

**Science Program**

# 44<sup>th</sup> Annual Meeting of the Pacific Seabird Group

## 22-25 February, 2017

### Daily Schedule Overview

Tacoma Convention Center (TCC)

Comments or questions, please contact Local Committee: [locochair@pacificseabirdgroup.org](mailto:locochair@pacificseabirdgroup.org)

Tuesday, 21 February 2017 (pre-conference)	
	Hotel Murano, Lido Boardroom
1300-1700	Short-tailed Albatross Recovery Team (START) Meeting – by invitation

Wednesday, 22 February 2017				
0730-1700	REGISTRATION DESK OPEN (TCC Lobby)			
<i>Committee Meetings – all welcome, unless otherwise indicated.</i>				
	Boardroom N, TCC	Ballroom AB, TCC	Boardroom S, TCC	Commencement Bay N, CUW <sup>1</sup>
0900-1230	EXCO	MAMU Tech Comm	TUPU Tech Comm	Aleutian Tern Tech Comm
1230-1300	BREAK			
1300-1500	EXCO	MAMU Tech Comm	Seabird Monitoring Comm	SCMU and GUMU Tech Comm
1500-1700	EXCO	MAMU Tech Comm	FWS Pacific Seabird Program	SCMU and GUMU Tech Comm
1700-1830			KIMU Tech Comm	
1800-2100	WELCOME RECEPTION (Hotel Murano, Venice Ballroom)			

<sup>1</sup> Center for Urban Waters (CUW), 326 East D St. Tacoma WA 98421. <https://www.urbanwaters.org>

## Thursday, 23 February 2017

0730-1700	<b>REGISTRATION DESK OPEN</b> (TCC Lobby)		
	<b>Ballroom AB</b>	<b>Meeting Room 315</b>	<b>Meeting Room 316</b>
0830-0900	<b>Welcome and Opening Remarks</b>		
0900-1000	<b>PLENARY:</b> P. Dee Boersma (Ballroom AB) <i>Natural History and Long-Term Studies Are Fundamental to Science</i>		
1000-1030	<b>Coffee Break</b>		
1030-1200	<b>SPS 2:</b> Sound to Sea: Marine Birds Across the Salish Sea	Population Biology	Tools and Techniques
1200-1330	<b>Lunch (on your own) and Meetings</b> NOAA Fisheries Seabird Workgroup (1200, Boardroom N) – by invitation Former Chairs Meeting (1215-1320, Boardroom S) – by invitation		
1330-1500	<b>SPS 2:</b> Sound to Sea: Marine Birds Across the Salish Sea	Population Biology	Tracking & Distribution
1500-1530	<b>Coffee Break</b>		
1530-1700	Climate Change	Management Policy Planning	Tracking & Distribution
1700-1800		Wildlife Acoustics Song Meter SM4 Workshop – pre- registration required	
1730-1930	<b>Meetings</b> NE Asia Seabird Conservation Committee (Boardroom S) - open to all		
1830-2100	<b>POSTER RECEPTION</b> (Lobby in front of Ballroom AB)		
2000-2130	<b>“Encountering Midway”</b> Documentary film: An evening with Chris Jordan and a million Laysan Albatrosses (Meeting Room 315)		

Friday, 24 February 2017			
0730-1700	REGISTRATION DESK OPEN (TCC Lobby)		
Time	Ballroom AB	Meeting Room 315	Meeting Room 316
0815-0830	Announcements		
0830-0930	<b>PLENARY:</b> George Divoky (Ballroom AB) <i>The Importance and Unimportance of Seabirds in the New Abnormal</i>		
0930-1000	Coffee Break		
0930-1230	<b>Meetings</b> North Pacific Albatross Working Group (1000, Boardroom S) Aleutian Tern Technical Committee (0930, Boardroom N)		
1000-1200	<b>SPS 1:</b> Pagophila in the Time of Warming: Ice Ecology of Polar Seabirds	<b>SPS 4:</b> Changes in Gull Foraging Ecology	Breeding Biology
1200-1330	<b>Lunch (provided) and Meeting</b> PSG Members' Meeting (Ballroom AB) – Lunch provided to all in attendance! All Welcome!		
1330-1500	<b>SPS 5:</b> Marine Spatial Planning	Foraging Ecology	Restoration and Eradication
1500-1530	Coffee Break		
1530-1700	<b>SPS 5:</b> Marine Spatial Planning	Foraging Ecology	
1715-1830	<b>Meeting</b> Gillnet Bycatch (Boardroom S)		
1700-1830	<b>EARLY CAREER EVENT: PANEL AND DISCUSSION (Meeting Room 315)</b>		
1830-2100	<b>STUDENT MENTOR RECEPTION (Lobby in front of Ballroom AB)</b>		

**Saturday, 25 February 2017**

<b>Time</b>	<b>Ballroom AB</b>	<b>Meeting Room 315</b>	<b>Meeting Room 316</b>
0730-1700	<b>REGISTRATION DESK OPEN (TCC Lobby)</b>		
0830-0845	<b>Announcements</b>		
0845-0945	<b>Special Achievement and Lifetime Achievement Award presentations</b> Coffee Available		
0945-1000	<b>Coffee Break</b>		
1000-1200	<b>SPS 3:</b> 1045 am: Bycatch in Fishing Gear and Fish-Oiled Seabirds	Conservation Biology	<b>SYM 1:</b> The Values of Long-Term Studies: Insight and Synthesis
1200-1330	<b>Lunch (provided) and Meeting</b> PSG Conservation Committee (Ballroom AB) – Lunch provided to all in attendance! All Welcome!		
1330-1500	<b>SPS 3:</b> Bycatch in Fishing Gear and Fish- Oiled Seabirds	Conservation Biology	<b>SYM 1:</b> The Values of Long-Term Studies: Insight and Synthesis
1500-1530	<b>Coffee Break</b>		
1530-1700		Contaminants and Marine Debris	<b>SYM 1:</b> The Values of Long-Term Studies: Insight and Synthesis
1830-2300	<b>BANQUET AND AWARDS (Ballroom AB)</b>		

**Sunday, 26 February 2017**

<b>0800-1400</b>	Field Trip: Birding at Billy Frank Jr. Nisqually National Wildlife Refuge
<b>1000-1800</b>	Field Trip: Protection Island Seabird Cruise on Puget Sound

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# Financial Support

The Pacific Seabird Group acknowledges  
the generous support of the following sponsors and donors



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## Special Acknowledgements

We would like to thank the following people and organizations for all their hard work to make this meeting possible.

**Conference Planning:** Justine Miller with Luana Events

**Fundraising:** Ann Edwards, Peter Hodum, Scott Pearson

**Meeting Website:** Jo Smith

**Regonline Assistance:** Lindsay Young

**Merchandise:** Emma Kelsey and Tom Good

**Volunteer Coordination:** Laura Todd and Justine Miller

**Student Mentor Session and Silent Auction:** Chris Tyson

**Field Trip Logistics:** Beth Phillips

**Twitter:** Stephanie Avery-Gomm

**Instagram:** Katsu Frausto

**Facebook:** Jane Dolliver

**Program Production:** University of Puget Sound

**Program Preparation:** Kyra Mills-Parker, Miranda Starr, Nathalie Hamel, Scott Pearson and Peter Hodum

**MANY THANKS TO ALL OF THE VOLUNTEERS AT THE REGISTRATION DESK AND AV!!!**

**Silent Auction donations:** Bird Yarns, Che Frausto, Oregon Coast Aquarium, Ginger Rebstock, Jenna Cragg, Jo Smith, Kate Goodenough, Lindsey Hayes, Lora Leschner, Mad River Decoys by Audubon, Michael E. Johns, Michelle Hester, Nathalie Hamel, NOAA Fisheries Northwest Fisheries Science Center, Peter Hodum, Puffin Pluckers Ukulele Band, Roberta Swift, Ron LeValley, Scilly Pelagics, SeaDoc Society, Tacoma Museum of Glass

### **Thanks to the Special Paper Session and Symposium Coordinators:**

Pagophilia in the Time of Warming: Ice Ecology of Polar Seabirds (John Piatt)

Sound to Sea: Marine Birds Across the Salish Sea (Nathalie Hamel and Douglas Bertram)

Bycatch in Fishing Gear and Fish-Oiled Seabirds (Enriqueta Velarde)

Changes in Gull Foraging Ecology (Stefan Garthe and Scott Shaffer)

Marine Spatial Planning (Joanna Smith and David Pereksta)

The Values of Long-Term Studies: Insight and Synthesis (Julia Parrish and William Sydeman)

### **Special Thanks to General Session Chairs:**

Conservation Biology: Jennifer Lang

Tools and Techniques: Jay Penniman

Tracking and Distribution: Lindsay Young

Foraging Ecology: Shiway Wang

Contaminants and Marine Debris: Tom Good

Restoration and Eradication: Susan (Allie) Hunter

Climate Change and Behavior: Jen Zamon

Breeding Biology: Brian Hoover

Population Biology: Aly McKnight

Management Policy Planning: Maria Félix-Lizárraga

**Front Cover and the meeting logo:** Thanks to Su Kim for producing the program cover and meeting logo of the rhinoceros auklet with Mt. Rainier, the Tacoma Dome, and Foss Waterway Bridge as backdrop.





# Pacific Seabird Group

## Pacific Seabird Group

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DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

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### **Pacific Seabird Group Executive Council for 2017**

#### ***Officers***

<i>Chair</i>	Nina Karnovsky
<i>Chair-elect</i>	Kyra Mills-Parker
<i>Past Chair</i>	Kathy Kuletz
<i>Vice-chair for Conservation</i>	Stan Senner
<i>Treasurer</i>	Martin Renner
<i>Secretary</i>	Jane Dolliver

#### ***Representatives***

<i>Alaska and Russia</i>	Robb Kaler
<i>Canada</i>	Stephanie Avery-Gomm
<i>Washington and Oregon</i>	Peter Hodum
<i>Northern California</i>	Anna Weinstein
<i>Southern California, Latin America and Hawai`i</i>	Yuri Albores-Barajas
<i>United States (excluding AK, WA, OR, CA and HI)</i>	Samantha Richman
<i>Asia and Oceania</i>	Kuniko Otsuki
<i>Europe/Africa</i>	Ross Wanless
<i>Student Representative</i>	Chris Tyson

#### ***Local Organizing Committee for the 2017 Annual Meeting***

<i>Local Committee Co-chairs</i>	Nathalie Hamel, Peter Hodum, and Scott Pearson
<i>Chair of the Scientific Program</i>	Kyra Mills-Parker
<i>Website</i>	Joanna Smith
<i>Merchandise</i>	Tom Good and Emma Kelsey
<i>Student events</i>	Chris Tyson
<i>Social Media</i>	Stephanie Avery-Gomm, Jane Dolliver and Katsu Frausto
<i>Regonline Guru</i>	Lindsay Young
<i>Field trips</i>	Elizabeth Phillips and Peter Hodum
<i>Fundraising</i>	Anne Edwards, Peter Hodum, and Scott Pearson
<i>Conference planner</i>	Justine Miller, Luana Events

## Local Committee Welcome

The Local Organizing Committee of the Pacific Seabird Group's 44<sup>th</sup> Annual Meeting welcomes you to the Tacoma Convention Center on the shores of the Salish Sea. In keeping with the locale for the meeting, the theme is "Sound to Sea: Marine Birds Across the Seascape," and we have planned a stimulating scientific program that includes two plenary speakers, five special paper sessions, contributed sessions, a symposium and a poster session. We will also be honoring distinguished scientists for their outstanding seabird conservation achievements. We hope this meeting will provide opportunities for free exchange of ideas, information and inspiration.

To encourage participation by younger scientists, we are providing travel awards and, for the first time, are having an event just for early-career scientists in addition to the student-mentor session. We hope that you will find the meeting welcoming and full of opportunities to connect with other scientists.

Tacoma is situated along the shores of southern Puget Sound, and we hope that you will take advantage of local opportunities to explore the area, whether that be through hiking, running, kayaking, and/or, of course, birdwatching – Puget Sound is a nationally significant estuary and wintering area for a wide diversity of marine birds. Within walking distance of the conference hotel, you can visit the Washington State History Museum, the Tacoma Art Museum, and the Tacoma Museum of Glass (think Dale Chihuly). A bit further away, but still within the city, you will find the Point Defiance Zoo, located in the beautiful forests of Point Defiance Park, one of the largest urban parks in the country. And Mt. Rainier and the Olympic Mountains are only a few hours from Tacoma.

Please feel free to ask us for advice, information or stop by just to say hello.

Welcome to the Salish Sea!

