



Ornate Box Turtle Watch
Citizen Scientist Project

Arizona Game and Fish Department

Background

"Everybody likes box turtles."

-Archie Carr



North American Box Turtles

- Genus *Terrapene*
- 4 species in N. America
- Domed shell
- Terrestrial
- Hinged plastron
 - Close shell completely ('box')



Christina Akins

North American Box Turtles

- Genus *Terrapene*
- 4 species in N. America
- Domed shell
- Terrestrial
- Hinged plastron
 - Close shell completely ('box')



Bluechameleon.org

North American Box Turtles

- Omnivorous
 - Young tend to eat more animal matter
 - Keen vision and sense of smell



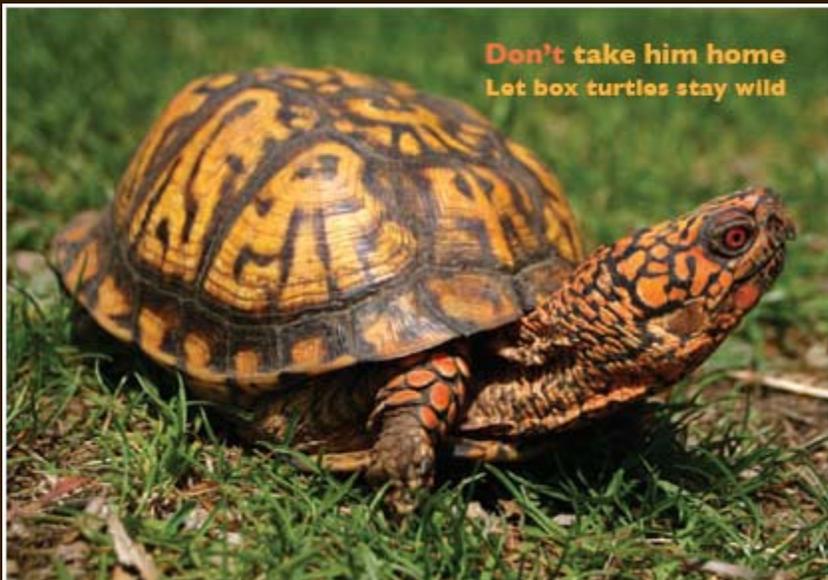
Christina Akins

North American Box Turtles

- Endearing
- Often kept as pets



www.marietta.edu



www.pwrc.usgs.gov

- Wild collection may have detrimental effects on populations



