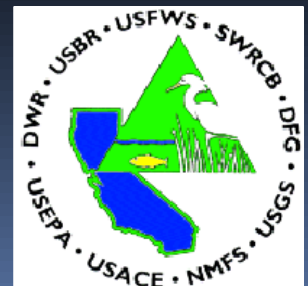


More big bass: Understanding the role of largemouth bass as top predators in the littoral zone

J. Louise Conrad, Kelly L. Weinersmith, Matthew J. Young, Denise de Carion, Erin Hestir, Maria Santos, Patrick Crain, Susan Ustin, Peter B. Moyle, Andrew Sih



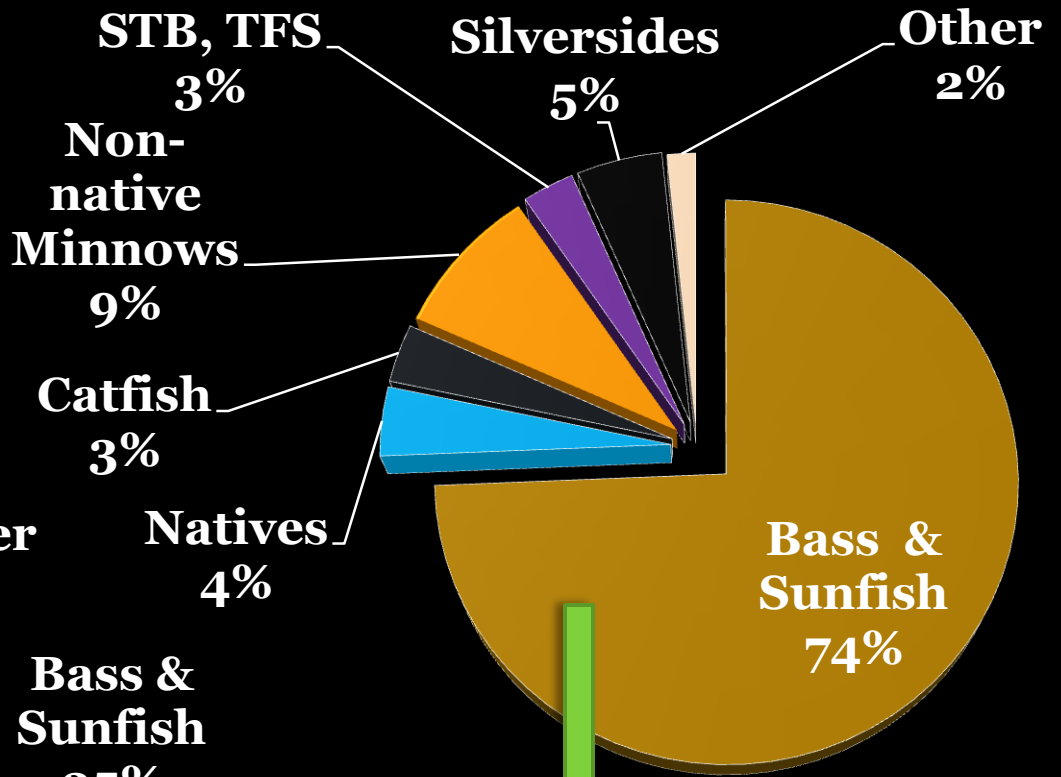
Delta Science Council Conference
Sacramento, California
September 2010



