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**I. EDUCATION**

2010 Ph.D. College of William and Mary, Virginia Institute of Marine Science, Fisheries Science. Dissertation: *Incorporating industry based dredge surveys into the assessment of sea scallops, Placopecten magellanicus*.

1999 M.S. College of William and Mary, Virginia Institute of Marine Science, Fisheries Science. Thesis: *A comparison of size selectivity and relative efficiency of sea scallop trawls and dredges.*

1994 B.S. University of Massachusetts at Amherst, Zoology.

**II. PROFESSIONAL EXPERIENCE**

2018-present Associate Director, Marine Advisory Program. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

2018-present Assistant Research Professor. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

2016-2018 Interim Associate Director for Marine Advisory Services. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

2015-2018 Senior Research Scientist. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

2012-2015 Associate Research Scientist. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

2011-2012 Assistant Research Scientist. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

1999‐2011 Marine Scientist II. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

1995‐1999 Research Assistant. College of William and Mary, Virginia Institute of Marine Science. Gloucester Point, VA.

1994 Research Intern. Edgerton Research Laboratory, New England Aquarium. Boston, MA.

**III. RESEARCH**

**A. Areas of Professional Interest and Expertise**

1. Fisheries science: resource surveys and survey design, fishing gear design and conservation engineering.
2. Fisheries management: cooperative research, spatial management of marine resources.

**B. Published work**

1. Peer Reviewed Publications

*Published*

B.N. Anderson\*, Weissman, A.M., Mandleman, J.M., **Rudders, D.B.**, and Sulikowski, J.A. 2020. The effects of scallop dredge fishing practices on the physical, behavioral, and physiological stress in discardedyellowtail, windowpane, and fourspot flounder. *Marine and Coastal Fisheries.*

D.R. Hart, Munroe, D.M., Caracappa, J.C., Haidvogel, D., Shank, B.V., **Rudders D.B.**, Klink, J.M., Hofmann, E.E., and Powell, E.N. 2020. Spillover of Sea Scallops from rotational closures in the mid-Atlantic Bight (USA). ICES Journal of Marine Science. *ICES Journal of Marine Science* 77:5 1992-2002. https://doi.org/10.1093/icesjms/fsaa099*.*

Borsetti, S.B\*., D. Munroe, **D.B. Rudders**, and J-H. Chang. 2020. Timing of the reproductive cycle of waved whelk, *Buccinum undatum,* on the U.S. Mid-Atlantic Bight. 2020*. Helgoland Marine Research.* 74:5. <https://doi.org/10.1186/s10152-020-00537-6>.

B. N. Anderson\*, A. M. Weissman, B. Sweezey, J. Mandelman2, **D. B. Rudders**, J. A. Sulikowski. Bycatch in a commercial lobster fishery – impacts on two benthic predators, Sea Raven and Longhorn Sculpin. 2020. Marine and Coastal Fisheries. 12:2. https://doi.org/10.1002/mcf2.10114.

Roman, S.A. and **D.B. Rudders**. 2019. Selectivity of Two Commercial Dredges Fished in the Northwest Atlantic Sea Scallop Fishery. Journal of Shellfish Research 38(3): 573-580.

A.M. Weissman\*, J.W. Mandleman, **D.B. Rudders** and J.A. Sulikowski. 2018. The effect of handling and capture stress in *Lophius americanus* in the scallop dredge fishery with observations of delayed mortality. *Conservation Physiology. 6(1).* doi.org/10.1093/conphys/coy058.

R.J. Knotek\*, **D. B. Rudders,** J.W. Mandelman, H. P. Benoît and J. A. Sulikowski. 2018. The survival of *rajids* discarded in the New England scallop dredge fisheries. *Fisheries Research,* 198:50-62.

S. Borsetti\*, Munroe, D., Bochenek, E, **Rudders D.B**. and Dobson, C. 2018. Spatial variation in life history characteristics of waved whelk (*Buccinum undatum* L.) on the U.S. Mid-Atlantic continental shelf. *Fisheries Research,* 198 129-137*.*

J. A. Sulikowski, Hugues P. Benoît, Connor W. Capizzano, Ryan J. Knotek, JohnW., Mandelman, Ted Platz, **D. B. Rudders**. 2018. Evaluating the condition and discard mortality of winter skate, *Leucoraja ocellata,* following capture and handling in the sink gillnet fishery. *Fisheries Research* 198, 159-164*.*

D.M. Ferraro\*, A.C. Trembanis, D.C. Miller and **D.B. Rudders**. 2017. Estimates of Sea Scallop (*Placopecten magellanicus*) Incidental Mortality from Photographic Multiple Before-After Control-Impact Surveys.  *Journal of Shellfish Research,* 36(3), 615-626.

