Monitoring and Stewardship of Great Blue Herons in the Columbia River Basin

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The interior subspecies of the Great Blue Heron (Ardea herodias herodias) is provincially blue-listed because of vulnerability to habitat loss and disturbance associated with development in prime breeding and wintering habitats. Valley bottom riparian and wetland areas in the Columbia River Basin represent key breeding and wintering areas for this subspecies. From 2002-2003, a comprehensive heron breeding inventory and habitat assessment was conducted within the BC portion of the Columbia Basin. As part of this initiative, a large-scale public awareness campaign generated heron sighting information from over 300 contributors throughout the basin. These locations were visited during the inventory, and information provided by the public was invaluable to its overall success. Numbers of active and successful nests, reproductive success, habitat characteristics, as well as disturbance and ownership status were determined for all breeding sites. A total of 32 breeding sites (20 active/12 historical) were found, and 24% (4 of 17) and 6.3% (1 of 16) of active sites failed in 2002 and 2003, respectively. Breeding site failure and low reproductive success at some sites was attributed to Bald Eagle predation and human disturbance. Sites had from 1-86 active nests (mean ± SE = 16.6 ± 3.6), and a total of 260 and 289 active nests were tallied during 2002 and 2003, respectively. Comparison of these results with those of a 1982 heron breeding survey suggest that although total numbers of active nests have changed little in the basin, average colony size (mean ± SE = 35.0 ± 7.9 in 1982 versus 16.6 ± 3.6 in 2002/2003) has decreased substantially. Breeding sites are primarily in mature and old forest structural stages with high canopy closure, and close to half of all sites are in pure coniferous stands. In 2002-2003, six breeding sites account for ≥80% of all active nests in the basin and >50% of breeding sites are located on private land. The potential implications of these results are explored, and based on initial findings, a stewardship brochure for landowners and land managers was developed. General and site-specific recommendations for conservation, management and monitoring of herons and their habitat are provided.