Wildherps.com

Ornate Box Turtle

Terrapene ornata

- Grassland species

Range Map from Davidson
College Herpetology



Desert box turtle, *T.o.luteola*



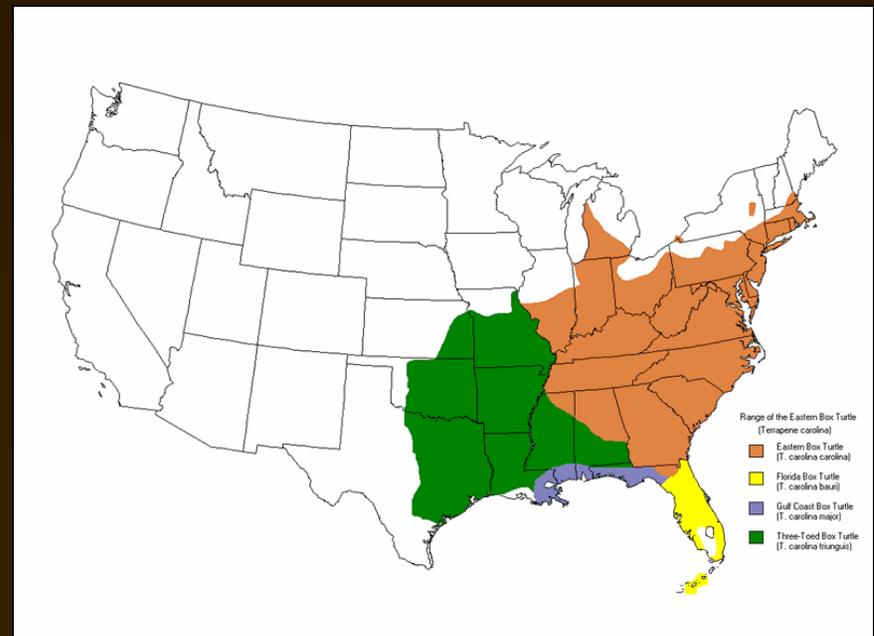
Richard Becker

Eastern Box Turtle

Terrapene carolina

- Forests, meadows

Range Map from Davidson College Herpetology





Biology.uta.edu

Coahuilan Box Turtle

*Terrapene
coahuila*

- Aquatic
- Wetlands around Quatro Ciénegas





Desertmuseum.org

Spotted Box Turtle

*Terrapene
nelsoni*

- Tropical
deciduous forest

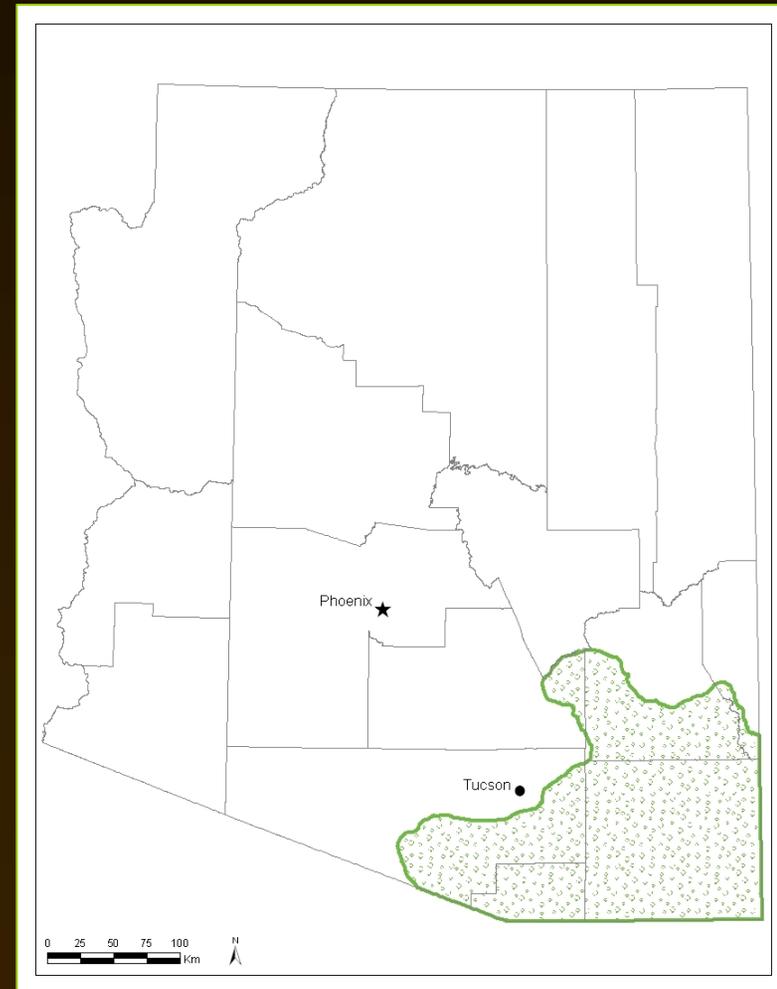


Ornate Box Turtle

Distribution



George Andrejko



Ornate Box Turtle

Description

- Brown with yellow radiating lines
- Orange or yellow on fore legs
- Up to 6"



Ornate Box Turtle

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- Up to 6"