Peace,

*Nathalie Hamel, Peter Hodum, and Scott Pearson*  
*Co-Chairs, Local Organizing Committee*

## Message from the Scientific Program Chair

I would like to extend a warm welcome to you, as you join us for the 44th Pacific Seabird Group Meeting! I am privileged that you have decided to join us, as it is this coming together of seabird biologists from around the world to share new ideas and information that helps make these meetings a success.

I know we all have a different story of why we love seabirds and how they have shaped our lives, and I look forward to hearing those stories from you during the next few days. As for me, I first fell in love with seabirds when I was a field assistant in the Galápagos Islands in the early 1990s. I remember the feeling of sheer amazement in watching enormous feeding flocks, some that lasted for hours! The variety of species within these flocks was of particular interest to me. Since then, I have migrated to several different places and jobs around the world, but seabirds have always remained a focal point in my life and my career, and they never cease to amaze me.

This year's theme, "Sound to Sea: Marine Birds Across the Seascape", not only encompasses the concept of the global distribution of marine birds, but also helps bring to mind the interconnectivity of these sea-going animals and the habitats that they rely on. With this in mind, we have put together a diverse scientific program that we think will help highlight a few general concepts that continue to take center stage as we enter a challenging era in the face of a changing climate. With 5 special paper sessions, 1 symposium, and 10 general session topics, there is something of interest for everyone. In addition, we have two excellent plenaries planned to jump-start days 1 and 2 of the conference (P. Dee Boersma and George Divoky), and which will introduce us to some of the major themes of this year's meeting: the value of long-term studies, and rethinking seabird conservation and research priorities in a rapidly changing ocean environment. On Saturday morning we will begin the day by honoring our Lifetime Achievement Award (P. Dee Boersma, Sarah Wanless) and Special Achievement Award (Martin Raphael) recipients.

As always, the Pacific Seabird Group encourages the participation of students by offering student travel awards, judging student papers, and hosting two back-to-back student events: the Early Career Event and the Student Mentor Reception (both on Friday evening). Over the next few days, please enjoy meeting new people, reconnecting with old friends, forming new collaborations, and learning about current seabird research, not only along the U.S. Pacific coast, but all over the world.

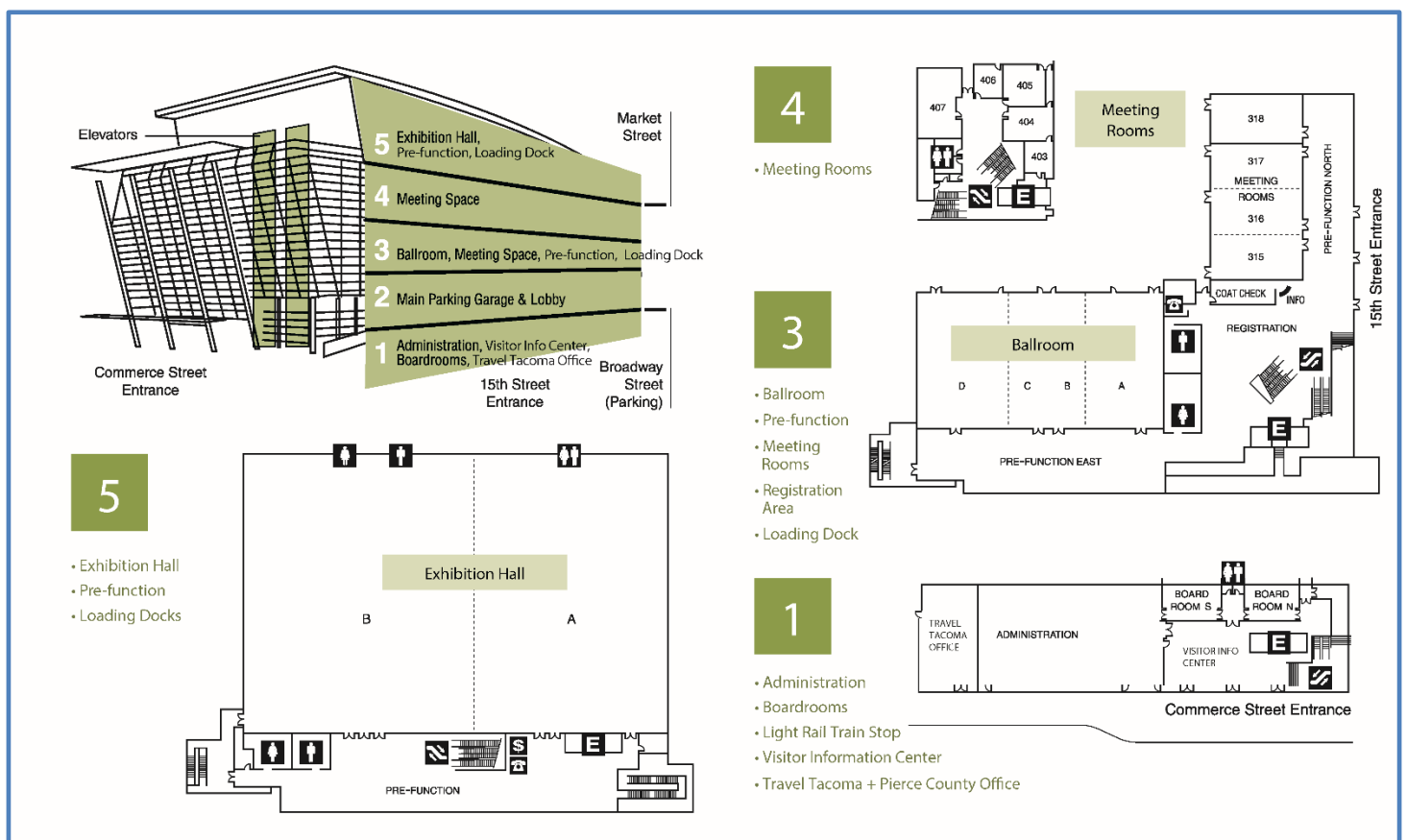
Finally, over the past year, I have had the honor of working alongside a group of amazing people that worked diligently to ensure that this meeting is a success. I am so grateful to the Local Committee (Peter, Nathalie, and Scott), the current and past Chairs (Nina Karnovsky and Kathy Kuletz), the rest of the Executive Committee, Jo Smith, and Lindsay Young for helping with every single detail of this Tacoma meeting. We truly hope you enjoy it!

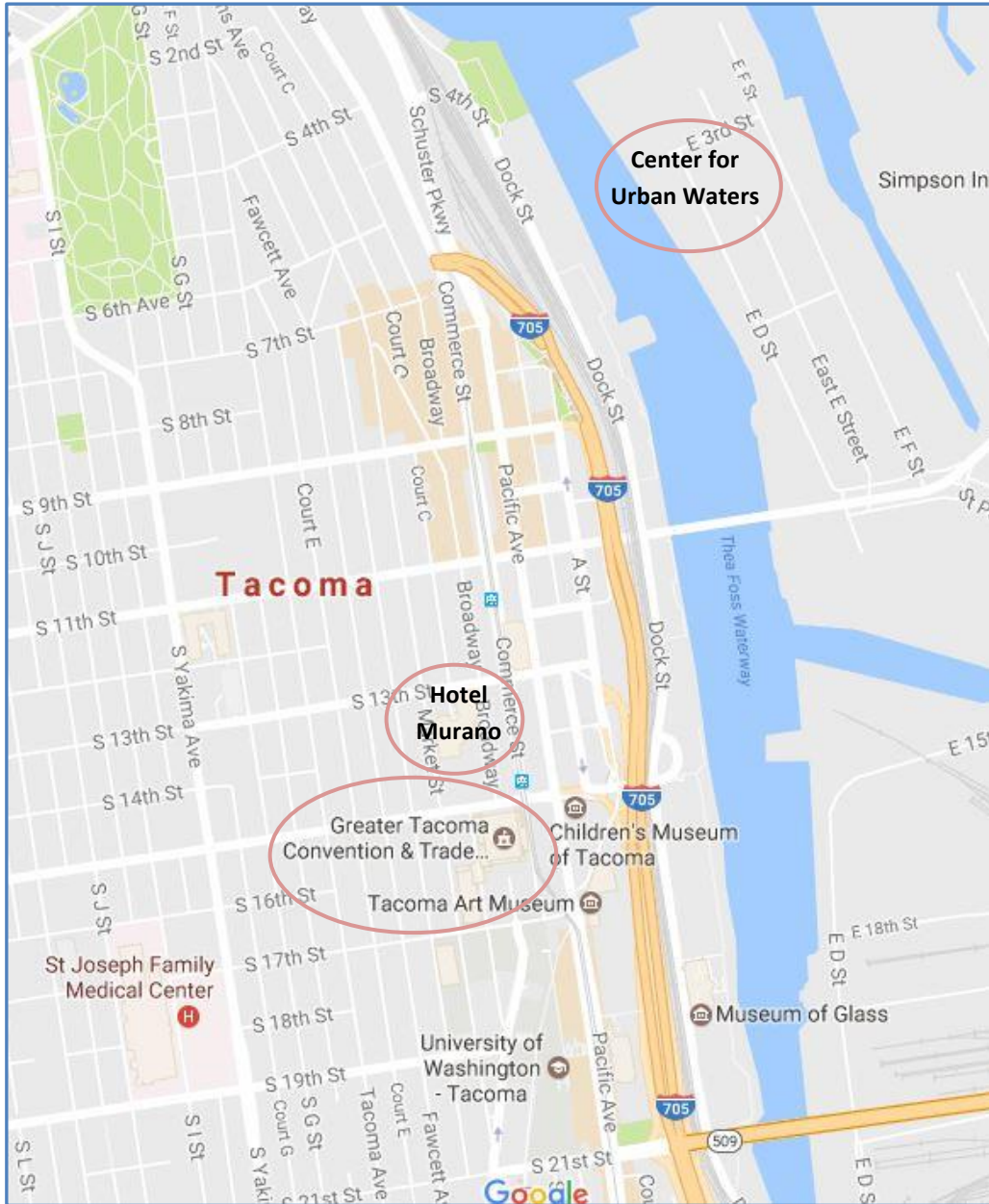
Kyra Mills-Parker  
Chair, Scientific Program

# Tacoma Convention Center Layout and Map

All conference events will take place at the Tacoma Convention Center in downtown Tacoma except for the opening reception which will be held at Hotel Murano. A map of the Convention Center meeting space is provided below. The registration desk at the Convention Center will be open Wednesday from 0730-1700 and then every morning of the meeting starting at 0730.

The registration table, posters, and vendor/display tables will be in the Convention Center lobby. Scientific events will be in the Ballroom and rooms 315 and 316. Committee meetings will be held in a variety of rooms within the Convention Center and at the Center for Urban Waters, about 20 minutes walking distance. The breaks will be held in the lobby. The plenaries and banquet will be in the Ballroom AB. The silent auction tables will be inside Ballroom AB. Please see the layout and map below.





## Conference Meetings, Events and Food

### Technical Committee Meetings and Workshops

The following PSG committees will meet before and during the scientific program. All interested members are welcome to attend unless otherwise indicated.

TCC = Tacoma Convention Center (3 minute walk from Hotel Murano)

CUW = Center For Urban Waters (20 minute walk from the TCC; map on previous page)

#### ***Tuesday 21 February (pre-conference)***

	<b><i>Time</i></b>	<b><i>Room</i></b>
Short-tailed Albatross Recovery Team (private)	0900 – 1700	Hotel Murano

#### ***Wednesday 22 February***

Executive Council (EXCO)	0900-1700	Boardroom North, TCC
Marbled Murrelet (MAMU) Technical Committee	0900-1700	Ballroom AB, TCC
Kittlitz's Murrelet (KIMU) Technical Committee	1700-1830	Boardroom South, TCC
PSG Seabird Monitoring Committee	1300-1500	Boardroom South, TCC
USFWS Pacific Seabird Program: Next steps	1500-1700	Boardroom South, TCC
Tufted Puffin Technical Committee	0900-1230	Boardroom South, TCC
Aleutian Tern Technical Committee	0900-1230	Commencement Bay N, CUW
Scripp's and Guadalupe Murrelet Tech. Committee	1300-1700	Commencement Bay N, CUW

#### ***Thursday 23 February***

Former chairs meeting (private)	Lunch	Boardroom South, TCC
Northeast Asia Seabird Conservation Committee	1730-1930	Boardroom South, TCC
NOAA Fisheries Seabird Workgroup (private)	Lunch	Boardroom North, TCC
Song Meter SM4 Workshop (must register)	1700-1800	Meeting Room 315

#### ***Friday 24 February***

North Pacific Albatross Working Group (NPAWG)	1000-1200	Boardroom South, TCC
Aleutian Tern Technical Committee	0900-1230	Boardroom North, TCC
Gillnet Bycatch Meeting	1715-1830	Boardroom South, TCC

### Events

#### ***Welcome Reception – Wednesday 22 Feb. 1800-2100, Hotel Murano, Venice Ballroom***

Hors d'oeuvres included in your registration fee. No host bar.

