

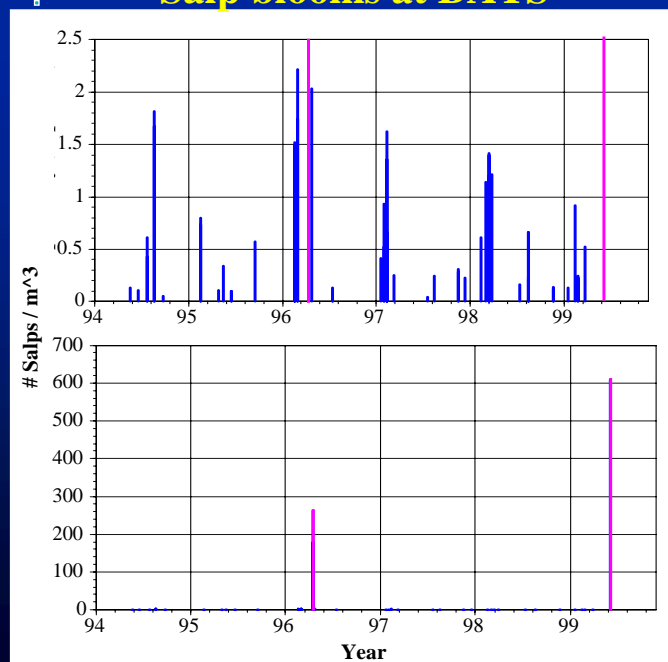
Commentary on Community Structure

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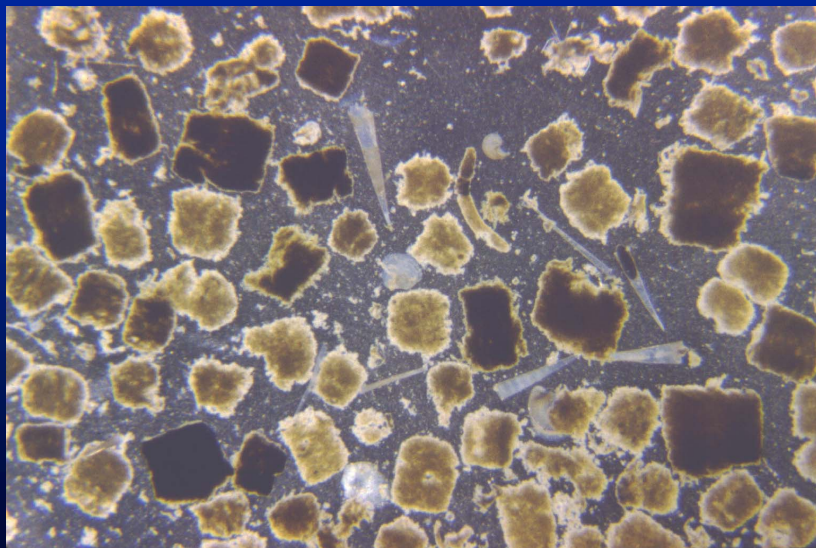
- Bloom dynamics and particle flux
- Twilight zone processes
 - Zooplankton & microbial community structure

Salp blooms at BATS



Steinberg & Madin
(in prep.)

3200 m trap contents, June 1999



Conte & Horgan



QuickTime™ and a
Cinepak decompressor
are needed to see this picture.

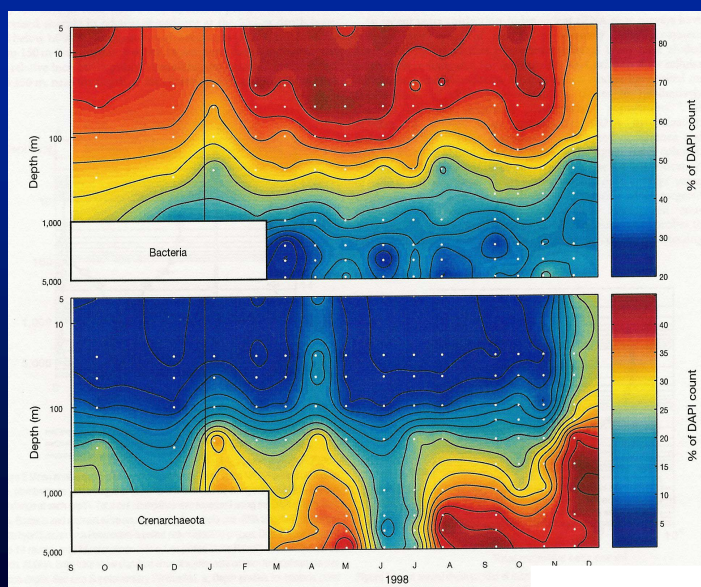
MBARI, Steinberg, Silver, & Pilskaln
video courtesy of MBARI © 1990