Dawn Wilson



Ornate Box Turtle

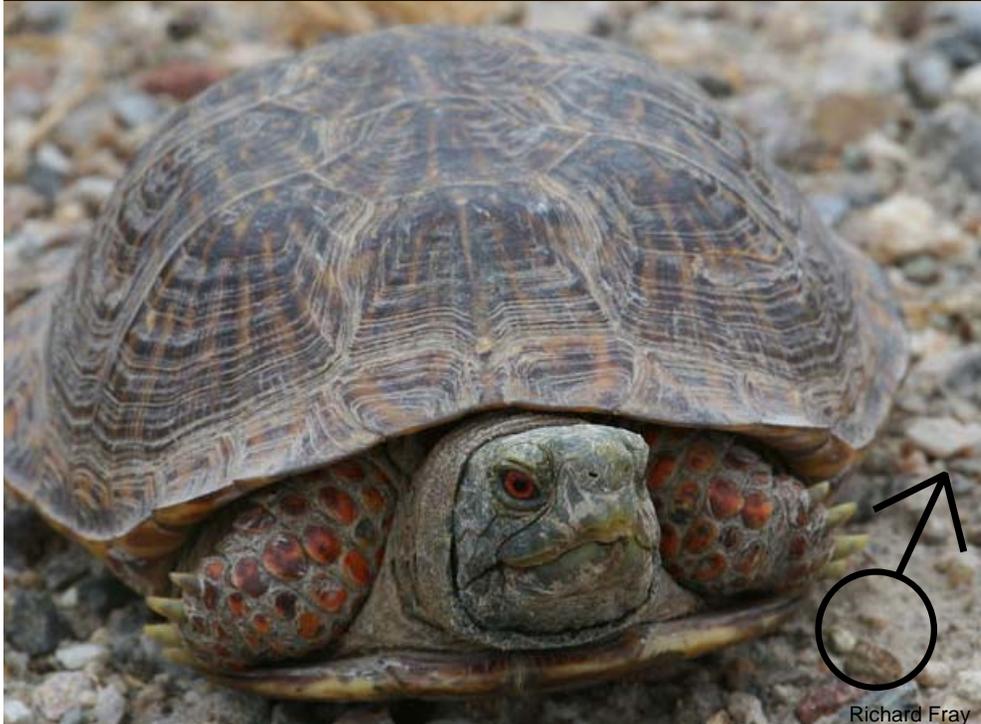


Ornate Box Turtle

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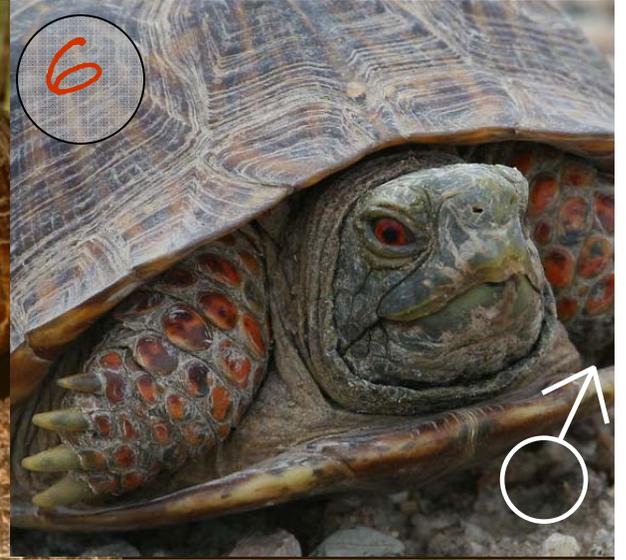
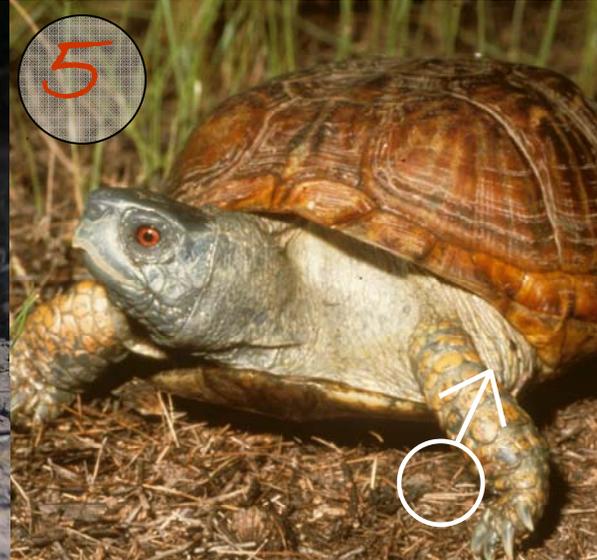


Ornate Box Turtle



Richard Fray





Ornate Box Turtle

Habitat

- Grasslands, desertscrub, woodlands



Valerie Boyarski

Ornate Box Turtle

Habitat

- Grasslands, desertscrub, woodlands



Ornate Box Turtle

Habitat

- Grasslands, desertscrub, woodlands



Ornate Box Turtle

Habitat

- Enter water to soak



Richard Fray

Ornate Box Turtle

Natural History

- Diet: grasses, fruit, invertebrates, carrion



George Andrejko



Valerie Boyarski

- Live in burrows

Ornate Box Turtle



- Peak of activity is during monsoon (Jul – Sept)
 - Early morning/late evening
 - < 80° F
 - >50% humidity
 - After rain

