Parasitic Jaeger (*Stercorarius parasiticus*)

Vulnerability: **Presumed Stable** Confidence: High

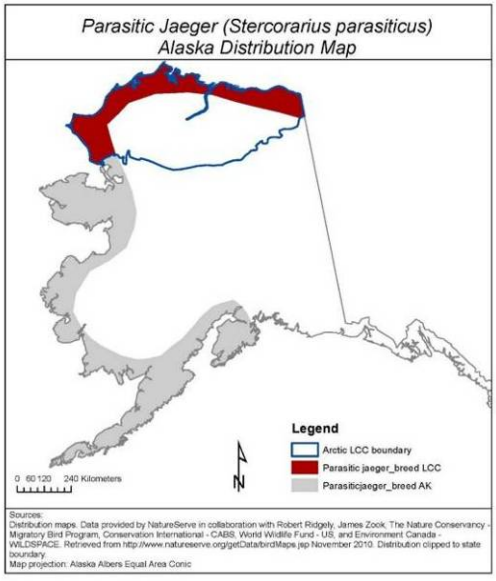
The Parasitic Jaeger, unlike the two other jaegers (the Long-tailed and Pomarine Jaegers), has a varied diet and is not closely tied to lemmings as a food source (Wiley and Lee 1999). This species utilizes both low-lying marshy tundra and drier tussock-heath tundra for nesting sites (Wiley and Lee 1999). Parastic Jaegers often hunt for fledgling and adult birds and are believed to be an important nest predator (Wiley and Lee 1999). Like the other jaeger species, Parasitic Jaegers winter in offshore tropical and sub-tropical oceans. The current global population estimate is 500,000 - 10,000,000 (BirdLife International 2012). There is no Alaska population estimate available.

Range: We used the extant NatureServe range map for the assessment as it closely matched the Birds of North America and other range descriptions (Johnson and Herter 1989, Bart et al. 2012).

Physiological Hydro Niche: For most of the indirect exposure and sensitivity categories in the assessment, Parasitic Jaegers were ranked with a neutral response (see table on next page). Only in one category (Physiological hydro niche), was this species ranked with the potential for increased vulnerability as a drying trend in the arctic could negatively impact this species. Parasitic Jaegers breed and hunt in tundra habitats ranging the full spectrum from wet to dry. So, while they may be impacted in the wetter habitats by a drying trend, it is uncertain whether that would have an overall negative effect on the species. Current projections of annual potential evapo-transpiration suggest negligible atmospheric-driven drying for the foreseeable future (TWS and SNAP), and its interaction with hydrologic processes is very poorly understood (Martin et al. 2009). Thus atmospheric moisture, as an exposure factor (most influential on the "hydrological niche" sensitivity category), was not heavily weighted in the assessment.

Disturbance Regimes: Climate-related shifts in disturbance regimes (e.g. greater storm severity [Jones et al. 2009], disease outbreaks) and climate change mitigation and adaptation activities in the region will likely not occur at a large enough scale to impact Parasitic Jaeger populations in Alaska.

Dietary Versatility: Unlike the other jaeger species, the varied and flexible diet of Parasitic Jaegers may enable it to cope with any climate-mediated changes in prey base (Ims and Fuglei 2005).



Phenological Response & Genetic variation: There currently exists little or no information regarding the genetic or phenological traits that

Parasitic Jaeger (*Stercorarius parasiticus*)

Vulnerability: **Presumed Stable** Confidence: High

Vulnerability Factors	D	SD	N	SI	I	GI	Unknown or N/A
B1. Sea level rise			*				
B2a. Natural barriers			*				
B2b. Anthropogenic barriers			*				
B3. Human response to CC			*	*			
C1. Dispersal/Movement			*				
C2ai. Historical thermal niche (GIS)			*				
C2aii. Physiological thermal niche			*				
C2bi. Historical hydro niche (GIS)			*				
C2bii. Physiological hydro niche			*	*	*		
C2c. Disturbance regime			*	*			
C2d. Ice & Snow habitats			*				
C3. Physical habitat restrictions		*					
C4a. Biotic habitat dependence			*				
C4b. Dietary versatility		*	*				
C4d. Biotic dispersal dependence			*				
C4e. Interactions with other species			*	*			
C5a. Genetic variation							*
C5b. Genetic bottlenecks							*
C6. Phenological response		*	*	*			*
D1. CC-related distribution response			*				

D=Decrease vulnerability, SD=Somewhat decrease vulnerability, N=Neutral effect, SI=Slightly increase vulnerability, I=Increase vulnerability, GI=Greatly increase vulnerability.

would make Parasitic Jaegers more or less vulnerable to a warming climate.

In summary, this assessment suggests that Parasitic Jaegers may be the most resilient of jaeger species in coping with potential impacts associated with climate change and within this context will likely remain stable, at least during the time frame of this assessment.

Literature Cited

Bart, J., S. Brown, B. Andres, R. Platte, and A. Manning. 2012. North slope of Alaska. Ch. 4 *in* Bart, J. and V. Johnston, eds. Shorebirds in the North American Arctic: results of ten years of an arctic shorebird monitoring program. Studies in Avian Biology.

BirdLife International 2012. *Stercorarius longicaudus*. In: IUCN 2012. IUCN Red List of Threatened Species. Version 2012.1. <www.iucnredlist.org>.

Ims, R.A. and E. Fuglei. 2005. Trophic interaction cycles in tundra ecosystems and the impact of climate change. BioScience 55: 311-322.

Johnson, S.R. and D.R. Herter. 1989. The birds of the Beaufort Sea, Anchorage: British Petroleum Exploration (Alaska), Inc.

Jones, B.M., C.D. Arp, M.T. Jorgenson, K.M. Hinkel, J.A. Schmutz, and P.L. Flint. 2009. Increase in the rate and uniformity of coastline erosion in Arctic Alaska. Geophys. Res. Letters 36, L03503.

The Wilderness Society (TWS) and Scenarios Network for Alaska Planning (SNAP), Projected (2001-2099: A1B scenario) monthly total potential evapotranspiration from 5 AR4 GCMs that perform best across Alaska and the Arctic, utilizing 2km downscaled temperature as model inputs. http://www.snap.uaf.edu/data.php.

Wiley, R.H., and D.S. Lee. 1999. Parasitic Jaeger (*Stercorarius parasiticus*). *In* The Birds of North America, No. 445. (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

From: Liebezeit et al. 2012. Assessing Climate Change Vulnerability of Breeding Birds in Arctic Alaska. A report prepared for the Arctic Landscape Conservation Cooperative. Wildlife Conservation Society, North America Program, Bozeman, MT., 167pp.