

Search for Phototrophs at Deep-Sea Hydrothermal Vents (4 dives, JdF)

C. Taylor "gattling gun" sampler
HPLC extractions and fluorescence spectroscopy

- *Gerry Plumley UAF
- *Bob Blankenship ASU
- *Steven Szcekan PTI, INC
- *Bill Smith, Medico, INC

Biophysical measures -- fluorescent transients in reaction center

- *Paul Falkowski Rutgers
- Zbigniew Kolber Rutgers

Culture

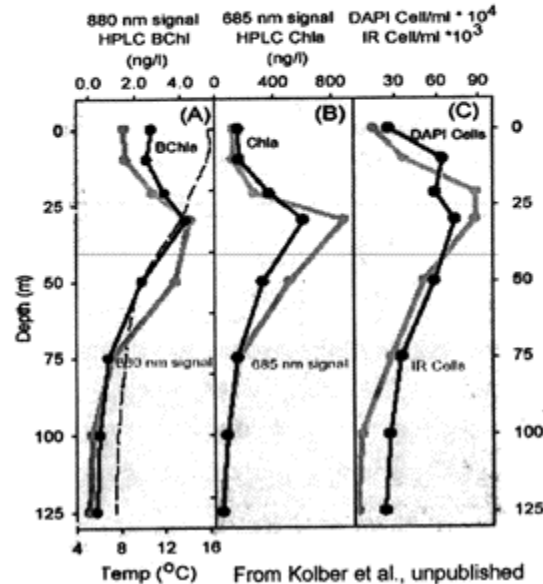
- Vladimir Yurkov U. Manitoba
- *Chris Rathgeber U. Manitoba

Direct Counts

- Tom Beatty -- UBC
- *Andrew Lang -- UBC

* Rookie Divers

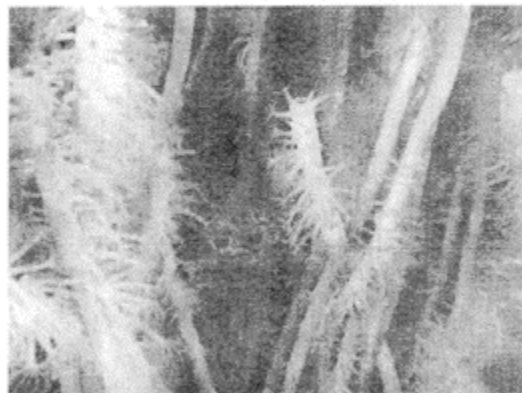
Supported by NSF BIO OCE
NASA Exobiology
ASU NASA Astrobiology Institute



Seep Census Florida Escarpment Deep-Sea Mussel Beds (3 dives)

- Florida Escarpment
 - 16 replicates
 - 27 liters of mussels
 - biomass dominated by echinoderms
 - holothurians, ophiuroids
 - ancillary sampling:
 - Costa Vetricani Rutgers
 - Zoe McKiness Harvard
 - Bob Vrijenhoek MBARI
 - Chuck Fisher Penn State
 - John Freytag Penn State
 - Stephane Hourdez Penn State
 - Joe Bonaventura Duke