#### ***Evening poster reception – Thursday 23 Feb. 1830-2100, TCC lobby, in front of Ballroom AB***

Included in your registration fee is the evening hors d'oeuvres and a coupon for one drink during the poster session. There will be a variety of items available, including vegetarian options.

#### ***PSG Members Lunch – Friday 24 Feb. 1200-1300, Ballroom AB***

Included in your registration fee (salads and sandwiches).



***PSG Conservation Committee Lunch – Saturday 25 Feb. 1200-1300, Ballroom AB***

Included in your registration fee (salads and sandwiches).

***Early Career Scientist Event: Panel and Discussion – Friday 24 Feb. 1700-1800, Meeting room 315***

This is a first-time event for PSG. The content for this panel and discussion session is based on early career scientists' submissions to the session's question jar at the registration table. A set of eight panelists will weigh in on these questions, with Nina Karnovsky as session moderator. Panelists include: Jessica Behnke, Jennifer Boyce, Alan Burger, Matthew McKown, Federico Méndez, Katie O'Reilly, Kuniko Otsuki and Nora Rojek. If you are an early career scientist (graduate student, MSc or PhD), field or lab technician, postdoctoral researcher, or early-career tenure track faculty, submit your question(s)! We welcome all attendees to listen to the questions and panelist responses. Come show your support for the next generation of seabird biologists!

***Student-Mentor Reception – Friday 24 Feb. 1830-2100, TCC lobby in front of Ballroom AB***

Do you have questions about career opportunities in marine ornithology or the range of options available to you regarding seabirds and seabird conservation? Please attend the 10<sup>th</sup> Annual Student-Mentor Event organized by Chris Tyson. This social event is an opportunity for students to meet and learn from PSG's members representing academia, government, NGOs, and private consulting and discuss with them careers in teaching, research, management, and policy. We encourage participation from all career stages and professions as mentors (e.g., early career scientists, mid or late career professionals). Food will be provided.

***Presentations honoring SAA and LAA Awardees – Saturday 25 Feb. 0845-0945, Ballroom AB***

We will honor the awardees with presentations about their life and achievements.

***Banquet, presentation of awards – Saturday 25 Feb. 1830-2300, Ballroom AB***

The final conference event will take place on Saturday 25 February beginning at 1830. Join us for dinner and dancing! If you would like to attend the banquet, and did not sign up at the time you registered, you can do so at the registration desk up until 1700 on Thurs Feb 23rd.

***Abbreviated awards ceremony and music – Saturday 25 Feb. after the banquet*** (Lifetime, special, and student awards) – this event will follow the banquet and is open to all registered attendees, even if you did not purchase a banquet ticket. Please wear your name tag throughout the evening.

***Silent Auction – Thursday 23 Feb. to Saturday 25 Feb. 1215, Ballroom AB***

The silent auction will be held from Thursday, 23 February through Saturday, 25 February and will end at 1215pm (over lunch!) to allow time to pay for and claim items. All proceeds from the silent auction will be used to support our student travel award program, so please don't view this as an opportunity to get cheap goods – start those bidding wars on some beautiful items! Sheets will be placed next to each item for you to place your bid. Successful bidders should claim their item before the banquet at 1830 on Saturday the 25th. We will accept payment by cash, check or credit card. If you would like to donate items, please drop them off at the registration desk.

# Twitter

(#PSG2017)

We encourage attendees to engage over Twitter during the conference by including the hashtag #PSG2017! To follow the conversation during the conference, users can simply look up #PSG2017. Beginners can find useful guidance on using Twitter here: <http://mashable.com/guidebook/twitter/>

Please be respectful and don't tweet anything that you wouldn't say in a face-to-face conversation. Please differentiate your opinions from the speaker's.

Presenters should advise their audience at the beginning of their talk if they don't wish for their presentation to be shared over Twitter, social media, or photographed.

It's all about engagement, community building, and widening participation!

## Field Trips

There are multiple exciting field trip options for our meeting this year, from the local day trips to inter-island trips.

### ***Birding at Billy Frank Jr. Nisqually National Wildlife Refuge - Sunday 26 February 2017, 0800– 1400***

Cost: USD \$60, per person. Deadline for signing up: Thurs 23 Feb. 2017 (1700).

Join a group of expert local birders at Billy Frank Jr. Nisqually National Wildlife Refuge. The Refuge is approximately 40 minutes south of Tacoma, at the confluence of the Nisqually River and the marine waters of Puget Sound. The Nisqually River is in one of the most intact watersheds in the region. In 2009, the Billy Frank Jr. Nisqually National Wildlife Refuge underwent the largest restoration effort in Puget Sound and now offers a mix of tidally influenced habitat, freshwater wetlands and wooded areas all accessible by trails. There are excellent opportunities to observe myriad marine birds, including sea ducks and black brant on Nisqually Reach, which fatten up before migrating north. You might even hear Pacific tree frogs chorusing. You can also learn about the history of Nisqually NWR, which was established in February 1974 – Happy 43rd Birthday!

### ***Protection Island Seabird Cruise on Puget Sound - Sunday 26 February 2017, 1000 – 1800***

Cost: USD \$155, per person. Deadline for signing up: Thurs 23 Feb. 2017 (1700).

Protection Island National Wildlife Refuge is located near the mouth of Discovery Bay in the Strait of Juan de Fuca. Nearly 70 percent of the nesting seabird population of Puget Sound and the Straits nest on the island (e.g., rhinoceros auklets, tufted puffins, pigeon guillemots and glaucous-winged gulls). The island is located near seabird hotspots, where thousands of seabirds overwinter, including sea ducks, waterfowl and shorebirds. We will board Puget Sound Express' M/V Glacier Spirit in Edmonds (about 1 hour north of Tacoma) for a four-hour cruise. On-board interpreters will provide commentary on local birds, mammals, geology, history and weather.

### ***Custom and Self-guided Tours***

There are several great options for custom and self-guided tours of the area if you are interested in exploring the Olympic Peninsula or around the Pacific Northwest.

***Olympic Peninsula*** -- Create a custom tour of the Olympic Peninsula, including the Elwha River and Olympic National Park! The PSG 2017 Annual Meeting Local Committee has coordinated with local tour guide Carolyn Wilcox to allow you to create a custom tour with her if you and a small group are so inclined. Transportation to/from Port Angeles is required. Reservations are required so call today to book your tour.

Tel: 1-360-808-9237; Email: [tours@experienceolympic.com](mailto:tours@experienceolympic.com); website: <http://experienceolympic.com/why/guide>

***Tacoma area*** -- Point Defiance Zoo and Park

<http://www.metroparkstacoma.org/point-defiance-park>

<http://www.pdza.org/>

**Vashon Island** -- Take a ferry from Point Defiance to Vashon Island and spend the day birding at Quartermaster Harbor, eating local food, and enjoying the island culture. <http://www.vashonchamber.com/>

***Pacific Northwest*** -- Interested in seeing Mount Rainier, Snoqualmie Falls, the North Cascades, or perhaps doing some wine tasting or guided tours of Seattle? Evergreen Escapes has you covered. <https://www.evergreenescapes.com/>

## Special Paper Sessions

### **SPS1 - Pagophilia in the Time of Warming: Ice Ecology of Polar Seabirds (Fri., 24 Feb. 10am-12pm)**

*Convener:* John F. Piatt

This special paper session will highlight recent research on ecological relationships between sea ice, glacial ice and ice-loving (pagophilic) seabirds in polar regions. There is continuing interest and concern regarding climate change, potential increases in shipping and industrial activity in polar waters, and contaminant issues near the poles. Consequently, there has been much work on polar seabirds during the past two decades, focused on these environmental threats. This session welcomes papers on all aspects of applied or fundamental ecology regarding pagophilic marine birds and their unique associations with ice. Our final goal will be to synthesize information presented at the session into a summary paper on specialized relationships between marine birds and ice, in both breeding grounds and foraging areas, and identify important threats to ice-loving polar seabirds.

### **SPS2 - Sound to Sea: Marine Birds across the Salish Sea (Thurs., 23 Feb. 10:30am-3pm)**

*Co-Conveners:* Douglas Bertram and Nathalie Hamel

The Salish Sea - the large body of water that adjoins the Pacific Ocean with the big cities of Tacoma and Seattle in the United States, and Vancouver and Victoria in Canada - is recognized as an important area for marine birds year round. Nonetheless, pressures on this complex transboundary ecosystem are intensifying: ocean temperatures are reaching new extremes, more coastal habitats are lost to increasing urbanization, and the threat of oil pollution and other contaminants is ever present. At the same time, regional efforts to protect and restore the ecosystem persevere. Marine bird use of the Salish Sea has been the focus of short and long-term research for decades. It has been almost 30 years since Vermeer and Morgan (1989) published symposium proceedings on the ecology and status of birds in the Strait of Georgia. In 2009, the journal *Marine Ornithology* published the proceedings from a symposium on the Salish Sea at the 2008 Pacific Seabird Group meeting. Since then, the Salish Sea region has become larger in the public eye and a broad spectrum of interests contribute to the growing knowledge of the biological and physical factors which influence marine bird use of the Salish Sea, and to better connect data with decisions. What have we learned in almost 30 years? What progress have we made as a research community? Are we closer to managing coastal habitats to create the healthy and resilient ecosystem that birds need in the face of climate change and spreading human footprint? This special paper session welcomes recent research and monitoring of marine birds and their habitats in the Salish Sea, remembering the past for context and keeping an eye toward the future.

### **SPS3 - Bycatch in Fishing Gear and Fish-Oiled Seabirds (Sat., 25 Feb. 10:45am-3pm)**

*Convener:* Enriqueta Velarde

This special paper session will highlight results of recent research on seabird bycatch by fishing gear, focusing in the Pacific and Gulf of California, including damage caused by oiling of seabirds with fish oil. Seabird mortality through bycatch in fishing operations is presently one of the main causes of seabird mortality and may affect seabird population survival in the long- or mid-term. The results presented in this SPS will be important

in the possible generation of a document of opinion and recommendations directed to governments of different countries for the development of conservation strategies and to international institutions such as Marine Stewardship Council, to emphasize the importance of this danger when evaluating fisheries as sustainable.

#### **SPS4 - Changes in Gull Foraging Ecology (Fri., 24 Feb., 10am-12pm)**

*Co-Conveners:* Stefan Garthe and Scott Shaffer

This special paper session will highlight recent research on gulls showing changes in their foraging ecology. Various reports and studies in North America and Europe have shown that gulls have exhibited changes in many aspects of their ecology. This includes food choice, exploration of novel/new habitats and changes from marine to terrestrial foraging. But also topics such as disease ecology and contaminants as well as possible effects of wind farms are becoming increasingly important in many regions. Many of the changes in gull foraging ecology are related to increasing and/or decreasing population trends, differing among species and regions. The geographic focus of this Session would be on the Pacific coast but also on the Atlantic, including case studies from Europe.

#### **SPS5 - 4<sup>th</sup> Marine Spatial Planning (Fri., 24 Feb., 1:30pm-5pm)**

*Co-Conveners:* Joanna Smith and David Pereksta

Marine spatial planning (MSP) is used globally to address issues and conflicts with existing uses in the marine space, implement MPA networks, and to plan for new developments such as offshore renewable energy, oil and gas, deep sea mining, and tourism. Most recently, there is a call to increase marine protection targets to 30% by 2030 (IUCN Motion 53). MSP and marine protected area (MPA) network processes both require extensive data sets to inform zoning and network designs – the demand for spatial data sets on marine bird distributions, foraging areas and critical habitats continues to be great, and is increasing. Contributed papers will identify an MSP or MPA network process that their data will or hope to inform, and present new information on seabird species distribution patterns, biogeographic assessments, or specific methodologies for incorporating existing datasets into spatial data frameworks and decision-support tools (e.g., Marxan).

