

# CBE6

AUG 27 – SEP 1 2017  
Woods Hole, Mass. USA

6th International Symposium on  
Chemosynthesis-Based Ecosystems  
at Woods Hole Oceanographic Institution



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This program is current as of August 22, 2017. Please refer to [cbe2017.org](http://cbe2017.org) for up-to-date information.



# Welcome to CBE6 2017

On behalf of everyone who was involved in the organization of the Sixth International Symposium on Chemosynthesis-Based Ecosystems, we are very happy to welcome you to Woods Hole on beautiful Cape Cod. The timing could not be better, as this year marks the 40th anniversary of the groundbreaking discovery of hydrothermal vents and chemosynthetic communities at the Galápagos Spreading Center, in which Woods Hole Oceanographic Institution played an important role. We have come a long way since then, and it is exciting to gather on this occasion to celebrate the discovery, while at the same time discussing the newest findings and developments in studying chemosynthesis-based ecosystems and their societal relevance.

In your bag, you will find information that we have put together to help you navigate the symposium and to enjoy your stay in the area. The symposium plenary sessions and presentations will take place in Redfield Auditorium and poster sessions will take place on the 5th floor of Clark Lab. Associated with the poster sessions will be a reception with hors d'oeuvres and beer/wine, and we would like to encourage your participation in these events. This time, we will also have selected number of posters to be presented as flash talks, 3-minute presentations intended to entice interest among participants to come visit the poster.

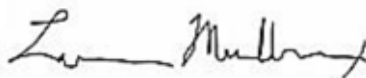
To help you to get around, there will be a bus to transport participants between certain hotels, Woods Hole Village, and the Quissett Campus, during the symposium, as well as for the excursions and the symposium dinner. Please note that parking is very limited in Woods Hole Village, and we recommend that if you have your own transportation, you find ways to car-pool and to park on Quissett Campus.

We look forward to an exciting meeting, connecting the past with the present, and offering a glimpse into the future! We hope you will enjoy the meeting and what Falmouth and Cape Cod have to offer. Please do not hesitate to ask if you have any questions.

Sincerely,



Stefan Sievert



Lauren Mullineaux

Co-organizers, CBE6 2017

## Scientific Committee

- Elizaveta Bonch-Osmolovskaya (Winogradsky Institute of Microbiology, Russia)
- Nicole Dubilier (Max Planck Institute for Marine Microbiology, Germany)
- Chuck Fisher (Pennsylvania State University, USA)
- Kim Juniper (University of Victoria, Canada)
- Nadine Le Bris (Université Pierre et Marie Curie, Banyuls-sur-Mer, France)
- Lisa Levin (Scripps Institution of Oceanography, USA)
- Crispin Little (University of Leeds, UK)
- Ashley Rowden (National Institute of Water and Atmospheric Research, New Zealand)
- Fengping Wang (Shanghai Jiao Tong University, China)
- Hiromi Watanabe (Japan Agency for Marine-Earth Science and Technology, Japan)

## Local Organizing Committee

- Stefan Sievert, Chair (WHOI)
- Lauren Mullineaux (WHOI)
- Colleen Cavanaugh (Harvard)
- Breaa Govenar (Rhode Island College)
- Tim Shank (WHOI)
- Andrew Daly, Symposium Coordinator (WHOI)
- Kate McMullen, Administrative (WHOI)

Special thanks to Katherine Spencer Joyce (Graphics, WHOI), as well as Erika Fitzpatrick, Stephanie Murphy, Lonny Lippsett, Ken Kostel, and Dina Pandya (all Communications, WHOI) for their invaluable help.

# Symposium Schedule at a Glance

Mon		Tue		Wed	Thu		Fri	
7:00	Breakfast			All day excursions				
8:00	Welcome	7:30	Breakfast		7:30	Breakfast	7:30	Breakfast
8:15	Introductory remarks				8:30	Plenary: Trophic Interactions		
8:30	Plenary	8:30	Plenary: Symbiosis		9:00	Microbiology	9:00	Evolution (including evolutionary history)
9:15		9:00	Habitat Structure and Dynamics		9:15		9:15	
9:15		9:15			9:30		9:30	
9:30		9:30			9:45		9:45	
9:45	Community Structure and Dynamics	9:45						
10:00	Coffee	10:00	Coffee		10:00	Coffee	10:00	Coffee
10:30	Community Structure and Dynamics	10:30	Symbiosis		10:30	Microbiology	10:30	Biogeography
10:45		10:45		10:45	10:45			
11:00		11:00		11:00	Chemosynthetic Energy Transfer	11:00	11:00	
11:15		11:15		11:15		11:15		
11:30		11:30		11:30		11:30		
11:45		11:45		11:45		11:45		
12:00		Lunch		12:00	Lunch (InterRidge Mtg)	12:00	Lunch	
13:40	Chemosynthetic Habitats and Society Invited talks <i>(Sponsored by the Deep Ocean Stewardship Initiative through a grant by the JM Kaplan Fund)</i>	13:45	Symbiosis	13:45	Chemosynthetic Energy Transfer	12:15	Lunch	
14:00		14:00		14:00	14:00	Panel		
14:20		14:15		14:15	14:15	15:30		
14:40	14:40	14:30		14:30	Geochemistry and Biogeochemistry			
15:00	Coffee	14:45		14:45				
15:30	Chemosynthetic Habitats and Society	15:00	Coffee	15:00	Coffee			
15:45		15:30	Microbiology	15:30	Evolution (including evolutionary history)			
16:00		15:45		15:45		15:45		
16:15		16:00		16:00		16:00		
16:30		16:15		16:15		16:15		
		16:30		16:30		16:30		
	16:45	16:45		16:45				
17:30	Poster Session I and Reception	18:00	Symposium Dinner	17:45	Poster Session II and Reception			
19:30		22:00		19:45				

# Full Symposium Schedule

## Sunday, August 27 - Lillie Auditorium

18:00	<b>Opening Public Talk:</b> <i>Discovery of Deep-Sea Vents</i> ( <b>Bob Ballard</b> ) (Lillie Auditorium, MBL)
19:00	<b>Panel discussion:</b> <i>Implications for Life on Earth and Beyond</i> (Lillie Auditorium, MBL)
20:00	Reception (Tent next to Redfield)

## Monday, August 28 - Redfield Auditorium

8:00	Welcome
8:15	Introductory remarks
8:30	<b>Plenary: Jim Childress:</b> <i>Early Adventures in Studying the Biology of Hydrothermal Vents</i>
<b>Community Structure and Dynamics (Session chair: Chuck Fisher)</b>	
9:15	<b>Rachel Boschen</b> , Verena Tunnicliffe: <i>A functional traits approach to assess differences among assemblages at hydrothermal vents in a marine protected area</i>
9:30	<b>Alanna Durkin</b> , Lisa Levin, Erik E. Cordes: <i>Community ecology of methane seeps along the Costa Rica margin</i>
9:45	<b>Sabine Gollner</b> , Breea Govenar, Pedro Martinez Arbizu, Susan Mills, Nadine Le Bris, Markus Weinbauer, Timothy M. Shank, Monika Bright: <i>Community dynamics at the 9°N East Pacific Rise after a volcanic eruption</i>
10:00	Coffee
10:30	<b>Ashley Grosche</b> , Donato Giovannelli, Francesco Smedile, Nadine Le Bris, and Costantino Vetriani: <i>The Microbial Biogeography of Deep-Sea Hydrothermal Vents: Mapping the Landscape of Active Microbial Communities Across Space, Time, and Fluid Dynamics</i>
10:45	<b>Thi Phuong Thao Ho</b> , Eunji Park, Soon Gyu Hong, Eun-Hye Kim, Kangchon Kim, Sook-Jin Jang, Robert C. Vrijenhoek, and Yong-Jin Won: <i>Geographical structure of endosymbiotic bacteria hosted by Bathymodiolus mussels at eastern Pacific hydrothermal vents</i>
11:00	<b>Abbie Chapman</b> , Amanda E. Bates, Verena Tunnicliffe: <i>Contributions of rare and common species to the functional diversity of basalt-hosted tubeworm bush communities from the Juan de Fuca Ridge</i>
11:15	<b>Dimitri Kalenitchenko</b> , Erwan Peru, Nadine Le Bris, Pierre E. Galand: <i>Ultra-rare microorganisms quickly transform deep-sea wood falls into chemosynthesis based ecosystems</i>
11:30	<b>Craig McClain</b> , James Barry, Clifton Nunnally, Thomas Webb: <i>Size and Energy Influenced Niche Packing in Experimental Wood-Fall Communities</i>
11:45	<b>Arunima Sen</b> , Emmelie K.L. Åström, Wei-Li Hong, Pavel Serov, Alexey Portnov, Malin Waage, Michael L. Carroll, JoLynn Carroll: <i>High Arctic cold seeps: visual and acoustic imagery reveal spatial heterogeneity in megafaunal communities and sediment geochemistry</i>



