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Marsha A Sovada
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01/24/2006 04:27 PM CST

To: elizabeth_madden@fws.gov
cc: Pamela J Pietz <pam_pietz@usgs.gov>
bcc:
Subject: Re: pelican WNV information for Greg Johnson

Beth

Ross only sent 24 birds to the health lab, which surprised Pam and I as we expected a larger sample. West Nile was first detected in a bird collected on 18 July. Of 15 birds collected between 18 July and 16 August, 13 were positive. None of the 9 birds collected between 23 June and 7 July were positive. Please be sure that this is cited as unpublished data (NPWRC).

Marsha

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01/23/2006 04:30 PM

To marsha_sovada@usgs.gov
cc pam_pietz@usgs.gov
Subject pelican WNV information for Greg Johnson

Marsha,

Greg Johnson (MSU) and his grad student have been patiently waiting for the summary of WNV results for Med Lake this past summer. I had told her we would have the info after the pelican mtg. Are the Med Lake results summarized yet in any meaningful way? They (and we) would like some general stuff like numbers tested, numbers that tested positive, dates of testing, date sof positives, etc....to track the virus in reference to their work. I hope it is possible for us to get this....

Thanks, Beth

Kristina Hale <allegon20876@yahoo.com>
01/23/2006 11:07 AM PST

To: elizabeth_madden@fws.gov

American White Pelican Workshop
January 10-11, 2006
Northern Prairie Wildlife Research Center
Jamestown, North Dakota

Guidance for participants: Please bring to the workshop any information you have that relates to the “colony-specific” or broader “discussion” topics listed below. We ask that participants with data on monitoring and research activities at specific pelican colonies be prepared to summarize available information for the group.

COLONY-SPECIFIC SUMMARIES

- History of monitoring at the colony: What information is available?

- Nest numbers over time: How counted? When?

On-the-ground colonial nesting surveys are conducted in late May or early June while the nests are active. For pelicans, each depression with eggs, young or egg remains is counted. Surveys or visual estimates have been done on Lake Bowdoin almost every year since the Refuge was established in 1936. Nest numbers have fluctuated quite a bit depending on water and nest habitat availability. When water levels are high, space becomes very limited on the already small nesting islands but when water levels are extremely low, the largest of these islands becomes a peninsula and the pelicans tend to abandon it as nesting habitat. The highest recorded nest count was 2,882 in 1993 and the lowest was 316 in 2004.

- Productivity estimates: How determined?

I'm not aware of any productivity studies or estimates that have been done for the Lake Bowdoin nesting population.

- Monitoring of disease and other mortality factors?

- Necropsies performed? **See below**
 - Disease test results? **See below**
 - Estimated losses?

In early August of 2003, a sudden die-off of pelicans was observed on Lake Bowdoin. Fifty-six pelican carcasses were collected between August 01 and September 25, 2003. Approximately 70% of the victims were young of the year. Three pelican carcasses were sent to the Nat'l Wildlife Health Center. All three tested positive for West Nile Virus (WNV) and one also tested positive for avian botulism. 2003 was the first year that WNV was recorded in this area. Previously, small numbers of dead pelicans would be observed during avian botulism outbreaks but no pelican carcasses were sent in for testing. Only one dead pelican was collected during the 2004 disease monitoring season. In 2005, 91 pelican carcasses were collected on Lake Bowdoin. 71 (4 adults, 67 young of the year) of these were suspected victims of a baseball-sized hailstorm which hit the lake in the first week of July. All were found on the nesting islands. The other 20 birds were picked up

during weekly disease monitoring activities (along with 30 ducks and 13 “other” species). One pelican and two ducks were sent to the Wildlife Health Center. The pelican tested positive for avian botulism, one of the ducks tested positive for avian tuberculosis and the second duck died from trauma. All three were negative for WNV.

In 1992, 175 dead pelicans were collected on Lake Bowdoin. The biologist suspected Newcastle’s Disease, but no testing was done to verify the cause of the die-off. Another sudden die-off of pelicans occurred in late August/early September of 1993 when 64 birds (mostly on Woody Island) were found dead. The carcasses were piled and burned and no specimens were sent in to the Wildlife Health Center. 1992 and 1993 saw some of the highest nest numbers for pelicans in Bowdoin’s documented history.

- Banding – USFWS bands, color bands, other markers:
 - How many deployed? On what age group? When?

I’m not aware of any pelican banding at Lake Bowdoin.

- Records of band returns? At what ages? Locations?

