2023 Pacific Seabird Group

50th Annual Meeting

15 – 17 February 2023

SPONSORS

We acknowledge the generous support of the following sponsors:

California Least Tern

NOAA National Seabird Program
SeaWorld
U.S Fish and Wildlife Service Region 8

Double-Crested Cormorant

Lotek
National Fish and Wildlife Foundation
Pūlama Lānaʻi

Brown Pelican

San Diego Zoo Wildlife Alliance
Washington Department of Fish and Wildlife
Gary Collar
Charlene McAllister

Great Blue Heron

Conservación de Islas

Farallon Institute

H.T. Harvey & Associates

Oikonos

SeaDoc Society

USGS Western Regional

Wildcoast

Kenneth Briggs

Douglas Causey

David Irons

Mark Rauzon

Dick Veit

Ashy Storm-Petrel

American Bird Conservancy
Oregon State University
San Diego Audubon Society
Individual: Kyra Mills-Parker
Annette Henry
Lora Leschner
Rob Suryan
Breck Tyler

DONORS

We thank the following individuals for their financial contributions.

Craig S. Harrison Conservation Fund	***PSG HELPS***	***Former Chairs Fund***	***Student Travel Fund***	***PSG General Support Fund***
Daniel Richards	Rob Suryan Gary Falxa Annette Henry	Roberta Swift David Irons Lora Leschner Mark Rauzon Douglas Causey Kim Nelson William Sydeman Kenneth Briggs Kyra Mills	Charlene McAllister Breck Tyler Gary Falxa	Gary Collar Rob Suryan Dick Veit

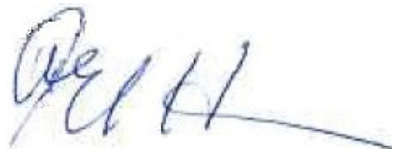
Local Committee Welcome

Welcome to our Annual Meeting of the Pacific Seabird Group. This year marks our 50th anniversary and we are excited to be back to an in-person event. We are also delighted to be bringing PSG back to San Diego (via La Jolla) after 28 years. At the time of writing, we have 289 people registered from 13 countries, giving us a phenomenal turn out for our return to an in-person meeting. With such a diverse group of students and career scientists attending, and a wide range of oral presentations and posters we are certain there will be interesting topics for everyone.

Our meeting will be held at the Scripps Institution of Oceanography's Robert Paine Scripps Forum for Science, Society and the Environment—Scripps Seaside Forum for short. Situated between the Scripps Pier and La Jolla Shores, the Scripps Seaside Forum is the perfect mix of academic and modern settings, in a waterfront location facing the Pacific Ocean. It is also an excellent fit with our theme of "Boundary Currents in Borderless Oceans'' as we will be a short distance from Baja California and have the California Current as a backdrop. We will also be a few steps away from where the California Cooperative Oceanic Fisheries Investigations (CalCOFI) began in 1949 and is currently run to understand and predict effects of ocean warming on the California Current Ecosystem. To complement we are organizing field trips that will get you seabirding and kayaking in the California Current or shorebirding in the San Diego Bay National Wildlife Refuge.
Our Silent AUKtion to benefit students is now up and running. Please visit the site and bid early and often! Auction ends Friday, February 17, at 3pm Pacific Time. Please get your bids in now!

We welcome you to La Jolla and look forward to sharing this time with you.

Nacho Vilchis & Annette Henry



Greetings from the Program Chair

Welcome to the 50th annual meeting of the Pacific Seabird Group, our first in-person meeting since COVID! The theme of this year's meeting is "**Boundary Currents in Borderless Oceans**". Within this theme, we tried to capture both the intrinsic nature of the California Current as well as the Pacific Seabird Group's long term goal of inclusivity, always a priority for the study and conservation of seabirds who know no political boundaries.

Our plenary speakers this year were chosen both for their innovative contributions to the study of seabirds as well as for their relevance to the general theme of the conference. **Dr. William Sydeman** will be honored this year at the meeting for his enduring research on seabirds of the California Current (a Boundary Current with, deservedly, world renown) with a Lifetime Achievement Award. Dr. Sydeman's Plenary lecture will highlight how changing climate might impact the California Current's suitability as a refugium, and whether changes in the current's suitability might favor generalist or specialist species of seabirds. **Dr. Andréa Thiebault** is this year's winner of the EARS Award (Early Achievements in Research and Science Communications). Dr. Thiebault has conducted creative and innovative research into the foraging behavior of seabirds. "Everybody knows" that seabirds use each other as cues to the location of prey, but there is remarkably little quantitative evidence to support this notion. Using various combinations of trackers, Go-Pro cameras and other instruments, Dr. Thiebault has made significant inroads into this difficult, and currently critically important, issue. She will present our second Plenary, based on her research. **Dr. Kathy Kuletz** has been honored with a Lifetime Achievement Award and will present our third Plenary lecture on her long-term research into the Bering Sea Ecosystem. Dr. Kuletz will present an ecosystem level analysis of the diverse avifauna, equally diverse prey upon which those birds feed, and the myriad ecological changes that have affected these ecosystem components in different ways. **Dr. Kees Vermeer**, winner of the third Lifetime Achievement Award at our 50th Anniversary meeting has been with PSG since the beginning. Unfortunately he is not able to be here in person. Dr. Vermeer was, and is, an inspiration to a great many aspiring seabird biologists. His research on alcids and other seabirds of the Pacific Coast is still widely cited; his warm and supportive personality will be missed at this meeting and we all send our congratulations to him on this occasion. A Special Achievement Award is shared by a team of researchers and conservationists in the western Pacific: **Simba Chan, Dr. Shuihua Chen, and Professor Hsiao-Wei Yuan**, for their extraordinary accomplishment of rescuing the very critically endangered Chinese Crested Tern from extinction after 63 years with no confirmed sightings. Such an accomplishment is remarkable for any threatened species, but this team having coordinated and cooperated in this effort to save a species reliant on conservation efforts across regions and nations is especially deserving of recognition.

We were delighted to be inundated with **187** talks and posters submitted for this 50th Anniversary Meeting and managed to work all of them into our schedule; we hope this level of interest forecasts an increasing trend in scientific research on biology and conservation of seabirds as well as attendance at future PSG meetings. An invited session on Thursday afternoon will feature indigenous speakers from the Bering Sea and Mexico speaking about **including traditional knowledge in seabird ecology and conservation**, and this session will follow an EID workshop Wednesday afternoon. There will be a special session Thursday afternoon in the Special Sessions room for a discussion of recent oceanographic and seabird events in the North Pacific Ocean. Amelia Duvall and her colleagues will present a workshop on Bayesian analysis, to be held Tuesday afternoon in the Special Sessions room.

Planning this year's scientific program has been inspiring and hopeful, seeing engagement from students, the driven EID committee, the growing support for scientists through PSG HELPS, and scientists throughout the society getting creative in their approach to science, communication and engagement beyond the scientific community. Many thanks to all the volunteers, sponsors, and contributors who have made this meeting happen. The meetings of the PSG have always been my favorite scientific meetings. The quality of the talks, the camaraderie, the intrinsic attractiveness and mystery surrounding seabirds have always made for a thoroughly enjoyable get together for me; I hope these will continue long into the future.

Dick Veit, Scientific Program Chair

Table of Contents

Pacific Seabird Group

Pacific Seabird Group Executive Council for 2022–2023

Officers

Chair	Rachel Sprague
Chair-elect	Dick Veit
Past Chair	Roberta Swift
Vice-chair for Conservation	Peter Hodum
Treasurer	Jenny McKee
Secretary	Sadie Wright

Representatives

Alaska and Russia	Alexis Will
Washington and Oregon	Laura Koehn
Northern California	Sarah Ann Thompson
Southern California, Latin America, & Hawai'i	Cristián Suazo
Non-Pacific USA	José R. Ramírez-Garofalo
Canada	Kerry Woo
Asia and Oceania	Jean-Baptiste Thiebot
Europe and Africa	Tegan Carpenter-Kling

Student Representative	Karen Lau Alarcón

Local Organizing Committee for the 2023 Annual Meeting

Local Committee Chair	Nacho Vilchis & Annette Henry
Scientific Program Chair	Dick Veit
Conference Planner	Justine Miller, Luana Events
Communications Committee Coordinators	Wieteke Holthijzen, Anna Vallery
Schedule Formatting	Andre Raine
Program Booklet	Lindsay Adrean

Pacific Seabird Group's Diversity Statement

The Pacific Seabird Group is an all-inclusive international society of professional seabird researchers and managers dedicated to the study and conservation of seabirds and their environment. PSG is committed to making diversity a core and abiding strength among our membership and all of our activities including programs, events, publishing, and professional development. Achieving diversity requires an enduring commitment to inclusion that must find full expression in the culture, values, norms and behaviors of the PSG. We support diversity in all of its forms, encompassing but not limited to age, disability status, economic circumstance, ethnicity, gender, race, religion and sexual orientation.

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, Luana Events

Scientific Program: Dick Veit, Andre Raine

Local Chair: Nacho Vilchis & Annette Henry

Student Events: Karen Lau Alarcón, Tammy Russell, Amanda Munro, Kristin Brunk

Early Career Scientist Panel Organizers: Amelia DuVall, Anna Vallery

Early Career Scientist Panelists: Lindsay Adrean, Roberta Swift, Katie Stoner, Yuliana Bedolla & Carlos Zavalaga

Fundraising: Nacho Vilchis, Tammy Russell

Meeting Website and Registration: Wieteke Holthijzen, Rachel Sprague

Merchandise: Annette Henry

Silent AUKtion: Kristin Brunk and all the generous donors who contributed

Social Media: Anna Vallery, Wieteke Holthujzen

Bayesian workshop: Amelia DuVall, Tim Jones, Molly McDevitt & Michelle Kissling

Field Trip Organizing: Nacho Vilchis

Field Trips: Rachel Smith, Sandy Vissman and Robert Patton

Program Booklet: Lindsay Adrean

Communications: Wieteke Holthijzen, Anna Vallery

EID Subcommittee: Derek Harvey, Katie Stoner, Amelia DuVall, Kristina McOmber, Sarah Guitart, Adrian Gall, Laney White

Special Session Hosts and Discussion Organizers: Derek Harvey, Amelia DuVall, Cristián G. Suazo, Lindsay Young, David Duffy, Anna Vallery, Tammy Russell, Timothy Jones, Molly McDevitt, Michelle Kissling, Mike Scott

Acknowledgements Continued

Volunteer Organizer: Justine Miller

Volunteers: Suzanne Dodge, Alexa Foster, Erika Dittmar, Ariel Micaiah Heswall, Kaiulani Sund, Lilamarie Bowen, Kimberly Lato, Risa Dickson, Jon Dachenhaus, Olivia Fross, Anna Vallery, Amy Miles, Noah Gilbert, Quinn Carvey, An Chou, Mylene Seguel, Gregory Smith, Rossy Natale, Cassidy Ruge, Katie Stoner, Sonya Pastran, Raina Heilman, Annette Henry, Derek Henry, Seungyeon Lee, Katelynn Gulley, Nacho Vilchis, Dick Veit, Roberta Swift, Rachel Sprague, Yumi Arimitsu, Sarah Guitart, Susan Euing, Rachel Stapleton, Amy Parsons, Katie O'Reilly, Wieteke Holthuijzen, Nina Karnovsky, Laney White

Student Presentation Judges: We are very grateful to all of the volunteer judges who reviewed the scientific presentations of students at the annual meeting. Thank you for supporting PSG's students!

About the Front Cover: Our PSG 2023 Annual Meeting artwork is an original watercolor painting by Sophie Webb (http://www.sophiewebb.com/). Sophie is no stranger to seabirds. She has been on numerous research cruises both as a researcher and naturalist in the central Pacific, eastern tropical Pacific, Atlantic, Antarctic, Aleutians Gulf of Alaska and Bering Sea. Sophie paints field guide plates as well as writes and illustrates children's books that are based on her research experiences.

We would like to acknowledge that many members of this organization work with seabirds on traditional lands of numerous Tribes. We honor with gratitude the land itself and these native people, past, present, and future.

Conference Meetings

All interested members are welcome to attend any of these meetings. In particular, please come to Wednesday's PSG Member Meeting and Thursday's Conservation Committee meeting, where you can learn about PSG's activities during the year and make comments or raise issues that concern you.

Tuesday, February 14
10:00 - 12:00 **Aleutian Tern Technical Committee**

15:00-17:00 **Bayesian Analysis Workshop**

9:00-14:00 **Executive Committee Meeting**

13:00-15:00 **Gillnet Bycatch Meeting**

13:00-15:00 **Kittlitz's Murrelet Technical Committee**

8:30 - 12:00 **Marbled Murrelet Technical Committee**

9:00 - 12:00 **North Pacific Albatross Working Group**

15:00-17:00 **Northeast Asia Seabird Conservation Committee**

14:00 - 17:00 **Scripps's and Guadalupe Murrelets Technical Committee**

15:00-17:00 **Seabird Monitoring Committee**

13:00 - 15:00 **Tufted Puffin Technical Committee**

Wednesday, February 15
12:00-13:00 **PSG Members' Meeting**

Thursday, February 16
12:00-13:00 **Conservation Committee**

Friday, February 17
12:00-13:00 **Past Chairs Luncheon**
12:00-13:00 **EID Lunch Meeting**

SCHEDULE-AT-A-GLANCE

PSG 2023 Daily Schedule Overview				
Tuesday 14 February 2023				
	Scripps Seaside Forum			
	Edward H. "Ted" Scripps II Room	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**	**Charles E. Scripps Room**
0800-1200	**Early Registration & Talk Uploads (Samuel H. Sripps Auditorium)**			
0830-0900	Marbled Murrelet Techincal Committee			
0900-1000	Marbled Murrelet Techincal Committee	North Pacific Albatross Working Group	ExCo Meeting	
1000-1100	Marbled Murrelet Techincal Committee	North Pacific Albatross Working Group	ExCo Meeting	Aleutian Tern Techincal Committee
1100-1200	Marbled Murrelet Techincal Committee	North Pacific Albatross Working Group	ExCo Meeting	Aleutian Tern Techincal Committee
1200-1300			ExCo Meeting	
1300 - 1400	Tufted Puffin Techincal Committee	Gillnet Bycatch Committee	ExCo Meeting	Kittlitz Murrelet Techincal Committee
1400-1500	Tufted Puffin Techincal Committee	Gillnet Bycatch Committee	Scripps Murrelet, Guadalupe Murrelet, & Craveri's Technical Committee	Kittlitz Murrelet Techincal Committee
1500-1600	Bayesian Analysis Workshop	Seabird Monitoring Committee	Scripps Murrelet, Guadalupe Murrelet, & Craveri's Technical Committee	NE Asian Seabird Conservation Committee
1600-1700	Bayesian Analysis Workshop	Seabird Monitoring Committee	Scripps Murrelet, Guadalupe Murrelet, & Craveri's Technical Committee	NE Asian Seabird Conservation Committee
1800-2000	**Early Registration (Shorerider Bar & Grill)**			
1800-2000	**WELCOME RECEPTION (Shorerider Bar & Grill)**			