### **Symposium**

#### **SYM1 - The Values of Long-term Studies: Insights and Synthesis (Sat., 25 Feb., 10am – 5pm)**

*Co-Conveners:* Julia Parrish and William Sydeman

Science has always been divided into process studies - understanding why something is occurring - and longitudinal studies - documenting pattern and change. And although the former defines much of what we call science, the latter has lent insights into a changing world, where broad extent, long-term patterns are changing in response to regional-to-global forcing. The symposium will focus on synthesis and comparison of insights from long-term studies on seabirds. We focus on Pacific seabirds, with perspectives from other parts of the world (North Sea, Patagonian Sea, and Benguela Current, possibly). We seek contributions that report on up-to-

date time series of >15 years on seabirds from at-sea, on-colony, and other creative data sources. Contributions should seek to establish both baseline and change relative to ocean climate variability, fisheries interactions (including both bycatch and potential food competition), and other long-term or long-lasting (lagged effects) anthropogenic impacts on marine ecosystems. Contributions from early career scientists, and studies integrating ecosystem models with empirical seabird studies would be particularly welcome. We seek to bookend the symposium with an introduction to the value of longitudinal science across a range of approaches, and a closing emphasizing cross-species, region, and ecosystem synthesis. This symposium would serve to highlight the value of long-term studies to understanding and conserving Pacific to global seabirds, and may result in a special volume in the peer-reviewed literature.

# Information for Presenters, Session Chairs and Judges

## Oral Presentations

All talks will be limited to a 15-minutes TOTAL time period. This does not mean that you can talk the full 15 minutes. **Please plan on a 12-min presentation**, allowing for 3 minutes for questions. Allowing time for questions helps with the networking aspect of this meeting and invites further discussions after the talk (among other benefits!). Session chairs will be instructed to stick to a very strict schedule, so please make sure your talk is 12 minutes long.

If your presentation is formatted for a Mac, it is your responsibility to test that it is functioning properly in windows ahead of time. If your presentation requires audio, we recommend that you test this ahead of time as well.

Loading presentations: Please do this at least two breaks ahead of your session by bringing your thumb drive to your session room. If you are speaking after the morning break, this means loading your talk before the plenary. You can also load your talks at the Welcome Desk when you check in.

Filename: Please use the following convention to name your talk before you load it. LASTNAME\_FIRST NAME\_ROOM\_DAY\_TIME.PPT. For instance: Hodum\_Peter\_Ballroom\_Thu\_1000.ppt. or, Pearson\_Scott\_Room315\_Fri\_1300.ppt.

## Poster Presentations

Create your poster so that the dimensions are no more than **4 ft (~1.2 m) long x 3 ft ~ (1 m) high**. Posters may be attached to the wall space via Velcro or tacks only. Your poster will be given a number (which you will be able to find in the program and at the Welcome desk) and that will correspond to a number that will appear on the wall of the poster session room. Please hang your poster to the right of the number.

Please hang your poster no later than 12pm on Thurs. 23 February. Please remove your poster no later than 10am on Saturday, 25 February.

## Student Presentation Award Judges

Several PSG members have volunteered to judge student oral and poster presentations for awards to be given at the Awards Ceremony after the Banquet on Saturday evening. Judges were assigned presentations to view, and assignments will be confirmed and adjusted for late changes at the beginning of the conference. Judges will turn in their score sheets and comments to the Awards chair, Kathy Kuletz, as soon as possible after their assigned presentation. After all of the student presentations have been given, judges will again meet to deliberate. The time and location of each meeting will be announced and posted at the message board next to the registration desk.

## Session Conveners

Thank you for your willingness to help manage the scientific program. You have a critical job in keeping presenters within the time allotted to their talk. We will be running two or three concurrent sessions, all with 15-minute time limits for talks. Please note that the 15 minutes includes your introduction of the speaker, the talk, questions from the audience and transition to the next speaker. At the 12-minute mark, please stand in a location



visible to the speaker as a notice to the speaker and the audience that it's time to wrap up. At the 14-minute mark, it's time to communicate a more forceful warning- be creative! At the 15-minute point, thank the speaker, and begin your introduction of the next speaker. At the break prior to your session, contact all speakers to confirm the presenter's name and pronunciation. Session chairs should also confirm that all of the session's talks are loaded onto the laptop and ready to go. In the event of a last minute cancellation, do not move the other talks up a slot and finish early. Instead, leave the cancelled speakers slot as time for discussion so that those in other sessions that have planned on attending specific talks later on in the session are not thrown off.

## Awards

### SPECIAL ACHIEVEMENT AWARD RECIPIENT

#### Martin Raphael



Dr. Martin Raphael, as a research scientist with the U.S. Forest Service in Washington, made significant, long-term contributions to our understanding of the ecology and conservation of the marbled murrelet. Marty began working on murrelet-related issues in the early 1990s and continues his work today. He was instrumental in developing and implementing one of the first large-scale ecosystem management efforts - the Northwest Forest Plan. This effort improved management of a majority of the marbled murrelet nesting habitat south of Canada. Marty has also contributed to our knowledge of the species in its marine environment, including habitat use and development of an at-sea survey protocol, which is used to assess murrelet population status and trends throughout the range of the species south of Canada. He has produced and contributed to more than 40 publications on marbled murrelet ecology and conservation.

In recognition of his significant contributions to our knowledge about the ecology and conservation needs of the marbled murrelet, and his work to examine at-sea distribution of seabirds with respect to the Salish Sea and California Current ecosystems, the PSG honors Dr. Raphael with the 2017 Special Achievement Award.

# LIFETIME ACHIEVEMENT AWARD RECIPIENT

## Sarah Wanless



Dr. Sarah Wanless is internationally recognized as a leading and influential marine scientist, with a lifetime focus on seabirds. Her work has included long term studies of a variety of North Atlantic species, particularly murre, puffins, kittiwakes and shags, with groundbreaking research into seabird-prey interactions and the influence of commercial fisheries in seabird ecology. Sarah is based at the United Kingdom's Center for Ecology and Hydrology and, among other appointments, holds Honorary Professor positions at the University of Glasgow and the University of Aberdeen. During her career, Sarah has mentored more than 30 Doctoral and Masters students. Concurrently, she has served as an expert advisor for European policy makers, particularly on seabird - fisheries interactions. Sarah is a Fellow of the Royal Society of Edinburgh and received the Zoological Society of London Marsh Award for Conservation Biology. With a remarkable 250 papers and two books authored to date, she is an accomplished author and educator.

In recognition of her decades of research on the ecology of Atlantic seabirds and their prey, leading to long-term studies and conservation efforts, her international leadership in education, ecosystem studies, and management that have benefitted seabirds, the Pacific Seabird Group honors Dr. Wanless with the 2017 Lifetime Achievement Award.

# LIFETIME ACHIEVEMENT AWARD RECIPIENT

## P. Dee Boersma



Dr. P. Dee Boersma is the Wadsworth Endowed Chair in Conservation Science in the University of Washington's Department of Biology. Her decades of research have extended from Alaska and Washington to Argentina and the Galápagos Islands. In the southern hemisphere her work has focused on penguin ecology and conservation, combining scientific rigor with resource management. Throughout her career she has mentored scores of undergraduate and graduate students while studying seabirds as indicators of environmental change. Her research started with Galápagos penguins and how their breeding biology was honed to the unpredictable Galapagos upwelling. She worked on Fork-tailed Storm-Petrels in the Barren Islands, Alaska for more than a decade, showing they ingested petroleum and could be used as indicators of oil spills. Dee directs the Center for Penguins as Ocean Sentinels, and for 30 years she has directed the Magellanic Penguin Project at Punta Tombo, Argentina, as a scientific fellow for the Wildlife Conservation Society. Her work on penguins led the charge for responsible fisheries in the South Atlantic, and helped guide management at a major tourist destination. She serves on numerous marine conservation boards spanning international, national, and scientific domains.

For her lifetime of education, research, and international leadership in conservation of seabirds, including opening new frontiers in ecological studies and conservation of penguins in South America, the Pacific Seabird Group honors Dr. Boersma with the 2017 Lifetime Achievement Award.

## **Plenary Speakers**

Thursday, 23 Feb. 2017, 9:00 am

**P. Dee Boersma, Ph.D.**

### **Natural History and Long-term Studies Are Fundamental to Science**

P. Dee Boersma

University of Washington, Dept. Of Biology, Seattle, WA 98185-1800, [boersma@uw.edu](mailto:boersma@uw.edu)

Natural history is an important component of science because it helps us determine what to measure to best test our hypotheses. Whether by experimental design or long-term observation of responses of species and ecosystems, natural history is the fundamental guide to how we and other species are going to live on this planet in the future. This is increasingly important in a human dominated world. Seabirds are long-lived, have delayed maturity, small clutches, and both parents are needed to successfully raise young. Because penguins do not fly and are central place foragers, small modifications in their distribution, abundance, and reproductive success provide insights into environmental variability. The natural history of the 18 species of penguins is remarkably variable. King penguins, a sub-Antarctic species, lay one egg and it takes 18 months to successfully rear one chick. In contrast, Galápagos penguins, living on the equator, can lay 3 clutches of 2 eggs in a year and can rear two chicks in just over 3 months. These extremes in natural history, and the penguin's dependence on the environment where they breed, make them useful sentinels of environmental variability. When penguins are breeding and molting, they are relatively easy to observe. When they are at sea, new technology allows us to assess where penguins are and their environment. Penguin ecology and population dynamics are intertwined with climate variability. The distance a penguin must travel to find food is a major determinate of its reproductive success. By investigating the natural history and success of individual penguins comprising a colony, we can understand how by modifying human behavior to use the environment with more concern for wildlife (e.g., tanker lanes routes, oil discharge, and designation of marine protective area, marine zoning, and providing quality nest sites). Knowledge used well by humans and our institutions can promote the success and resilience of penguins.

Friday, 24 Feb. 2017, 8:30 am

**George Divoky, Ph.D.**



George Divoky received his Bachelor's and Master's degrees from Michigan State University and a doctorate from the University of Alaska Fairbanks. In the early 1970s he was one of the founders of the Pacific Seabird Group. Since 1970, Dr. Divoky has studied Alaskan seabirds when, as a Research Associate for the Smithsonian Institution, he censused marine birds and mammals in the Beaufort Sea adjacent to Prudhoe Bay. In 1975, as part of environmental studies conducted in areas being considered for oil and gas leasing, he began a study of Mandt's Black Guillemots, on Cooper Island, 35 km east of Point Barrow, Alaska. The 42 years of research on the colony's breeding biology and feeding ecology provided some of the first examples of the biological consequences of snow and sea ice reductions in the Arctic. Divoky has also worked for federal and state agencies on a range of Alaskan seabird management and conservation issues, including the Alaska Native Land Claims Settlement Act, oil and gas exploration of the outer continental shelf, oil spill damage assessment and restoration, and regional climate change. He is currently Director of Friends of Cooper Island, a Seattle-based nonprofit organization working to continue the research on Cooper Island and provide its findings to the scientific community and public.

**The Importance and Unimportance of Seabirds in the New Abnormal**

G.J. Divoky

Friends of Cooper Island, [divoky@cooperisland.org](mailto:divoky@cooperisland.org)

At a time of major concern for the natural world and its fate, we are entering a unique period where the seabird conservation and research priorities of previous decades may no longer be relevant or appropriate. As seabird populations struggle to maintain themselves in a rapidly changing ocean, they are receiving growing attention from media and conservation groups. However, it is increasingly unclear what seabird conservation and research should address as the earth's ocean paradigm shifts. Earlier seabird conservation strategies of setting aside refuges and marine protected areas or focusing on "endangered" species appear to be less appropriate given current broad-scale and long-term threats as an increasing human population warms and acidifies the oceans, through emission of fossil fuels, and overexploits fishery resources. Similarly, seabird research that

recognizes the importance and magnitude of ongoing climatic modifications are increasingly hard to identify. Recent advances in technology provide heretofore unthinkable detail of the lives of seabirds, but the importance of life history and physiological minutiae during the Sixth Great Extinction is not clear. Seabird researchers seeking a government career, or conducting research with government funds, face the additional problem of working with or relying on agencies that have among their major tasks the facilitation of the fossil fuel extraction and seafood exploitation that are primary causes of the ocean's decline. Seabird conservationists and researchers cannot reverse the global processes that will be affecting seabirds in coming decades. But, identifying and implementing meaningful conservation efforts and appropriate research is now more important than ever.

