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Veterinary
Services

APHIS 91-39

National Tick Surveillance Program

Calendar Year 1984

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National Tick Surveillance Program Calendar Year 1984

During calendar year 1984, the collection and submission of ticks from native and imported animals plus plant and animal material was 29 percent less than in 1983. There were 7,213 collections in 1984, 10,207 in 1983, 9,086 in 1982, 9,381 in 1981, 7,763 in 1980, and 11,553 in 1979.

Interception of a Heartwater Vector in Texas

In June 1984, *Amblyomma hebraeum*, a vector of heartwater (*Cowdria ruminantium*), was collected from a female black rhinoceros on a cattle ranch near Linn, Texas. This rhino was one of three rhinos on the ranch. These three rhinos were part of a consignment of five rhinos imported into the United States from South Africa in March 1984. The other two rhinos in the consignment were shipped to an exotic game ranch near Glen Rose, Texas. The black rhinoceroses, an endangered species, were brought to the United States as part of an experimental breeding program.

The ticks were collected by Dr. Sherri L. Huntress, a veterinarian from the Gladys Porter Zoo in Brownsville, Texas. One of the female rhinos died unexpectedly and during the postmortem examination, Dr. Huntress noticed several "unusual" ticks which were collected and forwarded to the National Veterinary Services Laboratories, Ames, Iowa, where they were identified as male specimens of *A. hebraeum*, the South African bont tick.

Because of possible exposure of cattle to the tick-infested rhino, a State quarantine was placed on the ranch near Linn, Texas. Since there were no cattle on the exotic game ranch near Glen Rose, this ranch was not quarantined. A team of entomologists from Veterinary Services was sent to Texas to inspect the rhinos for additional ticks and to conduct a tick survey on both ranches. The entomologists were assisted by experienced personnel from Veterinary Services Fever Tick Eradication Program, Laredo, Texas.

Examination of the rhinos by the entomologists and tick eradication specialists on the ranch near Linn revealed additional male specimens of *A. hebraeum* as well as native ticks (*Amblyomma cajennense*). No *A. hebraeum* were found on the rhinos at the Glen Rose ranch; however, another native species, *Amblyomma americanum*, was found on the two rhinos. Surveys of the pastures on both ranches were negative for *A. hebraeum*.

After examination, the rhinos on both ranches were thoroughly sprayed with 0.125 percent coumaphos. The pasture used by the rhinos at the ranch near Linn was sprayed with 0.25 percent chlorpyrifos. A followup investigation was conducted on both ranches a month after the first investigation and no further evidence of *A.*

hebraeum was found. In addition, wildlife and livestock on the ranch near Linn were periodically sampled throughout 1984 for ticks by Veterinary Services tick eradication specialists. No *A. hebraeum* were found on any of the animals examined.

The impact of the interception of *A. hebraeum* was minimized by three factors: 1) the results of the investigation indicated that only male *A. hebraeum* were transported from Africa; 2) rhinos are nonruminants and are therefore not susceptible to heartwater; and 3) the rhinos came from an area in South Africa reportedly free of heartwater.

There are two principal avenues by which foreign animal diseases may enter the United States: 1) importation of diseased animals or 2) importation of foreign animal disease vectors. These risks are greatly reduced when dealing with wild or domestic animals for which the U.S. Department of Agriculture has jurisdiction. However, rhinos and some other nonruminants are not presently regulated by the U.S. Department of Agriculture. Thus, rhinos, elephants, large cats, and various other classes of non-domesticated animals may presently enter the United States without being inspected for parasites or diseases. The increasing volume and rapidity of commerce via air transport have intensified the danger of the introduction and establishment of exotic vectors. This is particularly true with the recent trend towards placing zoological animals in "natural-type" environments that directly expose susceptible domestic livestock and native wildlife. Importers of zoological animals, State, and Federal regulatory personnel should be aware of this danger and take necessary precautions to prevent the introduction and establishment of exotic parasites and diseases.

Boophilus microplus in Puerto Rico

The cooperative eradication program between the U.S. Department of Agriculture and the Commonwealth of Puerto Rico Department of Agriculture to eliminate *B. microplus* gained momentum in 1984. The program continued the systematic treatment of infested herds from two headquarters, one on the eastern and the other on the western end of the island. The eastern headquarters is located at Juncos; the western headquarters is at Arecibo. During 1984 there were some 1,279 herds comprising over 42,000 animals under treatment and supervision by the Juncos station. There are 3,501 total premises in the Juncos quarantine area. The Arecibo quarantine area has 4,004 premises and during 1984 over 1,500 herds with more than 17,000 animals were under treatment.

The total tick eradication budget for 1984, which included funds from the USDA, APHIS; the Commonwealth; and