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Title: Identification, Quantification and Distribution of Polychlorinated Biphenyls (PCBs) in sediments of the Rappahannock and York River Watersheds

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ABSTRACT

Georg Wilhelm Steller was born 100 years before Darwin in 1709 and he was part of a vast exploration fifty years before Lewis and Clark explored America. Steller was important to the study of marine mammals because he was the only naturalist to see and describe the great northern sea cow (*Hydrodamalis gigas*). Knowledge of an extinct population can be used to aid the conservation of a current population. Extraction of DNA from this extinct animal was performed in order to determine the population structure of the Steller's sea cow. A test was also developed that can definitively state whether or not a random bone sample came from *H. gigas*. This test could be used by the Fish and Wildlife Service (FWS) to examine material distributed in the North Pacific which would be helpful since all of the animals currently residing there are protected under the Marine Mammal Protection Act (MMPA) except *H. gigas*, as it is extinct.