

We are part of the Web of Life!

- Changes in climate and weather patterns -temperature extremes, more violent storms, fires and floods can affect where we can comfortably live.
- ❖ Observing the timing of plant growth and animal response to these events help us understand the importance of plant and animal adaptations that could affect our food supply.
- Understanding these connections may provide information to protect our world.



Nature's Calendar Phenology

- The study of life cycle stages of plants and animals and how these relationships depend on their environment.
- ❖ It is a tool that Scientists can use to observe the timing of the changes in plants and the effect on the behavior of animals throughout the year.
- Analysis of observations of data reported to Nature's Notebook (https://www.usanpn.org/ natures_notebook) and climate/weather data provide the link to determine if changes in the timing of stages of life cycle of plants and animals are related to changes in weather and climate.

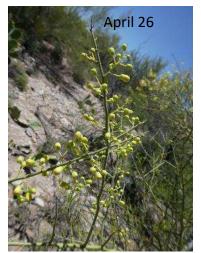






Life Cycle of Plants

Example of seasonal changes – Phenophases of the Foothill Palo Verde











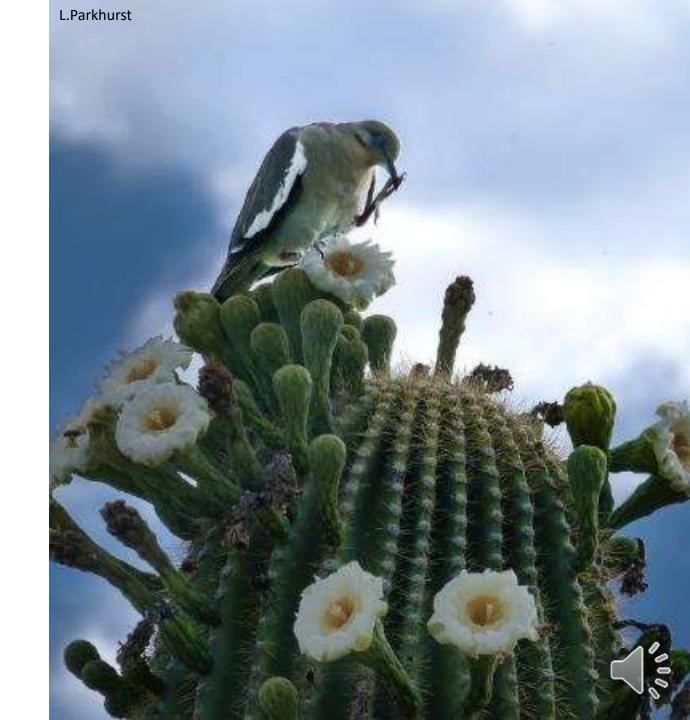






Adaptation

- Plants and Animals adapt to the habitat they live in or migrate through.
- Developing leaves, flowers and fruit and the emergence of insects, birds and mammals reflect these adaptative behaviors.
- Scientists are concerned about what happens if plants develop leaves, flowers and fruit before pollinating insects are hatched and migrating birds and bat arrive.



Climate Change

Extreme conditions – wildfires, floods, life-threatening high and low temperatures, increases in damage from powerful storms, hurricanes and tornados, and drought – affect the resources and habitat of all creatures.



Documenting Climate Change

- Scientists work to understand the world we live in and explain how things work.
- They develop tools like Phenology to measure and document the effects of climate change on the life cycle and timing of changes in plants and animals.
- ❖ iNaturalist provides the home for photographic and sound observations of plants and animals throughout the year submitted by people in the US and around the world.





iNaturalist is an online social network of people sharing biodiversity information to help each other learn about nature

