

**SOUTHEASTERN ASSOCIATION OF FISH AND WILDLIFE AGENCIES  
WILDLIFE RESOURCES COMMITTEE  
Cervid Working Group Report  
July 14, 2021**

**Meeting Convened:** July 14, 09:30 EDT

**Chaired by:** Charles Ruth, SC. Thank you to Gabe Jenkins, KY for organizing and refereeing the virtual meeting. Thank you to Katie Martin, VA for taking the meeting minutes.

**Cervid Working Group Members Attending:** Ralph Meeker, AR; Corey Morea, FL; Charlie Killmaster, GA; Gabe Jenkins, KY; Johnathan Bordelon, LA; William McKinley, MS; Jason Isabelle, MO (Co-Chair); Jonathan Shaw, NC; Dallas Barber, OK; Charles Ruth, SC (Chair); James Kelly, TN; Alan Cain, TX; Matt Knox, VA; Katie Martin, VA; Jim Crum, WV

**Other Attendees:** Jeremy Brown, AR; Becky Peters, FL; Tina Johannsen, GA; Emily Belser, GA; Kevin Rose, GA; Matthew Goode, GA; Kyle Sams, KY; Jimmy Ernst, LA; Brian Eyler, MD; George Timko, MD; Lindsey O'Brien, MD; Karen Campbell, MS; Kevyn Wiskirchen, MO; Ryan Myers, NC; Jay Cantrell, SC; Brett Skelly, WV; Kip Adams, NDA; David Stallknecht, SCWDS; Mark Ruder, SCWDS; Larry Williams, USFWS

**Scheduled Discussion Items:** See following meeting agenda and minutes.

**Working Group Recommendation for Chair:** Jason Isabelle, MO (Chair), Matt Knox, VA (Co-Chair), Charles Ruth, SC (Past-Chair).

**Issue Items to be Submitted to the WRC for Consideration:** None

**Meeting Adjourned:** July 14, 2021, 15:56 EDT

**Submitted by:** Jason Isabelle, MO (Chair)

**SEAFWA Cervid Working Group  
Virtual Meeting Agenda  
July 14, 2021**

**Wednesday, July 14**

- |             |  |
|-------------|--|
| 9:30-9:45   | Old Business<br>-Summary of report to WRC (Jason Isabelle)   |
| 9:45-10:15  | New Business<br>-2022 SEDSG Meeting update (Jim Crum)  |
| 10:15-10:45 | SE Deer Partnership update (Gabe Jenkins, Larry Williams, Kip Adams)   |
| 10:45-12:30 | State Reports - 10 minutes each<br>Alabama<br>Arkansas<br>Delaware<br>Florida<br>Georgia<br>Kentucky<br>Louisiana<br>Maryland<br>Mississippi<br>Questions and Discussion   |
| 12:30-2:00  | Lunch  |
| 2:00-3:30   | State Reports - 10 minutes each<br>Missouri<br>North Carolina<br>Oklahoma<br>South Carolina<br>Tennessee<br>Texas<br>Virginia<br>West Virginia<br>Questions and Discussion |
| 3:30-4:30   | SCWDS (Mark Ruder/David Stallknecht)   |
| 4:30-5:00   | Wrap Up and Adjourn  |

# **SEAFWA Cervid Working Group – Meeting Minutes**

## **Old Business**

### Summary of Report to SEAFWA Wildlife Resources Committee (WRC) – Jason Isabelle

2020 SEAFWA Conference was hosted by Missouri Department of Conservation (virtual conference). Information presented to WRC pertaining to roles of Cervid Working Group Chair and Co-Chair; Co-Chair takes meeting minutes and provides to Chair who compiles report and submits it to Chair of WRC; Co-Chair (host state) presents report to the WRC at SEAFWA Conference. Update about Southeast Deer Study Group (SEDSG) Meeting provided to WRC; virtual SEDSG Meeting held in February 2021 – hosted by National Deer Association (NDA). Update provided to WRC about the Southeast Deer Partnership and cervid research projects being conducted at SCWDS.

## **New Business**

### 2022 Southeast Deer Study Group (SEDSG) Meeting Update – Jim Crum

Given ongoing pandemic, Jim Crum asked which state agencies have travel restrictions; Charles Ruth sent e-mail to CWG members to inquire and will compile responses. WV DNR negotiating with NCTC; NCTC staff not on campus yet but may be this fall. By mid-Sept., NCTC will determine if they will open. If SEDSG Meeting held at NCTC, room/meals are \$161/day (new rates coming). WV DNR will have contract with Delaney Event Management soon. Delaney would handle website, online registration, and publishing proceedings. Jim indicated August timeframe would be best for decision on whether SEDSG Meeting will be held in WV or virtually.

If decision is made to host SEDSG Meeting virtually, Kip Adams (NDA) indicated he would ask his staff if they would be willing to host meeting as they did this year. Determined that Aug. 15 is date by which to let Kip know if meeting is going to be held virtually.

### Southeast Deer Partnership (SDP) Update – Kip Adams and Larry Williams

Kip Adams provided group with presentation about the SDP and importance of deer and deer hunting in the SE U.S. Project goal to increase awareness of role/benefits of deer hunters. All SEAFWA states have given conceptual support for project. Some states have agreed to contribute financially. Phase I of project: Contract with Responsive Management to collect data about benefits of deer hunting in SE U.S. Phase II: Communication products developed to promote benefits of deer hunting. Phase III: Implement messaging and media delivery (some state-specific, others with regional focus). Have secured \$745,000 of \$900,000 project budget. USFWS has contributed \$300,000. Phase I has begun; first draft of research report to be delivered by Oct. 2021; present results of Phase 1 to project team by Dec. 2021/Jan. 2022. Will soon solicit non-state wildlife agency partners. State agencies that have not contributed financially thus far can still do so.

Larry Williams asked group to give thought to SDP communication plan (e.g., audience, message, use of project results). Many benefits that deer hunters provide to other species by helping to finance conservation are often overlooked by public (e.g., land purchase/leases, permit sales, habitat management, PR funds). Larry mentioned need for high-quality deer habitat photos to show benefit of this work for other species. Thought to create Dropbox outlet for states to upload photos. Larry will update agency directors about SDP progress at this year's SEAFWA Conference. States should let Kip or Larry know if there are data in their state that would be helpful to include in project. Larry mentioned potential idea of Conservation Plan for deer hunting and possible partnering opportunities with USFWS on such an effort in future.

### **State Report Highlights (see attached state reports for additional information)**

#### Alabama

- 218,358 deer harvested during 2019-2020 deer season (estimated from hunter phone survey); up 7.5% from 2018-2019 season
- Participating in Surveillance Optimization Project for Chronic Wasting Disease
- Suspect HD cases reported in 26 of 67 counties
- 2,120 CWD samples collected from wild deer during 2020-2021; no detections thus far

#### Arkansas

- Record deer harvest during 2020-2021 season (~216,800)
- Research project being conducted within CWD Management Zone
- Hired first captive wildlife coordinator
- Updated White-tailed Deer Strategic Management Plan
- Update to CWD Management and Response Plan approved by Commission
- Past CWD surveillance year: 8 CWD+ elk; 261 CWD+ whitetails
  - Grand totals since first detection: 32 CWD+ elk; 1,081 CWD+ whitetails

#### Florida

- Second year of mandatory harvest reporting
- Research project in north FL to study population dynamics
- Rule prohibiting importation of deer carcasses (except certain parts) from out of state
- Working on preparation for and response if/when CWD is detected
- Have collected >16,500 CWD samples since 2002; no detections yet
- Working on developing hazard model for CWD detection

#### Georgia

- 2020-2021 deer harvest (~209,100) slightly more than in 2019-2020
- 231,000 acres impacted by Deer Management Assistance Program thus far
- Low fawn recruitment rates observed
- Collected 1,357 CWD samples in 2020-2021; no CWD detections to date
- Fawn mortality study conducted on Chattahoochee National Forest

## Kentucky

- ~141,600 deer harvested during 2020-2021 deer season (down 5% from previous year)
- Conducting deer hunter survey
- Deer population slowly rebounding in areas of eastern KY (HD outbreak in 2017)
- Considerable increases in harvest during crossbow season
- >35,000 deer and 805 elk samples tested for CWD since 2002; no detections yet

## Louisiana

- Estimated harvest of 191,800 deer from mail survey (2<sup>nd</sup> highest in past 10 seasons)
- Five named storms struck LA last year; harvest down 25% in SW Louisiana
- License restructure passed in spring of 2021
- 12,169 CWD samples tested since 2002; not detections to date
- Analysis of forest structure and plant species composition in areas of recent flooding

## Maryland

- Harvest up 3% from 2019-2020 deer season
- Conducting survey of sika deer hunters
- Research project upcoming to study sika deer demographics and movements
- Studying deer movements in Montgomery County
- Straight-walled rifle cartridges permitted during firearms deer season in counties where only shotguns have been permitted in past
- ~350 suspect HD cases reported
- 10,882 CWD samples collected since 1999; 80 CWD+ detections

## Mississippi

- Harvest up 19% from the 2019-2020 season; 12% increase in deer hunters
- Numerous research projects including influence of fire season and intensity on plant communities, buck movement response to hunting activity and supplemental feeding, and effects of supplemental feeding on sources of disease and habitat
- 4<sup>th</sup> year of flooding in south Delta
- CWD Response Plan updated/changed to CWD Management Plan
- Have detected 83 CWD+ deer in eight counties
- Several regulation changes within CWD Management Zone

## Missouri

- 5<sup>th</sup> highest harvest on record
- Record archery season harvest; increasing percentage of kill by crossbows
- Research to evaluate effects of CWD targeted culling and increase understanding of landowner motivation and barriers to participating in targeted culling
- Expansion of Deer Management Assistance Program
- Changes to confined cervid regulations

- 44 new CWD+ detections; brings total to 206 CWD+ deer since 2012

#### North Carolina

- Harvest up 9% from previous three-year average
- Research project studying deer ecology across urban-rural continuum
- Over 487 suspect cases of HD; most in Northwestern Zone
- Have tested nearly 17,200 CWD samples to date; no detections
- Commission to vote on revised CWD Response Plan
- CWD+ detection in VA 33 miles from NC border

#### Oklahoma

- Harvest record of 126,290 deer
- Highest antlerless deer harvest in five years
- Possible research project regarding Pronghorn success
- ODWC Foundation considering elk relocation project in south-central OK
- CWD+ in KS within 11 miles of OK border

#### South Carolina

- Harvest up 2% from 2019; 38% below record harvest in 2002
- 6% increase in deer hunter numbers
- 4<sup>th</sup> season of “all deer” tagging system and statewide antlered buck limit
- Conducting doe and fawn movement and survival study
- Field work for three-year coyote study completed
- CWD Response Plan updated; no CWD+ detections to date

#### Tennessee

- Harvest up ~19% from 2019-2020 deer season; up 36% in CWD Unit
- Project to delineate Deer Management Units
- Working on integrated population model to estimate populations annually by DMU
- Estimated deer density on eight focal areas in CWD Unit
- 18,735 deer tested for CWD last year; 644 positives; total to date is 1,322 CWD+ deer
- Conducted targeted removal effort for CWD last winter
- Several regulation changes within CWD Unit

#### Texas

- Harvest (~852,450) up ~1% from 2019-2020 season
- Research project on public perceptions of CWD in western Texas
- Developing pilot program for digital licenses and electronic tagging
- Collected 13,154 CWD samples in 2020; total number samples ~208,000 since 2002
- 258 CWD+ detections since 2012
- CWD detected in 5 new captive facilities since March 2021 (297 trace facilities)

## Virginia

- ~209,000 deer harvested
- Deer hunting license sales up ~7% over last two years, but down over 30% the past 25 years
- Research: Non-baited camera technique for deer population dynamics in Appalachians
- Adopted three resolutions regarding hunting deer with dogs
- All electronic harvest registration beginning this fall
- First elk season to be held fall 2022
- High occurrence of HD last year
- 110 CWD+ detections since 2009 (10 counties)

## West Virginia

- Harvest (106,861) up 7.5% from 2019-2020 season
- Research: Deer survival, cause-specific mortality, resource selection, and movements
- Five-year evaluation of distance sampling for deer density estimation
- Revision of White-tailed Deer Operation Plan (2020-2025)
- >21,000 deer tested for CWD since 2002; 463 CWD+ detections to date

## **SCWDS Update – Mark Ruder**

Mark Ruder provided update about CWD in utero transmission study. Collected samples from does and fawns to determine if CWD transmitted in utero.

Research project looking at patterns of HD in Great Plains; describing patterns and exploring climatic variables and landscape features.

Research project exploring landscape and climatic variables as potential risk factors for reported HD in West Virginia; trying to understand if affecting herd immunity.

Mark encouraged Cervid Working Group members to report any potential cases of green lung syndrome in deer.

Update on cervid mortality investigations: 390 white-tailed deer submissions from 25 states last year (266 for CWD or HD testing); 8% noninfectious, 54% infectious, 38% undetermined; most viral in origin followed by bacterial and fungal.

## **2022 SEAFWA Cervid Working Group Meeting**

If meeting can be held in-person, Charles Ruth indicated SC would be willing to host. However, this year a joint meeting of the SEAFWA Cervid Working Group and the MAFWA Deer and Wild Turkey Working Group was cancelled because of the pandemic. The meeting was scheduled to be hosted by Ohio DNR. If OH DNR decides to host the joint in-person meeting in 2022, Charles indicated that would be preferred. Charles will reach out to Mike Tonkovich (OH) to determine likelihood of joint meeting.

## **Election of Chair**

Co-Chair has been state biologist whose state is hosting SEAFWA Conference. Chair must be voted on by group. Jason Isabelle was Co-Chair because MO hosted SEAFWA last year. Motion by William McKinley for Jason Isabelle to serve as Chair; second by Charlie Killmaster; Unanimously approved. Because VA is hosting SEAFWA Conference this year, Matt Knox will be new Co-Chair. Jim Crum or Brett Skelly (WV) will be incoming Co-Chair and will be responsible for taking meeting minutes at next year's Cervid Working Group meeting.



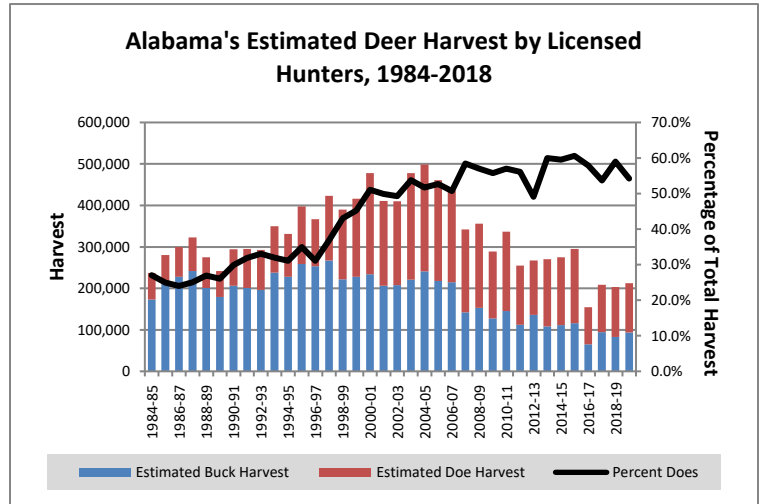


Alabama Deer Program Report  
Chris Cook  
Deer Program Coordinator



## I. Harvest/Population Trends

- Alabama hunters reported harvesting 195,131 deer through Game Check during the 2020-21 hunting season.
- Game Check reports were up **106.7%** from the 2019-20 season (195,131 vs. 94,401).
- Increase in reports mostly due to change in rules related to transfer of possession prior to 2020-21 hunting season, in particular transfer of possession to a deer processor or taxidermist.
- The reported 2020-21 harvest consisted of **54.0% bucks** and **46.0% does** (Game Check).
- True compliance estimates have yet to be determined for Game Check.
- 2019-20 harvest estimates generated by the hunter phone survey were:
  - 218,358** total deer harvested (**44.3% bucks, 55.7% does**).
  - Up **7.5%** from 2018-19 season.
  - Down **14.6%** from 10-year average.