Ornate Box Turtle



- Hibernates Oct-Feb
- Aestivates before monsoon

Ornate Box Turtle



- Opportunistic breeder



- Hibernate Oct-Feb
- Aestivate before monsoon

Ornate Box Turtle



- Avg. clutch size = 3

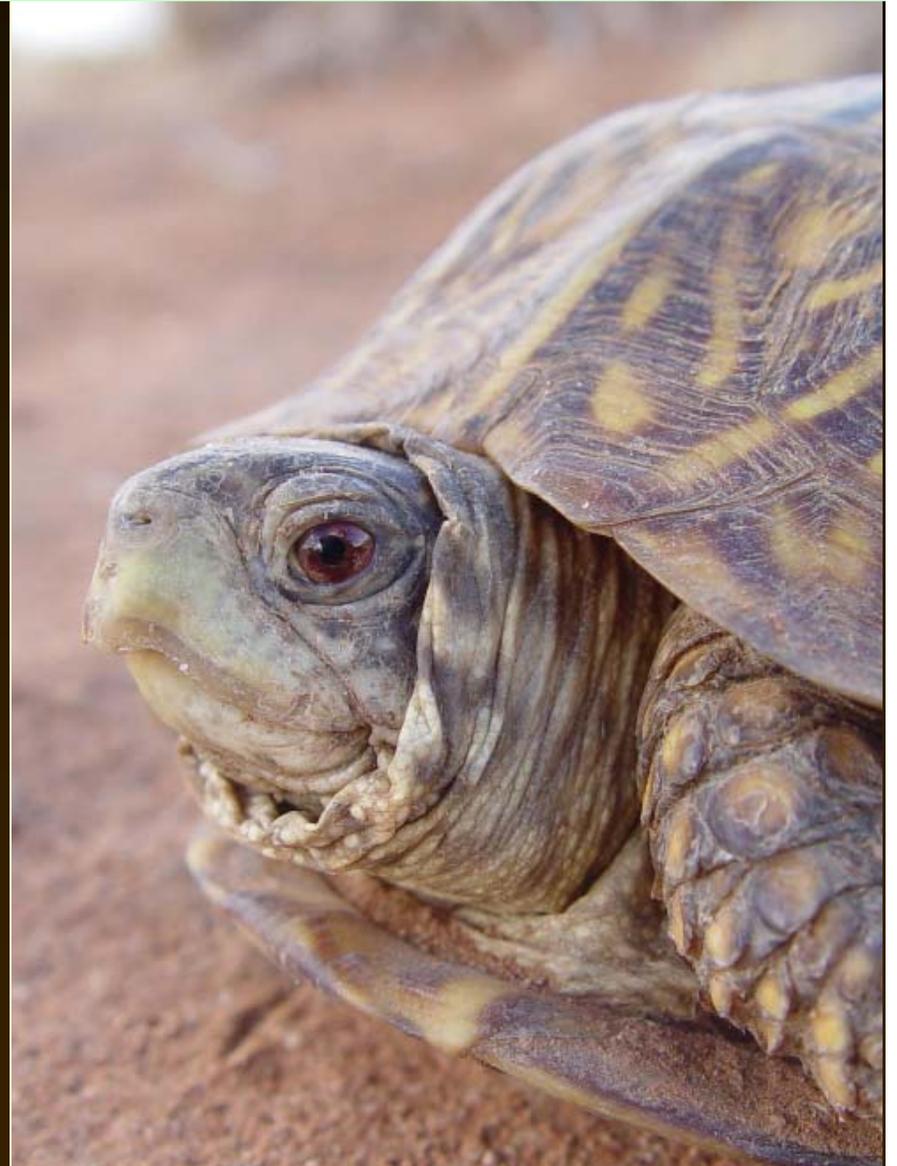


- Hibernates Oct-Feb
- Aestivate before monsoon

Ornate Box Turtle

Conservation

- Thought to be in decline
- Causes uncertain
 - Habitat loss, degradation, & fragmentation
 - Road mortality
 - Collection



Ornate Box Turtle

- Closed season species
 - Illegal to handle, relocate, collect



Randy Babb

Ornate Box Turtle Watch Project



Watch Project

What is a “Watch” project?