R.J. Fisher and **D.B. Rudders**. 2017.Population and reproductive biology of the channeled whelk, *Busycotypus canaliculatus*, in the US Mid-Atlantic. *Journal of Shellfish Research, 36(2),* 427-444. doi:10.2983/035.036.0215

M. Winton, C. Huntsberger, **D. Rudders**, G. DeCelles, K. Thompson, K. Goetting, and R. Smolowitz. 2017. Spatiotemporal patterns of flatfish bycatch in two scallop access areas on Georges Bank. *J. Northw. Atl. Fish. Sci.*, **49**: 23–37. doi:10.2960/J.v49.m710.

**Rudders, D. B.,** and Ward, J. M. 2015. Own-price elasticity of open access supply as a long-run measure of fish stock abundance. *Marine Policy*, *53*, 215-226.

R.J. Knotek\*, Gill, S. M., **Rudders, D. B.**, Mandelman, J. W., Benoît, H. P., & Sulikowski, J. A. 2015. The development of a low cost refrigerated flow-through seawater system for at-sea estimation of post-release mortality. *Fisheries Research*, *170*, 152-157.

Benoit, H.P., C.W. Capizzano, R.J. Knotek, **D.B. Rudders**, J.A. Sulikowski, M.J. Dean, B. Hoffman, D.R. Zemeckis and J.W. Mandleman. 2015. A generalized model for longitudinal short- and long-term mortality data for commercial fishery discards and recreational fishery catch-and-release. *ICES Journal of Marine Science: Journal du Conseil*, fsv039.

K. Coutré\*, T. Gedamke, **D. B. Rudders**, W. B. Driggers III, D. M. Koester and J. A. Sulikowski. 2013. Indication of density-dependent changes in growth and maturity of the Barndoor Skate on Georges Bank. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science*. 5:1, 260-269.

**Rudders, D.B**, W.D. DuPaul and J.E. Kirkley. 2000. A comparison of size selectivity and relative efficiency of sea scallop trawls and dredges. *Journal of Shellfish Research* 19(2) 757‐764.

*In Review*

Ward, J. M and **Rudders, D.B.** A holistic harmful ecological anthropogenic damage assessment methodology. *In review: Marine Resource Economics.*

A.M. Weissman, Knotek, R., Mandleman, J.M., **Rudders, D.B.**, Sulikowski, J.S. and Roman, S.A. Determining the discard mortality of monkfish (*Lophius americanus*) in the New England scallop dredge fishery. *In Review: North American Journal of Fisheries Management.*

Ward, J. M and **Rudders, D.B.** Integrating ecosystems with markets.*In review: Marine Policy.*

Ward, J. M and **Rudders, D.B.** Demand, fish size and the price of fish: An extension.*In review: Canadian Journal of Agricultural Economics.*

*Manuscripts in Preparation for Submission in 2020*

**Rudders, D.B.,** Hugues T. Benoît, Sally A. Roman, Ryan J. Knotek, James A. Sulikowski, John A. Mandleman. Discard mortality of sea scallops (*Placopecten magellanicus*) following capture and handling in the sea scallop dredge fishery. *In preparation for submission to the ICES Journal of Marine Science.*

Ward, J. M and **Rudders, D.B.** An error decomposition methodology for estimating stock abundance with an application to the sea scallop (*Placopecten magellanicus*) fishery. *In preparation*

S.A. Roman and **D.B. Rudders**. Examination into a Vessel effect for a multi-vessel industry-based sea scallop dredge survey. *In preparation for submission to the Journal of Shellfish Research.*

**D.B. Rudders,** Roman, S.A.and Fisher, R. J. and J.R. McDowell. Observations on a re-emerging epizootic of the sea scallop, *Placopecten magellanicus.* *In preparation for submission to Diseases of Aquatic Organisms..*

**D.B. Rudders,** Goff, K.D. and DuPaul, W.D. The use of a 4‐inch (101 mm) sea scallop (*Placopecten magellanicus*) ring dredge in the context of an area management strategy. *In preparation for submission to Journal of Shellfish Research.*

2. Other Publications

**Rudders. D.B.** and John Duberg. 2020 (Pending). An Assessment of the Economic Impact of Recreational Boating in Middlesex County, Virginia. VIMS Marine Resource Report No.2020-9. (VSG-20-04).

