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:

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Primary/ Alternate</th>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>X Research Coordinator</td>
<td>primary</td>
<td>DeVogelaere, Andrew</td>
<td>Monterey Bay National Marine Sanctuary</td>
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<tr>
<td></td>
<td>alternate</td>
<td>Kudela, Raphael</td>
<td>University of California, Santa Cruz</td>
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<td>Biological Oceanography</td>
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<td>Cailliet, Greg</td>
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<td>Central and Northern California Ocean Observing System</td>
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<td>X Deep-Sea Environment</td>
<td>primary</td>
<td>Haddock, Steve†</td>
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<td>Elkhorn Slough NERR and Foundation</td>
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<td>Goldbogen, Jeremy</td>
<td>Hopkins Marine Station</td>
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<td>X Nearshore Environment</td>
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<td>Southall, Brandon</td>
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<td>Carr, Mark</td>
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<td>Pomeroy, Carrie</td>
<td>California Sea Grant Extension Program</td>
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<td>Scorse, Jason</td>
<td>Middlebury Institute of International Studies</td>
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<td>Water Quality</td>
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<td>Hunt, John*</td>
<td>University of California, Davis</td>
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<td>Hoover, Bridget</td>
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*Sanctuary Advisory Council Member: Research (Primary)
†Sanctuary Advisory Council Member: Research (Alternate)

RAP Coordinator:

X Burton, Erica  Monterey Bay National Marine Sanctuary
GUESTS

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Grant, Kevin</td>
<td>Monterey Bay National Marine Sanctuary, Acting Superintendent</td>
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<tr>
<td>King, Chad</td>
<td>Monterey Bay National Marine Sanctuary</td>
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<tr>
<td>Wooninck, Lisa</td>
<td>West Coast Region, Office of National Marine Sanctuaries</td>
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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)
  o Vessel needs
    ▪ 22-foot Radon in development for Monterey area
  o Chumash Heritage NMS nomination 5-year review (new information on offshore wind and aquaculture opportunity areas).
  o Examination of offshore wind projects and compatibility with vessel traffic and fishing
  o Vessel re-routing study, incorporated data from whale, fishing, coast guard
  o DOE is funding environmental baselines, environmental monitoring and validation
  o Funding opportunity via boem.gov/environmental-studies-planning
  o 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:
    o https://sanctuarysimon.org/2020/10/sanctuary-scientists-re-visit-a-whale-fall/

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.

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**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

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2021 RAP Meeting Schedule and Locations

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<th>Date</th>
<th>Hosts</th>
<th>Location</th>
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<tr>
<td>January 8</td>
<td>Cailliet (MLML)</td>
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<td>May 14</td>
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<tr>
<td>September 10</td>
<td>Ruhl (CeNCOOS)</td>
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