

**Monica A. Zani**  
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**Kraus Marine Mammal Conservation**  
**Anderson Cabot Center for Ocean Life at the New England Aquarium**  
**Central Wharf, Boston, MA 02110 USA**

**Education - Salem State College, B.S. Biology, 1998**

### **Field Experience**

Right Whale Field Experience: 23 years  
Photography: Aerial: 15 years  
Shipboard: 23 years  
Boat Handling: 21 Years  
Suction Cup Tagging: 2 Years  
Fecal Sampling: 12 Years  
Biopsy Sampling: 13 Years  
Blow collection via sUAS: 2 Years

### **Certifications/Licenses**

USCG Master, 100 Ton Near Coastal, STCW Endorsment  
FCC Marine Operators Permit  
TWIC Credential Certified  
FAA UAS Part 107 Operator  
Canadian RPAS TP Compliant, Advanced  
PADI Open Water  
First Aid/CPR/AED  
Emergency Aircraft Egress/Open  
Water Survival Certified  
Massachusetts Firearms Identification

### **Experience/Employment**

#### **New England Aquarium, Associate Scientist/Right Whale Data Coordinator** *2010-Present*

Assist in the curation of the North Atlantic right whale Catalog. Identify right whale sightings from contributing parties doing photo-identification work. Field duties include annual shipboard, right whale surveys in the Bay of Fundy, Western Scotian Shelf, Gulf of Maine, Cape Cod Bay and Gulf of St. Lawrence.

#### **Co-Investigator Early Warning System (EWS)** *2003-2010*

Responsible for daily aerial right whale survey logistics for federally funded EWS surveys in the southeast U.S. critical habitat. Responsibilities included management of observers, pilots and aircraft. Additional responsibilities included data collection, equipment maintenance, weekly and final reports, budget management, hiring, training of aerial observers in the field. Additionally, I served as the point of contact for U.S. Navy, NMFS, U. S. Coast Guard and U. S. Army Corps of Engineers for right whale activities within the survey area.

#### **Penn State Right Whale Acoustic Project, Research Assistant** *2011-2012 (Dec-Mar)*

Participated in acoustic research of right whale cow/calf pairs in the southeast U.S. calving ground. Responsible for the identification of cow/calf pairs, boat handling, and data collection during recording sessions.

#### **Woods Hole Oceanographic Institute DTAG Project, Research Assistant** *2002&2007 (Jul-Aug)*

Participated in tagging of North Atlantic right whales in the Bay of Fundy and Gulf of Maine using non-invasive DTAGs. Responsible for the identification of right whales in the field, direction of tag boat approaches and data collection on the pre and post tagging behavior.

#### **New England Aquarium, Right Whale Aerial Observer** *2000-2002 (Dec-Mar)*

Flew daily surveys in the southeast U.S. to locate and identify North Atlantic right whales. Reported sightings to Naval Operations, U.S. Coast Guard, local harbor pilots and commercial vessels as part of Early Warning System. Obtained high quality aerial photographs of whales for photo-Id. Directed and /or operated research vessel to whales for biopsy darting and disentanglement efforts. Collection, entry and editing of large data sets using various Windows based systems.

### **New England Aquarium, Marine Education and Whale Watch, Captain**

1999-2001 (Apr-Nov)

Responsible for the vessel maintenance, upkeep, and all aspects of daily operations. I facilitated training and daily supervision of crew members and displayed intricate knowledge of marine navigational equipment.

- *M/V Doc Edgerton*, 65ft, 121 passenger, twin prop
- *M/V Voyager II*, 103ft, 298 passenger, quad prop, mono-hull
- *M/V Voyager III*, 112ft, 325 passenger, high-speed catamaran

### **New England Aquarium, Senior Whale Watch Naturalist**

1996-1998 (Apr-Nov)

Trained and supervised volunteers and interns at onboard education stations. Additional responsibilities included presentations on local history, ecology and animal behavior as well as identification of local birds, cetaceans and marine mammals.

### **Publications, Reports and Meeting Abstracts**

Brown, M.W., **Zani M.A.**, Knowlton, A.R., Howe, K.R. and Hamilton P.K. 2019

Research, Monitoring and Conservation of the North Atlantic Right Whale (*Eubalaena glacialis*) in the southern Gulf of St. Lawrence and the Bay of Fundy. Report to Dept. Fisheries and Oceans Canada.

Brown, M.W., **Zani M.A.**, Davies K.T.A., Knowlton, A.R., Howe, K.R. and Hamilton P.K., Johnson, H. and Kraus, S.D. 2018. Research, Monitoring and Conservation of the North Atlantic Right Whale (*Eubalaena glacialis*) in the southern Gulf of St. Lawrence and the Bay of Fundy. Report to Dept. Fisheries and Oceans Canada.

Brown, M.W., Knowlton, A.R., and **Zani, M.A.** 2014. Report of Activities: Right Whale Monitoring in Canadian Waters 2014 *R/V Nereid*. Report to the U.S. State Department. U.S. Dept. of State Cruise No.: F2014-044. Foreign Fishing Vessel License No.: 000015. 11 pp.

Brown, M.W., Kraus, S.D., and **Zani, M.A.** 2014. Report of Activities: Right Whale Monitoring in Canadian Waters 2014 *R/V Callisto*. Report to the U.S. State Department. U.S. Dept. of State Cruise No.: F2014-045. Foreign Fishing Vessel License No.: 000013. 06 pp.

