OPS 1 - From Oceans to Mountains: Recent Findings from Phenology Data Curated By the USA National Phenology Network

Monday, August 11, 2014: 4:30 PM-6:30 PM

Exhibit Hall, Sacramento Convention Center
Organizer: Theresa M. Crimmins
Co-organizer: Carolyn A.F. Enquist

Phenology—the timing of seasonal events in plants and animals—occurs from oceans to mountains, anywhere organisms can be found. This measure of activity in plants and animals is an increasingly valuable indicator of how species and ecosystems are responding to changing environmental and climate conditions. The USA National Phenology Network (USA-NPN) collects, stores, and shares phenology data and information from across the United States. The data curated by the USA-NPN is increasingly being used by researchers and decision-makers in a wide range of applications, including forecasting species’ future phenology and spatial distribution, evaluating emerging temporal mis-matches among co-occurring species, and quantifying phenotypic plasticity. Further, these data and findings resulting from these data are a growing resource for education and outreach applications. The goal of this session is to highlight some of the recent applications and novel scientific findings emerging from phenology data and information that is curated by the USA-NPN. How these findings have the potential to influence policy and management and/or their utility in education and outreach will be emphasized. This topic is of growing interest to ESA attendees, as evidenced by the steady increase in the number of presentations and sessions focused on phenology in recent years.

OPS 1-1
Using NPN observations to validate a simulation model that explores the effects of climate change on the phenology and voltinism of a butterfly hybrid zone
Sean F. Ryan, University of Notre Dame; Miranda N. Madrid, University of Notre Dame; Jessica J. Hellmann, University of Notre Dame

OPS 1-2
Scientists and volunteers partner to explore poplar phenology and vulnerability to climate change
Cathlyn D. Stylinski, University of Maryland Center for Environmental Science Appalachian Laboratory; Stephen Keller, University of Maryland Center for Environmental Science Appalachian Laboratory; Andrew J. Elmore, University of Maryland Center for Environmental Science; Matthew C. Fitzpatrick, University of Maryland Center for Environmental Science

OPS 1-3
Nature's Notebook provides phenology observations for NASA Juniper Phenology and Pollen Transport Project
Jeffrey Luval, NASA; Theresa M. Crimmins, USA National Phenology Network; William A. Sprigg, University of Arizona; Estelle Levetin, University of Tulsa; Alfredo Huete, University of Technology; Slobodan Nickovic, University of Belgrade; A.K. Prasad, University of Arizona; Ana Vukovic, University of Arizona; Peter K. Van de Water, CSU Fresno; Amy Budge, University of New Mexico; William Hudspeth, University of New Mexico; Landon Bunderson, University of Iowa; Kenneth Geter, New Mexico Department of Health

OPS 1-4
Assessing accuracy in volunteer-based plant phenology monitoring
Kerissa Fuccillo, Portland State University; Theresa M. Crimmins, USA National Phenology Network; Catherine DeRivera, Portland State University; Timothy S. Elder, Portland State University

OPS 1-5
Seasonal patterns of phenology, photosynthesis, and biomass production in 10 hybrid poplar clones
Ian M. Shiach, University of Arizona; Russell K. Monson, University of Arizona; David J.P. Moore, University of Arizona

OPS 1-6
MeadoWatch: A citizen science program investigating the impacts of climate change on wildflower phenology
Anna Wilson, University of Washington; Elinore J. Theobald, University of Washington; Ian Breckheimer, University of Washington; Janneke HilleRisLambers, University of Washington

OPS 1-7
Phenological patterns along biogeographic gradients: A case study from the California Phenology Project
Susan J. Mazer, University of California, Santa Barbara; Katharine L. Gerst, USA National Phenology Network; Elizabeth R. Matthews, University of California Santa Barbara
Deriving phenological metrics from the National Phenology Database: quantifying uncertainty across species and scales
Katharine L. Gerst, USA National Phenology Network; Carolyn A.F. Enquist, USA National Phenology Network

Project Tree Watch: Citizens monitoring street tree phenology to understand drivers of urban water quality
Christopher R. Buyarski, University of Minnesota; Rebecca A. Montgomery, University of Minnesota; Sarah E. Hobbie, University of Minnesota; Benjamin D. Janke, University of Minnesota; Jacques C. Finlay, University of Minnesota

Findings from the USA National Phenology Network's Green Wave Campaign
Theresa M. Crimmins, USA National Phenology Network; Ellen G. Denny, USA National Phenology Network; Carolyn A.F. Enquist, USA National Phenology Network; Katharine L. Gerst, USA National Phenology Network; Erin E. Posthumus, USA National Phenology Network; Alyssa Rosemartin, USA National Phenological Network; Jake Weltzin, US Geological Survey