Supported by NOAA-NURP
UNC-Wilmington NURC

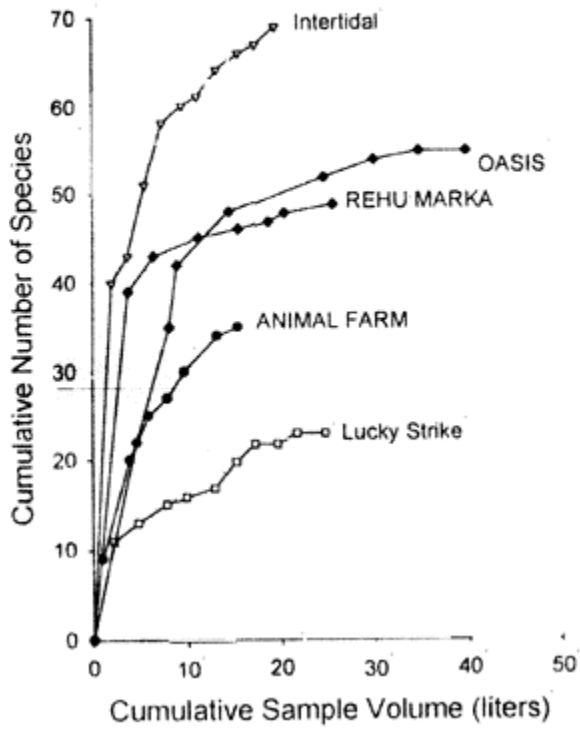


Coolpix courtesy I. Macdonald

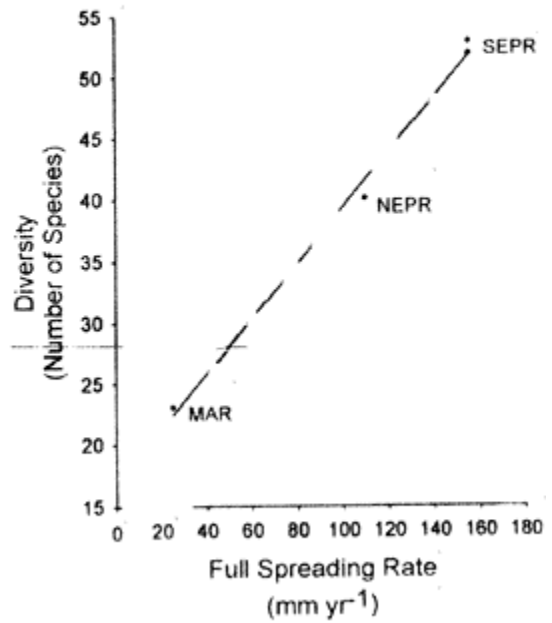
Rookie Divers:
Cheryl Jenkins
Mary Turnipseed
Josh Osterberg

W&M Res Assoc Prof
W&M MSc Prog
W&M 2001

Species-Effort Curves



Biodiversity Patterns



Vent Census 9N: Mussel Bed Fauna, East Pacific Rise

Nov 1999

Established Census Sites

Train Station -- *post* 1991 eruption
 East Wall -- *post* 1991 eruption
 Biovent -- *pre* 1991 eruption

2 Four additional censuses funded

(first of these in December 2001)

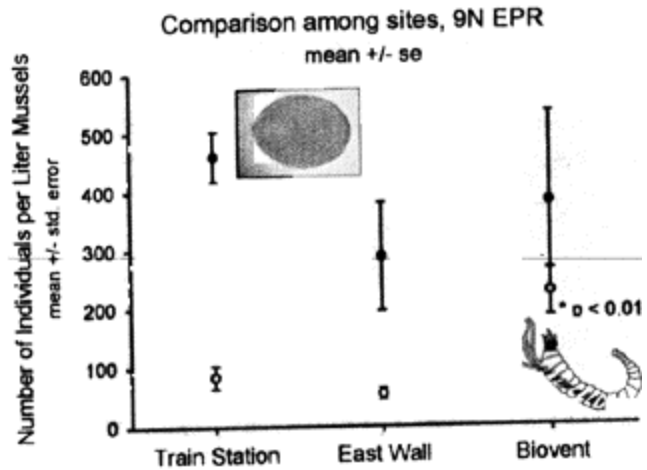
3 Integrated measures of habitat change:

A. HOBO temperature logs (2/site)

(Fornari loan)

B. Mussel tissue index

Supported by NSF- BIO OCE
 NSF-RIDGE



filled circle: limpet (*L. elevatus*)

open circle: polychaete (*A. galapagensis*)

N = 6 Train Station, East Wall

N = 5 Biovent