SCHEDULE-AT-A-GLANCE

Wednesday 15 February 2023				
	Scripps Seaside Forum			
0700-1700	Registration Desk open (Charles E. Scripps Room)			
0800-0830	**Welcome and Opening Remarks (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 1: William Sydeman SEABIRDS UNDER CLIMATE CHANGE: RESILENCE, REFUGIA, AND OTHER CONSIDERATIONS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps Il Room**	**Robert P. Scripps Il Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
1000-1200	Climate Effects on Population Trends	Breeding Biology	Foraging I	
1200-1330	**Lunch (Provided)**			
1200 - 1300	**PSG Member Meeting**			
1330-1450	Offshore Wind	Climate and Populations	Contaminants	
1450-1520	**Coffee Break**			
1520-1640	Dispersal and Colonization	EID Workshop	Population Biology	
1700-1800	**ECS PANEL**			
1800-2000	**STUDENT MENTORING RECEPTION (SIO Forum Beachfront Lawn)**			

SCHEDULE-AT-A-GLANCE

Thursday 16 February 2023				
	Scripps Seaside Forum			
0800-1700	Registration Desk open (Conference Room Lobby)			
0815-0830	**Welcome (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 2: Andrea Thiebeault GROUP BEHAVIOR AND COMMUNICATION IN FORAGING SEABIRDS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps Il Room**	**Robert P. Scripps Il Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
1000-1200	Climate Effects on Population II	Contaminants and Other Human Impacts	Conservation I	Breakout room
1200-1330	**Lunch (Provided)**			
1200 - 1300	**PSG Conservation Meeting**			
1330-1450	Indigenous Peoples and Seabirds	Conservation II	Human Impacts	PSG History
1450-1520	**Coffee Break**			
1520-1640	Fisheries Interactions	Conservation III	Human Impacts II	North Pacific Roundtable
1700-1800				Seabird Drone Information Sharing Group
1800 - 2100	**POSTER RECEPTION (SIO Forum Beachfront Lawn)**			

SCHEDULE-AT-A-GLANCE

Friday 17 February 2023				
	Scripps Seaside Forum			
0800-1700	Registration Desk open (Conference Room Lobby)			
0815-0830	**Welcome (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 3: Kathy Kuletz BREACHING THE BORDER & SHIFTING BOUNDARIES: 50 YEARS OF CHANGE IN NORTHERN OCEANS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II Room**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
1000-1200	Seabird Communities in Ecosystems	Foraging II	Population Biology	
1200-1330	**Lunch (Provided)**			
1200-1300	**EID MEETING**			**PAST CHAIRS LUNCH**
1330-1450	Seabird Communities in Ecosystems II	Plagues, Pestilence and Cats	Population Biology II	
1450-1520	**Coffee Break**			
1520-1640	Seabird Communities in Ecosystems III	Session Topic and Chair	Population Biology III	
	Conference Ends			
1800-2200	**BANQUET (BIRCH AQUARIUM)**			

Detailed Schedule

*Note: **bold** indicates presenting author, * indicates student presenter*

Wednesday 15 February 2023				
0700-1700	Registration Desk open (Charles E. Scripps Room)			
0800-0830	**Welcome: Rachel Sprague, Chair and Nacho Vilchis, Local Committee Chair (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 1: William Sydeman SEABIRDS UNDER CLIMATE CHANGE: RESILENCE, REFUGIA, AND OTHER CONSIDERATIONS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Climate Effects on Population Trends	**Breeding Biology**	**Foraging I**	**Special Sessions (to book see Justine)**
1000	**THE PARADOX OF TUFTED PUFFIN DECLINES IN NORTH AMERICA** **John Piatt,** Mayumi Arimitsu	**WHAT FACTORS INFLUENCE THE DAILY NEST SURVIVAL RATES OF ALEUTIAN TERN NESTS ON KODIAK ISLAND, ALASKA?** **Jill Tengeres,** Katie Dugger, Robin Corcoran, Donald Lyons	**ANNUAL HABITAT USAGE AND DISTRIBUTION PATTERNS OF WESTERN GULLS IN CENTRAL CALIFORNIA** **Katherine Douglas*,** Scott Shaffer, Stefan Garthe, Pete Warzybok, Mike Johns	
1020	**COMPARING SURVEY METHODS FOR FRATERCULA PUFFINS IN THE KODIAK ARCHIPELAGO** **Katie Stoner*,** Robin Corcoran, Megan Boldenow, Don Lyons	**ENVIRONMENTAL INFLUENCES ON CALIFORNIA LEAST TERN NEST ATTENDANCE** **Rachel Smith,** Justin Schuetz, Kristina Wolf, Elena Oey, Travis Wooten, Nacho Vilchis	**EFFECTS OF URBANIZATION ON TROPHIC NICHE WIDTH AND OVERLAP BETWEEN SYMPATRIC SEABIRD SPECIES** **Kimberly Lato*,** Richard Veit, Lesley Thorne	
1040	**IT WAS WORSE THAN WE THOUGHT: HALF OF ALASKA'S COMMON MURRES KILLED IN A HEAT WAVE** **Heather Renner,** John Piatt, Brie Drummond	**DEEP LEARNING OF ORTHOMOSAIC IMAGES IS AN EFFICIENT TOOL FOR MONITORING URBAN SEABIRD COLONIES** Rose Wilkin, Jillian Anderson, Rachel Stapleton, Gregory McClelland, Jenna Cragg, Ariel Lenske, **Ruth Joy**	**PRELIMINARY ANALYSIS OF MARINE BIRD VESSEL-BASED SURVEY DATA ON BRITISH COLUMBIA'S SOUTH COAST** Caroline Fox, **Davis Shanti,** Christopher Di Corrado, Will O'Shea, Lily Campbell, Bernard Schroeder, David Fifield	
1100	**THE 2015-16 COMMON MURRE DIE-OFF IN ALASKA WAS PRIMARILY DUE TO ACUTE STARVATION OF FEMALES FROM THE NORTHERN BERING SEA** **Alexis Will,** Andy Baltensperger, Stacia Backensto, Keith Hobson, Heather Coletti, Sarah Schoen, John Piatt, Alexander Kitaysky	**LESS THAN PERFECT ATTENDANCE: AN ATTEMPT TO FILL SOME GAPS IN LEDGE-NESTER BREEDING SUCCESS MONITORING Brie Drummond,** Heather Renner, Nora Rojek	**FORAGING BEHAVIOR OF BLACK-LEGGED KITTIWAKES AND COMMON MURRES IN RELATION TO PREY DISTRIBUTION AND DENSITY** **Sam Stark,** Sarah Schoen, Mayumi Arimitsu, Caitlin Marsteller, John Piatt	

1120	**MARINE BIRD MASS MORTALITY EVENTS AS AN INDICATOR OF THE IMPACTS OF OCEAN HEATING** **Timothy Jones,** Julia Parrish, Jacqueline Lindsey, Charlie Wright, Hillary Burgess, Lauren Divine, Robert Kaler, David Bradley, Graham Sorenson, Rémi Torrenta, Stacia Backensto, Heather Coletti, James Harvey, Hannah Nevins, Erica Donnelly-Greenan, David Sherer, Jan Roletto, Kirsten Lindquist	**PREDICTED DISTRIBUTION OF ʻUAʻU (HAWAIIAN PETREL, PTERODROMA SANDWICHENSIS) NEST SITES ON HALEAKALĀ, MAUI** **Josh Adams,** Jonathan Felis, Rob Klinger, Emma Kelsey, Joy Tomayose, Raina Kaholoaʻa, Jenni Learned, Jay Penniman, Cathleen Bailey, Ciarra Ganter, John Medeiros, Huisheng Chen	**FINE-SCALE BIO-LOGGING REVEALS PENGUIN-KRILL INTERACTIONS UNDER ANTARCTIC FAST ICE Hina Watanabe*,** Junichi Takagi, Akinori Takahashi	
1140	**INTERACTIONS OF PREY ABUNDANCE, PREY QUALITY, AND PREDATOR DISTURBANCE FOLLOWING AN ECOSYSTEM RESET IN THE GULF OF ALASKA** **Mayumi Arimitsu,** Sarah Schoen, Caitlin Marsteller, Sam Stark, Dan Donnelly, Naomi Bargmann, John Piatt	**COMMON RAVEN IMPACTS ON ASHY STORM-PETRELS WITHIN CHANNEL ISLANDS NATIONAL PARK** Michael Parker, Jim Howard, David Mazurkiewicz, Peter Sharpe, William McIver, Amelia DuVall, **Annie Little**	**OBSERVATION OF FEEDING AND FIGHTING BEHAVIOR OF SURFACE-FEEDING ALBATROSSES IN THE WESTERN NORTH PACIFIC** **Daisuke Ochi,** Shintaro Ueno, Tsikasa Kondo	
1215-1315	**PSG Member Meeting**			
1200-1330	**Lunch**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Offshore Wind	**Climate and Populations**	**Contaminants**	**Special Sessions (to book see Justine)**
1330	**OFFSHORE WIND ENERGY DEVELOPMENT AND SEABIRDS: INFORMING DECISION MAKING WITH SUBJECT MATTER EXPERTISE** **Edward Jenkins,** Julia Gulka, Kate Williams, Mark Severy, Rebecca Green, Caleb Spiegel, Tim White, Kate McClellan Press	**THE BLOB RUINED MY RELATIONSHIP: A STORY OF MURRE CHICKS, ISOTOPES, AND PHYSICS** **Robert Suryan**	**THE IMPACT OF DIGESTION ON THE RELEASE OF TOXICANTS FROM PLASTICS USING AN IN VITRO SEABIRD GASTRIC DIGESTIVE SYSTEM MODEL. Liesbeth van Hassell*,** Cathy Debier, Myra Finkelstein, Gauthier Eppe, Georges Scholl, Christine Dupont, Rebecca Braslau	

1350	**INTEGRATING MULTI-STATE MOVEMENT MODELS AND MARINE BIRD BEHAVIOR INTO ASSESSING RISK FROM PLANNED OFFSHORE WIND DEVELOPMENTS** **Julia Gulka,** Evan Adams, Alicia Berlin, Kevin Friedland, Andrew Gilbert, Chandra Goetsch, Pam Loring, William Montevecchi, Matthew Perry, Iain Stenhouse, Kate Williams	**USING NETWORK ANALYSES OF INDIVIDUAL MOVEMENT DATA TO EVALUATE POPULATION STRUCTURE AND DEFINE MANAGEMENT UNITS Juliet Lamb**	**DOES PLASTIC LOOK LIKE PETREL AND SHEARWATER PREY? A SENSORY ECOLOGY APPROACH Ariel-Micaiah Heswall*,** Aidan Sarginson, Matt Rayner, Brian Wijaya, Agustina Dominguez, Lynn Miller, Kristal Cain, Megan Friesen, Anne Gaskett	
1410	**FRAMEWORK FOR ASSESSING AND MITIGATING THE IMPACTS OF OFFSHORE WIND ENERGY DEVELOPMENT ON MARINE BIRDS** **Donald Croll,** Aspen Ellis, Josh Adams, Aohghais Cook, Stefan Garthe, Morgan Wingdale, Scott Hall, Elliott Hazen, Brad Keitt, Emma Kelsey, Jeffery Leirness, Don Lyons, Matthew McKown, Astrid Potiek, Kate Searle, Floor Soudijn, Cotton Rockwood, Bernie Tershy, Martin Tinker, Eric VanderWerf, Kathryn Williams, Lindsay Young, Kelly Zilliacus	**PERSONALITY AND FORAGING BY WESTERNS GULLS** **Danielle DeVincenzi*,** Pete Warzybok, Samantha Patrick, Scott Shaffer	**PRECISION MONITORING OF COLONIAL NESTING ISLANDS USING UAVS AND MACHINE LEARNING Anna Vallery,** Krish Kabrah, Richard Gibbons, Hank Arnold, Arko Barman	
1430	**OFFSETTING TO ACHIEVE NET POSITIVE IMPACTS OF OFFSHORE WIND ENERGY DEVELOPMENT TO SEABIRDS: TWO PACIFIC CASE STUDIES Aspen Ellis*,** Don Croll, Aonghais Cook, Jeffery Leirness, Josh Adams, Lisa Ballance, Nick Holmes, Bradford Keitt, Emma Kelsey, Donald Lyons, Cotton Rockwood, Scott Shaffer, Robert Suryan, Kelly Zilliacus	**FROM COLONY TO FALLOUT: IMPACTS OF ARTIFICIAL LIGHTS ON SEABIRDS ALONG COASTLINES AND WITHIN ISLAND CHAINS** **Brooke Friswold*,** Jessica Idle, Jennifer Learned, Jay Penniman, Tiana Bolosan, Javier Cotin, Lindsay Young, Melissa R. Price	**A REVIEW OF SEABIRD BYCATCH AND MITIGATION EFFORTS IN ALASKA FISHERIES FROM 2012 THROUGH 2022** **Joshua Moffi,** Cathy Tide	
1450	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Dispersal and Colonization	**EID Workshop**	**Population Biology**	**Special Sessions (to book see Justine)**

1520	**'FIELD OF DREAMS': THE MYTHOLOGY OF SEABIRD NATAL PHILOPATRY** **David Ainley,** George Divoky, Pat Baird, Gregory Spencer	**EID Workshop**	**NORTH PACIFIC PELAGIC SEABIRD DATABASE (NPPSD) UPDATE: WHY YOU SHOULD USE IT AND CONTRIBUTE DATA TOO** **Sarah Schoen,** Gary Drew, John Piatt, Mayumi Arimitsu, Heather Coletti, Marla Hood, Robert Kaler, Kathy Kuletz, Elizabeth Libunski, Samuel Stark, Christopher Swingley	
1540	**NORTHERN BREEDING RANGE EXPANSION OF TWO SULA SPECIES AT SUTIL ISLAND, SANTA BARBARA ISLAND, CALIFORNIA** **Jim Howard,** Amelia DuVall, David Pereksta, David Mazurkiewicz, Adam Searcy, Phillip Capitolo, Tamara Russell	**EID Workshop**	**SEABIRD COLONY REGISTRY FOR EAST ASIA** **Simba Chan,** Yat Tung Yu, Robert Kaler, Miran Kim, Chang-yong Choi, Thet Zaw Naing, Philip Round, Manh Hung Le, Scott Pursner, Chun Ting Chung, Va Leung, Gloria Pratidhwani Manggalagita, Songco Angelique	
1600	**HOW DO BREEDING, FORAGING, AND DISPERSAL PLASTICITY DEPEND UPON HABITAT CHARACETERISTICS?** **Seungyeon Lee*,** Who-Seung Lee	**EID Workshop**	**POPULATION DYNAMICS AND TRENDS OF AN ENDANGERED SEABIRD: TUFTED PUFFINS (*FRATERCULA CIRRHATA*) IN WASHINGTON** **Olivia Fross***	
1620	**NORTHWARD MIGRATION AND WINTER RESIDENCY OF CALIFORNIA-BREEDING PIGEON GUILLEMOTS** **Michael Johns,** Pete Warzybok	**EID Workshop**	**MONITORING AND CONSERVATION ACTIONS FOR THE ASHY STORM-PETREL ON THE TODOS SANTOS ARCHIPELAGO, MEXICO.** Alejandra Fabila-Blanco, Alicia Aztorga-Ornelas, María Félix-Lizárraga, **Yuliana Bedolla-Guzmán**	
1700-1800	**ECS Panel**			
1800-2000	**Student Mentor Session - Lawn**			

