Historic, archived document

Do not assume content reflects current
scientific knowledge, policies, or practices.

USF601
H1115
cop 2

APHIS 91-12

July 1973

NATIONAL TICK SURVEILLANCE PROGRAM

Calendar Year 1972

RECEIVED
NATIONAL TICK SURVEILLANCE PROGRAM
JUL 17 1974

RECEIVED
NATIONAL TICK SURVEILLANCE PROGRAM
JUL 17 1974

Animal and Plant Health Inspection Service
UNITED STATES DEPARTMENT OF AGRICULTURE

Prepared by
Veterinary Services
Animal and Plant Health Inspection Service
UNITED STATES DEPARTMENT OF AGRICULTURE
Hyattsville, Md. 20782

NATIONAL TICK SURVEILLANCE PROGRAM

CALENDAR YEAR 1972

During calendar year 1972 the collection and submission of ticks from native and imported animals were 14 percent less than for 1971. There were 3,645 species collections in 1972, compared with 4,247 in 1971.

THE ALICE, TEXAS *BOOPHILUS* OUTBREAK

On August 22, 1972, cattle fever ticks (*Boophilus* sp.) were found on cattle in a livestock market at Alice, Tex. As a result of this disclosure, by the end of 1972 a total of 64 infestations were detected, 63 in Texas and one in Imperial County, Calif. The infestations in Texas involved a county 400 miles northwest of Alice, another 300 miles northeast, and another county 100 miles west of Alice. Parts of six counties in the Alice area have been placed under both State and Federal quarantine. A total of 85 State and Federal inspectors has been assigned to the Cattle Fever Tick Eradication Task Force, Alice, Tex. The duties of the personnel involved in this program include: (1) inspection to determine location of infested premises, (2) carrying out inspection for movement, and (3) tracing movements from infested and exposed premises.

The *Boophilus* outbreak in the Alice, Tex., area is the most serious "break" in the protective quarantine zone in more than 30 years. State and Federal regulatory personnel are continuing a very active program in 1973 to contain and eradicate all infestations connected with the Alice tick outbreak.

In addition to unexpected tick outbreaks such as the one at Alice, each year a number of tick infestations are expected to be found in the quarantine zone separating Texas from Mexico. The United States maintains a permanent quarantine zone or barrier along the Rio Grande River to protect the cattle fever tick free area of Texas from the tick infested area of Mexico. For example, during the last half of calendar year 1972, 33 infestations of *Boophilus* ticks were found in eight counties along the Rio Grande River. This activity is comparable to the same period of time in the preceding year.

GULF COAST TICK IN OKLAHOMA

An unusually heavy outbreak of Gulf Coast ticks (*Amblyomma maculatum*) was reported from Oklahoma during the spring and summer of 1972. Entomologists from Oklahoma State University found the ticks on livestock in at least 15 counties in the State.

The Gulf Coast tick is a common parasite of livestock along the Gulf Coast but has seldom been a problem at distances greater than 100 miles inland. However, when infestations were detected in Mayes County, Okla., in 1963 an effort was made to determine if the tick had

become established. Collections of *A. maculatum* were made by Veterinary Services personnel from the same farm in Mayes County in 1963, 1967, 1968, and 1971. By 1968 it was apparent that this tick was established in Wagoner, Rogers, Craig, and Mayes Counties.

CHANGES IN THE DISTRIBUTION OF TICKS

The establishment of *A. maculatum* in northeastern Oklahoma is another instance in which a species of tick thought to be confined to a limited geographical area was able to make adaptations for survival and propagation in a geographical area quite different from where it originated. A second example is the brown dog tick (*Rhipicephalus sanguineus*) which was originally a tropical species but is now commonly found in the northern States. Although the brown dog tick is unable to survive the winter outdoors in the northern States, it has adapted very well to survival in centrally heated houses and kennels. It can become a serious pest of dogs and cause real concern to the owner. The

spinose ear tick (*Otobius megnini*) is a third species which has extended its geographical distribution. Originally a native of the southwestern United States and Mexico, it is now established in South America, Africa, India and Madagascar. It was carried to these distant areas in the ears of the livestock hosts. Until recently, the spinose ear tick was thought to be established in the United States only in the dry, arid, southwestern States. Records now confirm that the tick is a problem in several northwestern States as well as British Columbia. It is also known to be established in at least one county in eastern Tennessee.