## II. Research

Participating state in the Surveillance Optimization Project for Chronic Wasting Disease (SOP4CWD) project led by the Cornell Wildlife Health Lab at the Cornell College of Veterinary Medicine and by the Boone and Crockett Quantitative Wildlife Center at Michigan State University.

## III. Hot Topics

Nothing deer-related at this time.

## IV. Disease Issues/Updates

### Hemorrhagic Disease

Suspect HD cases were reported in 26 of 67 counties. Reports of summer/early fall mortalities were recorded for eight counties. Reports of hunter harvested deer showing evidence of HD exposure were reported from 23 counties.

### Chronic Wasting Disease

- 2020-21 – sampling goals based on CWD risk assessment developed for Alabama by Cornell University. 2,120 samples collected from wild deer (1,778 HH, 262 roadkill, 60 symptomatic/dead deer, 17 not specified); 2,108 tested as of 7-1-21; all “not detected” so far; limited use of voluntary drop off freezer locations (209 deer).

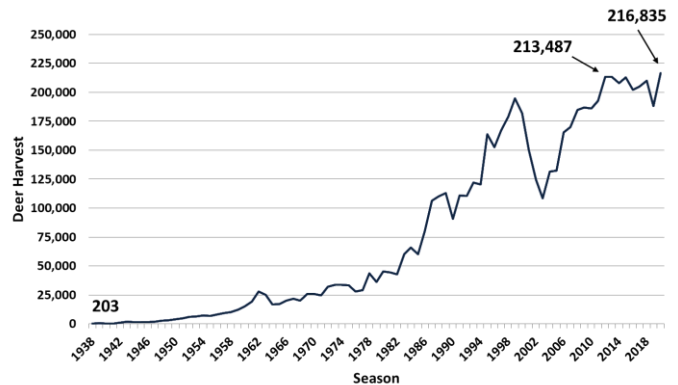


# 2020-21 Arkansas Deer Program Report

Deer Program Coordinator: Ralph Meeker  
Assistant Deer Program Coordinator: Jeremy Brown

## I. Harvest / Population Trends

- AR hunters reported harvesting 216,835 deer during the 2020-21 hunting season. This represents a 15.2% increase from the 2019-20 season.
- The 2020-21 season harvest set a new all-time record harvest, surpassing 213,487 set in 2012-13.
- The 2020-21 harvest consisted of:
  - 48% antlered bucks (103,973)
  - 6.2% button bucks (13,484)
  - 45.8% does (99,378)



## II. Research

### *Population-level impacts of chronic wasting disease on Arkansas's white-tailed deer*

This study is being conducted by the University of Georgia. The primary objectives of the study are to estimate the current abundance of white-tailed deer in the CWD management zone; examine survival and recruitment of white-tailed deer in the CWD management zone and to compare these parameters between CWD positive and presumed negative individuals; examine movement and home range size of white-tailed deer within the CWD management zone and to compare these between CWD positive and presumed negative individuals; calculate infection rates of CWD in white-tailed deer by age class and sex, calculate mortality rates and determine causes of mortality for CWD positive and presumed negative white-tailed deer; and lastly to use the above data to populate a model that will examine current and future population trends in the presence of CWD to help inform future management decisions. Researchers began field work in January 2021 and have collared a total of 112 deer (15 bucks, 47 does, and 50 neonates). Of these 112, 52 adults and 33 neonates are still alive as of June 21. They have also established three, 81-camera grids within the study areas that they are actively monitoring.

## III. Hot Topics

### *Harvest Increase*

The 2019-20 season was the first time that Arkansas hunters failed to harvest 200,000+ deer since 2011. However, Arkansas experienced an all-time high harvest this past season with 216,835. Hunting license sales were up by approximately 5.5%. We are receiving several questions/concerns as to whether this increase in harvest was the result of COVID-19, the increased number of hunters, and/or the regulation changes that liberalized some of our deer zones. Concerns are that our deer population cannot withstand this type of hunting pressure over time.

### *Captive Wildlife Coordinator*

The AGFC hired its first captive wildlife coordinator (Ashley Grimsley-Padron). This position will be tasked with working to streamline and simplifying our current captive regulations and to assist/lead the effort in addressing the backlog of captive situations.

### *Deer Management Assistance Program (DMAP) Audits*

The Deer Program has revised its DMAP program standard operating procedures. We are currently meeting with every DMAP biologist individually in order to promote program enrollment, improve program delivery and efficiency, and to address issues. We hope to follow this effort up with QDMA/NDA Deer Stewardship training/certification for all of our biologists who implement DMAP.

### *Strategic Deer Plan*

The Deer Program completed its update to its White-tailed Deer Strategic Management Plan (6 year plan). The plan can be found at <https://www.agfc.com/en/hunting/big-game/deer/deer-harvest-reports/>

### *Introduction to Hunting College Course Expansion*

Many of our agency's in-person R3 efforts were stalled due to COVID-19 this past season. However, we are happy to announce that we will be expanding our Introduction to Hunting college course to Black River Technical College for the Fall 2021 semester. This effort is a part of our agency's R3 Action Plan which can be found at <https://www.agfc.com/en/education/first-steps-outdoors/>

### *Southeastern Deer Partnership*

The AGFC is currently working on completing contractual language to be able to participate in the SE Deer Partnership. Our agency views this as a great partnership opportunity to be able to promote hunting (specifically deer hunting) by communicating its many biological, sociological, and economic impacts

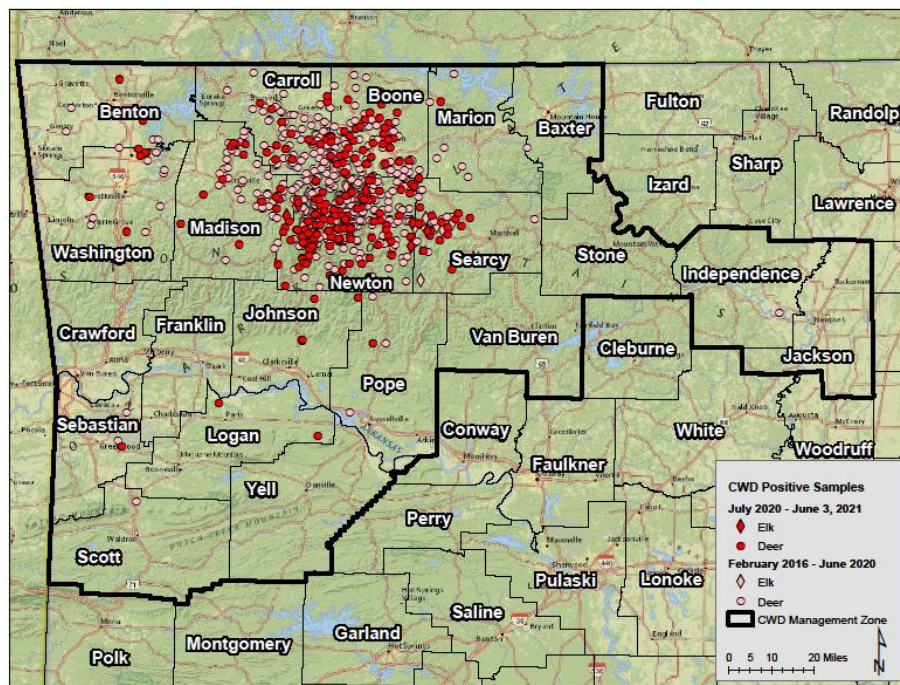
## IV. Disease Issues / Updates

### *2021-2025 CWD Management and Response Plan*

AGFC staff worked to update our agency's CWD Management and Response Plan. It was recently approved by our Commission and can be found at <https://www.agfc.com/en/hunting/big-game/deer/cwd/>

### *Chronic Wasting Disease*

See attached page



# ARKANSAS CWD UPDATE

July 2021



## CWD Surveillance Results from July 2015 to June 30<sup>th</sup>, 2021

Table 1. Total positive samples from July 1<sup>st</sup>, 2020 to June 30<sup>th</sup>, 2021 in Arkansas.

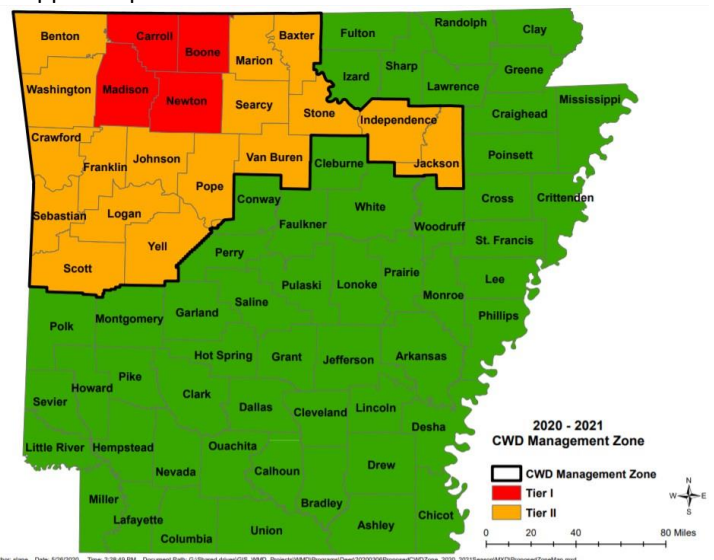
2020-2021 Season Positives	Elk			White-tailed Deer				Total
	Found	Hunter	Target	Found	Hunter	Road	Target	
Benton				1	1			2
Boone				1	41		3	45
Carroll					23			23
Independence					5			5
Johnson					2			2
Logan					18			19
Madison	1				1			1
Marion				1	131	1	2	141
Newton	1	3	2		1			2
Pope					21			22
Scott					1			1
Searcy	1				1			2
Sebastian					5			5
Washington				1			1	2
<b>Total</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>250</b>	<b>1</b>	<b>6</b>	<b>269</b>

- Overall, 7,799 samples were tested this sampling season, resulting in 269 CWD positive detections (8 elk and 261 WTD)

Table 2. Grand total positive samples since February 2016 in Arkansas.

County	CWD + Deer	CWD + Elk	Total
Benton	7		7
Boone	169		169
Carroll	124		124
Independence	1		1
Johnson	6		6
Logan	2		2
Madison	71	1	72
Marion	8		8
Newton	623	24	647
Pope	4		4
Scott	1		1
Searcy	40	7	47
Sebastian	3		3
Washington	22		22
<b>Total</b>	<b>1081</b>	<b>32</b>	<b>1113</b>

- Tier-based cervid carcass movement restrictions and the CWD management zone will not change for 2021. Tiers based on 3-yr. apparent prevalence rate.



Most notable findings of the recent CWD surveillance effort:

- Logan County picked up its first 2 positive samples (hunter harvested deer) this deer season, which has been in the CWD Zone since the original detection in 2016
- 1 CWD positive deer was found in north Benton County, AR within 10 miles of McDonald County, MO which places the county into Missouri's CWD Zone
- AGFC reached a historical high for samples collected annually
- Adopted a new CWD Response and Management Plan
- Implemented a county risk assessment tool for determining CWD management zone designation

Table 3. Annual breakdown of CWD samples submitted to the lab and positives detected from Arkansas.

Total Samples	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	Total
Elk	75 / 5	78 / 2	81 / 7	86 / 5	82 / 5	61 / 8	463 / 32
WTD	1,637 / 96	3,550 / 114	6,271 / 147	7,412 / 241	6,622 / 222	7,816 / 261	33,308 / 1,081
Exotic Cervids				2 / 0	2 / 0	1 / 0	4 / 0
<b>Total</b>	<b>1,712 / 101</b>	<b>3,628 / 116</b>	<b>6,352 / 154</b>	<b>7,500 / 246</b>	<b>6,706 / 227</b>	<b>7,878 / 269</b>	<b>33,776 / 1,113</b>

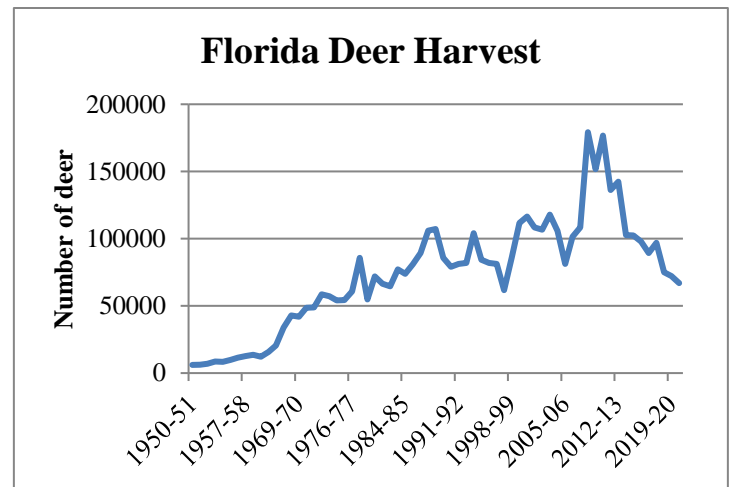


## Florida Deer Program Report By: Cory Morea and Becky Peters



### I. Harvest / Population Trends

- According to the harvest reporting system, 41,184 deer were harvested statewide in the 2020-21 season
  - 27,305 antlered males, 2,690 antlerless males and 11,189 females
- This was very similar to the 2019-20 season with 40,016 deer were harvested statewide
  - 28,546 antlered males, 1,206 antlerless males and 10,245 females
- The post-season telephone survey estimated a slightly higher harvest, 66,921 deer statewide
  - 44,614 males
  - 22,307 females



### II. Research

#### *North Florida Deer Study*

The North Florida Deer Study began in January 2020. It is a 5-year population dynamics study to investigate survival, fawn recruitment, and survey methods on two study sites in north Florida. The primary objectives are to estimate survival and cause-specific mortality of adult deer; evaluate movement, home-range, and habitat selection of adult deer; evaluate the camera-based spatial capture recapture method developed by the South Florida Deer Study; evaluate the feasibility of using camera-based spatial capture-recapture methods to estimate fawn recruitment; and test and develop body composition assessment for white-tailed deer using a portable ultrasound. Twenty-three (12 males, 11 females) adult deer were captured and radio collared in winter 2021 for a total of 34 deer collared to date. A 40-camera grid was deployed in April 2021. We are currently collaborating with the University of Florida to hire a Ph.D. student to start in January 2022. This student will oversee the study at the second field site and investigate the primary objectives as well as how white-tailed deer respond to varying levels and types of risks generated by changes in human hunting, other predators, and plant community structure.

### III. Hot Topics

#### *2021-22 Regulation Changes*

- Rule prohibiting importation of deer carcasses (except certain parts) from out of state including Georgia and Alabama. This follows Executive Order 19-41 that went into effect Nov. 1, 2019, that prohibit importation of deer carcasses (except certain parts) from out of state but allowed for importation of carcasses from Georgia and Alabama with a permit.

#### *Potential Proposed Changes*

- Cleanup on rules regarding deer carcass handling, storage, division, and labelling

#### *Harvest Reporting System*

- Completed second year of harvest reporting
- Change from in house systems to Brandt for 2020-21. This allowed integration of the reporting system into the established Fish|Hunt Florida app and GoOutdoorsFlorida.com website for 24/7 reporting. The change also included a switch from an in-house phone service to a 24/7 automated phone service.

### V. Disease Issues / Updates

#### *Chronic Wasting Disease*

Staff collected CWD samples from over 1200 deer in 2020-21. Since 2002, FWC has tested over 16,500 hunter-killed, road-killed, and sick/diseased deer. FWC continues to work to collect samples from priority counties and has recently joined the Cornell Wildlife Health Laboratory and 12 other states in developing a hazard model for CWD detection. This will allow the Commission to determine where to prioritize sampling for early CWD detection based on refined mathematical models. FWC continues to prepare for CWD introduction by purchasing additional equipment including a refrigerated trailer, a mobile incinerator for deer, and additional biological sample collection materials.