# Thursday Schedule

\* Indicates presenting author and \*\* indicates a student presentation

0830	Welcome & Opening Remarks		
0900	<b>PLENARY: P. Dee Boersma</b> <i>Natural History &amp; Long-Term Studies Are Fundamental to Science</i>		
1000	Coffee Break		
	<b>Ballroom AB</b>	<b>Meeting Room 315</b>	<b>Meeting Room 316</b>
	<b>Special Paper Session 2</b> <b>Sound to Sea: Marine Birds Across the Salish Sea</b>	<b>Population Biology</b>	<b>Tools &amp; Techniques</b>
1030	WHERE HAVE ALL THE FORAGE FISH GONE? ANOMALOUSLY POOR RHINOCEROS AUKLET BREEDING SEASON SUGGESTS CHANGES IN FORAGE FISH AVAILABILITY Peter J. Hodum*, Scott F. Pearson, & Thomas P. Good	POPULATION TRENDS OF ALASKAN SEABIRDS, 1974-2016 Aaron M. Christ*, Heather M. Renner, & Stephani G. Zador	TESTING WHETHER UNMANNED AIRCRAFT SYSTEMS CAN BE USED TO LOCATE CRYPTIC NESTS OF THE MARBLED MURRELET Lindsay J. Adrean*, Matthew Pickett, Brian Taggart, S. Kim Nelson, Daniel D. Roby, & Matthew G. Betts
1045	UNUSUAL RHINOCEROS AUKLET MORTALITY EVENT IN THE SALISH SEA Karen Devitt*, Victoria Bowes, Anthony Redford, Helen Schwantje, Dan Shervill, & Laurie Wilson	SEABIRD STUDIES MUST CONSIDER SEX Natasha J. Gownaris* & P. Dee Boersma	TECHNIQUES, REFLECTIONS AND CARE PRACTICES FOR CONIBEAR STYLE MECHANICAL TRAPPING IN ARID TROPICAL ECOTYPES Lynx K. Gallagher** & Jay F. Penniman
1100	MARINE BIRD DISTRIBUTION AND ABUNDANCE IN RELATION TO HERRING SPAWNING ACTIVITY IN THE SALISH SEA Jenna Cragg* & Douglas F. Bertram	COLONY SIZE INFLUENCES FIDELITY IN A COLONIAL NESTING SEABIRD Aly McKnight**, Erik Blomberg, David Irons, Cynthia Loftin, & Shawn McKinney	DETAILS OF A CAT BARRIER FENCE TO PROTECT NESTING HAWAIIAN PETRELS ON MAUNA LOA, HAWAII Kathleen Misajon, Darcy Hu*, Jon Faford, Charlotte Forbes-Perry, Rhonda Loh, & Keola Medeiros
1115	SEASONAL CHANGES IN THE AT SEA DISTRIBUTION AND ABUNDANCE OF MARINE BIRDS NEAR SHIPPING LANES AROUND SOUTHERN VANCOUVER ISLAND Douglas F. Bertram*, Mark Maftai, Cliff L. K. Robinson, & Patrick O'Hara	RED-FACED CORMORANT POPULATION DECLINE IN THE PRIBILOF ISLANDS, ALASKA Ryan N. Mong*, Greg Thomson, & Marc D. Romano	COMPARING METHODS FOR ASSIGNING SEABIRD BEHAVIOR FROM ACCELEROMETER DATA: SIX OF ONE OR HALF A DOZEN OF ANOTHER Allison Patterson** & Kyle Elliott
1130	NOCTURNAL SPACE USE BY SURF SCOTERS ( <i>Melanitta perspicillata</i> ) AND CRUDE OIL SPILL RESPONSE PLANNING IN THE SALISH SEA Lindsey Hamilton, Joseph R. Evenson*, & Dina Roberts	ASSESSING KITTLITZ'S AND MARBLED MURRELET ABUNDANCE AT SITES IN SOUTHEAST ALASKA, AND THEIR APPLICABILITY FOR LONG-TERM MONITORING Kelly Nesvacil*, Michelle Kissling, Paul M. Lukacs, & Grey Pendleton	IF A SEABIRD CALLS IN THE WILDERNESS AND NO ONE IS THERE TO HEAR, ARE SEABIRDS STILL BREEDING? Jay F. Penniman*, Jennifer K. Learned, & Matthew W. McKown
1145	MARBLED MURRELET DENSITY AND PRODUCTIVITY IN THE SAN JUAN ISLANDS, WASHINGTON, 1995 TO 2012 Teresa J. Lorenz* & Martin G. Raphael	BURROW PLOTS SURVEYS OF STORM-PETRELS: EXPLORING LONG-TERM DATA FROM AIKTAK ISLAND, AK TO DETERMINE WHAT BURROW MONITORING TELLS US ABOUT POPULATION TRENDS Nora A. Rojek*	RECENT MARBLED MURRELET RADAR COUNTS AND MARINE DENSITIES IN THREE CONSERVATION REGIONS OF BRITISH COLUMBIA Bernard K. Schroeder*, Kerry Woo, Trudy Chatwin, Douglas F. Bertram, & Jenna Cragg



	Ballroom AB	Meeting Room 315	Meeting Room 316
<b>1200</b>	<b>Lunch (on your own)</b>		
	<i>Special Paper Session 2</i> <b>Sound to Sea: Marine Birds Across the Salish Sea</b>	<b>Population Biology</b>	<b>Tracking &amp; Distribution</b>
1330	LIFE IN THE BIG CITY – CASPIAN TERNS IN THE SALISH SEA REGION Timothy J. Lawes*, Kirsten S. Bixler, Daniel D. Roby, Donald E. Lyons, Peter J. Loschl, & Yasuko Suzuki	IS AGE IN THE EYES AND FEET OF A PENGUIN? P. Dee Boersma, Kathryn P. Wellington**, Katie Holt, John Samaras, Ginger A. Rebstock, & Caroline D. Cappello	COMPARATIVE FLIGHT ALTITUDES OF HAWAIIAN ALBATROSSES Rachael A. Orben*, Scott A. Shaffer, & Robert M. Suryan
1345	ARE THE SALISH SEA’S SEABIRDS AND MARINE MAMMAL POPULATIONS LINKED TO THOSE IN THE CALIFORNIA CURRENT?: IMPLICATIONS FOR LOCAL MECHANISMS DRIVING POPULATION TRENDS Scott F. Pearson*, Martin G. Raphael, & Monique M. Lance	FOOTLOOSE AND FANCY-FREE: SURVIVAL, AGE AT FIRST RETURN AND BREEDING IN CASPIAN TERNS Yasuko Suzuki*, Daniel D. Roby, Donald E. Lyons, Pete J. Loschl, Timothy Laws, Kirsten S. Bixler, & Ken Collis	TRACKING MIGRATION ROUTES OF A SURROGATE SPECIES, GREATER CRESTED TERNS IN MATSU, TAIWAN, FOR CHINESE CRESTED TERNS CONSERVATION Le-Ning Chang*, Hsiao-Wei Yuan, & Chung-Hang Hung
1400	PROPOSED TRANSBOUNDARY BIRD METRICS WITHIN A SUITE OF SALISH SEA ECOSYSTEM HEALTH INDICATORS Holly Middleton* & Cecilia Wong		USING SATELLITE TELEMETRY TO EXPLORE ELEGANT TERN <i>Thalasseus elegans</i> MOVEMENT PATTERNS ALONG THE EASTERN PACIFIC COAST Katharine S. Goodenough*, Robert T. Patton, & Michael Horn
1415			TRACKING CALIFORNIA BROWN PELICANS INJURED IN THE REFUGIO BEACH OIL SPILL Deborah Jaques*, Kyra L. Mills, Bart Selby, Christine Fiorello, & Michael H. Ziccardi
1430			MOVEMENT PATTERNS AND HABITAT SELECTION OF BROWN PELICANS IN THE GULF OF MEXICO Juliet S. Lamb*, Yvan G. Satgé, & Patrick G. R. Jodice
1445			DIFFERENCES IN SHEARWATER AND MURRE DISTRIBUTIONS NEAR THE COLUMBIA RIVER PLUME DURING SPRING AND SUMMER Elizabeth M. Phillips**, Josh Adams, Jeannette E. Zamon, & John K. Horne
<b>1500</b>	<b>Coffee Break</b>		

	Ballroom AB	Meeting Room 315	Meeting Room 316
	<b>Climate Change</b>	<b>Management Policy Planning</b>	<b>Tracking &amp; Distribution</b>
1530	<p>THE “WARM BLOB” AND A COLD SEA: LARGE-SCALE TROPHIC PERTURBATIONS IN THE ALEUTIAN ISLANDS Douglas Causey*, Veronica M. Padula, &amp; Shiwai W. Wang</p>	<p>U.S. FISH AND WILDLIFE SERVICE CALIFORNIA CURRENT SYSTEM (CCS) SEABIRD SURVEY PROTOCOL FRAMEWORK PROJECT William T. Bridgeland*, Kevin Kilbride, &amp; Roberta Swift</p>	<p>FORAGING RHINOCEROS AUKLETS IN THE FARALLON ESCARPMENT: A SPATIAL ANALYSIS VIA GPS TRACKING TECHNOLOGY Bradley Wilkinson**, Jaime Jahncke, Pete Warzybok, Russell Bradley, &amp; Scott A. Shaffer</p>
1545	<p>MONSTER NIÑO: CASCADING EFFECTS OF RECENT ENVIRONMENTAL CHANGE ON ENDANGERED TERNS AND THREATENED PLOVERS IN SOUTHERN CALIFORNIA Gabriela Ibarguchi*, Travis Wooten, Rachel Smith, Katrina Murbock, Maggie Lee Post, Lisa Nordstrom, Ignacio Vilchis, &amp; Ron Swaisgood</p>	<p>ENVIRONMENTAL LEARNING STRATEGY TO PRESERVE SEABIRD ISLANDS IN MEXICO: THE CASE OF EL VIZCAÍNO BIOSPHERE RESERVE María Félix-Lizárraga*, Yuliana Bedolla-Guzmán, Alfonso Aguirre-Muñoz, Mariam Latofski-Robles, Cynthia Jauregui-García, &amp; Joana Bielschowsky de Aguirre</p>	<p>RESULTS OF A STATEWIDE SURVEY FOR NEWELL’S SHEARWATER, HAWAIIAN PETREL, AND BAND-RUMPED STORM PETREL Lindsay C. Young*, Eric A. VanderWerf, Megan Laut, Adam Vorsino, Jay F. Penniman, Hannah Nevins, Alex Wang, Nick Agarostis, Kathleen Misajon, &amp; Matthew W. McKown</p>
1600	<p>LINKING AT-SEA CONDITIONS WITH THE COAST-WIDE CASSIN'S AUKLET MASS MORTALITY EVENT OF 2014-2015 Jeannette E. Zamon* &amp; Laura Bliss</p>	<p>THE CHANGING ROLE OF RED-LEGGED KITTIWAKES IN THE SUBSISTENCE CULTURE OF THE PRIBILOF ISLANDS, ALASKA Marc D. Romano*, Lauren Divine, Sharon Mercuriel, &amp; Heather M. Renner</p>	
1615	<p>ONE BIG FAMILY: HIGH CONNECTIVITY AMONG ELEGANT TERN (<i>Thalasseus elegans</i>) BREEDING COLONIES REVEALED THROUGH POPULATION GENOMIC ANALYSIS Gabriela S. Perez**, Andres Aguilar, Katharine S. Goodenough, Michael Horn, Robert T. Patton, &amp; Enrico A. Ruiz</p>	<p>COMPLEXITIES OF PREDATOR CONTROL AROUND ENDANGERED SEABIRD COLONIES IN A WILDERNESS SETTING Kyle Pias* &amp; André F. Raine</p>	
1630			
1645			
1830-2000	<b>POSTER RECEPTION - Lobby in front of Ballroom AB</b>		
<p><b>OTHER MEETINGS</b></p> <p><b>NOAA Fisheries Seabird Workgroup (private; 1200, Boardroom N)</b></p> <p><b>Former Chairs Meeting (private; 1200, Boardroom S)</b></p> <p><b>NE Asia Seabird Conservation Committee (1730-1930, Boardroom S)</b></p> <p><b>Song Meter SM4 Workshop (1700-1800, Meeting Room 315)</b></p> <p><b>“Encountering Midway” Documentary: An evening with Chris Jordan and a million Laysan Albatrosses (2000-2130, Meeting R. 315)</b></p>			

