


# Cornell Wildlife Health Lab Annual Report 2016-2017

Promoting the health and sustainability of wildlife populations through integration of wildlife ecology and veterinary medicine.







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## ADMINISTRATIVE SUMMARY

The New York State Cooperative Wildlife Health Program (WHP) is a partnership between the New York State Department of Environmental Conservation (NYSDEC) and Cornell University's Wildlife Health Lab (CWHL) within the College of Veterinary Medicine's Animal Health Diagnostic Center (AHDC). We work to safeguard the long-term health of New York State's wildlife populations. Our laboratories in Albany and Ithaca conduct surveillance, research, staff training, data analysis, and other activities to support NYSDEC's mission. We maintain strong relationships with partners in human and domestic animal health to address issues common to all under the One Health philosophy.

The WHP concluded five years of formal operation in March 2016. The Cornell contract and supporting Federal Aid in Wildlife Restoration grant were successfully renewed in 2016 after a nearly 2 year long process. The contract renewal for April 2016-2021 was initiated in December 2014, but due to conflicts and processing lags complicated by administrative turnover in both organizations, it was not completed and approved until August 8, 2016. A program review and planning session was held in Albany on December 2, 2016, and work planning for the 2017-2018 fiscal year was completed in March 2017.

The new contract supports two additional staff at the CWHL: our geospatial analyst, Nick Hollingshead, and board certified veterinary pathologist, Maria Forzan, who most recently worked for the Canadian Wildlife Health Cooperative at Atlantic Veterinary College. As part of a strategic initiative at the Cornell College of Veterinary Medicine, the CWHL will be designated an independent lab unit and will develop additional specialized wildlife testing.

The Wildlife Health Unit staff is located at the Wildlife Resources Center in Delmar. Joe Okoniewski, Biologist 1 and long-time wildlife disease specialist, announced plans for retirement expected in June 2017. He performs the majority of the wildlife necropsies at the facility and contributes decades of expertise to the WHP. A position description for a research scientist has been created and we request expedience in filling this critical role. Kevin Hynes currently serves a dual role as wildlife disease biologist and manager of the Wildlife Resources Center which houses the Wildlife Health Unit Lab. To devote more time to gross necropsy when Joe Okoniewski retires, Kevin will delegate as many routine facility management tasks as possible to a new office assistant. John Shea and Ashley Ableman joined the staff as Fish and Wildlife Technicians, and Ellen O'Malley is recently added administrative support (seasonal Office Assistant). There is still a critical need for a dedicated Wildlife Resources Center building manager.

In addition to the contract renewal, major accomplishments include examination of over 1100 cases; development of a website for improved access to case data, training materials and disease information; multiple workshops for staff training; and action on an interagency chronic wasting disease risk minimization plan. This report is a summary of these WHP activities from April 1, 2016 to March 31, 2017, in fulfillment of the contractual agreement between NYSDEC and the AHDC. An organizational chart and list of current Wildlife Health Team members is in Appendix A. The Wildlife Health Program work plan for 2016-17 and proposed plan for 2017-18 are attached in Appendix B.





## HEALTH AND DISEASE SURVEILLANCE

The WHP conducts continuous opportunistic disease surveillance to establish disease patterns and detect new and emerging threats that can impact wildlife, human, and domestic animal health. In 2011, our first full year of operation, we received 600 cases. In the past two years, the caseload has stabilized at approximately 1200 animals. Our necropsy laboratories handled 1,135 wildlife cases between January and December 2016. Standardized diagnosis coding was completed for all of the cases submitted since 2011, allowing for analysis of nearly 6,000 mortalities by species, geographic area and time of year.

The use of digital tools has improved data collection and communication. Our online case submission system, first implemented in 2015, has streamlined processes and information sharing from field staff. In March 2017, we launched a website for NYSDEC staff to access to real-time case data, disease information, analytics, and mapping tools. The WHU has recently purchased a digital x-ray machine to facilitate screening for gunshot and ingested metallic fragments. The equipment was delivered to the Wildlife

Resources Center and staff are expected to be trained and operating it by mid-May 2017. The x-ray system is portable so it can be used off-site, but it will mostly be used in the WHU Biosafety Room at the WRC. All specimens suspected of being shot or species potentially ingesting bullet fragments or fishing tackle will be radiographed prior to necropsy.