**Rudders. D.B.**, Sally A. Roman and Erin Mohr. 2020. Industry Report: Understanding Dredge Performance for a Lined versus Unlined NMFS Sea Scallop Dredge. VIMS Marine Resource Report No. 2020-6. 22 pp.

**Rudders. D.B.** and Sally A. Roman. 2020. A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area in 2018; Final Report. VIMS Marine Resource Report No. 2020-4. 116 pp.

**Rudders. D.B.**, Sally A. Roman and Erin Mohr. 2020. Understanding Dredge Performance for a Lined versus Unlined NMFS Sea Scallop Dredge; Final Report. VIMS Marine Resource Report No. 2020-3. 87 pp.

**Rudders. D.B.**, Sally A. Roman and Erin Mohr. 2020. An Assessment of Sea Scallop Abundance and Distribution in the Nantucket Lightship Closed Area and Surrounds; Final Report. VIMS Marine Resource Report No.2020-2. 182 pp.

**Rudders. D.B.**, Sally A. Roman and Erin Mohr. 2020. An Assessment of Sea Scallop Abundance and Distribution in Georges Bank Closed Area I and II and Surrounds; Final Report. David B. Rudders, Sally A. Roman and Erin Mohr, VIMS Marine Resource Report No 2020-1. 213 pp.

**Rudders. D.B.**, S. Roman, E. Mohr, and K. Clark. 2019. 2019 Scallop Survey Short Report. Provided to the Sea Scallop Plan Development Team Meeting. Woods Hole, MA. August 27-28, 2019.

Roman, Sally A. and **D. B. Rudders**. 2019. Georges Bank Yellowtail Flounder Estimates from VIMS Industry-Based Scallop Dredge Surveys of Closed Area II and Surrounds; Final Report for the New England Fishery Management Council. VIMS Marine Resource Report No. 2019-9. 63 pp.

**Rudders. D.B.**, S. Roman, E. Mohr, and K. Clark. 2019. Results for the 2019 VIMS Industry Cooperative Surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, Closed Area I, and Closed Area II Resource Areas. VIMS Marine Resource Report No. 2019-7.

Roman, S.A. and **Rudders. D.B.** 2019. Georges Bank Yellowtail Flounder Estimates from VIMS Industry-Based Scallop Dredge Surveys of Closed Area II and Surrounds. Transboundary Resources Assessment Committee Working Paper.

Mann, Roger, **Rudders. D.B.**, M. Chase Long, Sally A. Roman, Melissa Southworth, Theresa Redmond, Sarit Truskey and Sara Thomas. 2019. Age Structure and Growth Rate in the Sea Scallop *Placopecten magellanicus.* VIMS Marine Resource Report No. 2019-5. 28 pp.

**Rudders, D. B.,** Sally A. Roman, Art Trembanis and Danielle Ferraro. 2019. A Study to Assess the Effect of Tow Duration and Estimate Dredge Efficiency for the VIMS Sea Scallop Dredge Survey. VIMS Marine Resource Report No. 2019-4. 60 pp.

**Rudders, D.B.**, S. Roman, A. Weissman, R. Knotek, J. Mandleman, and J. Sulikowski. 2019. Final Report: Evaluating the Condition and Discard Mortality of Monkfish, *Lophius* *americanus*, Following Capture and Handling in the Sea Scallop Dredge Fishery. Submitted to the NMFS NEFSC Cooperative Research Program. VIMS Marine Resource Report No. 2019-3. 26 pp.

**Rudders. D.B.**, S. Roman, R. Fisher, D. Bushek, D. Munroe, E. A. Bochenek, E. McGurk, and S. Borsetti. 2019. Final Report: An Investigation into the Scallop Parasite Outbreak on the Mid-Atlantic Shelf: Transmission Pathways, Spatio-Temporal Variation of Infection and Consequences to Marketability. Submitted to the NMFS NEFSC Cooperative Research Program. VIMS Marine Resource Report No. 2019-2. 53pp.

Mann. R., **D.B. Rudders**, M.C. Long, S. Roman, M. Southworth, T. Redmond, S. Truskey, and S. Thomas. 2019. Final Report: Age Structure and Growth Rate in the Sea Scallop *Placopecten magellanicus*. Submitted to the NMFS NEFSC Cooperative Research Program. VIMS Marine Resource Report No. 2019-5.

**Rudders. D.B.**, S. Roman, A. Trembanis, and D. Ferraro. 2019. Final Report: A Study to Assess the Effect of Tow Duration and Estimate Dredge Efficiency for the VIMS Sea Scallop Dredge Survey. Submitted to the NMFS NEFSC Cooperative Research Program. VIMS Marine Resource Report No. 2019-4.