Detailed Schedule

*Note: **bold** indicates presenting author, * indicates student presenter*

Thursday 16 February 2023				
0700-1700	Registration Desk open (Charles E. Scripps Room)			
815	**Welcome (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 2: Andrea Thiebeault GROUP BEHAVIOR AND COMMUNICATION IN FORAGING SEABIRDS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Climate Effects on Populations, II	**Contaminants and Other Human Impacts**	**Conservation I**	**Special Sessions (to book see Justine)**
1000	**SPECIALISTS, GENERALISTS, AND THE FUTURE: LINKING DIET AND PHENOLOGICAL FLEXIBILITY THROUGH META-ANALYSIS Amy Miles*,** Thomas Hahn, Marcel Holyoak, John Wingfield, Mike Johns, Heather Major, Joshua Hull	**MERCURY CONTAMINATION OF ARCTIC MARINE SEABIRDS: PAN-ARCTIC AND REGIONAL APPROACHES Jerome Fort,** Heather Renner, Alexander Kitaysky, Alexis Will, Celine Albert, Marta Cruz Flores, Paco Bustamante, David Gremillet	**INTEGRATION OF ANIMAL PERSONALITY IN SEABIRD CONSERVATION: A BIBLIOMETRIC INVESTIGATION Sydney Collins,** Jack Hendrix, Quinn Webber, Sean Boyle, Katrien Kingdon, Robert Blackmore, Kyle d'Entremont, Jennifer Hogg, Juan Ibanez, Joanie Kennah, Jessika Lamarre, Miguel Mejias, Levi Newediuk, Cerren Richards, Katrina Shwedack, Chirathi Wijekulathilake, Julie Turner	
1020		**EFFECT OF OIL SPILL DISPERSANT USE ON MARINE BIRDS: A REVIEW OF SCIENTIFIC LITERATURE AND IDENTIFICATION OF**	**SEABIRD COLLISIONS WITH HUMAN INFRASTRUCTURE ARE DRIVEN BY VISITATION RATES TO BREEDING COLONIES &**	

		INFORMATION GAPS Orla Osborne, Megan Willie, **Patrick O'Hara**	**DETECTABILITY OF HAZARDS Marc Travers,** Karim Hanna, Scott Driskill, Andre Raine	
1040	**CLIMATE VARIABILITY AND REPRODUCTIVE SUCCESS OF LAYSAN ALBATROSS Amanda Munro,** Rob Suryan, Annette Henry, David Kacev, Jonathan Plissner, Roberta Swift, Trevor Joyce	**PREDATION IMPACTS OF TWO CORMORANT SPECIES ON SALMONID SMOLTS AS IT RELATES TO NESTING LOCATION IN THE COLUMBIA RIVER ESTUARY Joelle Marchiani,** Nathan Banet, Allen Evans, Quinn Payton, Ken Collis, Daniel Roby, Timothy Lawes	**TRACKING GLOBAL OUTCOMES OF ACTIVE SEABIRD RESTORATION Dena Spatz,** Lindsay Young, Nick Holmes, Holly Jones, Don Lyons, Colin Miskelly, Graeme Taylor, Stephen Kress, Eric VanderWerf	
1100	**A 31-YEAR TIME SERIES REVEALS A WEAK NEGATIVE TREND IN MARBLED MURRELET AT-SEA COUNTS IN LASKEEK BAY, HAIDA GWAII Vivian Pattison,** Mark Drever, Doug Bertram, Sonya Pastran, Anthony Gaston, Rian Dickson	**THE IMPACTS AND INTERACTIONS OF HUMAN DISTURBANCE ON REPRODUCTIVE SUCCESS IN WESTERN GULLS Lilamarie Bowen*** and Dan Barton	**AN INTERCONNECTED WORLD: TROPICAL ISLAND RESTORATION FOR SEABIRDS AND CORAL REEF ECOLOGY Ruth Dunn**	
1120	**CLIMATE CHANGE AND SEABIRD PRODUCTIVITY Pat Baird**	**VULNERABILITY TO OFFSHORE WIND FARM COLLISION THROUGH THE YEAR BY TRACKING BLACK-TAILED GULLS Who-Seung Lee** and Seungyeon Lee	**FISHING ACTIVITY AS THE CAUSE OF NIGHT DESERTION OF CHINESE CRESTED TERNS' COLONY IN MATSU, TAIWAN Chung Hang Hung,** Kung Kuo Chiang, An Choui, Hsiao Wei Yuan	
1140	**COMPETITIVE INTERACTIONS BETWEEN NESTING SEABIRD SPECIES MEDIATE THE POPULATION IMPACTS OF RAPID CONTEMPORARY SEA LEVEL RISE Daniel Barton**	**HABITAT USE BY URBAN GULLS IN CHILE Miriam Lerma,** Claudia E. Fernandez, Mylene E. Seguel, Guillermo Luna-Jorquera, Stefan Garthe	**DO MURRELETS PREFER FISH OR TREES: MARINE HABITAT SUITABILITY FOR MARBLED MURRELETS ON THE SALISH SEA Sonya Pastran,** Doug Bertram, Patrick O'Hara, Caroline Fox, Mark Drever, Ross Vennesland	
1215-1315	**Conservation Meeting**			
1200-1330	**Lunch (Provided)**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Indigenous Peoples and Seabirds	**Conservation II**	**Human Impacts**	**Special Sessions (to book see Justine)**
1330	**ISLAND COMMUNITY LEADERS AS CHAMPIONS FOR SEABIRDS Mariam Latofski Robles**	**ELEGANT TERN COLONY RESCUE 2021 Julie Skoglund**	**THE POTENTIAL FOR ANTHROPOGENIC NOISE TO SERVE AS AN INADVERTANT ATTRACTANT FOR SEABIRDS Lindsay Young**	PSG History Mike Scott

1350	**COMBINING DIFFERENT WAYS OF KNOWING TO UNDERSTAND CLIMATE CHANGE EFFECTS ON SEABIRDS AND THE ECOSYSTEMS THEY RELY ON. Delbert Pungowiyi,** Alexis Will	**MANAGED RELOCATION OF ALBATROSS TO THE CALIFORNIA CHANNEL ISLANDS: CONSERVATION BASIS AND PRELIMINARY SUITABILITY ASSESSMENT Eric VanderWerf,** Nick Holmes, Scott Morrison, Robby Kohley, Alex Wegmann, Lindsay Young	**MONITORING MARINE BIRD DISTRIBUTION AND ABUNDANCE IN RESPONSE TO LNG TANKER TRAFFIC Marc d'Entremont,** Meike Holst, Isaiah Dundas, Johnston Reece, Tristan Reece, Chris Picard	PSG History Mike Scott
1410	**BREAKING UP IN THE BERING SEA** Delbert Pungowiyi, **Alexis Will,** Mark Rauzon	**THREATS TO AND CONSERVATION STATUS OF DE FILIPPI'S PETREL, A THREATENED CHILEAN ENDEMIC Peter Hodum,** Paola Gonzalez, Guillermo De Rodt, Cabila Manriquez, Ryan Carle, Hector Gutierrez, Valentina Colodro	**ABUNDANCE IN 3D: ASSESSING COLLISION VULNERABILITY OF SEABIRDS AND FLOATING OFFSHORE WIND IN THE CALIFORNIA CURRENT Stephanie Schneider,** Sophie Bernstein, Glenn Ford, Janet Casey, Jarrod Santora, Lisa Ballance, Sharon Kramer, Scott Terrill, David Ainley	PSG History Mike Scott
1430	Wrap Up of Indigenous Peoples & Seabirds	**AERIAL AND GROUND SURVEYS TO ESTIMATE THE BREEDING POPULATION OF PERUVIAN DIVING-PETRELS ON TWO MAJOR COLONIES IN PERU. Cinthia Irigoin-Lovera*,** Sebastian Lozano, Diego Gonzasles-DelCarpio, Isabella Diaz, Dayana Alva, Carlos Zavalaga	**PILOT STUDY DEMONSTRATES POWERLINE COLLISION RISKS FOR ENDANGERED SEABIRDS IN MAUI COUNTY, HAWAI'I Martin Frye,** Brad Keitt, Jennifer Learned, Skye Anderson, Cheryl King, Mariah Rivera, Joshua DeCambra, Katelynn Gulley, Jay Penniman	PSG History Mike Scott
1450	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Fisheries Interactions	**Conservation III**	**Human Impacts II**	**Special Sessions (to book see Justine)**
1520	**COMPOUND EFFECTS OF WARM OCEANOGRAPHIC ANOMALIES AND FISHING PRESSURE ON ELEGANT TERN COLONY SIZE AND NESTING DISTRIBUTION** Enriqueta Velarde, Michael H. Horn, Robert T. Patton, Exequiel Ezcurra	**USING TRACKING TECHNOLOGY TO LOCATE ENDANGERED 'UA'U (HAWAIIAN PETREL *PTERODROMA SANDWICHENSIS*) BURROWS. André Raine,** Alex Wang, Bret Mossman, Scott Driskill	**TURNING OFF LIGHTS SIGNIFICANTLY REDUCES LEACH'S STORM-PETREL (*HYDROBATES LEUCORHOUS*) STRANDINGS Tori Burt*,** Sydney Collins, Sherry Green, Parker Doiron, William Montevecchi	North Pacific Roundtable
1540	**INTERACTIONS BETWEEN ANCHOVY FISHERIES AND PERUVIAN BOOBIES REVEALED BY BIRD-BONE CAMERAS AND MOVEMENT LOGGERS Carlos Zavalaga,** Bethany	**SEABIRDS MONITOR A MULTI-DECADAL DECLINE IN ARCTIC COD, THE PRIMARY FORAGE FISH IN THE ARCTIC BASIN George Divoky**	**A DEADLY ATTRACTION: BRIGHT BOATS CAUSE COLLISIONS AND PREDATION FOR LEACH'S STORM-PETRELS Parker Doiron*,** William	North Pacific Roundtable

	Clark, Cinthia Irigoin-Lovera, Diego Gonzales-DelCarpio, Isabela Diaz-Santibañez, Stephen Votier		Montevecchi, Pierre-Paul Bitton, Noah Careen	
1600	**CHARACTERIZING ARCTIC SEABIRD BYCATCH IN EASTERN CANADA Allison Anholt***	**PRODUCTIVITY BASELINE TRENDS OF THE THREE CORMORANT SPECIES WITHIN THE CAPE PERPETUA MARINE PROTECTED AREA Taylor Ozimek,** Allison Anholt, Joe Liebezeit, Shawn Stephensen	**NIGHT LIGHTS AND SEABIRD BEHAVIOR – WHAT WE OBSERVE, UNRESOLVED QUESTIONS AND A NEED TO BE PROACTIVE Jay Penniman**	North Pacific Roundtable
1620	**DOES ECOSYSTEM-BASED FISHERY MANAGEMENT WORK FOR SEABIRDS IN ALASKA? Stephani Zador** and Heather Renner	**PLANES, BOATS, AND BIRDS: INFLUENCE OF THE COVID-19 PANDEMIC ON SEABIRD COLONY DISTURBANCE IN CENTRAL CALIFORNIA Lauren Scopel,** Gerard McChesney, Richard Golightly	**THE EFFECT OF URBANIZATION ON THE MICROBIOMES OF CALIFORNIA GULLS (LARUS CALIFORNICUS) Amy Parsons,** Micheal McFarlin, Cole Jower, Cleber Ouverney, Scott Shaffer	North Pacific Roundtable
1700-1800				Seabird Drone Information Sharing Group Lindsay Young
1800-2100	**Poster Session - Lawn**			

Detailed Schedule

*Note: **bold** indicates presenting author, * indicates student presenter*

Friday 17 February 2023				
0800-1630	Registration Desk open (Charles E. Scripps Room)			
815	**Welcome (Samuel H. Scripps Auditorium)**			
0830-0930	**PLENARY 3: Kathy Kuletz BREACHING THE BORDER & SHIFTING BOUNDARIES: 50 YEARS OF CHANGE IN NORTHERN OCEANS**			
0930-1000	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Seabird Communities in Ecosystems	**Foraging II**	**Population Biology**	**Special Sessions (to book see Justine)**
1000	**IF NOT FOR BAD NEWS THERE WOULD BE NO NEWS AT ALL: CURRENT RISKS AND DEVELOPMENTS FOR SEABIRDS IN THE NORTHWEST ATLANTIC** **William Montevecchi,** Sydney Collins, Tori Burt, Kyle d'Entrement, Parker Doiron, Noah Careen, Gretchen McPhail	**PRELIMINARY RESULTS OF TRACKING THE NON-BREEDING DISTRIBUTION OF TUFTED PUFFINS FROM AIKTAK ISLAND, EASTERN ALEUTIANS** **Nora Rojek** and Heather Renner	**SPATIAL ANALYSIS OF TRENDS IN TUFTED PUFFIN BREEDING HABITAT ON THE OREGON COAST** **Carina Kusaka*,** Melanie Davis, James Peterson	
1020	**BIOGEOGRAPHIC PATTERNS OF SEABIRDS IN THE CALIFORNIA CURRENT ECOSYSTEM** Tamara Russell, Angela Szesciorka, Trevor Joyce, **David Ainley**, Lisa Balance	**ASSESSING DRIVERS OF ROUTE FIDELITY IN TWO CLOSELY RELATED GULL SPECIES Madeleine Foley*,** Kimberly Lato, Matthew Fuirst, Richard Veit, Lesley Thorne	**BROADCAST PLAYBACK ATTRACTS A FEMALE-BIASED POPULATION OF NEWELL'S SHEARWATERS WITHIN PREDATOR-PROOF EXCLOSURES ON MAUI** **Jenni Learned**, Kenneth Hayes, Skye Anderson, Joshua DeCambra, Martin Frye, Mariah Rivera, Jay Penniman	
1040	**DIGITAL AND OBSERVER-BASED AERIAL SURVEYS FOR MONITORING BIRDS AT SEA: METHOD COMPARISONS** **Miriam Lerma,** Kai Borkenhagen, Henriette Schwemmer, Nele Markones, Moritz Mercker	**FORAGING ECOLOGY OF BREEDING LEACH'S STORM-PETRELS (HYDROBATES LEUCORHOUS) IN THE GULF OF MAINE, USA** **Keenan Yakola*,** Gemma Clucas, Don Lyons	**POPULATION TRENDS OF SEABIRDS IN MEXICAN ISLANDS AT THE CALIFORNIA CURRENT SYSTEM** **Federico Méndez Sánchez**, Yuliana Bedolla Guzmán, Evaristo Rojas Mayoral, Alfonso Aguirre-Muñoz, Patricia Koleff, Alejandro Aguilar Vargas, Fernando Álvarez Santana, Gustavo Arnaud, Alicia Aztorga Ornelas, Luis Felipe Beltrán Morales, Maritza Bello Yáñez, Humberto Berlanga García, Esmeralda Bravo Hernández, Ana Cárdenas Tapia, Aradit Castellanos Vera, Miguel Corrales Sauceda, Ariana Duarte Canizales, Alejandra Fabila Blanco, María Félix Lizárraga, Anely Fernández Robledo, Julio César Hernández Montoya, Alfonso Hernández Ríos, Eduardo Iñigo-Elias, Ángel Méndez Rosas, Braulio Rojas Mayoral,	