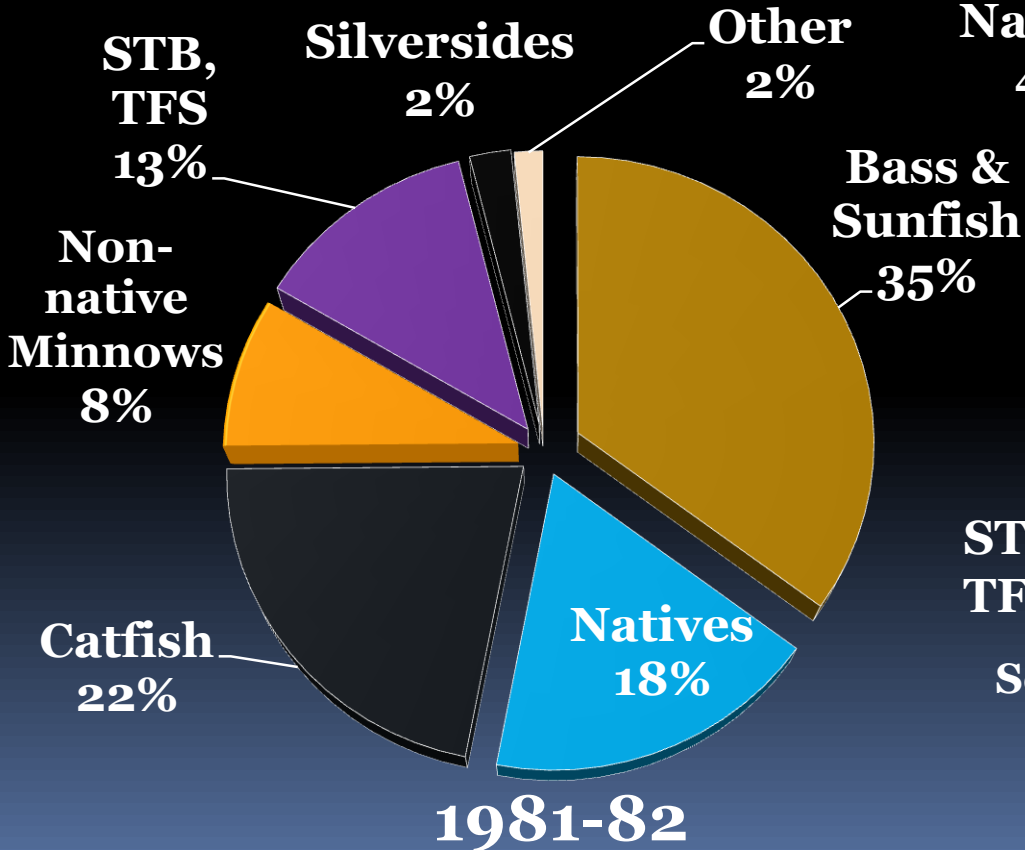
Changes in the Delta shoreline



Rise of Centrarchids



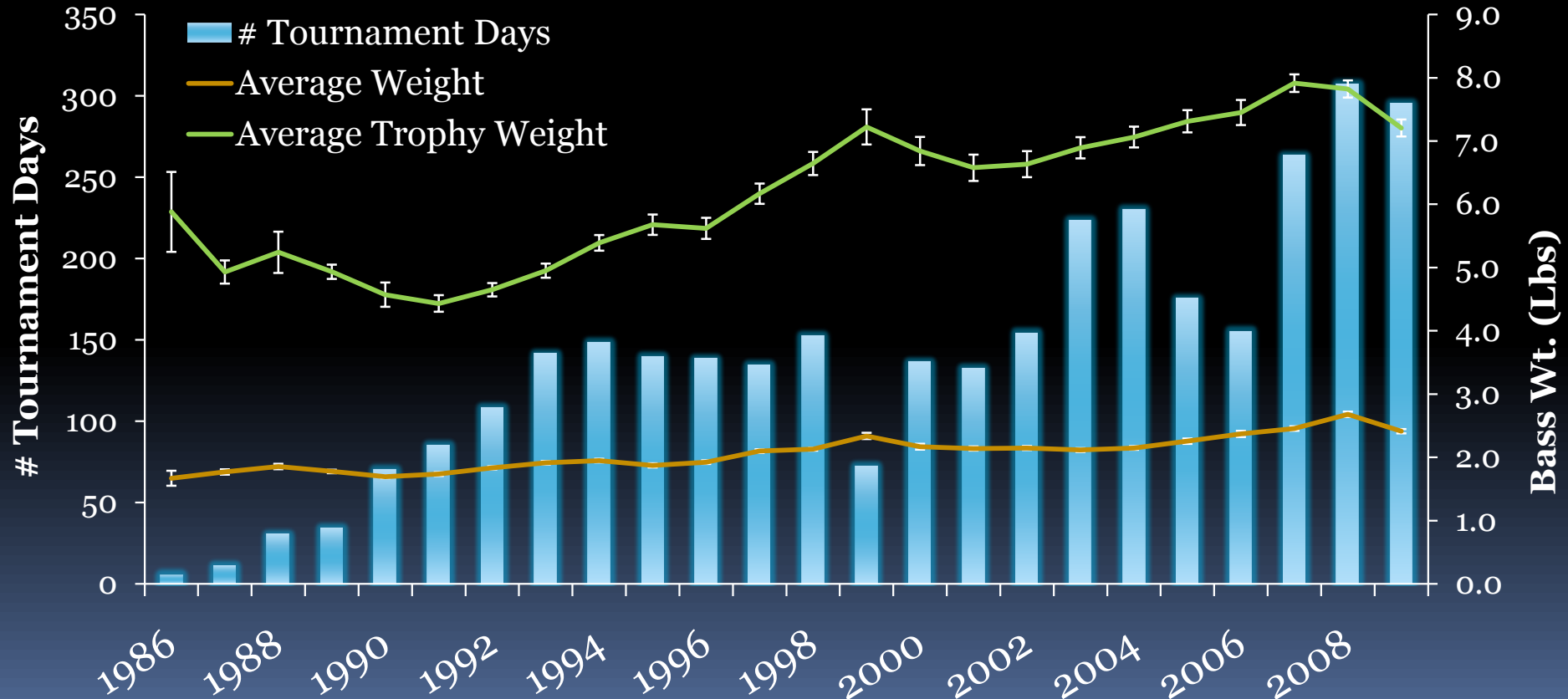
35% LMB **2009-10**



STB = Striped bass
TFS = Threadfin shad

Source: CDFG Resident Fish Survey ('81-'82). UC Davis Study ('09-'10). Catch for months of February, April, June, August.