THE VIRGIN ISLANDS TICK ERADICATION PROGRAM

The livestock owners of St. Croix, U.S. Virgin Islands, have maintained an interest in a *Boophilus microplus* eradication program since the early 1960's. Studies were begun in 1962 to determine the role the white-tailed deer (*Odocoileus virginianus*) plays as a potential host for *B. microplus*. These efforts were expanded from 1964 to 1967 with studies by the Southeastern Cooperative Wildlife Disease Study.

Final eradication plans were formulated in 1970, and supervisory personnel and equipment arrived on St. Croix in 1971. Construction of necessary facilities was completed in 1971. Dipping commenced on the eastern end of the island in January 1972. Unfortunately the dipping operation had to be suspended in March 1972 when it became apparent that efforts to control movement of livestock and green forage from other areas of the island were ineffective.

REPORT OF ALL TICKS COLLECTED
CALENDAR YEAR 1972

TICK COLLECTIONS FROM ALL HOSTS

Calendar Year 1972

STATE	TOTAL	CATTLE	DOGS	HORSES and MULES	ZOO ANIMALS and MISC.	NATIVE WILDLIFE	ANIMALS OFFERED FOR ENTRY
TOTAL	3,645	2,223	194	620	140	201	267
Alabama	20	7	2		3	8	
Alaska	1		1				
Arizona	35	13		2	2	1	17
Arkansas	146	117	5		21	3	
California	10	4		1		1	4
Colorado	97	6	58	8	20	1	4
Connecticut	1		1				
Delaware	2	1			1		
Florida	396	131	7	233	3	18	4
Georgia	24	12	1		3	8	
Hawaii							
Idaho	3	2			1		
Illinois	4				4		
Indiana	2	2					
Iowa							
Kansas	6	3	1		2		
Kentucky	3		3				
Louisiana	53	7	2			43	1
Maine							
Maryland	1				1		
Massachusetts	8	1	7				
Michigan							
Minnesota							
Mississippi	14	8	4		1	1	
Missouri	37	24	6		6	1	
Montana	7		2	3	2		
Nebraska	6	5	1				
Nevada	3	1			1	1	
New Hampshire							
New Jersey	16		1	14		1	
New Mexico	6	5			1		
New York	13		1				12
North Carolina	4		3		1		
North Dakota							
Ohio	6		3	1	1	1	
Oklahoma	51	38	7	2	2	2	
Oregon	18	1	8		4	5	
Pennsylvania	1		1				
Rhode Island							
South Carolina	45	1				44	
South Dakota	2	1	1				
Tennessee	17	16	1				
Texas	2,268	1,697	53	237	26	30	225
Utah							
Vermont	1				1		
Virginia	7	1			2	4	
Washington	11	1	8		2		
West Virginia							
Wisconsin	1		1				
Wyoming							
Puerto Rico	135	90	4	33	8		
Virgin Islands	164	28	1	86	21	28

