

# A Complete Listing of ESA 2011 Phenology Events

## MONDAY, August 8<sup>th</sup>, 2011

### **COS 2 - Phenology**

Ballroom F, Austin Convention Center

1:30 PM COS 2-1 Yang, X1, JF Mustard1 and J Tang2, (1)Brown University, (2)Marine Biological Laboratory. *Regional scale budburst and senescence modeling based on meteorological records and remote sensing observations.*

1:50 PM COS 2-2 Calinger, KM and PS Curtis, The Ohio State University. *Assessing climate change impacts on biodiversity in Ohio: Evidence from herbarium records for state-wide shifts in flowering phenology.*

2:10 PM COS 2-3 Denny, EG1, JF Weltzin1, CAF Enquist2, A Rosemartin3, TM Crimmins1 and RL Marsh1, (1)USA National Phenology Network, (2)The Wildlife Society & USA National Phenology Network, (3)USA National Phenological Network University of Arizona. *USA National Phenology Monitoring System: Enhancements for reporting phenophase intensity and abundance.*

2:30 PM COS 2-4 Polgar, C1, RB Primack1 and JS Dukes2, (1)Boston University, (2)Purdue University. *The effect of climate change on leaf-out phenology in Concord, MA from 1852-2010.*

2:50 PM COS 2-5 Rasmussen, NL and VHW Rudolf, Rice University. *Phenology of species interactions: Size-mediated priority effects and the dynamics of predator-prey systems in seasonal communities.*

3:20 PM COS 2-6 Allen, JM1, JA Silander Jr.1, RB Primack2, H Kobori3, T Katsuki4 and K Iwamoto4, (1)University of Connecticut, (2)Boston University, (3)Tokyo City University, (4)Forest and Forestry Products Research Institute. *Springtime phenological responses in a survival analysis framework.*

3:40 PM COS 2-7 Browning, DM1, JP Anderson2 and DC Peters3, (1)USDA Agriculture Research Service, (2)New Mexico State University, (3)USDA Agricultural Research Service. *Patterns in reproductive phenology for dryland grasses and shrubs from 1993 to 2010 in the Chihuahuan Desert.*

4:00 PM COS 2-8 Tuff, T1 and BA Melbourne2, (1)University of Colorado, (2)University of Colorado at Boulder. *The relativity of biological space-time: Macroecology, phenology, and migration.*

### **COS 5 - Biogeochemistry: C and N Cycling in Response to Global Change I**

6A, Austin Convention Center

3:40 PM COS 6-7 Cleland, E1, JM Allen2, TM Crimmins3, S Pau4, SE Travers5 and EM Wolkovich6, (1)University of California – San Diego, (2)University of Connecticut, (3)USA National Phenology Network, (4)National Center for Ecological Analysis and Synthesis, (5)North Dakota State University, (6)University of California. *Species performance in a warming climate relates to phenological tracking.*

### **COS 11 - Invasion I**

12B, Austin Convention Center

4:00 PM COS 11-8 Godoy, O1 and JM Levine2, (1)University of California, (2)University of California, Santa Barbara. *Phenology as a niche mechanism of community resistance to invasion.*

## **TUESDAY, August 9<sup>th</sup>, 2011**

### **OOS 9 - Heralding Change: How Can Plant Phenology be Used to Facilitate Sustainable Natural Resources Management?**

17B, Austin Convention Center

8:00 AM OOS 9-1 Enquist, CA1 and JF Weltzin2, (1)The Wildlife Society & USA National Phenology Network, (2)USA National Phenology Network. *Using phenology as a tool for resource management and climate change adaptation.*

9:20 AM OOS 9-5 Jarnevich, C1, W Eaias2, P Ma2, JT Morisette3, J Nickeson4, TJ Stohlgren3 and TR Holcombe1, (1)U.S. Geological Survey, (2)NASA Goddard Space Flight Center, (3)USGS Fort Collins Science Center, (4)Sigma Space Corp at Goddard Space Flight Center. *Using phenology in predicting the northward expansion of the Africanized honey bee.*