			Fernando Solis Carlos, Alfredo Ortega Rubio	
1100	**POSITIVE ASSOCIATIONS AMONG SEABIRDS AND MARINE MAMMALS IN THE CALIFORNIA CURRENT** **Samantha Monier*,** Richard Veit, Lisa Manne, Jarrod Santora	**DIET INSIGHTS OF A BURROW-NESTING SEABIRD USING DNA METABARCODING OF FECES AND SOIL** **Thomas Good,** Andrew Shelton, Abigail Wells, Ana Ramón-Laca, Ramón Gallego, Scott Pearson, Peter Hodum, Lilli Patton, Eric Wagner	**BREEDING POPULATION STATUS, DISTRIBUTION, AND TRENDS OF THE DOUBLE-CRESTED CORMORANT IN NORTHWEST MEXICO** **Emily Clark,** Lorayne Meltzer, Yuliana Bedolla Guzmán, Eduardo Palacios, Miguel Guevara Medina	
1120	**ALTERED PREDATOR DIET UNDER VARYING PREY AVAILABILITY SUGGEST SHIFTS IN A COASTAL FOOD WEB** **Edward Jenkins,** Julia Gulka, Kelsey Johnson, Paloma Carvalho, Marissa Berard, Laurie. D Maynard, Lauren Lescure, Gail Davoren	**DRIVERS OF INTRASPECIFIC TROPHIC DIVERSITY IN TWO SPECIES OF TERN** **Natasha Gownaris,** Jill Tengeres, Linda Welch	**BROWN PELICAN BREEDING EFFORT AND FLEDGLING PRODUCTION IN SOUTHERN CALIFORNIA IS HIGHEST IN MORE THAN 50 YEARS** **Michael Parker**, Jim Howard, David Mazurkiewicz, Dan Anderson, Frank Gress	
1140	**WHY INTERACTIONS AMONG SEABIRDS, FORAGE FISH, AND THE COLUMBIA RIVER PLUME MATTER TO THE SURVIVAL OF ENDANGERED SALMON** **Jeannette Zamon**, Elizabeth Phillips, Josh Adams, John Horne	**THE FORAGING BEHAVIOR OF ATLANTIC PUFFINS (FRATERCULA ARCTICA) IN THE GULF OF MAINE DURING MARINE HEATWAVE CONDITIONS** **William Kennerley*,** Rachael Orben, Donald Lyons	**MULTI-EVENT MODELING SHOWS VARIABLE NEST SUCCESS FOR THE AT-RISK DOUBLE-CRESTED CORMORANT POPULATION IN THE STRAIT OF GEORGIA** **Rachel Stapleton*,** Ruth Joy, Laura Cowen, Rose Wilkin, Jenna Cragg, Ariel Lenske, Gregory McClelland	
1200-1300	**EID Meeting**			**Past Chairs Luncheon**
1200-1330	**Lunch (Provided)**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Seabird Communities in Ecosystems, II	**Plagues, Pestilence and Cats**	**Population Biology II**	**Special Sessions (to book see Justine)**
1330	**TROPHIC PATHWAYS DRIVE DIFFERENTIAL RESPONSES OF NEARSHORE MARINE BIRD FORAGING GUILDS TO THE PACIFIC MARINE HEATWAVE** **Brian Robinson,** Heather Coletti, Brenda Ballachey, James Bodkin, Kimberly Kloecker, Sarah Traiger, Daniel Esler	**AVIAN FLU WREAKS HAVOC IN NEWFOUNDLAND: GEOGRAPHIC AND TEMPORAL RADIATION OF SEABIRD MORTALITY** **Gretchen McPhail*,** Sydney Collins, Tori Burt, Stephanie Avery-Gomm, William Montevecchi	**NEGATIVE EFFECTS OF ONGOING HABITAT FRAGMENTATION ON MARBLED MURRELETS ARE AMPLIFIED NEAR ITS RANGE EDGE** **Jonathon Valente,** James Rivers, Zhiqiang Yang, S. Kim Nelson, Joseph Northrup, Daniel Roby, Carolyn Meyer, Matthew Betts	

1350	**DIFFERENTIAL RESPONSE OF SEABIRD SPECIES TO WARM- AND COLD-WATER EVENTS ALONG THE SEWARD LINE IN THE NORTHERN GULF OF ALASKA** **Daniel Cushing,** Katherine Kuletz, Leandra Sousa, Robert Day, Seth Danielson, Russell Hopcroft	**CHARACTERIZING MARINE FORAGING HABITAT FOR THE ENDANGERED MARBLED MURRELET IN THE SOUTHERN PUGET SOUND** **Max Merrill***	**USING ORNITHOLOGICAL RADAR AND ACOUSTIC SURVEYS TO DETERMINE POPULATION TRENDS OF HAWAIIAN PETRELS ON THE ISLAND OF MAUI** **Skye Anderson,** Cheryl King, Stephen Rossiter, Jennifer Learned, Martin Frye, Cecelia Frisinger, Mariah Rivera, Joshua DeCambra, Jay Penniman	
1410	**GULLS AS INDICATORS OF THE HEALTH OF THE SALISH SEA ECOSYSTEM** Mark Hipfner, **Alice Domalik,** Hannah Hall, Theresa Burg, Tony Williams	**WHEN YOU LAND IN THE WRONG PLACE: SEABIRD PARASITE INFECTION DYNAMICS IN OTHER WATERBIRD HOSTS** **Kate Lyn Sheehan**	**ALIGNING STATISTICAL AND BIOLOGICAL POPULATIONS FOR ABUNDANCE ESTIMATION OF *BRACHYRAMPHUS* MURRELETS** **Michelle Kissling,** Paul Lukacs, Kelly Nesvacil, Scott Gende, Grey Pendleton	
1430	**CalCOFI SEABIRD SURVEYS IN THE CALIFORNIA CURRENT: NEW SPATIOTEMPORAL MODELS TO ACCOMMODATE DETECTION AND COMMUNITY EFFECTS.** **Brian Hoover,** Sarah Ann Thompson and William Sydeman	**THE CRESTED MURRELET POPULATION THREATERENED BY DOMESTIC CATS ON MARA ISLAND, KOREA.** **Chang-Yong Choi,** Changuk Park, Chang-Wan Kang, Hee Man Kang, Hyun-Young Nam	**CREATING A BEHAVIOR CHANGE CAMPAIGN TO ENGAGE RECREATIONAL FISHERMAN TO PROTECT SEABIRD COLONIES ON THE CALIFORNIA COAST** Lauren Dung, **Paul Hobi,** Julia Stalker, Karen Reyna	
1450	**Coffee Break**			
	Samuel H. Scripps Auditorium	**Edward H. "Ted" Scripps II**	**Robert P. Scripps II Room**	**Margaret Scripps Buzzelli & Nackey Scripps Loeb Room**
	Seabird Communities in Ecosystems III	**Session topic and Chair**	**Population Biology III**	**Special Sessions (to book see Justine)**
1520	**PRELIMINARY ANALYSIS OF MARINE BIRD VESSEL-BASED SURVEY DATA ON BRITISH COLUMBIA'S SOUTH COAST** Caroline Fox, **Davis Shanti,** Christopher Di Corrado, Will O'Shea, Lily Campbell, Bernard Schroeder, David Fifield	**THE TROPHIC NICHE OF INVASIVE HOUSE MICE AT THE LARGEST BREEDING COLONY OF PERUVIAN DIVING PETRELS, ISLA LA VIEJA, PERU** **Michael Polito,** Sara Wang, Diego Gonzales-DelCarpio, Isabella Diaz, Dayana Alva, Sebastián Lozano-Sanllehi, Cinthia Irigoin-Lovera, Carlos Zavalaga	**DOCUMENTING THE UNIMAGINABLE: LONG-TERM SEABIRD MONITORING IN AN AGE OF EXTINCTION** **George Divoky** and Christophe Barbraud	
1540	**SEEING UNDERWATER: WHAT WE HAVE LEARNED FROM 185 HOURS OF ADÉLIE PENGUIN FORAGING VIDEO PAIRED WITH ACCELEROMETRY**	**CALIFORNIA BROWN PELICAN MASS STRANDING EVENT DURING MAY-JUNE 2022: TIMELINE, OUTCOMES AND RESIGHTING EVENTS** **Rebecca Duerr** and Corrine Gibble	**TRADE-OFFS BETWEEN SURVIVAL AND REPRODUCTION IN TWO SPECIES OF NORTH PACIFIC ALBATROSSES** **Christopher Malachowski,** William Kendall, Roberta Swift, Elizabeth Flint, Jennifer McKay, Matthew Rogosky, Maura Naughton, Marc Romano, Jun Yoshizaki, Paul Doherty Jr.	

	DATA Suzanne Winquist*, Rachael Orben, Annie Schmidt, Grant Ballard, Amélie Lescroël, Megan Elrod, J.B. Thiebot, MariAnna Hinojosa, John Wenigmann, Kenlynn Volz, Katie Dugger			
1600	**CONSERVATIVE OR BOLD: WHICH BREEDING STRATEGY IS ADVANTAGEOUS UNDER NORMAL VERSUS WARM OCEANOGRAPHIC CONDITIONS? Gabriela De la Cruz-Pino*,** Enriqueta Velarde, Exequiel Ezcurra, Ernesto Ruelas-Inzunza, Mark Marín-Hernández	**IMPACTS OF RISING SEA SURFACE TEMPERATURES ON NESTING BEHAVIOR OF ATLANTIC PUFFINS IN THE GULF OF MAINE** Julie Wallace, Keenan Yakola, **Stephen Kress,** Don Lyons	**EFFECT OF OCEANOGRAPHIC VARIABILITY ON DEMOGRAPHY OF CASSIN'S AUKLET IN THE CALIFORNIA CHANNEL ISLANDS Amelia J DuVall*,** Josh Adams, David Mazurkiewicz, Sarah J Converse	
1620	**PHENOTYPIC PLASTICITY IN A RAPIDLY WARMING OCEAN: CHANGES IN ATLANTIC PUFFIN BILL SIZE AND SIZE AT FLEDGING Heather Major,** Joy Rivers, Quinn Carvey, Antony Diamond	**A REVIEW OF CALIFORNIA NATURAL RESOURCE DAMAGE ASSESSMENT SEABIRD RESTORATION PROJECTS OVER THE DECADES. Jennfier Boyce,** Annie Little, Carolyn Marn, Laird Henkel	**ESTIMATING THE POPULATION SIZE AND TREND OF TOWNSEND'S SHEARWATERS ON SOCORRO ISLAND, MEXICO. Fernando Solis,** Antonio Ortiz, Braulio Rojas, Federico Mendez, Evaristo Rojas	
1700	**Conference Ends**			
1800-2200	**Banquet - Birch Aquarium**			

POSTERS

*Note: **bold** indicates presenting author, * indicates student presenter*

Poster #	Poster Title	Topic
1	**DETERMINING ARTHROPOD CONSUMPTION BY LAYSAN DUCKS TO INFORM NON-TARGET MITIGATION EFFORTS DURING RODENT ERADICATION** **Wieteke Holthuijzen[1]*,** Carmen Antaky[2], Beth Flint[3], Jonathan Plissner[4], Coral Wolf[5], Holly Jones[6]	Conservation
2	**SEABIRDS AS BIOVECTORS IN THE TRANSPORT OF ANTHROPOGENIC DEBRIS SUCH AS PLASTIC Mylene E. Seguel[1]*,** Claudia E. Fernández[1], Guillermo Luna-Jorquera[1],[2],[3]	Plastics
3	**DIVING TO THE BOTTOM: MAPPING COASTAL AND ESTUARINE BATHYMETRY USING BENTHIC DIVES OF TAGGED CORMORANTS** **Rachael Orben[1],** Adam Peck-Richardson[2], Alexa Piggott[2], Dylan Winters[3], Sabir Bin Muzaffar[4], Alexa Foster[5], Greg Wilson[6], James Lerczak	Foraging
4	**INDIVIDUAL-LEVEL RESPONSES TO RAPID CLIMATE CHANGE IN COMMON TERNS (*STERNA HIRUNDO*) AND ARCTIC TERNS (*STERNA PARADISAEA*) Kaiulani Sund[1]*,** Linda Welch[2], Jill Tengeres[2], Natasha Gownaris[1]	Climate Effects
5	**BEYOND RESTORATION; THE NEEDS AND CHALLENGES OF INDUSTRIAL SCALE HABITAT CREATION Mark Rauzon[1],** Alex Wegmann[2]	Conservation
6	**SEABIRD TRANSFER OF MICROPLASTIC FIBERS TO OCEANIC ISLANDS VIA GUANO DEPOSITION AT PALMYRA ATOLL, NORTHERN LINE ISLANDS Alex Wegmann[1],** Karl Wegmann[2], Alyssa Anderson[3], Breonna Jones[1], Charles Rolsky[3],[4], Rolf Halden[3]	Plastics
7	**MIDWAY SEABIRD PROTECTION PROJECT- THE FINAL COUNTDOWN...AGAIN Jared Underwood**	Conservation
8	**EXPANDED GLOBAL SEABIRD BREEDING SUCCESS DATASET ENABLES LARGE SPATIAL AND TEMPORAL ANALYSES Sarah Ann Thompson,** Helen Killeen, William Sydeman	Population Biology
9	**SOUTHWESTERN BORDER? THE THREATENED BREEDING COLONY OF STREAKED SHEARWATER IN COTTON ISLET, TAIWAN Han-Po Chang*,** Chung-Hang Hung, Hsiao-Wei Yuan	Conservation
10	**MYSTERY OF AHOUDORI: A REVIEW OF THE LOCAL EXTINCTION HISTORY OF SHORT-TAILED ALBATROSS IN THE WESTERN PACIFIC REGION Yun-Xuan Lin*,** Chung-Hang Hung, Hsiao-Wei Yuan, Han-Po Chang	Conservation

11	**A NOVEL TRAIL CAMERA DIET MONITORING METHODOLOGY AND ITS CAPACITY TO REFLECT ROSEATE AND COMMON TERN CHICK PROVISIONING** **Sarah Guitart[1]*,** Michelle Staudinger[1]	Conservation
12	**MARINE LITTER POLLUTION OF BREEDING COLONY AND HABITAT USE PATTERNS OF BLACK-TAILED GULLS IN SOUTH KOREA** **Who-Seung Lee**	Contaminants
13	**COMPARATIVE ANALYSES OF DIVE DURATIONS IN BIRDS WITH DIFFERENT SWIMMING MODES** **Hiroya Matsushita[1]*,** Yuuki Watanabe[2]	Foraging
14	**HEARING THE SIGN OF RECOVERY: PASSIVE ACOUSTIC MONITORING OF STREAKED SHEARWATER ON COTTON ISLAND, TAIWAN** **An Chou*,** Chung-Hang Hung, Hsiao-Wei Yuan	Conservation
15	**DISTRIBUTION OF WHITE-EYED GULL (*ICHTHYAETUS LEUCOPHTHALMUS*) NESTS IN THE AL WAJH ARCHIPELAGO, NORTHERN RED SEA, SAUDI ARABIA** **Alexa Foster[1]*,** Jesse Cochran[1], Ute Langner[1], Licia Calabrese[2], Michael Berumen[1]	Breeding Biology
16	**THE STAMP EGG COLLECTION AT THE NEST BIOREPOSITORY** **Jennifer Hoguet,** Debra Ellisor, Amanda Moors, Jennifer Ness, Rebecca Pugh	Collections
17	**UNDERSTANDING BIODIVERSITY ACROSS SPACE AND TIME TO INFORM POLICY: A CASE STUDY ON THE PACIFIC COAST** **Rossy Natale***	Management and policy
18	**CORMORANT OCEANOGRAPHY PROJECT** **Alexa Piggott[1],** Adam Peck-Richardson[1], Dylan Winters[2,1], Dorukhan Ardağ[3,1], Greg Wilson[1], Rachael Orben[4], James Lerczak[1]	Movement ecology
19	**INVESTIGATING THE USES OF AUTOMATIC PIT TAG RESIGHTING IN A BURROWING SUBARCTIC SEABIRD** Léo Marcouiller, **Eliane Miranda*,** Shannon Whelan, Kyle Elliott	Breeding biology
20	**EVALUATING REPRODUCTION OF WEDGE-TAILED SHEARWATERS AT KĪLAUEA POINT N.W.R. PRIOR TO PREDATOR EXCLUSION FENCE CONSTRUCTION** Lauren Pederson[1]**, Dylan Blanchard[1],** Lindsay Young[1], Eric VanderWerf[1], Tristan Luxner[2], Brooke Burrows[2], Heather Tonneson	Conservation
21	**FORAGING IN A PLASTIC OCEAN: CHARACTERIZATION OF NATURAL AND NON-NATURAL DIET ITEMS INGESTED BY LAYSAN ALBATROSS** **Isabella Ah Moo[1]*,** Lucas Florsheim[1], Eliana Prosnitz[1], Eli Taub[1], Nina Karnovsky[1], Leilani Fowlke[2], Lindsay Young[2]	Plastics
22	**PARTNERING FOR ALEUTIAN TERN CONSERVATION IN ALASKA: IMPLEMENTING A STATEWIDE COLONY CENSUS PROTOCOL** **Susan Oehlers[1],** Robert Kaler[2], Robin Corcoran[3], Trent McDonald[4], Michael Goldstein[5], Heather Renner[6], Donald Lyons[7], Megan Boldenow[2], Nathaniel Catterson[1], Daniel Pepin[8], Alison Williams[9]	Conservation