Scallop Assessment Working Group (WGSCALLOP). ICES. 2019. Scallop Assessment Working Group (WGSCALLOP). ICES Scientific Reports. 1:90. 31 pp. http://doi.org/10.17895/ices.pub.5743

**David B. Rudders** and Sally A. Roman. 2018. An Assessment of Sea Scallop Abundance and Distribution in Georges Bank Closed Area II and Surrounds. VIMS Marine Resource Report No. 2018-3.

**David B. Rudders**, John M. Hoenig and Sally A. Roman. 2018. Scallop Mark-Recapture to Estimate Density Dependent Natural Mortality and Growth. VIMS Marine Resource Report No. 2018-4.

**David B. Rudders** and Sally A. Roman. 2018. A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource. VIMS Marine Resource Report No. 2018-5.

**David B. Rudders** and Sally A. Roman. 2018. An Assessment of Sea Scallop Abundance and Distribution in the Nantucket Lightship Closed Area and Surrounds. VIMS Marine Resource Report No. 2018-6.

**David B. Rudders** and Sally A. Roman. 2018. An Assessment of Sea Scallop Abundance and Distribution in Georges Bank Closed Area II and the Southern Extension Closure. VIMS Marine Resource Report No. 2018-7.

**David B. Rudders** and Sally A. Roman. 2018. Results for the 2018 VIMS Industry Cooperative Surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, Closed Area I, and Closed Area II Resource Areas. VIMS Marine Resource Report No. 2018-10.

**Rudders, D.B.,** Sally Roman, Hunter Tipton and Jennifer Anders. 2017. Results for the 2017 VIMS-Industry cooperative surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, and Closed Area II resource areas. VIMS Marine Resource Report No. 2017-8.

**Rudders, D.B.** and Sally Roman. 2017. Development and implementation of a high precision resource wide dredge survey of the Mid-Atlantic scallop resource area. VIMS Marine Resource Report No. 2017-5.

**Rudders, D.B.** and Sally Roman. 2017. Discard mortality of sea scallops following capture and handling in the sea scallop dredge fishery. VIMS Marine Resource Report No. 2017-4.

**Rudders, D.B.** and Sally Roman. 2016. Results for the 2016 VIMS-Industry cooperative surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, and Closed Area II resource areas. VIMS Marine Resource Report No. 2016-6.

**Rudders, D.B.** and Roman, S.A. 2016. Results for the 2015 VIMS/Industry cooperative survey of the Mid-Atlantic sea scallop resource area. VIMS Marine Resource Report No. 2016-03. 28 p.

**Rudders, D.B.** 2015. Virginia Institute of Marine Science dredge survey methods report. Sea Scallop Survey Peer Review Reference Document. 26pp.

**Rudders, D.B.** and Hudson, J.M. 2015. A synoptic survey of the sea scallop resource in the Mid-Atlantic. Final Report for Scallop Research Set Aside Program – Project NA12NMF4540032. VIMS Marine Resource Report No. 2015-07. 82 p.

**Rudders, D.B.** and Hudson, J.M. 2015. An assessment of sea scallop abundance and distribution in the southern New England and Long Island areas. Final Report for Scallop Research Set Aside Program – Project NA14NMF4540074. VIMS Marine Resource Report No. 2015-08. 40 p.

**Rudders, D.B.**, Knotek, R, Sulikowski, J., Mandleman, J. and Benoit, H. 2015. Evaluating the condition and discard mortality of skates following capture and handling in the sea scallop dredge fishery. Final Report for Scallop Research Set Aside Program – Project NA12NMF4540030. VIMS Marine Resource Report No. 2015-06. 39 p.

**Rudders, D.B.**, DuPaul, W., and Hudson, J.M. 2015. Results for the 2014 VIMS/Industry cooperative surveys of the mid-Atlantic bight. VIMS Marine Resource Report No. 2015-02. 40 p.

Davis, F., D. Ward, C Parkins and **D.B. Rudders**. 2015. Relative efficiency of a Coonamessett Farm Turtle Excluder Dredge equipped with escape windows. Final Report for Scallop Research Set Aside Program – Project NA14NMF4540068. 52 p.

Huntsberger, C., Thompson, K, Winton, M., Sieman, L., Stokesbury, K., Cadrin, S., Inglis, S., DeCelles, G., Bank, C., Wright, B., **Rudders, D.B.**, Smolowitz, R. 2015. Seasonal bycatch survey of the Georges Bank scallop fishery. Final Report for Scallop Research Set Aside Program – Project NA13NMF4540011. 107 p.