9:50 AM OOS 9-6 Esaias, WE1, JE Nickeson2, B Tan3, PL Ma2, JM Nightingale2 and RE Wolfe1, (1)NASA Goddard Space Flight Center, (2)Sigma Space Corp at GSFC, (3)ERT Inc. at GSFC. *Tracking climate effects on plant-pollinator interaction phenology with satellites and honey bee hives.*

10:10 AM OOS 9-7 Gordon, WS, Texas Parks and Wildlife Department. *Climate change, phenology and ecosystem management: A state manager's perspective on assessing vulnerability and adaptive capacity.*

10:30 AM OOS 9-8 Thomas, KA1, A Evenden2, SJ Mazer3, ER Matthews4 and JF Weltzin5, (1)US Geological Survey, (2)National Park Service, (3)University of California, Santa Barbara, (4)University of California Santa Barbara, (5)USA National Phenology

Network. *Linking species to science in a phenology monitoring project: The California Phenology Project case study.*

11:10 AM OOS 9-10 Weltzin, JF, TM Crimmins, EG Denny, CAF Enquist, RL Marsh and A Rosemartin, USA National Phenology Network. *Nature's Notebook: A USA National Phenology Network program for ecological monitoring and information management.*

### **OOS 11 - Multi-Factor Global Change Experiments: What Have We Learned about Terrestrial Carbon Storage and Exchange?**

14, Austin Convention Center

9:20 AM OOS 11-5 Norby, RJ1, JF Weltzin2, P Kardol3, CM Iversen1, S Wan4, CT Garten Jr.1 and AT Classen5, (1)Oak Ridge National Laboratory, (2)USA National Phenology Network, (3)Swedish University of Agricultural Sciences, (4)Henan University, (5)University of Tennessee. *Carbon dynamics in an oldfield ecosystem: Was a multi-factor experiment the best approach for revealing responses to atmospheric and climatic change?*

### **COS 25 - Pollination II**

10A, Austin Convention Center

10:10 AM COS 25-7 Burkle, LA1, TM Knight2 and JC Marlin3, (1)Montana State University, (2)Washington University in St. Louis, (3)University of Illinois. *Comparison of historic and contemporary plant-pollinator interaction networks: Changes in phenology, loss of specialist bee species, and decreased pollinator fidelity.*

### **WK 31 - Nature's Notebook: Tracking Phenology for Research, Management and Education in the Face of Climate Change--FREE**

18C, Austin Convention Center

Organized by: JF Weltzin, CAF Enquist, A Rosemartin

This workshop will introduce participants to programs and products that can enhance our understanding of climate change impacts on natural systems through involvement in phenological research programs. Scientists, educators, managers and volunteer program coordinators are welcome.

### **OOS 17 - Contribution of Observing Systems and Analyses to Continental Scale Ecology**

12A, Austin Convention Center

4:00 PM OOS 17-8 Crimmins, TM1, EG Denny2, CAF Enquist1, RL Marsh1, A Rosemartin3 and JF Weltzin1, (1)USA National Phenology Network, (2)Northeast

Regional Phenology Network, (3)USA National Phenological Network & University of Arizona. *Tracking climate change using Nature's Notebook.*

### **COS 36 - Mutualism and Facilitation I**

4, Austin Convention Center

1:50 PM COS 36-2 Encinas-Viso, F1, TA Revilla<sup>2</sup>, D Alonso<sup>3</sup> and RS Etienne<sup>3</sup>, (1)Community and Conservation Ecology Group, (2)Instituto de Zoología y Ecología Tropical, Universidad Central de Venezuela, Facultad de Ciencias, (3)University of Groningen. *Phenology drives mutualistic network structure and diversity.*

2:30 PM COS 36-4 Morales, MA, Williams College. *Phenology of mutualism: Altitudinal variation in survival and benefit of an ant-tended treehopper.*

