

MONITORING BATS FOR WHITE- NOSED SYNDROME IN COLORADO: ON THE GROUND EFFORTS

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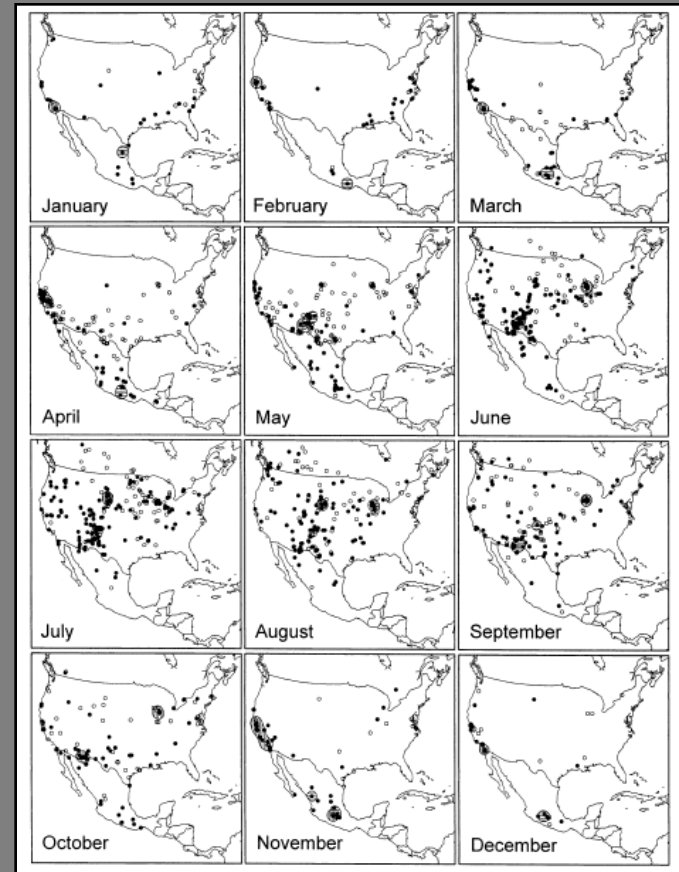
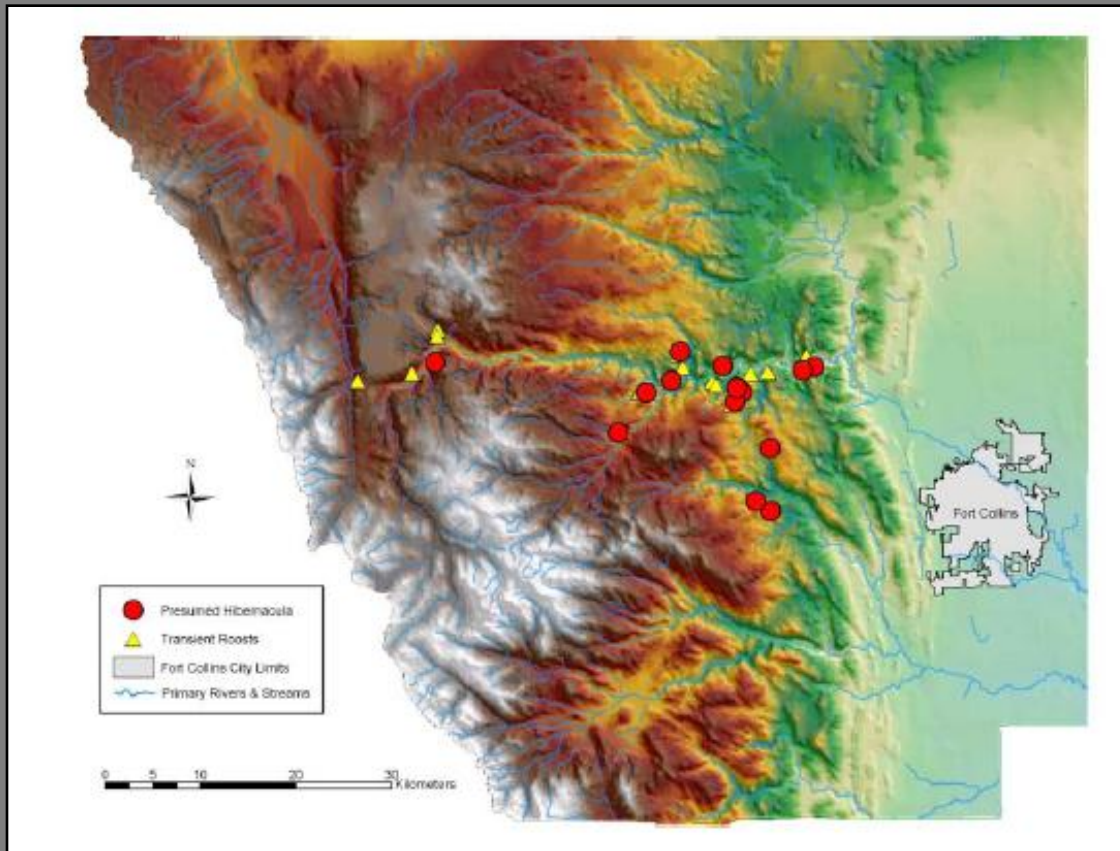
Important Questions Relating to WNS