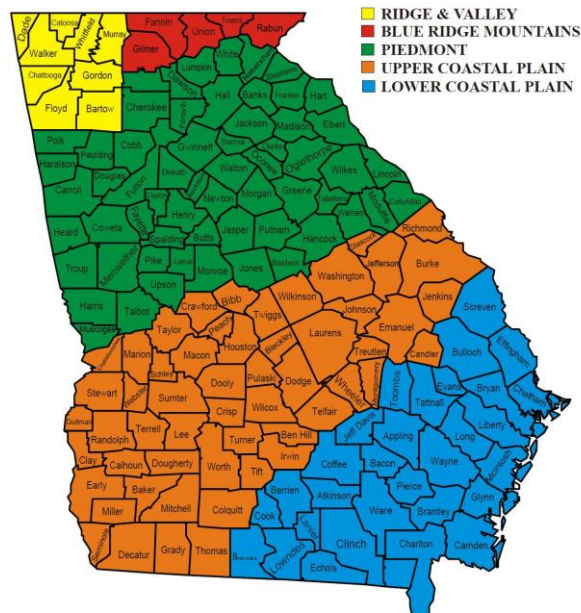


# Deer Program Annual Highlights

*FY 2020–2021*

## Overview

The 2020-21 deer season was excellent with 209,154 deer hunters taking 270,272 deer, slightly more than 2019-20. Harvest estimates are determined through the Game Check harvest reporting system and adjusted for reporting rates from an annual telephone survey of active deer hunters. Hunter satisfaction for the 2020-21 deer season was excellent with 91% of survey respondents rating their season as satisfactory, good, or excellent. Fawn recruitment rates increased from last year, but were still lower than the previous 5-year average. Georgia's new Deer Management Assistance Program (DMAP) is progressing well with 87 cooperators managing over 120,000 acres of land. Program participants receive detailed habitat and herd management plans, harvest data analysis, and assistance with camera surveys.



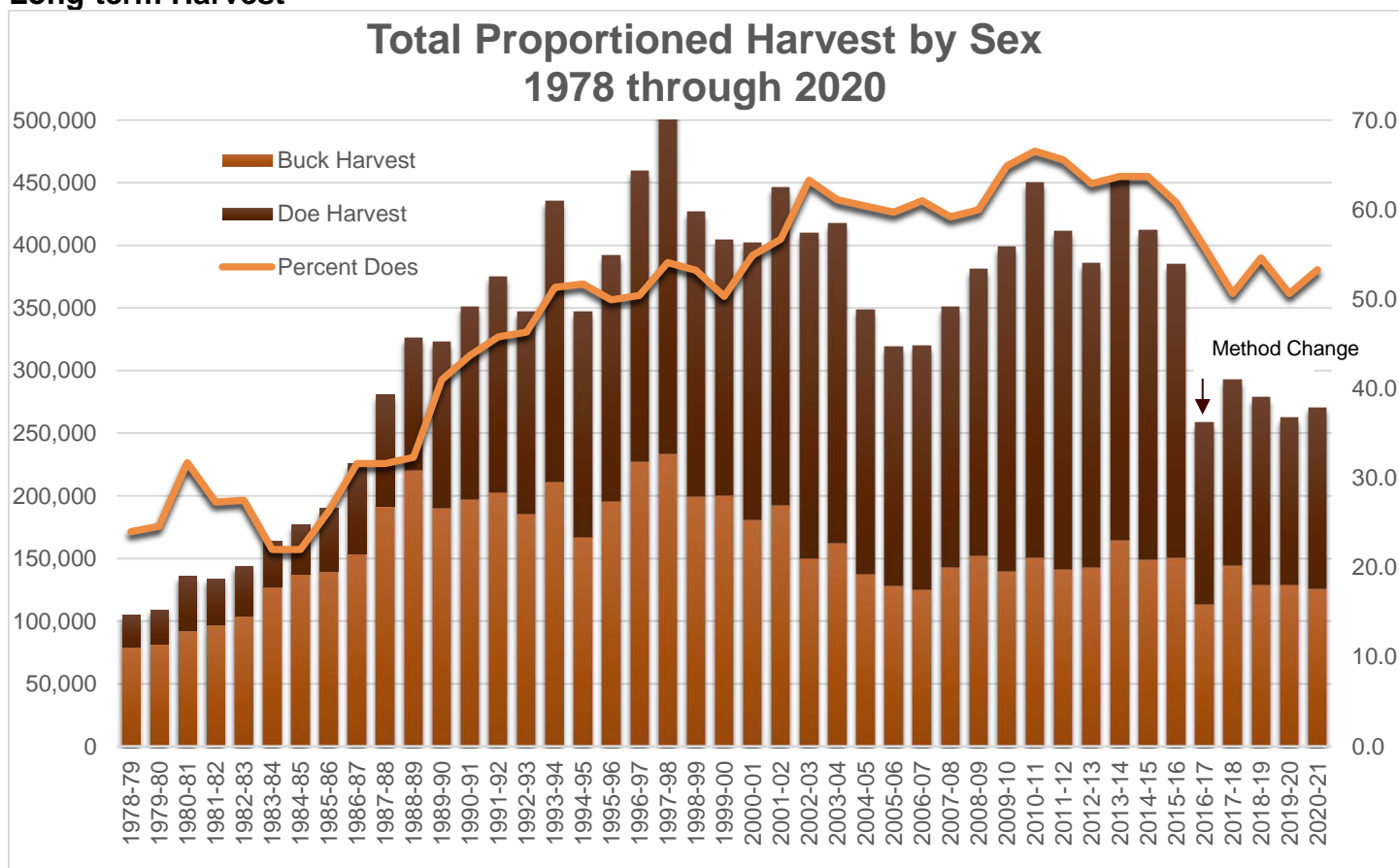
## 2020-21 Deer Harvest

Physiographic Region		Archery	Muzzleloader	Firearm
Blue Ridge Mountain	Buck	427	67	2,454
	Doe	833	114	428
Ridge and Valley	Buck	1,167	149	9,784
	Doe	2,011	195	6,934
Piedmont	Buck	8,864	1,008	44,483
	Doe	14,604	1,514	41,955
Upper Coastal Plain	Buck	2,857	669	36,715
	Doe	6,152	1,041	46,636
Lower Coastal Plain	Buck	1,495	476	15,549
	Doe	2,765	457	18,318
Total		41,175	5,691	223,255
Statewide Total				270,121

# Deer Program Annual Highlights

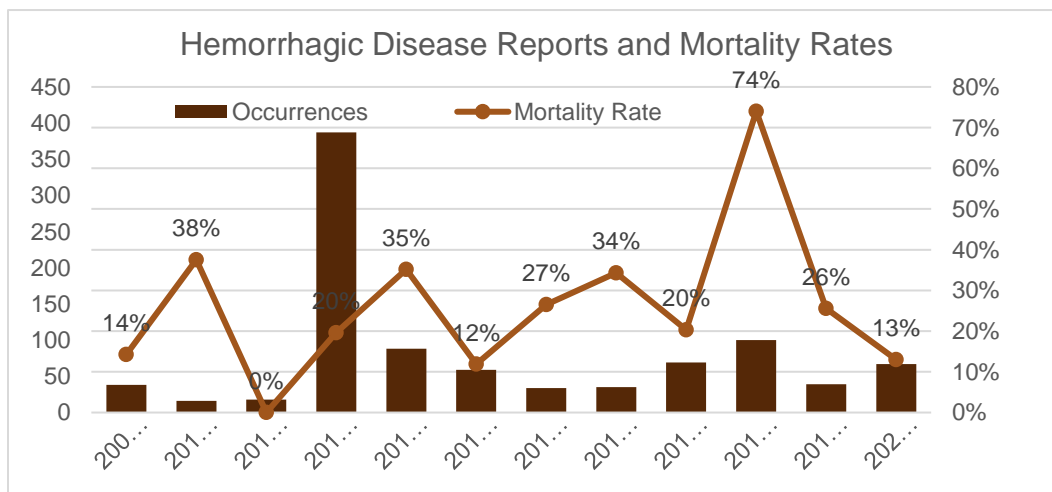
*FY 2020–2021*

## Long-term Harvest



## Disease

Georgia is fortunate to have a strong herd immunity to hemorrhagic disease, so outbreaks capable of causing regional population declines are rare. 2020 had a typical number of occurrences and typical mortality rate.



Chronic Wasting Disease has not been found in

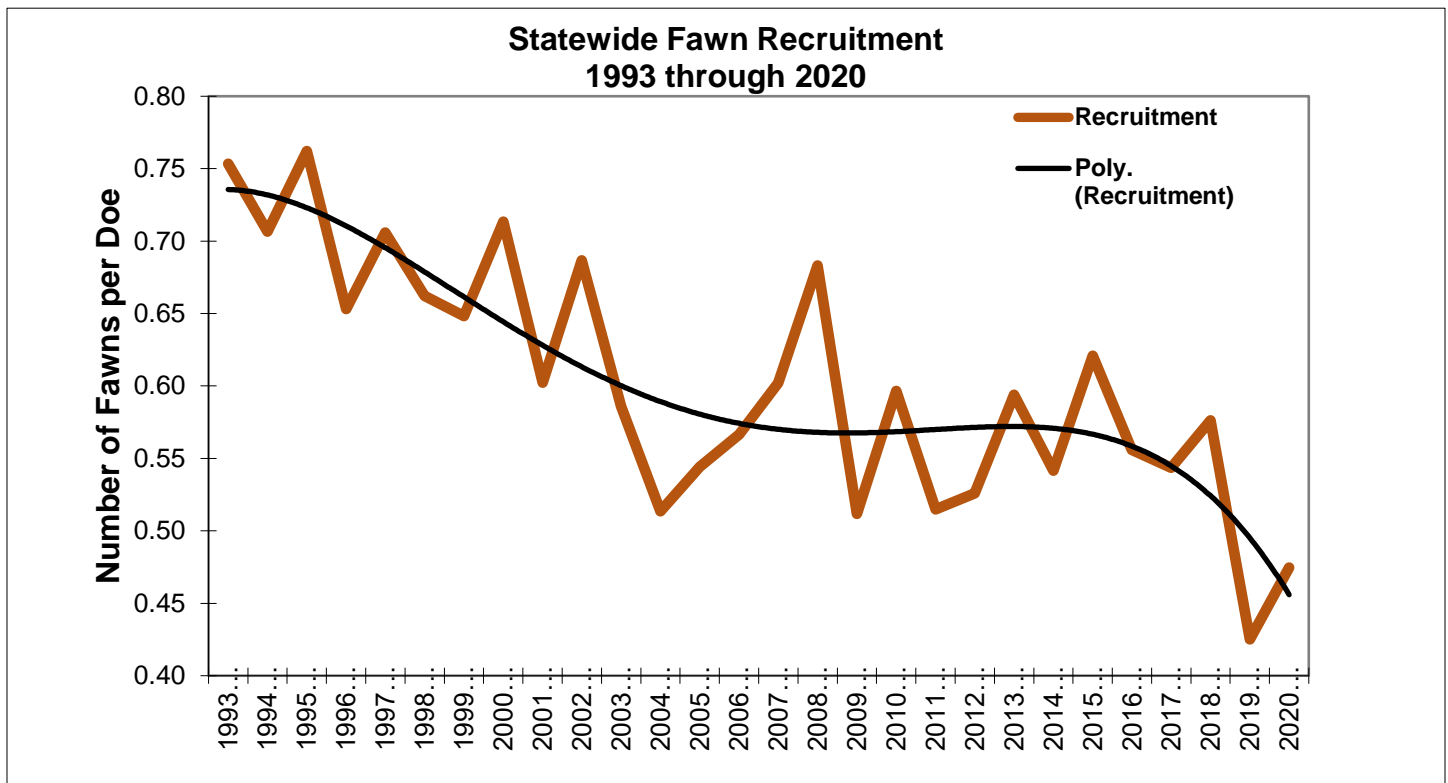
Georgia to date, however recent discoveries in Arkansas, Mississippi, and Tennessee have increased our level of concern. We are continually monitoring the population and adapt our disease surveillance strategy whenever new scientific information becomes available. WRD staff collected 1,357 samples in 2020-21.

# Deer Program Annual Highlights

*FY 2020–2021*

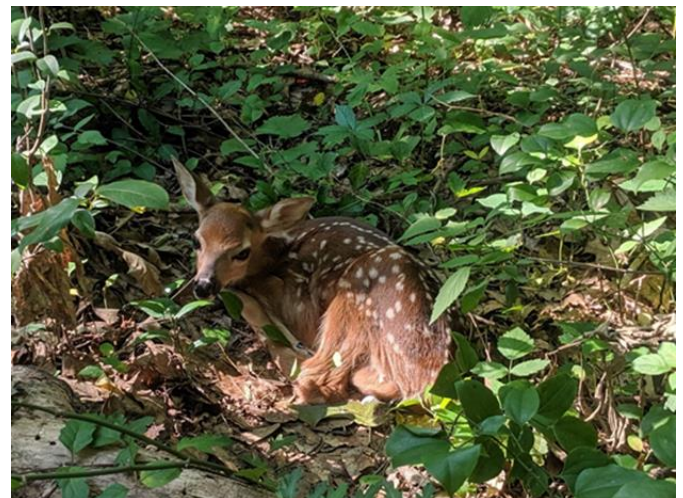
## Fawn Recruitment

Fawn recruitment is the ratio of fawns per adult doe that survive to deer season, which is one of the most important measures of productivity of the deer population. Fawn recruitment has been relatively stable over the last decade with the exception of the last 2 years. We will continue to closely monitor fawn recruitment and other metrics for assessing herd reproduction.



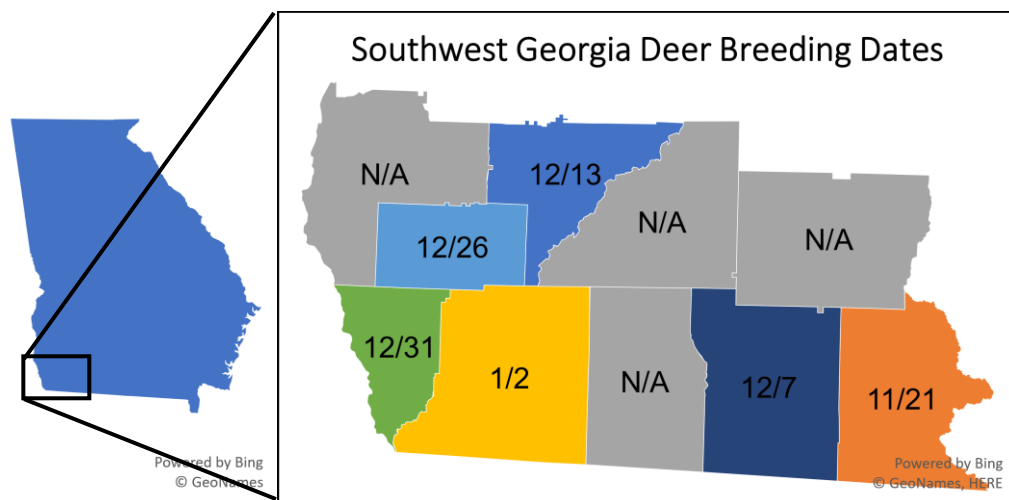
## Research

As a result of significant declines in the deer population on the Chattahoochee National Forest and associated WMAs, a fawn mortality study was launched in 2017. Over the course of the project 70 fawns were captured, radio-collared, and monitored for mortality. Fawn survival probability was determined to be 16.8% (very low) and predation by coyotes and bears was the leading cause of death. The next phase of this study may include some experimental deer stocking and predator reduction.