12:00	Lunch
<b>Chemosynthetic Habitats and Society (Invited talks) (Session chair: Lisa Levin)</b> (Sponsored by the Deep Ocean Stewardship Initiative through a grant by the JM Kaplan Fund)	
13:40	<b>Verena Tunnicliffe:</b> <i>X-traordinary: The Place of Hot Vents in a World of Humanity</i>
14:00	<b>Alison Swadling:</b> <i>Overview of SMS Mining Interest in the Pacific</i>
14:20	<b>Erik Cordes:</b> <i>The Influence of Hydrocarbon Seeps on the Deep Sea in the Anthropocene</i>
14:40	<b>Michael Lodge:</b> <i>Perspectives from the International Seabed Authority</i>
15:00	Coffee
<b>Chemosynthetic Habitats and Society (Session chair: Lisa Levin)</b>	
15:30	<b>Diva Amon, Judith Gobin:</b> <i>Characterisation of deep-sea communities in an area designated for oil and natural-gas exploitation off Trinidad and Tobago</i>
15:45	<b>Stace Beaulieu, Porter Hoagland, Christopher German, Maurice Tivey:</b> <i>Applying an economic value framework to ecosystem services from deep-sea vents</i>
16:00	Maria Baker, Lisa Levin, <b>Kristina Gjerde:</b> <i>Deep Ocean Stewardship Initiative (DOSI) progress in relation to deep-sea mining</i>
16:15	<b>Ana Hilario, Emil Paulsen, Torkild Bakken, Hans Tore Rapp, Eva Ramirez-Llodra:</b> <i>Results from the MarMine cruise: megafauna assemblages from Mohn's Treasure, a sediment covered massive sulphide deposit in the AMOR</i>
16:30	<b>Jennifer Le, Shuting Yang, Onyeweenu Ogene, Bryant Jew, Lisa Levin:</b> <i>Ecosystem services associated with methane seeps on the California continental margin</i>
16:45	Announcement by Adrian Glover (Deep-Sea Biology Society)
17:30	<b>Poster session I with selected flash talks* and Reception (Clark 507)</b>

## Tuesday, August 29 - Redfield Auditorium

8:30	<b>Plenary: Jillian Petersen:</b> <i>Symbiosis and Holobiont Physiology: A New Understanding of the Roles and Functions of Chemosynthetic Symbionts in Bivalves</i>
<b>Habitat Structure and Dynamics (Session chair: Ashley Rowden)</b>	
9:00	<b>Robert Carney, Kern Kassarie:</b> <i>Spatial distribution of chemosynthetic fauna determined by extensive AUV digital-image survey within a 15 km<sup>2</sup> portion of the central graben of a salt-formed ridge in the Gulf of Mexico</i>
9:15	<b>Cherisse Du Preez, Charles R. Fisher:</b> <i>Remarkable decadal stability at Lau Basin hydrothermal vents (Southwest Pacific)</i>
9:30	<b>Lisa Levin:</b> <i>Oxygen Minimum Zones as Creators and Modifiers of Chemosynthetic Ecosystems</i>

9:45	Heiko Sahling, Maxim Rubin Blum, Christian Borowski, Elva Escobar-Briones, Chieh-Wei Hsu, Markus Loher, <b>Ian MacDonald</b> , et al.: <i>Asphalt volcanoes revisited: Seafloor observations at natural hydrocarbon seeps in the southern Gulf of Mexico</i>
10:00	Coffee
<b>Symbiosis (Session chairs: Colleen Cavanaugh and Nicole Dublier)</b>	
10:30	<b>Roxanne Beinart</b> , J. Rotterova, S. Sylva, I. Cepicka, J. S. Seewald, R.G. Gast, V.P. Edgcomb: <i>Metabolic functioning of a ciliate-methanogen symbiosis from anoxic habitats</i>
10:45	<b>Christian Borowski</b> , Adrien Assié, Nikolaus Leisch, Matthew Saxton, Samantha Joye, Halina Tegetmeyer, Harald Gruber-Vodicka, Karina van der Heijden, et al.: <i>A novel and specific association of bathymodiolin mussels with Epsilonproteobacteria that is widespread at deep-sea hydrothermal vents and cold seeps</i>
11:00	<b>Corinna Breusing</b> , Shannon B. Johnson, C. Robert Young, Robert C. Vrijenhoek: <i>Cryptic diversity and host-symbiont specificity in Pacific deep-sea tubeworms</i>
11:15	<b>Chong Chen</b> , Dilworth Y. Parkinson, Katsuyuki Uematsu, Katrin Linse, Julia D. Sigwart: <i>A new lease of life: Ontogenetic shift in anatomy and ecology of a holobiont vent snail shown using synchrotron micro-CT</i>
11:30	<b>Sebastien Duperron</b> , Olivier Gros, Bérénice Piquet, Kamil Szafranski, Sven Laming, Bruce Shillito: <i>The flexible symbioses of deep-sea mussels: a not-so-straight story</i>
11:45	<b>François Lallier</b> , Tanguy A., Détrée C., Mary J., Szafranski K., Duperron S., Shillito B., Takeuchi T., et al.: <i>Symbiosis under pressure: effects of isobaric recovery and in situ translocation on gene expression patterns in Bathymodiolus azoricus</i>
12:00	Lunch (InterRidge meeting: Future plans, code of conduct, working groups)
13:45	<b>Stephanie Markert</b> : <i>Marine thiotrophic symbioses—examined by physiological proteomics</i>
14:00	<b>Julia Polzin</b> , Thomas Nussbaumer, Manuel Kleiner, Dan Liu, Thomas Rattei, Jillian M. Petersen: <i>Understanding mechanisms of host-microbe interactions in lucinid clams</i>
14:15	Pei-Yuan Qian, <b>Jin Sun</b> , Jian-Wen Qiu: <i>Adaptation of deep-sea mussels to chemosynthetic environments revealed by full genome analysis</i>
14:30	<b>Maxim Rubin-Blum</b> , Christian Borowski, Chakkiath Paul Antony, Lizbeth Sayavedra, Thomas Pape, Heiko Sahling, Gerhard Bohrmann, Nicole Dubilier: <i>Invertebrate-microbe symbioses at asphalt volcanoes in the deep Gulf of Mexico</i>
14:45	<b>Shelbi Russell</b> , Colleen M Cavanaugh: <i>Impacts of transmission mode on chemosynthetic symbiont genome evolution: A population genomic perspective</i>
15:00	Coffee

