

A close-up photograph of a vibrant red cactus flower. The petals are a deep, rich red, and the center is a bright yellow. A small, dark-colored bee is perched on the yellow center, facing left. The background is a blurred, light-colored surface, possibly sand or a rock.

# Rescuing Cacti

**Since 1999**

Tucson Cactus & Succulent Society

Presented By: Joe Frannea  
A Longtime "Cactus Rescue Crew"  
Volunteer



Over 1,400 TCSS Members  
Largest Cactus & Succulent Society

So...

What Does Our  
"Cactus Rescue Crew"  
Do?

# No, Not This!

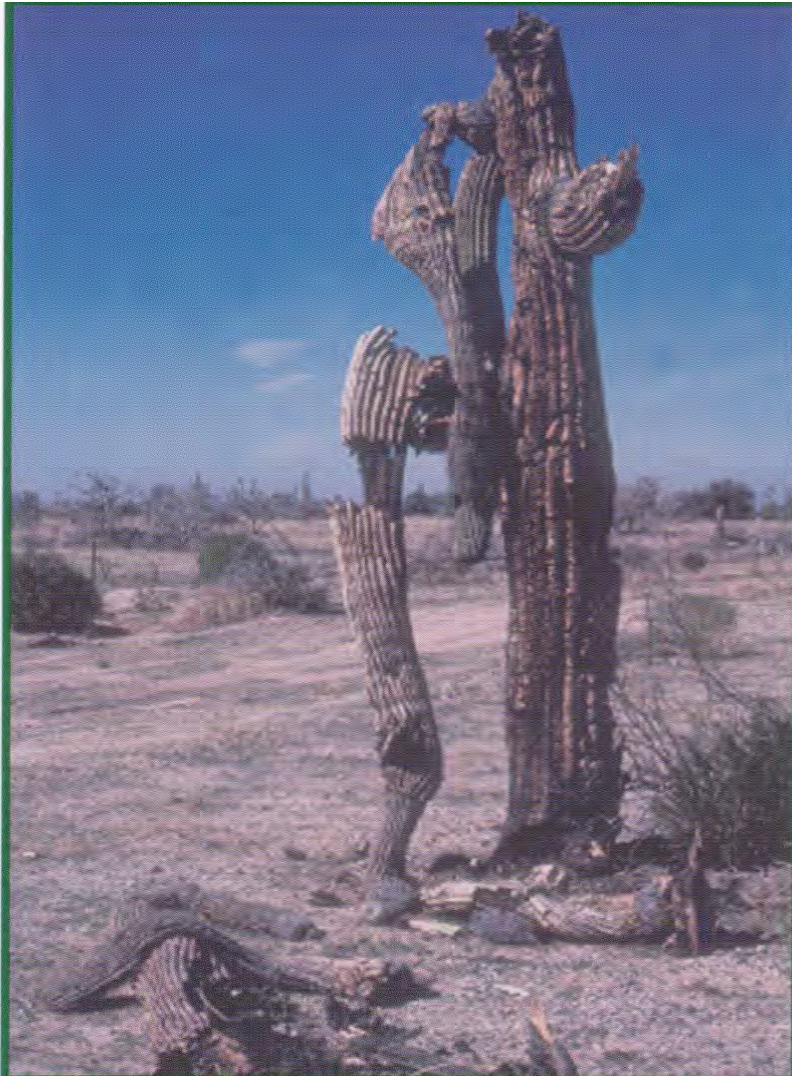


Photo by JE Bowers/SP McLaughlin

## Fire... Non Native Grasses & Plants

**Maintain a 30 Ft.  
Fire Zone  
Around Buildings  
“Use Succulents”**

Several Local Groups  
Remove Invasive  
Grasses Every Weekend

No, Not This!



