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High Levels of Contaminants in Ivory Gull *Pagophila eburnea* Eggs from the Russian and Norwegian Arctic

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Abstract:
We found high levels of contaminants, in particular organochlorines, in eggs of the ivory gull Pagophila eburnea, a high Arctic seabird species threatened by climate change and contaminants. An 80% decline in the ivory gull breeding population in the Canadian Arctic the last two decades has been documented. Because of the dependence of the ivory gull on sea ice and its high trophic position, suggested environmental threats are climate change and contaminants. The present study investigated contaminant levels (organochlorines, brominated flame retardants, perfluorinated alkyl substances, and mercury) in ivory gull eggs from four colonies in the Norwegian (Svalbard) and Russian Arctic (Franz Josef Land and Severnaya Zemlya). The contaminant levels presented here are among the highest reported in Arctic seabird species, and we identify this as an important stressor in a species already at risk due to environmental change.

Keywords: PERSISTENT ORGANIC POLLUTANTS; BROMINATED FLAME RETARDANTS; PERFLUORINATED ALKYL SUBSTANCES; POLYBROMINATED DIPHENYL ETHERS; TEMPORAL TRENDS; GLAUCOUS GULLS; LARUS-HYPERBOREUS; SEABIRD EGGS; ORGANOCHLORINE CONTAMINANTS; STABLE ISOTOPES