<b>Microbiology (Session chair: Fengping Wang)</b>	
15:30	<b>Julie Huber</b> , Caroline S. Fortunato, Christopher K. Algar, Lisa Zeigler Allen, David A. Butterfield, James F. Holden, Benjamin I. Larson, Begüm Topçuoğlu: <i>Spatially distinct, temporally stable chemolithoautotrophic microbial populations mediate biogeochemical cycling at and below the seafloor in venting fluids from Axial Seamount</i>
15:45	Sean M. McAllister, Shawn W. Polson, <b>Clara S. Chan</b> : <i>Using marine Fe mat meta-omics to gain insights into Zetaproteobacteria functional diversity, ecological interactions, and biogeochemical roles</i>
16:00	<b>Heather Olins</b> , Peter Girguis: <i>In situ mineral colonization samplers reveal patterns in microbial community composition, structure, and succession</i>
16:15	<b>David Emerson</b> , Jarrod J. Scott, Craig Moyer: <i>New insights into chemosynthetic Fe-oxidizing communities at hydrothermal vents</i>
16:30	<b>Florian Götz</b> , Stephanie Markert, Dörte Becher, Thomas Schweder, Stefan M. Sievert: <i>Metaproteomics Reveals the Metabolic Pathways of Active Chemoautotrophic Communities at Crab Spa, a Diffuse-Flow Deep-Sea Vent site at 9°N EPR</i>
16:45	<b>Costantino Vetriani</b> , Manuel Amieva, Donato Giovannelli, Sushmita Patwardhan, Francesco Smedile: <i>Common adaptive strategies in hydrothermal vent and pathogenic Epsilonproteobacteria revealed by comparative genomic and physiological analyses</i>
18:00	<b>Symposium Dinner at Sea Crest Beach Hotel (<a href="http://www.seacrestbeachhotel.com">www.seacrestbeachhotel.com</a>)</b>

## Wednesday, August 30

All day excursions

## Thursday, August 31 - Redfield Auditorium

8:30	<b>Plenary: Marie Portail</b> : <i>Food Webs in Deep-Sea Chemosynthetic Ecosystems, the Missing Link between the Structure and Function of Biodiversity</i>
<b>Microbiology (Session chair: Costantino Vetriani)</b>	
9:00	<b>Yinzhao Wang</b> , Fengxiao Yuan, Jiahua Wang, Jialin Hou, Fengping Wang: <i>High abundance and diversity of anaerobic hydrocarbon metabolizing archaea in sediment of Guaymas Basin</i>
9:15	<b>James Holden</b> , Begüm D. Topçuoğlu, Lucy C. Stewart: <i>Hydrogen syntrophy-driven methanogenesis by hyperthermophiles in hot subsurface environments</i>
9:30	<b>Mohamed Jebbar</b> : <i>Thermococcales in the genomic era: diversity, physiology, applications and adaptation to deep sea hydrothermal vent conditions</i>

9:45	<b>Stefan Sievert</b> , Jesse McNichol, Jeff Seewald, Craig D. Taylor, Jeremy Rich, Niculina Musat, Nuria Fernandez-Gonzalez, Edward Hobart, et al.: <i>Connecting the Past with the Present: Identifying Chemosynthetically Active Microbes and Measuring Primary Productivity at Deep-Sea Hydrothermal Vents</i>
10:00	Coffee
10:30	<b>Holly Bik</b> , Taruna Aggarwal: <i>Diversity patterns of nematode microbiomes around a Pacific whale fall site (off-coast California)</i>
10:45	<b>Sheryl Murdock</b> , S. Kim Juniper: <i>Hydrothermal Vent Protists: The Missing Piece to the Puzzle</i>
<b>Chemosynthetic Energy Transfer (Session chairs: Breea Govenar and Nadine Le Bris)</b>	
11:00	<b>Bérengère Husson</b> , Jozee Sarrazin, Dick van Oevelen, Pierre-Marie Sarradin, Karline Soetart, and Alain Menesguen: <i>Integrating knowledge and getting insights on chemosynthetic-based ecosystems: a modelling approach</i>
11:15	<b>Peter Girguis</b> , Charles P.M. Vidoudez, Roxanne Beinart, Daniel Hoer, Jessica Panzarino, Jennifer Delaney: <i>Mantle to microbe to mollusc and more: The role of chemosynthetic symbioses in matter and energy flux in chemosynthetic ecosystems</i>
11:30	<b>Nicholas Higgs</b> , Jason Newton, Martin Attrill: <i>A chemosynthesis based food chain supports commercial lobster fisheries</i>
11:45	<b>Hidetaka Nomaki</b> , Uejima Y, Ogawa NO, Yamane M, Watanabe HK, Senokuchi R, Kitahashi T, Yokoyama Y, et al.: <i>Nutrition sources of deep-sea hydrothermal vent meio- and macrofauna revealed by natural-abundance radiocarbon and stable carbon and nitrogen isotope ratios</i>
12:00	Lunch
13:45	<b>Sarah Seabrook</b> , Fabio C. De Leo, Andrew R. Thurber: <i>Feast in the deep: The use of chemosynthetic nutrients by the Tanner crab</i>
14:00	<b>Serban M. Sarbu</b> , Kenneth H. Nealson, Casey Barr, Joost W. Aert, Rob J.M. Van Spanning, Nicu-Viorel Atudorei, Jean-François Flot, Radu Popa: <i>Chemosynthesis based cave ecosystems at liquid:gas and gas:gas redox interfaces</i>
<b>Geochemistry and Biogeochemistry (Session chair: Nadine Le Bris)</b>	
14:15	<b>David Brankovits</b> , J. W. Pohlman, T. J. Mincer, H. Niemann, M. B. Leigh, K. W. Becker, T. M. Iliffe: <i>Cryptic Chemosynthetic Pathways Support an Ecosystem within Subterranean Karst Estuaries</i>
14:30	<b>Solveig Bühring</b> , Stefan M. Sievert, Philip Arevalo, Lara Gulmann, Gonzalo V. Gomez Saez, Petra Pop Ristova: <i>The shallow submarine hot vent system off Milos (Greece) – a natural laboratory to study hydrothermal geomicrobiology</i>
14:45	<b>Lucie Pastor</b> , Toffin Laurent, Cathalot, Cécile, Brandily, Christophe, Olu, Karine, Lesongeur Françoise, Decker, Carole, Taillefert, Martial, et al.: <i>When Organic-Rich Turbidites Reach 5000 m: “Cold-Seep Like” Life in the Congo Deep-Sea Fan</i>
15:00	Coffee

<b>Evolution (including evolutionary history) (Session chair: Cris Little)</b>	
15:30	<b>Crispin Little:</b> <i>A 3.77—or possibly 4.28—billion-year history of microbial communities associated with marine hydrothermal vents</i>
15:45	<b>Steffen Kiel:</b> <i>Clams 'n' Trends 'n' Marine Sulfate Concentrations: Ocean Chemistry and Macroevolution through Earth History</i>
16:00	<b>Kazutaka Amano, Robert G. Jenkins, Steffen Kiel:</b> <i>Paleocene wood-fall communities from eastern Hokkaido, northern Japan</i>
16:15	<b>Robert Gwyn Jenkins, Andrzej Kaim:</b> <i>Chemosynthetic community on Cretaceous marine reptile falls</i>
16:30	<b>Andrzej Kaim, Robert Jenkins, Krzysztof Hryniewicz, Horacio Parent, Alberto Garrido:</b> <i>Early Mesozoic seeps and the advent of modern seep faunas</i>
16:45	<b>Mari Heggernes Eilertsen, Jon A. Kongsrud, Tom Alvestad, Josefin Stiller, Greg W. Rouse, Hans T. Rapp:</b> <i>Do ampharetids take sedimented steps from vents to seeps? Phylogeny and habitat-use of Ampharetidae (Annelida, Terebelliformia) in chemosynthesis-based ecosystems</i>
17:00	<b>Magdalena Georgieva, Crispin T.S. Little, Jonathan S. Watson, Mark A. Sephton, Alexander D. Ball, Adrian G. Glover:</b> <i>Identification of fossil worm tubes from Phanerozoic hydrothermal vents and cold seeps</i>
17:45	Poster session II with selected flash talks* and Reception (Clark 507)

