Behaviour and Survival of Captive-Raised Pygmy Rabbits Reintroduced in Idaho

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The pygmy rabbit (Brachylagus idahoensis) is the smallest rabbit in the Northern Hemisphere and a sagebrush foraging specialist experiencing declining populations and local extinctions in portions of its range. The U.S. Fish and Wildlife Service recently classified the Columbia Basin pygmy rabbit as endangered in Washington State and the Washington Department of Fish and Wildlife began a captive breeding program in 2000. We raised non-endangered Idaho pygmy rabbits in captivity as a surrogate to develop techniques for reintroduction and restoration of populations elsewhere. We released 27 captive-reared, radio-equipped rabbits into protected natural habitats in southeastern Idaho in 2002-03, to evaluate effects of release date and pre-release rearing techniques on behavior, dispersal, and survival. In addition, we documented behavioral response to soft-release techniques including provision of artificial burrows. Released rabbits adapted quickly to natural forages, used artificial burrows extensively, but not exclusively, and dispersed from 0-333 m during the first week post-release. Calculated annual survival rates ranged from 0.0 for a release in July, 0.21 for August, and 0.52 for a release in September. At least five animals survived until the post-winter breeding season and successful reproduction occurred as indicated by unmarked kits associating with burrows of radio-collared females in spring. Factors influencing dispersal away from the release burrow, or simply dispersal itself, could be the major elements influencing exposure to predators and early survival after release, with additional inter-related factors possibly being age, cohort, season, and the influence of rearing conditions on escape behavior.