Endangered Cranes, Frogs, Foxes, and Marmots: Scientific solutions to reintroduction challenges across taxa

A. Moehrenschager

Centre for Conservation Research, Calgary Zoological Society, 1300 Zoo Road NE, Calgary, AB T2E 7V6, < axelm@calgaryzoo.ab.ca >, phone: 403-232-7771

Reintroduction success depends on successful breeding or translocation, release techniques, and restoration goals that are achievable in altered ecosystems. Here reintroduction aspects of some of Canada's most endangered species are addressed to illustrate taxon-specific challenges that can arise between propagation and population viability. Differences in behavioural repertoires of captive Vancouver Island marmots (*Marmota vancouverensis*) predicted whether breeding pairs produced pups from 2002 – 2003. Successful breeding in whooping cranes (*Grus* Americana) from 1996 – 2003 did not guarantee reproduction as hatching success of fertilized eggs was closely tied to egg moisture loss during incubation. Moisture loss differed significantly between whooping and sandhill cranes (*Grus canadensis*), between successful and unsuccessful whooping cranes, and between different stages of whooping crane incubation. The hatching of translocated northern leopard frog (*Rana pipiens*) egg masses has been successful in Alberta, but release strategies are still being developed. In 2003, leopard frogs that were recaptured using stream-side fencing, randomly placed arrays, or repeated transects, dispersed minimally by October although post-release mortalities occurred. The survival of swift foxes that were translocated from Wyoming to Canada was highest for males and for foxes that remained near release sites, but did not differ significantly from that of already established residents from 1994 – 1998. By 2001 the reintroduced population changed in sex ratio and grew significantly in number, distribution, and the proportion of wild-born individuals. Just as swift fox reintroduction data have been pivotal for the development of the current SARA-compliant recovery strategy, sound science will be increasingly necessary as a pivotal corner-stone of reintroduction success across all taxa.