23	**TEMPORAL TRENDS OF BROWN PELICAN ATTENDANCE AT INLAND LAKES IN SOUTHERN CALIFORNIA IN RELATION TO OCEANOGRAPHIC CONDITIONS** **Caitlin DiCarlo[1]*,** Tamara Russell[2]	Movement ecology
24	**AN INTEGRATED APPROACH TO INCORPORATING MARINE BIRD HABITAT USE TO SUPPORT OFFSHORE WIND SITING IN THE GULF OF MAINE** Julia Stepanuk, Andrew Gilbert, Sarah Dodgin, Edward Jenkins, Evan Adams, **Julia Gulka,** M. Wing Goodale	Management
25	**GENETIC POPULATION STRUCTURE OF ATLANTIC PUFFIN (*FRATERCULA ARCTICA*) BREEDING COLONIES IN ATLANTIC CANADA** **Quinn Carvey[1]*,** Antony Diamond[2], Heather Major[1]	Population genetics
26	**INVESTIGATING ALEUTIAN TERN BREEDING SEASON MOVEMENTS USING SATELLITE TELEMETRY** **Robin Corcoran[1]**, Donald Lyons[2],[3], Susan Oehlers[4], Timothy Lawes[2]	Movement ecology
27	**UPDATING THE MARINE BIRD VULNERABILITY INDEX ON RISKS OF OFFSHORE WIND ENERGY PROJECTS ON THE PACIFIC OUTER CONTINENTAL SHELF** **Emma Kelsey[1],** Josh Adams[1], Jonathan Felis[1], David Pereksta	Offshore Wind
28	**PRODUCTIVITY BASELINE TRENDS OF THE THREE CORMORANT SPECIES WITHIN THE CAPE PERPETUA MARINE PROTECTED AREA** **Taylor Ozimek[1]*,** Allison Anholt[2], Joe Liebezeit[2], Shawn Stephensen	Conservation
29	**FITTING A SMALL PLUNGING SEABIRD WITH TELEMETRY TRANSMITTERS** **Kristina Wolf,** Elena Oey, Rachel Smith, Travis Wooten, Ignacio Vilchis	Foraging
30	**PREVALENCE OF HIPPOBOSCIDAE PARASITISM ON WEDGE-TAILED SHEARWATER (ARDENNA PACIFICA) HATCH-YEARS ON MOLOKINI ISLET** **Mariah Rivera[1],[2],** Jennifer Learned[1], Martin Frye[1], Skye Anderson[1], Cheryl King[1], Joshua De Cambra[1], Katelynn Gulley[1], Jay Penniman	Parasites
31	**SHIFTS IN DIET NICHE SPACE OF PRE-LAYING ALEUTIAN TERNS THROUGH TIME USING MUSEUM SPECIMENS** **Jill Tengeres[1],** Robin Corcoran[2], Donald Lyons	Diet
32	**ECTOPARASITE COMMUNITY ASSEMBLAGES OF LARIDS FROM AN OUTBREAK OF AVIAN BOTULISM** **Sonja Barber***, Kate Sheehan	Parasites
33	**AVIAN INFLUENZA (H^5N^1) AND A MARINE HEATWAVE SPELL REPRODUCTIVE DISASTER FOR NORTHERN GANNETS AT THEIR SOUTHERNMOST COLONY** **Noah Careen[1]**, Kyle D'Entremont[1], Chris Mooney[2], Bill Montevecchi[1]	Parasites, diseases
34	**NOVEL KNOTLESS LEG-LOOP HARNESS PROVIDES FIRST YEAR-ROUND GPS TRACKS OF AN ARCTIC TERN (STERNA PARADISAEA)** **Keenan Yakola[1],[2],** Don Lyons	Movement ecology

35	**COMBINING GPS, VIDEO, AND ACCELEROMETRY DATA TO IDENTIFY PREDATOR-FACILITATED FORAGING BEHAVIORS IN PELAGIC SEABIRDS. Abigail Schiffmiller[1]*,** Sara Maxwell[2], Scott Shaffer[3], Hillary Young[4], Michael Johns[5], Greg Breed	Foraging
36	**IS THERE HETEROZYGOSITY-FITNESS CORRELATION IN A COLONIAL SEABIRD, THE THICK-BILLED MURRE? Marianne Gousy-Leblanc[1]*,** Thomas Merkling[1], Lila Colston-Nepali[2], Emma Lachance Linklater[2], Anthony J Gaston[3], Grant Gilchrist[4], Kyle Elliott[5], Vicki L. Friesen[6]	Population genetics
37	**MONITORING TUFTED PUFFIN POPULATION TREND WITH TIME-LAPSE PHOTOGRAPHY Arthur Kettle**	Population Biology
38	**A PRELIMINARY REVIEW OF PREDATOR ACTIVITY ON LEEWARD HALEAKALĀ, MAUI, HAWAI'I USING GAME CAMERAS AT LEGHOLD TRAP LOCATIONS Joshua DeCambra***	Breeding Biology
39	**THE EFFECT OF URBANIZATION ON THE MICROBIOMES OF CALIFORNIA GULLS (LARUS CALIFORNICUS) Amy Parsons,** Michael McFarlin, Cole Jower, Cleber Ouverney, Scott Shaffer	Parasites and diseases
40		
41	**HAKE, HERRING OR SAURY? COMMON TERNS USE DISTINCT FORAGING AREAS FOR DIFFERENT FISH IN THE GULF OF MAINE Jacob Ligorria[1]*,** Keenan Yakola[2,3], Nina Karnovsky[1]	Foraging
42	**CANADA'S OCEANS PROTECTION PLAN: WHAT HAVE WE DONE FOR SEABIRDS, AND WHAT COMES NEXT? Sarah Hudson,** Mark Hipfner, Doug Bertram, Mark Drever, John Elliott, Sandi Lee, Vivian Pattison, Alice Domalik, Nik Clyde, Elsie Krebs	Management
43	**MULTIDIMENSIONAL NICHE DIFFERENTIATION IN SYMPATRIC CHICK-REARING AUKS Christina Petalas[1]*,** Kyle Elliott[1], Raphael Lavoie[2]	Foraging
44	**COMPARING THREE HIGH RESOLUTION SATELLITE IMAGERY PLATFORMS TO CENSUS NESTING PACIFIC ALBATROSS. Risa Dickson[1]*,** Jane Dolliver[1], Rachael Orben[1], Jennie Spegon[2], Chris Noyles[3], Kris Pacheco[2]	Population Biology
45	**ASSESSING PUBLIC ATTITUDES ON A WEDGE-TAILED SHEARWATER COLONY WITHIN A PUBLIC PARK Katelynn Gulley[1,2],** Jennifer Learned[1,3], Martin Frye[1,3], Skye Anderson[1,3], Mariah Rivera[1,2], Joshua DeCambra[1,2], Cheryl King[1,3], Mike Ing[1], Jay Pennima	Conservation
46	**PARASITE INFECTIONS AND MICROPLASTIC CONSUMPTION OF SEABIRDS FROM THE PACIFIC AND ATLANTIC OCEANS Kate Lyn Sheehan[1],** Douglas Causey	Parasites

47	**INFLUENCE OF SEA ICE DYNAMICS ON THE MOVEMENT ECOLOGY OF AN ARCTIC SEABIRD** **Alyssa Eby[1]*,** Allison Patterson[2], Bruno Tremblay[3], Grant Gilchrist[4], Kyle Elliott	Movement ecology
48	**NOAA FISHERIES NATIONAL SEABIRD PROGRAM: [5]-YEAR STRATEGIC PLAN UPDATE** **Annette Henry[1]**, Lee Benaka[2], Joan Browder[3], Shannon Fitzgerald[4], Tom Good[4], Trevor Joyce[1], Mi Ae Kim[2], Ryan Silva[5]	Management
49	**MAUI COUNTY'S ADOPTION OF A NEW OUTDOOR LIGHTING ORDINANCE TO PROTECT NATIVE WILDLIFE AND PRESERVE DARK SKIES** **Cheryl King[1],[2],** Jennifer Learned[1],[2], Martin Frye[1],[2], Skye Anderson[1],[2], Emily Severson[1],[2], Mariah Rivera[1],[3], Josh DeCambra[1],[3], Katelynn Gulley[1],[3], Jay Penniman[1],[2]	Lighting
50	**CHANGES IN GENTOO PENGUIN NEST FORMATION DURING THE COVID-[1]9 PANDEMIC** **Clare Flynn*,** Heather Lynch	Breeding Biology
51	**AN UNCREWED AERIAL SYSTEM PHOTOGRAMMETRIC CENSUS OF BRUSH-TAILED PENGUIN CHICKS AT KING GEORGE ISLAND, ANTARCTICA** **Trevor Joyce[1],** Tamara Russell[2], Jefferson Hinke	Population Biology
52		
53	**SAN DIEGO AUDUBON SOCIETY'S COLLABORATIVE EFFORTS TO CONSERVE AND MONITOR CALIFORNIA LEAST TERNS IN MISSION BAY, SAN DIEGO** **Cristina Santa Maria,** Andrew Meyer, Lesley Handa, Sandeep Dhar	Conservation
54	**STATUS AND TREND OF MARBLED MURRELET AT-SEA ABUNDANCE AND REPRODUCTIVE OUTPUT OFF CENTRAL CALIFORNIA, [1]999–[2]0[22]** **Jon Felis[1],** Josh Adams[1], Benjamin Becker[2], Cheryl Horton[1], Emma Kelsey[1], Laney White	Population Biology
55	**METABOLITE LEVELS REFLECT NUTRITIONAL STATE IN A FREE-LIVING SEABIRD** **Lauren Jackson[1]*,** Don-Jean Léandri-Breton[1], Shannon Whelan[1],[2], Alexandre Turmaine[1], Scott Hatch[2], Kyle Elliot	Physiology
56	**USE OF DETECTION DOGS TO FIND RARE AND ELUSIVE SEABIRDS ON SOCORRO AND GUADALUPE ISLANDS, MEXICO** Luciana Luna, David Cosio, Fernando Solis, Antonio Ortiz, Julio Hernandez, Evaristo Rojas, Mauricio Canales, Aldo Lopez, Ivan Monge, Federico Mendez	Population Biology
57	**FOLLOW THE EATER: A LOOK AT WESTERN GULLS' FORAGING RELATIONSHIP WITH SEA OTTERS** **Katherine Herrmann*,** Gerick Bergsma	Foraging
58	**SEASONAL SHIFTS AND INDIVIDUAL CONSISTENCY IN THE DIET AND FORAGING OF PERUVIAN BOOBIES (*SULA VARIEGATA*)** **Sara Wang[1]*,**	Diet

	Isabella Diaz[2], Diego Gonzales-DelCarpio[2], Cinthia Irigoin-Lovera[2], Carlos Zavalaga[2], Michael Polito	
59	**TRACKING SEABIRD USE OF THE AIRSPACE AT OFFSHORE WIND ENERGY AREAS USING THE THERMAL TRACKER-^{3}D: A CASE STUDY** **Stephanie Schneider[1]**, Sophie Bernstein[1], Sharon Kramer[1], Scott Terrill[1], Shari Matzner[2]	Offshore wind
60	**NEW BREEDING COLONY OF ELEGANT TERNS (THALASSEUS ELEGANS) IN NORTHERN CALIFORNIA Susan Euing**	Dispersal and colonization
61	**SOCIAL ATTRACTION AS A TOOL TO BRING SEABIRDS BACK TO KAUA'I ISLETS Dilek Sahin[1],[2],** André F. Raine[3], Karin Yuki Reiss[1],[2], Sheri S. Mann[4], Falefia Moe[4], Afsheen A. Siddiqi[2]	Conservation

PSG 2023 Special Achievement Award Recipient

Dr. Hsiao-Wei Yuan

Dr. Hsiao-Wei Yuan is a Professor in the School of Forestry and Resource Conservation at National Taiwan University (NTU). She earned her B.S. and M.S. degrees from the Department of Zoology at NTU and obtained her Ph.D. degree in Natural Resources from Cornell University, USA. As a pioneering scholar in the field of bird ecology, biodiversity, wildlife, and animal conservation in Taiwan, she has contributed her expertise and intellectual leadership to academia and society.

Currently, Prof. Yuan is Vice President for International Affairs and Associate Director of the Biodiversity Research Center at NTU. Over the past few decades, Prof. Yuan has received numerous awards and recognition for her research, teaching, and service. Throughout her career as an advocate for international higher education, she served as Director for International Affairs of the National Applied Research Laboratories and the CEO of the Foundation for International Cooperation in Higher Education of Taiwan.

Prof. Yuan has not only been the principal investigator as a trailblazer for numerous programs commissioned by the National Science and Technology Council and Forestry Bureau, but also received the recognition of outstanding contributions in forestry and nature preservation by the Council of Agriculture. Dedicated to cultivating future talents for forestry research and management, she also received the Distinguished All-English Teaching Award, Outstanding Teaching Award, Distinguished Teacher Award, and Distinguished University Service Award from NTU on many occasions.

Her PhD thesis investigated the population dynamics and conservation of Common Terns at Oneida Lake in New York State, USA. After returning to Taiwan, she teamed up with Dr. Shuihua Chen and Mr. Simba Chan to implement the action plan for the critically endangered Chinese Crested Tern since 2006. The Chinese Crested Tern was rediscovered nesting in a large Greater Crested Tern colony on the Matsu Islands, Taiwan, in 2000 by Chieh-Te Liang after 63 years when no confirmed sightings of the species were recorded. Programs for habitat restoration, colony protection, and social attraction for Chinese Crested Terns in the Matsu Islands have been undertaken since 2000. Ph.D. and Masters students have worked on this species for their thesis research under the direction of Prof. Yuan at NTU. Because of the leadership and research contributions that Prof. Yuan has brought to conservation efforts, the Matsu Islands remain a crucial site for the protection and restoration of Chinese Crested Terns.