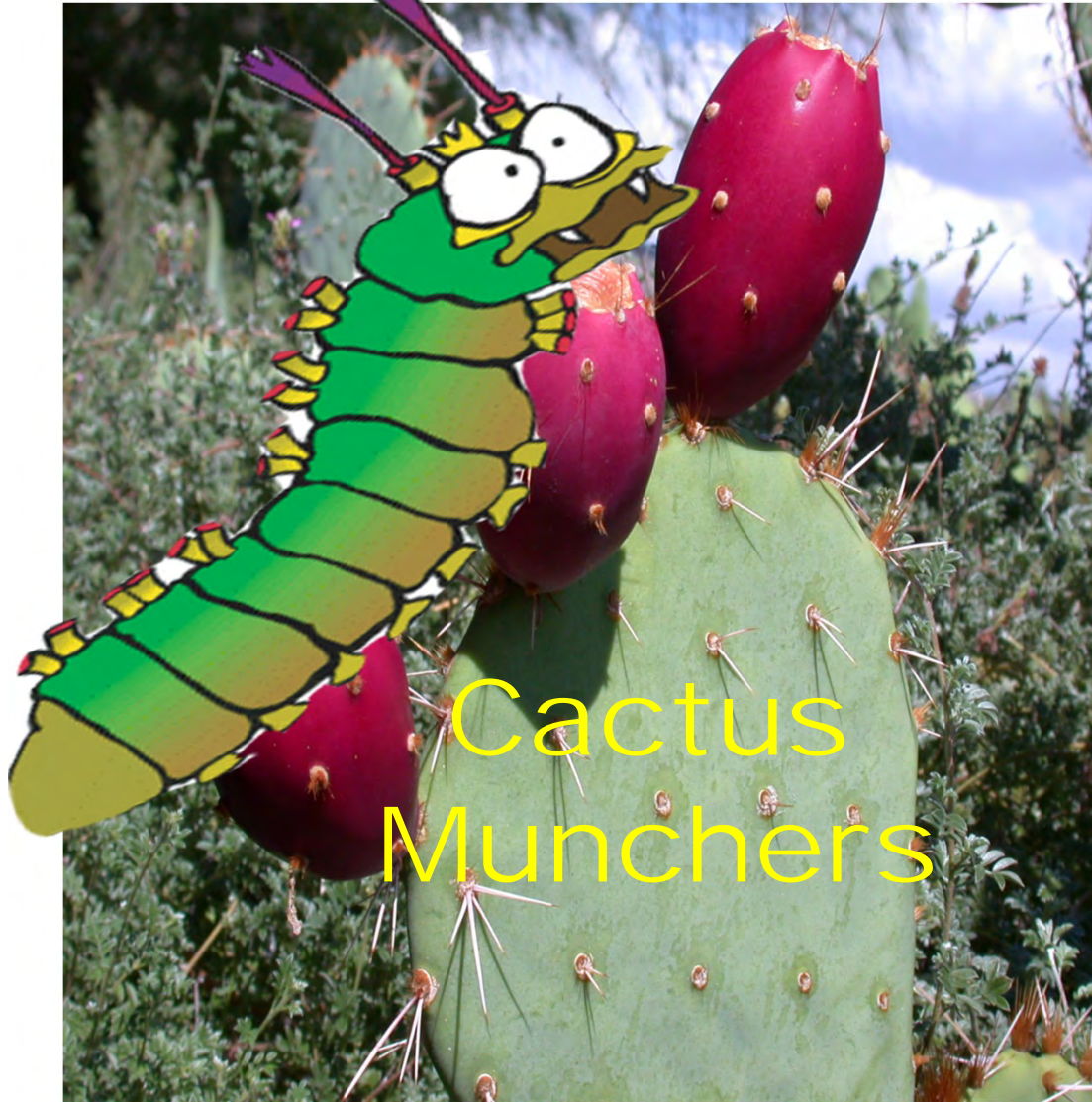
## Cactus Rustlers...

Two Cactus Cops in all of Arizona  
Fines Up to \$250 per Native Plant

Micro-chipping some Saguaros

Theft is a big problem world wide

# No, Not This!



Cactus  
Munchers

# Cactoblastis

No, Not This!



**Adult  
Cactus  
Moth**



Eggs on Spine



Larvae

No, Not This!



Unwanted Cacti or those  
Outgrowing their space...