## Friday, September 1 - Redfield Auditorium

8:30	<b>Plenary: Satoshi Mitarai:</b> <i>Quantifying Dispersal from Hydrothermal Vent Fields in the Western Pacific Ocean</i>
<b>Evolution (including evolutionary history) (Session chair: Cris Little)</b>	
9:00	<b>Sook-Jin Jang, Eunji Park, Won-Kyung Lee, Shannon B. Johnson, Robert C. Vrijenhoek, and Yong-Jin Won:</b> <i>Population subdivision of hydrothermal vent polychaete <i>Alvinella pompejana</i> across equatorial and Easter Microplate boundaries</i>
9:15	<b>Shannon Johnson, Greg W. Rouse, Sara Teixeira, Robert C. Vrijenhoek:</b> <i>Evolution of <i>Oasisia</i>, an unusual polytypic vestimentiferan</i>
9:30	<b>Yuanning Li, Kenneth M. Halanych:</b> <i>Comparative genomics reveal symbiont-host evolution of deep-sea tubeworms</i>
9:45	<b>Rob Young:</b> <i>Ubiquitous Episodic Selection on Protein Coding Genes in Vesicomymid Symbiont Genomes</i>
10:00	Coffee
<b>Biogeography (Session chairs: Lauren Mullineaux and Hiromi Watanabe)</b>	
10:30	<b>Ana Colaço, Maria Rakka, Pedro Ribeiro, Manuela Juliano:</b> <i>Key species dispersal and population connectivity at different spatial scales and under different disturbance scenarios at fragmented habitats of the MAR</i>

10:45	<b>Austin Phillips</b> , Mike Neubert, Lauren Mullineaux, Julie Kellner, Stace Beaulieu: <i>Tools for Evaluating the Importance of Habitat Patches in Hydrothermal Vent Metapopulations</i>
11:00	<b>Adrian Glover</b> , Helena Wiklund, Jonathan T. Copley: <i>Biogeography of annelids from newly-explored Caribbean, Indian Ocean and Southern Ocean hydrothermal vents</i>
11:15	<b>Won-Kyung Lee</b> , Won-Gi Min, Se-Jong Ju: <i>Biodiversity and spatial distribution of vent fauna in the hydrothermal fields on the spreading axis of North Fiji Basin based on ROV visual survey</i>
11:30	<b>Ashley Rowden</b> , Malcolm R. Clark, Jennifer C. Beaumont, Rachel E. Boschen, Alison B. MacDiarmid, Kareen E. Schnabel, Dianne M. Tracey, Kerry Walton: <i>Biogeography of hydrothermal vent communities of western Pacific Ocean back-arc basins and volcanoes</i>
11:45	<b>Hiromi Watanabe</b> , Takuya Yahagi, Shigeaki Kojima, Satoshi Mitarai, Hiroyuki Yamamoto: <i>Dispersal and population maintenance of two hydrothermal vent shrimps, Alvinocaris longirostris and Shinkaicaris leurokolos</i>
12:00	<b>Craig Young</b> , Laurel Hiebert, Terra Hiebert, Kara Robbins, Caitlin Plowman, Amy Burgess, Kirstin Meyer, Cindy van Dover, et al.: <i>Distributions of cold-seep bivalve larvae in the Western North Atlantic, Caribbean, and Gulf of Mexico</i>
12:15	Lunch
14:00	<b>Panel: Future Research Directions and Societal Relevance of Chemosynthetic-Based Ecosystems</b> Panel members: Peter Girguis, Lisa Levin, Nadine Le Bris, Ashley Rowden, Stefan Sievert, Hiromi Watanabe, moderator: Heather Goldstone (WCAI)
15:30	

## Poster session I with selected flash talks\* and Reception

Monday August 28, 17:30, Clark 507

<b>Posters: Chemosynthetic Habitats and Society</b>	
1	<b>Verena Tunnicliffe*</b> , Amanda E. Bates, David A. Butterfield, Benjamin I. Larson: <i>Regional diversity of the Mariana biogeographic region with a closer look at Alviniconcha hessleri, the original “hairy snail”</i> (Please note: Poster moved from Biogeography section due to scheduling conflict.)
2	<b>Amber Cobley</b> , Adrian Glover, Maria Baker, Jon Copley: <i>Open oceans, open data: Biodiversity and policy in the deep-sea mining frontier</i>
4	Ward Appeltans, <b>Nicholas Higgs</b> : <i>Introduction to the new deep-sea node of the Ocean Biogeographic Information System</i>
5	Tina Molodtsova, Galkin S.V., <b>Gebruk A.V.</b> , Dobretsova I.G.: <i>Fauna of soft sediments and inactive hydrothermal sulfide deposits in the Russian Exploration Area on the Mid-Atlantic Ridge</i>
<b>Posters: Geochemistry and Biogeochemistry</b>	
6	<b>Hailey Conrad</b> : <i>Time series analysis of hydrothermal vent growth, flow coloration, and colony changes at Mushroom Vent in ASHES Field off the coast of Oregon</i>
7	<b>Jennifer Houghton</b> , Dionysis Foustoukos: <i>Microbial sulfur oxidation under high pressure conditions: A whiff of O<sub>2</sub></i>
8	<b>Benjamin Jelen</b> , Donato Giovannelli, Costantino Vetriani: <i>Revealing the genes responsible for sulfur respiration in Thermovibrio ammonificans</i>
9	<b>Midori Suzuki</b> , Robert Jenkins, Shouzo Ogiso, Masahiro Matada, Nobuo Suzuki: <i>Decay process of sea turtle-falls and their related ecosystems</i>
<b>Posters: Microbiology</b>	
10	<b>Dionysis Foustoukos</b> , Sushmita Patwardhan, Kelli Mullane, Francesco Smedile, Ileana Pérez-Rodríguez, and Costa Vetriani: <i>Lithotrophic nitrate reduction under high-pressure conditions at deep-sea vents</i>
11	<b>Diego Franco</b> , Camila N. Signori, Wânia Duleba, Vivian H. Pellizari: <i>Deep-sea sediment microbial communities at Hook Ridge hydrothermal vent in the Bransfield Strait, Northwestern Antarctic Peninsula</i>
12	<b>Jialin Hou</b> , Muhammad Zohaib Nawaz, Stefan Sievert, Xiang Xiao, Fengping Wang: <i>Comparative metagenomics reveals contrasting microbial communities inhabiting deep-sea chimneys at different stages of activity</i>
13	<b>Dimitri Kalenitchenko</b> , Erwan Peru, Pierre E. Galand, Nadine Le Bris: <i>High-resolution monitoring of deep-sea wood falls fill the gap between in situ conditions and microcosm experiments</i>
14	<b>Sushmita Patwardhan*</b> , Donato Giovannelli, Costantino Vetriani: <i>Prokaryotic Diversity and Function at a Newly Discovered Shallow-water Gas Vent Site in the Tyrrhenian Sea</i>
15	<b>Adelaide Rhodes</b> , Alex Emch, Elizabeth Lee, Heaven Roberts: <i>Identifying potential microbial drivers of community succession and organization near deep sea hydrothermal vents</i>

