

AGENDA

NASA Biodiversity and Ecological Forecasting Team Meeting April 22 – 23, 2015

Marriott Hotel and Conference Center College Park, MD

Wednesday Afternoon, April 22

- 1:30PM **Load Talks**
- 2:00PM **Biodiversity and Ecological Forecasting Program Update**
Woody Turner/NASA ESD
- 2:15PM **Project Talks (12 minutes each plus 3 minutes for questions)**
The Role of Taxonomic, Functional, Genetic, and Landscape Diversity in
Food Web Responses to a Changing Environment
Tony Ives/University of Wisconsin
- Linking Remotely Sensed Optical Diversity to Genetic, Phylogenetic and
Functional Diversity to Predict Ecosystem Processes
Jeannine Cavender-Bares/University of Minnesota
- Mapping of Stress on Native Tree Species across Western United States
and Canada
Amanda Mathys/University of British Columbia
- 3:00PM **Additional Questions and Discussion**
- 3:15PM **Project Talks (12 minutes each plus 3 minutes for questions)**
Bayesian Data-Model Synthesis for Biological Conservation and
Management in Antarctica
Heather Lynch/Stony Brook University
- Satellite Driven Studies of Climate-mediated Changes in Antarctic Food
Webs
Matt Oliver/University of Delaware
- 3:45PM **Break**
- 4:00PM **Project Talks (12 minutes each plus 3 minutes for questions)**
Forecasting Changes in Habitat Use by Bowhead Whales in Response to
Arctic Climate Change
Dan Pendleton/NOAA

Partnering with DEVELOP: Program and Projects Overview
Merna Saad and Beth Brumbaugh/NASA DEVELOP and Cindy Schmidt/NASA Ames Research Center

4:30PM **Additional Questions and Discussion**

4:45PM Integrating Global Species Distributions, Remote Sensing Information and Climate Station Data to Assess Recent Biodiversity Response to Climate Change
Mao-Ning Tuanmu/Yale University

Developing and Testing the Dynamic Habitat Index from Terra and Aqua MODIS Data for Biodiversity and Conservation Science
Volker Radeloff/University of Wisconsin

Global Population Dynamics and Climate Change: Comparing Species-level Impacts on Two Contrasting Large Mammals
Mark Hebblewhite/University of Montana

WhaleWatch: A Tool Using Satellite Telemetry and Remotely-sensed Environmental Data to Provide Near Real-time Predictions of Whale Occurrence in the California Current System
Helen Bailey/University of Maryland Center for Environmental Science

5:45PM **Additional Questions and Discussion**

6:00PM **Dinners with Colleagues**

Thursday, April 23

8:15AM **Project Talks (12 minutes each plus 3 minutes for questions)**
 Genetic Programming for Ocean Microbial Ecology and Biodiversity
John Moisan/NASA Wallops Flight Facility

Merging Satellite and Numerical Model Data in the California Current to Create Continuous Imagery and Forecasts of Harmful Algal Blooms
Clarissa Anderson/University of California, Santa Cruz

Snapshot Wisconsin – Bringing Wildlife Management into Focus: Integrating Camera Traps, Remote Sensing and Citizen Science to Improve Population Modeling
Phil Townsend/University of Wisconsin

Assembly and Evolution of the Amazonian Biota and its Environment: An Integrated Approach

Kyle McDonald/*CUNY City College*

9:15AM **Additional Questions and Discussion**

9:30AM **Project Talks (12 minutes each plus 3 minutes for questions)**

A Multidisciplinary Framework for Biodiversity Prediction in the
Brazilian Atlantic Forest Hotspot
Ana Carnaval/CUNY City College

Desert Birds in a Warming World: Characterizing Thermal Stress with
Daily Earth Observation Data in Complex Terrain
Thomas Albright/University of Nevada, Reno

10:00AM **Break**

10:15AM **Project Talks (12 minutes each plus 3 minutes for questions)**

Combining Remote Sensing and Biological Data to Predict the
Consequences of Climate Change on Hummingbird Diversity
Catherine Graham/ SUNY Stony Brook

EcoCatch: Improving Ecological and Economic Sustainability of Marine
Fisheries Using Remotely-sensed Oceanographic Data
Rebecca Lewison/San Diego State University

10:45AM **Additional Questions and Discussion**

11:00AM **Plenary Discussion Session**

*Topic: Based on your NASA-funded activities, please suggest components
for integrated global-to-local biodiversity observation and monitoring
networks to support large connected landscapes and seascapes for
preserving and enhancing Nature*

12:00PM **Lunch**

1:15PM **Project Talks (12 minutes each plus 3 minutes for questions)**

The Salmonid Population Viability Project: A System to Forecast the
Demographic and Genetic Viability of Salmonid Fish across Broad
Regions under Changing Climates
Seth Wenger/University of Georgia/Trout Unlimited

Projecting Effects of Climate Change on Pacific Rim Rivers and Salmon:
Integrating Remote Sensing, Landscape Genomics, and Demography to
Inform Conservation
Brian Hand/University of Montana

System for Mapping and Predicting Species of Concern (SMAP-SOC)
John Olson/Desert Research Institute

From the Watershed to the Ocean: Using NASA Data and Models to
 Understand and Predict Variations in Central California Salmon
Eric Danner/NOAA

2:15PM **Additional Questions and Discussion**

2:30PM **Project Talks (12 minutes each plus 3 minutes for questions)**

Management and Conservation of Highly Migratory Fish in the Gulf of
 Mexico under IPCC Climate Change Scenarios
Mitch Roffer/Roffer's Ocean Fishing Forecasting Service, Inc.

Physiological Impacts of Climate Change Using Remote Sensing
David Wethey/University of South Carolina

3:00PM **Additional Questions and Discussion**

3:15PM **Break**

3:30PM **Project Talks (12 minutes each plus 3 minutes for questions)**

Avian Abundance Estimation across the Pacific Flyway for Full Life-cycle
 Conservation Planning
Steve Kelling/Cornell Lab of Ornithology

Effects of Extreme Climate Events on Avian Demographics
Volker Radeloff/University of Wisconsin

Spatial Responses to Climate across Trophic Levels: Monitoring and
 Modeling Plants, Prey, and Predators in the Intermountain Western U.S.
Tom Edwards/U.S. Geological Survey/Utah State University

Using NASA Resources to Inform Climate and Land Use Adaptation
Andrew Hansen/Montana State University

4:30PM **Additional Questions and Discussion**

4:45PM **Project Talks (12 minutes each plus 3 minutes for questions)**

Sensitivity of Coastal Zone Ecosystems to Climate Change
Daniel Gruner/University of Maryland

Using the USGS "Resource for Advanced Modeling" to Connect Climate
 Drivers to Biological Responses
Jeff Morisette/U.S. Geological Survey

Monitoring and Forecasting Chimpanzee Habitat Health in Africa to
Inform Conservation Actions, Strategies and Measure Success
Lilian Pintea/Jane Goodall Institute

- 5:30PM **Additional Questions and Discussion**
- 5:45PM **Programmatic Issues: Questions and Answers**
Woody Turner/NASA
- 6:00PM **Meeting Ends**