



Automeris louisiana
Louisiana Eyed Silkmoth

Citizen Science Project April – August 2017

Jennifer Wilson, Project Leader

Report prepared by Peggy Romfh

Louisiana Eyed Silkmoth (LAESM)

- **Discovered in 1981 along LA coast**
- **Similar to IO Moth but more brownish and less spotted**
- **Wing Span: 2 1/2 - 3 1/2 inches**



LAESM photos courtesy of John Savell, FWS

Life Cycle



YUM!!



- Eggs laid on host plant.
- Cocoons spun around several leaf blades of Cordgrass about 6-12 inches above the ground.

Species of Concern **Sept. 2011**

- **Limited geographic range – extreme SE Texas to extreme SW Mississippi along coast**
- **Limited habitat – coastal saltmarsh**
 - **Smooth Cordgrass (*Spartina alterniflora*)**
 - **Sturdy Bulrush (*Bolboschoenus robustus*)**
- **Coastal wetland loss**
- **Hurricane devastation**
- **Massive mosquito spraying**



BAMONA: Populations should be monitored to determine impacts of wetland loss. Unable to assign rank due to lack of available information.

Storm Devastation and Wetland Losses



- Since 2000, 33 significant storms hit LA
- 2001 Allison
- 2005 Katrina
- 2005 Rita
- 2008 Ike
- 2008 Gustav
- 2017 Harvey



Wetland Losses:

**Texas: 5,700
acres/year
LA: 18,000
acres/year**

Hypothesis (Question):

- ***Does the LAESM still exist in its historic range and has it expanded its range along the central Gulf Coast where Smooth Cordgrass (larval host) is found?***
- **Project search areas:**
 - **4 parishes in LA**
 - **4 counties in TX**
 - **2 counties in MS**
 - **1 county in AL**
- **Overall Project Leader: John Savell, LA FWS**

Project – Search for LAESM in Texas Mid-Coast Refuges

- **Mid-Coast Project Leader: Jennifer Wilson, FWS**
- **TMN-COT Citizen Scientists**
 - **Oron Atkins**
 - **Herb Myers**
 - **Jo Myers**
 - **Larry Peterson**
 - **Peggy Romfh**
 - **Pete Romfh**
 - **George Valadez**