- Where are Colorado bats roosting in the winter?
- How many bats are using caves and mines during this season?
- Can we expect bat activity/movements during winter months?

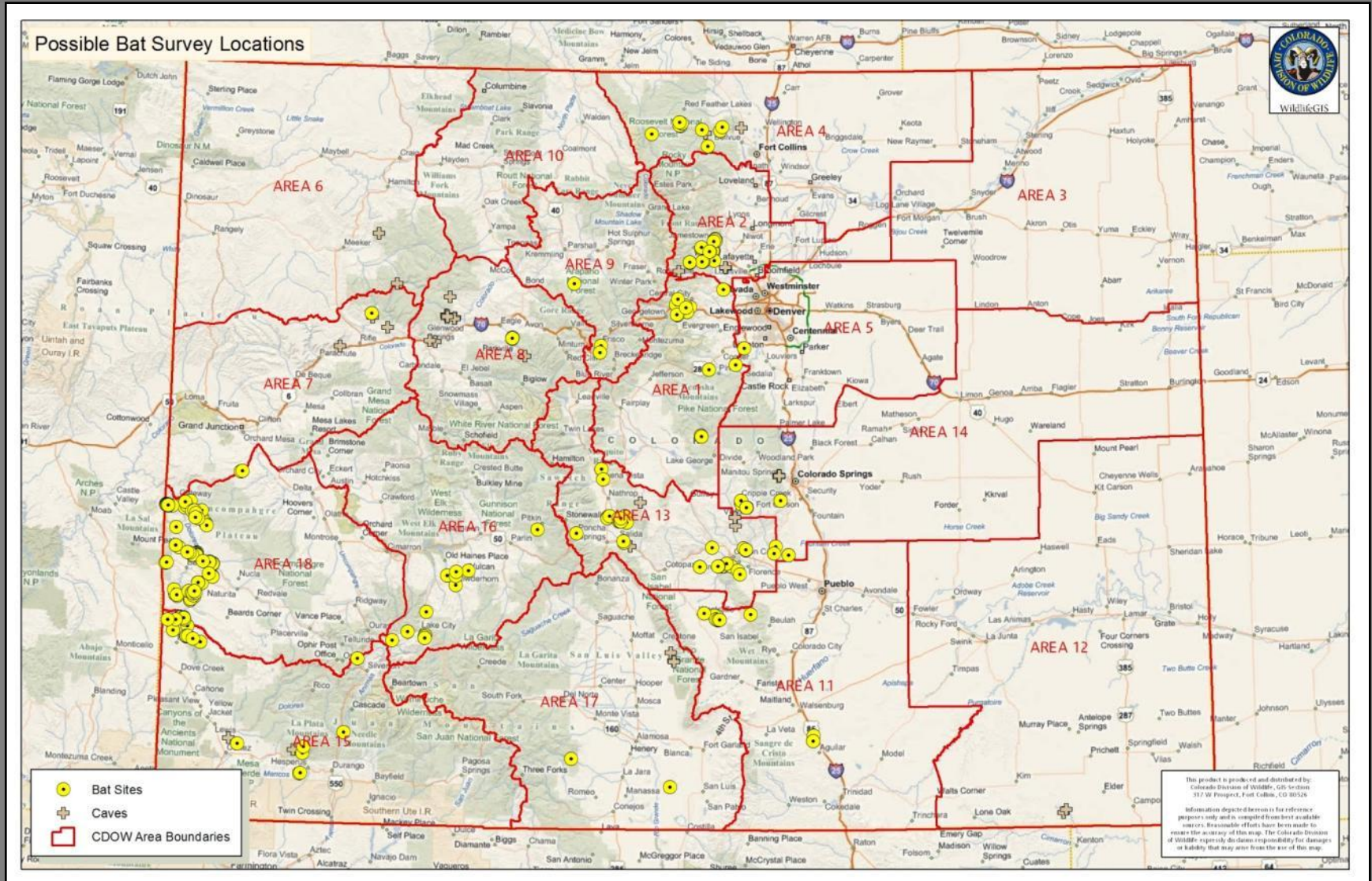
Need for baseline data!!!