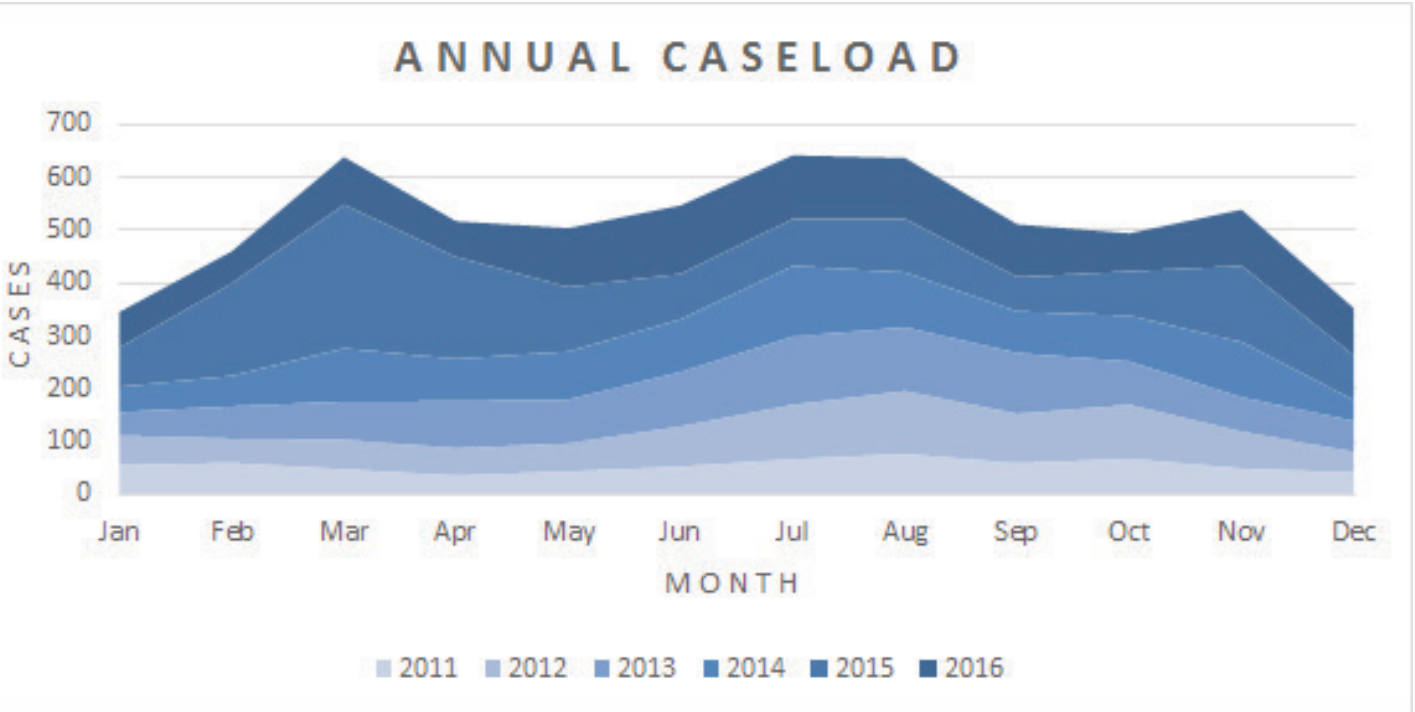
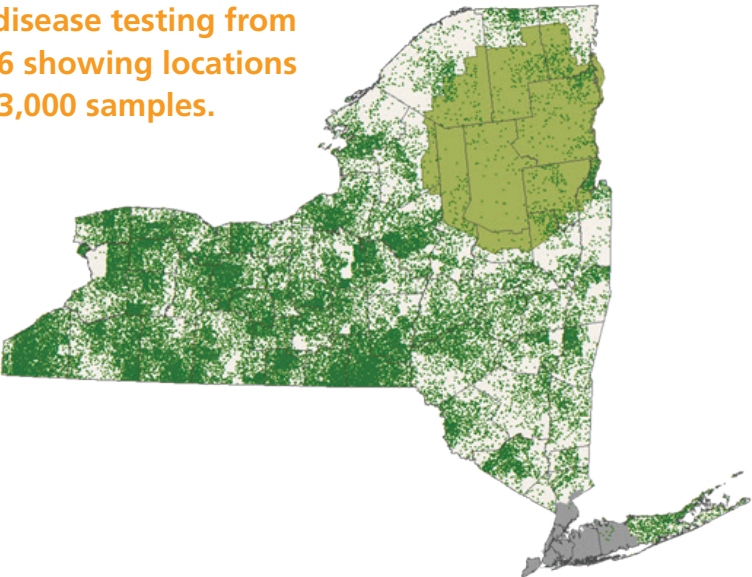
Kevin Hynes continues to offer forensic necropsy services and forensic evidence sample collection training to NYSDEC Environmental Conservation Officers, local USFWS Special Agents, and NYCDEP Police. Thirty-eight forensic necropsies were performed in FY 2016-2017 on 14 species. The WHU also designed and assembled 240 Specimen Collection Kits for distribution to Environmental Conservation Officers (ECO) to facilitate dead wildlife collection and submission from this group. ECOs are often the first NYSDEC personnel to respond to calls from the public about sick or injured wildlife, especially outside of normal business hours. This kit contains Personal Protective Equipment (gloves, face shield, boot covers) and various sized specimen bags enabling ECOs to collect specimens as small as

salamanders and as large as deer and bear. We have seen an increase in specimens submitted from this group using materials supplied with the kits.

A new, board-certified veterinary pathologist with a special interest in wildlife was formally hired as director of the Cornell Duck Laboratory in Eastport, Long Island, a satellite of the AHDC, in mid-2016. This pathologist (Gavin Hitchener) is assisting with deer necropsies and CWD testing from Region 1. Access to pathology services in this area reduces the time and resources for Region 1 BOW staff to submit cases to the WHP.

Testing for CWD remains a high-priority for disease surveillance. In 2016-17 sampling year we tested 2,596 hunter-harvested deer. We had 93 meat processors and taxidermists participate in collection of heads and lymph node samples. Since 2002, NYSDEC has tested over 47,000 wild white-tailed deer for CWD, with no additional detections since the single outbreak in Oneida County in 2005.

New York State chronic wasting disease testing from 2011-2016 showing locations of over 13,000 samples.



# EMERGING DISEASE ISSUES

## Black Bear Mange

In 2016, 32 black bears were submitted to the WHP. Mange was the second leading cause of death for black bears, behind trauma. Bears with mange also had a higher likelihood of being involved in a nuisance complaint than unaffected bears. Mange cases in black bears have been reported since 1970 but are increasing in frequency in recent years. Clinical signs of mange in black bears are primarily alopecia, which can reach 50 to 90% of the body area, and poor body condition. *Sarcoptes scabiei* appears to be the primary pathogen in PA and NY bears, but the program is examining the genetics of the mite to determine if there are subspecies that are specific to bear.

