Tom Jones

- Citizen science
 - Report encounters with sp. of concern
 - Minimal data requested

Watch Project

Successful watch projects

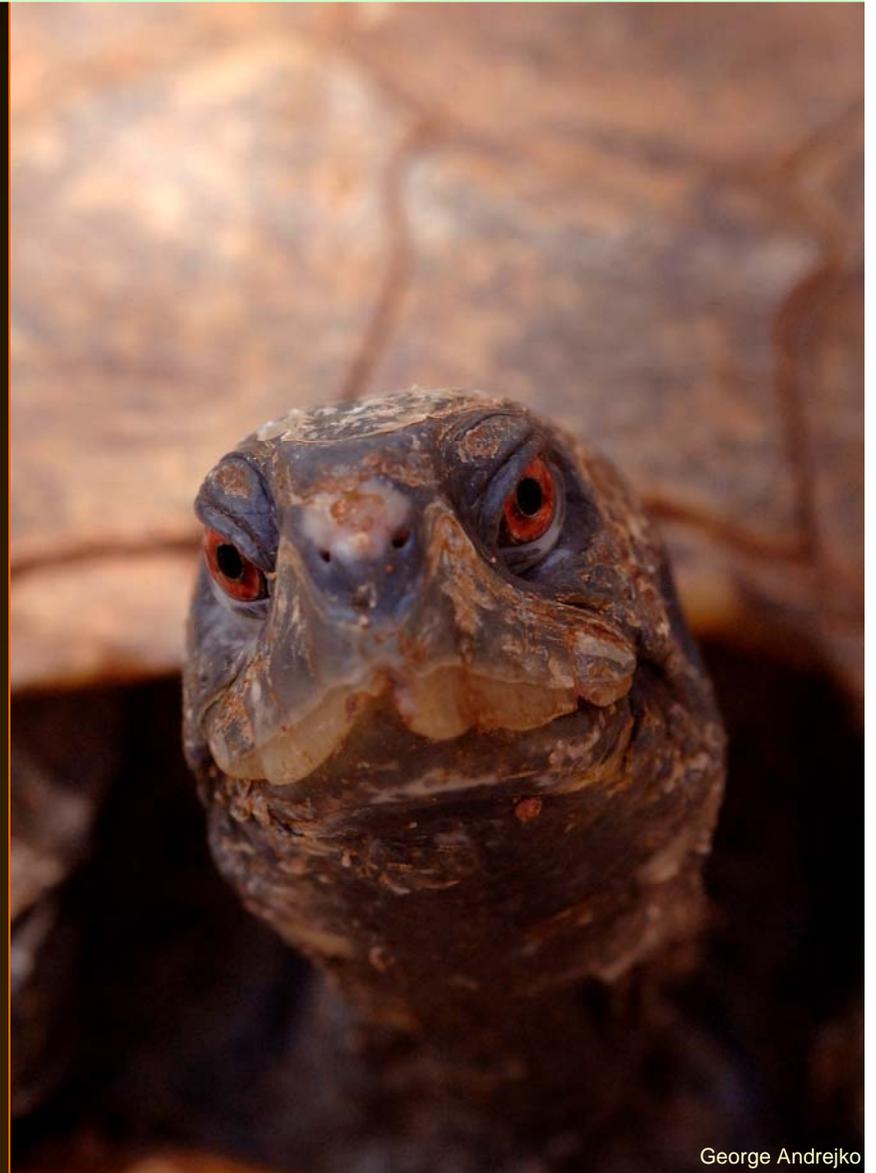
- Christmas Bird Count
- North American Amphibian Monitoring Project
- Monarch Larva Monitoring Project
- Texas Horned Lizard Watch



Watch Project

Benefits

- Helps agency gather valuable data
- Engages public in conservation
 - Private landowners, hikers, recreationalists, birders



Watch Project

Why the need?

- Ornate box turtles are secretive
- Box turtle surveys are inefficient!
- You will be our eyes “on the ground”



Watch Project



Richard Fray

- Started summer 2009
- Long-term project
 - Trend data
 - Health & status of population
- Create & implement management plan

Watch Project

- Data will answer questions:
 - Habitat preferences?
 - Factors in landscape causing decline?
 - Activity periods?
 - Range-wide distribution



Cecil Schwalbe

How to Participate



How to Participate



- Fill out observation form
 - Basic info
 - *Does not allow handling of box turtles*
 - Keep forms in your car!
- Take *in situ* photos

www.azgfd.gov/boxturtlewatch

How to Participate

Good places to see box turtles:



- Audubon Research Ranch
- San Pedro Riparian Nat'l Cons. Area
- Whitewater Draw Wildlife Area
- Coronado Nat'l Forest
- Leslie Canyon National Wildlife Refuge
- Fort Huachuca

How to Participate

 **Ornate Box Turtle Watch Observation Form**
Please fill out one form for each observation

The ornate box turtle is a land turtle native to southeastern Arizona's desert grasslands. It can be distinguished from the desert tortoise, which also has a domed shell, by the yellow radiating lines it has on its carapace (top part of shell), and the hinged plastron (underside of shell) which allows it to close its shell completely.