U.S. DEPARTMENT OF AGRICULTURE-VETERINARY SERVICES
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

REPORT OF TICKS COLLECTED															PERIOD	HOST											
															CALENDAR YEAR 1972					NATIVE WILDLIFE							
STATE	TOTAL	AMBL YOMMA AMERICANUM	AMBL YOMMA CALIFORNENSE	AMBL YOMMA DETROITENSIS	AMBL YOMMA MITALOR	AMBL YOMMA MACULATUM SPP.	ARGAS PERSCICUS	BOOPHILUS ANNULATUS	BOOPHILUS MICROPLUS	BOOPHILUS SPP.	DERMACENTOR ALBICINCTUS	DERMACENTOR BREVIPALPUS	DERMACENTOR DEPRESSUS	DERMACENTOR FULVENS	DERMACENTOR OCCIDENTALIS	DERMACENTOR LAMIAE	DERMACENTOR SPP.	HAEMAPHYSALIS PARVITRIS	IXODES COCKEII	IXODES PACIFICUS	IXODES SCAPULARIS	IXODES SPP.	ORNITHODOROS SPP.	OTIOBIUS MEGALIN	RHIPICEPHALUS SANGUINEUS	RHIPICEPHALUS SPP.	WICCELLANEUS SPP.
TOTAL	201	53	--	--	5	5	--	--	30	--	8	1	2	--	--	14	3	8	1	2	66	3	--	--	--	--	--
Alabama	8	1D																			7D						
Alaska																											
Arizona	1										1EK																
Arkansas	3	1W																			1W 1D						
California	1																			1F							
Colorado	1																					1WS ^b					
Connecticut																											
Delaware																											
Florida	18	1RC 4D			1D	11 ^e									2PO 5RC						3PO 1D						
Georgia	8	6D			1D												1R										
Hawaii																											
Idaho																											
Illinois																											
Indiana																											
Iowa																											
Kansas																											
Kentucky																											
Louisiana	43	4D																				39D					
Maine																											
Maryland																											
Massachusetts																											
Michigan																											
Minnesota																											
Mississippi	1																					1D					
Missouri	1																					1FS					
Montana																											
Nebraska																											
Nevada	1										1D																
New Hampshire																											
New Jersey	1												1D														
New Mexico																											
New York																											
North Carolina																											
North Dakota																											
Ohio	1																				1RC						
Oklahoma	2																					1D	1SK ^f				
Oregon	5										3D	1D									1D						
Pennsylvania																											
Rhode Island																											
South Carolina	44	32D			2D																	1DD					
South Dakota																											
Tennessee																											
Texas	30	1D			1D	18C ⁿ 145 181 1D			2D		3D		1D			1BC 4CO 2D 1FS 1BD 1R		7R			1D						
Utah																											
Vermont																											
Virginia	4	3D																					1BT ^k				
Washington																											
West Virginia																											
Wisconsin																											
Wyoming																											
Puerto Rico																											
Virgin Islands	28									28D																	

Key to Host

A	Armadillo	FS	Fox squirrel
BC	Bobcat	PO	Opossum
BD	Badger	R	Rabbit
BI	Bird	RC	Raccoon
CO	Coyote	SK	Skunk
D	Deer	T	Tortoise
EK	Elk	W	Wolf
F	Fox	WS	Weasel

Key to Species

b	<i>Ixodes sculptus</i>
e	<i>Amblyomma tuberculatum</i>
f	<i>Ixodes benkesi</i>
k	<i>Ixodes brunneus</i>
n	<i>Amblyomma inornatum</i>

