Save the Sky Puppies Initiative-Bat lab

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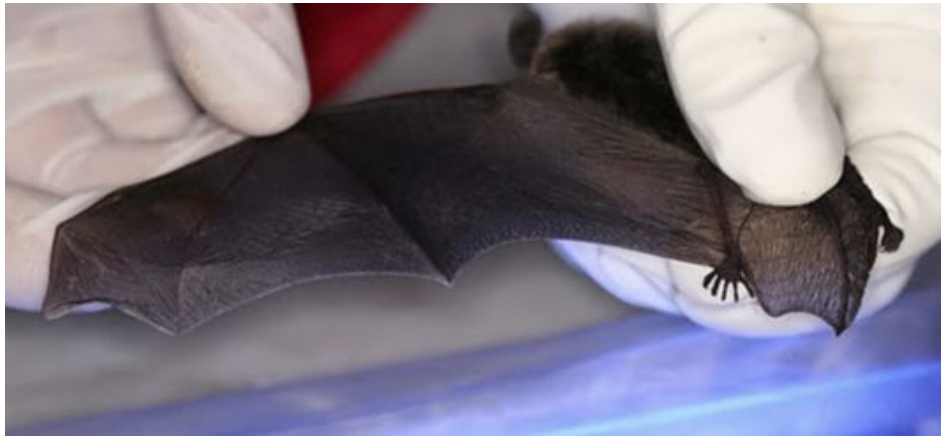
WNS

LBB w/ Confirmed WNS



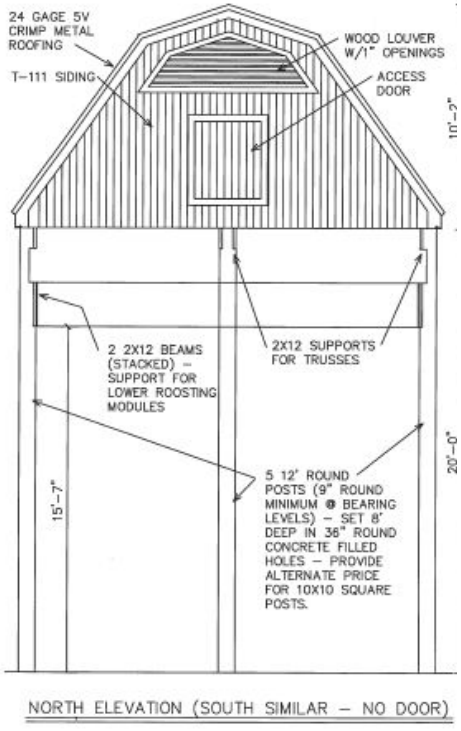
Healthy LBB

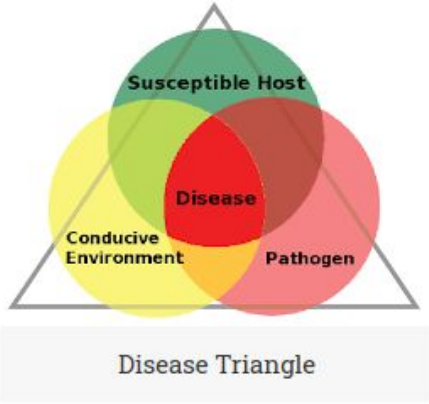
(Photos from U.S. Fish and Wildlife Service)

WNS

- U.S. Fish and Wildlife Service- in order to help bats survive we must make a change to the susceptible host (LBB), the conducive environment, or the pathogen itself
- Boyles and Willis (2010) stated that "it would be reckless to attempt an intervention that might prolong survival of affected bats **in the wild.**"
- Thus leading to our project of recreating a bat habitat, suitable for them year round
- Our Batlab will provide an opportunity to observe and test various variables in hopes of finding a way to decrease mortality of bats and/or reduce the spread of WNS

Bat Lab





Bat House/cave is modeled after UF bat houses in Florida/ Bat enclosures at zoos.

- The bat houses will have removable wood bottom to keep the bats in for testing the cures during hibernation.
- Within the bat house there will be a aerosolizer system to release antifungal agents into the bat house
- Outside enclosure surrounded by netting
- A place schools/programs could come to for field trips

Outside of bat Lab

Allowing area for the bats outside will create a more realistic bat environment.

Educational Outreach Component

- The general public is not fully aware of the impact decreases in bat populations have on the environment
- Bats are surviving by choosing to hibernate in homes (attics and basements) instead of infected caves
- We will develop educational materials that will be catered to school children as well as homeowners touting the benefits of having bats in the neighborhood
- We will also develop materials catered to farmers about the benefits of bats on crop production. Blueprints for effective bat houses will be provided to them to convince them to join the effort

Method

Description of Steps	**Time Frame (finished by)**
Gather materials/hire builders	April 2020
Cross-check blueprints	May 2020
Begin construction	May 2020
Gather bats exhibiting WNS	July 2020
Gather teachers and bat experts to develop an educational outreach program touting the benefits of bats	September 2020
Finish development of educational outreach program/begin implementation and fundraising	October 2020
Finish construction of initial enclosure/introduce bats to enclosure	Late September/ Early October 2020
Begin observations of bats pre-hibernation	October 2020 through early November (temp. dependent)
Bat hibernation begins	November 2020
Conduct observations/test variables	November 2020-March 2021
Final analysis of results	April 2021
Publish results/	April 2021

Budget

Items	# of items	Cost per item	Total cost
Wood for bat house	1 blueprint (from an existing design)	$50,000	50,000
Bat netting for enclosure	30’X30’	$42.00 per 10’X14’	37,800
Aerosolizer system for bat house	1	$500	500
Plants for enclosure	30	$15	450
Cave rocks	15	$10	150
Wooden beams (4X4)	8	$77	616
Grad students	2	$20,000	40,000
Enclosure upkeep	2 (employees)	$35,000	70,000
Temperature regulation system	1	$32	32
1 ES and 1 HS teacher - Consulting	2 teachers	$5,000	10,000
Bat scientists	1	$30,000	30,000
Licenses	2	$10	20
Thermal imaging cameras	2	$500	1000
Total overall cost			$240,568