Observer _____ Date _____ Time _____
Street address _____ City _____ State _____ Zip _____
County _____ Phone _____ E-mail address _____
Status: Dead / Alive _____ GPS Easting/Latitude _____ Datum _____
location: Northing/Longitude _____
Location (i.e., specific nature preserve, highway and mile marker, etc.) _____

Nearest cross streets and town _____

Temperature _____ °F / °C Sky: No or few clouds/Mostly cloudy/Raining Rain in the previous 24 hrs? Y / N
Sex? M / F / unknown
Activity: In open / hiding *Male box turtles have red eyes, a long tail, and the first claw on their hind foot is curved; females have brownish yellow eyes and a short tail. Determining sex will not require you to handle the turtle.
Behavior: walking / not moving / eating
Photos taken? Y / N
Habitat where turtle was found (circle one):
paved road native grassland desert scrub other (describe) _____
unpaved road disturbed grassland agricultural land _____
Land use in surrounding area (circle one):
agricultural/ranching residential recreational area
nature park/preserve not in use other (describe) _____
Notes _____

Due to perceived population declines, the ornate box turtle is a protected species in Arizona, meaning that it means that it is illegal to collect, handle, or relocate the species. Participating in the Ornate Box Turtle Watch will not require or allow you to handle ornate box turtles. A box turtle found crossing the road may be moved across the road and placed in the same direction it was facing.
By participating in the Ornate Box Turtle Watch, you will be directly helping the Arizona Game and Fish Department to determine the current distribution of box turtles which will guide our conservation efforts. For more information on box turtles and Arizona's other turtle species, please visit www.azgfd.gov/turtle. Thank you for your participation.

Please return form and any photos to: Nongame Branch Turtles Project Arizona Game and Fish Department 5000 W. Carefree Highway, Phoenix, AZ 85096	If you have questions, contact: Cristina Jones, Turtles Project Coordinator cjones@azgfd.gov / 623-236-7767 Audrey Owens, Turtles Project Biologist aowens@azgfd.gov / 623-236-7504
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www.azgfd.gov/boxturtlewatch

How to Participate

Observation form



Ornate Box Turtle Watch Observation Form

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Observer _____ Date _____ Time _____
Street address _____ City _____ State _____ Zip _____
County _____ Phone _____ E-mail address _____

www.azgfd.gov/boxturtlewatch

How to Participate

Status: Dead / Alive (dead on road) GPS location: Easting/Latitude (circle one) Datum (NAD 83/27)
Northing/Longitude

Location (i.e., specific nature preserve, highway and mile marker, etc.)
On San Pedro Riparian Nat' Conservation Area by Hereford entrance, on hiking trail, 100m from gate

Nearest cross streets and town Residence is approx. 1/4 mile from corner of 10th St. and Hereford Rd.

Temperature _____ °F / °C Sky: No or few clouds / Mostly cloudy / Raining Rain in the previous 24 hrs? Y / N

Sex: * M / F / unknown

Activity: In open / hiding

Behavior: walking / not moving / eating

Photos taken? Y / N

**Male box turtles have red eyes and a long tail; females have brownish yellow eyes and a short tail. Determining sex does not allow you to handle the turtle.*

www.azgfd.gov/boxturtlewatch

How to Participate

Habitat where turtle was found (circle one):

paved road native grassland desert scrub other (describe) _____
unpaved road disturbed grassland agricultural land _____

Land use in surrounding area (circle one):

agricultural/ranching residential recreational area
nature park/preserve not in use other (describe) _____

Notes House is within 1 mile of SPRNCA

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www.azgfd.gov/boxturtlewatch

