

## Abstract #42724

# Researcher-driven campaigns engage *Nature's Notebook* participants in scientific data collection

[Theresa M. Crimmins](#)<sup>1</sup>, Andrew J. Elmore<sup>2</sup>, Alfredo Huete<sup>3</sup>, Stephen Keller<sup>4</sup>, Estelle Levetin<sup>5</sup>, Jeffrey Luvall<sup>6</sup>, Orrin Myers<sup>7</sup>, Cathlyn D. Stylinski<sup>2</sup>, Peter K. Van de Water<sup>8</sup> and Ana Vukovic<sup>9</sup>, (1)USA National Phenology Network, Tucson, AZ, (2)Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD, (3)University of Technology, Sydney, Australia, (4)University of Maryland Center for Environmental Science, Frostburg, MD, (5)University of Tulsa, (6)NASA, (7)University of New Mexico, Albuquerque, NM, (8)CSU Fresno, (9)University of Belgrade, Serbia

### Background/Question/Methods

One of the many benefits of citizen science projects is the capacity they hold for facilitating data collection on a grand scale and thereby enabling scientists to answer questions they would otherwise not been able to address. *Nature's Notebook*, the plant and animal phenology observing program of the USA National Phenology Network (USA-NPN) suitable for scientists and non-scientists alike, offers scientifically-vetted data collection protocols and infrastructure and mechanisms to quickly reach out to hundreds to thousands of potential contributors.

The USA-NPN has recently partnered with several research teams to engage participants in contributing to specific studies. In one example, a team of scientists from NASA, the New Mexico Department of Health, and universities in Arizona, New Mexico, Oklahoma, and California are using juniper phenology observations submitted by *Nature's Notebook* participants to improve predictions of pollen release and inform asthma and allergy alerts. In a second effort, researchers from the University of Maryland Center for Environmental Science are engaging *Nature's Notebook* participants in tracking leafing phenophases of poplars across the U.S. These observations will be compared to information acquired via satellite imagery and used to determine geographic areas where the tree species are most and least adapted to predicted climate change.

### Results/Conclusions

Researchers in these partnerships receive benefits primarily in the form of ground observations. Launched in 2010, the juniper pollen effort has engaged participants in several western states and has yielded thousands of observations that can play a role in model ground validation. Periodic evaluation of these observations has prompted the team to improve and enhance the materials that participants receive, in an effort to boost data quality. The poplar project is formally launching in spring of 2013 and will run for three years; preliminary findings from 2013 will be presented. Participants in these special campaigns benefit through direct engagement in science.

This form of researcher partnership has now been successfully pilot-tested and implemented in several instances, and provides a template for future research project campaigns.

---

**Title:** Researcher-driven campaigns engage *Nature's Notebook* participants in scientific data collection

**Preferred Presentation Format:** Oral

**Submitter's E-mail Address:** [theresa@usanpn.org](mailto:theresa@usanpn.org)

**Place in an Organized Oral Session:** Yes

**Organized oral session preference:** The Climate Change Response Framework: Integrating Tools, Partnerships, and Actions to Support Climate-Smart Conservation and Forest Management

**Themes:**

1. Ecological applications, tools, and techniques - education: tools & technology
2. Ecological applications, tools, and techniques - education: community-based learning
3. Ecological applications, tools, and techniques - citizen science

## **First author**

### ***Presenting Author***

Theresa M. Crimmins

**Email:** [theresa@usanpn.org](mailto:theresa@usanpn.org)

USA National Phenology Network

1955 E. 6th Street

Tucson AZ 85721

USA

**Would you like to volunteer as a session presider?** No

**Would you like to volunteer to judge the Buell-Braun student award applications?** No

## **Second author**

Andrew J. Elmore

**Email:** [andrew@elmore.cc](mailto:andrew@elmore.cc)

University of Maryland Center for Environmental Science

Appalachian Laboratory

301 Braddock Rd

Frostburg MD 21532  
USA

**Would you like to volunteer as a session presider?** Yes  
**Would you like to volunteer to judge the Buell-Braun student award applications?** No

### **Third author**

Alfredo Huete  
**Email:** alfredo.huete@uts.edu.au -- Will not be published

University of Technology  
Sydney  
Australia

**Would you like to volunteer as a session presider?** No  
**Would you like to volunteer to judge the Buell-Braun student award applications?** No

### **Fourth author**

Stephen Keller  
**Email:** skeller@umces.edu -- Will not be published

University of Maryland Center for Environmental Science  
Frostburg MD

**Would you like to volunteer as a session presider?** No  
**Would you like to volunteer to judge the Buell-Braun student award applications?** No

### **Fifth author**

Estelle Levetin  
**Email:** estelle-levetin@utulsa.edu -- Will not be published

University of Tulsa

**Would you like to volunteer as a session presider?** No  
**Would you like to volunteer to judge the Buell-Braun student award applications?** No

### **Sixth author**

Jeffrey Luvall  
**Email:** jluvall@nasa.gov -- Will not be published

NASA

**Would you like to volunteer as a session presider? No**  
**Would you like to volunteer to judge the Buell-Braun student award applications? No**

### **Seventh author**

Orrin Myers  
**Email:** OMyers@salud.unm.edu -- Will not be published

University of New Mexico  
Albuquerque NM 87131  
USA

**Would you like to volunteer as a session presider? No**  
**Would you like to volunteer to judge the Buell-Braun student award applications? No**

### **Eighth author**

Cathlyn D. Stylinski  
**Email:** cstylinski@umces.edu

University of Maryland Center for Environmental Science  
Appalachian Laboratory  
301 Braddock Road  
Frostburg MD 21532  
USA

**Would you like to volunteer as a session presider? No**  
**Would you like to volunteer to judge the Buell-Braun student award applications? No**

### **Ninth author**

Peter K. Van de Water  
**Email:** pvandewater@csufresno.edu -- Will not be published

CSU Fresno

**Would you like to volunteer as a session presider? No**  
**Would you like to volunteer to judge the Buell-Braun student award applications? No**

### **Tenth author**

Ana Vukovic  
**Email:** pazisadana@yahoo.com -- Will not be published

University of Belgrade

Serbia

**Would you like to volunteer as a session president? No**

**Would you like to volunteer to judge the Buell-Braun student award applications? No**