Calendar Year 1972

REPORT OF TICKS COLLECTED															PERIOD		CALENDAR YEAR 1972										HOST		CATTLE				
STATE	TOTAL	AMBLIOMMA AMERICANUM	AMBLIOMMA CULENSENSE	AMBLIOMMA INULATUM	AMBLIOMMA MACULATUM	AMBLIOMMA SPP.	ARGAS PERSCUS	BORPHILUS ANNULATUS	BORPHILUS MICROPLUS	BORPHILUS SPP.	DERMACENTOR ALBIPICTUS	DERMACENTOR MONTANUS	DERMACENTOR NIGRALINEATUS	DERMACENTOR NITENS	DERMACENTOR OCCIDENTALIS	DERMACENTOR VARIABILIS	DERMACENTOR SPP.	HAEMAPHYSALIS SPURTHILLI	HAEMAPHYSALIS ALUTIS	HAEMAPHYSALIS SUDAN	HAEMAPHYSALIS PARVICUS	HAEMAPHYSALIS SCABRUS	HAEMAPHYSALIS LARIS	HAEMAPHYSALIS SPP.	ORNITHODOROS SPP.	OTOBUS MESQUITI	RHIPICEPHALUS SANGUINEUS	RHIPICEPHALUS SPP.	MISCELLANEOUS SPP.				
TOTAL	2,223	411	312	8	458	119	--	25	176	10	60	2	18	95	1	428	2	--	--	--	60	--	--	--	38	--	--	--	--	--			
Alabama	7				3											2						2											
Alaska																																	
Arizona	13										5		1														3						
Arkansas	117	106														9						2											
California	4	1							1						1	1																	
Colorado	6										1	1															4						
Connecticut																																	
Delaware	1															1																	
Florida	131	9	1		89											8						24											
Georgia	12	8			1											2						1											
Hawaii																																	
Idaho	2										2																						
Illinois																																	
Indiana	2	1														1																	
Iowa																																	
Kansas	3				1											1											1						
Kentucky																																	
Louisiana	7	2			1																	4											
Maine																																	
Maryland																																	
Massachusetts	1															1																	
Michigan																																	
Minnesota																																	
Mississippi	8	3			2											3																	
Missouri	24	19														3						1					1						
Montana																																	
Nebraska	5	4									1																						
Nevada	1										1																						
New Hampshire																																	
New Jersey																																	
New Mexico	5	1									3					1																	
New York																																	
North Carolina																																	
North Dakota																																	
Ohio																																	
Oklahoma	38	20			2						1					5						3					7						
Oregon	1																										1						
Pennsylvania																																	
Rhode Island																																	
South Carolina	1				1																												
South Dakota	1												1																				
Tennessee	16	8														6						1					1						
Texas	1,697	229	311	8	358	53 ⁿ 66		25	152	10	41		17			384	2					22					19						
Utah																																	
Vermont																																	
Virginia	1										1																						
Washington	1																										1						
West Virginia																																	
Wisconsin																																	
Wyoming																																	
Puerto Rico	90													90																			
Virgin Islands	28								23					5																			

Key to Species

n *Amblyomma inornatum*

Calendar Year 1972

ANIMAL AND PLANT HEALTH INSPECTION SERVICE

HOST ZOO ANIMALS and MISCEL-
LANEOUS HOST (Human, Sheep,
etc.)

a Argas sanchezi
c Rhipicephalus pulchellus
f Amblyomma dissimile
g Amblyomma varium
h Haemaphysalis sp.
j Amblyomma testudinis
m Amblyomma variegatum
o Argas sp.
p Argas radlatus

Calendar Year 1972

REPORT OF TICKS COLLECTED														PERIOD	HOST
														CALENDAR YEAR 1972	DOGS
STATE	TOTAL	AMBL.YOMMA ABRICARDUM	AMBL.YOMMA CAELENSESE	AMBL.YOMMA MONTANA	AMBL.YOMMA MONTANA	AMBL.YOMMA MONTANA	ARGAS PERICLITUS	BOOPHILUS ANNULATUS	BOOPHILUS MICROPYLUS	BOOPHILUS SPP.	DERMACENTOR ALBIPICUS	DERMACENTOR VITULINUS	DERMACENTOR VITULINUS	DERMACENTOR VITULINUS	DERMACENTOR VITULINUS
TOTAL	194	13	1	--	6	2	--	--	--	--	--	13	--	1	--
Alabama	2													1	
Alaska	1														1
Arizona															
Arkansas	5	1												1	2
California															
Colorado	58	2										10		9	1 ^b 2 ^d
Connecticut	1														1
Delaware															
Florida	7				1									2	2
Georgia	1													1	
Hawaii															
Idaho															
Illinois															
Indiana															
Iowa															
Kansas	1													1	
Kentucky	3													3	
Louisiana	2														2
Maine															
Maryland															
Massachusetts	7													7	
Michigan															
Minnesota															
Mississippi	4				1									1	2
Missouri	6	5												1	
Montana	2													1	1 ^d
Nebraska	1													1	
Nevada															
New Hampshire															
New Jersey	1													1	
New Mexico															
New York	1														1
North Carolina	3													3	
North Dakota															
Ohio	3													3	
Oklahoma	7				1									5	1
Oregon	8											2		1	1
Pennsylvania	1														1
Rhode Island															
South Carolina															
South Dakota	1													1	
Tennessee	1														1
Texas	53	5	1		3	2								18	20
Utah															
Vermont															
Virginia															
Washington	8											1		1	4
West Virginia															
Wisconsin	1														1
Wyoming															
Puerto Rico	4														3
Virgin Islands	1														1