## Friday Schedule

0815	Announcements		
0830	<b>PLENARY: George Divoky</b> <i>The Importance and Unimportance of Seabirds in the New Abnormal</i>		
0930	Coffee Break		
	<b>Ballroom AB</b>	<b>Meeting Room 315</b>	<b>Meeting Room 316</b>
	<b><i>Special Paper Session 1</i></b> <b>Pagophilia in the Time of Warming: Ice Ecology of Polar Seabirds</b>	<b><i>Special Paper Session 4</i></b> <b>Changes in Gull Foraging Ecology</b>	<b>Breeding Biology</b>
1000	ARCTIC SEABIRDS WORK HARDER TO GAIN LESS WHEN ICE LEAVES EARLY Kyle Elliott* & Tony Gaston	THE JUAN DE FUCA EDDY – A CRITICAL STOPOVER SITE FOR MIGRATING SABINE’S GULLS ( <i>Xema sabini</i> ) Shanti E. Davis*, Mark Maftai, & Mark L. Mallory	ESTIMATING REPRODUCTIVE SUCCESS USING TWO SURVEYS PER SEASON: VALIDATION WITH MAGELLANIC PENGUINS Ginger A. Rebstock* & P. Dee Boersma
1015	PREDATOR FORAGING ALTERING THE MCMURDO SOUND PREYSCAPE Benjamin Saenz, David G. Ainley*, Kendra Daly, Stacy Kim, Erin Conlisk, & Dennis Jongsomjit	TERRESTRIAL AND MARINE FORAGING STRATEGIES OF GULLS IN NORTHERN GERMANY, NORTH AND BALTIC SEAS Stefan Garthe*, Rahel M. Borrmann, Anna-Marie Corman, Leonie Enners, & Philipp Schwemmer	KID-FRIENDLY: FACTORS AFFECTING BREEDING SUCCESS OF CASPIAN TERNS ON EAST SAND ISLAND IN THE COLUMBIA RIVER ESTUARY Olivia A. Bailey**, Daniel D. Roby, Donald E. Lyons, Yasuko Suzuki, Peter J. Loschl, & Kirsten S. Bixler
1030	IS SEA-ICE MARGINAL HABITAT FOR LITTLE AUKS ( <i>Alle alle</i> )? Françoise Amélineau**, David Grémillet, Ann M. A. Harding, Wojciech Walkusz, Rémi Choquet, & Jérôme Fort	SEABIRD RESPONSES TO SUPPLEMENTAL FOOD SUPPLY SHIFTS IN RELATION TO VARIABLE NATURAL PREY BIOMASS Laurie Maynard*, Paloma Carvalho, & Gail Davoren	BREEDING DISTRIBUTION AND STATUS OF MARKHAM’S STORM-PETREL ( <i>Oceanodroma markhami</i> ) IN NORTHERN CHILE Rodrigo Barros, Ronny Peredo, Fabrice Schmitt, Fernando Medrano**, Rodrigo Silva, & Heraldo Norambuena
1045	FORAGING NICHE SEPARATION OF ADELIE ( <i>Pygoscelis adeliae</i> ) AND GENTOO ( <i>P. papua</i> ) PENGUINS DURING THE BREEDING SEASON AT PALMER STATION, ANTARCTICA Erin P. Pickett*, Bill R. Fraser, Donna Patterson, Megan A. Cimino, & Ari S. Friedlaender	FORAGING BEHAVIOUR OF THE GREAT-BLACK-BACKED GULL ( <i>Larus marinus</i> ): GPS TELEMETRY REVEALS INDIVIDUAL DIFFERENCES IN HABITAT USE Laurie Maynard* & Robert Ronconi	VARIATION IN REPRODUCTIVE SUCCESS AND MHC BASED MATE CHOICE IN MALE LEACH’S STORM-PETRELS ( <i>Oceanodroma leucorhoa</i> ) Brian Hoover*, Sarah Jennings, Scott Edwards, Yung-Wa Sin, & Gabrielle Nevitt
1100	THE EFFECTS OF THE MULTI-DECADAL DECLINE OF ARCTIC SEA ICE ON A RESIDENT ICE-OBLIGATE SEABIRD George Divoky*	SPATIOTEMPORAL HABITAT USE OF FORAGING WESTERN GULLS ( <i>Larus occidentalis</i> ) Scott A. Shaffer*, Pete Warzybok, Russell Bradley, Corey A. Clatterbuck, Emily C. Kelsey, & Josh Adams	DIET OF BRANDT’S CORMORANTS ( <i>Phalacrocorax penicillatus</i> ) DURING BREEDING SEASON: A NOVEL APPROACH Heather J. Robinson* & Julie A. Thayer

	Ballroom AB	Meeting Room 315	Meeting Room 316
1115	<p>ESTIMATING ANNUAL &amp; LIFETIME REPRODUCTIVE PERFORMANCE OF KNOWN-AGE ADELIE PENGUINS: AN EXPLORATION OF LIFE HISTORY THEORY</p> <p>Peter J. Kappes**, Katie M. Dugger, Grant Ballard, David G. Ainley, Phil O'B. Lyver, &amp; Alexander D. Fraser</p>	<p>CONNECTIVITY BETWEEN OFFSHORE AND NEARSHORE ECOSYSTEM DYNAMICS VIA NUTRIENT TRANSPORT AND SUPPLYING BY BREEDING SEABIRDS</p> <p>Kentaro Kazama*, Mami T. Kazama, Hirotsu Murano, Yasuaki Niizuma, Masahiko Sato, &amp; Kazuki Kosugi</p>	<p>EGG TURNING BEHAVIOR &amp; EGG TEMPERATURE IN RELATION TO MERCURY CONTAMINATION OF FORSTER'S TERNS (<i>Sterna forsteri</i>)</p> <p>Gregory T. Taylor**, Joshua T. Ackerman, &amp; Scott A. Shaffer</p>
1130	<p>THE ICE ECOLOGY OF KITTLITZ'S MURRELET</p> <p>John F. Piatt*, Mayumi L. Arimitsu, Kathy J. Kuletz, Sarah Schoen, Gary Drew, &amp; Brielle Heflin</p>	<p>EL NIÑO, THE BLOB, AND EGG CANNIBALISM IN GLAUCOUS-WINGED GULLS</p> <p>James L. Hayward* &amp; Shandelle M. Henson</p>	<p>LIVING AT THE EDGE: A 10-YEAR TIMESERIES OF COMMON MURRES NESTING AT A LARGE COLONY IN THE CALIFORNIA CURRENT</p> <p>Stephanie R. Schneider** &amp; Richard T. Golightly</p>
1145	<b>WRAP-UP/DISCUSSION</b>	<b>WRAP-UP/DISCUSSION</b>	
<b>1200</b>	<b>Lunch (Lunch provided to all at the Membership Meeting - All Welcome)</b>		
	<i>Special Paper Session 5</i> <b>Marine Spatial Planning</b>	<b>Foraging Ecology</b>	<b>Restoration &amp; Eradication</b>
1330	<p>ECONOMIC DEVELOPMENT &amp; MARINE PROTECTION USING MARINE SPATIAL PLANNING: GLOBAL TRENDS &amp; RELEVANCE TO SEABIRD CONSERVATION</p> <p>Joanna L. Smith*</p>	<p>DIET OVERLAP &amp; INTER-ANNUAL VARIATION OF SYMPATRIC SHEARWATERS DURING THE NON-BREEDING SEASON</p> <p>Paloma Carvalho** &amp; Gail K. Davoren</p>	<p>POPULATIONS TRENDS OF COMMON MURRES &amp; BRANDT'S CORMORANTS IN THE GULF OF THE FARALLONS 1999-2016</p> <p>Cassie M. Bednar*, Gerard J. McChesney, Phillip J. Capitolo, Michael W. Parker, Harry R. Carter, &amp; Pete Warzybok</p>
1345	<p>THE ESTABLISHMENT OF OFFSHORE WIND FARMS IN THE NORTH SEA &amp; THE CONSEQUENCES FOR SEABIRDS, MARINE CONSERVATION &amp; SPATIAL PLANNING</p> <p>Stefan Garthe*, Katharina Fliessbach, Nele Markones, Bettina Mendel, Sabine Mueller, Verena Peschko, &amp; Henriette Schwemmer</p>	<p>FORAGE FISH ABUNDANCE IN COMMON TERN DIETS, AND ITS IMPLICATIONS FOR SEABIRD POPULATIONS</p> <p>Aspen A. Ellis** &amp; Paula S. Shannon</p>	<p>THE SUCCESSFUL SEABIRD RESTORATION ON MEXICAN ISLANDS</p> <p>Yuliana Bedolla-Guzmán*, Alfonso Aguirre-Muñoz, Federico Méndez-Sánchez, Antonio Ortiz-Alcaraz, Julio Hernández-Montoya, &amp; Evaristo Rojas-Mayoral</p>
1400	<p>USE OF MARINE BIRD DISTRIBUTION MODELS BY REGIONAL OCEAN COUNCILS FOR SPATIAL PLANNING</p> <p>Arliss J. Winship*, Brian P. Kinlan, Jesse Cleary, Corrie Curtice, Patrick N. Halpin, &amp; Emily Shumchenia</p>	<p>WORKING PARENTS IN AN UNPREDICTABLE SEA: CASSIN'S AUKLET TIME BUDGETS DURING THE BREEDING SEASON</p> <p>Gail Gallaher**, Meredith Elliott, Pete Warzybok, Russell Bradley, Jaime Jahnce, Andre Cavalcanti, &amp; Nina J. Karnovsky</p>	<p>ACOUSTIC MONITORING OF SEABIRDS BEFORE &amp; AFTER RAT ERADICATION ON HAIDA GWAII</p> <p>Carita Bergman* &amp; Luke Halpin</p>

	Ballroom AB	Meeting Room 315	Meeting Room 316
1415	<p>AT-SEA RANGING BEHAVIOR OF RED-TAILED TROPICBIRDS &amp; POTENTIAL FOR INTERACTION WITH OFFSHORE WIND ENERGY INFRASTRUCTURE IN HAWAI'I</p> <p>Jonathan J. Felis*, Josh Adams, Emma J. Kelsey, Max Czapanskiy, Eric A. VanderWerf, &amp; David M. Pereksta</p>	<p>WHEN BEING AN OPPORTUNIST IS NOT BENEFICIAL</p> <p>Katharine S. Goodenough*, Robert T. Patton, Julio Lorda, &amp; Eli S. Bridge</p>	<p>STATUS OF ENDANGERED BRYAN'S SHEARWATERS AND MANAGEMENT OF BIRD BREEDING ISLANDS IN THE OGASAWARA ISLANDS IN JAPAN</p> <p>Kazuo Horikoshi*, Hajime Suzuki, Hayato Chiba, &amp; Kazuto Kawakami</p>
1430	<p>SHEARWATERS IN THE NORTHERN CALIFORNIA CURRENT: COMBINING ENVIRONMENTAL PREDICTORS WITH SATELLITE TELEMETRY AND AT-SEA ABUNDANCE</p> <p>Josh Adams, Jonathan J. Felis, Max Czapanskiy*, Jennifer Schulien, &amp; Bill Henry</p>	<p>HIGH INDIVIDUAL VARIATION IN THE FORAGING ECOLOGY OF BREEDING COMMON MURRES</p> <p>Julia Gulka**, Gail Davoren, &amp; Robert Ronconi</p>	<p>AN INVASIVE MOUSE POPULATION COULD THREATEN SEABIRD RECOVERY AT JARVIS ISLAND NATIONAL WILDLIFE REFUGE</p> <p>S. Allie Hunter*, Stefan Kropidowski, &amp; Elizabeth Flint</p>
1445	<p>FLEET DYNAMICS: TOWARDS UNDERSTANDING THE WHERE, WHEN AND WHY OF FISHER BEHAVIOUR</p> <p>Pamela E. Michael**, Chris Wilcox, Geoffrey N. Tuck, Alistair J. Hobday, &amp; Peter G. Strutton</p>	<p>OCEANOGRAPHIC DRIVERS OF PREY AVAILABILITY IN TROPICAL SYSTEMS</p> <p>Fiona McDuie*, Mark G. R. Miller, Scarla J. Weeks, &amp; Bradley C. Congdon</p>	<p>THE STATUS OF THE COMMON MURRE AT TEURI ISLAND, JAPAN</p> <p>Shin Matsui* &amp; Yasunori Takenaka</p>
<b>1500</b>	<b>Coffee Break</b>		
	<i>Special Paper Session 5</i> <b>Marine Spatial Planning</b>	<b>Foraging Ecology</b>	
1530	<p>SPATIALLY-EXPLICIT POPULATION DYNAMICS: INCORPERATING BYCATCH AND ENVIRONMENTAL VARIATION</p> <p>Pamela E. Michael**, Robin Thomson, Christophe Barbraud, Karine Delord, Sophie de Grissac, Alistair J. Hobday, Peter G. Strutton, Geoffery N. Tuck, Henri Weimerskirch, &amp; Chris Wilcox</p>	<p>LONG-DISTANCE EFFECTS OF GROWING WHITE-TAILED SEA EAGLE (<i>Haliaeetus albicilla</i>) POPULATIONS ON DUTCH BARNACLE GOOSE (<i>Branta leucopsis</i>) MIGRATION TIMING</p> <p>Marinde E. Out** &amp; Ronald C. Ydenberg</p>	
1545	<p>THE RISK OF RODENT INTRODUCTIONS FROM SHIPWRECKS TO SEABIRDS ON ALEUTIAN AND BERING SEA ISLANDS</p> <p>Martin Renner*, Eric Nelson, Jordan Watson, Alan Haynie, Aaron Poe, &amp; Martin Robards</p>	<p>ACCELERATED ENERGY INTAKE INCREASES SURVIVAL RATES OF BLACK OYSTERCATCHER BROODS</p> <p>Brian H. Robinson**, Laura M. Phillips, &amp; Abby N. Powell</p>	
1600	<p>A TRIBUTE TO THE LIFE, AND RETROSPECTIVE OF THE MARINE SPATIAL PLANNING &amp; MODELING WORK, OF BRIAN KINLAN</p> <p>Jeffery B. Leirness*</p>	<p>THICK-BILLED MURRES FORAGE MORE EFFICIENTLY IN WELL-STRATIFIED WATERS</p> <p>Nobuhiko Sato**, Nobuo Kokubun, Takashi Yamamoto, Dale M. Kikuchi, Yutaka Watanuki, &amp; Alexander S. Kitaysky</p>	

