

PROGRAM ACTIVITY REPORT (PAR)



National Nobuto Storage Archive

One of the longest running surveillance projects at the NWDP is collecting wildlife blood samples on Nobuto filter

strips for plague and tularemia surveillance across the United States. Nobuto blood filter strips are made out of high-purity cellulose paper which allows for uniform sample collection. Each strip is designed to hold 0.1 mL of whole blood, which can later be reconstituted as dilute sera or used for DNA extraction and genetic analyses. The benefit of using Nobuto strips for blood sample collection is that they do not require refrigeration to preserve sample integrity. Once dry, they can be stored and shipped at room temperature.

Currently, the Centers for Disease Control and Prevention and the NWDP have a collaborative project underway to determine the optimum conditions for long-term Nobuto storage.

The National Nobuto Storage Archive was implemented to store wildlife blood samples collected on Nobuto filter paper. The archive is located in Fort Collins, Colorado at the USDA/APHIS/Wildlife Services, National Wildlife Research Center. Currently, there are over 14,000 samples in the Archive, and

thousands more are being processed and catalogued. Sample collection has been ongoing since 2004, making



Air drying blood-soaked Nobuto strips before placing them in data envelopes. Photograph provided by Randy Mickley.

this archive a valuable and rare resource that can be examined for seroprevalence patterns over time, across seasons, among species, between regions, etc. Samples have been collected from all 50 states and several territories. A majority of the samples were collected from coyotes (*Canis latrans*), which are a good sentinel species for plague exposure; however, more than 100 different species have been sampled over the years. During 2011, Wildlife Disease Biologists collected more than 5,000 samples for

the archive, despite a reduction in plague and tularemia testing.

The plague and tularemia data generated from sample analyses has allowed unique insight into the dynamics of these two pathogens. Samples also have been used for surveillance projects on additional pathogens. Samples were recently used to investigate *Neospora caninum* exposure in coyotes, a definitive host for this parasite. Results from this analysis will be combined with geographically overlapping samples pulled from the Feral Swine Serum Archive, also maintained by the NWDP. Samples have also been provided to multiple groups for diagnostic assay

development and evaluation. The NWDP considers requests for Nobuto samples for use in research projects, retrospective disease surveillance, or diagnostic assay development, on an individual basis.

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