16	<b>Kathleen Scott</b> , Juliana Leonard, Ryan Keeley, and USF MCB 4404L: <i>Diversity in carbon dioxide concentrating mechanisms among gammaproteobacterial chemolithoautotrophs from the deep-sea hydrothermal vents and elsewhere</i>
17	<b>Camila Signori*</b> , Vivian H. Pellizari, Stefan M. Sievert: <i>Controls on Chemoautotrophic Production along Depth Profiles of the Water Column off the Northwestern Antarctic Peninsula</i>
18	<b>Francesco Smedile</b> , Ashley Grosche, Sushmita Patwardhan, Donato Giovannelli, Ben Jelen, Costantino Vetriani: <i>Hydrogen oxidation coupled to sulfur reduction in deep-sea vent bacteria</i>
19	<b>Tresa Thomas*</b> , Vijayakumar Kanojia, LokaBharathi PA: <i>Chemosynthesis at the expense of thiosulfate in the mangrove clam <i>Polymesoda erosa</i> and the major bacterial contributors</i>
20	<b>Andrew Thurber*</b> , Sarah Seabrook, and Rory Welsh: <i>Methane cycling in the High Antarctic – Paradigms lost?</i>
21	<b>Kecen Zhou</b> , Steven J Hallam, Jason B. Sylvan: <i>Opening a single-cell genomic window on the ecological distribution and metabolic potential of uncultivated Sulfiphilic Bacteroidetes</i>
<b>Posters: Symbiosis</b>	
22	<b>Tjorven Hinzke*</b> : <i>Physiological basis of the Riftia pachyptila symbiosis</i>
23	<b>Yi Lan*</b> , Jin Sun, Weipeng Zhang, Ting Xu, Chong Chen, Jian-Wen Qiu, Pei-Yuan Qian: <i>Interaction relationship between a chemosymbiotic Calyptogenia clam and its vertically-transmitted endosymbiont revealed through meta-transcriptome sequencing</i>
24	<b>Juliana Leonard</b> , Jessica Panzarino, Roxanne Beinart, Jon Sanders, Jennifer Delaney, Peter Girguis, Kathleen Scott: <i>Redox substrates and autotrophic pathways of Endoriftia Persephone, the gammaproteobacterial endosymbiont of vestimentiferan tubeworm Riftia pachyptila</i>
25	<b>Kaori Motoki</b> , Tomo-o Watsuji, Emi Hada, Yukiko Nagai, Yoshihiro Takaki, Asami Yamamoto, Kenji Ueda, Takashi Toyofuku, et al.: <i>Compositional and functional shift in epibiotic bacterial community of hydrothermal vent</i>
26	<b>Jessica Panzarino</b> , Tom Yu, Roxanne Beinart, Jennifer Delaney, Kathleen Scott, Frank Stewart, Peter Girguis: <i>Switch-hitting carbon: An investigation of metabolic flexibility in hydrothermal vent tubeworm symbiosis</i>
27	<b>B�er�enice Piquet*</b> , Bruce Shillito, Fran�ois Lallier, Ann C. Andersen and S�ebastien Duperron: <i>Apoptosis in the tissues of Bathymodiolus mussels under bathymetric pressurized versus unpressurized conditions: the possible role of apoptosis in regulating the branchial microbiota</i>
28	<b>Szafrański KM*</b> , Deschamps P, Cunha MR, Gaudron SM, Duperron S : <i>Symbiont-related bacteria colonize plant substrates at hydrothermal vents and cold seeps</i>
29	<b>Yi Yang</b> , Jin Sun, Ting Xu, Jian-Wen Qiu, Pei-Yuan Qian: <i>The symbiotic relationship between a methane seep tubeworm and its symbiont as revealed through meta-transcriptomic analysis</i>



<b>Posters: Physiology and Adaptation</b>	
30	<b>Joan Bernhard</b> , Giuliana Panieri, Daniel J. Fornari, Mette Marianne Svenning: <i>Gas-hydrate foraminifers: cellular adaptations and first association with putative methanotrophs</i>
31	<b>Paul Dando</b> , Sophie Pendlebury, Christopher Pham, Ana Colaço: <i>Aquarium observations on the behaviour and nutrition of animals from the hydrothermal vents at the Menez Gwen site on the MAR</i>
32	<b>Julia Machon*</b> , Magali Zbinden, Juliette Ravaux, Dominique Barthelemy, Philippe Lucas, Jozée Sarrazin, Pierre-Marie Sarradin, Bruce Shillito: <i>AbbyssBox: public exhibition of deep-sea hydrothermal fauna and associated research projects</i>
33	<b>Julia Sigwart</b> , Chong Chen, Ken Takai: <i>A first glimpse into the physiology and metabolism of Indian Ocean vent gastropod holobionts</i>
34	<b>Jin Sun</b> , Ting Xu, Pei-Yuan Qian, Jian-Wen Qiu: <i>Understanding the deep-sea biomineralization tool-kit by comparative proteomic characterization of deep-sea Bathymodiolus and shallow-water Modiolus mussels</i>

\*Presenter also giving a flash talk during poster session

## Poster session II with selected flash talks\* and Reception

Thursday August 31, 17:45, Clark 507

<b>Posters: Community Structure and Dynamics</b>	
35	<b>Joan Manel Alfaro-Lucas*</b> , Martin Foviaux, Daniela Zeppilli, Florence Pradillon, Jozée Sarrazin: <i>The role of environmental filtering on community structure in the vicinity of hydrothermal vents in the Lucky Strike vent field (Mid-Atlantic Ridge)</i>
36	<b>Emmelie Astrom*</b> , Arunima Sen, Michael L. Carroll, William G. Ambrose Jr, JoLynn Carroll: <i>Methane release at underwater mounds in the Barents Sea (76° N) and its impact on Arctic macro-benthic faunal communities</i>
37	<b>Jill Bourque</b> , Amanda W.J. Demopoulos: <i>Drivers of benthic community structure at hydrocarbon seep communities along the western Atlantic margin</i>
38	<b>Fabio Cabrera De Leo</b> , Steve Mihály, S. Kim Juniper: <i>8 years of continuous monitoring of NE Pacific cold-seeps and hydrothermal vents using the NEPTUNE cabled observatory</i>
39	<b>Adriana Gaytan-Caballero</b> , Elva Escobar Briones, Heiko Sahling, Ian MacDonald: <i>Preliminary results on biodiversity of Campeche knolls, Mexico: high connectivity of species</i>
40	<b>Yann Lelièvre</b> , Pierre Legendre, Marjolaine Matabos, Steve Mihály, Raymond W. Lee, Pierre-Marie Sarradin, Claudia P. Arango, Jozée Sarrazin: <i>Astronomical and atmospheric impacts on deep-sea hydrothermal vent invertebrates</i>
41	<b>Susan Mills</b> , Nadine Le Bris, Stace Beaulieu, Nam Siu, Lauren Mullineaux: <i>Community matters: Post-eruption settlement at vent sites with and without a surviving animal community</i>
42	<b>Phillip Turner*</b> , Cindy L. Van Dover: <i>Contributions of rare and abundant species to the functional diversity of deep-sea hydrothermal vent communities</i>