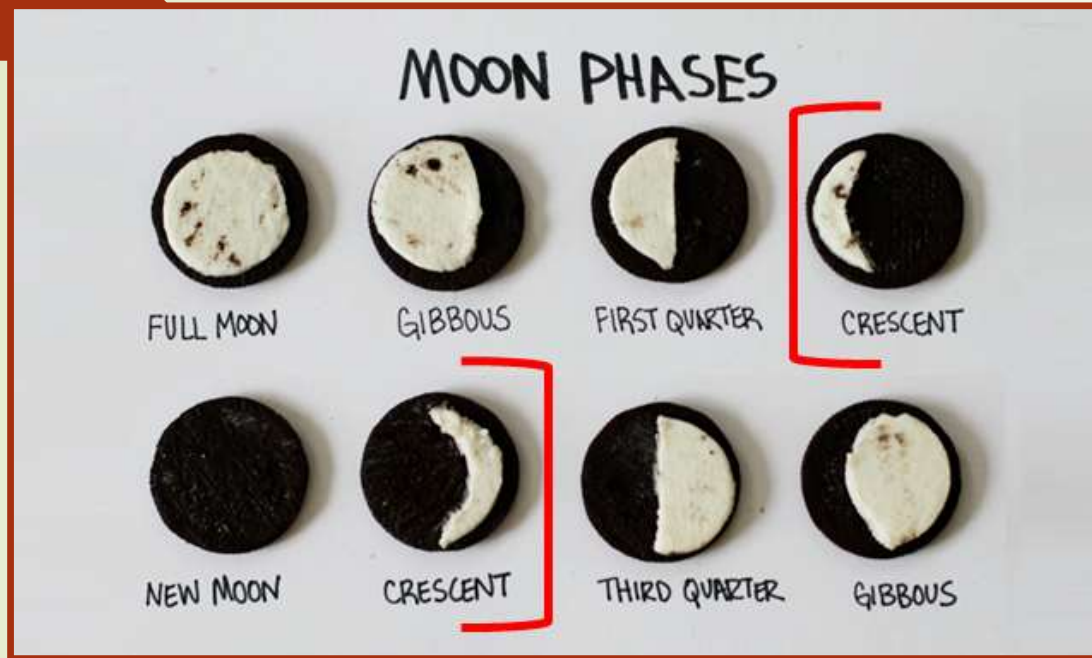
400 volunteer hours

Materials: Moth Trap



- ▶ **5 gal. pail with suspended UV light, reflective winged frame, and funnel into bucket trap**
- ▶ **Powered by battery ± solar backup**
- ▶ **Dark: UV light ON**
- ▶ **Daylight: UV light OFF**

Method: Set trap at new moon.



New Moons 2017
April 26
May 25
June 23
July 23
August 21

- **Set trap for 2 nights.**
- **Check trap in early a.m. each day**
- **Document date, habitat, species seen, life cycle stage, numbers.**