## Research

Deep southwest Georgia is locally known for having one of the latest peak rut periods in the state, however the sample size of conception dates is inadequate to pinpoint peak times. WRD biologist began working with private landowners in February of 2020 to collect fetal conception dates in a 10-county area in the southwestern corner of the state. To date landowner cooperators have collected 150 deer on the project. The preliminary results shown below may change as sample size increases.

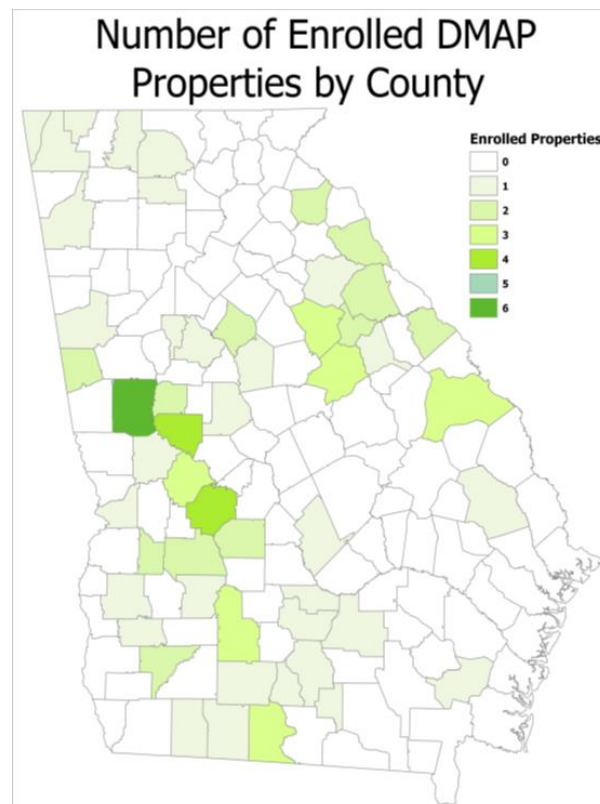


Average peak breeding dates for white-tailed deer by county in Southwest Georgia, 2019-2021. Data for counties with a sample size <5 are listed as N/A.

## Deer Management Assistance Program

Georgia's DMAP is administered by 3 experienced wildlife biologists under guidance of the State Deer Biologist. Since the launch of the program in November of 2019, DMAP biologists have provided technical guidance to 200 customers with a total impacted land area of 231,000 acres. Of those, 87 customers have enrolled their private property or hunting club in DMAP with a total 123,211 acres in the program. There are 4 different levels of the program to accommodate a wide range of acreages. Georgia's DMAP was designed to provide assistance to everyone regardless of property size.

A recent law change granted more antlerless deer harvest flexibility to DMAP biologists as they develop harvest prescriptions for cooperators.







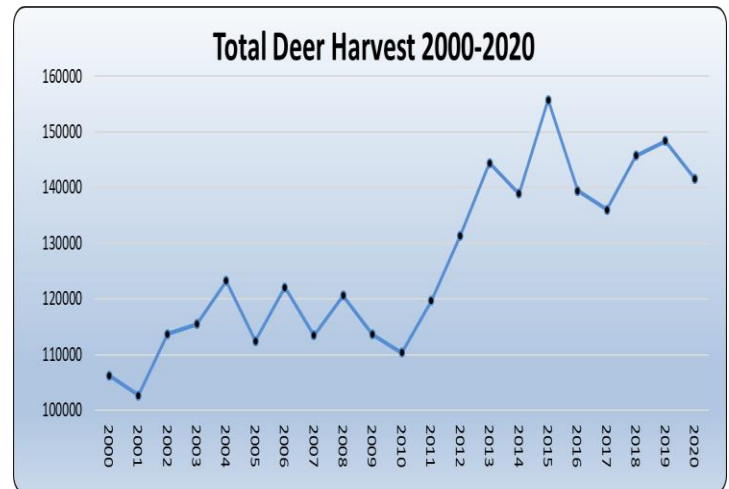
## Kentucky Deer Program Report

Kyle Sams



### I. Harvest / Population Trends

- KY hunters reported harvesting 141,620 deer during the 2020-2021 hunting season.
- The 2020-2021 total statewide harvest was down 5% from the 2019-2020 season and 3.7% above the 10yr avg.
- The 2020-2021 harvest consisted of 49% antlered males, 5.4% antlerless males, and 45.6% female.
- The 2020-2021 antlered male harvest was 4.9% above the 10-year average statewide.
- The 2020-2021 male fawn harvest was 12% below the 10-year average statewide.
- The 2020-2021 female harvest was 3.9% above the 10-year average statewide.



### II. Research

No current research

KDFWR is in the process of conducting a deer hunter survey

### III. Hot Topics

#### *Deer Season Regulatory Changes*

- None for the 2021-22 season

#### *Deer Season Harvest Issues*

- Slow growth/rebound of deer populations in heavily hit HD (2017) areas of east Kentucky

#### *Crossbow Season*

- Since the expansion of crossbow season in 2019, the crossbow harvest has increased considerably as expected. Specifically, crossbow harvest increased 180% in 2020 (13,161) from the 2018 (4,705) crossbow harvest and is 138% above the 5-year average.

### IV. Disease Issues / Updates

#### *Hemorrhagic Disease*

In 2020, there were 57 deer reported to have died due to HD in which three of those were clinically diagnosed as EHDV-2 positive. All positive cases occurred in the southeast portion of the state.

#### *Chronic Wasting Disease*

To detect CWD should it arrive in Kentucky, KDFWR adopted a CWD monitoring plan in 2002. That plan is a three-part monitoring program to test: 1) a random sample of hunter-harvested deer, 2) target or suspect animals (i.e., animals that appear ill), and 3) a random sample of roadkill deer. The monitoring program is based around a set of risk factors that provide a more focused collection effort in counties with high risk. Our risk assessment model accounts for the following risks: wild deer densities, elk presence, captive cervids (imports, # of facilities, history, trace-outs, and escapes), taxidermists, processors, and CWD proximity to KY borders. In 2006, KDFWR adopted a contingency plan to deal with CWD if it was ever found in Kentucky and the plan is updated annually. Since 2002, more than 35,000 deer and 805 elk samples have been tested. 2,907 deer and 46 elk were submitted for CWD testing in 2020-21, and CWD was not detected. For the 2020-21 CWD collection season, we utilized a weighted point system that focused our efforts on older age class males. In addition, KDFWR utilized ELISA to test samples.

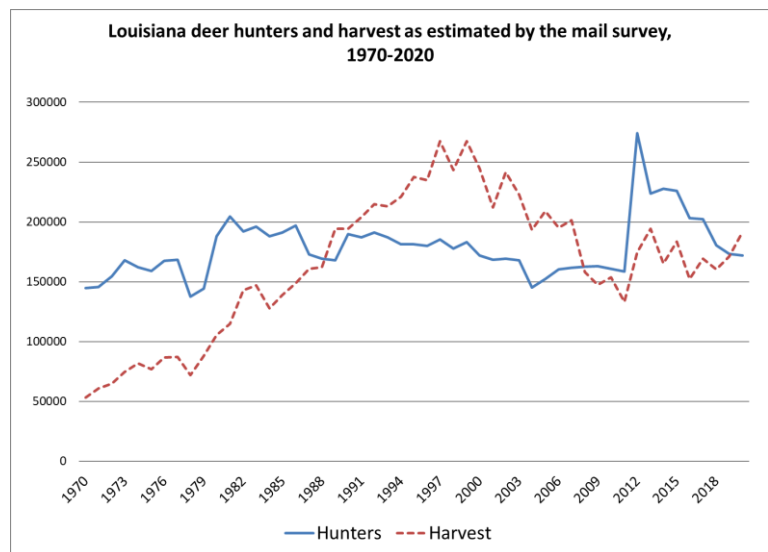


## 2021 Louisiana Deer Program Report

By: Johnathan Bordelon

### I. Harvest / Population Trends

- The 2020-21 reported deer harvest was 88,256 compared to the mail survey estimate of 191,800 deer.
- The reported harvested was the highest reported harvest over the past ten seasons while the mail survey estimated harvest was the 2<sup>nd</sup> highest for the same period.
- The 2020-21 survey estimated deer harvest was up 13% compared to 5% for the reported harvest.
- Louisiana hunters continue to harvest a greater percentage of bucks than does despite season-long antlerless opportunity across the majority of the state (55% bucks and 45% does).
- The hunter trend line on the right was influenced by the inclusion of senior hunting and fishing license holders in 2012. This license group has been included in the annual mail survey since 2012. Estimated hunter numbers are trending down based on the annual mail survey despite the spike observed in 2012, however harvest has not declined over the same period.



### II. Research

Department led investigation and analysis of forest structure and plant species composition in areas of recent river flooding. The flood pulse and frequency of river flooding in Louisiana over the past ten years has led to noticeable habitat changes. Many of the areas impacted have historically supported some of the highest deer harvest rates in Louisiana.

### III. Hot Topics

*Storm impacts from the 2020 hurricane season.*

Louisiana was struck by 5 named storms in 2020. Two of the more destructive storms were Category 4 Laura and Category 2 Delta. Both made landfall within a few miles of one another and ravaged coastal southwest Louisiana as well as points north along the storm track. Extensive forest damage occurred over the pine-dominated forests of west Louisiana. Deer harvest was down 25% in southwest Louisiana despite the statewide harvest rate increasing by 5%. No season closures or modifications were made in response to the storms. Past mark recapture projects revealed high deer survival in coastal Louisiana post-major storms. Increased cover and reduced access is anticipated in the forested habitat of southwest Louisiana.

A license restructure was passed in the spring of 2021 by the Louisiana legislature. The changes will both consolidate the total number of licenses and increase the fees on most privileges. The license restructure and fee increase effected fishing, hunting and commercial license holders. It was the first fee increase in 20 years for recreational licenses and 35 years for commercial. While packaged by LDWF and supported by the LWFC, fee increases must be voted on and approved by a 2/3 majority of the Louisiana Legislature.

### IV. Disease Issues / Updates

*Chronic Wasting Disease*

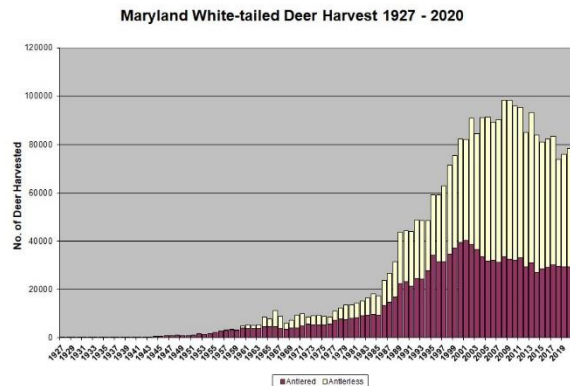
LDWF collected 826 CWD samples statewide in 2020-21 (12,169 since 2002). CWD has not been detected in Louisiana. Difficulty in meeting sample quotas in areas of low harvest and low hunter engagement. Sample goals are based on a risk based system.

# Maryland Deer Program Report

## Brian Eyler, George Timko, Lindsey O'Brien

### I. Harvest / Population Trends

- MD hunters reported harvesting 81,729 deer during the 2020-2021 hunting season.
- The 2020-2021 total statewide harvest was up +3% from the 2019-2020 season.
- The harvest consisted of 38% antlered bucks, 62% antlerless (8% button bucks, and 54% does).
- The antlered buck harvest was: 30,742



### II. Research

#### **Sika hunter survey**

Staff will work with a university to conduct a survey of sika deer hunters to determine management preferences, hunting participation rates, and support for sika deer hunting by hunters on Maryland's Eastern Shore. The goal is to identify those management practices that will ensure hunters remain engaged in pursuing sika deer.

#### **Sika Calf Survival Pilot Study**

A research project is planned to begin Winter 2022 to investigate using modern vaginal implant transmitters (VITs) in sika deer to study reproductive rates, calf survival, and movements. Pending their success, the study will be expanded to a full graduate project.

#### **Montgomery Fawn Tagging Project**

Montgomery County Parks' Wildlife Ecology unit is researching deer movements to learn more about the deer population dynamics within the county. The project involves capturing, tagging, and releasing fawns in select parks. Fawns are tagged with individual ID ear tags. The public is encouraged to report tagged deer sightings. This project hopes to try and determine deer movements within the county, over time.

### III. Hot Topics

#### **Deer Cooperator Permits (DCP's) Refined**

DCP's limited to February and March, limited on antlered take, spread restrictions for antlers, antlers must be returned to Department, each shooter must pass written & shooting testing, NRP violations background check, operator pays fee. Detailed Operational Plan and county firearms approval required. 1,658 deer killed in 2021. Due to requests, the Department is considering extending DCPs to include the month of April.

#### **Agricultural Deer Cooperator Permits**

ADCP's (sharpshooting) permits for agricultural properties were issued to 4 farmers in February, March 2021 (1 in Central, 1 in Southern, and 2 in Eastern region). Written testing, shooting proficiency, county approval, landowner approval, natural resources background checks, detailed written operational plan and a fee were required. Farmers and their agents killed 67 deer 22 sikas, 45 WTD) during February and March 2021.

#### **Biennial Regulatory Review**

##### **Straight-Walled Cartridges**

Deer hunting regulations now permit the use of rifles and handguns using straight-walled rifle cartridges (SWC) during deer firearm season in Maryland counties where only shotguns have been permitted in the past. Note that this provision is specific to straight-walled cartridges and excludes the use of bottleneck rifle cartridges. This has been the most popular regulation change with hunters

## Maryland Deer Program Report

### Brian Eyler, George Timko, Lindsey O'Brien

that we have proposed in decades. In those counties where shotguns were previously required, SWCs comprised about 13% of the harvest during the firearm seasons (2-week and 3-day January).

#### Suburban Deer Management Zone

5 counties now have an unlimited antlerless deer bag limit for archery season to assist with deer management. Exurban deer management remains a challenge in Maryland's developed areas.

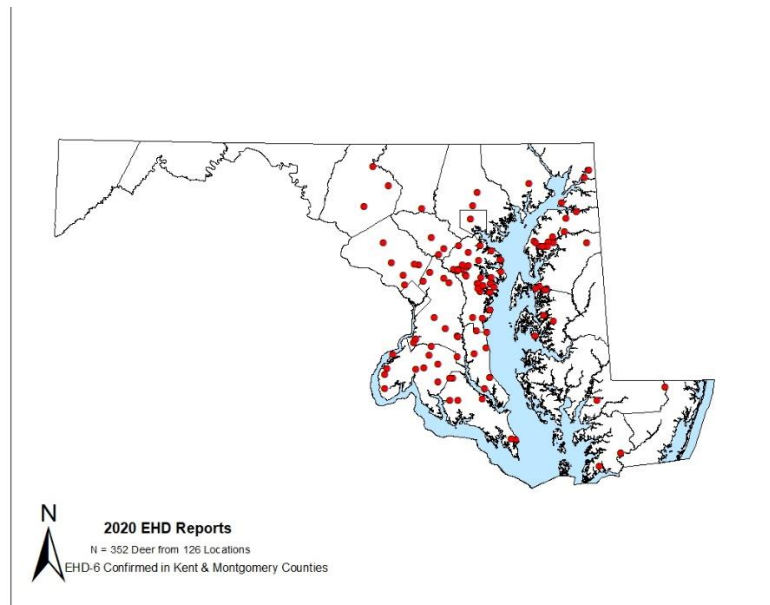
#### Primitive Weapon Deer Hunt Days

Primitive bows (long and recurve) and primitive muzzleloaders (flintlock and or sidelock percussion cap muzzleloaders) are now permitted during a limited early February season, statewide. Drawlocks and telescopic aiming devices are prohibited. 250 deer were harvested during this season.

### IV. Disease Issues / Updates

#### ***Hemorrhagic Disease***

352 suspect HD cases were reported in 126 locations, across 16 counties. EHDV-6 confirmed in Kent and Montgomery Counties. Map below.