Yes, This! "Just in Time"



"NOT SAVING BUT...  
RELOCATING THE DESERT"



Developers Need To  
Clear Everyting To Get  
To Bigger Plants

# A Small Development Site Holding Area



NPPO (Yea Arizona!)

Native Plant Protection Ordinance  
(triggered by a blading permit – 1/3 acre+)

Permits and Plant Tags are Required to Remove/Sell Plants

# Developers Must Inventory...

- Native Trees
  - Mesquite
  - Palo Verde
  - Ironwood
  - Acacia
  - few others
- Native Cacti
  - Saguaros
  - Pima Pineapple

Some Municipalities  
Require more...





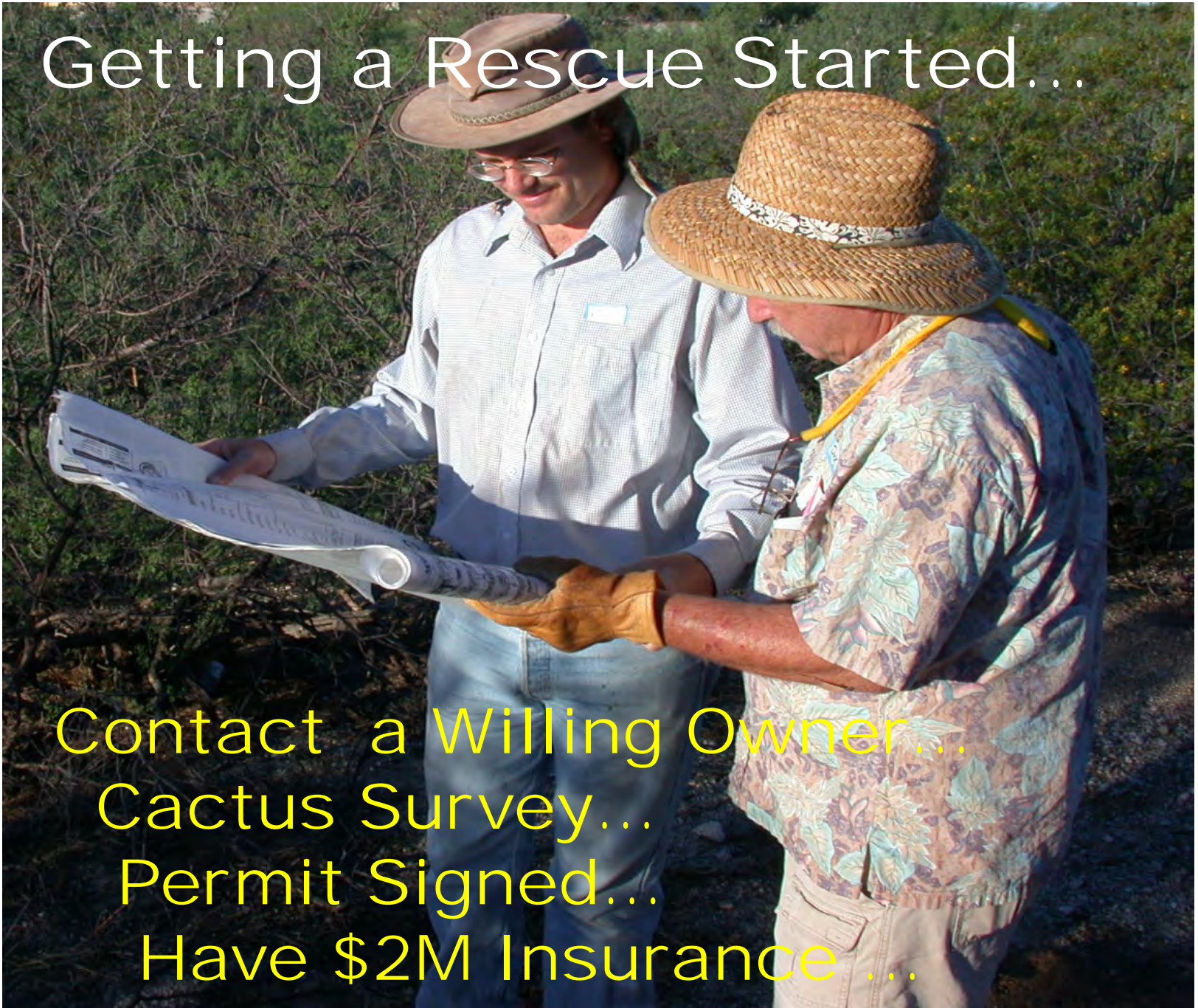
Not Inventoried or Protected...