How to Participate

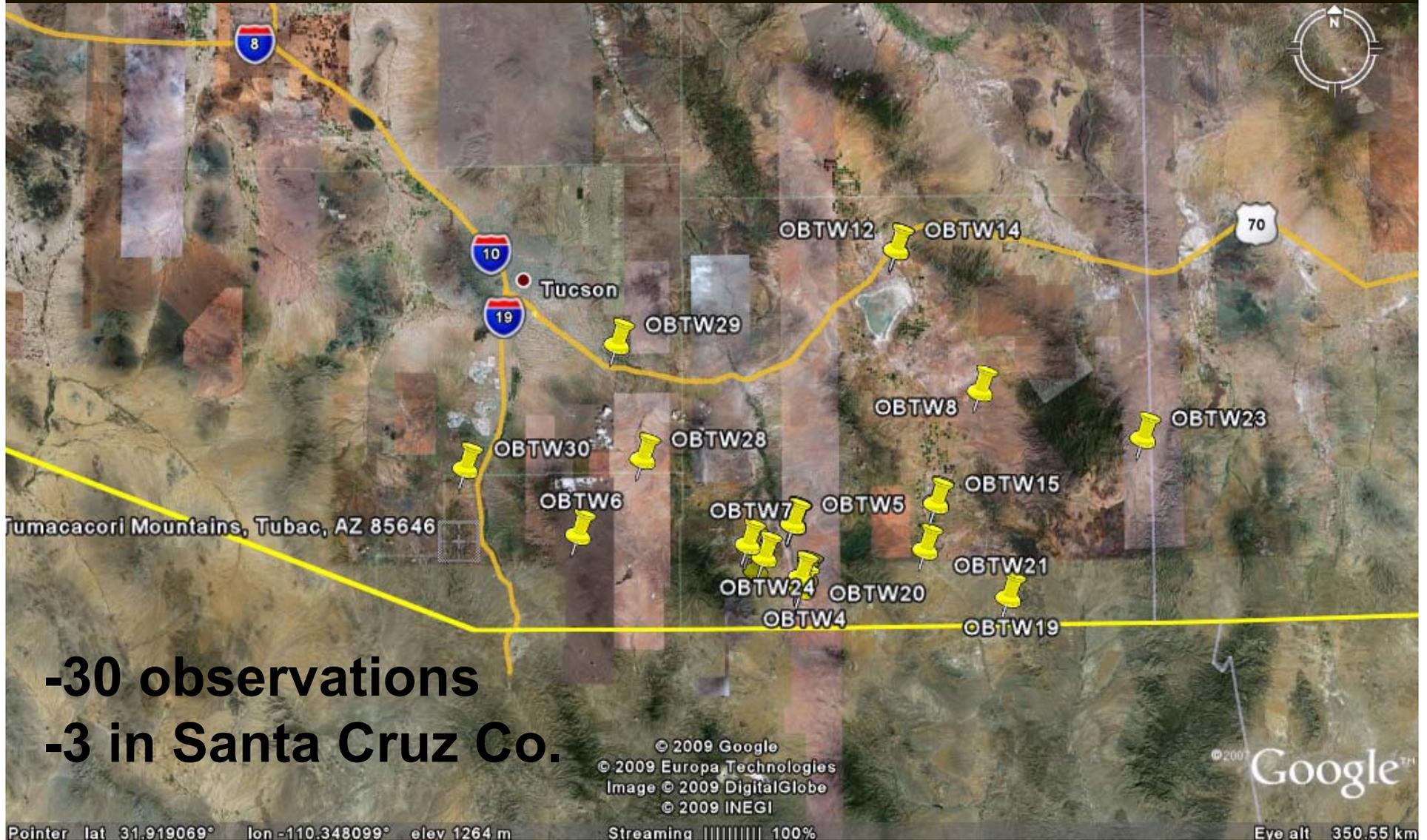
Return form and photos to:

Turtles Project, Nongame Branch
Arizona Game and Fish Department
5000 W. Carefree Hwy, PHX AZ 85086



Valerie Boyarski

Observations



**-30 observations
-3 in Santa Cruz Co.**

- Observations needed in periphery locations:
 - Western: Patagonia, Tumacocori Mtns., Buenos Aires NWR
 - Northern: Dudleyville, Safford