#### ***Chronic Wasting Disease***

CWD samples were not collected in the 2020-2021 sampling season due to COVID-19. A total of 80 CWD positive cases have been detected out of 10,882 total samples collected since 1999. Details in separate CWD report.

## 2021 Maryland Deer Program CWD Report

### Brian Eyler, George Timko & Lindsey O'Brien

#### Current CWD Status and Summary

CWD sampling was suspended in 2020-2021 due to COVID-19\*.

In 2019-2020, staff collected 706 CWD samples opportunistically (646 hunterkill, 18 roadkill, 27 sick, 2 injured, 13 crop damage) and from clinical (27) deer in 2019-2020. CWD has been detected in 80 out of 10,882 samples tested in MD since 1999. We are continuing an annual surveillance program with similar goals (approx. 750 samples across a three county area). We now have a biologist to assist with CWD sampling for 2021-2022.

- 80 CWD+ / 10,882 total samples, to date: free-range deer
- Positives by HMU – Table below

Year	Samples	Positives
2002	304	0
2003	542	0
2004	872	0
2005	999	0
2006	982	0
2007	983	0
2008	997	0
2009	1130	0
2010	369	1
2011	305	0
2012	278	0
2013	261	1
2014	230	4
2015	295	5
2016	319	6
2017	749	10
2018	561	25
2019	706	28
2020	0*	0*
<b>Totals</b>	<b>10,882</b>	<b>80</b>

- Positives by HMU, 2010 - 2020

County	HMU	Number Positive
Allegany	230	0
	231	12
	232	3
	233	46
	234	0
Washington	250	14
	251	4
	252	1
<b>Total</b>		<b>80</b>

## 2021 Maryland Deer Program CWD Report

Brian Eyler, George Timko & Lindsey O'Brien

### Surveillance

- Surveillance to remain the same for 2021/2022
- Surveillance suspended in 2020 due to COVID-19\*

	Yes	No	Statewide	Disease area only	Weighted	2018 Total	2019 Total	2020 Total
HK	√			√		561	646	*
RK	√			√			18	*
Dropboxes		√					4	*
Clinical	√		√		√		27	*
Escapes		√						*
Sharpshooting		√						*
Taxidermists								*
Elk								*

### Regulations

	Natural urine ban	Feeding Ban	Baiting Ban	Antler Point Restrictions
Statewide	No	No	No	Yes - Partial bag limit
Disease area only	No	No	No	

	All States	CWD+ States only	Partial State (Disease area only)	Partial State if neighboring (Disease area only)
High Risk parts ban movement		√		√

- LTC to continue coordination of CWD sampling in DMA

### Research

Cooperating on multi-state Michigan/Cornell based research project examining CWD surveillance optimization (Dr. Krysten Schuler).



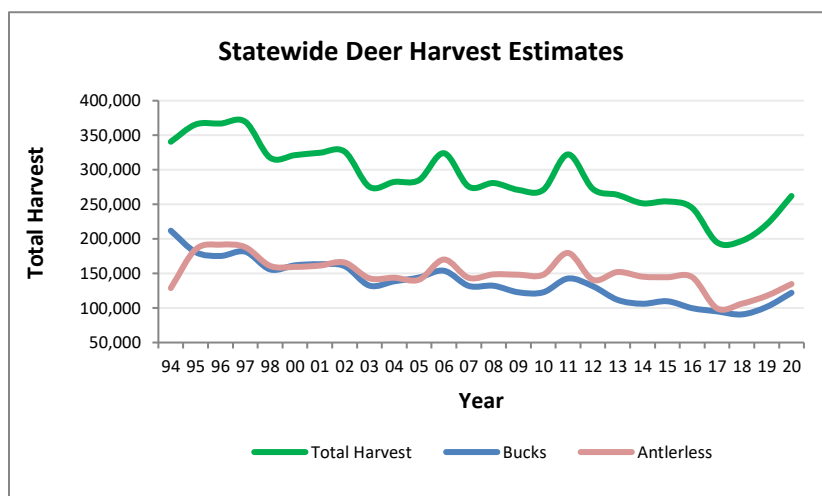
## 2021 Mississippi Deer Program Report

### William T. McKinley



#### I. Harvest / Population Trends

- MS hunters reported harvesting 262,133 deer during the 2020-2021 hunting season.
- The 2020-2021 total statewide harvest was up 19% from the 2019-2020 season, but still represents a downward trend.
- 2020-2021 showed a 12% increase in deer hunters
- 92% of Mississippi hunters hunted deer in the 2020-2021 season



#### II. Research

Research projects include:

- 1) Influence of Fire Season and Intensity on Plant Communities in Loblolly Pine Stands.
- 2) Assessing Deer Populations in Relation to CWD and Long Duration Flooding.
- 3) Buck Movement Response to Hunting Activity and Foods.
- 4) Buck Movement Response to Supplemental Feeding.
- 5) Effects of Supplemental Feeding on Sources of Disease.
- 6) Supplemental Feeding Effects on Habitat.

#### III. Hot Topics

- 1) CWD Response Plan updated and changed to CWD Management Plan. In final editing stage now.
- 2) Flooding in the MS South Delta
  - a. Occurred in 2018, 2019, 2020, and 2021. Most severe in 2019.
  - b. Deer harvest declined in this area by 50%+ in this area during the 2019 season.
  - c. Deer harvest rebounded in the 2020-2021 season. DMAP data shows improved body weights. 4.5+ year old buck weights were the highest since 1995. 3.5+ year old doe weights tied highest since 1993.

#### IV. Disease Issues / Updates

##### *Hemorrhagic Disease*

The occurrence of HD during the 2020–2021 hunting season was very low, and has been low for four consecutive years, with HD suspected in 13 counties. Most counties only had a single report.

##### *Chronic Wasting Disease*

Mississippi currently has detected 83 CWD positive deer in eight counties. The counties are Benton (56), Marshall (20), Issaquena (2), Alcorn (1), Panola (1), Pontotoc (1), Tallahatchie (1) and Tippah (1).

Sampling Year	Samples	Positives	Counties Detected (new)
2017-2018	1820	1	1 (1)
2018-2019	8023	18	6 (5)
2019-2020	8484	35	2 (0)
2020-2021	7301	29	4 (2)
<b>Totals</b>	<b>25,628 since discovery</b>	<b>83</b>	<b>8 total counties</b>



## 2021 Mississippi Deer Program Report

William T. McKinley



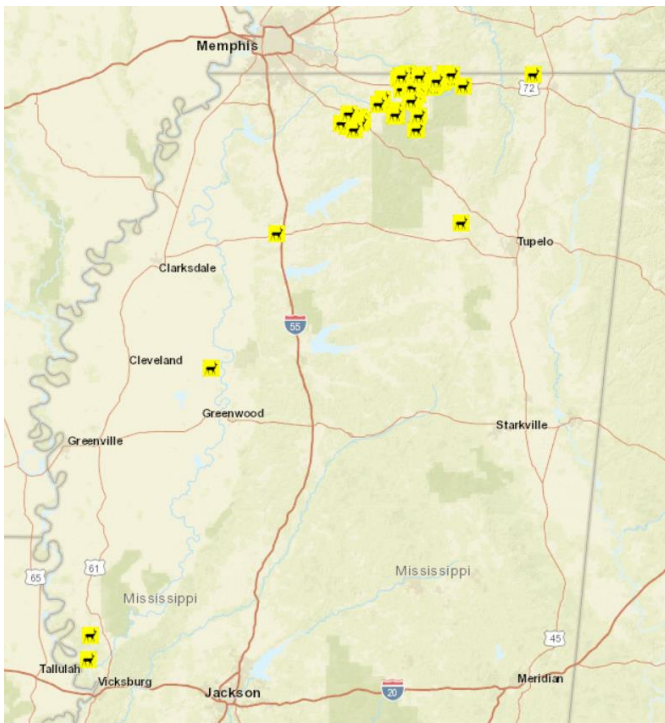
Regulation changes within the CWD Management Zone include:

- 1) North MS CWD Mgmt Zone reduced from 19 counties to 11 counties (went from 25 mile radius to 10 mile radius from known positives).
- 2) North Central Deer Management Unit created in the heavily affected CWD area. Buck bag limit increased from 3 to 4. All antler criteria removed. Antlerless bag limit increased from 5 to 10.
- 3) Carcass movement bans (from inside the zone and from out-of-state) modified. Allows deer heads from the zone to be transported to any taxidermist in MS. By permit only and requires mandatory sampling.
- 4) Changed deboned meat to quartered meat, with no spinal column or head attached.
- 5) CWD Management Tags for properties within 3 miles of known positives; either-sex tags allow any weapon all season (began in 2020/2021 season.) Resulted in 34% of total positives last season.
- 6) Enclosure CWD regulations changed from all wtd harvested inside the enclosure to one sample per 200 high-fenced acres. Depopulation language was struck for positive enclosures and replaced with “the owner shall work with the commission to determine a solution for containing the disease” and added “If CWD is detected within an enclosure, the commission shall not declare surrounding or adjoining properties within a five (5) mile radius of the enclosure, a CWD Management Zone, until chronic wasting disease is positively detected within such radius on these surrounding or adjoining properties.

Notes of interest:

- The positives in Mississippi range 220 miles apart.
- A 3.5 yo buck captured in December 2020 near our first CWD+ location, outfitted with a GPS collar, swam the MS River in March and currently resides in LA. He is currently about 18 miles from capture site.
- Plans are underway for a spotlight count along the MS portion of the Natchez Trace Parkway (about 220 miles).

CWD Positives in Mississippi





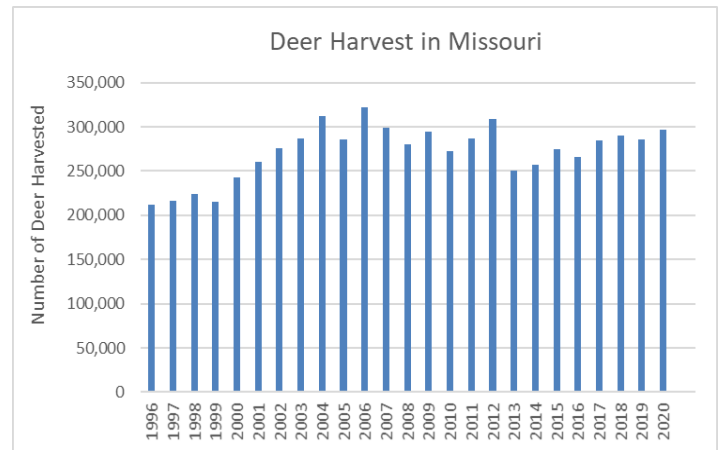


## Missouri Deer Program Report By: MDC Cervid Program Staff



### I. Harvest / Population Trends

- The 2020-2021 deer season harvest total was 297,214, which was 4% higher than the previous year and 6% above the previous five-year-average.
- Antlered buck harvest (140,855) was 5% higher than in 2019 (highest on record); doe harvest was 127,707 (3% higher than 2019 harvest); 28,652 button bucks were harvested (+2% from 2019 harvest).
- Archery season harvest was the highest recorded (67,487); proportion of the archery season harvest attributed to crossbows has increased from 30% in 2016 (first year allowed) to 50% in 2020.
- Increasing trend in deer numbers in most counties; antlerless portion of firearms deer season will be extended to nine days this fall.



### II. Research

#### *Modeling the Effects and Risks of Common Harvest Strategies and Human Practices to Promote Effective Management of CWD*

Cooperative research project with University of Montana to use an agent-based modeling approach to evaluate management strategies to reduce prevalence and spread of CWD. Objectives include: 1) Evaluate the effects of existing culling program on CWD prevalence rates through time in Northeast Missouri; 2) Consider factors that would result in maximum effectiveness of targeted culling strategy; 3) Identify trigger-points to guide targeted culling efforts to help allocate limited resources where most likely to be successful, and 4) Identify alternative harvest strategies.

#### *Identifying and Understanding Landowner Motivations and Barriers to Participating in MDC CWD Culling Programs*

This research project will use landowner focus groups and a follow-up survey of landowners within CWD Core Areas to improve our understanding about the factors that influence landowner participation in targeted culling. Objectives of the project include: 1) Identify and assess the barriers and motivations that drive landowner participation in targeted culling management efforts; and 2) Obtain information to help design programs to recruit and retain landowners in targeted culling.

### III. Hot Topics

#### *Confined Cervid Regulations*

Changes to confined cervid regulations will take effect August of this year. Changes create a Movement Qualified Status for holders of Class III wildlife (mule deer, white-tailed deer, their hybrids, and elk) breeder permits, and a Hunt Qualified Status for holders of Big Game Hunting Preserve Permits, if they meet inventory (including identification requirements), CWD testing, and fencing requirements. Changes to movement requirements and certification needed prior to movement.

#### *Deer Management Assistance Program*

In 2019, MDC piloted a Deer Management Assistance Program (DMAP). The program has since been expanded to five of the 8 regions of the state and will be expanded statewide beginning in 2022.

#### *Carcass Transportation and Disposal Regulations*

Beginning last year, there are new regulations pertaining to transportation and disposal of cervid carcasses. These regulations limit transportation of cervid carcasses into and within the state and provide provisions for transporting cervid carcasses to processors, taxidermists, and disease sampling stations. These regulations also establish a requirement for commercial processors and taxidermists to dispose of unused cervid parts in a sanitary landfill or transfer station.

#### *Elk Hunting Season*

Missouri had its first elk hunting season in modern times last year. The hunting season occurred within a three-county area in the Missouri Ozarks and consisted of two season portions: a 9-day archery season in October and a 9-day firearms season in December. All five hunters that were awarded a permit through the random lottery harvested an elk.