**D. B. Rudders**, W. D. DuPaul, Hudson, J. and J. Bergeron. 2014. An assessment of sea scallop abundance and distribution in a selected closed area: Nantucket Lightship Closed Area. VIMS Marine Resource Report No. 2014-09. 41 pages.

**D. B. Rudders**, W. D. DuPaul, Hudson, J. and J. Bergeron. 2014. An assessment of sea scallop abundance and distribution in the Northeast Georges Bank Area. VIMS Marine Resource Report No. 2014-10. 49 pages.

Davis, F., D. Ward, M. Winton, C Parkins and **D.B. Rudders**. 2014. Testing of Scallop Dredge Bag Design Changes for Flatfish Bycatch Reduction. Final Report. 48 pp.

K. Goetting, F. Davis, C. Huntsberger, K. Stokesbury, S. Cadrin, A. Barkley, S. Inglis, K. Thompson, W.D DuPaul, **D.B. Rudders**, R. Smolowitz. Seasonal bycatch survey of the Georges Bank scallop fishery. Final Report

F. Davis, K. Thompson and **D.B Rudders**. Testing of a scallop dredge bag design for flatfish bycatch reduction. Final Report. 46 pages.

**D. B. Rudders**, W. D. DuPaul and J. Bergeron. 2013. An assessment of sea scallop abundance and distribution in selected areas: the Nantucket Lightship Closed Area. VIMS Marine Resource Report No. 2013-05. 56 pages.

**D. B. Rudders**, W. D. DuPaul and J. Bergeron. 2013. An inventory of the sea scallop resource in the Georges Bank Closed Area II and surrounds. VIMS Marine Resource Report No. 2013-06. 59 pages.

**D. B. Rudders** and W. D. DuPaul. 2013. An assessment of sea scallop abundance and distribution in selected areas: The Hudson Canyon and Delmarva Closed Area and inshore areas of the New York Bight. VIMS Marine Resource Report No. 2013-07. 62 pages.

**D. B. Rudders** and W. D. DuPaul. 2012. An assessment of sea scallop abundance and distribution in a selected closed area: Georges Bank Closed Area II. VIMS Marine Resource Report No. 2012-06. 40 pages.

**D. B. Rudders** and W. D. DuPaul. 2012. An assessment of sea scallop abundance and distribution in a selected closed area: DelMarVa Closed Area. VIMS Marine Resource Report No. 2012-07. 40 pages.

**D. B. Rudders** and W. D. DuPaul. 2012. An assessment of sea scallop abundance and distribution open access areas: New York Bight and Southern New England. VIMS Marine Resource Report No. 2012-08. 49 pages.

**David B. Rudders**, William D. DuPaul and Jessica Bergeron. An assessment of sea scallop abundance and distribution in a selected Closed Area: Georges Bank Closed Area, Hudson Canyon Closed Area and DelMarVa Closed Area (for PDT use only). VIMS Marine Resource Report No. 2013-09. 20 pp. http://www.vims.edu/GreyLit/VIMS/mrr12-09.pdf

Kelli A. Milleville Wright, **David B. Rudders** and William D. DuPaul. Reducing yellowtail flounder bycatch in the sea scallop fishery: twine top modifications; VIMS Marine Resource Report No. 2012-13. 22 pp. http://www.vims.edu/GreyLit/VIMS/mrr12-13.pdf

**D. B. Rudders** and W. D. DuPaul. 2011. An assessment of sea scallop abundance and distribution in a selected areas: Georges Bank Closed Area II, Southern New England/Long Island, New York Bight and the DelMarVa Closed Area. VIMS Marine Resource Report No. 2011‐15. 22 pages.

**David B. Rudders** and William D. DuPaul. Results for the 2010 VIMS/Industry cooperative surveys of Georges Bank Closed Area I and the Hudson Canyon Closed Areas; VIMS; 16 pp. http://www.vims.edu/GreyLit/VIMS/mrr2011-09.pdf

**David B. Rudders** and William D. DuPaul. Results for the 2010 VIMS/Industry cooperative survey of Georges Bank Closed Area II; VIMS; 12 pages. http://www.vims.edu/GreyLit/VIMS/mrr11-10.pdf

**D. B. Rudders** and W. D. DuPaul. 2011. An Assessment of Sea Scallop Abundance and Distribution in a Selected Closed Area: Hudson Canyon Closed Area. VIMS Marine Resource Report No. 2011‐8. 40 pages.