Trap Locations Texas Mid-Coast

BNWR

Rogers Pond

Crosstrails Pond

Weir Dam Road

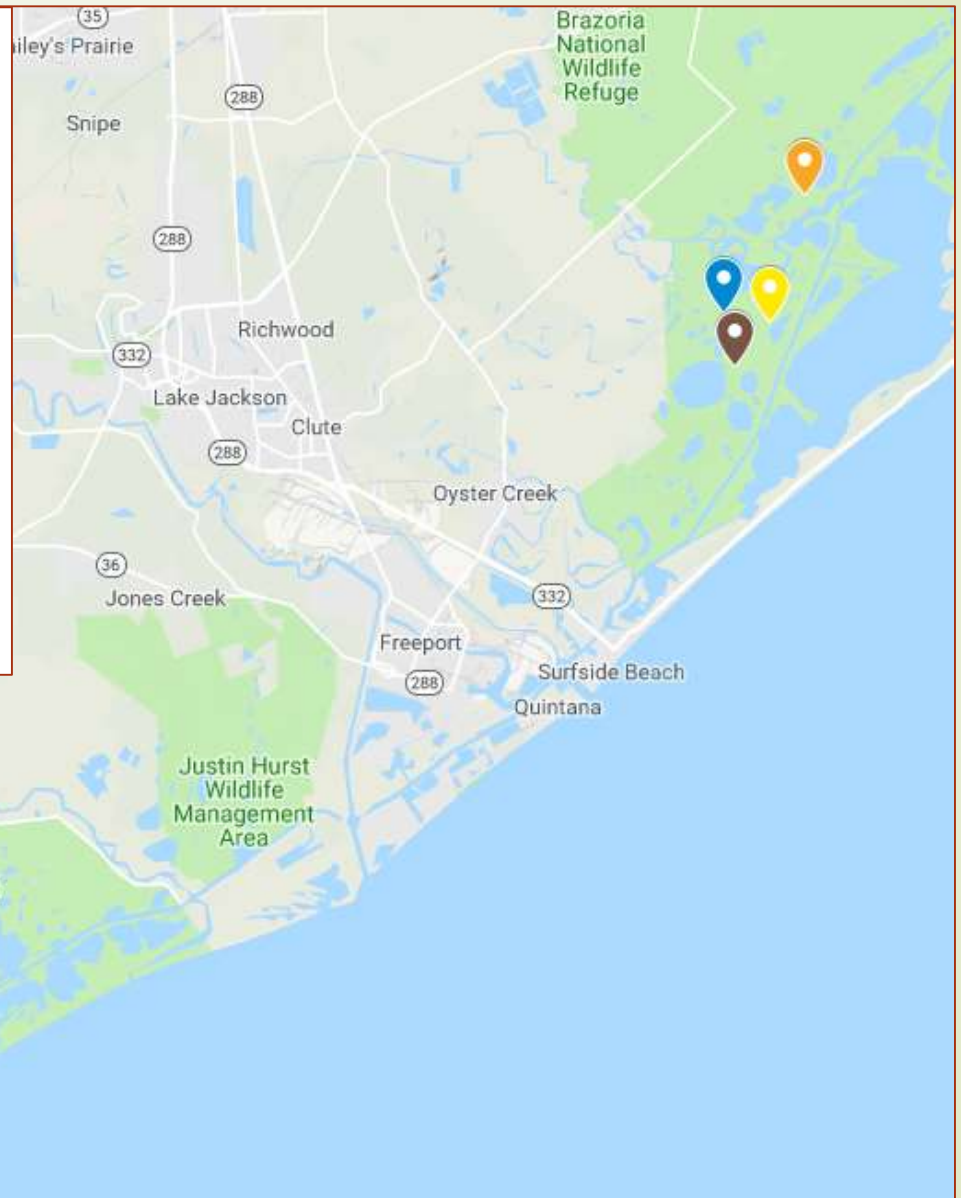
Alligator Marsh

SBNWR

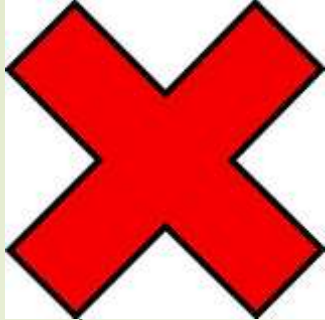
Cowtrap Levee

Sargent Unit

Sargent Unit



Project Results



➤ **BNWR, SBNWR, Alabama sites**



- **Texas: Jefferson County,
[Chambers County (Anahuac)]**
- **Louisiana: Cameron, Terrebone,
Lafourche, and Orleans Parishes**

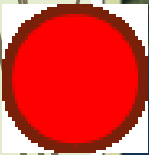


SUCCESSFUL

UNSUCCESSFUL

W. MS

Anahuac



Legend

La eyed silkmoth trap locations

Status

- Anahuac NWR Historic Record
- Larva
- Successful
- Unsuccessful

0 50 Miles

U.S. Fish & Wildlife Service makes every effort to represent the location of these traps as accurately and accurately as possible. Given the complexity and volume of the data, the USFWS does not warrant, expressed or implied, as to the accuracy, reliability, or completeness of these data. In addition, the USFWS does not have data for the number or percentage of the traps that are used and/or captured. Graphical representations provided to the user of this data do not represent any right, title, or interest in the land and are provided only for general information of the user.

Map courtesy John Savell, FWS

Project Results by Date

Month	All Project Traps Set	TMN-COT Traps Set	Moths Trapped
February	1 effort		X
March			
April	X	X	X
May	X	X	X
June	X	X	X
July	X	X	X
August	X	X	X
September	X	Hurricane	X

Flight: Three to four broods from February to early November.

Project Conclusions

- ***Presence of *A. louisiana*: Cited threats (hurricanes, limited range, chemical control of insect populations, coastal land loss, and habitat fragmentation) do not appear to be limiting factors at this time. [Savell]***
- **Habitat range: No habitat expansion beyond historic range (LA and extreme SE Texas and SW MS) was observed. During this four month study at seven sites in BNWR and SBNWR, *Automeris louisiana* was not seen.**

Project Post-notes

June 8,
2018

- No plans to repeat the study
- **Center for Biological Diversity** has re-petitioned FWS to remove LAESM from species of concern (along with 22 other species) to focus on about 30 other species of greater concern.
- Master naturalists role is critical to success.
- Results for Texas Mid-Coast pointed to biodiversity of species on the refuges and possibly local studies in the future of some of the non-target species seen.

Non-target Species



Moth trap bucket
4/27/18 Rogers Pond



Giant Water Bug
Lethocerus americanus

Non-target Species: Tiger Beetles



**Other Citizen
Science Projects:**

BugGuide

i-Naturalist



Non-target Species: Lady Beetles



**Other Citizen
Science Projects:
Lost Ladybug
*i-Naturalist***

Non-target Species: *Doryodes sp.* Moths



- *Doryodes* – DNA testing IP to ID species



Non-target Species: Other Moths



Meske's Pero Moth
(*Pero meskaria*) –
usually only found in
drier areas of SW

Non-target Species: Sphinx Moths



Carolina Sphinx
Manduca sexta
[Jennifer Wilson]



Five-spotted Hawkmoth
Manduca quinquemaculata
[Larry Peterson]

Non-target Species: Water Boatman



Citizen Science Project: LA Eyed Silkmoth