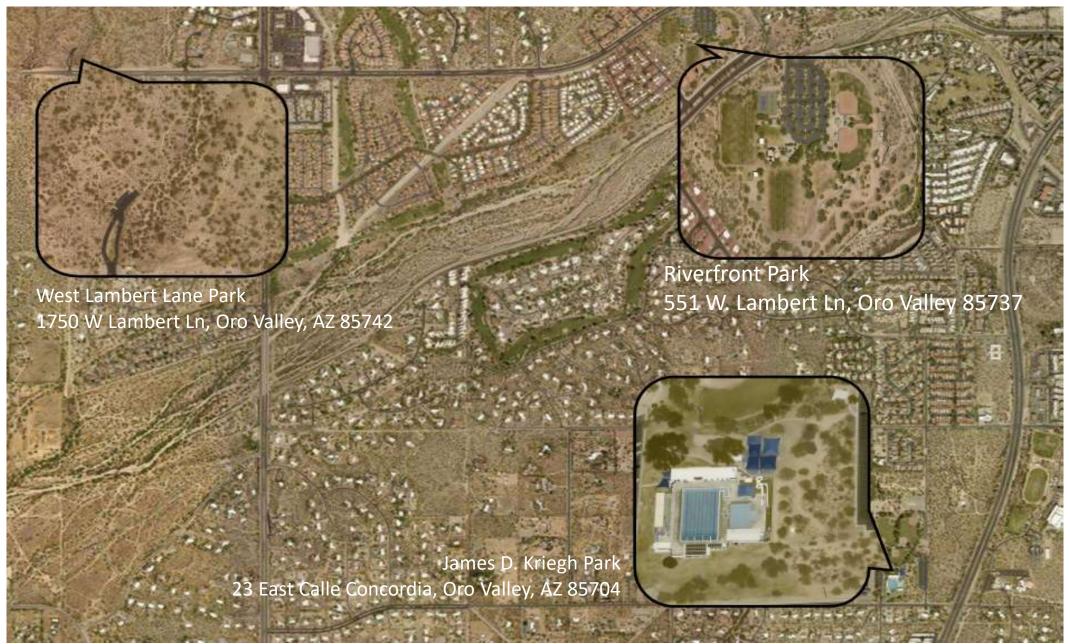
It's also a crowdsourced species identification system and an organism occurrence recording tool. You can use it to record your own observations, get help with identifications, collaborate with others to collect this kind of information for a common purpose, or access the observational data collected by iNaturalist users.

However, despite the fact that iNat can be a bit technical and seems scientific, our *primary* goal in operating iNaturalist is to **connect people to nature**, and by that we mean getting people to feel that the non-human world has personal significance, and is worth protecting. We have a pretty nerdy way of doing that, of course, but we really believe that recording information about nature in a social context is a tremendous way to understand the awesome depth and breadth of life on Earth.

Our secondary goal is to generate scientifically valuable biodiversity data from these personal encounters. We believe iNat can achieve both of these goals simultaneously - in fact that they reinforce one another - but when we get pulled in conflicting directions, we measure success by our primary goal. If we connect people to nature without contributing to any specific scientific outcomes or quantifiable conservation results, then we're still doing our job, but if we just contribute to science without helping people care about the natural world, we'll be on the wrong track.