## Missouri Deer Program Report By: MDC Cervid Program Staff



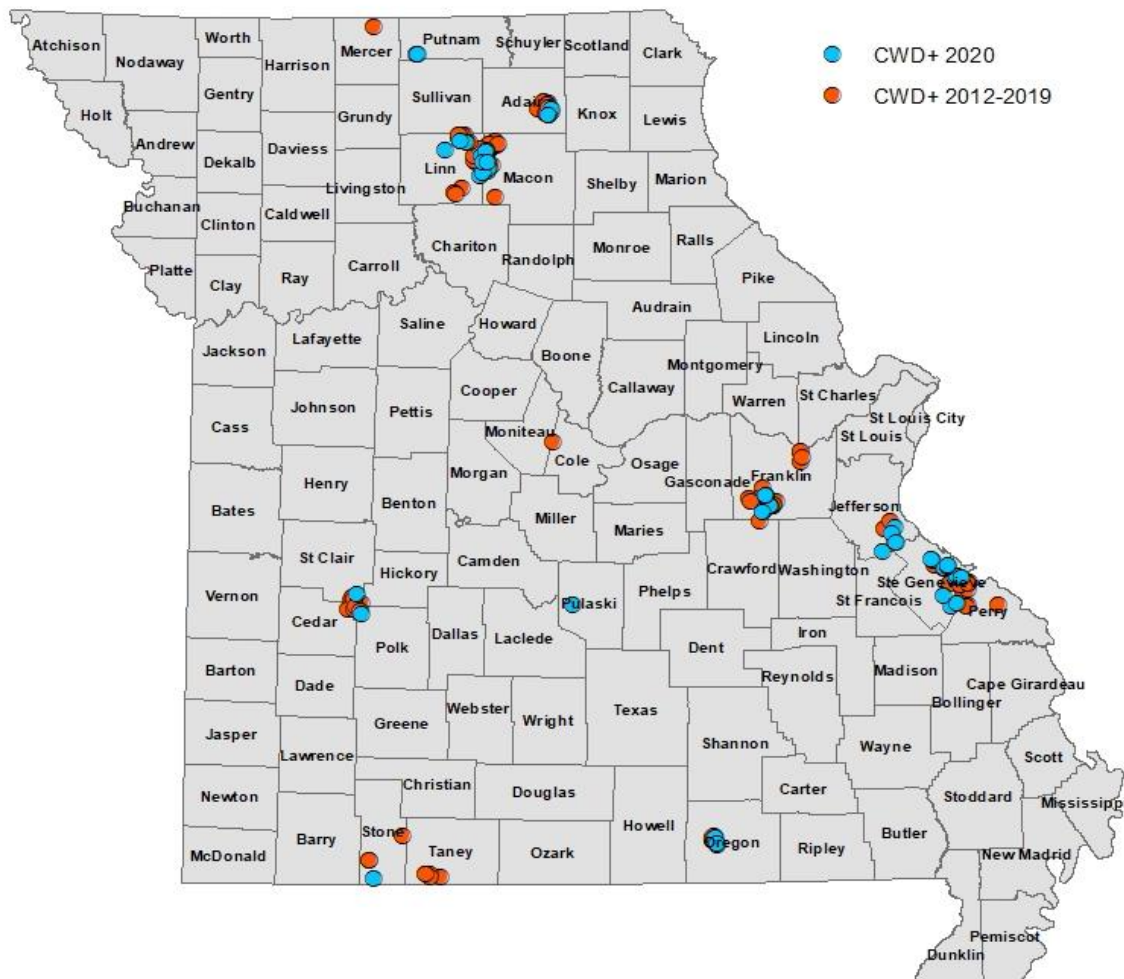
### IV. Disease Issues / Updates

#### *Chronic Wasting Disease*

- During the 2020-2021 CWD surveillance season, 15,341 free-ranging deer were sampled for CWD (impacted by pandemic).
- 2,692 deer were culled post-hunting season within CWD Core Areas (within 1-2 sq. mi of CWD detections)
- 44 CWD+ deer were detected
  - 24 hunter-harvested, 18 during post-season culling, 1 exhibiting clinical symptoms, and 1 hit by vehicle
  - First CWD detections in Pulaski and Putnam counties
- Since 2012, 206 free-ranging CWD+ deer have been detected in Missouri
- For upcoming sampling year:
  - Conduct mandatory sampling in all 34 CWD Management Zone counties during November 13-14
  - Statewide CWD sample collection by participating taxidermists and meat processors
  - Continue targeted culling in CWD Core Areas (January 16 – March 15)

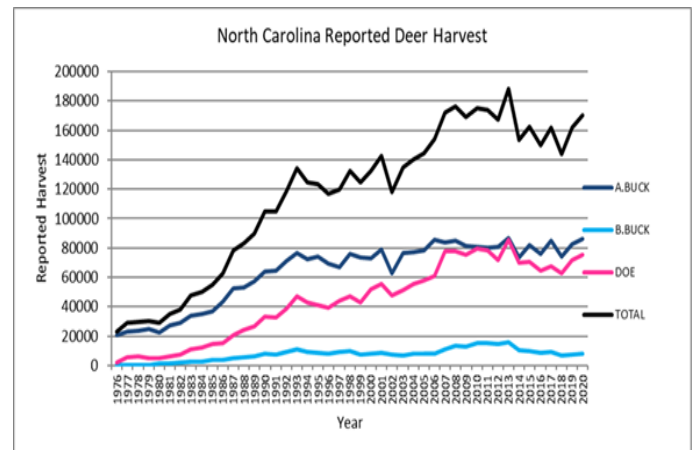
#### *Hemorrhagic Disease*

- In 2020, sporadic hemorrhagic disease (HD) activity, with heaviest activity in central Missouri
  - 218 suspect cases were reported
  - Nine of these cases (from 8 counties) were serotyped at the Southeastern Cooperative Wildlife Disease Study (SCWDS), and Epizootic Hemorrhagic Disease Virus-2 (EHDV-2) was isolated



## I. Harvest / Population Trends

- NC hunters reported harvesting 169,973 deer during the 2020/2021 hunting season, consisting of 50.8% antlered bucks, 4.7% button bucks, and 44.5% does.
- The 2020/2021 total statewide harvest was up 9.1% from the previous 3-year average, ranging from a 3.7% increase in the Northeastern Zone to a 23.7% increase in the Western Zone.
- Statewide increased harvest is likely impacted by hunter effort due to covid, and increased deer numbers in some areas, particularly western NC.



## II. Research

### *Deer Ecology Across an Urban-Rural Continuum*

A 4.5-year study with NC State University will provide a comprehensive understanding of spatial and temporal variation in deer ecology across an urban-rural continuum in NC. Our primary objectives focus on an urban/suburban/rural continuum where hunting is lawful and include determining annual survival, home range sizes, movements, dispersals, excursions, habitat use, deer densities, mortality sources, hunting vulnerability, and cultural issues/perceptions. Work will begin this fall with final reports due in 2025.

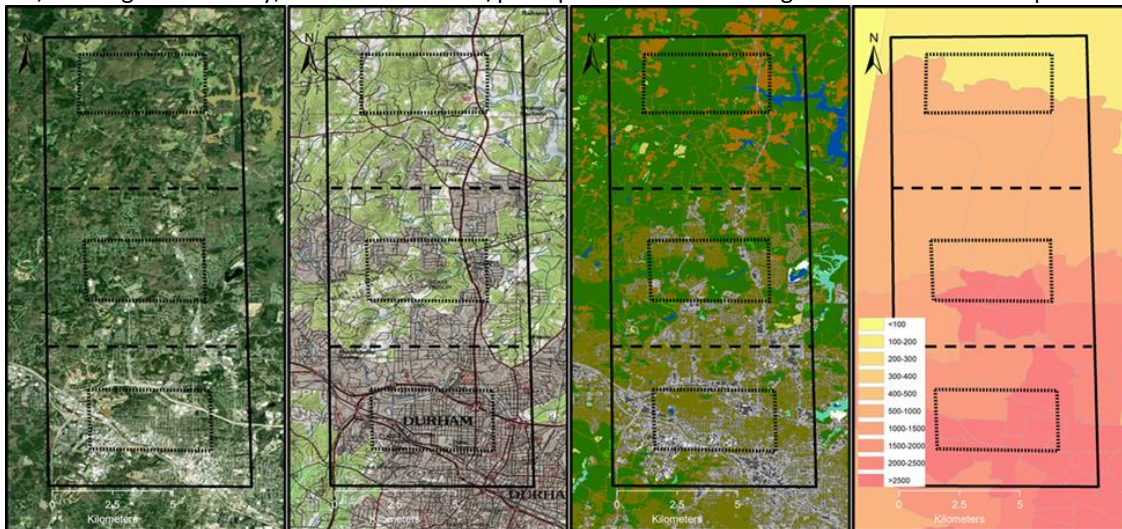


Figure 1. Approximate regional study area (solid rectangle; 125 km<sup>2</sup>), approximate focal study sites for genetic material collection (dotted rectangles; 10 km<sup>2</sup>), and strata for three focal study sites for human dimensions work (dashed lines) across an urban-to-rural continuum that extends from Durham, NC to ~20 km north. Example maps provide visualizations of landscape characteristics.

## III. Hot Topics

Interviews for Assistant Chief / Game and Furbearer Program Coordinator occurred, and are scheduled for the Deer Biologist.

## IV. Disease Issues / Updates

### *Hemorrhagic Disease*

In 2020, 487+ suspect HD cases were reported across 40 counties, with the most (215+) occurring in Surry and Wilkes Counties (Northwestern Zone). EHDV-6 was isolated in 8 counties, EHDV-2 was isolated in 4 counties primarily in the Southeastern Zone.

### *Chronic Wasting Disease*

Surveillance - 1,050 white-tailed deer, 8 elk, 120 farmed cervids, and 18 illegal-imported deer samples were collected in 2020/2021. CWD has not been detected in more than 17,197 cervids to date.

Response Plan - The Commission will vote on a revised CWD response plan July 29<sup>th</sup>. The revision is timely given the discovery of a positive VA sample located within 33 miles of the NC/VA state border.

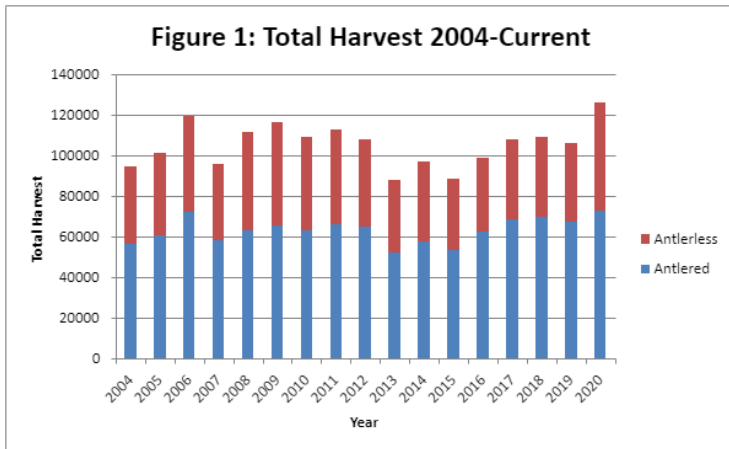
Rules - A proposed rule for 2020/2021 was approved by the Commission to prohibit of cervid excretions. However, 10 letters of objection to the rule were submitted to the NC OHA Rules Review Commission, making it subject to ongoing legislative review.

Human Dimensions Survey with NCSU - *Hunter Perspectives on Chronic Wasting Disease Management in North Carolina*.



## Oklahoma Deer Program Report

By: Dallas Barber



### I. Harvest / Population

- Oklahoma hunters harvested 126,290 deer (Overall Harvest Record)
- 42% of harvest was antlerless, highest in 5 years
- Harvest records in Archery (35,337), and Rifle Seasons (73,542)

### II. Research

Annual Herd Health Evaluation in the NW and NC region, nothing out of the ordinary to report.

Possible research topic regarding Pronghorn success

### III. Hot Topics

The ODWC Foundation is considering an Elk relocation project to the Arbuckle Mountains of SC OK.

### IV. Disease Issues / Updates

#### *Hemorrhagic Disease*

No outbreaks to report

#### *Chronic Wasting Disease*

HHE project tested over 100 deer from the NW and NC region of the state with no positive detections.

Have new positive cases in Cowley County, KS that are within 11 miles of our border.

Have a possible situation developing in a high fence facility, but no action has been taken as of yet as details are still being developed.



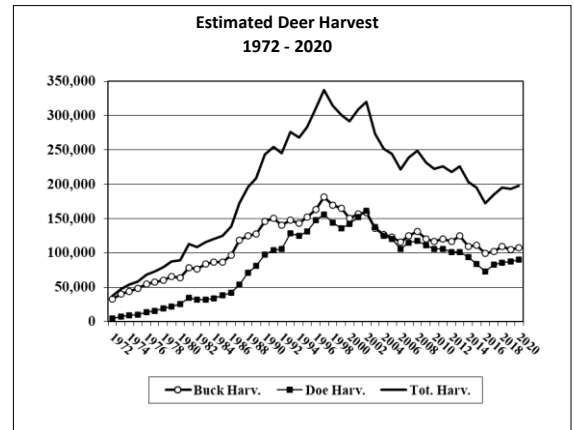
# South Carolina Deer Program Report

By: Charles Ruth & Jay Cantrell



## I. Harvest / Population Trends

- During the 2020 deer season it is estimated that a total of 107,212 bucks and 90,681 does were harvested for a statewide total of 193,073 deer.
- The 2020 harvest estimate represents a 2.4 percent increase from 2019 (193,073) and is 38 percent below the record harvest established in 2002 (319,902).
- The fall of 2020 was the fourth season of the “all deer” tagging system and statewide limit on antlered deer. Although the harvest has increased (15%) since 2016, this increase is primarily a result of an increase in doe harvest (25%) rather than an increase in the harvest of bucks (7%). This disproportionate harvest may be indicative of the new buck limit having the desired effect of decreasing pressure on bucks and increasing the harvest of does.



## II. Research

### ***Doe and Fawn Movement and Survival/Coyote Ecology and Deer Interactions in the Piedmont of South Carolina***

A research project funded by SCDNR & being conducted by Dr. David Jachowski, Clemson University, began in January 2019 in McCormick County in the SC Piedmont. The deer project objectives are to: 1) Evaluate factors contributing to fawn mortality, 2) establish estimates of doe and fawn survivorship, and 3) track movements of doe-fawn pairs. The coyote project objectives are: 1) Compare coyote movement patterns to fawn/doe movement using GPS collar data. 2) Link deer predation with known individuals/social status based on (a) sex and size of coyote, (b) dominance based on home range overlap, and (c) relatedness based on genetic testing. 3) Evaluate movement of GPS collared coyotes in relation to deer corn feeders to assess (a) if it attracts them, (b) if they are coming together socially near feeders, and (c) if they increase deer encounter rates. 4) Use cameras at and around feeders to assess deer and coyote activity/density (marked vs. unmarked), species interactions, as well as doe:fawn ratio.

Field activities and data collection have occurred over the last 3 years and are winding down at the time of this report. During the study, 83 adult does were instrumented with GPS collars and VITs which facilitated 94 neonate fawns being collared. To date fawn mortality has averaged 70%, with approximately 50% of mortalities attributed to coyotes. 90 coyotes were captured, 76 GPS collared, there have been 31 known mortalities and 21 are still being monitored. 850+/- scats (presumed coyote) were collected for genetic analysis. Additionally, an extensive array of game cameras has been maintained and monitored on the site, including 90+ cameras on unbaited sites, 15 on feeders and 75 on “baited scavenging sites”. These cameras have provided over 3 million photos. Data analysis, reports and publications are forthcoming in the near future.

### ***Use of fecal genotyping and spatial capture-recapture modeling to investigate coyote abundance in South Carolina***

A cooperative research project with UGA and Dr. Gino D’Angelo, Dr. John Kilgo, and Dr. Stacey Lance began in 2019. Project objectives are: 1) Estimate coyote populations across 3 physiographic regions in South Carolina using fecal genotyping and spatial capture-recapture, 2) Relate coyote population abundance to land use and habitat characteristics across South Carolina, 3) Assess population genetic structure of coyote metapopulations across 3 physiographic regions in South Carolina. The final field season of this 3-year study was completed in June and DNA extractions for species identification is ongoing.

### ***Influence of Abiotic Factors on Activity Patterns of White-tailed Deer in South Carolina***

A research project funded by SCDNR & being conducted by Dr. Stephen Ditchkoff, Auburn University, is ongoing in Dorchester County in the SC coastal plain utilizing animals outfitted with tags and transmitters. Objectives are to (1) Examine the influence of abiotic factors (e.g. solunar patterns, weather, etc.) on deer activity patterns, (2) Generate predictive models of deer activity based on abiotic factors, and (3) Test the validity of predictive models using data from the study.

## III. Hot Topics

Things have generally been quiet in South Carolina. The initial pushback from urine manufacturers and a few hunters in 2019 related to the regulation prohibiting the use of many commercially available deer lures has not resurfaced. SCDNR’s position is that until AFWA modifies its CWD BMP’s the regulation will remain in place.

## IV. Disease Issues / Updates

### ***Hemorrhagic Disease***

Several cases were submitted to SCWDS for diagnostics with EHDV detected in one case (no virus isolation). However, surveillance indicated that disease activity may have been present in 12 or more counties affecting small numbers of deer.

