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SOUTHEASTERN COOPERATIVE WILDLIFE DISEASE STUDY

COLLEGE OF VETERINARY MEDICINE
THE UNIVERSITY OF GEORGIA
ATHENS, GEORGIA 30602-7393

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January 15, 1998

Mr. Steve Gard
Dahomey National Wildlife Refuge
P.O. Box 1070
16736 Hwy 8 West
Grenada, Mississippi 38901

Dear Steve:

Enclosed is our report on the deer herd health check that we conducted on Dahomey National Wildlife Refuge, Bolivar County, Mississippi, on September 4, 1997. The data are summarized in three tables (parasitologic, serologic, and pathologic) and are accompanied by interpretative comments. Our findings are briefly summarized below.

This population appears to be near nutritional carrying capacity based on the moderate APC value, the levels of other parasites, and the general physical parameters of the animals. The animals we examined had a greater diversity of lesions and pathologic conditions than do many populations but most of the problems were relatively minor. Currently, the herd does not appear to have any significant density related health problems, and we did not encounter any overtly diseased deer. The herd is fully susceptible to the hemorrhagic disease viruses, but prediction of future activity by these viruses is not possible. Our data indicate that the herd can be maintained near its present density without undue risk of declines in herd health provided that habitat quality remains stable. Any significant increase in density can be expected to be accompanied by problems with a syndrome of parasitism and malnutrition.

One additional item of interest is that we recovered a single adult female tick identified as *Ixodes affinis*. This is outside the normal range for this tick (previously only from coastal FL, GA, and SC). If you think that you may have the opportunity to collect additional ticks from deer (from hunts, roadkills, etc.), we would like to get them. Let me know and I will send some collection vials.

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I trust this information will be of value in management of this deer population. If you have any questions about the report, please do not hesitate to contact me.

Best regards,

Sincerely,

Randy

William R. Davidson, Ph.D.
Assistant Professor

WRD

Enclosures

CC: Mr. S. Ray Aycock
Mr. Cleophas R. Cooke, Jr.
Dr. E. Frank Bowers
Dr. Milton Friend
Mr. Robert Griffin
Mr. Bill Thomason

Table 2. Results of serologic tests for selected diseases in five white-tailed deer from Dahomey National Wildlife Refuge, Bolivar County, Mississippi, on September 4, 1997.

Disease	Deer Number 1	2	3	4	5
Leptospirosis					
(serotype bratislava)	Neg	Neg	Neg	Neg	Neg
(serotype pomona)	Pos	Pos	Pos	Neg	Neg
(serotype hardjo)	Neg	Neg	Neg	Neg	Neg
(serotype grippotyphosa)	Neg	Neg	Neg	Neg	Neg
(serotype icterohemorrhagiae)	Neg	Neg	Neg	Neg	Neg
(serotype canicola)	Neg	Neg	Neg	Neg	Neg
Brucellosis	Neg	Neg	Neg	Neg	Neg
Infectious bovine rhinotracheitis (IBR)	Neg	Neg	Neg	Neg	Neg
Bovine virus diarrhea (BVD)	Neg	Neg	Neg	Neg	Neg
Parainfluenza$_3$ (PI_3)	Neg	Neg	Neg	Neg	Neg
Epizootic hemorrhagic disease (EHD)	Neg	Neg	Neg	Neg	Neg
Bluetongue (BT)	Neg	Neg	Neg	Neg	Neg

Table 3. Lesions and pathologic conditions in five white-tailed deer collected from Dahomey National Wildlife Refuge, Bolivar County, Mississippi, on September 4, 1997.

	Deer Number				
Lesion/Condition	1	2	3	4	5
Granulomatous meningitis	1	-	-	-	-
Focal verminous pneumonia	1	-	-	-	-
Bronchitis/peribronchitis	-	-	1	1	-
Fibrinous pleuritis	-	-	1	2	1
Verminous pneumonitis	-	-	1	-	-
Generalized lymphadenopathy	1	-	2	-	-
Abomasal ulceration	-	-	-	-	1
Chronic multifocal interstitial nephritis	1	-	-	-	-
Chronic granulomatous fascioloidosis	1	1	1	2	1
Peritonitis	-	1	1	-	-
Abscessations (mammary gland, flank, and rear leg)	-	-	2	-	-
Healed injury to hoof	-	-	1	-	-

*Key: - = lesion or condition not present; 1 = minor tissue damage or mild pathologic change; 2 = moderate tissue damage or moderate pathologic change; 3 = extensive tissue damage or marked pathologic change.

Table 1. Arthropod, helminth, and protozoan parasites of five white-tailed deer (Odocoileus virginianus) collected from Dahomey National Wildlife Refuge, Bolivar County, Mississippi, on September 4, 1997.

Animal Number	1	2	3	4	5
Age (years)	4.0	7.0	6.0	2.5	2.5
Sex	F	F	F	F	F
Weight (pounds)	115	125	135	130	110
Physical Condition	Fair	Fair	Good	Good	Fair
Kidney Fat Index	12.9	3.6	30.8	32.2	11.6
Packed Cell Volume	46	39	49	44	37
Hemoglobin	16.5	15.2	16.0	16.5	14.2

ARTHROPODS

Animal Number	1	2	3	4	5
Lice	-	-	-	-	-
Louse Flies	Light	Light	Light	Light	Light
Ticks	Light	Light	Light	-	Light
Chiggers	Light	-	-	-	Light
Ear Mites	-	-	-	-	-
Nasal Bots	Light	Heavy	Light	-	Moder.

Location in Host	HELMINTHS	Number of Parasites Per Deer 1	2	3	4	5	Range	Prevalence	Average
Subcutaneous									
Brain	Parelaphostrongylus tenuis	2	-	-	-	-	0-2	20%	0.4
Circulatory									
Lungs	Dictyocaulus viviparus	-	6	-	-	1	0-6	40%	1.4
	Protostrongylid larvae	+	-	+	-	-	-	60%	-
Abdominal Cavity	Setaria yehi								
Liver	Fascioloides magna	18	5	4	9	2	2-18	100%	7.6
Esophagus	Gongylonema pulchrum	3	9	3	-	-	0-9	60%	3.0
Rumen									
Abomasum	Mazamastrongylus pursglovei	120	2,309	472	812	752	120-2,309	100%	893.0
APC = (1,044)	Ostertagia dikmansi	-	77	-	-	53	0-77	40%	26.0
	Ostertagia mossi	120	154	28	108	215	28-215	100%	125.0
	Protozoans								
Blood	Theileria cervi	-	-	-	-	+	-	20%	-
	Trypanosoma cervi	+	-	-	-	+	-	40%	-