Oro Valley Parks Education Phenology Trail Locations





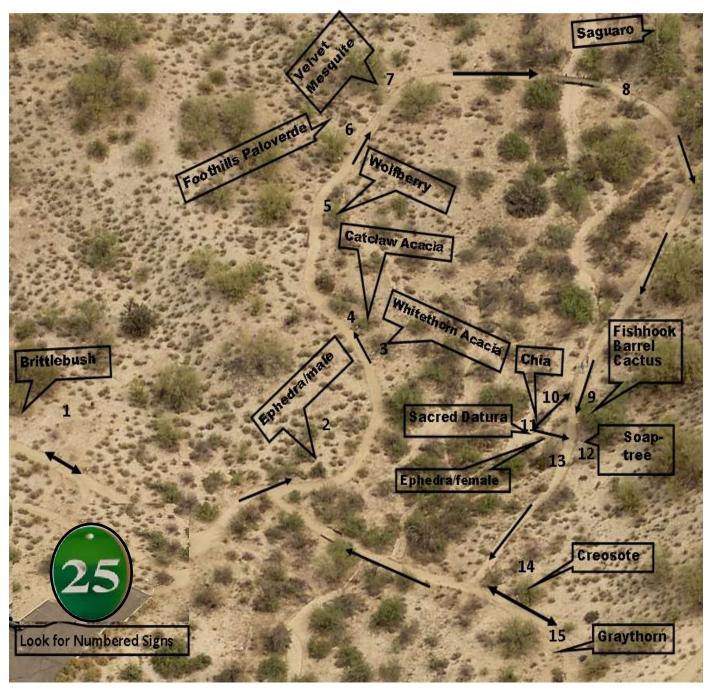


West Lambert Lane Park Phenology Trail

Phenology — The study of seasonal changes in the behavior of plants and animals.

Contributing to Science by observing plants and animals to document adaptations to changes in rainfall and temperature.

1750 W Lambert Lane, Oro Valley, AZ 85742



Plants

- 1. Brittlebush
- 2. Ephedra (male)
- 3. Whitethorn Acacia
- 4. Catsclaw Acacia
- 5.Wolfberry
- 6. Foothills Palo Verde
- 7. Velvet Mesquite
- 8. Saguaro
- 9. Fishhook Barrel Cactus
- 10. Chia
- 11. Sacred Datura
- 12. Soaptree Yucca
- 13. Ephedra (female)
- 14. Creosote
- 15 Graythorn

Birds: White-winged Dove

Anna's Hummingbird

Costas Hummingbird

Northern Cardinal

Phainopepla Verdin

White-crowned Sparrow

Lizards: Desert Spiny

Tiger (Western) Whiptail

Zebra-Tailed

Mammals: Bobcat

Round-Tail Ground Squirrel

Desert Cottontail

Coyote

Butterflies: Gulf Fritillary

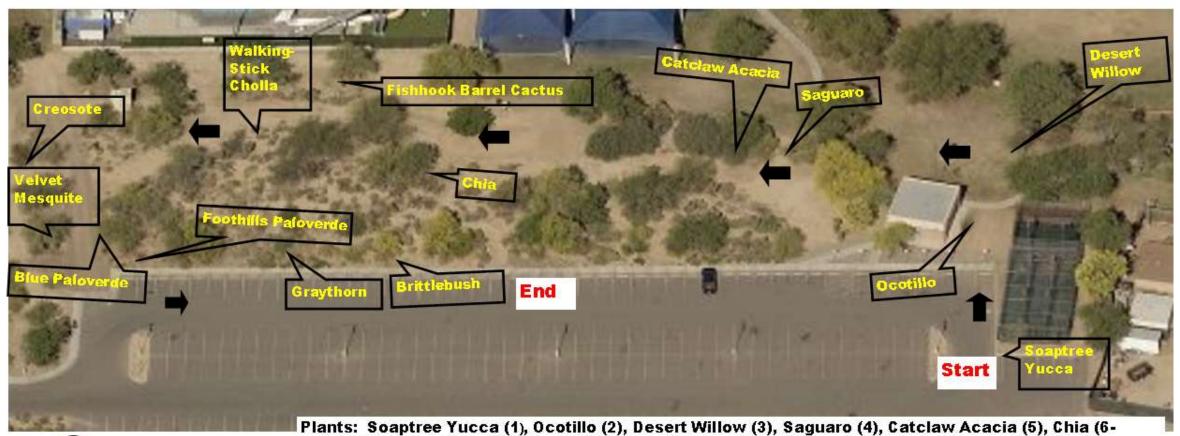
Pipevine Swallowtail

Queen



James D. Kriegh Park Phenology Trail

23 East Calle Concordia, Oro Valley, AZ 85704



Look for Numbered Signs

Plants: Soaptree Yucca (1), Ocotillo (2), Desert Willow (3), Saguaro (4), Catclaw Acacia (5), Chia (6-patch), Fishhook Barrel Cactus (7), Walkingstick Cholla (8), Creosote (9), Velvet Mesquite (10), Blue Paloverde (11), Foothills Paloverde (12), Graythorn (13), BrittleBush (14)