Key to Species

^b Ixodes sculptus

^d Ixodes kingi

TICKS COLLECTED FROM DOGS Calendar Year 1972

Calendar Year 1972

REPORT OF TICKS COLLECTED																	PERIOD	TICKS FOUND ON ANIMALS OFFERED FOR ENTRY INTO THE UNITED STATES									
STATE	TOTAL	AMBLYOMMA HEBELLII	AMBLYOMMA SPLENDIDUM	AMBLYOMMA CALVINEI	AMBLYOMMA DEITZERI	AMBLYOMMA MACULATUM	ARGAS HELVETICUS	BOOPHILUS ANNULATUS	BOOPHILUS MICROPS	BOOPHILUS SP.	DERMACENTOR ALEUTICUS	DERMACENTOR BENTLEYI	DERMACENTOR DEUTSCHMANI	DERMACENTOR DUMERETII	DERMACENTOR HUNTERI	DERMACENTOR PARVUS	CALENDAR YEAR 1972	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.	DERMACENTOR SP.
TOTAL	267	--	3	1	7	2	--	29	39	46	83	--	4	2	--	8	18	--	--	--	2	--	--	6	3	13	1
ARIZONA																											
Douglas	5										580																
Hogales	6										480						28H*										
Phoenix	1					1AT ^Q																					
Tucson	5																58H*										
CALIFORNIA																											
Calexico	1																							1E			
San Diego	3																							180	280		
COLORADO																											
Denver	4									1AT ^E																1AT ^S 112 ^R	
FLORIDA																											
Miami	4		1E						1E					2E													
LOUISIANA																											
New Orleans	1		1X																								
NEW YORK																											
New York***	12					1AE ^U																			1HH	12C 12V 52 ^R 12 ^V	
TEXAS																											
Brownsville	33		1X	180	780					1080	780					680										1CA	
Del Rio	16							380	280		1080					180											
Eagle Pass	44							1780	480	1680	680													180			
El Paso	50									3780		480				680									180 1E	180	
Laredo	57							780 20	2280	2280					280										180		1X ^P
Presidio	25									2180						180 ^V 380											

Key to Host

AE Antester
 AT Animal trophies
 BH Bighorn sheep
 BO Bovine
 CA Canine
 D Deer
 E Equine
 HH Hedgehog
 X Inanimate object
 Z Zebra

Key to Species

c Rhipicephalus pulchellus
 p Argas radiatus
 q Amblyomma splendidum
 r Rhipicephalus evertsi
 s Rhipicephalus appendiculatus
 t Boophilus decoloratus
 u Amblyomma pictum
 v Rhipicephalus evertsi mimeticus
 w Hyalomma rufipes
 x Dermacentor hunteri
 y Dermacentor parumapertus

***Includes quarantine station at Clifton, N. J.

TICKS COLLECTED FROM ANIMALS OFFERED FOR IMPORTATION

Calendar Year 1972

U.S. DEPARTMENT OF AGRICULTURE-VETERINARY SERVICES
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

Hyattsville, Maryland 20782

Official Business

Penalty for Private Use, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101