43	<b>Jamie Wagner</b> , Clara Smart, Christopher German: <i>Extensive microbial mats discovered at seep in oxygen minimum zone off the CA coast by Redondo Knoll</i>
44	<b>Young, E.L.</b> , Smith, C.R., Halanych, K.M., Amon, D.J.: <i>Biodiversity, Connectivity &amp; Ecosystem Function of Deep-Sea Organic-Rich Whale-Bone and Wood-Fall Habitats: A Comparative Experimental Approach</i>
<b>Posters: Biogeography</b>	
46	<b>Abbie Chapman</b> , Diva Amon, Maria C. Baker, Stace Beaulieu, P.A. Loka Bharathi, Rachel E. Boschen, Simone N. Brandão, Chong Chen, et al.: <i>sFDvent: Building the first global functional trait database for hydrothermal vent species</i>
47	<b>Steffen Kiel</b> : <i>Biogeography of the vent and seep fauna—a network approach</i>
48	Dongsung Kim, <b>Won-Gi Min</b> , Hyun Soo Rho, Se-Jong Ju: <i>Comparison of faunal assemblages by the hydrothermal chimney type at southern Lau back-arc basin revealed by high-resolution video image</i>
49	<b>Clifton Nunnally*</b> , Craig McClain: <i>Traits associated with of species associated with deep-sea wood falls and niche width expansion shared between chemosynthetic communities</i>
50	<b>Olivia Pereira*</b> , Mauricio Shimabukuro, Angelo F. Bernardino, Paulo Y. G. Sumida: <i>Occurrence of Alvinocaris muricola in whale bones from the SW Atlantic: molecular proximity with the Atlantic Equatorial Belt population</i>
52	<b>Dongsheng Zhang</b> : <i>Phylogeny of Ophryotrocha (Polychaeta, Dorvilleidae) from hydrothermal vents with descriptions of six new species</i>
53	<b>Yadong Zhou</b> , Ruiyan Zhang, Dongsheng Zhang, Bo Lu, Rongcheng Lin, Chunsheng Wang: <i>Diversity and biogeography of vent fauna at hydrothermal vents from Southwest Indian Ocean Ridge</i>
<b>Posters: Evolution (including evolutionary history)</b>	
54	<b>Suzanne Dufour*</b> , McIlroy, D.: <i>Ediacaran fossils suggest a role for chemosynthesis in early animal evolution</i>
55	<b>Suzanne Dufour*</b> : <i>Farmers and ranchers: how thyasirid bivalves associate with chemosynthetic bacteria</i>
56	<b>Magdalena Georgieva</b> , Crispin T.S. Little, Alexander D. Ball, Adrian G. Glover: <i>Microbial-tubeworm associations in a 440-million-year-old hydrothermal vent community</i>
57	<b>Krzysztof Hryniewicz</b> , Kazutaka Amano, Robert G. Jenkins, Steffen Kiel: <i>Thyasirid bivalves from ancient cold seeps and their evolution</i>
58	<b>Didier Jollivet</b> , Alexis Bioy, Marie Verheye, Anne-Sophie Le Port, Baptiste Faure, Jean Mary: <i>Protected polymorphism of phosphoglucomutase in the Pompeii worm and its variant adaptability is only governed by two QE linked mutations</i>
59	<b>Genki Kobayashi*</b> , Ryutarō Goto, Tsuyoshi Takano, Shigeaki Kojima: <i>Evolutionary shift from infaunal to epifaunal lifestyle may have enabled bamboo worms (Annelida: Maldanidae) to invade chemosynthesis-based ecosystems</i>
60	<b>Krylova, E.</b> , Johnson S.B., Sahling H., Audzijonyte A., Vrijenhoek R.: <i>Phylogenetic radiation of chemosymbiotic vesicomysids: trends, adaptations, timing</i>

61	<b>Crispin Little</b> , Fiona L. Gill, Jordan Bestwick, Ian C. Harding, Jonathan A. Todd and Steffen Kiel: <i>Paleogene and Neogene Caribbean and South American seep communities</i>
62	<b>Yuichi Nakajima</b> , Masako Nakamura, Hiromi Watanabe, Satoshi Mitarai: <i>Stepping-stone larval dispersal contributes to genetic diversity and connectivity among populations of a hydrothermal vent limpet in the Okinawa Trough</i>
<b>Posters: Life History</b>	
63	<b>Shawn Arellano</b> , Chelsea Collins, and Jacob T. Krodell: <i>Larval development and feeding in two species of an abundant snail at hydrothermal vents on the Mariana Arc and Back-Arc system</i>
64	<b>Caitlin Plowman*</b> , Craig M. Young: <i>Reproductive patterns of cold-seep mussels in the western Atlantic and Gulf of Mexico: effects of depth and detritus</i>
65	Andrey Vedenin, Galkin Sergey, Kokarev Valentin, <b>Andrey Gebruk</b> : <i>Bottom community associated with shallow-water methane seep in the Laptev Sea</i>
<b>Posters: Trophic Ecology</b>	
66	Helena Wiklund, Diva J Amon, <b>Adrian G. Glover</b> : <i>Three new Ophryotrocha species (Polychaeta: Dorvilleidae) from hydrothermal vent and whale-fall habitats in the Southern Ocean</i>
67	<b>Breea Govenar</b> , Leah Smith, Brittany Baker: <i>Identifying invertebrate prey of hydrothermal vent gastropods</i>
68	<b>Se-Jong Ju</b> , Ah-Ra Ko, Won-Kyung Lee: <i>Understanding the energy flow of hydrothermal vent ecosystem in North Fiji Basin using stable isotope ratios and lipid biomarkers</i>

\*Presenter also giving a flash talk during poster session

# Excursions

## **Martha's Vineyard Bus tour**

Hotel pickup from 7:30 a.m., depart Island Queen Ferry from Falmouth Harbor at 9:00 a.m. for arriving at charming Oak Bluffs. We'll take a full island bus tour (3 hrs), including visits to Edgartown, the fishing village Menemsha, and the clay cliffs and lighthouse at Gay Head. Afternoon can be spent at your leisure before returning to Woods Hole.

## **Martha's Vineyard Bike Tour**

Hotel pickup from 7:30 a.m., depart Island Queen Ferry from Falmouth Harbor at 9:00 a.m. for arriving at charming Oak Bluffs. Rent bikes (included), ride to scenic Edgartown with stops in between. Lunch on your own and free time in Edgartown, ride to beautiful Katama Beach and time at beach. Return to Oak Bluffs and take ferry to Woods Hole at 6:15 p.m. (arrival at 7 p.m.).

## **National Seashore Outing**

Hotel pickup from 9 a.m., depart for Cape Cod National Seashore. Nature walk on the beach (10:30 a.m. to 12:30 p.m.), then lunch on your own at Mac's on the Pier, Wellfleet, back to Falmouth by 4:30pm.

## **Shining Sea Bikeway Tour**

19 miles (30 km)

Hotel pickup from 8:30 a.m. Bike 9 a.m. to 1 p.m. Bike rental, lunch, and hotel pickup/drop-off included.

## **Whale Watch and Natural History Museum**

Hotel pickup from 9 a.m., depart for Cape Cod Museum of Natural History. Lunch on your own at Mattakeese Wharf or Osterville Fish Too. 2:30 to 6:30 p.m., Hyannis Whale Watcher Cruises. Return to Falmouth by ~7:30 p.m.

## **Woods Hole Tours**

11:30 a.m. to 1:00 p.m. Meet at WHOI Information Office in Woods Hole and visit WHOI facilities and listen to anecdotes with deep-sea microbiologist Carl Wirsen (free tickets still available).

2 p.m. to 4:15 p.m. Meet at WHOI Information Office in Woods Hole and go on an entertaining and informative tour of WHOI, NOAA Aquarium, and MBL Marine Resource Center with deep-sea biologist Stace Beaulieu (sold out).

