

"Trait-based Approaches to Ocean Life"

5th-8th October 2015

Waterville Valley, NH, U.S.A

agenda

MONDAY 5th OCT

GETTING A HANDLE ON TRAITS

11:30-12:00 ARRIVE AT CONFERENCE CENTER, DROP OFF LUGGAGE

12:00-13:00 LUNCH

13:00-13:10 Andrew Barton opening comments

13:10-13:50 **Hans Cornelissen** **invited:** *Plant traits and biochemical cycling on land: parallels with marine ecosystems?*

SESSION 1: Measuring and Detecting Traits

13:50-14:00 Tatiana Rynearson introduction

14:00-14:20 Heidi Sosik *Plankton traits from flow cytometry and imaging-in-flow cytometry*

14:20-14:40 Adam Martiny *Microbiomes in light of traits: a phylogenetic perspective*

14:40-15:00 Harriet Alexander *Functional group specific traits drive ecosystem state shift in the oligotrophic ocean*

15:00-15:50 COFFEE + CHECK-IN

SESSION 2: Biogeography of Traits

15:50-16:00 Andrew Barton introduction

16:00-16:20 David Talmy *The influence of viral reproduction strategies on marine microbial community dynamics*

16:20-16:50 Tim Moore /Colleen Mouw *Approaches for detecting phytoplankton composition from space-based sensors*

16:50-17:10 Fi Prowe *Effects of trade-off based zooplankton feeding in a global ocean ecosystem model*

SESSION 3: Linking Observations and Models

17:10-17:40 MODERATED DISCUSSION moderators: Anna Hickman/Tatiana Rynearson
panelists: Philip Brun, Bethany Jenkins, Colin Kremer

17:40-19:00 POSTERS (Sessions 1,2,3)

19:00-20:30 DINNER

20:00-20:30 Steering Committee introductions

20:30 SOCIAL

TUESDAY 6th OCT

FRONTIERS OF TRAIT-BASED ECOLOGY IN THE OCEAN

7:30-9:00 BREAKFAST

9:00-9:40 **Elena Litchman** **invited:** *Trait-based approaches to microbial ecology and evolution*

SESSION 4: Size as a master trait

9:40-9:50 Ken Andersen introduction

9:50-10:10 Andrew Hirst *New insights from body surface: a major trait in determining life sustaining rates in metazoans*

10:10-10:30	Karen Stamieszkin	<i>Changes in North Atlantic copepod community size structure and fecal pellet carbon flux over 55 years</i>
10:30-10:50	COFFEE	
10:50-11:10	Subhendu Chakraborty	<i>Correlation between organism size and trophic strategies</i>
11:10-11:30	Kathy Mills	<i>Using size structure and metabolic theory to forecast fish community characteristics in a changing climate</i>
11:30-12:00	MODERATED DISCUSSION	moderators: Heidi Sosik/Ken Andersen
12:00-12:15	Steering Committee	introduction to afternoon plans
12:15-13:15	LUNCH	
13:15-15:15	CHALK TALKS/SMALL GROUP DISCUSSIONS	
15:15-15:30	COFFEE	

SESSION 5: Role of physics on setting and linking traits

15:30-15:40	Stephanie Dutkiewicz	introduction
15:40-16:00	Lan Smith	<i>Trait-based modeling of phytoplankton under realistic sub-scale variability</i>
16:20-16:40	Marina Levy	<i>The dynamical landscape of marine phytoplankton diversity</i>
16:40-17:00	Bror Jonsson	<i>The effect of advection on temperature adaptation by phytoplankton communities in the global ocean</i>
17:00-17:30	MODERATED DISCUSSION	moderators: Andrew Barton/Stephanie Dutkiewicz panelists: Thomas Kiørboe, Tatiana Rynearson, Sophie Clayton
17:30-19:00	POSTERS (Sessions 4,5,6) and continued small group discussions (if needed)	
19:00-20:30	DINNER	
20:30-21:10	Thomas Kiørboe	invited: <i>How traits are interrelated through tradeoffs in zooplankton</i>
21:10	SOCIAL	

WEDNESDAY 7th OCT

BROADER CONTRIBUTIONS OF TRAIT-BASED APPROACH

7:30-9:00	BREAKFAST
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SESSION 6: Contributions to cross-cutting principles in marine ecosystems

9:00-9:10	Øyvind Fiksen	introduction
9:10-9:50	Simon Jennings	invited: <i>Size- and trait-based structures and processes in marine ecosystems</i>
9:50-10:10	Jorn Bruggeman	<i>Traits of benthic fauna: from observations to community models</i>
10:10-10:30	Stephanie Dutkiewicz	<i>Combining phytoplankton size and functional traits in a global ocean ecosystem model</i>
10:30-10:50	COFFEE	
10:50-11:10	Susanne Menden-Deuer	<i>The role of intra-specific trait variability in plankton biodiversity: a gametheoretic and model examination</i>
11:10-11:30	Selina Våge	<i>Combining internal and external pelagic prokaryote community control links biodiversity to ecosystem function</i>
11:30-12:00	MODERATED DISCUSSION	moderators: Øyvind Fiksen/Mick Follows panelists: Simon Jennings, Selina Våge, Susanne Menden-Deuer
12:00-12:15	Steering Committee	introduction to afternoon plans
12:15-13:15	LUNCH	
13:15-17:00	OUTDOOR ACTIVITIES/FREE TIME	

SESSION 7: Contributions to climate science and biogeochemical cycles

17:00-17:30	MODERATED DISCUSSION	moderator: Stephanie Dutkiewicz panelists: Mick Follows, Colleen Mouw, Adrian Burd
17:30-19:00	POSTERS (Sessions 7,8,9)	
19:00-20:30	DINNER	

SESSION 8: Contributions to policy

20:30-21:00	MODERATED DISCUSSION	moderators: Nick Record / Andrew Pershing panelists: Lars Ravn-Jonsen, Janaína Bumbeer
21:00	SOCIAL	

THURSDAY 8th OCT

NEW DIRECTIONS FOR TRAIT-BASED OCEAN SCIENCE

7:00-8:30	BREAKFAST
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SESSION 9: From the gene to the ecosystem

8:30-8:40	Nick Record	introduction
8:40-9:20	Sonya Dyrhman	invited: <i>Linking 'omic approaches to a trait-based view of ocean life: using transcripts to define microbial traits</i>
9:20-9:40	Frederic Maps	<i>Blurred lines between species in trait-based numerical approaches. A case study of Calanus hybrid</i>
9:40-10:00	Elizabeth Harvey	<i>Linking individual movement to population-level dynamics: strain-specific behaviors of Heterosigma akashiwo</i>
10:00-10:20	COFFEE	
10:20-10:40	Victoria Coles	<i>Emergent patterns of genes, transcripts and community structure in the GENOME model</i>
10:40-11:10	MODERATED DISCUSSION	moderators: Nick Record/Bethany Jenkins panelists: Sonya Dyrhman, Jeff Bowman, Hans Cornelissen, Victoria Coles

SESSION 10: Summary and wrap-up

11:10-11:40	DISCUSSION	moderators: Steering Committee
11:40-11:50	Andrew Barton	final summary
11:50-13:00	LUNCH	
13:00	BUS DEPARTS	