

**MBNMS Research Activity Panel
Meeting Summary
November 13, 2020**

Host: Steve Haddock – Deep-Sea Environment (Monterey Bay Aquarium Research Institute)

Location: Virtual Meeting (call-in information sent to RAP members)

Date: Friday, November 13, 2020; 9:00 am to 12:00 pm

Members:

	Discipline	Primary/ Alternate	Name	Institution
X	Research Coordinator		DeVogelaere, Andrew	Monterey Bay National Marine Sanctuary
	Biological Oceanography	primary	Kudela, Raphael	University of California, Santa Cruz
X	Biological Oceanography	alternate	Ruhl, Henry	Central and Northern California Ocean Observing System
X	Deep-Sea Environment	primary	Cailliet, Greg	Moss Landing Marine Laboratories (retired)
X	Deep-Sea Environment	alternate	Haddock, Steve †	Monterey Bay Aquarium Research Institute
X	Estuarine Environment	primary	Clark, Ross	Central Coast Wetlands Group
	Estuarine Environment	alternate	Wasson, Kerstin	Elkhorn Slough NERR and Foundation
	Fisheries	primary	Lindley, Steve	NOAA Fisheries Service
	Fisheries	alternate	Owens, Brian	California Department of Fish and Wildlife
	Marine & Coastal Geology	primary	Golden, Nadine	United States Geological Survey
	Marine & Coastal Geology	alternate		
	Marine Conservation Biology	primary	Goldbogen, Jeremy	Hopkins Marine Station
	Marine Conservation Biology	alternate	Micheli, Fiorenza	Hopkins Marine Station
X	Nearshore Environment	primary	Southall, Brandon	Southall Environmental Associates, Inc.
	Nearshore Environment	alternate	Carr, Mark	University of California, Santa Cruz
X	Physical Oceanography	primary	Cheriton, Olivia	United States Geological Survey
	Physical Oceanography	alternate	Orescanin, Mara	Naval Postgraduate School
	Shelf & Slope Environment	primary	Lindholm, James	California State University Monterey Bay
X	Shelf & Slope Environment	alternate	Sogard, Susan	NOAA Fisheries Service (retired)
X	Social Sciences	primary	Pomeroy, Carrie	California Sea Grant Extension Program
X	Social Sciences	alternate	Scorse, Jason	Middlebury Institute of International Studies
	Water Quality	primary	Hunt, John *	University of California, Davis
X	Water Quality	alternate	Hoover, Bridget	Monterey Bay National Marine Sanctuary

*Sanctuary Advisory Council Member: Research (Primary)

†Sanctuary Advisory Council Member: Research (Alternate)

RAP Coordinator:

X	Burton, Erica	Monterey Bay National Marine Sanctuary
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GUESTS

Grant, Kevin	Monterey Bay National Marine Sanctuary, Acting Superintendent
King, Chad	Monterey Bay National Marine Sanctuary
Wooninck, Lisa	West Coast Region, Office of National Marine Sanctuaries

CONSENT ITEMS

Introductions/Modifications to the Agenda (Steve Haddock)

HOST PRESENTATION AND DISCUSSION

MBARI Research and Institutional Update (Steve Haddock)

- Steve provided brief overview of MBARI PIs and their current research focus. Many research projects at MBARI have direct application to MBNMS management, including: characterizing the seafloor in the proposed wind energy area; soundscape characterization and impacts of seal bombs; assessing prey distribution with active acoustics; cm scale mapping of unique areas such as the octopus garden; the deep-sea coral observatory at a Sanctuary Ecologically Significant Areas (SESA); the MBON project; and development of a UAV program.
- Steve also touched upon research in his lab, including:
 - zooplankton biogeographic boundaries in the California Current System as determined from metabarcoding
 - bioluminescence in corals and sea pens
 - deep-sea physiology lab experiments
 - chromosome-scale ctenophore genome
 - other tech-related projects (virtual reality, drones, planktivore AUV camera)
 - deep-sea mining issue.
- It was suggested that a presentation to the SAC on deep-sea mining might be instructive and appreciated.
- It is expected that the last active year for the R/V *Western Flyer* will be 2021, and the new ship will begin working midway through 2023.

SANCTUARY ADVISORY COUNCIL UPDATE

Summary of 2020 Advisory Council Meetings (Steve Haddock)

- For meeting minutes, see: <https://montereybay.noaa.gov/sac/sacma.html>
- Steve read a note from Dawn Hayes that expressed appreciation for the RAP's detailed review of the Draft MBNMS Management Plan.
- It was requested that we remind the SAC that the RAP is available as a resource to them.