### **COS 47 - Reptiles and Amphibians**

18A, Austin Convention Center

4:20 PM COS 47-9 Banka, MN, University of Michigan. *Individual and climatic variation: Predicting nesting phenology in a population of painted turtles (*Chrysemys picta*).*

### **PS 15 - Climate Change**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 15-9 Stine, AW<sup>1</sup>, CF Salk<sup>1</sup>, J Mohan<sup>2</sup>, JM Melillo<sup>3</sup> and JS Clark<sup>1</sup>, (1)Duke University, (2)University of Georgia, (3)Marine Biological Laboratory. *Leaf senescence phenology: Interactions with warming and light habitat.*

PS 15-12 Rosemartin, A<sup>1</sup>, RL Marsh<sup>2</sup>, EG Denny<sup>3</sup> and BE Wilson<sup>4</sup>, (1)USA National Phenological Network & University of Arizona, (2)USA National Phenology Network, (3)Northeast Regional Phenology Network, (4)Oak Ridge National Laboratory. *The USA National Phenology Network's model for managing diverse data through space and time to inform phenology research and applications.*

### **PS 19 - Aquatic Ecology**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 19-60 Pomeroy, JN, ZR Snobl, O Xiong, EC Merten and TA Wellnitz, University of Wisconsin - Eau Claire. *Phenology of aquatic insect emergence in a northern Minnesota stream.*

### **PS 30 - Urban Ecosystems**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 30-166 Wepprich, TM1, M Maloley<sup>2</sup> and JE Grealey<sup>3</sup>, (1)North Carolina State University, (2)Natural Resources Canada, (3)Natural Resource Solutions, Inc.. *Butterfly flight phenology in response to urban heat island effects.*

## **WEDNESDAY, August 10<sup>th</sup>, 2011**

### **OOS 21 - Earth Stewardship: Communicating and Fostering Stewardship Behavior**

17A, Austin Convention Center

10:30 AM OOS 22-8 Marsh, L1, D Meredith<sup>2</sup> and A Rosemartin<sup>3</sup>, (1)USA National Phenology Network & University of Arizona, (2)USA National Phenology Network, (3)USA National Phenological Network & University of Arizona . *The needs of the many: Challenges and opportunities in mobile citizen science infrastructure at the USA-NPN.*

### **National Phenology Network Brown Bag Luncheon**

18B, Austin Convention Center

11:30-1:15

### **COS 74 - Climate Change: Ranges and Phenology**

8, Austin Convention Center

1:30 PM COS 74-1 McKellar, AE<sup>1</sup>, P Marra<sup>2</sup>, SJ Hannon<sup>3</sup>, CE Studds<sup>2</sup> and LM Ratcliffe<sup>1</sup>, (1)Queen's University, (2)Smithsonian Migratory Bird Center, (3)University of Alberta. *Winter rainfall predicts phenology on an east-west axis in widely separated Populations of a migrant songbird.*

1:50 PM COS 74-2 Hille Ris Lambers, J and KR Ford, University of Washington. *Transient dynamics during climate change induced range shifts.*

2:10 PM COS 74-3 Courter, JR<sup>1</sup>, RJ Johnson<sup>1</sup>, KG Hubbard<sup>2</sup> and WC Bridges<sup>1</sup>, (1)Clemson University, (2)University of Nebraska Lincoln. *Assessing the effects of climate change on bird phenology at broad temporal and spatial scales.*

2:30 PM COS 74-4 Erb, LP, C Ray and R Guralnick, University of Colorado at Boulder. *Climatic drivers of pika population density in the Southern Rocky Mountains.*

2:50 PM COS 74-5 Ellwood, ER1, RB Primack1 and JS Dukes2, (1)Boston University, (2)Purdue University. *Measuring the effect of climate change on fern phenology and ecophysiology using historical and experimental methods.*

3:20 PM COS 74-6 Ettinger, AK, KR Ford and J HilleRisLambers, University of Washington. *Impacts of climate and competition on altitudinal range limits of Pacific Northwestern conifers.*