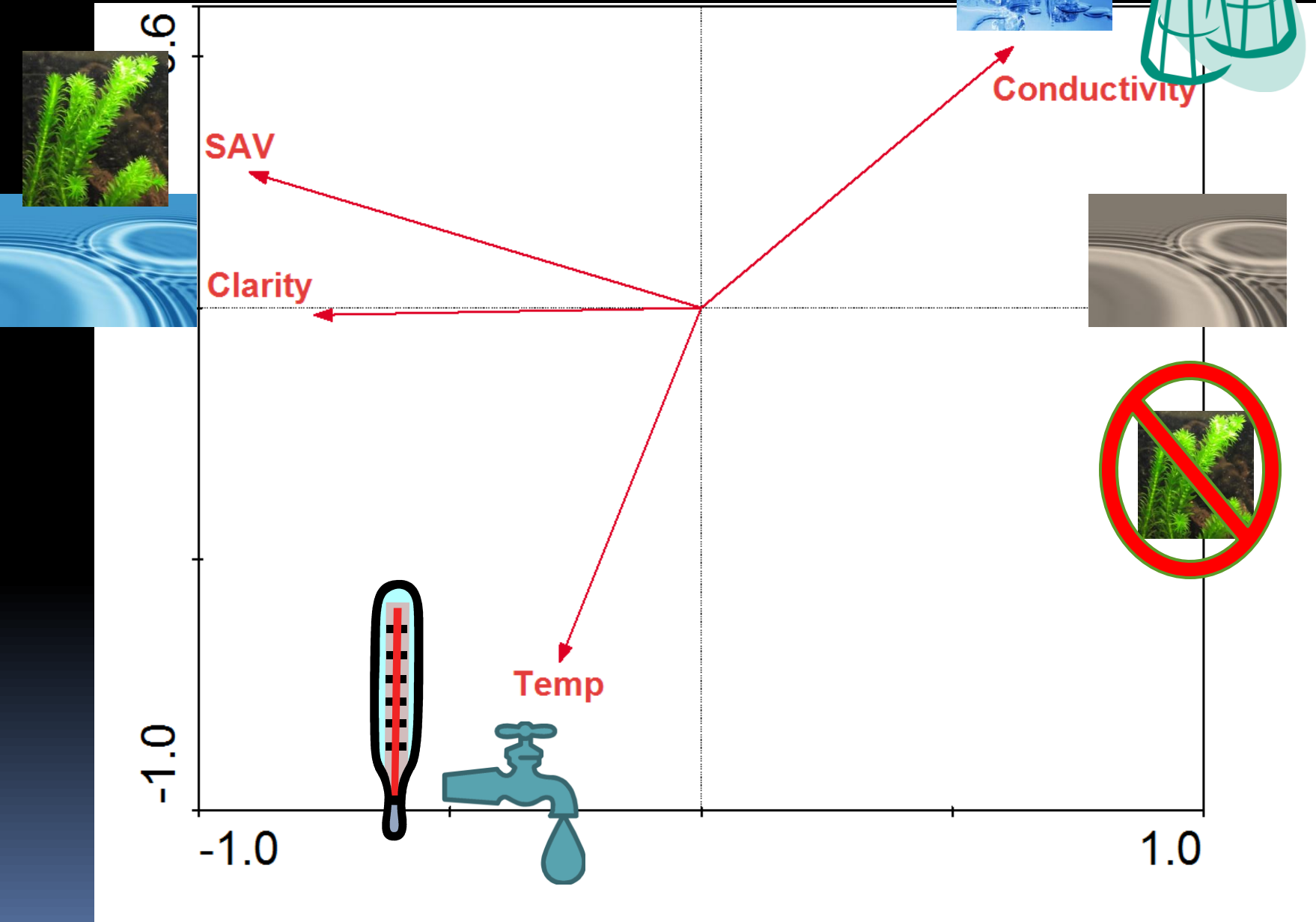
More BIG bass....



