



## Common Loons (*Gavia immer*)

# Resource Brief

### Background Information

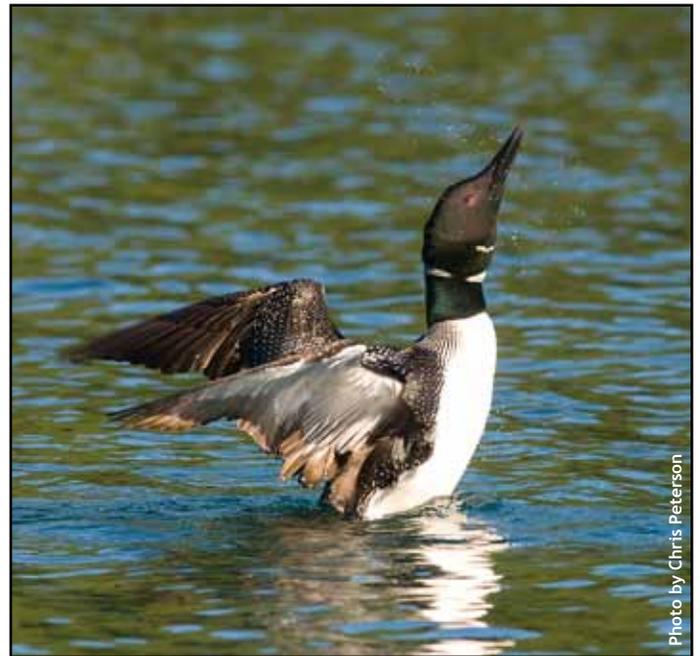
The common loon, with its mournful wail, conjures up images of wilderness, solitude, and remote northern lakes. They are found on pristine freshwater lakes throughout the Crown of the Continent Ecosystem during the breeding season (early spring through fall), migrating to coastal areas for the winter. Loons are large, relatively long-lived birds (living 25-30 years) that possess many unique adaptations, which allow them to be both excellent divers and swimmers. Unlike most birds, they have dense bones (rather than hollow), heavy bodies (8-12 lbs.), and comparatively small wings for their body size. These characteristics make loons adept at diving underwater in search of their main prey of fish. In addition, the loon's ability to quickly blow air out of its lungs and compress air out of its feathers gives it the ability to dive instantly when in search of food. A loon can also use these tactics to submerge its body below the water surface with only its head above water, making it less detectable.

Loons are also agile swimmers. Large, webbed feet and legs set far back on their bodies allow these birds to powerfully propel themselves underwater as well as in take off as they run on top of the water, flapping their wings in order to gain enough momentum for lift-off. These traits do, however, make it difficult for loons to walk on land and make take off virtually impossible if in a small body of water. They are only found on land when mating or nesting, or if sick or injured.

### Status and Trends

Listed as a Species of Concern by the state of Montana, Montana's loon population is considered to be at risk and requires ongoing management in order to ensure population health. Besides threats from human activities, loons have a set of biological limitations that make them more vulnerable to change. Common loons have specific habitat requirements – requiring lakes over five acres in size, clear water, little disturbance, and a good supply of fish and/or aquatic invertebrates. They also have a low recruitment rate, only producing up to two chicks per mating pair each year, and are slow to mature (the average first year of successful breeding is seven years old).

Current estimates are that Glacier National Park (GNP)



Common loons have variety of calls and behaviors that indicate something is disturbing them. This adult loon is reacting to a perceived threat by doing a penguin dance, a display used when the bird feels severely threatened.