**D. B. Rudders** and W. D. DuPaul. 2011. An assessment of sea scallop abundance and distribution in a selected closed area: Georges Bank Closed Area I. VIMS Marine Resource Report No. 2011‐7. 43 pages.

Northeast Fisheries Science Center. 2010. 50th Northeast regional stock assessment workshop (50th SAW) assessment report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 10-17; 844 p.

**D.B. Rudders.** 2010**.** Incorporating industry based dredge surveys into the assessment of sea scallops, *Placopecten magellanicus*. Ph.D. Dissertation, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, VA. 235 pages.

Legault, C.M., **D. B. Rudders** and W.D. DuPaul. 2010. Yellowtail flounder catch at length by scallop dredges: A comparison between survey and commercial gear. Transboundary Resource Assessment Committee–2010/ .9 pages.

**D. B. Rudders** and W. D. DuPaul. 2010. Appendix B4: Vessel calibrations for the NMFS sea scallop survey. In: Report of the 50th Northeast Regional Stock Assessment Workshop (50th SAW): Stock Assessment Review Committee (SARC) consensus summary of assessments. Northeast Fish. Sci. Cent. Ref. Doc. 10‐09. 10 pages.

**D. B. Rudders** and W. D. DuPaul. 2010. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Closed Area I and Hudson Canyon Closed Area. VIMS Marine Resource Report No. 2010‐8. 14 pages.

**D. B. Rudders** and W. D. DuPaul. 2010. An assessment of sea scallop abundance and distribution in selected closed area: Nantucket Lightship Closed Area. VIMS Marine Resource Report No. 2010‐5. 47 pages.

**D. B. Rudders** and W. D. DuPaul. 2010. Continuing the time series: Calibrating the NMFS sea scallop survey to the R/V *Hugh Sharp*. VIMS Marine Resource Report No. 2010‐4. 36 pages.

William D. DuPaul and **David B. Rudders.** Abundance and distribution of sea scallops and yellowtail flounder during the 2009 VIMS/Industry cooperative survey of the Nantucket Lightship Closed Area. VIMS Marine Resource Report No. 2010‐2. 36 pages. http://www.vims.edu/GreyLit/VIMS/mrr10-2.pdf

**D. B. Rudders** and W. D. DuPaul. 2009. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area II and the DelMarVa Closed Area. VIMS Marine Resource Report No. 2009‐7. 42 pages.

William D. DuPaul, Kelly Milleville Wright and **David B. Rudders**. Sea scallop/yellowtail flounder bycatch during the 2008 VIMS/Industry cooperative survey of Georges Bank Closed Area II. VIMS Marine Resource Report No. 2009-03. 25 pages. http://www.vims.edu/GreyLit/VIMS/mrr09-3.pdf

W. D. DuPaul and **D. B. Rudders**. 2008. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area II and the DelMarVa Closed Area. VIMS Marine Resource Report No. 2008‐8.

W. D. DuPaul and **D. B. Rudders**. 2008. Calibrating industry scallop surveys with NOAA vessel platforms. VIMS Marine Resource Report No. 2008‐6.

**D. B. Rudders**, R. A. Fisher and N. Yochum. 2008. An evaluation of size selectivity and relative efficiency of Black Sea Bass, *Centropristis striata* habitat pots equipped with large mesh panels. VIMS Marine Resource Report No. 2008‐5.

W. D. DuPaul and **D. B. Rudders**. 2008. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area I and II, Nantucket Lightship and Elephant Trunk. VIMS Marine Resource Report No. 2008‐3.

W. D. DuPaul and **D. B. Rudders**. 2007. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area I, Nantucket Lightship and Elephant Trunk (Award No. NA06NMF4540260); VIMS Marine Resource Report No. 2007‐7. 33 pages.

W.D. DuPaul and **D. B. Rudders**. 2007. An assessment of sea scallop abundance and distribution in the Georges Bank Closed Area II. VIMS Marine Resource Report No. 2007‐5. 18 pages

**D.B. Rudders** and William D. DuPaul. 2007. An assessment of sea scallop abundance and distribution in the Georges Bank Closed Area II ‐ Preliminary Results. VIMS Marine Resource Report No. 2007‐3. 18 pages

Yochum, N., W. D. DuPaul and **D. B. Rudders**. 2006. An assessment of sea scallop abundance and distribution in selected areas of Georges Bank and the Mid‐Atlantic; Part II: Selectivity of a New Bedford style sea scallop dredge. VIMS Marine Resource Report No. 2006‐8. 24 pages.