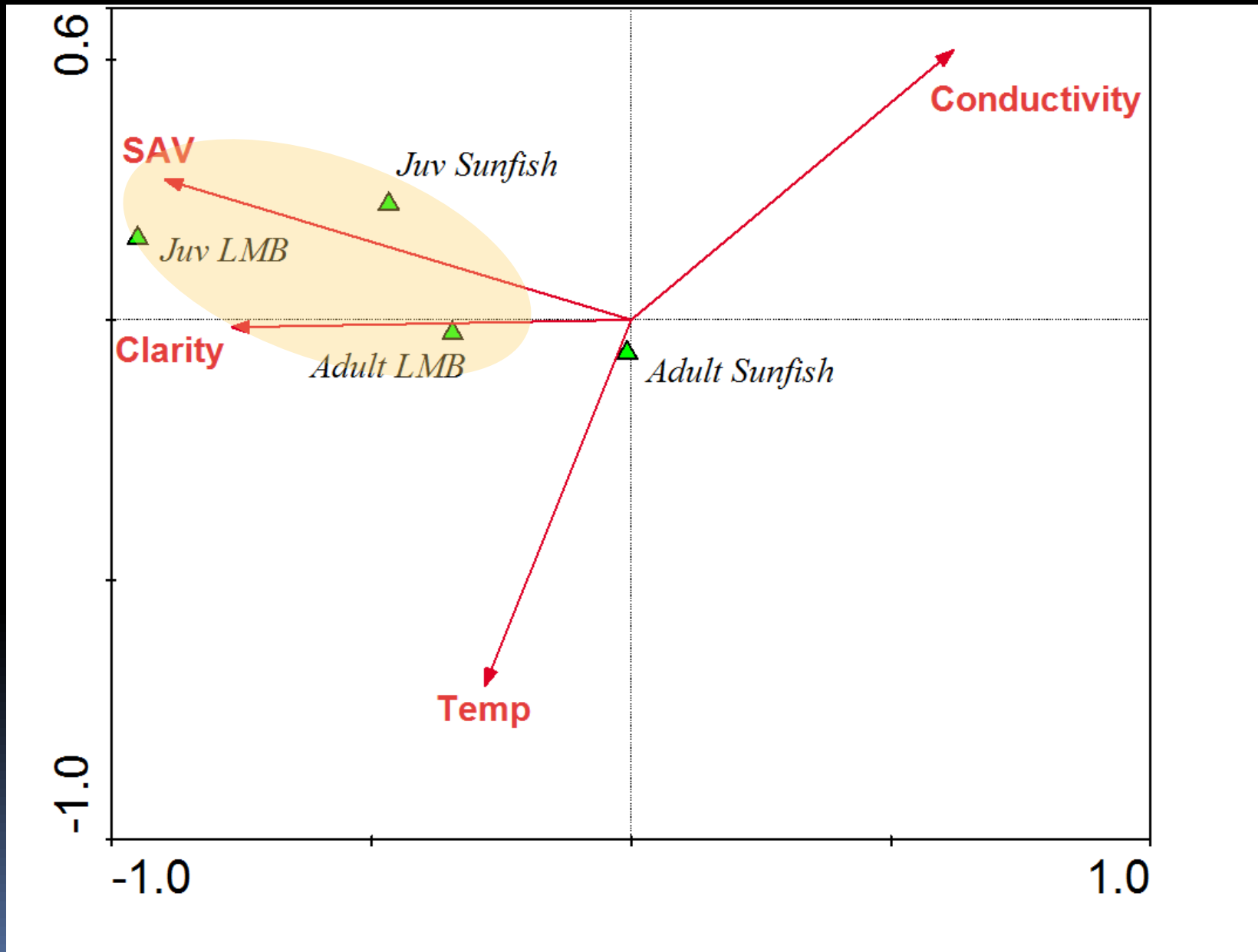
Bimonthly fish, vegetation & WQ surveys at 33 sites since October 2008