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# Symposium Transportation and Parking

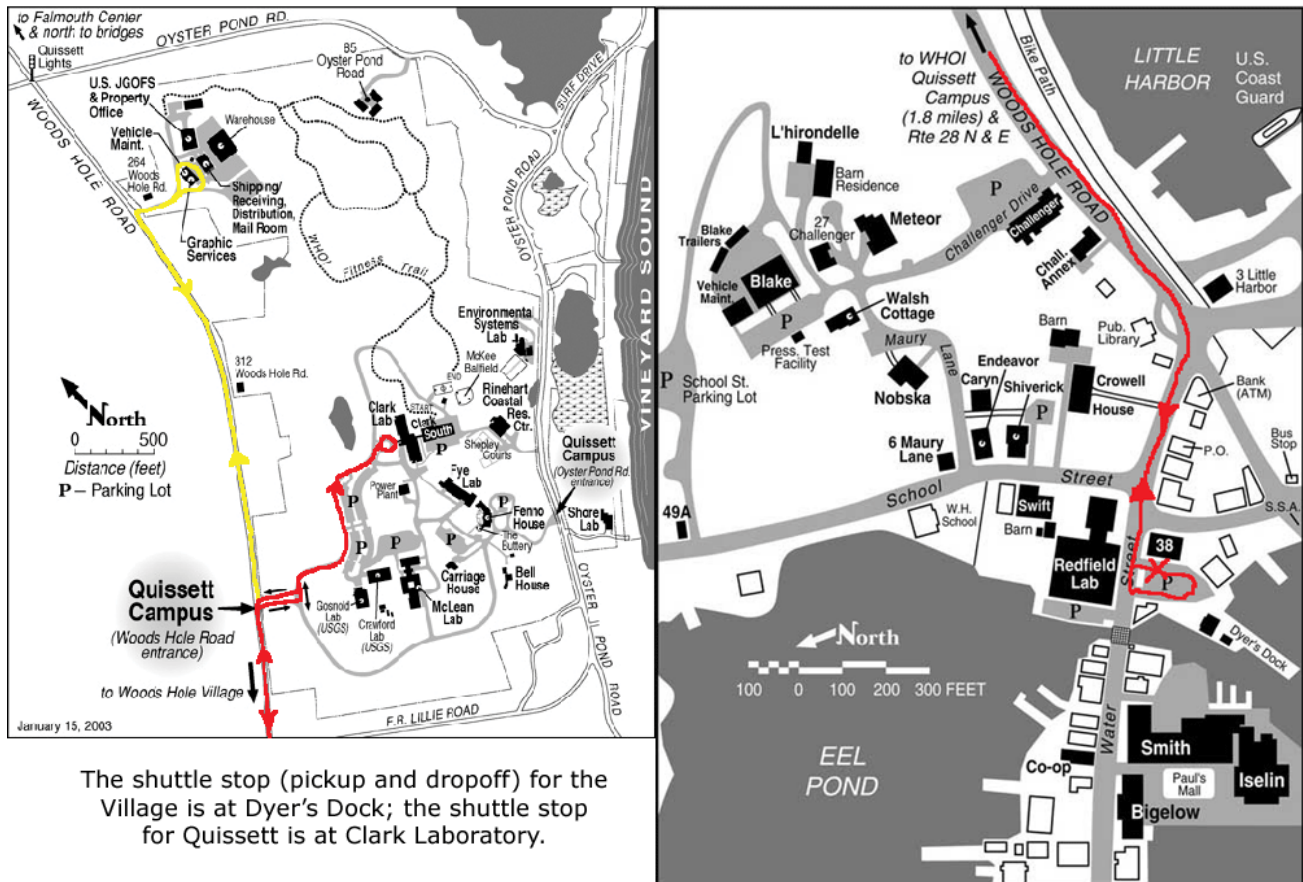
**Symposium plenary sessions and presentations will take place in Redfield Auditorium (Water Street, WHOI's Village campus) and poster sessions on the 5th floor of Clark Lab (Woods Hole Road, WHOI's Quissett Campus).** There will be a bus to transport participants between certain hotels (see next page), Woods Hole Village and the Quissett Campus. Parking is **very limited** in Woods Hole Village and it is recommended that if you have your own transportation to park on Quissett Campus, which is included in the symposium shuttle bus route (see next page) and where a WHOI passenger shuttle is also available that goes back and forth to the village (see below). We also recommend car pooling.

## WHOI Passenger Shuttle Schedule

For transport between Redfield and Clark, runs every 20 minutes

The Dyers Dock stop is in the parking lot across Water Street from Redfield. The shuttle leaves at :00, :20, :40 past the hour from 8:00 to 17:40.

The Clark stop is in the circle in front of Clark and leaves at :10, :30, :50 past the hour from 8:10 to 17:50.