Due to collective efforts in Taiwan, mainland China, and, more recently, South Korea, the population of Chinese Crested Terns has been boosted to well over 100 adults. Because Prof. Yuan spares no effort to advocate for the conservation of species and raise social awareness, numerous nesting habitats for the species have remained intact. The protection of this seabird species continues in order to mitigate threats, including natural disasters (e.g., typhoons) and human disturbance. Meanwhile, Prof. Yuan endeavors to collaborate with scientists across the globe to protect the species and other seabirds within shared habitats. Based on Prof. Yuan's long-term research on Chinese Crested Terns, Director Chieh-Te Liang released the documentary entitled "Enigma: The Chinese Crested Tern" in 2021, drawing the public's attention to the significance and life history of this charismatic seabird species.

PSG 2023 Special Achievement Award Recipient

Simba Chan

Simba was born and educated in Hong Kong and, after graduating from the Chinese University of Hong Kong, he worked as a Teaching Assistant in the Biology Department. He first began banding birds in 1985, and joined the World Wildlife Fund - Hong Kong to work as the Assistant Education Officer at Mai Po Marshes Nature Reserve in 1987. Since 1990 he has worked as the Training Officer at Mai Po and conducted wetland management courses for nature reserve managers from China and Thailand.

In the winter of 1990/91 about 100 Oriental Storks were found wintering at Mai Po Marshes and Simba initiated a study of the behavioral ecology of the storks. He attended the International Workshop on Cranes and Storks on the Amur River in July 1992 to report his findings. His work ethic and conservation acumen impressed many senior scientists at the workshop, and that led Simba to a position with the Wild Bird Society of Japan in 1995 as Head of the International Cooperation Division. That position was a proxy for BirdLife International projects in Asia, including compilation of the Asian Red Data Book (published in 2001), designating Important Bird Areas (published in 2004), and coordinating international conservation projects for the endangered Black-faced Spoonbill. Simba also led the wetland projects of the Ministry of the Environment of Japan in Southeast Asia, particularly in Myanmar, and flyway projects on cranes in East Asia.

In 2005 Simba shifted his post from the Wild Bird Society of Japan to BirdLife International - Asia Division, which is based in Tokyo, Japan. He initiated a highly successful China Program that supported development of bird conservation NGOs in China during 2005 – 2019. In 2005 he also became the editor-in-chief of the International Action Plans for the Black-faced Spoonbill and the Chinese Crested Tern. The Chinese Crested Tern conservation project eventually led to Simba serving as the resident colony monitor on Tiedun Dao, a small island in the Jiushan Archipelago, Zhejiang Province, during the first two years (2014 and 2015) after a new tern colony was established on the island using social attraction. Simba monitored nesting behavior and nesting success of Chinese Crested Terns on Tiedun Dao and identified factors limiting colony size and nesting success. Beginning in 2016 Simba worked with South Korean researchers on the newly discovered Chinese Crested Tern breeding colony on Chilsando Island off the southwest coast of South Korea, and also with Indonesian conservationists on protection of a known wintering site for the species. During a trip to South Korea for the Chinese Crested Tern project in March 2018 Simba suffered a serious brain hemorrhagic stroke, but has miraculously and fully recovered with no lingering complications.

Apart from seabird conservation, since 2014 Simba has also promoted international cooperation on land bird monitoring and conservation in East Asia. He is the international coordinator of the East Asia Land Bird Monitoring Scheme and the editor-in-chief of the International Action Plan on the critically endangered Yellow-breasted Bunting. Simba left BirdLife International in 2020, and has since served as an Associate Researcher for both the Japan Bird Research Association and the Wild Bird Society of Japan.

PSG 2023 Special Achievement Award Recipient

Dr. Shuihua Chen

Dr. Shuihua Chen is the former leader of the restoration project for the critically endangered Chinese Crested Tern (*Thalasseus bernsteini*, CCT) in Zhejiang Province, China. Dr. Chen led the project during 2003-2019, when he was the Curator of Ornithology at the Zhejiang Museum of Natural History.

Dr. Chen grew up in Zhejiang Province, eastern China. He received a B.S. degree in Zoology from Shandong University, a M.Sc. in Animal Ecology from Hangzhou University, and a Ph.D. in Avian Ecology from Beijing Normal University. Early in his career, he focused his research on urban birds, but in 2003 he got involved with research on seabirds when he initiated a survey for the CCT and other breeding seabirds along the Zhejiang coast. In 2004, he and his team finally found a small breeding colony of CCTs in the Jiushan Islands, which was the second CCT colony to be discovered after the species was rediscovered nesting on the Matzu Islands in 2000, after a 63-year period when the species was presumed extinct. Since then, he has devoted most of his research and conservation efforts to this critically endangered seabird. After four years of surveys and investigations, he concluded that the population of CCTs was very small, less than 50 individuals, and faced several severe threats, including habitat degradation, illegal egg harvest, disturbance, overfishing, and typhoons. Among these, illegal egg harvest was considered the greatest threat to CCTs and other breeding seabirds along the coast of China. Dr. Chen devoted another four years of research on this poorly known seabird, and uncovered new information on its reproductive ecology, which became the foundation for efforts to conserve and restore the species, including targeted protection and social attraction.

Meanwhile, Dr. Chen and his team held many different publicity events and educational activities for local people, wrote to the government, called attention to the need for protection, and raised public awareness over the plight of the few surviving CCTs. This was the first attempt at conserving and restoring any seabird species in China, so Dr. Chen and his team were pioneers in this effort. In 2013, using social attraction techniques and with the help of Dr. Daniel Roby from Oregon State University and Simba Chan from Birdlife International Asia Division, Dr. Chen launched the first active colony restoration project for CCTs. The objective was to establish a new breeding colony of Greater Crested Terns (*T. bergii*, GCT) in the Jiushan Islands, in the hope that CCTs would follow. Thousands of GCTs and at least 19 CCTs colonized the island during the first breeding season. After 10 years of successful breeding, Dr. Chen's team has successfully established two mixed-species breeding colonies of CCTs on the east coast of China, one in the Jiushan Islands and the other in the Wuzhishan Islands. In 2022, the number of breeding adult CCTs was 139, and 49 chicks were fledged. The global population of CCTs is now more than 3-fold what it was when the project began. The restoration program in Zhejiang Province has been a major factor in preventing the CCT from going extinct and on starting the species on the road to recovery.

In recognition of his dedication to the conservation and restoration of the Chinese Crested Tern and other seabirds in China, and his significant and collaborative contributions toward this goal, the Pacific Seabird Group honors Dr. Shuihua Chen with its Special Achievement Award.

PSG 2023 Lifetime Achievement Award Recipient

Dr. William Sydeman

Plenary 1, Wednesday, February 15, 8:30 - 9:30am

William J. Sydeman, Ph.D., is a marine ecologist with expertise in eastern boundary current, upwelling, and other temperate-subarctic ecosystems of the North Pacific. Bill's interdisciplinary research lies at the nexus of marine climate change, ocean conditions, zooplankton, forage fish, and marine predators. He has focused particularly on mechanisms of change in ocean temperature and winds, environmental influences on the population biology of krill and forage fish, seabird foraging behavior and ecology, ecosystem-based fisheries management, seabird conservation, and the development of ecological indicators.

Bill lives and works in Petaluma, California, as President and Chief Scientist of the Farallon Institute. Under his leadership, Farallon Institute has become an outstanding model of how to successfully conduct both academic and conservation-oriented research outside of academic institutions and government agencies, while still working collaboratively with them. The Farallon Institute embodies Bill's values of pursuing cutting-edge marine science and engaging extensive collaborative networks. It is these qualities that have brought the Farallon Institute to the forefront of research with prominent seabird scientists around the world. Beyond seabird research, however, Bill's engagement in interdisciplinary science and eagerness to collaborate with those in other areas of marine science has enriched his work and made it also valuable in the broader fields of biological oceanography and marine ecology.

Throughout this evolving career, Bill has been a prolific contributor to seabird, fisheries, and marine ecosystems science. In his various positions over the years, he has instructed hundreds of pre-doctoral students, entry-level biologists, and agency personnel in marine and field biology classes and workshops. He has advised or supervised dozens of BSc, MSc, PhD students and post-Docs. He has served as editor to multiple journals, and reviewed papers or proposals for a wide swath of journals and agencies. He edited 5 different proceedings published in peer reviewed journals, resulting from some of the dozen symposia he has helped to organize. He has published more than 200 peer-reviewed papers in journals specializing in bird, oceanography, plankton, fish and fisheries, conservation, and climate science; and more synthetic or multidisciplinary journals of ecology, marine policy, and science. Bill has long contributed service to many organizations (including PSG and PICES) and advisory panels, and currently serves as the co-chair of California's Ocean Protection Council – Science Advisory Team.

Focusing on boundary current ecosystems, part of Bill's plenary will be based on an update of a recent paper published in *Science* (May 2021) in which he and a large group of international colleagues conducted a meta-analysis of changes in seabird breeding success across the globe in relation to climate change and other human impacts.

SEABIRDS UNDER CLIMATE CHANGE: RESILIENCE, REFUGIA, AND OTHER CONSIDERATIONS

William J. Sydeman, Farallon Institute, Petaluma, CA; wsydeman@faralloninstitute.org

Global climate change, the ecological backdrop facing all marine life, is predicted to affect seabird communities by tipping the balance towards species with greater plasticity in life history tactics, and capacity for adaptation (which is poorly known). Indeed, some noteworthy conservation actions (e.g., listing of emperor penguins under the Endangered Species Act) have recently come to pass based on anticipated trait-based effects of climate change on population parameters. But, are seabirds with greater dietary breath and/or foraging attributes (generalists) actually faring better than species with narrow niches (specialists) as the world warms, deoxygenates, and acidifies? The prognosis for healthy seabird populations under climate change also lies in large part with a better understanding of how climatic factors, in its various flavors (e.g., from slow unidirectional change to coupled extreme events), are likely to interact with other human impacts to affect seabird habitats and food webs. This includes the likelihood of extant, or even possibly expanding, habitat refugia in major ecosystems of the world's oceans. Boundary current ecosystems provide examples of both likely major change, as well as probable habitat refugia, at least in the near term. In this presentation, I will discuss these concepts, focusing on examples from the North Pacific Ocean, as well as share observed life history-based responses on a global scale to ocean warming and changes in stratification that appear to challenge some of our preconceived notions of how seabirds should respond to climate change in the future.

PSG 2023 Lifetime Achievement Award Recipient

Dr. Kathy Kuletz

Plenary 3, Friday, February 17, 8:30 - 9:30am

Since 1978, Dr. Kathy Kuletz has engaged in research and management of seabirds. Her graduate degrees include a M.Sc from the University of California, Irvine and a Ph.D. from the University of Victoria, British Columbia. Kathy's M.Sc. thesis on the reproductive consequences of foraging behavior of Pigeon Guillemots in Prince William Sound (PWS), Alaska, provided essential baseline information prior to the 1989 *Exxon Valdez* Oil Spill. Kathy's Ph.D. on Marbled Murrelets followed their at-sea distribution and fledging success relative to marine habitat use and prey availability. After four decades of federal service, Kathy retired as the Alaska Migratory Bird Management Seabird Coordinator for the U.S. Fish and Wildlife Service (USFWS), but remains involved in national and international projects for seabird ecology and conservation, including the Distributed Biological Observatory array in the Pacific Arctic, the Arctic Marine Biodiversity Observing Network, and the Northern Gulf of Alaska Long-term Ecological Research Program.

In 2006, Kathy initiated the USFWS' Alaska At-sea seabird survey program and led numerous seabird studies that examined factors driving Alaskan seabird distribution and abundance and the impacts of climate change. Her many seasons at sea, and leadership in multi-disciplinary research projects, provided invaluable data archived in the North Pacific Pelagic Seabird Database. Kathy served on the Science & Statistical Committee of the North Pacific Fisheries Management Council (2007-2012), to provide scientific grounding for management of some of the world's most important fisheries. She served as Chair of the Pacific Seabird Group in 2016 and in 2020 received the first USFWS Migratory Bird Program Distinguished Biologist Support Award, in part for her conservation influence and success in building diverse partnerships. Kathy's scientific publication and presentation record, as well as her international coordination efforts, are indicative of her tireless and unselfish approach in maintaining long-term collaborations with state and federal agencies, universities, and NGOs, all while serving on graduate student committees. Her international collaborations include the Short-tailed Albatross Recovery Team, the Circumpolar Seabird Expert Network, and multiple Arctic Council and PICES working groups and regional environmental assessments. Conservation of seabirds has always been at the heart of Kathy's work and research, and she frequently served as an advisor on natural resource damage assessment teams, spill response and planning teams, and international conservation committees.

In recognition of her distinguished contributions to the study and conservation of seabirds, student mentoring, and our organization, the Pacific Seabird Group honors Dr. Kathy Kuletz with a Lifetime Achievement Award.

BREACHING THE BORDER & SHIFTING BOUNDARIES: 50 YEARS OF CHANGE IN NORTHERN OCEANS

Katherine J. Kuletz, retired / affiliate, U.S. Fish and Wildlife Service, Anchorage, Alaska. Kathy_kuletz@fws.gov.

Some of the most radical changes in the world's oceans have occurred in marginal seas and at higher latitudes. In both the Atlantic and Pacific sub-Arctic and Arctic seas, the response of seabird communities to environmental changes presage global challenges. Increasing variability in the north is restructuring seabird communities, even absent commercial fisheries. Given environmental forecasts, can we predict which seabirds

will predominate? For example, Alcids have reigned in the north, where cold water, strong fronts and currents concentrate abundant prey. However, in recent decades, loss of sea ice has resulted in greater flow of Bering Sea water (volume, heat, biomass) into the Chukchi Sea, and in 2018 the loss of a deep thermal barrier in the Bering Sea facilitated northward movement of southern predatory fish, and juvenile Gadids flooded into the Arctic. Concurrently, nutrient-rich Arctic fish species also increased, but in the warmest year they were farther north of seabird colonies. Planktivorous seabirds encountered a prey base of smaller, less fatty zooplankton. Seabirds may be competing with fish for food, while tracking more dispersed prey, which could swing the advantage to piscivorous birds with light wing loading. Even versatile long-distance migrants may risk diminishing returns and starvation. There is evidence of stress across foraging guilds, indicating that while there may be 'winners', there could be fewer of those as well. Our challenge will be to identify and protect refugia and new habitats for new communities.

PSG 2023 Lifetime Achievement Award Recipient

Dr. Kees Vermeer

The Pacific Seabird Group is honored to present Dr. Kees Vermeer with a Lifetime Achievement Award, in recognition of exceptional contributions to marine ornithology and to PSG.

His impact on seabird biology began with a 1963 publication on clutch size, from his MSc on Glaucous-winged Gulls. This paper, a Citation Classic, challenged accepted theory, including work by David Lack and Niko Tinbergen. After his PhD, he began a long career with the Canadian Wildlife Service. He initiated research on Triangle Island, the most important seabird colony in British Columbia, and several other colonies. This was the foundation of long-term research continuing today and numerous key publications on Cassin's Auklets, Rhinoceros Auklets, Tufted Puffins and more. At the same time Kees initiated at-sea surveys off BC, leading to the present atlas of pelagic birds off western Canada. He collaborated with plankton and fish biologists for the most intensive investigations at that time into diets and foraging of several Pacific seabirds. Overall, he published high-quality papers on diets, foraging, breeding biology and distribution of almost every seabird regularly occurring in BC.

