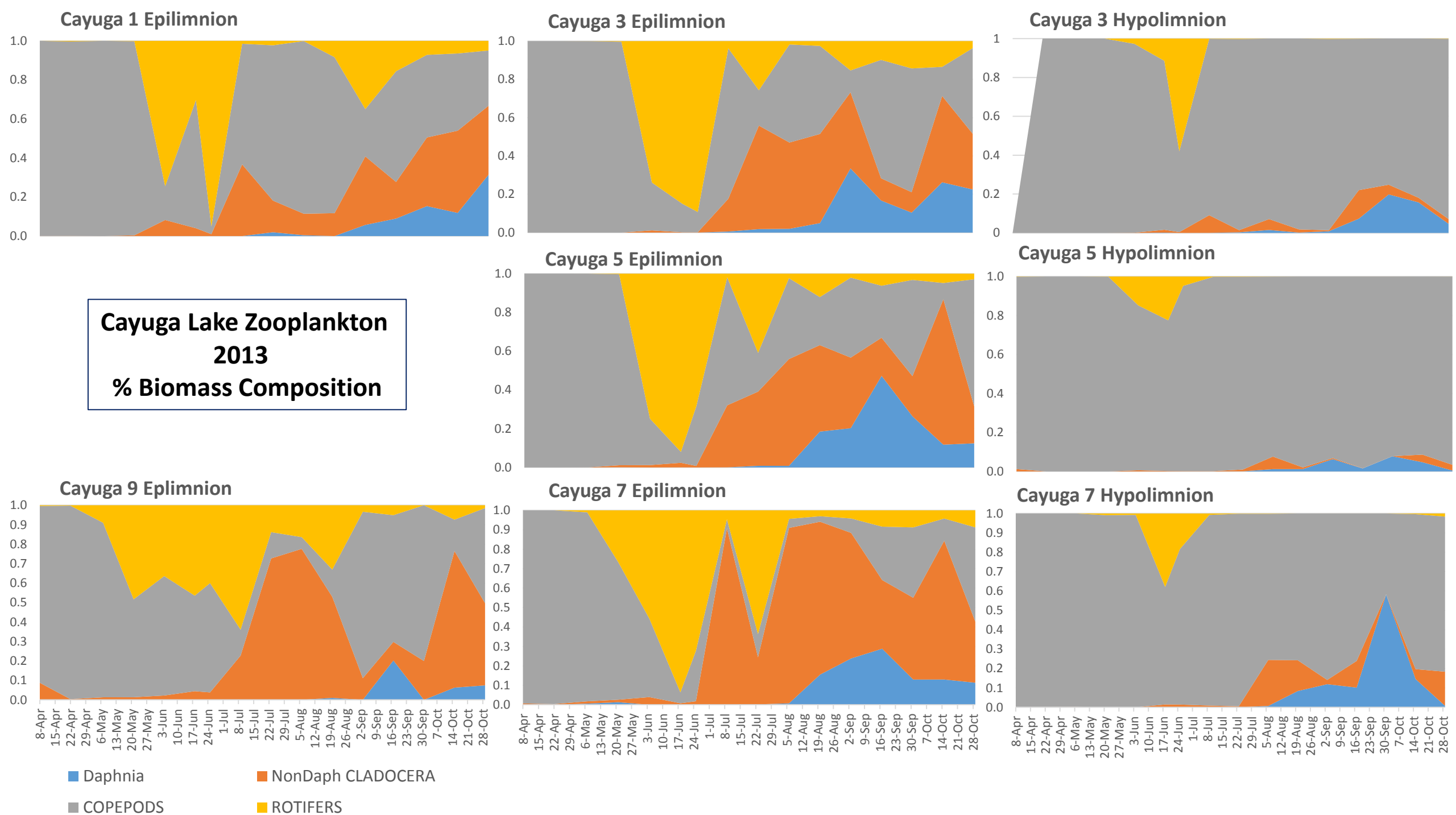
**Cyanobacteria ("blue-greens") are present in July and August, but only at Site-3**

**do they make up a marked fraction (max 20%) of total biovolume, and that is at a time of low phytopl. abundance.**



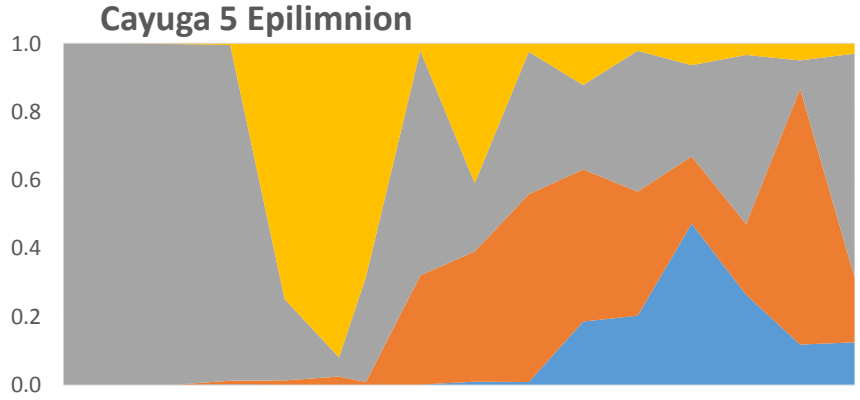

Cayuga Lake Epilimnion Total Zooplankton Biomass 2013
Zooplankton Biomass (mg/m³)
120
100
80
60
40
20
0
Site-1
Site-3
Site-5
Site-7
Site-9
17-Mar
6-May
25-Jun
14-Aug
3-Oct
22-Nov


Cayuga 1 Epilimnion
Cayuga 3 Epilimnion
Cayuga 3 Hypolimnion
Cayuga 5 Epilimnion
Cayuga 5 Hypolimnion
Cayuga Lake Zooplankton
2013
% Biomass Composition
Cayuga 9 Eplimnion
Cayuga 7 Epilimnion
Cayuga 7 Hypolimnion
Daphnia
NonDaph CLADOCERA
COPEPODS
ROTIFERS

# Zooplankton Observations:

**Seasonal patterns of Total Zooplankton Biomass are similar at deep-water sites (3, 5, 7), and similar at shallow-water sites (1, 9), but diffent between shallow and deep.**

**Greater biomass shallow than deep**
**Maximum in June at deep sites, but July at shallow sites**

***Daphnia* is scarce. Species present (*D. retrocurva)* is small in body size, occurs late in season (Aug – Sept): Does not cause a clear-water phase.**

**Zooplankton biomass is dominated by copepods > rotifers > non-*Daphnia* cladocerans > *Daphnia***