Animals: *Birds*: White-winged Dove, Anna's Hummingbird, Costa's Hummingbird, Phainopepla, Verdin, Northern Cardinal, White-crowned Sparrow; *Lizards*: Desert Spiny, Tiger Whiptail, Zebra-tail; *Mammals*: Round-tail Ground Squirrel, Desert Cottontail, Bobcat, Coyote; *Butterflies*: Gulf Fritillary, Pipevine Swallowtail, Queen







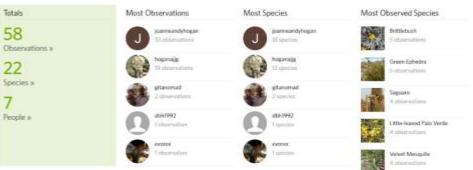


OBSERVATIONS

Terror & Rules | Full Plaint

Oro Valley Parks Phenology Trails

Stats





https://www.inaturalist.org/projects/oro-valley-parks-phenology-trails



» Identify Observations
» New Journal Post

About

Nature's Notebook Phenology Trails located at:

West Lambert Lane Park, 1750 W Lambert Ln, Oro Valley, AZ 85742

Plants: #1 Brittlebush, #2 Male Ephedra, #3 Catclaw Acacia, #4 White-thorn Acacia, #5 Wolfberry, 6F Oothills Palowerde, #7 Velvet Mesquite, #8 Saguaro, #9 Chia, #10 Fishhook Barrel Cactus, #11 Sacred Datura, #12 Soaptree Yucca, #13 Female Ephedra, #14 Creosote Bush, _more |

In hoganoing created this project on September Ot. 2020 is this imappropriate, spain, or offensive? Add a Flag