### ***Chronic Wasting Disease***

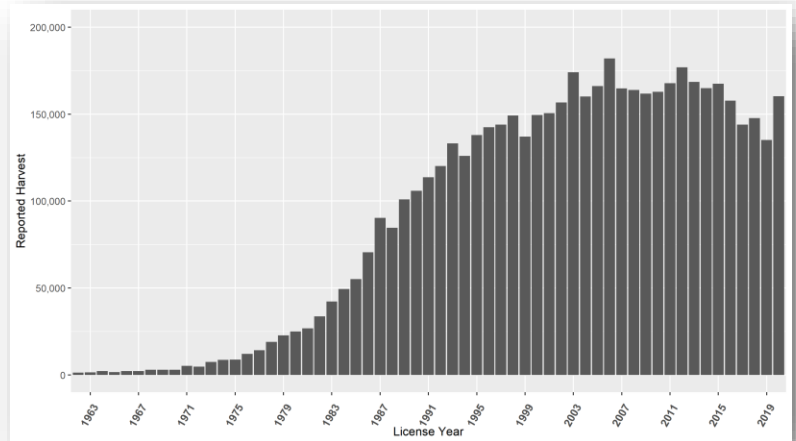
CWD surveillance continues in SC with an emphasis on targeted surveillance of clinical suspect and high-risk animals. In addition, any illegally possessed or imported deer and other high-risk animals are euthanized and tested for CWD. South Carolina continues to participate in a project with Cornell University to develop a CWD risk assessment and surveillance strategy. An effort will be made at some level to enlist the assistance of taxidermists to collect samples this fall. All deer hunters in South Carolina receive physical deer tags by mail which provides a platform for messaging related to the CWD carcass importation and commercial urine ban regulations that are in place. The carcass importation messaging is unique for residents and nonresidents.





## I. Harvest / Population Trends

- 160,267 deer harvest reports statewide
- Reported harvest up substantially from last year (~19%)
- Reported harvest up 36% in 11-county deer hunting unit, Unit CWD
- Increases likely due to a combination of COVID effect, new tag-before-you-drag requirement, and incentive program in Unit CWD



## II. Research / Special Projects

### *Deer Management Unit (DMU) Delineation*

TN Tech completed a project that leveraged historic TWRA data and other publicly available spatial datasets to delineate units in a data-driven fashion that also met our constraints. It is still unclear when the new DMU delineation will be introduced to the Commission and, if approved, established in proclamation.

### *Annual Harvest Survey*

Results from the 2019-20 (and inaugural) harvest survey conducted by University of Tennessee showed that reported harvest accounted for 78% of estimated statewide harvest. The 2020-21 report will be available Fall 2021.

### *Statewide Population Model*

Researchers at TN Tech continue to develop an integrated population model (IPM) for deer in TN. The IPM will leverage existing datasets (e.g., reported harvest, field check data, survey harvest estimates, etc.) to estimate populations annually by DMU. Projected completion date is Fall 2022.

### *Attitude & Opinion Survey*

In April 2020, researchers at UT – Knoxville deployed a survey of hunters, farmers, and residents regarding their respective attitudes and opinions regarding deer and deer management where they live, hunt, or farm in TN. Results (available Fall 2021) will be used primarily to inform TWRA when establishing population objectives for each DMU and deciding which actions to take to achieve DMU objectives.

### *Surveillance Optimization for Chronic Wasting Disease (SOP4CWD)*

TWRA continues to collaborate heavily on the SOP4CWD project led by the Cornell Wildlife Health Lab. See website for more details on this project: [cwhl.vet.cornell.edu/project/sop4cwd](http://cwhl.vet.cornell.edu/project/sop4cwd)

### *Deer Density Estimation in CWD-Affected Area*

To begin monitoring impacts of CWD and CWD management on deer density in TN, we outsourced thermal aerial surveys on eight focal areas, each 35 mi<sup>2</sup> in size. Four of the focal areas were in targeted removal zones on the periphery of the outbreak where targeted removal efforts began this year. The remaining four focus areas were in the core area of Fayette and Hardeman counties. Using distance sampling, estimated densities ranged from a low of 13.4 deer/mi<sup>2</sup> in northern Haywood county to a high of 88.6 deer/mi<sup>2</sup> in western Hardeman county.

### *Trained Canine Detection of Fecal Sample Odor and Whole-Body Odor Associated with CWD Infection*

We are partnering with Colorado State University to: 1) test behavioral responses of biodetectors (i.e., trained dogs) to WTD fecal samples, 2) train canine biodetectors to identify CWD infection in gastrointestinal tract samples in the laboratory, and 3) screen gastrointestinal tract and whole-body (e.g., harvested white-tailed deer heads or carcasses) field samples using trained biodetectors and confirming the behavioral responses with IHC techniques. So far researchers have had good success in training dogs to correctly identify fecal samples from CWD-infected WTD in laboratory and controlled field settings. Funding provided by USDA-APHIS.



### III. Hot Topics

See *Chronic Wasting Disease* below.

### IV. Disease Issues / Updates

#### *Chronic Wasting Disease*

##### *Surveillance 2020-21*

- Surveillance targets were achieved in all 95 counties and were exceeded by a substantial margin in many counties.
- Finished sampling year with total of 18,735 deer sampled.
- In 2020-21, 644 positives detections. Since CWD discovered in December 2018, a total of 1,322 deer have tested positive.
- Lauderdale County went from a "High Risk CWD County" to a "Positive CWD County." Henderson County is now "High Risk" due to a positive in Madison that was within 10 miles of Henderson County.
- 18 elk sampled in East TN (all not detected).

##### *Targeted Removal*

- First ever targeted removal effort for CWD occurred during Winter '21.
- Removals conducted by USDA Wildlife Services. Landowner recruitment conducted primarily by TWRA.
- 100 deer removed over the 4 removal zones.
- Planning efforts underway to increase the number of deer removed in Winter '22.

##### *Surveillance 2021-22*

- Buffer Zone will additionally include Henderson County.
- Freezer drop-off locations and processor/taxidermist incentive program to be expanded into this county.
- Rest of state will have similar targets as 2020-21.

##### *Regulation changes for 2021-22 season*

- Carcass transportation and feeding restrictions still in effect for Positive CWD Counties<sup>a</sup> and High Risk CWD Counties<sup>b</sup>.
- The deer hunting unit, Unit CWD, expanded to additionally include Henderson County.
- Hunters who submit heads or samples from harvested antlered deer that turn out to be untestable will be issued a replacement buck, just like those who have a positive test result.
- Replacement bucks issued but not harvested during the 2021-22 season can be harvested in the 2022-23 season.

##### *New incentives for 2021-22 season*

- For hunters who harvest a positive deer, a voucher worth \$75 will be given towards the processing cost of their next deer.
- Residents who kill 2 or more CWD-positive deer during the season will get a free Annual Sportsman's license for 2022-23 season. If the hunter has a lifetime license, they can gift that license to someone of their choosing.

For more information go to [CWDinTN.com](http://CWDinTN.com)

##### *On the horizon*

- Strategic planning effort for CWD prevention, response, management, etc. underway. DJ Case & Associates will facilitate the planning process including internal and external stakeholder engagement.

#### *Hemorrhagic Disease*

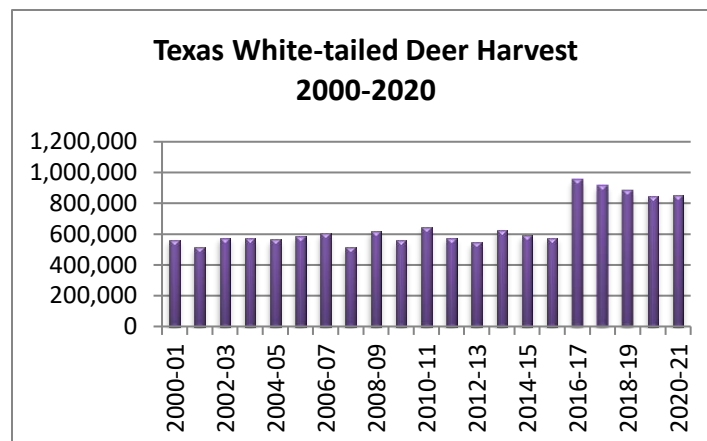
- Average number of suspect HD reports during Summer and Fall of 2020.

<sup>a</sup> Fayette, Hardeman, Shelby, Tipton, Haywood, Madison, Chester, and Lauderdale counties as of June 25, 2021.

<sup>b</sup> Has a confirmed case of CWD within 10 miles; McNairy, Henderson, Gibson, and Crockett counties as of June 25, 2021.

## I. Harvest / Population Trends

- 2020 estimated statewide harvest was 852,448, up 0.7% from 2019. Bucks represented 53% of harvest and does 47%.
- 2020 statewide deer population estimate is 5,444,798 based on most current estimates from each monitored deer management unit
- Landowner participation in the 2020 Managed Lands Deer Program (MLDP) represents 12,198 management units on 28,936,138 acres.
  - TPWD issued 301,828 deer tags under the MLDP program in 2020. (126,678 bucks & 175,150 antlerless)
  - MLDP participants harvested 206,852 white-tailed deer (57.7% of recommended harvest) and 2,198 mule deer (59.9% of recommended harvest)



## II. Research

### *Public Perceptions of CWD in Western Texas*

Human dimension project to identify prevailing CWD-related beliefs, attitudes, preferences, and behaviors among landowners in CWD zone counties, and in Texas hunters. Research completed in 2021. Key findings: respondents supported ban on release of captive deer into free-range populations, support for range of available method to achieve population reduction goals including sharpshooting, but opposed population reductions greater than 60%, need to enhance communications regarding implications of CWD, 75% of hunters outside of CWD zone never tested deer and 3 most common reasons were; not required, CWD not a concern outside the zone, and don't know where to get deer tested, hunters indicated more check stations would improve CWD testing

## III. Regulation Changes, Proposal and Hot Topics

### *Allow for take of white-tailed by firearm in 4 counties in North Texas*

TPWD received a petition for rule making requesting that firearms be allowed to take white-tailed deer during general season in Collin, Dallas, Grayson, and Rockwall counties. Currently, take of white-tailed deer is by lawful archery equipment only during all seasons in these counties. Grayson county has been archery-only since 1984. Take by firearm in these counties has been a contentious issue since the late 90s.

### *Digital License and Electronic Tagging*

Recent legislative efforts have prompted TPWD to develop a pilot program for digital licenses and electronic tagging. Pilot program will offer a digital license for the "super combo" hunting /fishing license. Selection for this e-license is voluntary. Electronic "tagging" is to be completed using the TPWD mobile app, My Texas Hunt Harvest" that is currently use for mandatory reporting requirements. Tagging requirements will essentially be the same as mandatory harvest reporting and there is no unique tag to notch or select in the pilot project. Hunters required to attach a legible confirmation number on the harvested animal.

### *MLDP Fee Regulation*

Fee for participation in the MLDP program was implemented April 2021. To date the Department has received payment totaling \$477,635. Wildlife division is in the process of hiring 5 new biologists with plans for additional biologists to be added in the new FY.

## IV. Disease Issues / Updates

### *Chronic Wasting Disease*

- New zones proposed in Lubbock and Hunt counties, and expansion of the South-central Texas CWD Zone (Medina Co.)
- Statewide Surveillance
  - 13,154 samples collected in 2020 (10,024 voluntary hunter-harvested samples, 2,680 roadkill samples, 450 other)
  - 12,256 samples from white-tailed deer, 715 from mule deer, 31 from elk, and 152 from exotic species
  - Females represented 43.4% and males 55.9% of total samples, 0.7% sex was unknown
  - 95,184 CWD tests ("Not Detected" / "Detected") from TPWD collected samples 2002-2020
- Private Samples

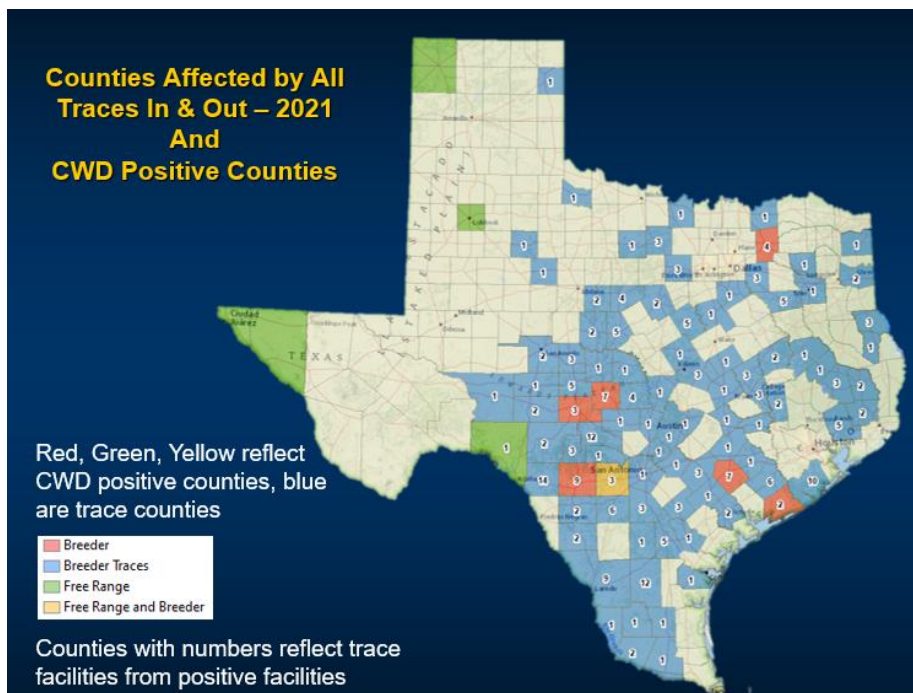


- 47,480 postmortem deer breeder tests 2002-2020
- 37,448 ante mortem deer breeder tests 2015-2020
- 17,378 postmortem deer breeder release site tests 2015-2020
- 10,499 TTT & TTP permit postmortem tests (2002-2020)
- 207,989 total CWD test results in Texas 2002-2020 (all sources combined)

A total of 258 CWD-positive animals have been detected in Texas since 2012, 73.6% (n=190) are deer/elk associated with captive breeding facilities and release sites, and the remaining 26.4% are free range deer and elk (Table 2)..

Table 1. CWD positives by CWD zone, species, and source (fr – free range, cp – captive pen, cr – captive release site)

CWD Zone	Species	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Trans Pecos	Mule Deer (fr)	6	0	1	1	5	2	4	5	7	3	34
	Mule Deer (fr)	0	0	0	1	2	2	2	6	4	0	17
Panhandle	Elk (fr)	0	0	0	0	1	0	0	0	0	0	1
	White-tailed Deer (fr)	0	0	0	0	0	1	3	0	1	0	5
South-Central Texas	White-tailed Deer (fr)	0	0	0	0	1	0	2	2	3	0	8
	White-tailed Deer (cp)	0	0	0	5	21	21	47	17	14	23	148
	White-tailed Deer (cr)	0	0	0	0	5	6	3	5	1	0	20
	Elk (cr)	0	0	0	0	0	0	1	1	1	0	3
	Red Deer (cr)	0	0	0	0	0	0	0	1	1	0	2
Val Verde	White-tailed Deer (fr)	0	0	0	0	0	0	0	2	1	0	3
Kimble	White-tailed Deer (cp)	0	0	0	0	0	0	0	1	9	0	10
Hunt	White-tailed Deer (cp)	0	0	0	0	0	0	0	0	0	5	5
Matagorda	White-tailed Deer (cp)	0	0	0	0	0	0	0	0	0	1	1
Mason	White-tailed Deer (cp)	0	0	0	0	0	0	0	0	0	1	1
<b>Grand Total</b>		<b>6</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>35</b>	<b>33</b>	<b>62</b>	<b>39</b>	<b>42</b>	<b>33</b>	<b>258</b>



CWD was detected in 5 new captive facilities since March 2021.