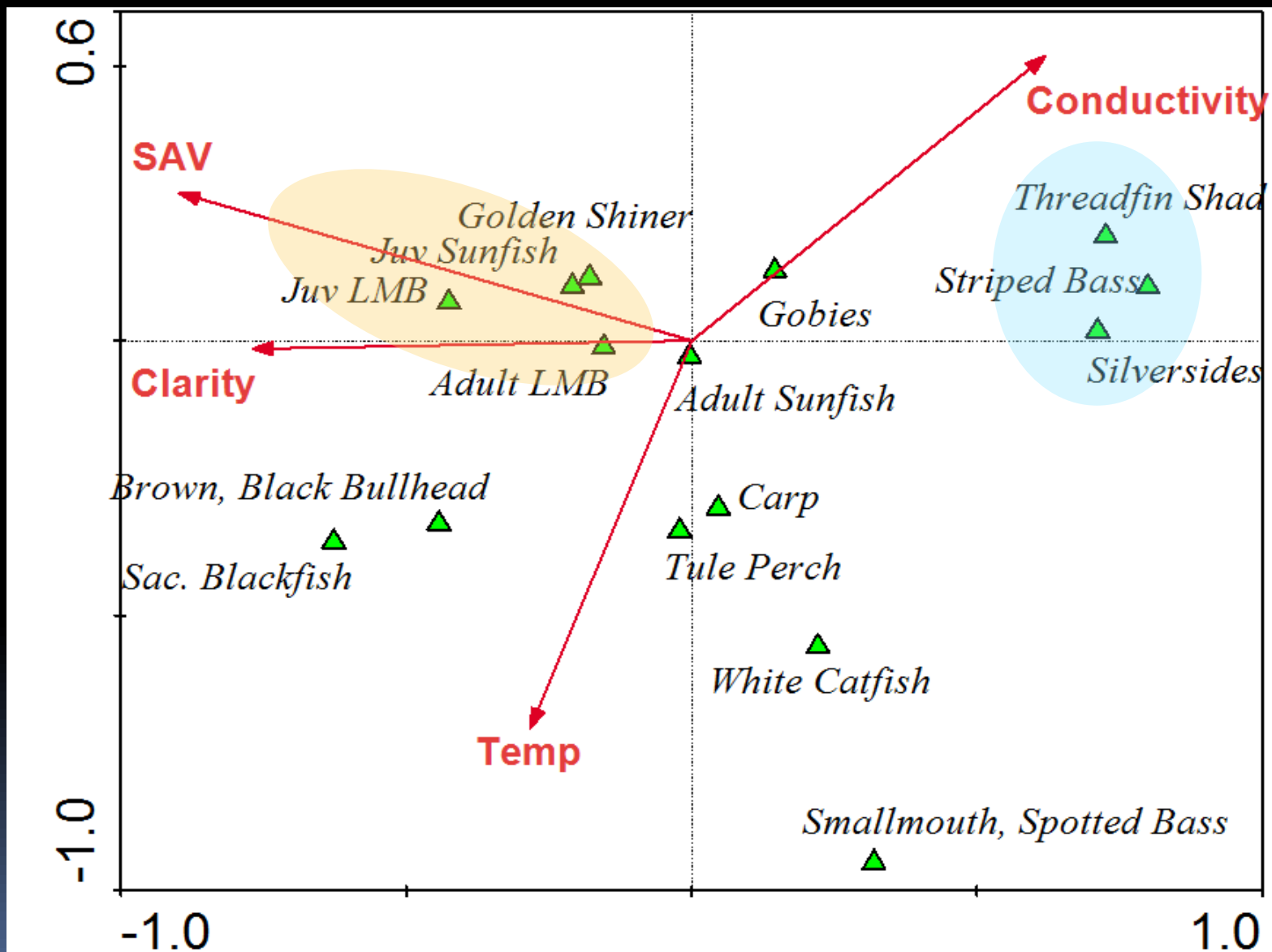
Canonical Correspondence Analysis



CCA: Summer – Early Fall



CCA: Summer – Early Fall



Largemouth Predation on Threadfin Shad:

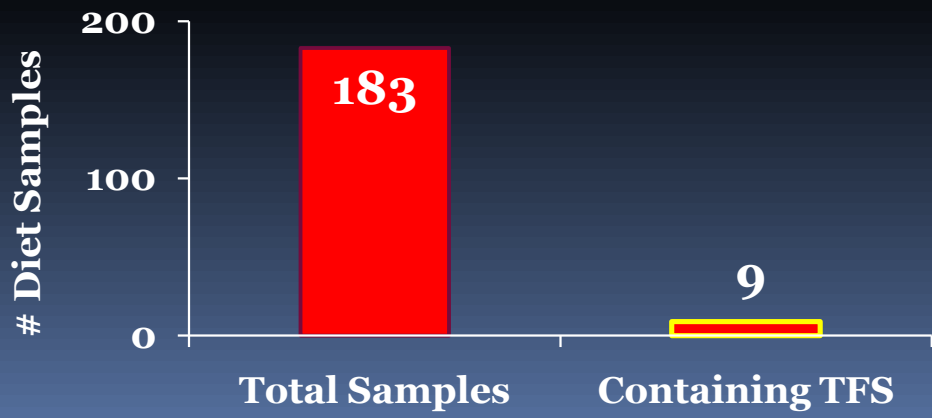
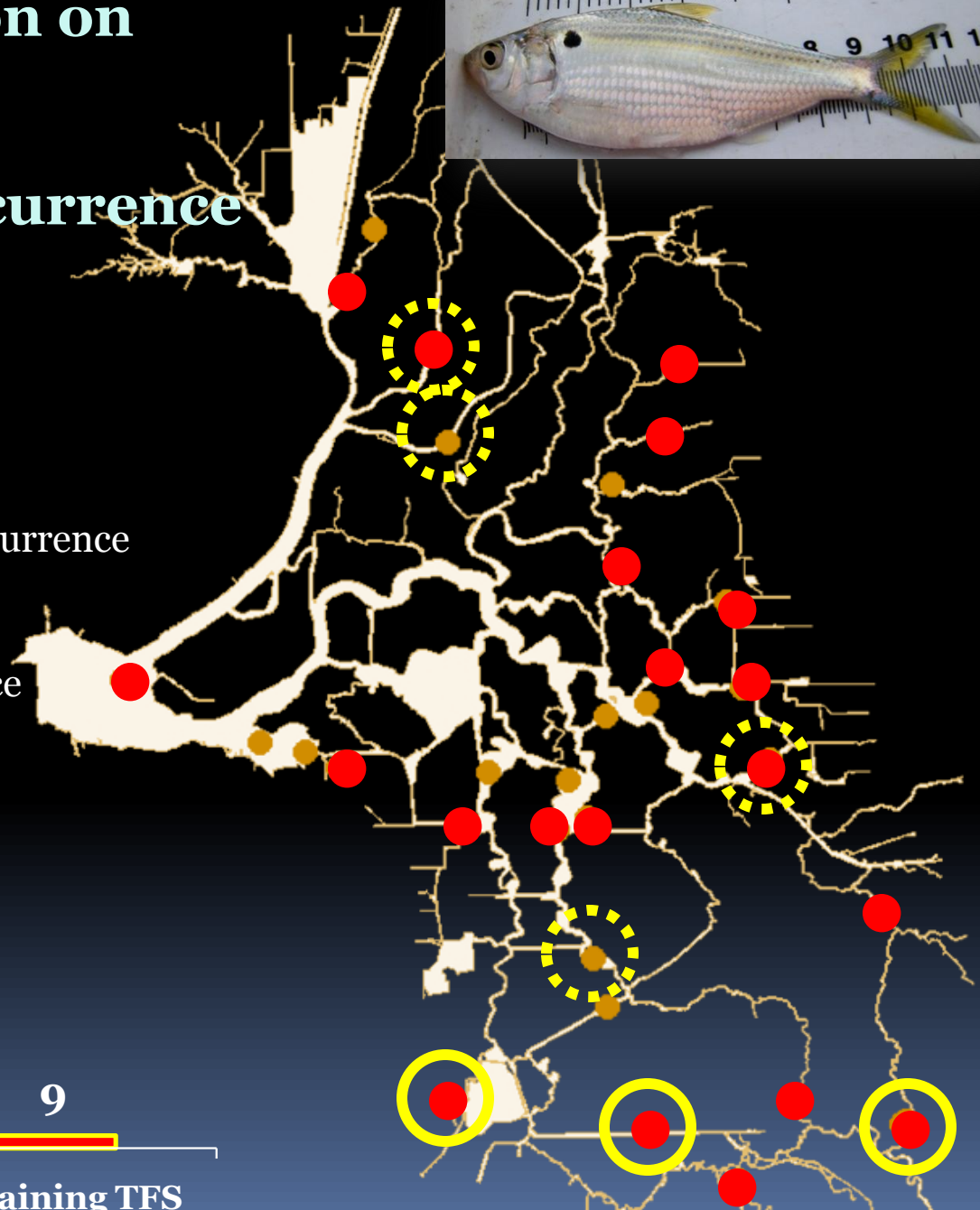
RARE despite co-occurrence