Imbed a widger for this project on your website



Privacy



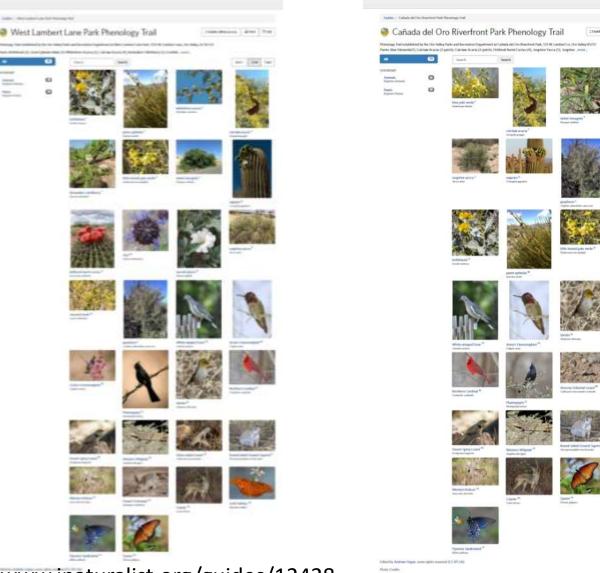








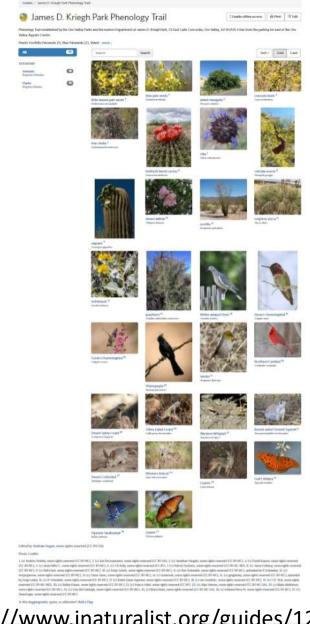




https://www.inaturalist.org/guides/12428

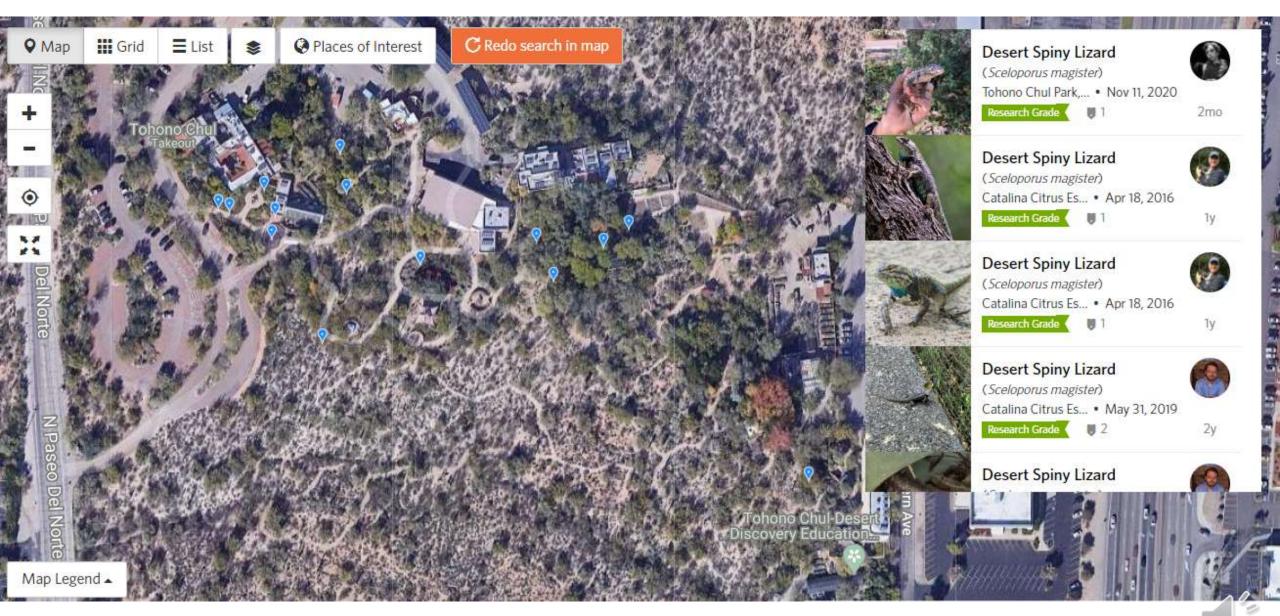
https://www.inaturalist.org/guides/13394





https://www.inaturalist.org/guides/12422

iNaturalist: An Example from Tohono Chul Park of Desert Spiny Lizard Observations, Map View