With his wife Rebecca and other collaborators, Kees made major contributions to wildlife toxicology. Two 1974 bibliographies on wildlife oil pollution were the most complete documentation at the time and are still regularly cited today. Two 1975 reviews of oil pollution affecting seabirds off BC and Yukon followed. These early reviews brought to light key elements of oil pollution, subsequently supported by extensive research: e.g., susceptibility of diving seabirds to oiling; major impacts of chronic small spills. Kees also did ground-breaking research into organochlorides and other toxic chemicals affecting waterbirds.

For three decades Kees was the go-to person to review almost any aspect of seabird biology in BC, resulting in numerous book chapters and journal papers, including the first comprehensive review of the status of BC seabirds (Croxall et al. 1984: *Status and Conservation of the World's Seabirds*). Kees convened symposia and edited five resultant multi-authored compendia to summarize regional information on seabirds in BC and the North Pacific.

Kees was an early supporter of the fledgling PSG and was active within the group through his career and into retirement. He was the Chair of PSG in 1981.

At age 89 Kees published an excellent autobiography detailing his career, childhood in Nazi-occupied Netherlands, emigration to Canada and more. This also lists his publications:
https://www.immigrantgonetoheaven.com/

Dr. Andréa Thiebault

Plenary 2, Thursday, February 16, 8:30 - 9:30am

Dr Andréa Thiebault completed her PhD at the Institut de Recherche pour le Développement (IRD UMR248 France) on the group foraging strategies in Cape gannets. She demonstrated the importance of social interactions throughout their foraging trip, from locating to capturing prey. For her PhD work, she received an award from the Oceanographic Institute, Fondation Albert I^{er} Prince of Monaco. She then conducted several years of postdoctoral research at the Nelson Mandela University (South Africa) where she continued studying the mechanisms of social interactions and group strategies in foraging seabirds. In particular, she developed the study of vocal communication in seabirds when they are at sea. In 2021, she was granted funding from the European Commission under a Marie Sklodowska-Curie grant to study the implementation of a foraging network based on acoustic signals in African penguins. In 2022 she was recruited for a permanent position as a researcher at the CNRS in France.

GROUP BEHAVIOUR AND COMMUNICATION IN FORAGING SEABIRDS

Seabirds are often observed in groups at sea, but the mechanisms by which they may communicate or benefit from these interactions remain poorly known. Advances in technologies allow us to finally tackle these questions. I will present two case studies, demonstrating the importance of group behaviours in the foraging strategies of Cape gannets *Morus capensis* and African penguins *Spheniscus demersus*.

Cape gannets forage on the continental shelf, on pelagic fish that are patchily distributed in a highly dynamic environment. To detect these inconspicuous preys, they may use oceanographic features, memory or social information. My work focused on the latter: using animal-borne devices we demonstrated mechanisms by which Cape gannets exchange information in the surroundings of their colony as well as further offshore (i.e. using local-enhancement). When aggregated on fish schools, they further benefit from the group to increase their feeding success. Using underwater video footage, we described how successive attacks disorganized fish schools and resulted in an increase in prey capture for individual birds.

African penguins feed on small pelagic fish, diving to 30m depth within 40km from the coast. They actively coordinate their feeding behaviour by herding fish in schools and they benefit greatly from feeding in groups. The mechanisms by which they regulate these group activities remain unknown. I hypothesized that acoustic signals could play an important role. I will present my work in progress on this project, including analyses from penguin-borne devices and acoustic experiments at sea.

In Memoriam

We offer the following remembrances of Pacific Seabird Group members lost during the last year. The loss of these valued members will be deeply felt by the Pacific Seabird Group membership, seabird conservation, and all whom they worked with, shared their expertise and talents with, and those they mentored. We offer our condolences and deep regrets to their families, friends and colleagues.

Ronald LeValley

1947-2022

We lost Ron LeValley on June 4, 2022, age 75, following a debilitating illness. Ron was one of PSG's original members, and attended its first meeting in Issaquah, Washington (December 1974). For half a century, PSG's annual meeting was a highlight of Ron's year. He enjoyed learning about recent research, and provided history and context to new discoveries. Ron's infectious personality, enthusiasm, and joy in networking charmed first-time attendees and old friends alike. Ron volunteered for countless PSG tasks, including serving as its Treasurer for a decade.

Born and raised in Sacramento, Ron earned a BA in biology from Sacramento State College (1969). His lifelong interest in marine birds and mammals was stimulated by his involvement with Point Reyes Bird Observatory beginning in 1966, including fieldwork on the Farallon Islands. He received an M.A. in Biology from Humboldt State University (1980) and wrote a thesis on the yellow-footed gull. Ron founded a travel company that enabled him and his colleagues to lead trips to Alaska, Mexico, South America, Africa, and Australia. These natural history tours showcased Ron's greatest gifts: an insatiable curiosity about animals and plants, an unending desire to tell stories about nature, and a camaraderie with anyone who shared his passions.

Ron's consulting firm Mad River Biologists conducted hundreds of surveys for Marbled Murrelets in northern California. He helped design a training program that certified field biologists for conducting the surveys, a program that continues today and is endorsed by PSG's Marbled Murrelet Technical Committee.

Ron led Audubon hikes, pelagic boat trips, and similar outings throughout Northern California. He was an accomplished photographer, and regularly gave illustrated talks sharing his adventures. Ron was a compassionate and loyal friend, with a twinkly smile, a hearty laugh, and a sharp wit. He is sorely missed by all who were fortunate to know him.

Fern P. Duvall II

1953-2022

The conservation community in Hawai'i and beyond lost a cherished friend and accomplished colleague early this year, Dr. Fern P. Duvall II. Fern was a lifelong naturalist, dedicated conservationist, and mentor. Fern's deep knowledge of the natural world in Hawai‘i was unparalleled, and his curiosity never ceased. Fern was also a generous mentor, a gentle leader, a trusted guide, and a delightful friend.

Fern was the one we turned to when we needed expert knowledge about Hawaiian birds and conservation. He thought deeply about how to approach difficult conservation challenges and often came up with innovative and successful paths forward. He was a unifying presence, bringing people together to get work done on the ground. Fern believed in seabirds as vital ecological engineers. He regularly communicated to staff and the public about seabirds' capacity to transport marine nutrients to both terrestrial and near shore coral reef habitats, as essential to both watershed and coral reef community resilience. He encouraged the Division of Forestry and Wildlife to build a consistent seabird monitoring program. He initiated projects to restore the endangered ‘ua‘u (Hawaiian petrel) and threatened ‘a‘o (Newell‘s shearwater) populations and a long term demographic study of ‘ua‘u kani (wedge-tailed shearwater). While Fern was a trained ornithologist, his interests included all flora and fauna. His knowledge of Hawaiian native and invasive plants was complete and he made the connection between habitat structure and seabird colony success.

Fern retired from Hawai‘i Division of Forestry and Wildlife (DOFAW) in 2021 after 38 years of service. Early this year, Fern was celebrated as a Hawai‘i Division of Forestry and Wildlife Conservation Leader in a beautiful article and video that describes some of his conservation contributions and his philosophy about getting out in the field and nature. In the video, Fern tells us, "You've got to get out into the environment. You cannot manage well if you do not understand the resources," and that we should "study lots and talk less!". We will keep his guidance in our hearts as we continue the work to which Fern was so deeply committed. Fern is deeply missed but his contributions to Hawaiian conservation live on in the colleagues he advised and mentored.

Read more about Fern:

Fern's lifelong love of nature and incredible conservation career is highlighted in the Maui News.

Hear Fern talk about the Maui Nui Seabird Project in this episode called Fly, Fly, Fly.

SILENT AUKTION

Happening right now online! Ends **Friday, February 17, at 12:00 pm PST**!

For the past decade, the silent auction has been held at each annual meeting to raise funds for Student Travel Awards. The silent auction has assisted more than 100 students in attending and presenting their work at the annual meeting! Proceeds from this year's auction will support student travel to PSG 2024 in Seattle, WA, so don't forget to bid early and often!

All bidding for the 2023 auction will take place online, and most items will be shipped after the meeting ends. If you're attending PSG in person and looking for a prize to take home with you, check out the "In-person Exclusive" items on the website, which can be picked up in-person by winners at the conclusion of the auction!

To access the auction, scan this QR code or visit https://go.charityauctionstoday.com/bid/PSG2023

SPECIAL PAPER SESSIONS AND SYMPOSIA

Special Paper Session - Indigenous Peoples and Local Communities: Flying from Traditional Knowledge to their Inclusion in Seabird Ecology and Conservation
Thursday, February 16th, 13:30-14:30
Conveners: Amelia DuVall, Derek Harvey, Cristián Suazo

Current knowledge is experiencing a growing and frequent interaction of communities with people who are more involved with the once-isolated western science. Today, we can find a diverse and interactive seascape, including the revival of ecological and traditional knowledge from communities. In turn, people's wisdoms and generational knowledge can help inform decisions to keep or change our experiences and habits with marine biodiversity, such as seabirds. However, linkages between biodiversity and cultural diversity (biocultural diversity) are being eroded with detrimental effects on unique sources of knowledge.

Intangible cultural-spiritual links through people's experiences involve us with seabirds, thus facilitating a unique platform to learn from each other. Thus, we are calling for contributions for a special paper session "Indigenous Peoples and Local Communities: Flying from Traditional Knowledge to Their Inclusion in Seabird Ecology and Conservation".

A brief storytelling opportunity to communicate experiences from anyone who wants to share and learn through a different way of knowledge, and recognize how seabirds' impact on our interaction with the conservation and management of the marine realm. Examples of contents that can contribute to this special paper session:

- Indigenous and local-traditional knowledge in seabird ecology and conservation
- Human dimensions as new sources of knowledge on policy and decision-making

Please come and share your experience through a talk of ~10 minute presentation (with your graphs, images, sounds, gear, or any other supporting material) to tell us your own experience of interaction with seabird. An important topic to discuss and generate new ideas and identify challenges.

For more information about the special paper session please contact any one of the following session conveners: Derek Harvey (dharvey@hawaii.edu), Amelia DuVall (ajduvall@uw.edu), or Cristián Suazo (biosuazo@gmail.com).

PANEL DISCUSSIONS, ROUND TABLES, AND WORKSHOPS

Introduction to Bayesian Analysis for Seabird Research Workshop
Tuesday, February 14th, 15:00-17:00
Conveners: Amelia DuVall, Timothy Jones, Molly McDevitt, Michelle Kissling

What is the probability that someone knows Bayesian statistics given that they love seabirds? According to Bayes' theorem, it is the probability that someone loves seabirds given that they know Bayesian statistics multiplied by the probability of knowing Bayesian statistics, and all divided by the probability of loving seabirds. We won't try to estimate this, but it is probably a small number that we hope to increase with our *Introduction to Bayesian Analysis for Seabird Research Workshop*. We argue that Bayesian statistics is a compelling approach for analyzing seabird data because it allows for the incorporation of prior knowledge, and it offers an intuitive way to interpret parameter estimates that also quantifies uncertainty. Our objectives for the workshop are to: (1) introduce the key concepts and principles behind Bayesian inference; and (2) provide hands-on experience working through introductory analyses in R/RStudio. More broadly, we hope to reduce barriers to using and interpreting Bayesian analyses and to help create a community of analytical learning and support within PSG. Our target participants are those that are interested in using Bayesian analyses in their own research as well as those that want a deeper understanding of methods in order to interpret other research in the field.

We recommend that participants have some experience with statistical analyses and coding in the R programming language. Participants should bring their own laptop with R/RStudio and the required packages installed; we will send additional information regarding the required packages and installation instructions in advance of the workshop. Please contact Amelia DuVall (ajduvall@uw.edu) with any questions.

FieldFutures Workshop: Preventing Sexual Harassment in Fieldwork
Wednesday February 15, 2023 from 15:20-17:20
Convener: Equity, Inclusion, and Diversity Committee

Join PSG's Equity, Inclusion, and Diversity (EID) committee in welcoming FieldFutures Workshop: Preventing Sexual Harassment in Fieldwork on Wednesday February 15th from 15:20-17:20 at the 50th Annual Meeting in San Diego. Grounded in the latest evidence-based research on harassment prevention and organizational psychology, participants will learn to prevent, intervene in, and report incidents of sexual harassment and assault in field settings. This workshop will emphasize prevention via positive organizational climate-setting activities for the movement toward safe, inclusive fieldwork.

PSG History
Thursday, February 16th, 13:30-14:30
Convener: Mike Scott
Please join us to share your memories of PSG's beginnings.

North Pacific Roundtable
Thursday, February 16th, 15:20-16:20
Share your observations from the 2022 seabird year around the Pacific on climate conditions and anomalies, red tides, die-offs and breeding failures, or even if the year appeared normal (or the "new normal") where you work in the Pacific. There will be no electronic presentation capability in this room.

Seabird Drone Information Sharing Group
Thursday, February 16th, 17:00-18:00
Convener: Lindsay Young
Information sharing session for anyone currently using, or planning to use drones in seabird research.

STUDENT AND EARLY CAREER SCIENTIST EVENTS

Early Career Scientist (ECS) Panel
Wednesday, February 15th, 1700-1800
If you are an early-career scientist or want to help facilitate the professional advancement of early-career scientists, this event is for you! Our definition of ECS mirrors that of other professional societies: a current student (associates, bachelors, masters, or PhD) or scientist who has received their highest degree within the last 5 years. This panel is an informational, structured event where panelists will give a brief background of their own research and career path, and then answer questions from the audience about career development! Our panel this year consists of people with an intentional diversity of backgrounds and research interests, who are either transitioning out of being an ECS or are experienced in and regularly interested in hiring ECS. Our panelists for this year are Roberta Swift, Katie Stoner, Yuliana Bedolla, Carlos Zavalaga, and Lindsay Adrean (see their bios below).

Questions for the panelists can be submitted anonymously prior to the event by e-mailing Anna Vallery & Amelia DuVall (communications@pacificseabirdgroup.org), but there will be opportunities for attendees to ask questions live during the event, as well. Students and all other ECS are invited to attend!
The student/ECS mentoring event will immediately follow this panel!

Roberta Swift – Seabird Coordinator for the U.S. Fish and Wildlife Service Pacific Region's Office of Migratory Birds and Habitat

Roberta Swift works as the regional Seabird Coordinator for the USFWS Pacific Region's Office of Migratory Birds and Habitat. During her ten years in this position, she has worked to solve seabird conservation and management issues through partnership and permitting in Oregon, Washington, Hawaii and the U.S. Pacific islands. The pinnacle of Roberta's seabird experience was her work on Mauna Loa studying Hawaiian petrels for her Master of Science degree at Oregon State University. She still has a soft spot for Hawaiian petrels and she enjoys connecting with their more numerous cousins, Bonin petrels, during rare trips to Midway Atoll National Wildlife Refuge. Prior to working with the Office Migratory Birds, Roberta's

work ran the taxonomic gamut from salmon to seals and rats to raptors, working with state, federal and private organizations. This varied experience gives her a unique perspective that benefits her current work. Her professional interests include addressing seabird conservation challenges and minimizing human impacts to seabirds. In her free time, Roberta loves any activity that takes her outside, including making her habitat in Newberg, Oregon more hospitable to native plants and animals.