3:40 PM COS 74-7 Record, S1, MC Fitzpatrick2, AM Ellison3 and AO Finley4, (1)Harvard Forest, Harvard University, (2)University of Maryland Center for Environmental Science, (3)Harvard University, (4)Michigan State University. *Exploring spatial autocorrelation and spatial random effects in tree species distribution models with the forest inventory and analysis data.*

4:00 PM COS 74-8 Nagy, L, University of Bayreuth. *Extreme weather events alter leaf phenology and growth of different Fagus sylvatica provenances.*

4:20 PM COS 74-9 Robertson, A1, N Takebayashi2 and MS Olson3, (1)University of Alaska, (2)University of Alaska Fairbanks, (3)Texas Tech University. *Migration potential of a North-American boreal forest tree species, Populus balsamifera, in a changing climate.*

4:40 PM COS 74-10 Hurlbert, AH and LZ Liang, University of North Carolina. *Using citizen science efforts to examine spatiotemporal variation in avian migration phenology.*

### **PS 35 - Predation and Predator-Prey Interactions**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 35-26 Romeu-Dalmau, C, J Piñol and X Espadaler, Universitat Autònoma de Barcelona. *Phenology, coexistence and potential role as pest predators of Forficula auricularia and Forficula pubescens (Dermaptera: Forficulidae) in Mediterranean organic citrus trees.*

### **PS 38 - Plant-Insect Interactions**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 38-45 Yang, LH and ML Censer, University of California, Davis. *Phenology, ontogeny, and the timing of species interactions: Windows of opportunity in milkweed-monarch interactions.*

## **THURSDAY, August 11<sup>th</sup>, 2011**

### **OOS 37 - Droughts and Downpours: The Effect of Experimentally Altered Precipitation Patterns on Plant Function and Community Structure**

14, Austin Convention Center

9:20 AM OOS 37-5 Jentsch, A, J Walter, K Grant, L Nagy, J Kreyling and C Beierkuhnlein, University of Bayreuth. *Sensitivity of plant functions (i.e. growth, photosynthesis, phenology) and community composition in temperate grassland to severe drought.*

### **COS 94 - Herbivory: Plant Defenses**

9C, Austin Convention Center

10:30 AM COS 94-8 Pearse, IS1, AL Hipp2 and R Karban3, (1)University of California - Davis, (2)The Morton Arboretum, (3)University of California at Davis. *Global patterns of leaf defenses in oak species: Herbivores, leaf phenology, and climate.*

### **OOS 45 - Aeroecology: An Emerging Discipline**

16A, Austin Convention Center

3:20 PM OOS 45-6 Kelly, JF1, JR Shipley2, WF Frick3, K Howard4, PB Chilson2 and TH Kunz5, (1)Oklahoma Biological Survey & University of Oklahoma, (2)University of Oklahoma, (3)University of California, Santa Cruz, (4)NOAA-NWS-NSSL, (5)Boston University. *Quantifying animal phenology in the aerosphere.*

### **COS 109 - Climate Change: Plants II**

6B, Austin Convention Center

4:40 PM COS 109-10 Whittington, HR, D Tilman and JS Powers, University of Minnesota. *Phenology of grassland plants exposed to elevated temperature.*

### **PS 61 - Invasion: Ecosystem Processes**

Exhibit Hall 3, Austin Convention Center

4:30-6:30

PS 61-57 Baty, JH1, VT Eviner2, K Rice3 and C Malmstrom4, (1)U C Davis, (2)University of California Davis, (3)University of California, Davis, (4)Michigan State

University. *Does phenology of decomposition match phenology of plant growth in CA grasslands?*

**FRIDAY, August 12<sup>th</sup>, 2011**

**COS 134 - Phenotypic Plasticity**

8am-10:30 am ACC, 13

**PS 75 - Latebreaking: Biodiversity**

Exhibit Hall 3, Austin Convention Center

8:00-10:30 AM

PS 75-26 Solecki, AM, A Grégoire Taillefer, MS Blair, S Rochefort and TA Wheeler, McGill University. *Phenology and temporal species turnover in an Arctic Diptera assemblage.*