Not inventoried or protected...

# Getting a Rescue Started...

- Contact a Willing Owner...
- Cactus Survey...
- Permit Signed...
- Have \$2M Insurance ...



Purchase Native Plant Tags  
from AZ Dept. of Agriculture  
for each type of Cactus

Native Plant Tag  
STATE OF ARIZONA  
DEPARTMENT OF  
AGRICULTURE  
Native Plant Tag  
SAGUARO  
ENLAWFUL to remove this tag  
from the plant until planted in  
final location.  
ENLAWFUL to transport this plant  
until it is properly affixed to  
the plant.  
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Tag No. 15035

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the plant.  
Tag No. 15600

Tag Costs  
\$0.50 - small  
\$6.00 - over 8"  
\$8.00 - Saguaros

TCSS Has  
Spent Over  
\$250,000  
On Tags

DIRECTOR  
STATE OF ARIZONA  
DEPARTMENT OF  
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Cactus Rescue Crew Saving that 100,000 Cactus – Oct 2019

Before Each Rescue:

- ✓ Sign In (Liability Release)
- ✓ Safety Instructions (No Accidents)
- ✓ Digging Boundaries Reviewed (No Mistakes!)

About 150 TCSS Members Participate Each Year  
Contributed over 38,000 Volunteer Hours to date (since '99)



Busy bringing in plants and getting them tagged – Silver Bell Mine



Sharing Knowledge while tagging...

# Caveman Innovation...



Carrying a Cholla...  
without hurting it or us...

# Cholla Clothesline



# Why Save Cholla? Simple...



Doves, Cactus Wrens and Many other need secure nest habitats.





Loading Cacti to move  
to our Holding Area...

A photograph of a desert garden featuring a large, multi-armed cholla cactus (Cylindropuntia) as the central focus. The cactus is covered in sharp, dark spines and is situated on a bed of light-colored gravel. In the background, there are other desert plants, including a large, flat-topped cholla cactus and several agave-like plants. The scene is brightly lit, suggesting a sunny day. The text "Special Prize" is overlaid in yellow on the lower part of the cactus.

Special  
Prize





Planted at Pima Prickly Park  
but has since died



Queen of  
the Night...



"It's All About the Bloom"





Viable?



Often said...  
No Plants of Any Value?  
(commercial)



# We Must Preserve Our Gene Pool

Desert Plants  
- Hardy  
- Survivors  
But Propagate Slowly



Many Cacti go home with the Crew Members...



Safely Carrying a 250-300 Pound Saguaro out of the Desert





Helping PACCC Landscape  
their Entrance Area

**Ms. Cheryl McCurry, Manager  
Wheeler Taft Abbett Library  
Marana**





Most Rescued Cacti are Sold at Public Sales, about 3 per year...

A photograph of a courtyard area. In the background, there is a red brick building with several dark-framed windows. In the foreground, a brick planter box is filled with various types of cacti, including a tall, thin cholla cactus and several smaller, rounded barrel cacti with small orange flowers. The ground in the planter is covered with light-colored gravel. The text "Just Planted" is written in yellow in the upper right corner, and "Some are planted at HOAs, Public Gardens and other Public Places..." is written in white in the lower left corner.

Just Planted

Some are planted at HOAs,  
Public Gardens and other  
Public Places...

Several Years After Planting,  
They More than Doubled in Size

A great re-landscaping at the Arizona  
State Building Downtown Tucson... Little  
Maintenance & Very Little Water!

Over 104,000 Cacti Rescued  
At No Monetary Cost to the Developer  
and No Project Delays!



