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Two New U.S. Studies Into CWD Have Important Implications For Management

By Vivian Pharis, AWA Director

Veteran deer researchers Beth Williams and Michael Miller of the Colorado Division of Wildlife's research centre, in a September 4 article in *Nature*, indicate that chronic wasting disease (CWD) is very contagious in mule deer and it acts much like its sister prion disease scrapie in being transmitted from animal to animal and probably from soil to animal. In their article, the two researchers cite other scientific work showing that prions accumulate in gut-associated lymph glands – possibly gathering there for extrusion from the body. Findings presented at the recent national meeting of the American Chemical Society in New York City by University of Wisconsin chemist Joel Pedersen indicate that prions have an affinity for clay soil particles and stick to their surfaces.

The Colorado research centre's captive mule deer herd had been infected with CWD in the 1960s (possibly originally from sheep infected with scrapie). That herd was eventually eliminated and the facility was left free of mule deer for five years. However, new uninfected deer introduced in 1990 were developing CWD by 1994. Two groups of nine fawns were then studied, one raised from CWD-infected mothers in the centre's herd and nine that were brought to the station from uninfected wild mothers. In less than two years, all nine of the research centre fawns had contracted CWD and eight or nine wild fawns were also infected.

CWD is now established in wild deer herds in about a dozen U.S. states, and in 2002 it spread east of the Mississippi River into Wisconsin. That state is planning on killing 30,000 wild deer this year in a bid to stop the spread of CWD. Saskatchewan and Alberta, two provinces with CWD in captive deer herds, are also finding infected wild deer. Mule deer and elk tend to herd together at certain times of the year and it is feared that such behaviour will contribute to the spread of CWD in the wild. But is mass eradication, such as carried out in Saskatchewan and now in Wisconsin, the answer to controlling CWD in the wild? Some researchers say mass shootings may disrupt the social structure of herds and cause survivors to wander and new deer to move into infected areas.

For Alberta and Saskatchewan, getting rid of the source of the infection (game farms) and keeping infected areas fenced off from wildlife for many years remains the economically smartest option, before CWD becomes widespread in the wild. But recent requests to the Alberta government to move in this direction have been met with indecisive answers.