	Ballroom AB	Meeting Room 315	Meeting Room 316
1615	NATIONAL GEOGRAPHIC - PRISTINE SEAS EXPEDITION TO SEYCHELLES  Film to be shown after oral presentations	COORDINATED PROVISIONING IN A PELAGIC SEABIRD WITH VARIABLE FORAGING STRATEGIES  Chris W. Tyson**, Holly Kirk, Annette Fayet, Emiel Van Loon, & Tim Guilford	
1630		NICHE WIDTH VARIATION OF THE ALEUTIAN TERN: INSIGHTS FROM STABLE ISOTOPE ANALYSIS  Shiway W. Wang*, McKenna Hanson, Veronica M. Padula, & Douglas Causey	
1645			
1700- 1830	<b>EARLY CAREER EVENT: PANEL &amp; DISCUSSION - Meeting Room 315</b>		
1830- 2000	<b>STUDENT MENTOR RECEPTION - Lobby in front of Ballroom AB</b>		
	<b>OTHER MEETINGS</b> <b>North Pacific Albatross Working Group - 1000, Boardroom S</b> <b>Aleutian Tern Technical Committee - 0930, Boardroom N</b> <b>Gillnet Bycatch - 1715, Boardroom S</b>		

## Saturday Schedule

0830	Announcements		
0845	<b>SPECIAL ACHIEVEMENT &amp; LIFETIME ACHIEVEMENT AWARD PRESENTATIONS</b> <i>Coffee Available</i>		
0945	Coffee Break		
	<b>Ballroom AB</b>	<b>Meeting Room 315</b>	<b>Meeting Room 316</b>
	<i>Special Paper Session 3</i> <b>Bycatch in Fishing Gear &amp; Fish-Oiled Seabirds</b>	<b>Conservation Biology</b>	<i>Symposium</i> <b>The Values of Long-Term Studies: Insight &amp; Synthesis</b>
1000		WHAT'S IN A WRECK? ELUCIDATING THE PATTERN(S) OF UNUSUAL MORTALITY EVENTS Jennifer W. Lang** & Julia K. Parrish	LONG-TERM STUDIES OF BREEDING SEABIRDS IN THE COLUMBIA RIVER ESTUARY: TRANSFORMATIVE CHANGE AND RESPONSIBLE FORCING FACTORS Daniel D. Roby*, Donald E. Lyons, Yasuko Suzuki, Jessica Y. Adkins, Peter J. Loschl, & Timothy J. Lawes
1015		MOTU NUI: AN EASTER ISLAND (RAPA NUI) SEABIRD REFUGE Guillermo Luna-Jorquera*, Marcelo A. Flores, Pedro Lazo-Hucke, Paula Plaza- Ramírez, & David C. Duffy	THE CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATION (CALCOFI): 30 YEARS OF AT-SEA SEABIRD OBSERVATIONS AND COUNTING William J. Sydeman*
1030		EFFECTS OF OCEANIC VARIABILITY ON BREEDING POPULATION OF GREATER CRESTED TERN & CHINESE CRESTED TERN IN EAST CHINA SEA Chung-Hang Hung**, Shui-Hua Chen, Hsiao-Wei Yuan, Le-Ning Chang, Zhong- Yong Fan, & Yi-Wei Lu	LONG-TERM SEABIRD DATA FOR A CHANGING ARCTIC Elizabeth A. Labunski* & Kathy J. Kuletz
1045	<b>Introduction</b>	EARLY SUCCESS IN LONG-TERM MONITORING OF PROTECTED HAWAIIAN PETREL BREEDING HABITAT Jennifer K. Learned* & Jay F. Penniman	TOP- AND MID-TROPHIC LEVEL RESPONSES TO OCEAN CONDITIONS OFF CENTRAL CALIFORNIA Jaime Jahncke*, Pete Warzybok, Meredith Elliott, & Russell Bradley
1100	FISHING GEAR INJURIES IN CALIFORNIA BROWN PELICANS ADMITTED FOR REHABILITATION 2002-2015 Rebecca Duerr* & Julie Skoglund	PELAGIC CORMORANT STATUS Ron LeValley*	60,000 CARCASSES, 175 SPECIES, 500 SITES & 4,000 PEOPLE: BEACHED BIRD PATTERNS IN A WARMING WORLD Julia K. Parrish*, Timothy Jones, & Hillary Burgess
1115	MITIGATING SEABIRD & SEADUCK BYCATCH IN FISHERIES UNDER THE ARCTIC MIGRATORY BIRD INITIATIVE (AMBI) Jennifer F. Provencher*, Amie L. Black, Mark L. Mallory, & H. Grant Gilchrist	SPATIOTEMPORAL PATTERNS OF CORVID DISTRIBUTION AND ABUNDANCE IN AREAS OCCUPIED BY MARBLED MURRELETS Joseph M. Northrup*, James W. Rivers, S. Kim Nelson, Daniel D. Roby, Lindsay J. Adrean, & Matthew G. Betts	SEABIRDS HELP TO INFORM FORAGE FISH TRENDS IN RELATION TO ENVIRONMENTAL CONDITIONS IN THE GULF OF ALASKA Stephani G. Zador*

	Ballroom AB	Meeting Room 315	Meeting Room 316
1130	<p>STATUS AND CONSERVATION OF WAVED ALBATROSS</p> <p>Hannah Nevins*, Giovanni Suarez-Espin, Kate Huyvaert, Joanna Alfaro-Shigueto, Jeffrey C. Mangel, Nigel Brothers, Felipe Vallejo, &amp; Cristina Muller</p>	<p>WHAT HAPPENS AFTER? POST-RELEASE MOVEMENTS &amp; SURVIVAL AMONG GROUNDED NEWELL'S SHEARWATER FLEDGLINGS</p> <p>André F. Raine*, Josh Adams, Tracy Anderson, Reginald E. David, Megan Vynne, &amp; Mike McFarlin</p>	<p>INTERRELATIONSHIPS AMONG OCEAN CLIMATE, ZOOPLANKTON TIMING AND ABUNDANCE, AND REPRODUCTION IN A ZOOPLANKTIVOROUS SEABIRD</p> <p>Mark Hipfner* &amp; Moira Galbraith</p>
1145	<p>SEABIRD BYCATCH AND MITIGATION EFFORTS IN ALASKA FISHERIES SUMMARY: 2007 THROUGH 2015</p> <p>Anne Marie Eich*, Kristin R. Mabry, Sadie K. Wright, &amp; Shannon M. Fitzgerald</p>	<p>MEASURING NEARSHORE RECOVERY OF SEABIRD ISLANDS FOLLOWING RODENT ERADICATION AT THE MERCURY ISLANDS, NEW ZEALAND</p> <p>Lyndsay L. Rankin** &amp; Holly P. Jones</p>	<p>LONG-TERM SEABIRD STUDIES ON THE ISLE OF MAY: CHANGING TIMES FOR NORTH SEA SEABIRDS</p> <p>Sarah Wanless, Francis Daunt, &amp; Mike Harris Presented by William J. Sydeman</p>
1200	<b>Lunch (Lunch provided to all at the Conservation Committee Meeting - All Welcome)</b>		
	<i>Special Paper Session 3</i> <b>Bycatch in Fishing Gear &amp; Fish-Oiled Seabirds</b>	<b>Conservation Biology</b>	<i>Symposium</i> <b>The Values of Long-Term Studies: Insight &amp; Synthesis</b>
1330	<p>SEABIRD INTERACTIONS IN THE HAWAII DEEP &amp; SHALLOW SET LONGLINE FISHERIES IN 2015</p> <p>John Peschon* &amp; Sarah Ellgen</p>	<p>CURRENT STATUS AND PLANS FOR SEABIRD CONSERVATION AND MANAGEMENT ON THE ISLAND OF LĀNA'I</p> <p>Rachel S. Sprague* &amp; André F. Raine</p>	<p>INSIGHTS REGARDING CLIMATE CHANGE &amp; FISHERIES FROM LONG-TERM RESTORATION OF ATLANTIC PUFFIN COLONIES IN THE GULF OF MAINE</p> <p>Stephen W. Kress*, Paula S. Shannon, &amp; Christopher O'Neal</p>
1345	<p>THE DEVIL IS IN THE DETAIL: TRENDS IN ALBATROSS BYCATCH RATES IN ALASKAN LONGLINE FISHERIES</p> <p>Edward F. Melvin*, Kim S. Dietrich, Robert M. Suryan, &amp; Amanda J. Gladics</p>	<p>MEXICO'S NEWEST PROTECTED AREA: "BAJA CALIFORNIA PACIFIC ISLANDS BIOSPHERE RESERVE"</p> <p>Alfonso Aguirre-Muñoz &amp; Federico Méndez-Sánchez*</p>	<p>A NEW DATABASE TO ELUCIDATE GLOBAL SEABIRD POPULATION TRENDS</p> <p>Stephanie Avery-Gomm**, Milani Chalopuka, Richard A. Fuller, Edd Hammill, Britta D. Hardesty, Michelle Paleczny, M. L. D. Palomares, Daniel Pauly, Chris Wilcox, &amp; Hugh Possingham</p>
1400	<p>DO HUNGRY ALBATROSSES GATHER AROUND FISHING VESSEL?</p> <p>Yukiko Inoue*, Yasuaki Niizuma, Tomomi Sumi, Shin-nosuke Nishimura, Kaoru Koyama, &amp; Wataru Goshima</p>	<p>REDISCOVERY OF LEAST KNOWN BREEDING SITES FOR SEABIRDS IN EAST COAST MALAYSIA</p> <p>Abdulmaula A. Hamza*, Chee Ho Wong, &amp; Amirrudin Ahmad</p>	<p>DENSITY DEPENDENCE AND CHANGES IN CARRYING CAPACITY OF ALASKAN SEABIRD POPULATIONS</p> <p>Holly F. Goyert*, Edward O. Garton, Brie A. Drummond, &amp; Heather M. Renner</p>
1415	<p>SEABIRD BYCATCH BY THE PURSE-SEINE SMALL PELAGIC FISHERY IN THE CENTRAL GULF OF CALIFORNIA</p> <p>Enriqueta Velarde*, Gabriela García-Alberto, Ernesto Gastelum-Nava, &amp; Daniel W. Anderson</p>		<p>LONG-TERM MONITORING ON HAIDA GWAI: USING AT-SEA SURVEYS TO DETERMINE DISTRIBUTION &amp; ABUNDANCE OF MARINE BIRDS OVER TIME</p> <p>Vivian Pattison*, Tony Gaston, &amp; Ayla Pearson</p>