### Threats

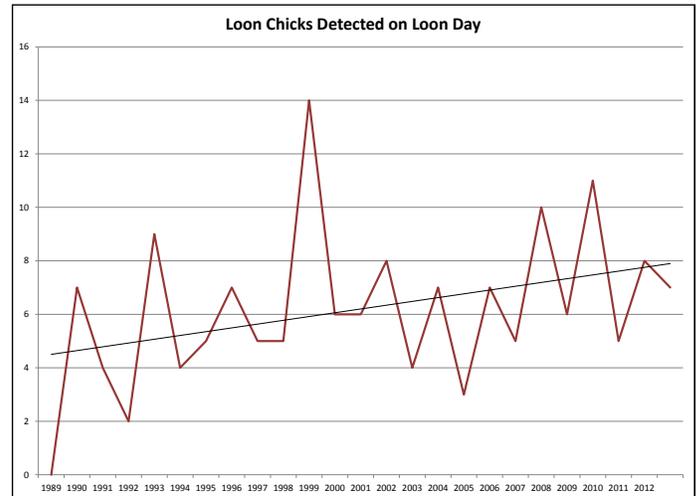
Once seen as far south as places like Colorado, Illinois, and northern California, habitat loss has confined the common loon's breeding habitat to far northern areas of the United States. Even in some of these areas, population numbers are in decline. In Montana, the common loon is listed as a Species of Concern and efforts are being made to monitor them throughout the state. The biggest threat to loons is human disturbance. Shoreline development, recreation and watercraft use, and human-caused water level fluctuations can lead to the loss of adequate nesting habitat or even the loss of nests and eggs themselves. Other threats include discarded fishing line, which can entangle and kill the birds, ingested lead from fishing lures, and mercury exposure, which can lead to reproductive failure and have possible effects on chick behavior and development.

harbors roughly 20% of the breeding population of common loons in the state of Montana. Yet, despite comprising such a large portion of the state's breeding loons, only 4-7 chicks are fledged each year. In order to better understand population trends and chick survival, GNP has participated in Montana Loon Day, an annual statewide common loon count that takes place in mid-July, since 1988. But, park managers realized to truly get an accurate count and to understand possible factors affecting nesting success, more consistent season-long monitoring was needed. To better track GNP's loon population, volunteer citizen scientists and park staff have been trained since 2005 to monitor 45 priority loon lakes at least three times throughout the breeding season. This season-long monitoring effort provides more accurate data and will help determine common loon population trends and factors affecting their survival. As of 2012, data from the last seven years of monitoring shows an average of 43 adult loons and 7 chicks in Glacier National Park.

## Management Strategy

In 2005, park biologists and Crown of the Continent Research Learning Center staff created the Common Loon Citizen Science Project, which uses trained volunteers and staff to gather season-long data on common loons throughout Glacier National Park. The main goal of the project is to gain a better estimate of Glacier's loon population and to begin to identify factors affecting

nesting success. Using a large volunteer workforce increases our coverage of all 45 of the park's priority loon lakes throughout the nesting season, thereby improving our accuracy of loon population counts, breeding pair numbers, and chick survival. The data collected helps determine possible threats to loon population health and allows park managers the information needed to make informed management decisions.



With more data collected each season, we see less variation in our estimate of loon chicks each year, and an overall increase in chicks counted. Although it's unclear if this increase is due to higher chick production or to better detection of chicks by trained citizen scientists, this graph shows less fluctuation in the number of loon chicks detected on Loon Day since 2005.

## Resources For More Information

### Glacier National Park Staff

- Jami Belt, Citizen Science Coordinator
- Lisa Bate, Wildlife Biological Science Technician

### Documents and web sites

- The Birds of North America Online – <http://bna.birds.cornell.edu/bna/species/313>
- Montana Fish, Wildlife & Parks' Conservation Plan for the Common Loon  
<http://fwp.mt.gov/fishAndWildlife/management/commonLoon/>
- NatureServe Explorer: An Online Encyclopedia for Life – <http://www.natureserve.org/explorer/>
- Citizen Science for Common Loon Monitoring Education Presentation  
[http://www.nps.gov/glac/naturescience/ccrlc-citizen-science\\_loons.htm](http://www.nps.gov/glac/naturescience/ccrlc-citizen-science_loons.htm)

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