

# Red Phalarope

*Phalaropus fulicarius*

Class: Aves  
Order: Charadriiformes

**Review Status:** Peer-reviewed

**Version Date:** 07 March 2019

## Conservation Status

NatureServe: Agency:

G Rank: G5      ADF&G: Species of Greatest Conservation Need      IUCN: Least Concern      Audubon AK:

S Rank: S4S5B      USFWS:      BLM:

<b>Final Rank</b>		
Conservation category: <b>II. Red</b>		
high status and either high biological vulnerability or high action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	6
Biological	-50 to 50	-36
Action	-40 to 40	12
<b>Higher numerical scores denote greater concern</b>		

**Status** - variables measure the trend in a taxon's population status or distribution. Higher status scores denote taxa with known declining trends. Status scores range from -20 (increasing) to 20 (decreasing).

**Score**

*Population Trend in Alaska (-10 to 10)*

6

Data are limited. Suspected to be declining based on trends from Arctic study sites (Andres et al. 2012a). Also experienced serious declines in northern Alaska in the 1980s (Troy 1996).

*Distribution Trend in Alaska (-10 to 10)*

0

Unknown over the last 50 years. By the next century, climate change may lead to changes in suitable habitat, but models disagree on the direction and magnitude of change (Marcot et al. 2015; Wauchope et al. 2017).

Status Total: 6

**Biological** - variables measure aspects of a taxon's distribution, abundance and life history. Higher biological scores suggest greater vulnerability to extirpation. Biological scores range from -50 (least vulnerable) to 50 (most vulnerable).

**Score**

*Population Size in Alaska (-10 to 10)*

-10

Uncertain, but >25,000. PRISM surveys in northern Alaska estimated a population size of 570,000 individuals (Bart et al. 2012). Far fewer birds nest in western Alaska. Limited data from the Yukon Delta National Wildlife Refuge suggest a population size of 3,599 (McCaffery et al. 2012).

*Range Size in Alaska (-10 to 10)*

-8

Breeds on the Arctic Coastal Plain from the Canadian border west to Utqiagvik and south along the western coast to the Yukon-Kuskokwim Delta (Kessel 1989; Tracy et al. 2002). During migration,

found in offshore waters of southwest Alaska, the Aleutians, and the Kenai Peninsula (Tracy et al. 2002). Overwintering distribution is poorly known, but thought to include offshore waters of California south to South America (Tracy et al. 2002). Breeding range is most restricted and is estimated at ~230,000 sq. km., calculated in GIS and based on range map from ACCS (2017a).

*Population Concentration in Alaska (-10 to 10)*

-10

The Arctic Coastal Plain supports large numbers of breeding individuals and large concentrations occur in offshore waters along the Alaskan coast (Isleib and Kessel 1973; Tracy et al. 2002), but number of sites is likely >250 given population and range sizes. Most migratory surveys report seeing only small flocks or a few individuals (Gill et al. 1981; Andres 1994; Gibson and Byrd 2007; Taylor et al. 2011) and data from other sources (e.g. offshore seabird surveys) have not reported important concentration areas (Smith et al. 2012a).

*Reproductive Potential in Alaska*

Age of First Reproduction (-5 to 5)

-5

Unknown. Based on data from the red-necked phalarope (Rubega et al. 2000), we assume age at first breeding is <2 years .

Number of Young (-5 to 5)

1

3-4 eggs in a clutch (Kessel 1989; Tracy et al. 2002; Weiser et al. 2018b). Females sometimes lay a second clutch with another mate (Schamel and Tracy 1977).

*Ecological Specialization in Alaska*

Dietary (-5 to 5)

-5

During breeding season, mainly consumes freshwater invertebrates such as adult and larval flies (Chironomidae and Tipulidae), but also beetles, spiders, wasps, and stoneflies (Kessel 1989; Tracy et al. 2002; Gerik 2018). DNA analyses revealed that chicks in Utqiagvik ate 17 prey families and were opportunistic foragers (Gerik 2018). Diet changes seasonally with availability (Tracy et al. 2002; Gerik 2018). At sea, diet consists of a variety of zooplankton including copepods, amphipods, and isopods (Dodson and Egger 1980; Haney and Stone 1988; Kessel 1989; reviewed in Tracy et al. 2002).