# Sales Proceeds Go To:

- Recover Our Tag Costs
- Club Activities
- Educational Outreach -25%
- Pima Prickly Park - 25%
- Conservation Grants
- Research Grants
- Preservation Botanical Art

# SAGUAROS: A CACTUS CALAMITY?

## QUESTION

Are saguaros healthier in wild areas or near roads?

## HYPOTHESIS

There will be more unhealthy saguaros in the road plots than in the control plots. There will be less animal damage near roads.

## RESULTS

After observing my plots, I determined that the most significant variables were observed on both the road and control plots. The saguaros in the road plots were generally healthier than those in the control plots. I observed that on all three of the saguaros in the road plots, I saw more and larger animals than I did on the control plots. The saguaros in the road plots were also generally healthier than those in the control plots. I observed that on all three of the saguaros in the road plots, I saw more and larger animals than I did on the control plots. The saguaros in the road plots were also generally healthier than those in the control plots.

## CONCLUSIONS

My hypothesis was partially correct. There were more unhealthy saguaros in the road plots than in the control plots. There were also more animals in the road plots than in the control plots. I observed that on all three of the saguaros in the road plots, I saw more and larger animals than I did on the control plots. The saguaros in the road plots were also generally healthier than those in the control plots.

## PROCEDURES


1. I visited the area for my plots. I observed that on all three of the saguaros in the road plots, I saw more and larger animals than I did on the control plots. The saguaros in the road plots were also generally healthier than those in the control plots.

## MATERIALS

1. A clipboard  
2. A pencil  
3. A camera  
4. A measuring tape  
5. A ruler  
6. A compass  
7. A protractor  
8. A calculator  
9. A notebook  
10. A pen




## RESEARCH

I researched the effects of roads on saguaros. I found that roads can have both positive and negative effects on saguaros. Roads can provide access to water and other resources, but they can also cause habitat fragmentation and increase the risk of collisions with vehicles.



Healthy	60%
Unhealthy	40%

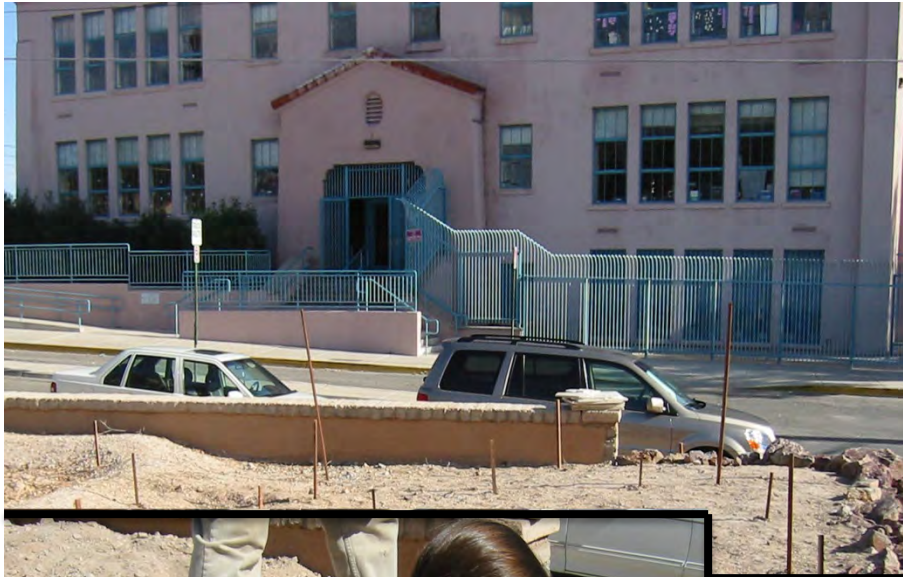
Healthy	70%
Unhealthy	30%



SARSEF - Science Fair  
Cash Prizes K to 12 Students  
for deserving projects...