● LMB & TFS co-occurrence
October '08 – October '09

○ TFS predated at time of co-occurrence

⊙ TFS predated, no co-occurrence
at time of sample

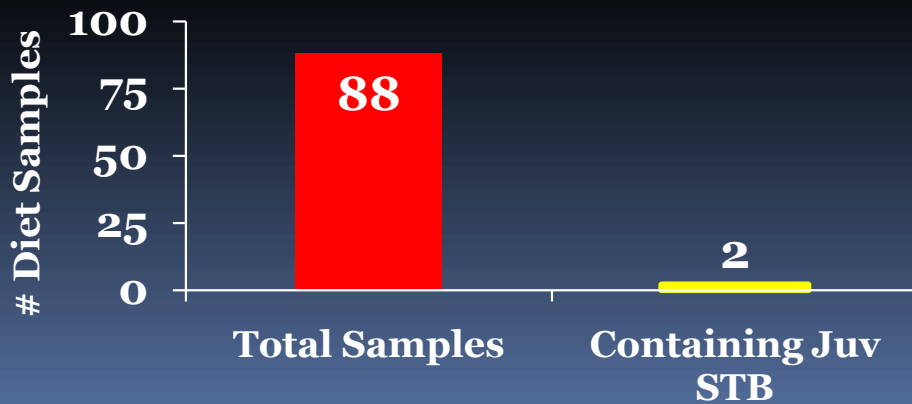


Largemouth Predation on Juvenile Striped Bass:

Limited co-occurrence & even more RARE

● LMB & STB co-occurrence
October '08 – October '09

○ STB predated, no co-occurrence
at time of sample



Largemouth Diet Composition

■ ≤125 mm



n = 708

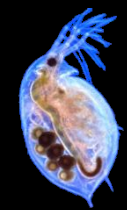
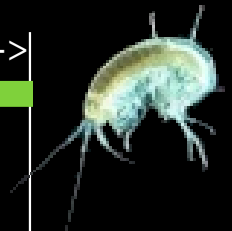
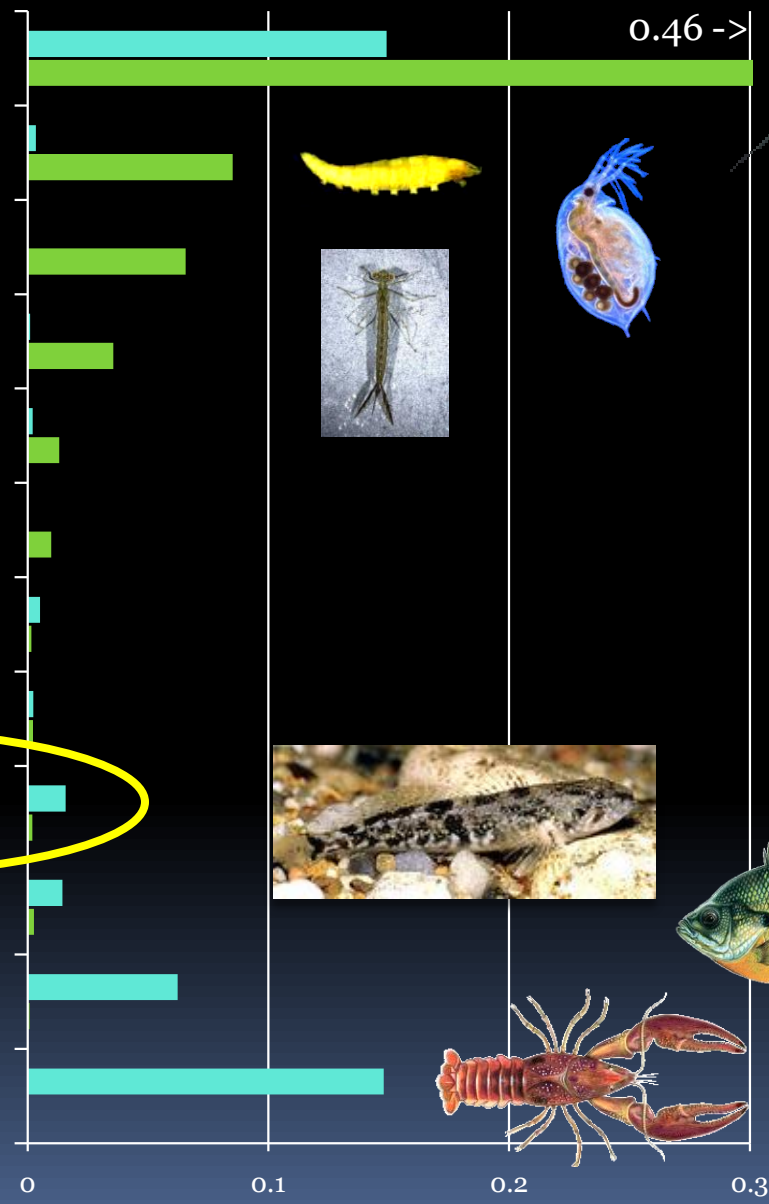
■ > 125 mm



