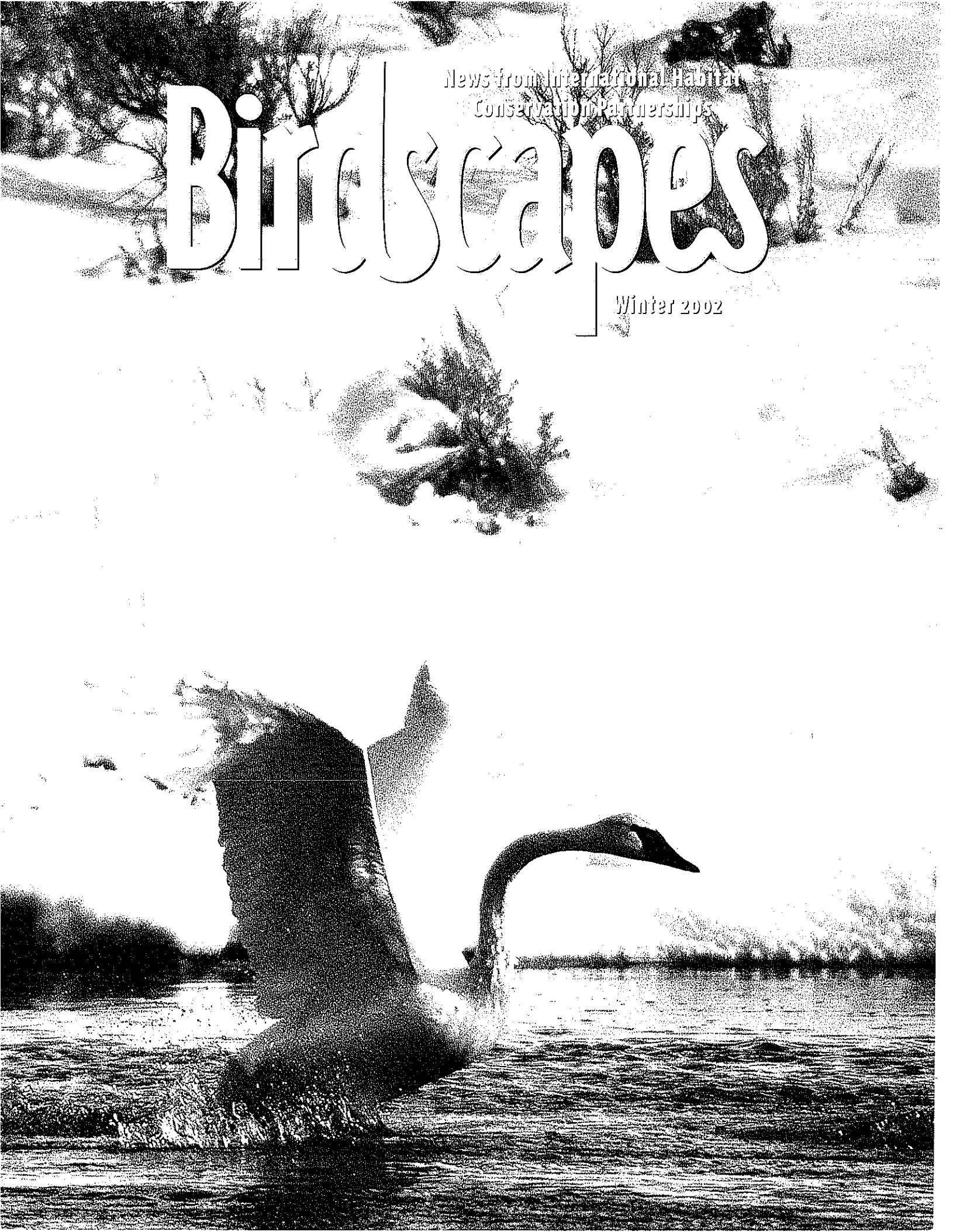

News from International Habitat Conservation Partnerships

Birdscapes

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THE IMPORTANCE OF BEAVERS TO DUCK POPULATIONS IN WYOMING

Beaver activities broadly influence many plants and other animals. They are especially important in the western United States where riparian and wetland habitats comprise less than 2% of the landscape yet support 80% of wildlife species.

The objectives of our research were to identify streams in Wyoming where beavers are currently present, have been extirpated, have been used to manage riparian habitat, and are suitable for creating wetlands and improving riparian habitat. We surveyed 125 public managers knowledgeable on beaver occupancy for streams within their districts. Each manager was sent 1:100,000-scale Bureau of Land Management topographic maps of their district, with instructions to highlight streams that met the research objectives. Managers were asked to limit reporting to only those streams for which they had direct and reliable knowledge. Seventy-two managers responded, providing information for 18% of Wyoming's 95,720 stream miles.

The loss of beaver-created habitat in Wyoming may have affected over 240,000 waterfowl statewide./Mark McKinstry

We transferred information into ARC INFO and ArcView and a digital line graph, 1:100,000-scale coverage for Wyoming. Where a manager's highlighting did not extend entirely to the end of a reach where a node was located, we extended the classification to the next node (1% of stream highlights). ArcView generated total stream lengths by stream order and the four categories of beaver occupancy.

Waterfowl surveys were conducted in 1994 from May 15 through June 15 between 0700 and 1000 hours to census active breeding birds. We selected eight paired 1-kilometer reaches on first- through third-order streams throughout the State. The only difference between paired sites was the presence or absence of beavers and wetland habitat. Waterfowl were surveyed by walking 1-kilometer stream reaches and recording species and sex for each bird observed within the riparian zone. We also surveyed 10 ponds created by introduced beavers. At each site, we walked pond shorelines and recorded all wildlife seen during two visits between June 1 to July 15.

A total of 60 waterfowl, representing seven species were counted during the paired stream surveys: 19 green-winged teal, 18 mallards, 12 blue-winged teal, 5 cinnamon teal, 3 wood ducks, 2 gadwalls, and 1 American wigeon. All, save one blue-winged teal, were counted on stream reaches with beaver ponds. Four broods (two green-winged teal, one mallard, and one blue-winged teal) also were counted. Beaver-pond stream reaches averaged 7.5 ducks/kilometer of stream. The 10 ponds, each less than 2 years old, had three mallard hens and one blue-winged teal hen; all but one mallard hen were tending active nests.

Extrapolating only to the first- through third-order streams for which managers thought beavers could be used to improve habitat, we estimate that beaver-extirpated streams may have provided habitat for 19,000 ducks. Assuming that the percent of streams where beavers have been removed (23%) is representative of the State, and extrapolating only to first- through third-order streams, the reduction in beaver habitat may have affected over 240,000 waterfowl statewide.

We realize that critical studies have not been done directly linking waterfowl population levels with beaver abundance; however, we believe that beavers are fulfilling an important role in supporting Wyoming's waterfowl and other wetland-dependent species.

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