

3<sup>rd</sup> North American Sea Duck Conference  
November 10 – 14, 2008  
Quebec City, Province of Quebec, Canada

Poster Presentation - #20

**Title:** Contaminants in common eiders (*Somateria mollissima*) compared to 22 other species of birds, Maine U.S.A.

---

Wing Goodale, BioDiversity Research Institute, 19 Flaggy Meadow Road, Gorham, ME 04038,  
(207) 839-7600

David C. Evers, BioDiversity Research Institute, Gorham, ME  
Steven E. Mierzykowski, U.S. Fish and Wildlife Service, Orono, ME  
R. Bradford Allen, Maine Department of Inland Fisheries and Wildlife, Bangor, ME  
Charles S. Todd, Maine Department of Inland Fisheries and Wildlife, Bangor, ME  
Linda J. Welch, U.S. Fish and Wildlife Service, Milbridge, ME  
C. Scott Hall, National Audubon Society, Belfast, ME  
Julie C. Ellis, Tufts University, North Grafton, MA  
Kurunthachalam Kannan, New York State Department of Health, Albany, NY

**Abstract:** In 2007, we measured 192 contaminants in six, three-egg composites of common eider (*Somateria mollissima*) from locations spanning the Maine Coast. Results were compared to contaminant levels in 54 egg-composites of 22 other species of Maine birds, representing seabirds, shorebirds, wading birds, raptors and passerines. All contaminants in the analytical suite were detected in eider samples. Out of the 23 species of birds tested, common eider eggs ranked fourth lowest in contaminant load. Eider egg contaminant loads were below adverse effects thresholds. Contaminant levels in eider eggs varied up to 20-fold between sites, while stable isotope levels varied little. Stable nitrogen and carbon isotope analysis suggests that eiders are feeding at a lower trophic level than other seabirds such as double-crested cormorants (*Phalacrocorax auritus*) and herring gulls (*Larus argentatus*). At sites where eiders had elevated contaminants, herring gull and double-crested cormorants also had higher levels. Our results suggest that eiders have lower contaminant body burden compared to other species because of their low trophic level and a diet dominated by blue mussels (*Mytilus edulis*).