Habitat (-5 to 5)

1

During the breeding season, found in wet or moist coastal tundra, typically near marshes and small ponds (Tracy et al. 2002; Johnson et al. 2007a; Andres et al. 2012b; Saalfeld et al. 2013b). Nests are generally located on dry patches such as raised ridges or hummocks (Kessel 1989; Cunningham et al. 2016). After breeding, moves to nearshore habitats such as tidal flats and gravel beaches, as well as coastal and offshore waters (Isleib and Kessel 1973; Smith and Connors 1993; Andres 1994; Taylor et al. 2011; Hunt et al. 2018). Annual variations in sea ice extent may affect foraging distribution in offshore waters (Hunt et al. 2018).

Biological Total: -36

**Action** - variables measure current state of knowledge or extent of conservation efforts directed toward a given taxon. Higher action scores denote greater information needs due of lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

**Score**

*Management Plans and Regulations in Alaska (-10 to 10)*

-10

Protected under the Migratory Bird Treaty Act (MBTA 1918). Closed to recreational harvest (ADFG 2018e). Subsistence harvest is permitted, but subject to closed seasons (AMBCC 2018).

*Knowledge of Distribution and Habitat in Alaska (-10 to 10)*

2

Breeding distribution and habitat associations on the Arctic Coastal Plain are well-known from multi-

species surveys (see references in Habitat section), but additional surveys are needed to determine distribution along Alaska's western coast. At-sea distribution captured during seabird surveys (e.g. Bartonek and Gibson 1972; Day 2006; Jahncke et al. 2008; Dragoo et al. 2010). Limited knowledge of migration routes (Tracy et al. 2002; Taylor et al. 2011).

*Knowledge of Population Trends in Alaska (-10 to 10)*

10

There is currently no monitoring program in place in Alaska that can provide data on population trends. Recent efforts such as PRISM surveys in western and northern Alaska are promising (Bart and Johnston 2012), but this program is still in its infancy and multi-year data are not available. Few data are available from other Arctic breeding grounds (Andres et al. 2012a). Red Phalaropes are difficult to monitor on non-breeding grounds because they spend most of the year at sea (Tracy et al. 2002).

*Knowledge of Factors Limiting Populations in Alaska (-10 to 10)*

10

Although several studies have been conducted about this species, factors that limit its population remain speculative. Researchers have documented high inter-annual variation in nest densities and moderate levels of site fidelity (Liebezeit et al. 2009; Saalfeld and Lanctot 2015; Weiser et al. 2018c). These (and other) traits suggested an "opportunistic" selection of breeding sites that might be influenced by local conditions (Saalfeld and Lanctot 2015). For example, nest densities and survival may be influenced by predator abundance (Liebezeit et al. 2009; Saalfeld and Lanctot 2015; Weiser et al. 2018c) and proximity to infrastructure (Liebezeit et al. 2009). Additional research is needed to determine the effects of environmental contaminants and climate change on population parameters and habitat availability (Perkins et al. 2016; Hunt et al. 2018). Earlier snowmelt has been linked to earlier clutch initiation dates (Liebezeit et al. 2014) and a shortened incubation period (Weiser et al. 2018b), but the effects on reproductive success are unknown. Population declines noted in northern Alaska in the 1980s were attributed to mortality on wintering grounds from extreme El Niño events (Troy 1996; Nisbet and Veit 2015), but a more robust investigation is needed. Harvest data are very limited and do not differentiate between red and red-necked phalarope. However, available data suggest that harvest rates are very low, especially relative to population size (Naves 2015).

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Action Total: 12

**Supplemental Information** - variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or management questions.

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<b>Harvest:</b>	Not substantial
<b>Seasonal Occurrence:</b>	Breeding
<b>Taxonomic Significance:</b>	Monotypic species
<b>% Global Range in Alaska:</b>	<10%
<b>% Global Population in Alaska:</b>	25-74%
<b>Peripheral:</b>	No

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