Katie Stoner – Ph.D. Student, Wildlife Science Department of Fisheries, Wildlife, & Conservation Sciences, Oregon State University

Katie Stoner is a PhD student at Oregon State University who's research focuses on assessing the conservation status and threats to tufted and horned puffins (*Fratercula cirrhata, F. corniculata*) breeding in the Kodiak Archipelago within the Gulf of Alaska. After graduating with her B.S. in Wildlife Biology from the University of Vermont, she conducted fieldwork for several years researching seabirds in both tropical and temperate marine systems including with the Kauai Endangered Seabird Recovery Project, Point Blue's Adelie Penguin Population Ecology Project, and with Kodiak and Alaska Maritime National Wildlife Refuges. Katie also serves as one of the Co-Coordinators of PSG's Equity, Inclusion, and Diversity Committee.

Yuliana Bedolla-Guzmán– Project Director - Marine Birds, Grupo de Ecología y Conservación de Islas, A.C. (GECI)

Yuliana is a marine biologist, holds an MSc in Coastal Oceanography, and is a Ph.D. Candidate from the Justus Liebig University, Germany. She joined Grupo de Ecología y Conservación de Islas, A.C. (GECI) in 2009, and now she is the Director of the Marine Birds Project, a project restores and conserves marine birds using social attraction systems in conjunction with systematic monitoring, research, and environmental education. Before leading this project, she coordinated several restoration projects on islands all along Mexico, all related to invasive rodent eradications to benefit seabird colonies. Her Ph.D. research is about niche segregation in sympatric storm-petrel species. Her interests are also focused on the response of seabirds to climate conditions, identifying important marine areas, parasites infecting seabirds, and the response of the native fauna to the removal of invasive mammals. Her activities in GECI include project planning, personnel coordination and supervision, applied research and monitoring, environmental education, and sharing of information at conferences and in scientific reports and publications.

Carlos Zavalaga – Director of the Marine Ecosystem Research Unit – Peruvian Seabird Group, Universidad Científica del Sur

Carlos Zavalaga is PhD marine biologist graduated from the University of North Carolina at Wilmington. He is now in charge of the Marine Ecosystem Research Unit – Peruvian Seabird Group at Universidad Científica del Sur, Lima-Perú. His research projects are focused in biologging, conservation and management of seabirds of the Humboldt Current, collaborating with seabird scientists worldwide. Some of these projects are related to interactions between Peruvian seabirds and the anchovy fisheries, house mice as predators of Peruvian diving-petrels, oil spill and seabird toxicology, activities of migrant NZ albatrosses in Peruvian waters, drones and seabird monitoring, among others. He enjoys fieldtrips to the guano islands of Peru with his students and is wide open to collaborate with international academic institutions in future projects.

Lindsay Adrean - Northwest Program Officer, American Bird Conservancy

The focus of Lindsay's career has been research and management of shorebirds, waterbirds, and seabirds whose needs conflict with those of humans utilizing the same resources. After receiving a broad introduction to environmental studies through my B.S. studies in geography, she spent several years as a seasonal field technician before obtaining an M.S. in wildlife science at Oregon State University. She then worked for the Oregon Department of Fish and Wildlife, becoming familiar with local management issues and the internal functioning of a state wildlife agency. A craving to do more focused research lead her back to academia, which was followed by a craving to use that research to implement on-the-ground conservation. In her current role with American Bird Conservancy, she is facing the new challenges of grant writing and partnership building while creating conservation projects for the Marbled Murrelet and other at-risk birds in the Pacific Northwest.

Mentoring Session
Wednesday, February 15th, 1800-2000
We're excited to host the Mentoring Session once again at PSG 2023! This year the student-mentor session will be a two-part event. The first part will be composed of speed-dating where groups of students and early career scientists rotate around to different mentors and chat for around 15 minutes. The second part will open discussions where mentees have time to chat with whichever mentor(s) they have questions for in a more informal way. Food and drinks will be available throughout the event!

Social events

Welcome Reception, *Tuesday February 14, 18:00–20:00*
Stop by to say hi and catch up with friends and colleagues from near and far at the Shorerider Bar and Grill.

Poster Session, *Thursday February 16, 18:00 - 21:00*
Come on down to the Scripps Seaside Forum lawn and join our Poster authors to talk about their work!
As a reminder if you are presenting a poster, the maximum size is 40"h x 40"w. Posters will need to be setup between 10:00 am - Noon on Thursday, February 16th and removed from the site by 9:00 pm the same day.

Award Ceremony & Banquet, *Friday, February 17, 18:00-22:00*
This year's banquet and Awards ceremony will take place at the beautiful Scripps Institution of Oceanography Birch Aquarium (https://aquarium.ucsd.edu). Doors open for banquet guests (tickets required) at 6:00 pm for socializing and to explore the exhibits before dinner. The dinner buffet opens at 6:30 pm. Menu will include vegetarian options, with wine and beer included as part of the banquet fee. Doors open for all meeting attendees at 7:30, with awards presentations beginning at 7:45. After the awards ceremony, enjoy music and dancing till 10:00 pm. If you would like to attend the banquet, and did not sign up at the time you registered, you can do so up until 1700 on Wed 14 Feb here (https://psg.wildapricot.org/Online-Store).

Meeting Logistics

Registration

Registration hours and locations:

February 14, 8:00am - 12:00pm, Samuel H. Scripps Auditorium Foyer. Come by to pre-register and load your talks.

February 15 - 17, 7:00am - 5pm, Charles E. Scripps Room. There will also be merchandise for sale.

For any issues regarding the scientific program, please contact Dick Veit at programchair@pacificseabirdgroup.org

Twitter

We encourage anyone with a Twitter handle to share updates from the meeting using the hashtag **#PSG2023.** You can also follow and mention @PacificSeabirds. Presenters, if you would like to encourage mentions of your work, please include your Twitter handle on your opening (and closing) slides. Conversely, if you prefer that your presentation not be tweeted, please say so at the beginning of your talk. If there are specific slides in your presentation that you do not want us to share via social media, please indicate them with a "no tweet" symbol.

PSG's own designated Tweeters will be tweeting live from the conference!

Sustainability at PSG2023

PSG members have expressed, loud and clear, the desire to make annual meetings more sustainable and less consumptive. Every effort has been made to choose sustainable options for this year's event, from the use of environmentally friendly caterers that use compostable cups and utensils, to scheduling events within walking distance of the meeting venue. If you are interesting in joining the planning team to promote sustainability of future meetings, please contact your Local Committee Chair at LocoChair@pacificseabirdgroup.org

FIELD TRIPS

Pelagic Birding Trip
Date: Saturday, February 18th
Cost: $180/person
Time: 6:30 AM boarding, 7:00 AM push-off.
Location: 1717 Quivira Road, San Diego, CA 92109
Description: Pelagic birding and whale watching trip. Nine-hour trip (7:00 AM to 4:00 PM) to San Diego's Middle Banks, the second line of banks off San Diego's coastline. Lots of pelagic seabirds to see here in February. Ship has a galley but you should pack your own lunch along with warm clothes. Two local seabird guides will be on-board directing the ship and calling out species. **Must sign up directly at this link:** https://seaforth.fishingreservations.net/sdwhales/user.php?trip_id=844752

Birding at San Diego Bay National Wildlife Refuge
Date: Saturday, February 18th
Cost: FREE (20 person limit - Refuge rules)
Time: 7:00 AM La Jolla departure; 8:00AM to 12:00PM (due to high tide) at Refuge.
Location: 1080 Gunpowder Point Drive, Chula Vista, CA 91910
Description: Contact Sandy Vissman to sign up (sandy_vissman@fws.gov). Once signed up, attendants will self-coordinate to carpool from La Jolla to the Refuge for the tour. Must bring your own lunch and water. Lead by local expert Robert Patton. Timing should correspond closely to earliest arrivals of seabirds that regularly nest within the saltworks, including Forster's, elegant, royal, and Caspian terns. Double-crested cormorant and Belding's savannah sparrow should just be starting nesting. Nesting shorebirds western snowy plover, killdeer, black-necked stilt, and American avocet, and waterfowl mallard, gadwall, and possibly Canada goose should just be starting to pair up. Given that it will be an extremely high tide, should expect to see good numbers of wintering waterfowl on the bay, including brant, American wigeon, surf scoter, and both species of scaup; and waterbirds on the saltponds including eared grebe, shoveler, bufflehead, and common goldeneye. Large numbers of wintering shorebirds are expected to be roosting within the saltponds and on the levees, waiting for the tide to start to ebb so they can shift to bayshore, mudflats, and beaches to forage, including greater yellowlegs, willet, whimbrel, long-billed curlew, marbled godwit, red knot, western sandpiper, least sandpiper, dunlin, and both species of dowitchers. Likewise, roosting flocks of gulls are expected, including ring-billed, California, herring, and western gulls, with Bonaparte's and glaucous-winged possible, too.

La Jolla Kayaking and Birding Trip
Date: Saturday, February 18th
Cost: $55/person
Time: 9:00 AM (will last for 5 hours)
Location: 2199 Avenida De La Playa, La Jolla, CA 92037
Description: Includes single or double kayak, helmet, wetsuit, and life vest. 2-hour guided kayak tour through La Jolla's Ecological Reserve along La Jolla's Sea Caves. La Jolla's Ecological Reserve and Underwater Park is a Marine Protected Area (MPA) with large kelp beds harboring sea lions, seals, and many fish species, including the critically-endangered Giant Sea Bass. **Please note in your PSG Annual Meeting registration if you plan on attending this field trip,** as PSG will keep track of attendants and send that information to the kayak outfitters. More information at this link: https://www.lajollakayak.com/original-kayak-cave-tour/

Information for Presenters, Session Chairs, and Judges

Oral Presentations

For all oral presentations, if there are slides that you do not want shared online, please include a "no tweet" sign, such as shown below, on each slide that you do not want shared to clearly indicate that you do not want a picture of your slide posted online by anyone in the audience. This helps people moving between sessions to know your preference because they may miss an announcement at the beginning of the talk.

Session Hosts

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. As a reminder, each oral presentation is scheduled for 20 minutes—15 minutes for the presentation and the remaining 5 minutes for questions. As speakers arrive to the session, be sure to remind them that they will be given 5-, 2-, and 1-minute warnings near the end of their talk. At the scheduled start time for the Session, please welcome attendees and presenters and announce the Session's title (e.g., Conservation Biology, Discussion Session: Offshore Wind , etc.). At the 10-minute mark, please display a 5-min warning card as a notice to the speaker that it's time to wrap up. At the 13-minute mark, it's time to communicate a more forceful warning by waving the 2-minute warning card. At the 20-minute mark, thank the speaker, and begin your introduction of the next speaker. In the event of a last-minute cancellation, do not move the other talks up a slot and finish early. Instead, leave the canceled speaker's slot as time for discussion so that those in other sessions that have planned on attending specific talks later in the session do not get thrown off. If you have any questions, please ask Dick Veit, Scientific Program Chair.

Student Presentation Award Judges

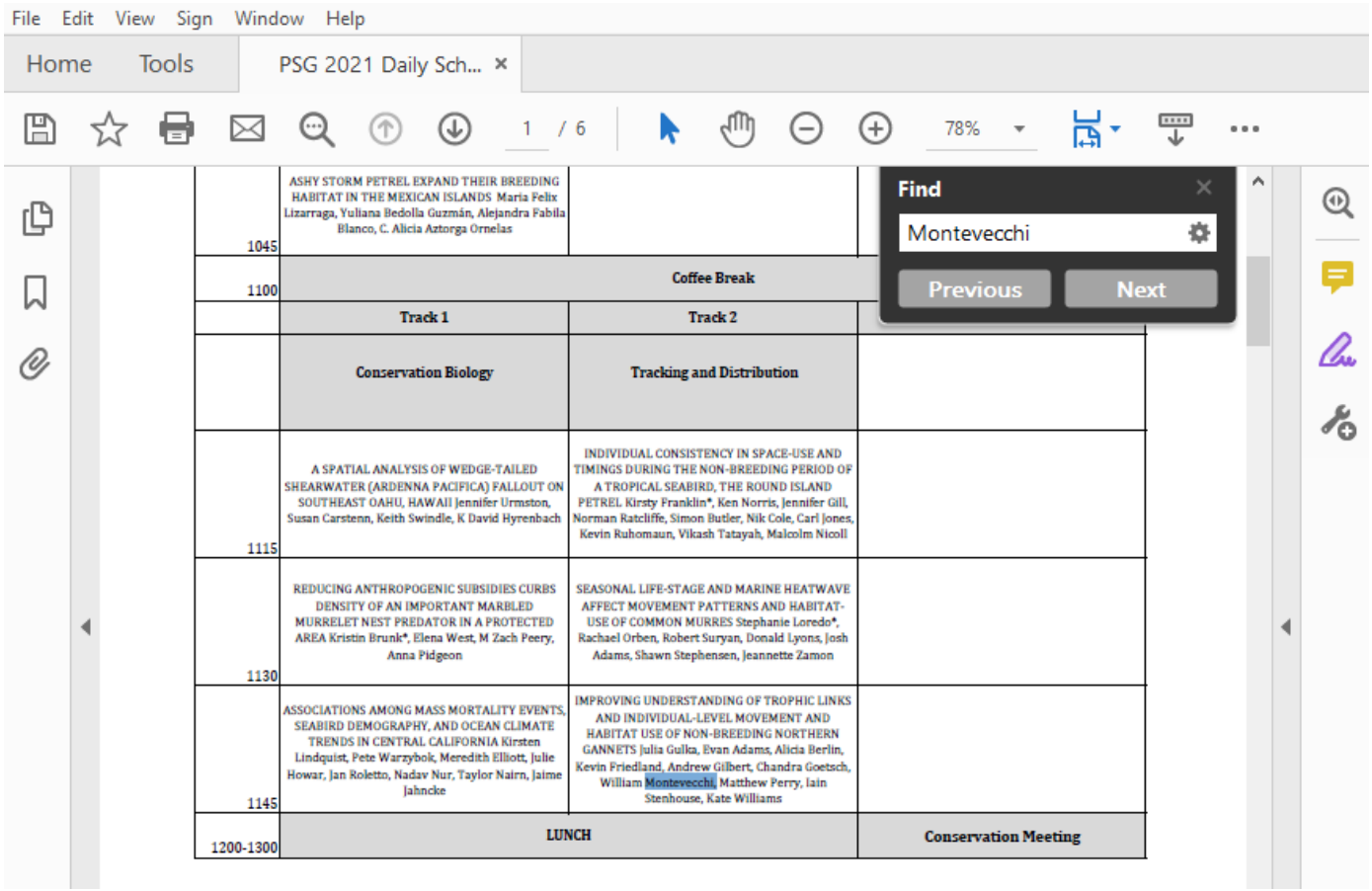
Many thanks to our judges, for volunteering to give valuable feedback to students as they develop their scientific communication skills. In the week preceding the conference, judges will have the opportunity to sign up for their preferred talks and posters to judge. We will also have signup sheets available at registration. At the beginning of the conference, a short orientation will be provided for judges. Judges will submit their scores electronically or using paper scoring sheets available at the registration desk. Please submit scores as soon as possible after you score a talk or poster. For questions about judging, please contact PastChair@PacificSeabirdGroup.org. Awards for the best oral and poster presentations will be presented at our ***Award Ceremony & Banquet, Friday, February 17, 18:00-22:00***

Search for a Presenter

How to search for a presenter in a PDF

1. Press CTRL+F (Windows) or CMD+F (Mac).
2. In the text box, enter the name of the person you are looking for and press Enter
3. Press the Next or Previous buttons to navigate between the results.

You can also search for a specific phrase or species.



ABSTRACTS

In order to save resources, we are not including abstracts in the printed program. Please consult the following location on the meeting website for abstracts: https://psg.wildapricot.org/abstracts