Migration Patterns of CO Bats

- Long distance seasonal migrations of tree bats (Cryan 2003)
- Short distance migrations in elevation (Neubaum et al. 2006, Ingersoll et al. 2011)

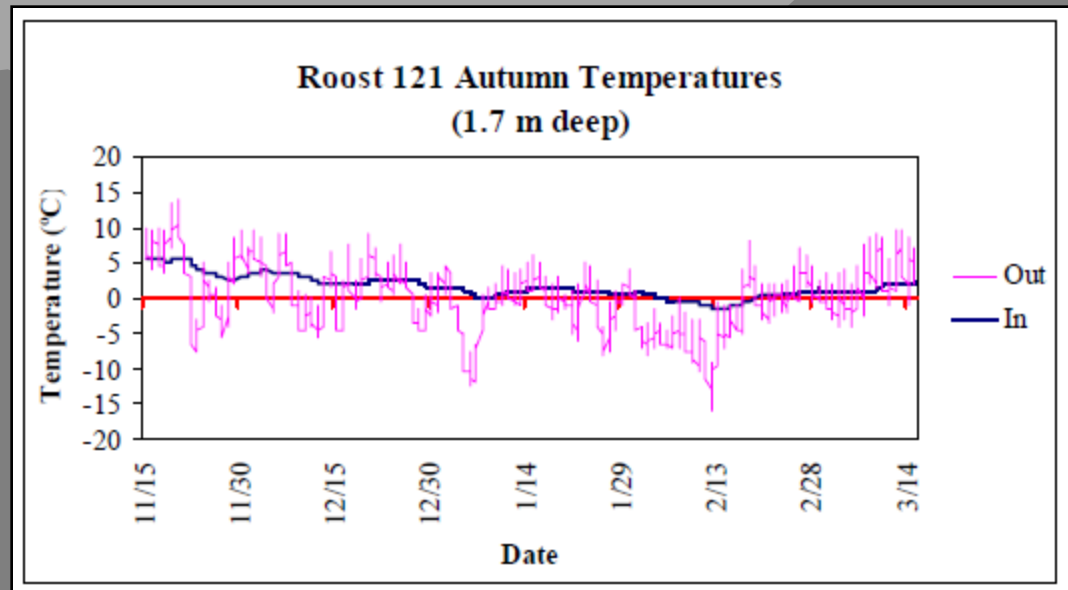


Potential Cave & Mine Sites



Internal Methods

- Temperature/Humidity Dataloggers
- Bat Counts
- Soil Samples

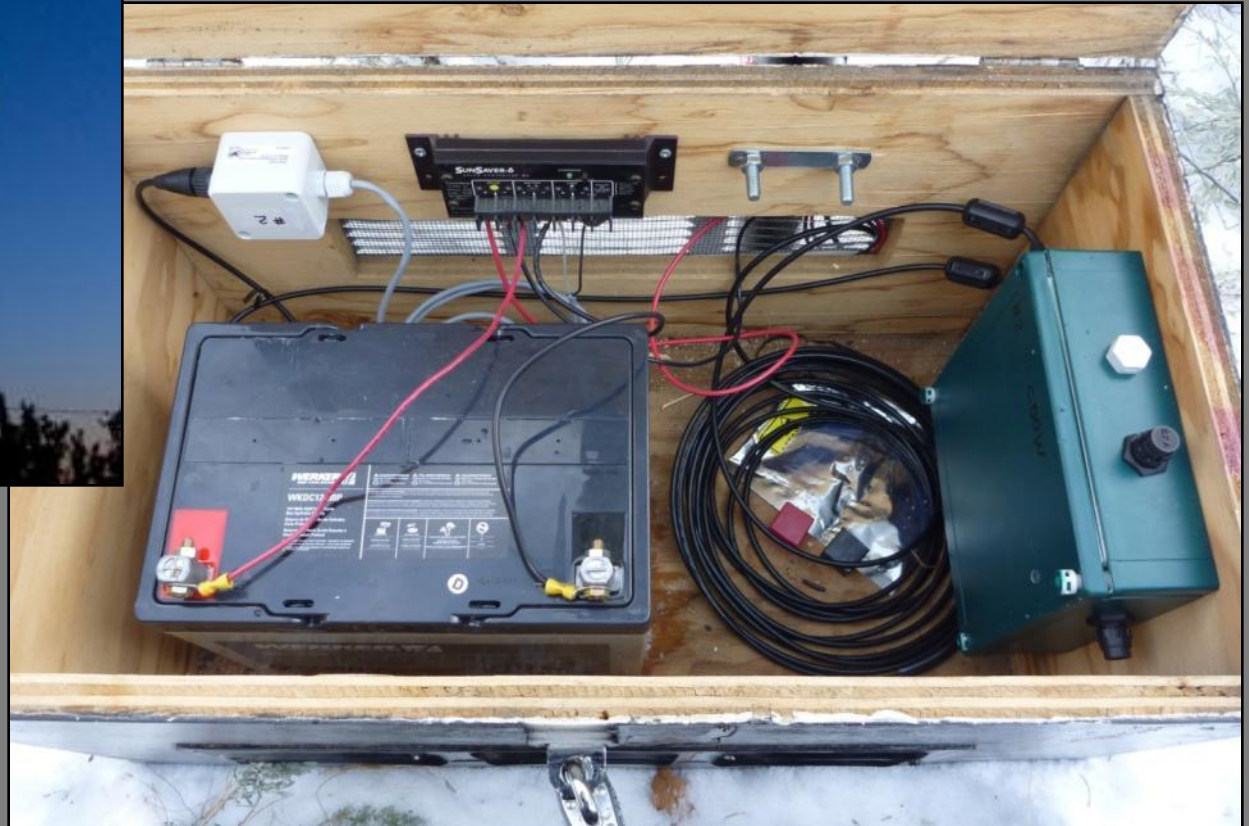


External Methods

- Portal Visits
- Acoustic Detectors



Acoustic Detectors



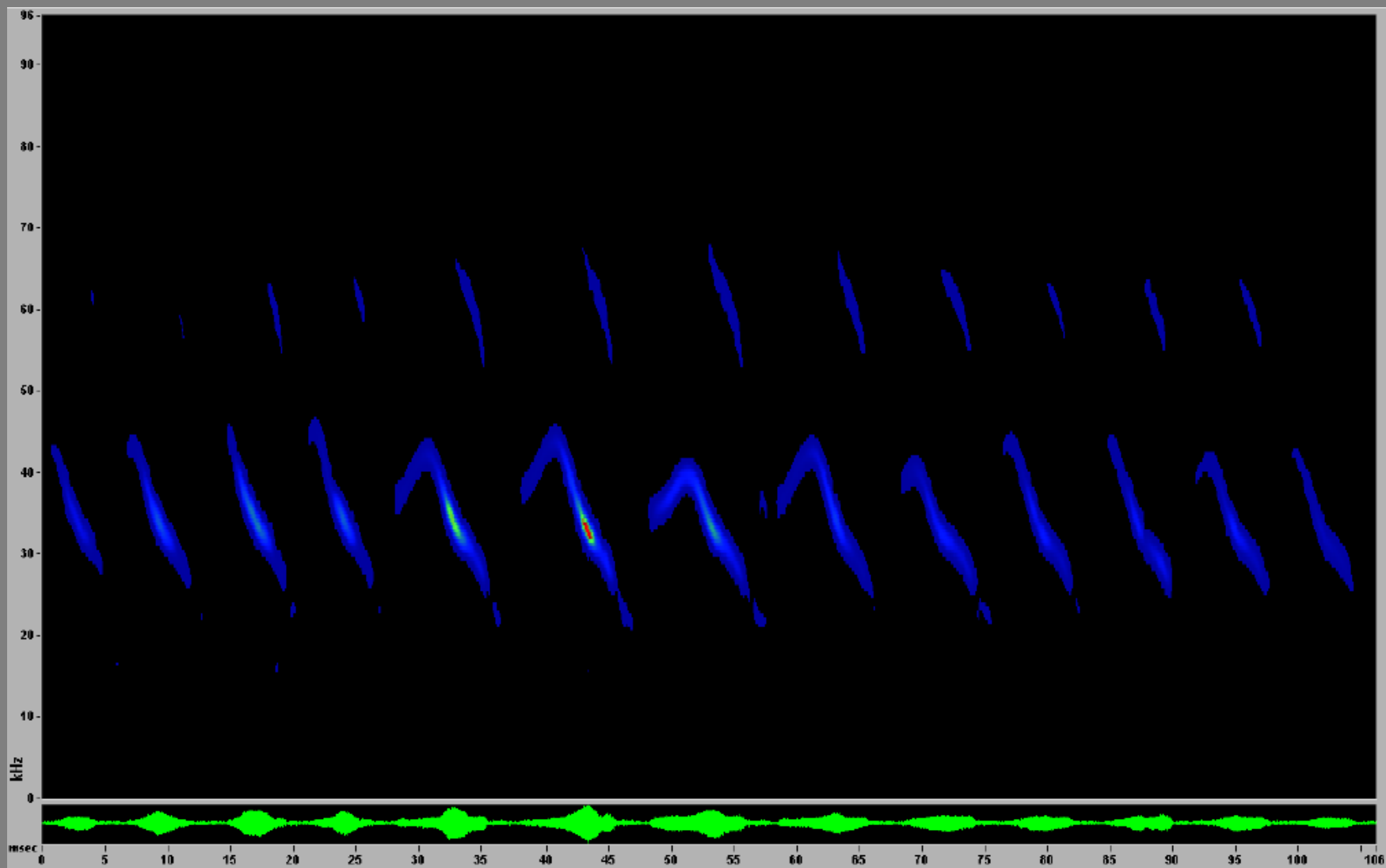
Summary of Findings So Far