Brown, M.W., **Zani, M.A.**, Hunt, K.E., Rolland, R.M., Kraus, S.D, and Parks, S.E.

2014. Report on the research activities on the North Atlantic right whale (*Eubalaena glacialis*) in the Bay of Fundy (and adjacent waters): August and September 2014. Report for SARA Section 73 Permit #325863. 53 pp.

Brown, M.W., **Zani, M.A.**, Knowlton, A.R., Hamilton, P.K., and Scott D. Kraus. 2015. Research, monitoring and conservation of North Atlantic right whales in the Bay of Fundy and adjacent waters south of Nova Scotia: 2014 Final report to Irving Oil. 23 pp.

Brown, M.W., **Zani, M.A.**, Knowlton, A.R., Hamilton, P.K., and Scott D. Kraus. 2015. Research, monitoring and conservation of North Atlantic right whales in the Bay of Fundy: 2014. Final report to the Island Foundation. 9 pp

Lagueux, K.M., **M.A. Zani**, A.R. Knowlton, S.D. Kraus. 2011. Vessel responses to mitigation measures to protect the North Atlantic right whale, *Eubalaena glacialis*, in the Calving Ground. Endangered Species Research.

Howe, K.R., Pendleton, D.E., Brown, M.W., Hagbloom, M.N., Hamilton, P.K., Knowlton, A.R., Marx, M.K., Pettis, H.M., **Zani, M.A.** and Kraus, S.D. Interannual variation and trends in marine mammal sighting rates over 30+ years (1987-2018) in the Bay of Fundy, Canada. Poster presented at: The 2<sup>nd</sup> World Marine Mammal Conference; 2019 Dec 9-12; Barcelona, Spain.

Leiter, S., Stone, K., Thompson, J., Accardo, C., Wikgren, B., **Zani, M.**, Cole, T., Kenney, R., Mayo, C., Kraus, S. 2017. North Atlantic right whale *Eubalaena glacialis* occurrence in offshore wind energy areas near Massachusetts and Rhode Island. *Endangered Species Research* 34, 45-59.

Taylor, J.K.D., **M.A. Zani**, A.R. Knowlton, B. Wikgren, P. K. Hamilton, and S.D. Kraus. 2010. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the Calving Ground of the North Atlantic Right Whale (*Eubalaena glacialis*). Draft report submitted to U.S. Department of Commerce. Contract No. WC133F-06-CN-0022.

Taylor, J.K.D., **M.A. Zani**, A.R. Knowlton, P. K. Hamilton, S.D. Kraus and K.M. Lagueux. 2009. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the Calving Ground of the North Atlantic Right Whale (*Eubalaena glacialis*). Final report submitted to U.S. Department of Commerce. Contract No. WC133F-06-CN-0022.

**Zani, M.A.**, A.R. Knowlton, C.K Slay, E.P. Pike and S.D. Kraus. 2003. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the North Atlantic Right Whale Calving Ground. Final report submitted to U.S. Department of Commerce. Contract No. WC13330-03-CN-0002.

**Zani, M.A.**, A.R. Knowlton, H.M. Pettis, E.P. Pike and S.D. Kraus. 2004. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the North Atlantic Right Whale Calving Ground. Final report submitted to U.S. Department of Commerce. Contract No. WC1330-03-CN-0002.

**Zani, M.A.**, A.R. Knowlton, H.M. Pettis, E.P. Pike and S.D. Kraus. 2005. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the North Atlantic Right Whale Calving Ground. Final report submitted to U.S. Department of Commerce. Contract No. WC1330-03-CN-0002.

**Zani, M.A.**, A.R. Knowlton, S.D. Kraus, K.M. Lagueux and H.M. Pettis. 2006. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the Calving Ground of the North Atlantic Right Whale (*Eubalaena glacialis*). Final report submitted to U.S. Department of Commerce. Contract No. WC133F-06-CN-0022.

**Zani, M.A.**, A.R. Knowlton, and K.M. Lagueux. 2006. Determining vessel densities and speeds within the Southeast U.S. Right Whale Critical Habitat with the use of Automatic Identification System (AIS). Right Whale Consortium Annual Meeting, New Bedford, MA.

**Zani, M.A.**, A.R. Knowlton, P. K. Hamilton, S.D. Kraus and K.M. Lagueux. 2007. Early Warning System: Aerial Surveys to Reduce Ship/Whale Collisions in the Calving Ground of the North Atlantic Right Whale (*Eubalaena glacialis*). Final report submitted to U.S. Department of Commerce. Contract No. WC133F-06-CN-0022.

**Zani, M.A.**, J.K.D. Taylor and S.D. Kraus. 2008. Observation of a Right Whale (*Eubalaena glacialis*) Birth in the Coastal Waters of the Southeast United States. *Aquatic Mammals*, 34(1), 21-24.

**Zani, M.A.**, Knowlton, A.K., Howe, K.R., Hamilton, P.K., Kraus, S.D. and Brown, M.W. 2019. Research, Monitoring and Conservation of the North Atlantic Right Whale (*Eubalaena glacialis*) in the southern Gulf of St. Lawrence and the Bay of Fundy. Report to Fisheries and Oceans, Canada.