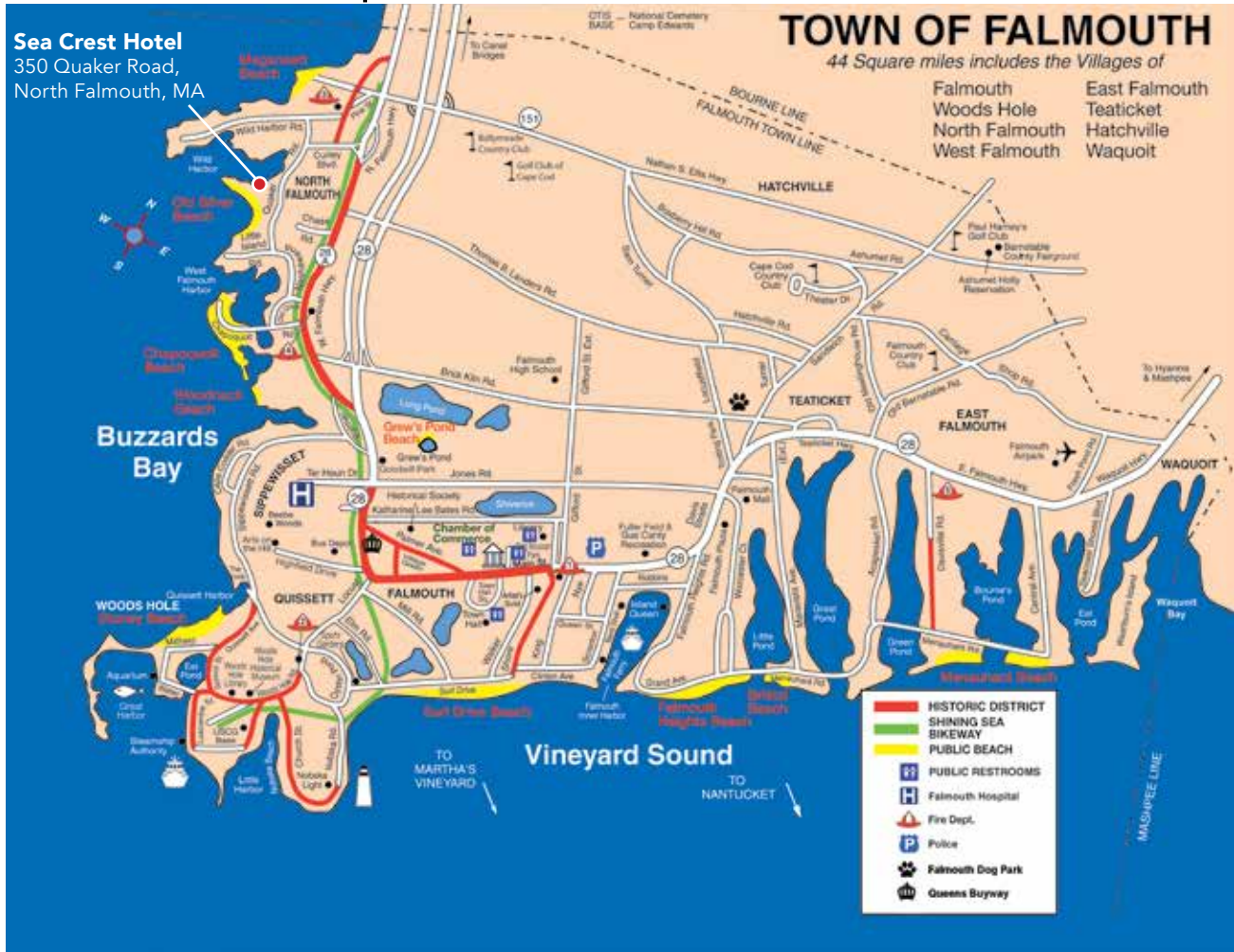


# Hotel Shuttle Bus Schedule\*

<b>Shuttle Bus Services between CBE6 Designated Hotels, Clark Lab/Parking Lot, and Redfield Bld.</b>	
<b>White Tie Shuttle Bus #1 Route</b>	
Red Horse	28 Falmouth Heights
Falmouth Heights Lodge	146 Falmouth Heights Road
Shoreway Acres	59 Shore Street
Clark Lab	360 Woods Hole Road
<b>White Tie Shuttle Bus #2 Route</b>	
Holiday Inn	291 Jones Road
Coonamessett Inn	311 Gifford Street
Inn on the Square	40 North Main Street
Clark Lab	360 Woods Hole Road
<b>Times below are when shuttle buses start pickup routes. There will be at least 2 subsequent trips if needed between these locations and the CBE6 Venue, with pickup times approx. 20-30 mins apart.</b>	
<b>SCHEDULE</b>	
<b>Sunday, August 27</b>	
<b>1st Trip Time</b>	
<b>4:30 p.m.</b>	6:00 p.m. Morss Colloquium at Lillie Auditorium, Woods Hole
<b>9:00 p.m.</b>	Depart Redfield for hotels
<b>Monday, August 28</b>	
<b>6:30 a.m.</b>	Breakfast starting at 7 a.m., Redfield Tent, Woods Hole Village Campus
<b>5:00 p.m.</b>	Depart Redfield for Clark Lab Poster Session and Reception
<b>7:40 p.m.</b>	Depart Clark Lab for Hotels
<b>Tuesday, August 29</b>	
<b>7:00 a.m.</b>	Breakfast starting at 7:30 a.m., Redfield Tent, Woods Hole Campus
<b>5:30 p.m.</b>	Depart Redfield for Hotels
<b>5:30 p.m.</b>	Depart Redfield for Sea Crest Hotel and Symposium Dinner
<b>8:45 p.m.</b>	Depart Sea Crest for Hotels
<b>Wednesday, August 30</b>	
Excursion Day (see page 16 for details)	
<b>Thursday, August 31</b>	
<b>7:00 a.m.</b>	Breakfast starting at 7:30 a.m., Redfield Tent, Woods Hole Campus
<b>5:20 p.m.</b>	Depart Redfield for Clark Lab Poster Session and Reception
<b>7:55 p.m.</b>	Depart Clark Lab for Hotels
<b>Friday, September 1</b>	
<b>7:00 a.m.</b>	Breakfast starting at 7:30 a.m., Redfield Tent, Woods Hole Campus
<b>3:40 p.m.</b>	Depart Redfield for Hotels

\*provided by White Tie Luxury Transportation

# Falmouth Map



## Public Transportation

**WHOOSH Trolley** runs from Woods Hole (Steamship Authority dock) to Falmouth Mall, \$2. Operates from 9:45 to 19:15 every half hour (leaves Falmouth Mall at :15 and :45 past the hour and Woods Hole at :10 and :40 past the hour). Can also be flagged down between stops.

### Falmouth Taxi

508-548-3100

# Hotel Information

## **Inn on the Square**

40 North Main Street  
Falmouth, MA  
Phone: 1-800-676-0000

## **Sands of Time**

Motor Inn & Harbor House  
549 Woods Hole Road  
Woods Hole, Cape Cod, MA 02543  
(508) 548-3623 or 800- 841-0114

## **Holiday Inn**

291 Jones Road  
Falmouth, MA  
Phone: (877) 272-6415

## **Coonamessett Inn**

311 Gifford Street  
Falmouth, MA  
Phone: (508) 548-2300

## **Red Horse Inn**

28 Falmouth Heights  
Falmouth, MA  
Phone: (508) 548-0053 or (508) 495-0152

## **ShoreWay Acres Resort Inn**

59 Shore Street  
Falmouth, MA 02540  
Email: tab@shorewayacresinn.com  
Phone: 508-540-3000

## **Sea Crest Beach Hotel**

350 Quaker Road  
North Falmouth, MA 02556  
Telephone: (800) 225-3110

## **Falmouth Heights Motor Lodge**

146 Falmouth Heights Road  
Falmouth, MA 02540  
Phone: (508) 548-3623 or (800) 468-3623

# Some Suggested Local Restaurants

## Woods Hole:

Captain Kidd (bar/restaurant)	77 Water Street	508-548-8563
Coffee Obsession (internet café)	38 Water Street	508-540-8130
Jimmy's Sandwich Shop (hot dogs, hamburgers, sandwiches: take-out mostly, only a few tables)	22 Luscombe Ave.	508-540-6823
Pie in the Sky (bakery, sandwiches)	10 Water Street	508-540-5475
Landfall Restaurant	9 Luscombe Ave.	508-548-1758
Quicks Hole Tacqueria	6 Luscombe Ave.	508-495-0792
Quicks Hole Tavern	29 Railroad Ave.	508-495-0048
Shuckers Raw Bar in Woods Hole	91A Water Street	508-540-3850
The 41-70	71 Water Street	508-457-3100
Water Street Kitchen and Public House	56 Water Street	508-540-5656
Woods Hole Market and Provision (small grocery store with sandwiches, pizza available)	87 Water Street	508-540-4792

## Falmouth:

The British Beer Company (pub)	263 Grand Avenue	508-540-9600
Anejo Mexican Bistro and Tequila Bar	188 Main St.	508-388-7631
Bangkok Cuisine	291 Main St.	508-548-1728
Casino Wharf FX (water view)	286 Grand Ave.	508-540-6160
Chapoquoit Grill	410 West Falmouth Highway	508-540-7794
Coonamesett Inn Restaurant	311 Gifford St.	508-548-2300
The Flying Bridge (water view- some outdoor dining)	220 Scranton Ave.	508-548-2700
Glass Onion (reservations for 6+ only)	37 North Main St.	508-540-3730
Simply DiVine Pizza	271 Main St.	508-548-1222
Osteria La Civetta (Italian)	133 Main St.	508-540-1616
C-Salt Wine Bar and Grille	75 Davis Straits (Rte 28)	774-763-2954
Golden Swan (Indian cuisine)	323 Main St.	508-540-6580
La Cucina Sul Mare (Italian cuisine)	237 Main St.	508-548-5600
Maison Villatte Boulangerie (French bakery)	267 Main St.	774-255-1855
Liam Maguire's Irish Pub & Restaurant	273 Main St.	508-548-0285
Gourmet Garden (Chinese)	452 Main St.	508-540-8204
Quarterdeck Restaurant (bar/restaurant, cozy atmosphere)	164 Main St.	508-444-8090

*This is just a sampling of the many restaurants around Falmouth and Woods Hole. Ask the locals for recommendations, or if you are looking for something specific.*



## THE 40TH ANNIVERSARY OF THE DISCOVERY OF HYDROTHERMAL VENTS

In 1977, scientists made a stunning discovery on the bottom of the Pacific Ocean that forever changed our understanding of planet Earth and life on it. They found seafloor vents gushing shimmering, warm, mineral-rich fluids into the cold, dark depths. And, to their complete surprise, they found that the vents were brimming with extraordinary, unexpected life supported by a process known as chemosynthesis, utilizing Earth's internal energy.

The discovery, made by the collective efforts of scientists and engineers at institutions around the world, spawned a revolution in deep-sea exploration that continues today. The abundance of life that thrives in the deep sea has proven that life can exist in even the most extreme environments, leading to new insights about the evolution of life of on Earth and perhaps elsewhere in the universe.

**CBE6**  
AUG 27 – SEP 1 2017  
Woods Hole, Mass. USA

[cbe2017.org](http://cbe2017.org)