**Carrillo School Docents building the LaPilita Museum Cactus Garden**

# PIMA PRICKLY PARK

## "Special Cacti"

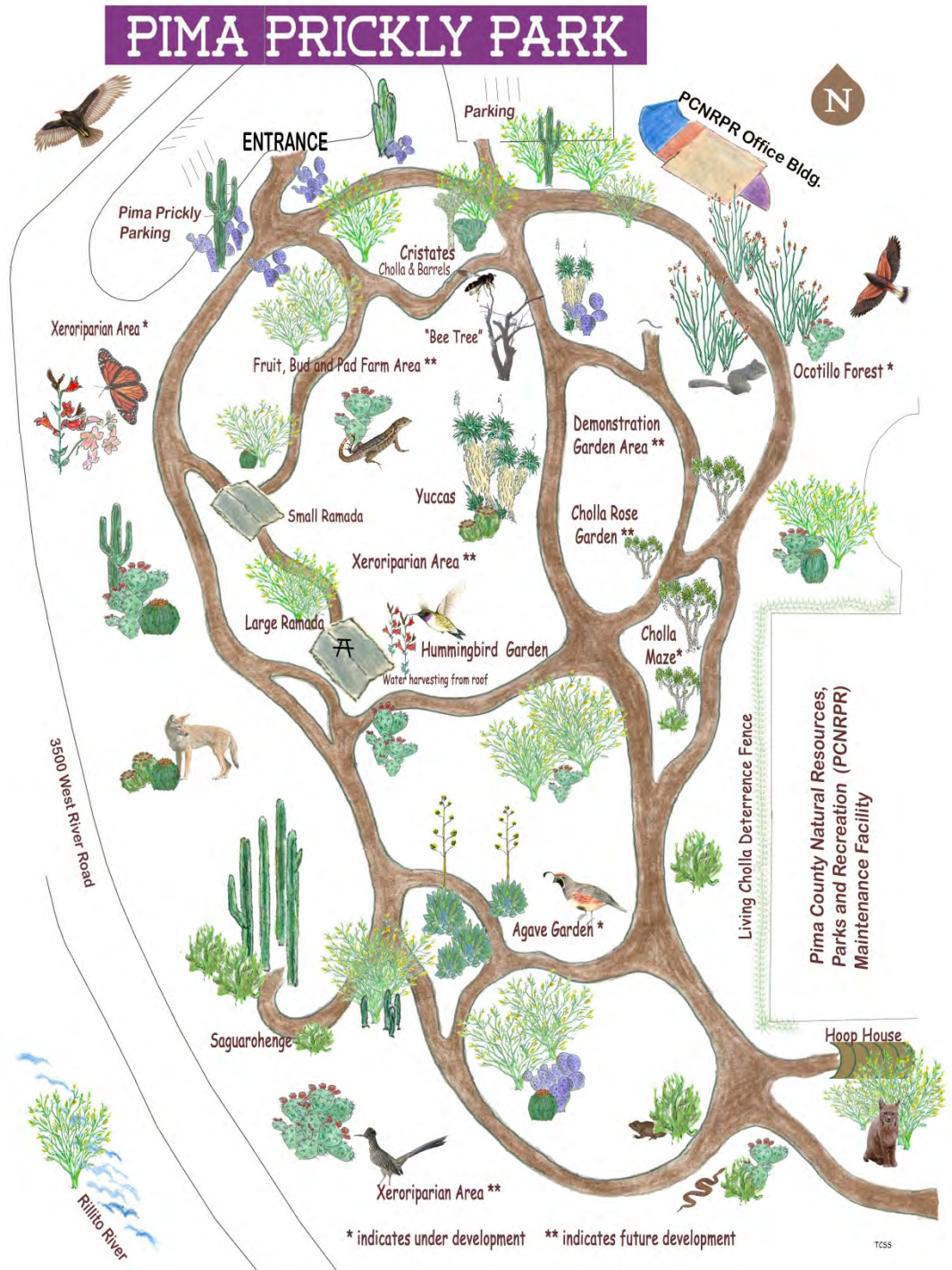
Often go to our  
7 Acre

Pima Prickly Park  
3500 W. River Road

And

Others often go to  
gardens or landscapes  
such as

Mission Gardens  
Krutch Garden UofA  
Public Buildings  
Cemeteries  
Libraries  
Schools