DuPaul, W.D., **D. B. Rudders** and N. Yochum. 2006. An assessment of sea scallop abundance and distribution in selected areas of Georges Bank and the Mid‐Atlantic; Part I: Abundance, distribution and biomass, and Part II: Selectivity of a New Bedford Style sea scallop dredge. Contract Report for NOAA Award No. NA05NMF4541294. VIMS Marine Resource Report No.2006‐7. 45 pages.

DuPaul, W. and **D. B. Rudders**. 2006. An assessment of sea scallop abundance and distribution in the Elephant Trunk Closed Area: June 2006. Submitted to the NEFMC Sea Scallop Plan Development Team. VIMS Marine Resource Report No. 2006‐6. 13 pages.

DuPaul, W. and **D. B. Rudders**. 2006. An assessment of sea scallop abundance and distribution in selected areas of Georges Bank and the Mid‐ Atlantic. Submitted to the NEFMC Sea Scallop Plan Development Team. VIMS Marine Resource Report No. 2006‐2. 29 pages.

DuPaul, W. D., **D. B. Rudders** and R. J. Smolowitz. 2004. Final report: Industry trials of a modified sea scallop dredge to minimize the catch of sea turtles. VIMS Marine Resource Report No. 2004‐12. 35 pages.

DuPaul, W. D., **D. B. Rudders** and R. J. Smolowitz. 2004. Draft final report: Industry trials of a modified sea scallop dredge to minimize the catch of sea turtles. VIMS Marine Resource Report No. 2004‐11. 14 pages.

R.A. Fisher and **D.B. Rudders,** J. Dawson. 2004. Draft – discard reduction concerning selectivity and overall gear design in the Black Sea Bass, *Centroprisits striata,* trap fishery. VIMS Marine Resource Report No. 2004‐09. 22 pages.

DuPaul, W. D., **D. B. Rudders** and R. J. Smolowitz. 2004. Interim report: Industry trials of a modified sea scallop dredge to minimize the catch of sea surtles. VIMS Marine Resource Report No. 2004‐8. 14 pages.

DuPaul, W. D. and **D. B. Rudders**. 2004. A comparative evaluation of a 3.5" ring dredge versus 3.0" ring sea scallop dredge equipped with sea turtle excluder chains. VIMS Marine Resource Report No. 2004‐5. 4 pages.

W.D. DuPaul and **D.B. Rudders**. 2004. Seasonal, interannual and geographic variations in sea scallops shell height and meat weight. VIMS Marine Resource Report No. 2004‐03. 16 pages.

R. J. Smolowitz, P. J. Struhsaker; W. D. DuPaul and **D.B. Rudders**. 2004. Evaluation of gear modifications to reduce the bycatch of Summer Flounder (*Paralichthys dentatus*) in sea scallop dredges. VIMS Marine Resource Report No. 2004‐01. 28 pages.

R.A. Fisher and **D.B. Rudders**. 2003. The effect of circle and square escape vents on discard reduction in the Black Sea Bass, *Centroprisits striata,* trap fishery. VIMS Marine Resource Report No.2003‐04. 34 pages.

**D.B. Rudders** and W.D. DuPaul. 2002. Evaluation of bycatch reduction devices to facilitate Summer Flounder (*Paralichthys dentatus*) escapement from sea scallop trawls. Virginia Institute of Marine Science, Marine Resource Report 2002‐06. 14 pages.

W.D. DuPaul, **D.B. Rudders** and K.D. Goff. 2002. Finfish and invertebrate bycatch in the Georges Bank and Hudson Canyon closed areas using a 3.5‐inch (88.9mm) and a 4.0‐inch (101.6mm) ring sea scallop dredge. VIMS Marine Resource Report No. 2002‐04. 23 pages.

W.D. DuPaul, K.D. Goff and **D.B. Rudders**. 2002. Finfish bycatch for the Georges Bank and Hudson Canyon closed areas during 4 inch ring dredge experiments. VIMS Marine Resource Report No. 2002‐03. 24 pages.

W.D. DuPaul, **D.B. Rudders** and T.G. Gedamke. 2002. Yellowtail flounder (*Limanda ferruginea*) bycatch during the 1999 commercial sea scallop opening of Georges Bank Area II. VIMS Marine Resource Report No. 2001‐16. 8 pages

W.D. DuPaul, **D.B. Rudders** and P.J. Rago. 2000. Results of commercial sea scallop survey in the Virginia Beach Closed Area-September 2000. VIMS Marine Resource Report No.2000‐10. 13 pages.

