

PROGRAM ACTIVITY REPORT (PAR)

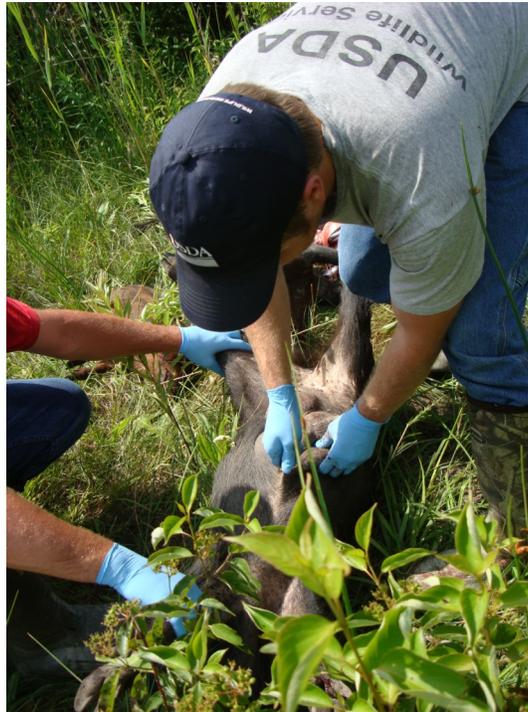


NWDP Leptospirosis Project

Leptospirosis is a bacterial infection caused by one of several *Leptospira* spp. serovars. Most mammals, including humans, can become infected. Humans typically become infected after exposure to water contaminated with animal urine. Infection in swine can lead to abortions or stillbirths.

The NWDP has been collaborating with Colorado State University to test samples from feral swine, raccoons, and coyotes for leptospirosis with the objective of determining the apparent prevalence in these species. Since sample collection for the leptospirosis surveillance project began in May 2012, 500 samples have been collected from 238 feral swine, 178 raccoons, and 84 coyotes. Serum samples from coyotes and raccoons have been tested using the microagglutination test to determine antibody titers to 5 serovars – Hardjo, icterohaemorrhagiae, canicola, grippityphosa, Pomona, and Bratislava. These serovars are most commonly found in humans, livestock, domestic dogs, or rodents.

As an extension of the original project, feral swine kidney samples are



being collected from counties where positive swine serum samples have been identified previously; a paired serum sample will be tested as well. The kidneys will be analyzed using an rRT-PCR assay to determine whether active shedding of *leptospira* is occurring; the assay will not distinguish between serovars of leptospirosis. NWDP is also increasing the

number of counties being evaluated for presence of leptospirosis. Initially, only samples collected from counties where at least 10 serum samples were available through the archive were tested to reduce diagnostic costs. The project is now being expanded to include samples collected from any county where antibodies to leptospirosis have not been previously detected in feral swine serum.

Diagnostics have been performed on 164 of the 500 samples collected thus far. The samples are comprised of 25 coyotes, 72 feral swine, and 67 raccoons. The table below depicts the number of samples tested by species and result. Definitive conclusions cannot be drawn due to small number of samples tested thus far. However, initial results indicate that leptospirosis exposure may be fairly common in feral swine, coyotes and raccoons (42%, 28% and 30% respectively).

For more information about this project, contact Kerri Pedersen. Kerri.Pedersen@aphis.usda.gov.

Species	total samples collected	# of positives	# of negatives	# pending results
Feral Swine	238	30	42	166
Coyotes	84	7	18	74
Raccoons	178	20	47	118

The original artwork on this page was created by the National Wildlife Disease Program's Erika Kampe and Sarah Goff