#### 297 Trace Facilities

- 178 breeder facilities
- 104 release sites
- 8 out-of-state
- 4 nursing facilities
- 3 DMP sites
- 87 of the trace facilities enrolled in HCP (15 certified)



## Virginia Deer Program Report By: Matt Knox and Katie Martin



### I. Harvest / Population Trends

- 2020-2021 season reported harvest = 209,356 (Fig 1)
- 49% antlered bucks, 7% button bucks, and 44% does.
- Archery (including crossbows) = 14%, muzzleloaders = 23%, and firearms = 63%.
- Fall 2020 pre-hunt population estimate = 1,270,000 (conservative: Downing reconstruction with SAK, based only on reported deer kill data; no compensation for noncompliance and no nonharvest mortality added in)

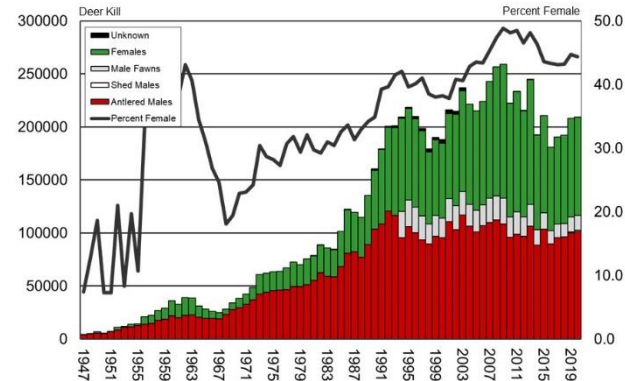


Figure 1. Virginia deer kill 1947 to present.

### II. Research

#### *Non-baited camera technique for deer population dynamics in Appalachians*

- 2018-2021, Virginia Tech, Garrett Clevinger and Drs. Mark Ford, Mike Cherry
- Developing a non-baited camera-based methodology to investigate and monitor deer population dynamics at large scales.
  - 92,000 images of deer or predators (bears, bobcats, and coyotes). Predicting deer/predator abundance and activity.
- Providing estimates and quantifying drivers of deer population parameters such as abundance, survival, and recruitment.
  - 12-week fawn survival at 0.402; 21/30 fawn mortalities were predation: 70% bears, 13% bobcats, 1% coyotes, 16% unassigned based on field site (awaiting predator DNA confirmation)

### III. Hot Topics

- The Virginia Department of Game and Inland Fisheries has been renamed and is now the Virginia Department of Wildlife Resources.
- In June 2021, the Department's Board adopted three resolutions relative to deer dog hunting. The resolutions address:
  - Requiring collars on deer hunting dogs with the owner's name and contact information (will require legislative action).
  - Reviewing dog field trial permits issued for foxhound field trials.
  - Development of a dog hunting ethics module to be included in the Department's Hunter Education Program.

#### *New deer regulations that take effect fall 2021. Deer regulations are evaluated biennially.*

- Check stations and the distribution of check books have been discontinued.
- It is illegal to use unmanned aerial vehicles, commonly referred to as drones, for the purposes of hunting. New calendar day restriction added.
- The daily deer bag limit is now unlimited in all cities and towns that allow deer hunting (except in the cities of Chesapeake, Suffolk, and Virginia Beach).
- A statewide deer bag limit of one deer per day has been established on national forest, department-owned, and department-managed lands. The statewide daily deer bag limit is two deer per day on private land.
- Earn a buck (EAB) is now in effect on private lands in 10 new counties, bring the EAB total to 33 counties.
- The minimum muzzleloading rifle caliber has been reduced from 45 to 40 caliber and muzzleloading rifles must still fire a single bullet or sabot bullet (35 caliber or larger).
- The definition of a muzzleloading rifle was changed so that only the projectile must be loaded from the muzzle of the gun. This makes the new Firestick muzzleloader a legal weapon in Virginia.

#### *Elk*

Elk management plan was completed in 2019; 3-county Elk Management Zone (EMZ). Bill passed in 2020 General Assembly session that allows the Department to create a special license to hunt elk in the 3-county elk management zone in the future. Regulations adopted in spring 2021 to hold first elk hunt in the EMZ in fall 2022.

### IV. Disease Issues / Updates

#### *Hemorrhagic Disease*

Fall 2020 was an odd HD year. Based on the number of late summer and early fall HD calls and reports the Department received from the public, fall 2020 appeared to be a relatively quiet HD year, but then later, based on the records of splitting/sloughing hooves in DMAP data, fall 2020 appeared to have been a fairly big HD year.

Last fall, the Department received 54 late summer and early fall HD calls from 30 counties involving 199 deer. These are not "big" numbers in terms of calls, counties, or deer. However, in April when the Department received the fall 2020 DMAP data, it clearly indicated a bigger HD year in fall 2020 than previously thought based on the low number of late summer/early fall HD calls and reports. East of the Blue Ridge, approximately 6% of the 11,500 deer examined by DMAP cooperators showed splitting or sloughing hooves on two or more feet, indicative of having had HD in fall 2020. This 6% is a big number.

In a typical year, approximately 1-2% of eastern deer have splitting and sloughing hooves. In quiet years, that figure is less than 1%. HD occurs every year in Virginia at some low level.

### *Chronic Wasting Disease*

Bad news, bad news, and more bad news. First, the original CWD area centered in and around Frederick and northern Shenandoah counties (Disease Management Area 1 (DMA1)) continues to grow and expand. First detected in fall 2009 near the community of Gore in Frederick County on the West Virginia state border, CWD has been moving east across Frederick County and south for a decade and has now become established in the northern half of Shenandoah County. In fall 2018, CWD was detected east of I-81 for the first time. In fall 2019 two CWD deer were found in Clarke County, and in fall 2020 a CWD deer was found in Warren County for the first time. For fall 2021 early and late antlerless only deer seasons in DMA1 have been established in Clarke County and on private lands in Frederick, Shenandoah, and Warren counties.

- Second, in fall 2018 CWD was discovered for the first time in Culpeper County using a pilot statewide taxidermist-supported CWD surveillance strategy. To address this situation in fall 2019, a new DMA2 was established that included all of Culpeper, Madison, and Orange counties. Then with the discovery of CWD in a taxidermist-sampled deer in the northwestern corner of Fauquier County in fall 2019, DMA2 was expanded to include seven counties: Culpeper, Fauquier, Loudoun, Madison, Orange, Page, and Rappahannock. In fall 2020, additional CWD detections were made in DMA2 in Fauquier (1), Loudoun (1), Madison (1), and Rappahannock (1) counties. Hopefully, all of the CWD detections in DMA2 represent deer that have dispersed out of DMA1. For fall 2020 in DMA2 an early antlerless only deer season has been established on private lands in Culpeper, Fauquier, Madison, Orange, and Rappahannock counties.

Third, and when you think it cannot get any worse, in fall 2020 CWD was detected in a taxidermist-sampled deer from southern Montgomery County, 163 miles from the closest Virginia positive. For fall 2021, a new DMA3 will consist of Floyd, Montgomery, and Pulaski counties. In response to the 2020 CWD detection in Montgomery County, the Department is recommending the addition of early and late antlerless-only deer seasons in an approximately 40 square-mile Disease Focus Zone in Montgomery County and the extension of the general firearms deer season from two to four weeks on private lands in Montgomery and Pulaski counties.

In addition to the three DMAs noted above, the Department continues to conduct annual statewide CWD surveillance using a taxidermist-supported surveillance strategy. In fall 2020, approximately 2,600 samples from hunter-harvested deer were submitted by participating taxidermists. The Montgomery County CWD-positive deer was sampled as part of this effort.

As of May 1, 2021, 109 CWD-positive deer have been found in ten counties in Virginia including two in Clarke (fall 2019), one in Culpeper (fall 2018), two in Fauquier (one each in fall 2019 and 2020), 87 in Frederick (2009 to present), one in Loudoun (2020), one in Madison (2020), one in Montgomery (2020), one in Rappahannock (2020), 12 in Shenandoah (2014 to present), and one in Warren (2020).

For more information on CWD go to <https://www.dgif.virginia.gov/wildlife/diseases/cwd/>.



# 2021 West Virginia Report

Southeast Deer Technical and  
Cervid Working Group Meeting

July 14, 2021  
(Virtual Meeting)

## I. Harvest

Season	2019	2020	Change 2019-20	2015-19 Avg.	2020 Diff From Avg.
Overall	99,437	106,861	+7.5%	113,444	-6%
Archery	29,537	31,594	+7%	28,278	+12%
Modern Firearm	64,808	70,040	+8%	80,280	-13%
Muzzleloader	5,092	5,227	+3%	4,876	+7%

Note: Archery season harvest includes deer taken with bow and crossbow with no hunter use restrictions for crossbows.

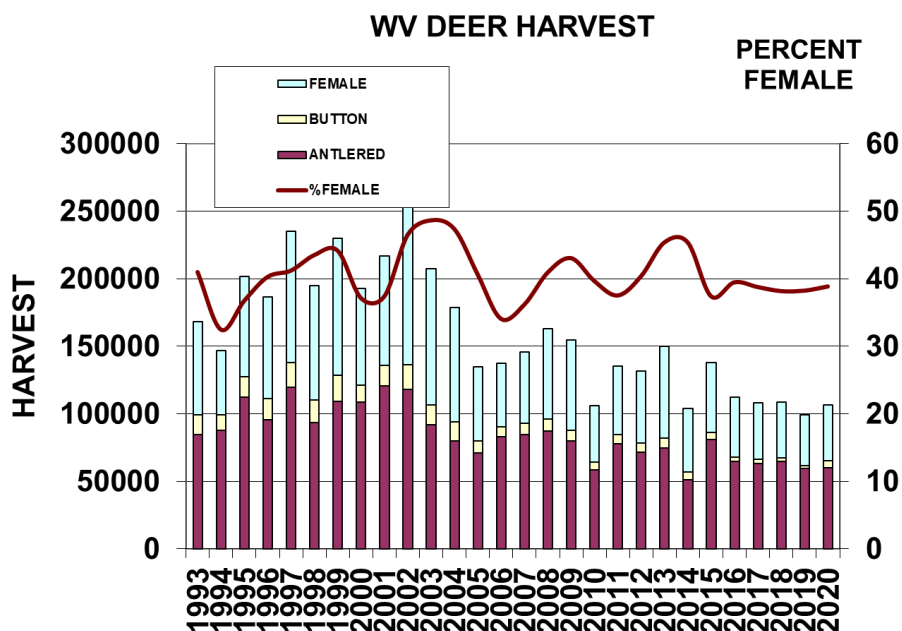


Figure above depicts statewide recorded deer harvest from 1993-2020 by deer type and % female. Although statewide % female was 39% in 2020, the % female harvest in management units varied from 20% to 49% which reflects antlerless harvest frameworks designed to grow, reduce, or stabilize the deer population on a county basis.

## II. Research

**Survival, Cause-Specific Mortality, Resource Selection and Movement of White-tailed Deer in West Virginia.** Deer capture started February 19, 2021. A Ph.D. student at West Virginia University started August 2020 and a M.S. student started June 2021. Three study areas are distributed across the state, including one in a CWD detected County. Ninety-two deer currently have active GPS collars.

**Five-year Evaluation of Distance Sampling for White-tailed Deer (*Odocoileus virginianus*) Density Estimation in West Virginia.** Dr. H. Brian Underwood, USGS Patuxent Wildlife Research Center, Syracuse Field Station, has completed phase I and phase II modeling of distance sampling conducted by the WV DNR is ongoing.

## III. Hot Topics

- ➡ The impacts of electronic game checking on harvest data collection and ability to examine deer carcasses
- ➡ Presence of Chronic Wasting Disease located in eastern panhandle portion of the state.
- ➡ Revision of White-tailed Deer Operational Plan for the period 2020-2025
- ➡ Pressure to reduce buck bag limit and/or adopt antler point restrictions statewide.
- ➡ Natural Resource Commission appointments under recent enacted legislation shortened term lengths and reapportioned Commissioners based on WV DNR District boundaries.
- ➡ WV Department of Agriculture regulation of captive cervid facilities encountering enforcement challenges.



## Hemorrhagic Disease (EHDV-6)

## Chronic Wasting Disease

Fig.1

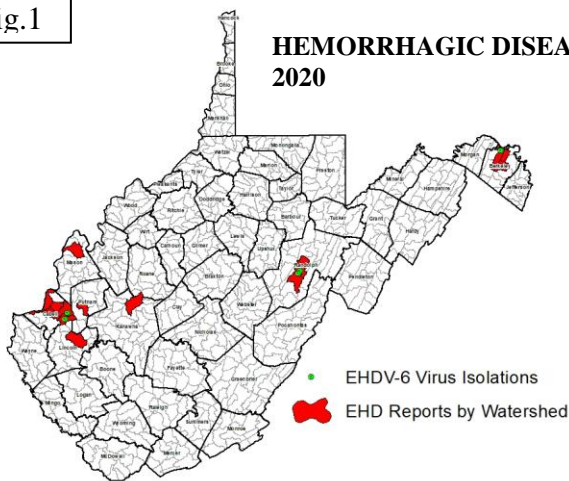


Fig.3

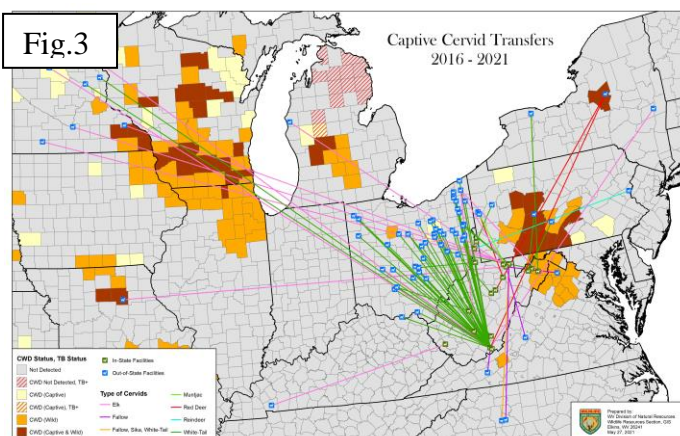


Fig.2

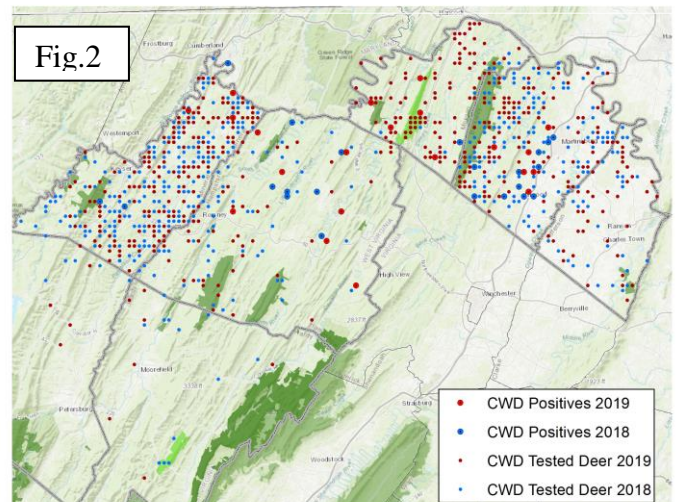
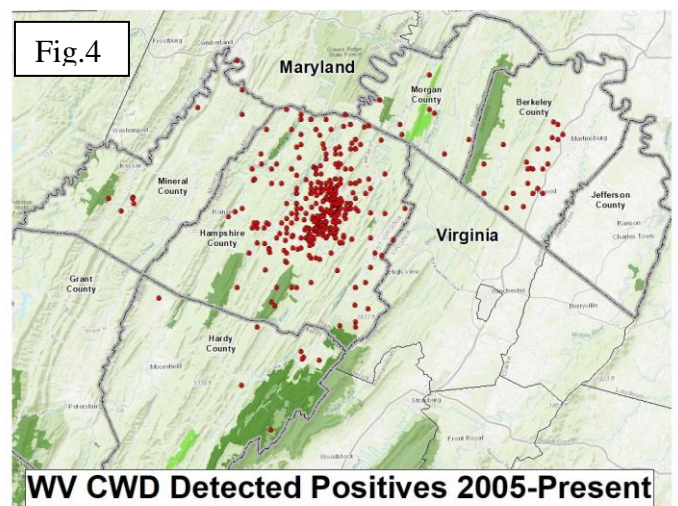


Fig.4



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