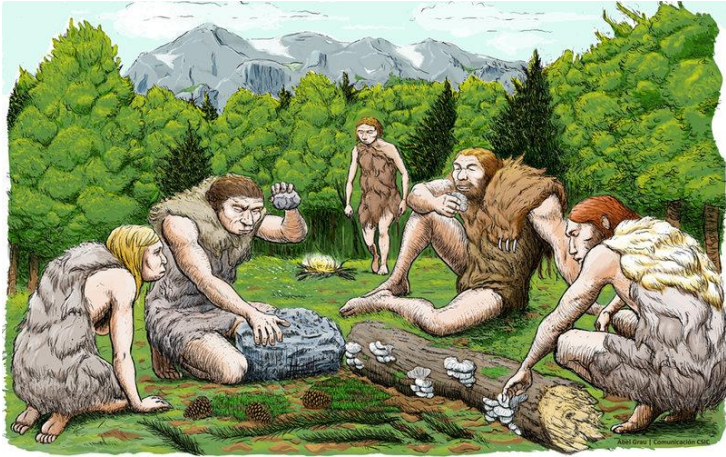


TIMING IS EVERYTHING

Shane Burgess MRCVS FLS

Vice President for Agriculture, Life and Veterinary Sciences, and
Cooperative Extension
Charles-Sander Dean of the College of Agriculture and Life
Sciences

CITIZEN SCIENTISTS



nature's
notebook

A project of the USA-NPN

BENEFITS OF THE PARTNERSHIP



THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE & LIFE SCIENCES

**Natural Resources
& the Environment**



- Initiated in 2007
- \$14.5 M to UA
 - USGS: \$12 M (\$10 M direct expenditures)
 - Other sources (FWS, NASA, NSF, NOAA, Microsoft): \$2.5 M (\$2.2 M direct expenditures)
- 18 UA employees over the past 11 years (10 today)
- 23 UA students in 10 years
 - 9 graduate
 - 14 undergraduate
- 5 dissertations at UA & dozens globally
- 5 International visiting scholars
 - Mexico, Netherlands, Bhutan, Switzerland
- 56 peer-reviewed papers have used USA-NPN data or data products



RESEARCH SYNERGIES AT UA

College of Science

- Laboratory for Tree Ring Research
- Tumamoc Hill
- Ecology & Evolutionary Biology
- Biosphere 2

College of Agriculture and Life Sciences

- SWES
- SNRE
- SRER
- AED
- Biosystems Engineering
- Campus Arboretum
- Entomology
- Extension

College of Social and Behavioral Sciences

- School of Geography and Development
- School of Information

College of Public Health

Federal Partnerships in AZ

- USFWS Arizona Ecological Services
- SW Climate Adaptation Science Center

College of Education

Local Partnerships

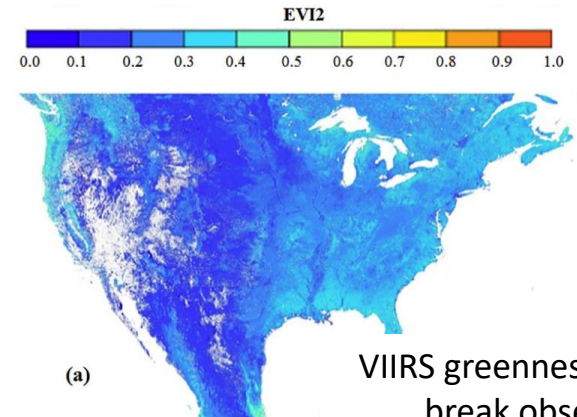
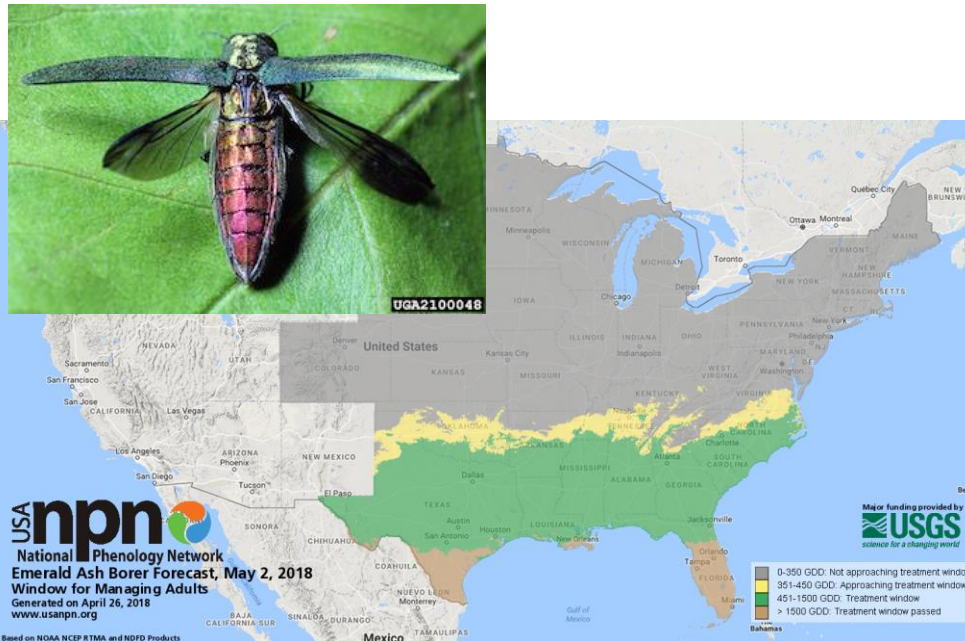
- ASDM
- Tohono Chul
- Tucson Audubon
- Mission Gardens
- Ironwood Tree Exp
- Borderlands Restoration
- Tucson Botanical Gardens
- Watershed Management Group

- BIO5
- CyVerse
- UA Libraries
- CNRS (France)

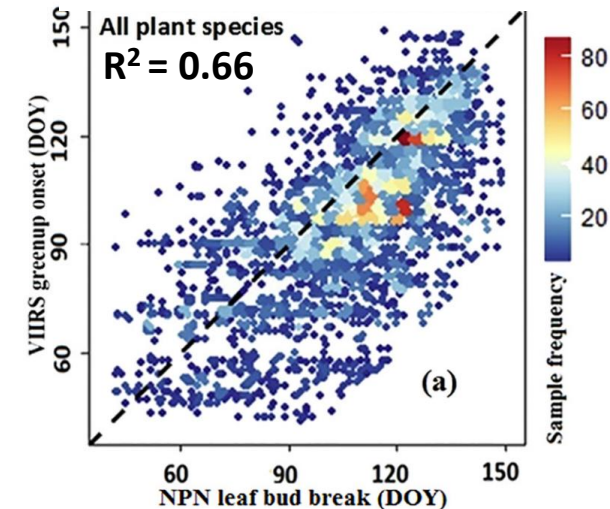
- Southwest Desert Research Station
- Fish & Wildlife Coop Desert Southwest CESU

SCIENCE ADVANCES SUPPORT DECISION MAKING

- Pheno Forecasts: Short-term forecasts can guide pest insect control activities
- Verifying satellite-based data and data products



VIIRS greenness vs. leaf bud break observations



Zhang et al., 2018
Remote Sensing of the Environment