PRESENTATION REQUESTED BY RAP

West Coast Regional Office Update (Lisa Wooninck/ONMS)

- Lisa provided overview of the west coast regional office, including:
 - Staff (11 people)
 - FY20 and FY21 priorities (with emphasis on deep-sea corals and soundscapes)
 - Changes:
 - Removed: Veterans Engagement
 - Removed: LIMPETS (still active, but not under WCR)

- Removed: Signage Plan and Sharing Resources/Organizational Health
- Merged: Ocean Acidification with Climate Change
- Merged: Whale Entanglement with Ship Strikes
- Added: White Shark Sub-Adult Population Monitoring
- Added: Maritime Cultural Landscape (includes indigenous, not just shipwrecks)
- Vessel needs
 - 22-foot Radon in development for Monterey area
- Chumash Heritage NMS nomination 5-year review (new information on offshore wind and aquaculture opportunity areas).
- Examination of offshore wind projects and compatibility with vessel traffic and fishing
- Vessel re-routing study, incorporated data from whale, fishing, coast guard
- DOE is funding environmental baselines, environmental monitoring and validation
- Funding opportunity via boem.gov/environmental-studies-planning
- Brandon mentioned State of the Science program for offshore winds.

SANCTUARY RESEARCH UPDATE

E/V Nautilus cruise (Chad King/MBNMS)

- Chad provided overview of recent ROV surveys via Ocean Exploration Trust at Pioneer Canyon and Davidson Seamount.
- Octopus brooding areas and whale fall were revisited at Davidson Seamount; and an area southwest of Davidson was explored for warm-water venting and octopus brooding areas (none found), and corals and sponges.
- For more information, see:
 - <https://sanctuariesimon.org/2020/10/sanctuary-scientists-re-visit-a-whale-fall/>
 - <https://sanctuariesimon.org/2020/09/video-discover-wonder-the-octopus-garden/>

ED RICKETTS AWARD AND LECTURE

Update on 2020 Award Recipient and Event (Erica Burton)

- 2020 award recipient: Dr Terrie Williams, Director of the Center for Marine Mammal Research and Conservation, University of California, Santa Cruz.
- Due to COVID, we lost momentum and were uncertain how we would schedule event (in-person or virtual), we concluded virtual.
- Virtual event will be live stream broadcast as part of Office of National Marine Sanctuaries webinar series.
- Save the Date: Thursday Jan 21st (~6pm): details will be sent out/advertised.
- Call for Nominations for 2021 Award is now open; nominations due mid-December; voting will occur in January.
- **ACTION**: Erica will email RAP reminder of Call for Nominations.

INSTITUTIONAL RESEARCH UPDATES DURING COVID

RAP Roundtable Discussion

- RAP members were asked to consider the following questions:

- How are you conducting research during COVID?
- Are you conducting research on the effects of COVID on environment?
- Other institutional updates
- RAP members briefly discussed what they were working on, but deemed it too early to discuss results.
- Research continues in the area, but has clearly been limited by the virus. Some scientists are taking this as an opportunity to finish analyses and writing of “back burner” projects.
- RAP members suggested they present their results at the May 2021 meeting.
- **ACTION**: May meeting will focus on RAP members presenting results of COVID-related research (Brandon Southall will develop the presentation)
- Jason Scorse mentioned that the House of Representatives have introduced the "Ocean-based Climate Solutions Act", including provisions for Blue Economy, Greening of ports, Sustainable fisheries and aquaculture, and offshore wind.
- No other decisions or actions.

SUGGESTED FUTURE AGENDA ITEMS

- May 2021 meeting: RAP presentations on the effects of COVID on environment.

Future Agenda Items (running list):

- Socioeconomic benefits of science (per Scorse)
- RAP Focus:
 - Long-term Monitoring
 - Coordinated water quality monitoring: lessons learned (Hunt/Hoover)
 - Consider interns to follow-up on RAP monitoring plan tasks (Hunt)
- RAP Membership:
 - Reinvigorate non-attending members
 - Constituent outreach (Hunt)
- Happy Whale App (Jeremy Goldbogen)
- California Collaborative Fisheries Research Program (CCFRP), and MPA monitoring and synthesis of historic data sets in MBNMS (Mark Carr and Rick Starr)
- Microplastics: How an under-funded marine science community deals with a significant new problem
 - Microplastics and seabirds (chemical cues; Matt Savoca/Hopkins Marine Station)
 - Choy et al. (MBARI)
 - NOAA’s Marine Debris Program (Sherry Lippiatt)
 - Monterey Bay Aquarium (Kyle Van Houtan)
 - Watersheds (Bridget Hoover has preliminary data)
 - Davidson Seamount (MBNMS office)
- Invite research representative of GFNMS Advisory Council (John Largier)
- MBA’s Conservation and Science Program update (Kyle Van Houtan)
- Pelican/fishery interactions (SAC discussed; per Hunt)
- MPAs as monitors/buffers of climate change (e.g., recent OPC presentation at SAC; Micheli’s recent newspaper article)

- Ocean Discovery Institute: High School Research Program in Monterey Bay (Joel Barkan) – JAN 2021
- Seal bomb/Soundscape Update (per Scorse)
- Coastal Land-Air-Sea Interaction (CLASI) experiment (Jamie McMahan/NPS) – JAN 2021
- Research on the effects of COVID on environment – MAY 2021

2021 RAP Meeting Schedule and Locations

Date	Hosts	Location
January 8	Cailliet (MLML)	Virtual Meeting (until further notice)
March 12	Tbd	Virtual Meeting (until further notice)
May 14	Tbd	Virtual Meeting (until further notice)
September 10	Ruhl (CeNCOOS)	Virtual Meeting (until further notice)
November 12	Tbd	Virtual Meeting (until further notice)