# Very Interesting and Unique...

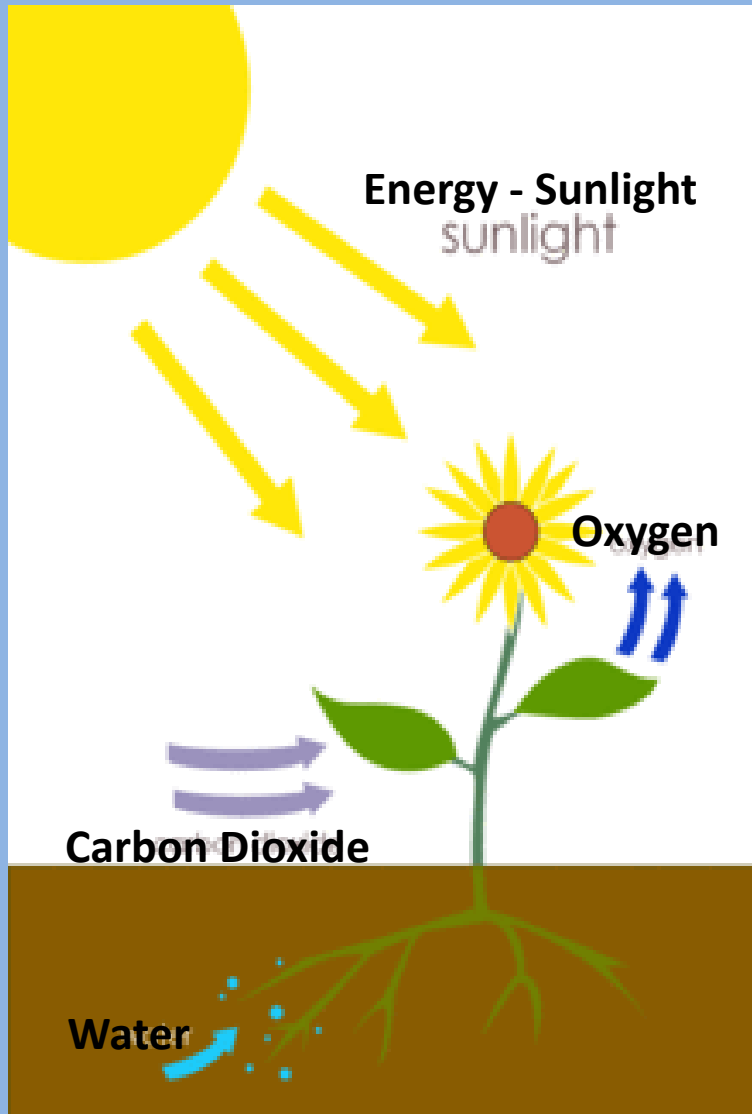
## CAM – Photosynthesis

### Crassulacean Acid Metabolism

**Used by Almost All Cactus  
and Many Succulents**

- Stomata (pores) Closed All Day
- Takes in Carbon Dioxide at Night
- Stores as Malic Acid
- Daytime Photosynthesis releasing Oxygen

**Evolved for Arid Conditions  
Greatly Reduces Water  
Evaporation - up to 66%**



# This Is Only Possible Due To Over 110 Partners Including...

- Developers
- Utility Companies
- School Districts
- Municipalities
- Government Agencies
- Landscape Architects
- Planners
- Nurseries
- Landscapers
- Businesses
- Homeowners

*"Tucsonans Really Do Care About Their Desert"*

A silhouette of a Saguaro cactus stands on the left side of the image, set against a vibrant sunset sky. The sky transitions from a deep blue at the top to a bright orange and red near the horizon, with wispy clouds catching the low light. The cactus has several arms, some with small spines visible at the tips. The overall mood is peaceful and appreciative.

*Thank You...*

**Tucson Cactus & Succulent Society**  
**[www.TucsonCactus.org](http://www.TucsonCactus.org)**

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