	Ballroom AB	Meeting Room 315	Meeting Room 316
1430	<b>WRAP-UP/DISCUSSION</b>		MURRE UPDATE: WIDESPREAD BREEDING FAILURES FOLLOWING WINTER MORTALITY EVENT Heather M. Renner*, Mayumi L. Arimitsu, Donald E. Dragoo, Holly F. Goyert, John F. Piatt, & Nora A. Rojek
1445			ALTERNATE UNSTABLE STATES: DISTINGUISHING CONTRIBUTIONS OF BOTTOM-UP VS. TOP-DOWN CONTROL OF A SEABIRD COLONY Robert M. Suryan*, Bryan A. Black, Amanda J. Gladics, Cheryl A. Horton, Shawn W. Stephensen, & Julia K. Parrish
<b>1500</b>	<b>Coffee Break</b>		
		<b>Contaminants &amp; Marine Debris</b>	<i>Symposium</i> <b>The Values of Long-Term Studies: Insight &amp; Synthesis</b>
1530		SPATIAL ECOTOXICOLOGY UNDER CLIMATE CHANGE: TRACKING MERCURY CONTAMINATION ACROSS ARCTIC MARINE FOOD WEBS Jérôme Fort*, David Grémillet, Hallvard Strøm, Maria Gavrilov, Olivier Gilg, & Rune Dietz	DETECTING CHANGE IN SEABIRD DISTRIBUTIONS AT SEA IN ARCTIC AND SUB-ARCTIC WATERS OVER SIX DECADES Carina Gjerdrum*, Sarah N. P. Wong, Kasper L. Johansen, David Lieske, David A. Fifield, & April Hedd
1545		CHARACTERIZATION OF MARINE DEBRIS INGESTED BY PROCELLARIIFORMES Ruth Kaz**	NATURAL SELECTION ON MORPHOLOGY VARIES AMONG YEARS AND BY SEX IN MAGELLANIC PENGUINS ( <i>Spheniscus magellanicus</i> ) Laura E. Koehn**, Jeffrey J. Hard, Elaine P. Akst, & P. Dee Boersma
1600		PLASTICS IN THE PACIFIC: ASSESSING RISK FROM MARINE DEBRIS ON SEABIRDS IN THE CALIFORNIA CURRENT Thomas P. Good*, Jameal F. Samhoury, Blake E. Feist, Chris Wilcox, Jaime Jahncke, & Scott A. Shaffer	STATUS & TREND OF THE MARBLED MURRELET IN THE PACIFIC NORTHWEST Martin G. Raphael*, Gary A. Falxa, Deanna Lynch, Scott F. Pearson, S. Kim Nelson, & Craig Strong
1615			RECOVERY OF ENDANGERED CALIFORNIA LEAST TERNS: MULTI-DECADAL PROGRESS & CHALLENGES Travis Wooten*, Gabriela Iburguchi, Katrina Murbock, Maggie Lee Post, Rachel Smith, & Amie B. Aguiar
1630			
1645			
<b>1830-2300</b>	<b>BANQUET &amp; AWARDS - Ballroom AB</b>		

## Poster List

Poster #	Poster Session & Reception - All Welcome!	Topic
1	BEYOND ALLOMETRIC MODELS: FLIGHT COSTS OF RED-FOOTED BOOBIES VARY IN RESPONSE TO WIND CONDITIONS Max F. Czapanskiy**, Jonathan F. Felis, Emma C. Kelsey and Josh Adams	Behavior
2	EXPERIENCE AND CONTAMINANTS IN RELATION TO INCUBATION BEHAVIOR OF WESTERN GULLS ( <i>Larus occidentalis</i> ) NESTING AT FARALLON NATIONAL WILDLIFE REFUGE Lindsey J. Broadus**, Pete Warzybok, Russell Bradley, Jaime Jahnce and Scott A. Shaffer	Breeding Biology
3	TIMING OF REPRODUCTION IN SEABIRDS: LARGE-SCALE COMPARISONS, AND LINKS TO POPULATION DYNAMICS, CLIMATE AND LOWER TROPHIC LEVELS Zofia M. Burr, Øystein Varpe, Sébastien Descamps, Tycho Anker-Nilssen, Tone K. Reiertsen, Kjell Einar Erikstad	Breeding Biology
4	STATUS OF ALEUTIAN TERNS ( <i>Onychoprion aleutica</i> ) BREEDING IN THE KODIAK ARCHIPELGO, 2014-2016 Robin M. Corcoran and Donald E. Lyons	Breeding Biology
5	SPECIES-SPECIFIC EFFECTS OF THE 2015-16 EL NIÑO ON SEABIRDS BREEDING AT ISLA ESPAÑOLA, GALÁPAGOS Jennifer L. Howard** and David J. Anderson	Breeding Biology
6	EVALUATING SPACE USE AND REPRODUCTIVE SUCCESS OF THE THREATENED MARBLED MURRELET IN WESTERN OREGON S. Kim Nelson, Joseph M. Northrup, Daniel D. Roby Matthew G. Betts, Lindsay J. Adrean, and James W. Rivers	Breeding Biology
7	KITTLITZ'S MURRELET ( <i>Brachyramphus brevirostris</i> ) NESTING ECOLOGY ON KODIAK ISLAND, ALASKA, 2008-2016 Katelyn A. Stoner**, Timothy W. Knudson, Robin W. Corcoran, James R. Lovvorn, Matthew J. Lawonn, and John F. Piatt	Breeding Biology
9	COLONY WIDE BREEDING FAILURE OF RHINOCEROS AUKLETS ON TEURI ISLAND DURING 2014-2016 Mariko Yamamoto** and Yutaka Watanuki	Breeding Biology
10	SHIFTS IN CROSS-SHELF DISTRIBUTION OF SEABIRDS IN THE NORTHERN GULF OF ALASKA UNDER DIFFERENT TEMPERATURE REGIMES, 2007-2015 Daniel A. Cushing, Kathy J. Kuletz, Russell R. Hocroft, Seth L. Danielson and Elizabeth A. Labunski	Climate Change
11	COULD LASERS DAMAGE ALBATROSS VISION? A REVIEW OF POTENTIAL RISKS Arden P. Blumenthal**, Edward F. Melvin and Esteban Fernandez-Juricic	Conservation Biology
12	WATERBIRD MONITORING AS A TOOL FOR ESTUARINE CONSERVATION: A CASE STUDY FROM HUMEDALES DE LA LAGUNA LA CRUZ, SONORA, MEXICO McKenna N. Hanson, Lorayne Meltzer, Lindsay J. Adrean, Emily Clark, Abram B. Fleishman	Conservation Biology
13	USING MOTION SENSING CAMERAS TO ASSESS PREDATORS OF JAPANESE MURRELETS Nina J. Karnovsky, Yoshitaka Minowa, Yutaka Nakamura and Kuniko Otsuki	Conservation Biology
14	PUBLIC ENGAGEMENT IN SEABIRD CONSERVATION - OBSERVATIONS FROM NEWFOUNDLAND AND LABRADOR Pierre Ryan	Conservation Biology
15	SELECTIVE MICROPLASTIC CONTAMINATION OF A PLANKTIVOROUS DIVING SEABIRD IN THE GREENLAND SEA Françoise Amélineau**, Delphine Bonnet, Olivier Heitz, Valentine Mortreux, Ann Harding and Nina Karnovsky	Contaminants and Marine Debris

Poster #	Poster Session & Reception - All Welcome!	Topic
16	SEX DIFFERENCES IN MERCURY CONCENTRATIONS OF RED-LEGGED KITTIWAKES DURING THE BREEDING AND NON-BREEDING SEASONS Abram B. Fleishman**, Rachael A. Orben, Alexis Will, Roasana Paredes, Alexander Kitaysky and Joshua T. Ackerman	Contaminants and Marine Debris
17	MICROPLASTIC IN CASSIN'S AUKLETS FROM THE 2014 STRANDING EVENT Hannah P. Floren** and Gary W. Shugart	Contaminants and Marine Debris
18	USING FEATHERS TO DETERMINE TEMPORAL TRENDS IN PBDE LEVELS IN SEABIRDS Amanda E. Johnson**, Peter J. Hodum and Megan M. Gessel	Contaminants and Marine Debris
19	MARINE PLASTIC POLLUTION AND SEABIRDS - MOVING BEYOND REPORTING TO USING STANDARDIZED APPROACHES TO MOVE TOWARDS ASSESSING EFFECTS Jennifer F. Provencher, Stephanie B. Borrelle, Stephanie Avery-Gomm and Mark L. Mallory	Contaminants and Marine Debris
20	SIZE AND DYNAMICS OF MICROPLASTIC IN GASTROINTESTINAL TRACTS OF NORTHERN FULMARS AND SOOTY SHEARWATERS Gary W. Shugart, Peter J. Hodum, Lydia U. Kleine, Alicia K. Terepocki and Alex T. Brush	Contaminants and Marine Debris
21	DIETARY NICHE WIDTH AND OVERLAP OF MULTIPLE MARINE PREDATORS AT A BIOLOGICAL HOTSPOT Gail Davoren, Paloma Calabria Carvalho, Laurie Maynard, Julia Gulka, Edward Jenkins and Kelsey Johnson	Foraging Ecology
22	NOVEL SPATIAL ANALYTICS REVEAL INFLUENCE OF PREY DEPTH UPON ALCID DISTRIBUTION IN A FJORD SYSTEM Eric M. Keen** and Chris R. Picard	Foraging Ecology
23	BEGGARS CAN'T BE CHOOSERS: SUCCESSFUL BREEDING ON A POOR QUALITY DIET Alexa R. Piggott, Sam B. Stark, Higgins R. Brendan, David B. Irons and Daniel D. Roby	Foraging Ecology
24	ANALYSIS OF HISTORIC FORAGING ECOLOGY OF DECLINING TUFTED PUFFIN (FRATERCULA CIRRHATA) POPULATIONS IN WASHINGTON AND OREGON Robyn M. Thomas and Peter J. Hodum	Foraging Ecology
25	INTER-ANNUAL DIFFERENCES IN STABLE ISOTOPES AND CORTICOSTERONE IN FEATHERS OF A RARE NOCTURNAL SEABIRD Sarah Thomsen	Foraging Ecology
26	IMPACT OF LATE QUATERNARY CLIMATE CHANGE ON THE DEMOGRAPHIC HISTORY OF GULF OF CALIFORNIA SEABIRDS Enrico A. Ruiz, Enriqueta Velarde and Andres Aguilar*	Genetics
27	BEACH COMBERS REFLECTIONS ON SEABIRD MORTALITY EVENTS, 1997-2016 Jacqueline K. Lindsey, Emily Kelsey, Corinne Gible, Erica Donnelly-Greenan, Hannah Nevins and Scott Benson	Management Policy Planning
28	EXHIBITION OF NITROGEN SUPPLYING BY PISCIVOROUS BIRDS INTO PLANTS IN AN AQUARIUM: A PILOT EXPERIMENT OF CAPTIVE EGRET Mami Kazama and Kentaro Kazama	Other
29	EXPERIENTIAL LEARNING IN MARINE ORNITHOLOGY AT OREGON STATE UNIVERSITY Donald E. Lyons, Robert M. Suryan, Rachael A. Orben and G. Renee Albertson	Other
30	A MULTI-DECADAL STUDY OF PRE-BREEDING SURVIVAL OF BLACK GUILLEMOTS IN A RAPIDLY CHANGING ARCTIC George J. Divoky and Christophe J. Barbaud	Population Biology

Poster #	Poster Session & Reception - All Welcome!	Topic
31	A MULTI-DECADAL STUDY OF PRE-BREEDING SURVIVAL OF BLACK GUILLEMOTS IN A RAPIDLY CHANGING ARCTIC George J. Divoky and Christophe J. Barbaud	Population Biology
32	THE LIFE AND TIMES OF SEA RANCH SEABIRDS: REPRODUCTIVE SUCCESS AND PHENOLOGY BEFORE, DURING AND AFTER THE 2015 EL NIÑO Kyle Jensen**, Ellen Harris, Ramoncito Caleon, Diane Hichwa and Nina J. Karnovsky	Population Biology
33	UNRAVELLING MORTALITY TRENDS IN TWO AT-RISK COASTAL DUNE BREEDING BIRDS IN SOUTHERN CALIFORNIA Maggie Lee Post, Rachel Smith, Megan E.B. Jones, Gabriela Ibarguchi, Katrina Murbock, Travis Wooten, Lisa Nordstrom, Ignacio Vilchis and Ron Swaisgood	Population Biology
34	MONITORING PIGEON GUILLEMOT COLONIES ON WHIDBEY ISLAND: 2008-2016 Emily Terao, Govinda Rosling, Ann Casey, Phyllis Kind and Frances Wood	Population Biology
35	COMMUNITY ENGAGEMENT STRATEGIES FOR PROMOTING SEABIRD BYCATCH REDUCTION IN COMMERCIAL FISHERIES Amanda J. Gladics, Edward F. Melvin and Robert M. Suryan	SPS 3: Bycatch in Fishing Gear and Fish-Oiled Seabirds
36	A SUMMARY OF ALBATROSS BAND RECOVERY DATA IN THE HAWAII DEEP AND SHALLOW SET LONGLINE FISHERIES John Peschon	SPS 3: Bycatch in Fishing Gear and Fish-Oiled Seabirds
37	PRELIMINARY AT-SEA TRIALS OF SEABIRD BYCATCH MITIGATION IN JAPANESE GILLNET FISHERIES Mayumi Sato, Yutaka Yamamoto, Seiji Hayama and Rory Crawford	SPS 3: Bycatch in Fishing Gear and Fish-Oiled Seabirds
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