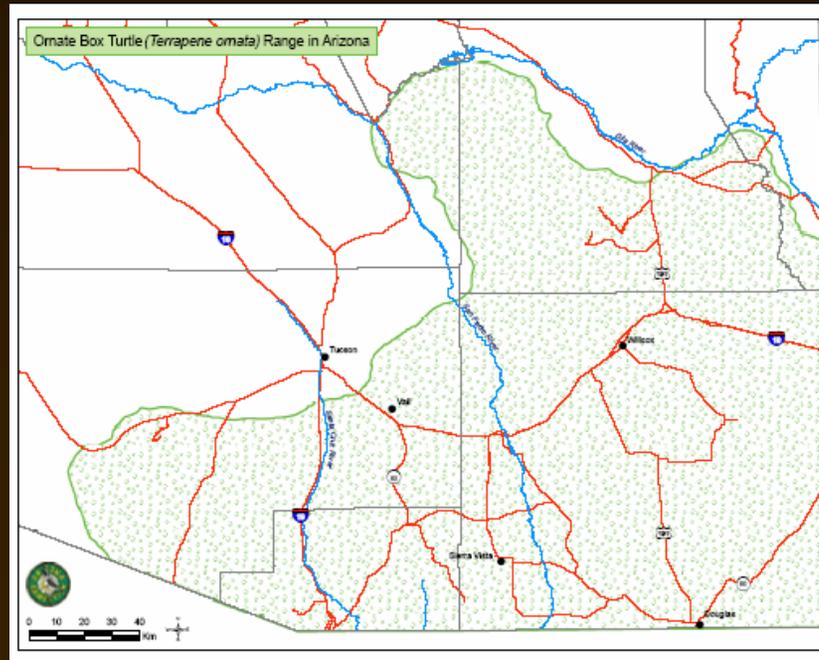


Resources

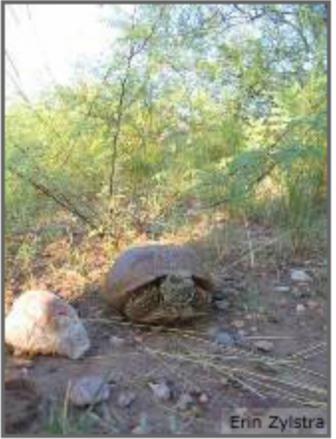


Resources

- Visit the Ornate Box Turtle Watch website
 - Download and print more observation forms
 - Distribution map



Become a citizen scientist!



Erin Zylstra

Click here to find out about the Ornate Box Turtle Watch

www.azgfd.gov/boxturtlewatch

Resources

Visit the Turtles Project website:

www.azgfd.gov/turtle

- Info on Arizona's native & nonnative turtles
- How you can help turtle conservation in AZ
- Captive desert tortoise adoption & care



Ian Murray

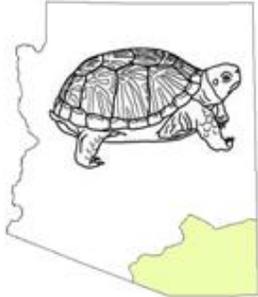


George Andrejko



Jeff Lovich

Resources



ORNATE BOX TURTLE WATCH CITIZEN SCIENTIST PROJECT

Report box turtle observations to
the Arizona Game and Fish
Department

For forms or more information, visit
www.azgfd.gov/boxturtlewatch

For questions, contact the Arizona Game and Fish
Department Turtles Project at (623) 236-7504



Pick up a
Citizen Scientist
Project
business card

Ornate Box Turtles in Arizona

The ornate box turtle is protected in Arizona, meaning that *it is illegal to collect, handle, or relocate the species*, because of a perceived decline. The Ornate Box Turtle Watch will not require you to handle ornate box turtles; however, a box turtle found crossing the road may be moved across the road, placed in the same direction it was facing.

Distinguishing between male and female box turtles:



Males:
-red eyes
-long tail



Females:
-brownish-
yellow eyes
-short tail

Resources

Interested in helping
turtle conservation in
Arizona?

Donate to the
Sponsor-A-Turtle Program

Provide funding for purchasing
mud turtle traps, GPS gear, radio
telemetry tags and receivers



Sponsor-A-Turtle Sponsorship Levels

\$25 Painted turtle

\$50 Mud turtle

\$100 Box turtle

\$200 Desert tortoise

All levels receive **Turtles Project sponsor kit**: sponsorship certificate and turtle photo

\$100 + annual Turtles Project newsletter

\$200 + detailed account of a specific tortoise in the department's desert tortoise radio-telemetry project that year

Resources

Audrey Owens

aowens@azgfd.gov

www.azgfd.gov/boxturtlewatch