A dead pelican possessing leg band number 0619-28218 was collected on Lake Bowdoin in late August of 1998. The bird had been banded by David Genter of the Montana Natural Heritage Program approximately 7 miles east of Winston, MT when it was too young to fly (is there a breeding population on or near Canyon Ferry?)

- Documentation of disturbances (e.g., human, predator)

In 2002 and 2003, water levels were low enough that the largest pelican nesting island (Woody Island) became a peninsula. The colonial nesters abandoned this site probably due to its accessibility to predators such as coyotes and raccoons. Even though the island was surrounded by water again by the spring of 2004, pelicans did not return to nest on this site until 2005 and then the birds only utilized a small point of the island farthest from mainland.

To keep human disturbance at a minimum, Refuge staff is careful to avoid the colonial nesting islands except for a few hours during the nesting season to count nests. During this time, staff have observed some depredation of pelican eggs and young by gulls.

- Description of nesting habitat:
 - Nesting substrate, vegetation types/heights

Pelican Islands - man-made islands consisting of a rock/boulder base and covered with loose, sandy soil and fine gravel. Some low vegetation (mostly kochia) grows around the edges of these two islands and this is where the gulls usually nest. Some taller weeds will emerge amongst the large rocks where the cormorants and great-blue herons nest after the nesting season is over. The upper, sandy portions of the islands are heavily utilized by pelicans into the fall so very little vegetation ever gets established there.

dried eggshell weight and thickness of eggshell including membranes. The document does not have a date.

- When?
- Results?

There is no background documentation, conclusions or comparisons included.

Appears to be an isolated data collection. (Are you aware of any wider-range study this may be part of?)

DISCUSSION TOPICS

Population dynamics

- What do we know about the northern plains breeding population?
 - What population trends are evident?
 - Is there evidence of a metapopulation (e.g., use of non-natal colonies for breeding; interchange of adults among breeding colonies)?
 - Can we differentiate between growth and immigration (or mortality and emigration) at surveyed colonies?
 - Can population changes be attributed to specific causes?

Habitat

- Nesting habitat availability (e.g., effects of water-level changes)
- Foraging habitat availability
 - Wet/dry cycles in prairie potholes
 - Wetland drainage
 - Creation of reservoirs and other permanent water bodies

Food resources

- What are the pelicans eating?
- What are the sources of diet information? (e.g., geographic locations, years, methods and timing of data collection, sample sizes)
- Is there evidence for variability in diet within or among years? Any evidence of cyclical patterns or long-term change?
- What influences food availability? (e.g., how do natural food-web interactions and human activities affect prey abundance or accessibility?)
 - Abundance of prey, as affected by . . .
 - Water levels (e.g., wet/dry cycles or human induced)
 - Water quality (e.g., siltation, nutrient loading)
 - Contaminants (e.g., do agricultural chemicals affect salamanders?)
 - Fisheries (e.g., stocking game fish; rearing fry)
 - Bait fish industry (producing and trapping in wetlands)
 - Accessibility of prey, as affected by . . .
 - Water levels (e.g., wet/dry cycles or human induced)
 - Diurnal movements of prey

- Is there evidence that food can limit reproductive success in the northern plains?

Weather

- Acute, e.g., . . .
 - Hail (killing adults or young, destroying nests)
 - Cyclonic or gale-force winds (killing crèched chicks)
- Chronic, e.g., . . .
 - Persistently cold, rainy weather (especially during early crèche stage, when chicks are more vulnerable to exposure)
 - Hot/humid microclimate (e.g., amid thick ground vegetation; may exacerbate pouch-lice infestations?)
 - Conditions for production/transmission of diseases (e.g., WNV mosquito, botulism)

Diseases/Parasites

- Ectoparasites, endoparasites
- Botulism, salmonella
- Newcastle's disease
- West Nile virus

Disturbance

- At breeding colonies
 - Predators (e.g., mammalian, avian)
 - Humans (e.g., bird-watching/tourism, fishing, research/management, overflights)
- At foraging areas
 - Recreation boating, fishing
 - Commercial fishing operations (e.g., bait-fish trapping)

Interactions with other species

- Predation on eggs, chicks, or adults
- Competition for nesting space?
- Disease transmission? (e.g., at mixed-species nesting colonies)

Environmental contaminants

- Have contaminants been detected in eggs, chicks, adults, nesting substrate, or food resources?
- Have levels of specific contaminants changed over time?
- Is there evidence for reproductive impacts from contaminants?

Wintering grounds

- Potential effects on breeding population size
 - Food availability
 - Mortality factors