n = 740

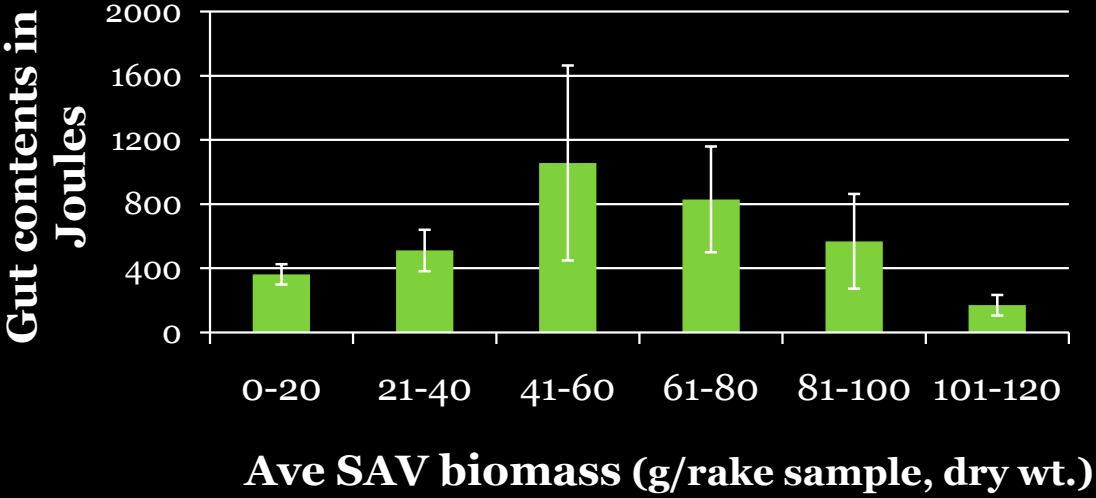
Largemouth bass
Unidentified fish

- Amphipods
- Diptera
- Cladocera
- Zygotera
- Hemiptera
- Copepoda
- Shrimp
- Largemouth bass
- Unidentified fish
- Demersal fish
- Sunfish
- Crayfish

