

SUCCESSFUL NON-SURGICAL INSEMINATION OF MEXICAN WOLVES  
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Puppies were born in early May at the Wild Canid Survival and Research Center (WCSRC) outside St. Louis, Missouri, to two Mexican gray wolves (*Canis lupus baileyi*) that had been inseminated using a new, non-surgical technique that deposits sperm directly into the uterus. A third female was confirmed pregnant with ultrasound, but her four puppies died in utero due to a pregnancy complication unrelated to the insemination.

Successful application of this non-surgical technique to Mexican wolves by Norwegian veterinarian Dr. Ragnar Thomassen and the research team from the St. Louis Zoo is a significant advance. Although semen can be deposited easily into the vagina, the fertility rate is low. Deposition into the uterus results in higher fertility, but usually requires surgery. This new technique, developed in Norway, uses a catheter threaded through the cervix to deposit semen directly into the uterus, resulting in high fertility rates without the risks of surgery.

Dr. Thomassen and the St. Louis Zoo researchers first tested the technique with generic gray wolves (*C. lupus*) at the Wildlife Science Center in Minnesota before attempting it with the three endangered Mexican wolves at WCSRC. Three of the seven surviving puppies were hand-raised for the first month by WCSRC staff, because of the mother's history of not providing good care, but are now being gradually reintroduced to their parents. WCSRC, as the largest holder of Mexican wolves, has recorded almost 19% of all births and has collaborated for almost 15 years with the St. Louis Zoo Research Dept. on the Mexican wolf semen banking program and on research to better manage reproduction, with support from the Mexican Wolf SSP and the U.S. Fish & Wildlife Service.

With this new technique it will be possible to manage the genetics of the population by transporting semen instead of wolves. Not only should it be simpler to ship semen rather than wolves between the U.S. and Mexico, but because wolves are monogamous and form long-term social bonds, separation is stressful to the animals. The use of non-surgical artificial insemination allows compatible pairs to remain together, while accomplishing appropriate genetic matches. Also, artificial insemination using semen from our frozen semen bank will allow important males to contribute genes to the population long after they have died.

Although the puppies that were hand-raised will not be eligible for release, the other four may someday be part of the reintroduction program. However, the critical contribution they all can make will be to the overall genetic health of the population.