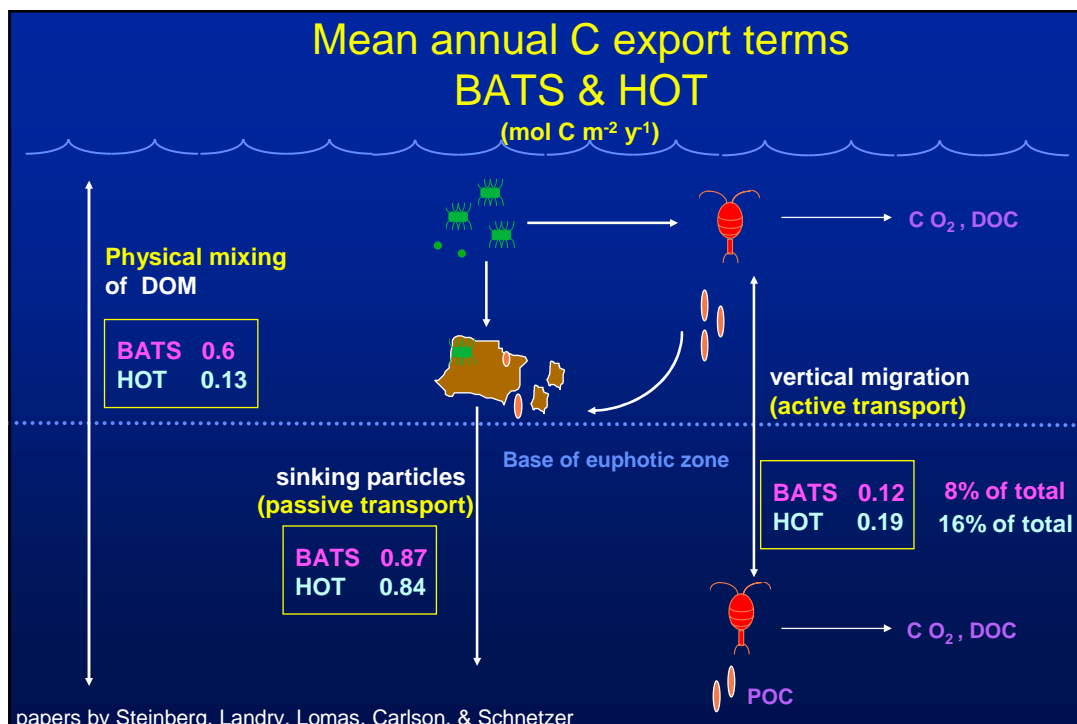
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Goldthwait, Alldredge, & Yen

Vertical distribution of prokaryotic cell abundance at HOT



Karner et al., 2001



Migratory active dissolved flux vs. passive POC flux

Location	Migrating biomass (mg C / m ²)	Migratory flux (% mean POC flux)	Reference
BATS	85	13	Steinberg et al. (2000)
Subtropical & Tropical Atlantic	-	9	Longhurst et al. (1990)
BATS	191	44	Dam et al. (1995)
North Atlantic	(5-480)	(25-52)	Morales (1999)
HOT	142	19	Al-Mutairi & Landry (2001)
<u>Eq. Pacific</u>			
March/April-	96	24	Zhang & Dam (1997)
October-	155	33	
Oligotrophic-HNLC area-	47	10	LeBorgne & Rodier (1997)
	53	5	

Updated from Steinberg et al. 2000

Conclusions

- **Even rare shifts in community structure can have remarkable effects**
- **Just beginning to understand communities and processes below euphotic zone**
- **Likely to have significant impact on remineralization length scale, cycling of elements**