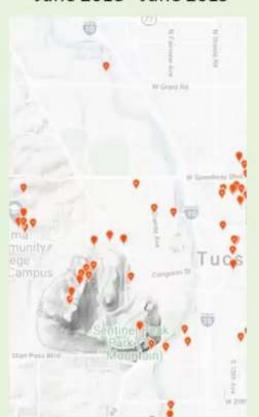


Olya Phillips

Effect of Restoring Flow to the Santa Cruz River

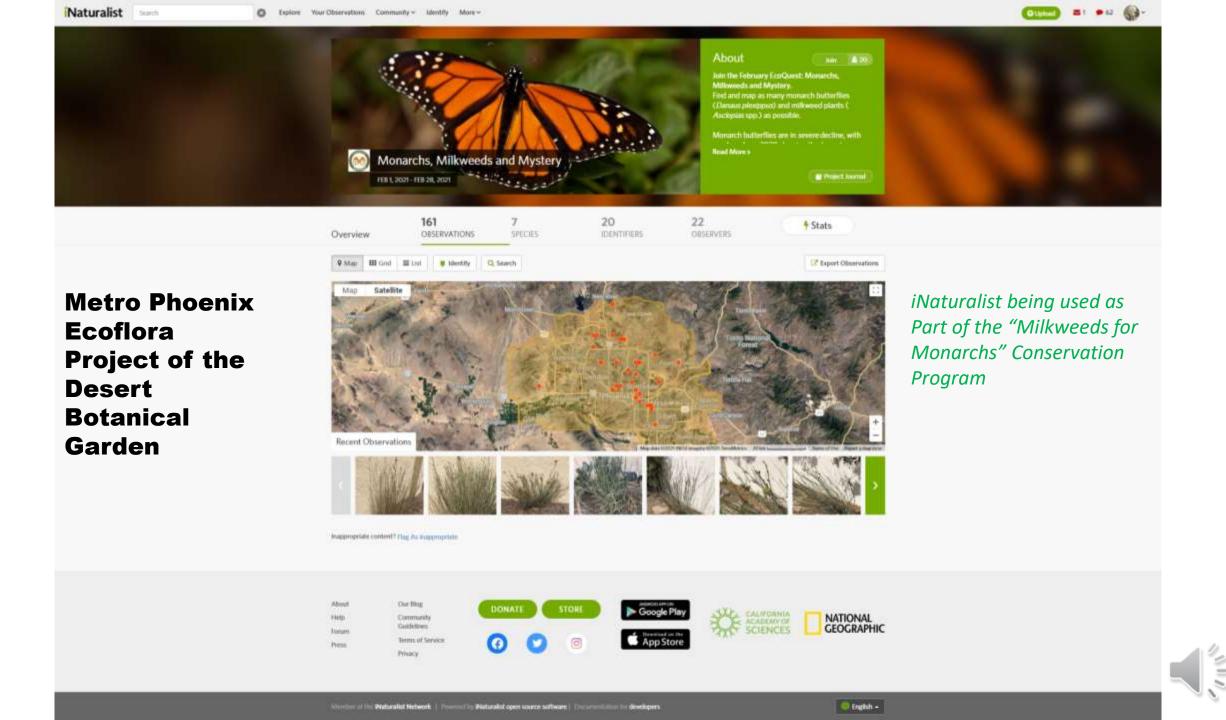
iNaturalist Insect Observations

June 2018 - June 2019



June 2019 - June 2020

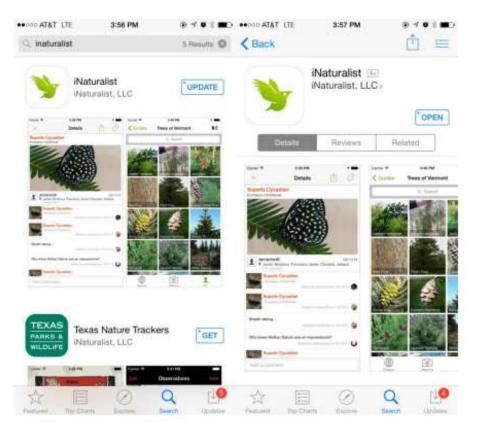




Install iNaturalist on Your Device

- Google Play or App Store: Search iNaturalist.
- Click Install







Video Tutorials

Help

Getting Started

Video Tutorials

Community Guidelines

Curator Guide

Managing Projects

Bioblitz Guide

Teacher's Guide

Help Us Translate

- · Adding an Observation on a Mobile Device
- Adding an Observation via the Web
- · How to Take Identifiable Photos
- · How to Use the Identify Page
- · Geotagging DSLR Photos in the Field
- · Duplicating an Observation
- · Adding a photo or sound to an Observation
- · Exploring Observations with iNaturalist