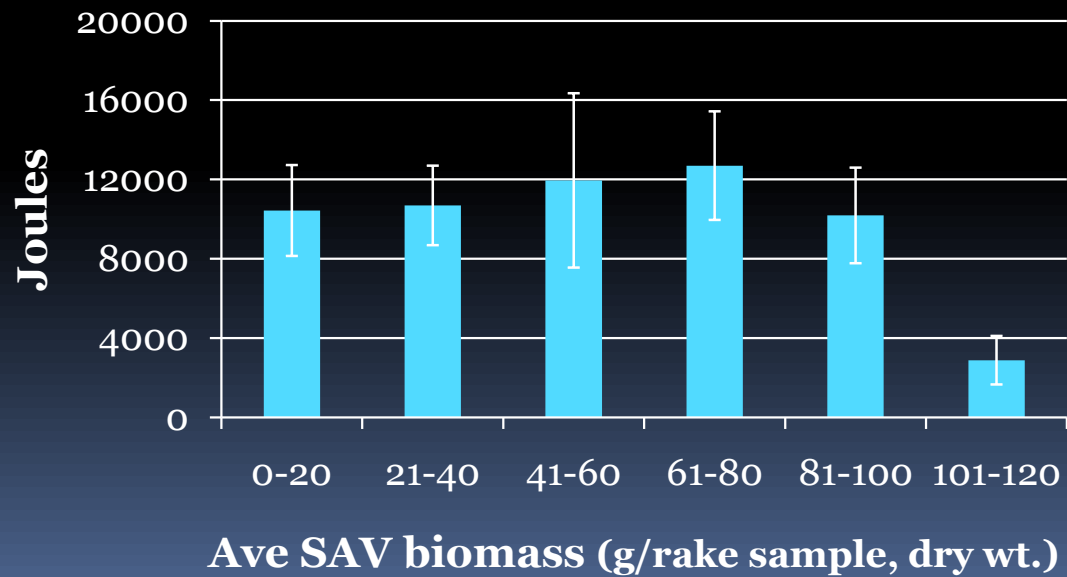


Index of Relative Importance

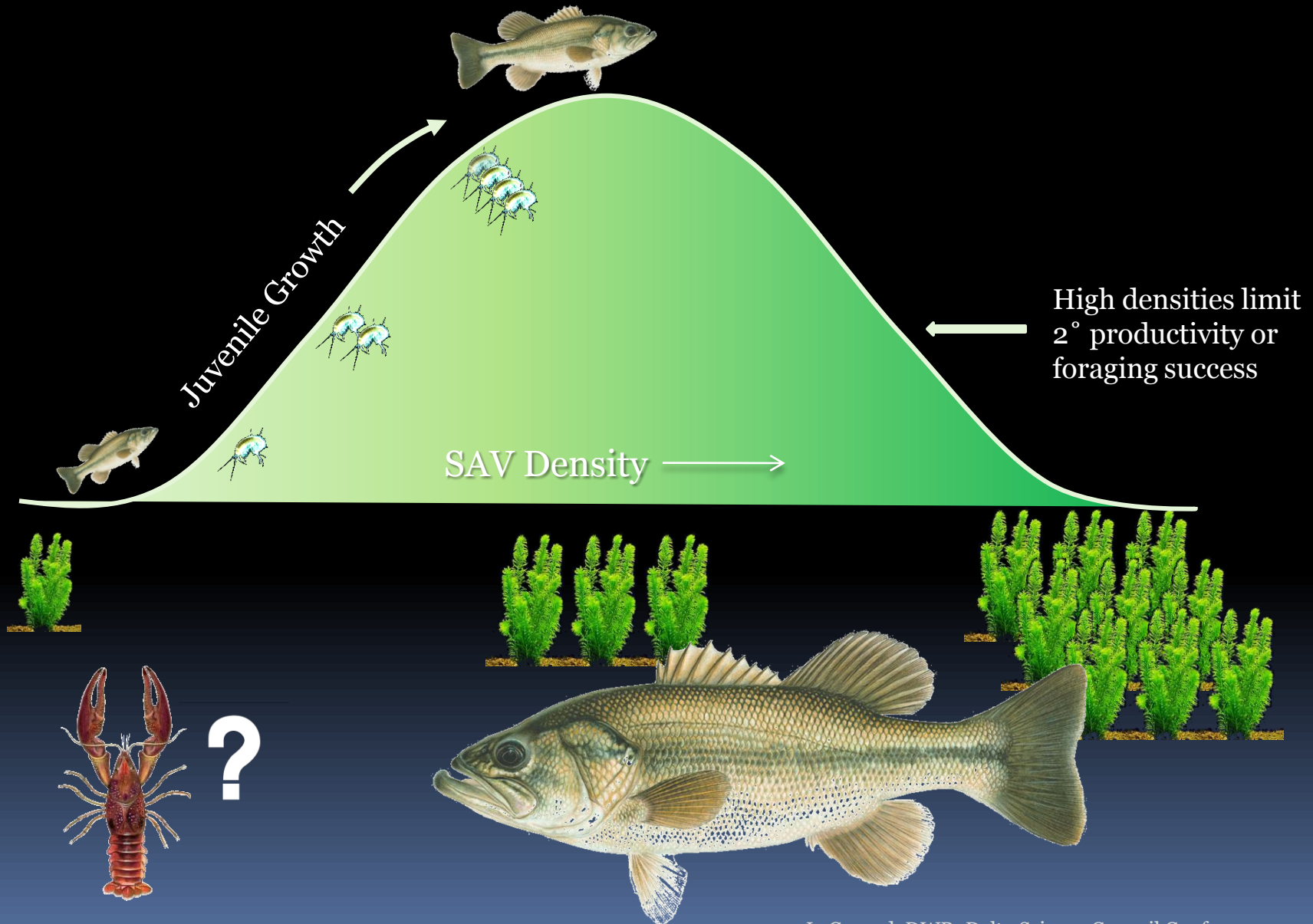
Does more SAV mean better food?



> 125 mm



SAV Grows Bass...a conceptual model

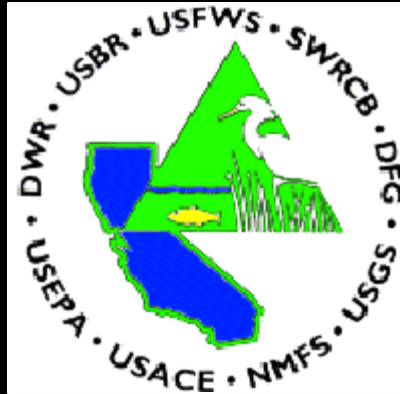


Many Thanks

Project Sponsor: Interagency Ecological Program

Diet Sample Analysis

Andrew Bibian, UCD
Talene Baghdassarian, UCD
Bryn Evans, UCD
Michael Vella, DWR
Caily Nelson, DWR



CDFG Resident Fish
Survey Data
provided by Larry
Brown, USGS

LMB Tournament Data
from Kyle Murphy &
Kelly Souza

Electrofishing Vessel: California Department of Fish & Game

Marty Gingras, Curtis Hagen



Questions?

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