- 83 sites, 8 of which are caves, have been visited externally (**No bat mortalities or suspicious behavior were documented during Tier 3 surveys**)
- 8 Caves have been internally surveyed with relatively low numbers of torpid bats documented

Results from Acoustic Detectors

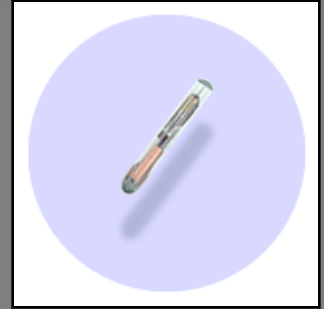
- 25 Acoustic detectors were deployed starting in late January
- Over 200 Gigs of data
- Still processing this data
- Calls identified to species during every month detectors were deployed suggesting some winter activity can be expected
- Wind, rain, etc. create many noise files

Sonogram of Townsend's big-eared bat



Future Work

- Marking individuals at known summer roosts and looking for them at winter roosts to confirm movements
- Radiotracking other species to determine winter roost sites.
- Swarming documentation



How Can Cavers Aid This Effort?

- Assisting with CDOW cave surveys as trip leaders
- Survey nonrestricted caves
- Submission of anecdotal information about bat use in caves
- DOW can provide training sessions on detecting “signs of bat use”

Acknowledgements

- Colorado Caving Survey
- Colorado Grottos
- US Forest Service
- Bureau of Land Management