Adding an Observation on a Mobile Device

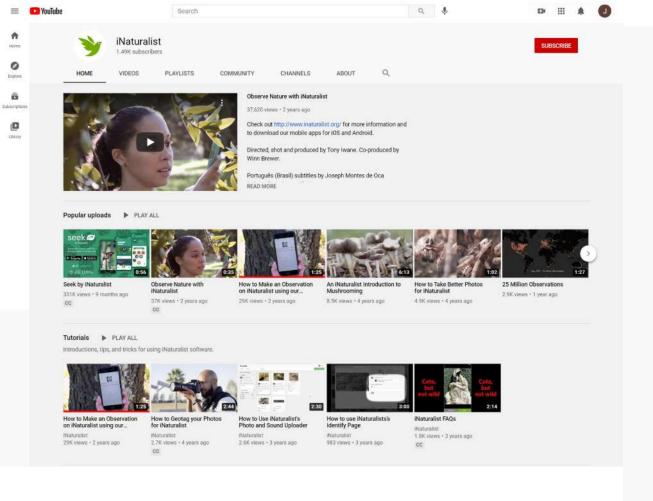


How to Make an Observation on iNaturalist using our Mobile App from iNaturalist on Vimeo.

© California Academy of Sciences.

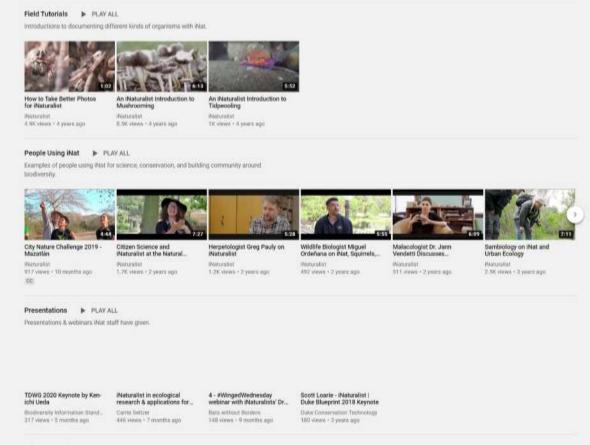
Adding on Observation via the Web







https://www.youtube.com/channel/UC16Di6Bbo1BeXqp9li5uqlg/featured



Friends and Partners

California Academy of Sciences National Geographic Society 161K subscribero SUBSCRIBE

5.9K subscribers

BUBSCRIBE

Gbif Secretariat 446 subscribers BUBSCRIBE

15.2% subscribers

SUBSCRIBE

IUCN, International Union for Co... Royal Botanic Gardens, Kew 16.1K aubscribers

SUBSCHIBE

Biodiversidad Mexicana 47.1K subscribers

SUBSCRIBE



How to Use iNaturalist

Posted on Monday, August 10, 2020 — 1 Comment \

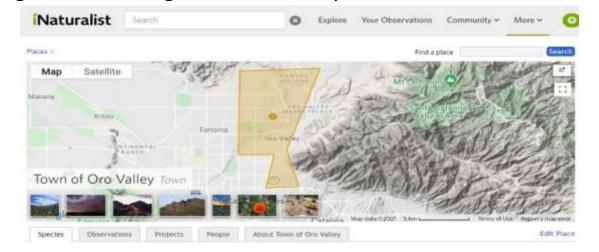


Bird observations on iNaturalist, like this one of a Lazuli Bunting, are most often confirmed within 10 minutes. Plant confirmations take much longer! If you're interested in community science projects for birding, be sure to check out eBird, too! (Photo by Craig Martin)



Parks and Recreation

Created by Oro Valley Parks and Recreation Phenology Trail Volunteers
Andrew Hogan, Joanne Hogan, Dawn Hartley





Canada De Oro Riverfront Park



James D. Kriegh Park



West Lambert Lane Park

Contact Us

Phone

520-229-5050

Fax

520-229-5075

Email

recreation@orovalleyaz.gov

Location

10555 N. La Cañada Drive Oro Valley, AZ 85737 <u>View Map</u>

Hours

Monday - Friday 8am - 5pm

Connect with us







