

OFFICE OF FISH AND WILDLIFE HEALTH AND FORENSICS

MONTHLY REPORT

October 2023

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Two new seasonal employees have recently been hired to assist with the activities of the Fish & Wildlife Health & Forensics Laboratory including the forthcoming Fish Health Inspection at the Pequest Trout Hatchery. Laboratory infrastructure and equipment has been serviced (fume hood and Zeiss microscope) or is pending service (Millipore De-ionized Water Unit).

FISH AND WILDLIFE HEALTH PROJECT (FW-69-R20)

Diagnosis of Diseases in Freshwater Fish (Job F-1)

Fish Health Inspection of the Pequest Trout Hatchery

No activity, although there have been discussions concerning the application of environmental DNA for the detection of salmonid pathogens at the Pequest Hatchery.

Diagnosis and Research of Diseases in Marine Fish (Job F-2)

No activity

Non-Project Activities

Tautog Morbidity & Mortality, James J. Howard Marine Sciences Laboratory, NOAA, Sandy Hook, NJ

The OFWHF was contacted by personnel from the James J. Howard Marine Sciences Lab concerning an increased mortality in cultured tautog fry that were progeny of wild broodstock obtained from Massachusetts. A site visit on August 10 revealed that a significant percentage of the juvenile population exhibited a spinning or whirling behavior prior to mortality. Samples were collected for histopathological examination or frozen for future isolation and detection of pathogens as necessary. Histopathological examination is pending. In addition, 12 sexually mature males and 12 sexually mature females previously used as broodstock were submitted to the OFWHF on August 21 and necropsied on August 22. Similarly, a subset of samples was collected for histopathological examination and a subset of samples were frozen for future detection of potential pathogens as necessary. The histopathological examination of the broodstock is also pending.

Update: Additional moribund juvenile tautog were submitted to the laboratory for examination. Cytological examination of live juvenile fish did not reveal external pathogens. Histological results from the current samples are pending. There was also a meeting with personnel from the NOAA Lab to further discuss the husbandry conditions and to consider various etiologies. Molecular diagnostics were recommended for viral pathogens and is pending.

Hirudinid Infection of Hard Clams in Strathmere

The Nacote Creek Marine Fisheries/Shellfisheries Research Station contacted the OFWHF concerning the report of a private citizen that noticed leeches in hard clams from the bayside of Strathmere, New Jersey.

Samples were collected and submitted to the OFWHF and were subsequently transferred to Dr. Daniel Shain at Rutgers Camden for a definitive identification. Results are pending.

Wildlife Disease Surveillance and Investigations (Job W-1) and Wildlife Toxicology

Epizootic Hemorrhagic Disease

EHD has not currently been detected, although the results from a deer that was dispatched by a farmer in East Brunswick are pending (see below). Discussion with Dr. Mark Ruder from the Southeastern Wildlife Disease Cooperative indicated that this was generally a mild year for EHD in the eastern United States.

CWD Surveillance

CWD surveillance recently began with approximately 35 samples collected to date. Surveillance will continue until late December.

Deer from East Brunswick, New Jersey (October 3)

A deer with neurological signs and oral foaming was dispatched by a farmer in east Brunswick on October 2 and subsequently submitted for necropsy. The deer was negative for rabies and testing for EHD by the SWDC is pending.

Deer Health Questions

The OFWHF was contacted for opinions/advice on deer health issues as follows:

- emaciated deer with a hanging tongue in Hillsborough, New Jersey (October 3);
- possible split hoof in a deer (October 10); and
- emaciated, lethargic deer in Sussex County (October 20).

Wildlife Forensics

The OFWHF was contacted by CPO Brice Paey on October 15 concerning a heart and (attached) section of lung with red hepatization that was found on the driveway of a private residence in Lambertville, New Jersey. The organs were assumed to be wildlife based on the forwarded images; this was also the opinion of the Medical Examiner.

Non-Project Activities

Eastern Box Turtle Mortality, Gloucester County & Estell Manor

Four dead Eastern Box Turtles from a population of 10 that occurred near a small pond on a private site in Gloucester County were collected by William Pitts (NJDEP Endangered Species). The animals were necropsied on August 4, 2023. An additional live turtle from this population was transported to the Mercer County Wildlife Center for rehabilitation, but subsequently died and was refrigerated for future examination. The latter turtle and a separate moribund turtle from private property adjacent to the Winslow WMA that was euthanatized were necropsied on August 8. Gross examination turtles revealed a stomatoglossitis suggestive of a ranaviral or herpesviral etiology. Histopathological examination of the four turtles necropsied on August 4 revealed multifocal lesions consistent with ranaviral infections that was corroborated by molecular diagnostics performed at the University of Illinois. Specifically, the

molecular diagnostics revealed that the turtles were positive for ranavirus and *Mycoplasma*, whereas one turtle was positive for herpesvirus. Histopathological examination of the final two turtles is pending.

Update: Molecular diagnostics at Washington State University confirmed that the ranavirus was consistent with Frog-Virus 3 (FV-3). Sequencing of the isolates is pending.

Red-Tailed Hawk Necropsies (October 13, 2023)

Three red-tailed hawks from The Raptor Trust were submitted for necropsy. Gross findings were absent or non-specific and histological examination is pending. The liver of one hawk was submitted for rodenticide testing as per the request of the submitter.

Cooper's Hawk Necropsy (October 17, 2023)

A Cooper's hawk from Warren County was found roadside and submitted for necropsy. The bird was emaciated with internal fragmentation of the liver and oropharyngeal, pulmonary and coelomic hemorrhage. The presumptive diagnosis was trauma; histological examination is pending.