

Mid Atlantic Mosquito Control Association

2013 Conference Notes

Losing an Ally: White Nose Syndrome is Killing Our Bats - Mary Bunch

- a) How are bats an ally?
 - i) Mosquito control - not really
 - ii) Agricultural pest control
 - iii) Keystone species in some cave systems
- b) Bat dietary info comes primarily from examining guano
 - i) There are keys for ID to group
 - ii) 1996 study
- c) What is WNS?
 - i) Fungal disease of hibernating bats
 - (1) First found in bats in 2006 in New York State
 - (2) Die offs began in 2007
 - (a) High mortality associated with WNS
 - (b) Emerge early from hibernacula and die
 - (3) Fungus damages wing membrane
 - (4) Causes water loss
 - (5) Affected bats are emaciated
 - (6) Does not grow on active bats
 - ii) Caused by *Geomyces destructans*
 - (1) Named in 2009
 - (2) New to science
 - (3) Spores survive year round
 - (4) Skin fungus
 - (5) Optimum growth range is 54-60 degrees
 - iii) Species affected
 - (1) Big brown bat
 - (2) Eastern small-footed
 - (3) Gray bat
 - (4) Indiana
 - (5) Little brown
 - (6) Northern long-eared
 - (7) Tri-colored
 - (8) Non-hibernating bats are not affected
 - (9) Some species get the fungus but do not die
 - iv) Smaller bats appear to be more vulnerable
 - v) There appears to be a reproductive reduction
- d) Found in Europe but does not appear to kill bats
- e) Emerging disease in the US
 - i) Rapid spread
 - ii) Now found in Georgia
- f) Why is this important?
 - i) Many of these species are endangered
 - ii) Bats reduce crop damage

- iii) Will likely be a bottleneck effect on bat genetics
- g) whitenosesyndrome.org