W.D. DuPaul, **D.B. Rudders** and P.J. Rago. 2000. Results of commercial sea scallop survey in the Hudson Canyon South Closed Area-June 2000. VIMS Marine Resource Report No.2000‐8. 11 pages.

W.D. DuPaul, **D.B. Rudders** and P.J. Rago. 2000. Preliminary results of commercial sea scallop survey in the Hudson Canyon South Closed Area-June 2000. VIMS Marine Resource Report No. 2000‐6. 11 pages

W.D. DuPaul, **D.B. Rudders** and D.W. Kerstetter. 1999. Results of modifications to a sea scallop dredge twine top to facilitate the reduction of finfish bycatch: Georges Bank experimental fishery‐September & October 1998. VIMS Marine Resource Report No. 99‐4. 18 pages.

R.A Fisher and **D.B. Rudders**. 1999. Evaluation of fixed gear for the capture of Summer Flounder in coastal waters of Virginia. VIMS Marine Resource Report No. 99‐7. 17 pages.

**D.B. Rudders.** 1999. A comparison of size selectivity and relative efficiency of sea scallop trawls and dredges. Master’s Thesis, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, VA.

**Rudders, D.B**, W.D. DuPaul and J.E Kirkley. 1998. A Comparison of Size Selectivity and Relative Efficiency of Sea Scallop Trawls and Dredges. VIMS Marine Resource Report No. 98‐6. 73 pages.

**C. Grants and Contracts**

1. Current

**D. B. Rudders** and Roman, S.A. An Assessment of Sea Scallop Abundance and Distribution in the Nantucket Lightship Closed Area – Addition of the Great South Channel SAMS Area. Submitted to the 2020 Sea Scallop Research Set Aside grant competition. *Total-$131,973, Research-$26,395* (3/1/2020‐5/29/2022).

R. Mann and **D. B. Rudders**. Age based assessment in the sea scallop *Placopecten magellanicus*. Submitted to the 2020 Sea Scallop Research Set Aside grant competition. *Total-$1,042,322, Research-$230,611* (3/1/2020‐5/29/2022).

**D. B. Rudders** and Roman, S.A. An assessment of sea scallop abundance and distribution in the Georges Bank access areas and surrounds. Submitted to the 2020 Sea Scallop Research Set Aside grant competition. *Total-$812,062, Research-$162,412* (3/1/2020‐5/29/2022).

**D. B. Rudders** and Roman, S.A. An assessment of sea scallop abundance and distribution in the Nantucket Lightship Closed Area. Submitted to the 2020 Sea Scallop Research Set Aside grant competition. *Total-$781,441, Research-$156,288* (3/1/2020‐5/29/2022).

Munroe, D., Powell, E., Hofmann, E., Klinck, J., Scheld, A., and **Rudders, D.B.** Economic impacts of offshore wind energy development on the commercial sea scallop fishery. Submitted to the 2020 Sea Scallop Research Set Aside grant competition. *Total- $1,124,300 VIMS Subcontract -$84,367* (3/1/2020‐5/29/2022).

Hartley, T. and **D.B. Rudders.** Virginia Sea Grant 2020 COVID-19 Rapid Response. $140,000.

Hartley, T. and **D.B. Rudders.** Virginia Sea Grant 2020 COVID-19 Rapid Response and Aquaculture Supplemental. $158,712.

**D.B. Rudders.** Mariculture FY2020. Virginia Marine Resources Commission. $100,000.

**D. B. Rudders**. A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area in 2019 and 2020. Submitted to the 2019 Sea Scallop Research Set Aside grant competition. *Total- $1,754,210 Research-$350,842* (3/1/2019‐5/29/2021).

**D. B. Rudders**. *In Situ* high-definition camera monitoring to evaluate catch efficiency and performance of a survey dredge. Submitted to the 2019 Sea Scallop Research Set Aside grant competition. *Total- $844.937 Research-$211.234* (3/1/2019‐5/29/2021).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in Georges Bank Access Areas (CAI and CAII). Submitted to the 2018 Sea Scallop Research Set Aside grant competition. *Total-$767,641, Research-$153,528* (3/1/2018‐5/29/2020).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in the Nantucket Lightship Closed Area and Essential Fish Habitat Area. Submitted to the 2018 Sea Scallop Research Set Aside grant competition. *Total-$642,891, Research-$128,578* (3/1/2018‐5/29/2020).

**D. B. Rudders** and R. Mann. The effect of density on the growth, yield and reproduction of the sea scallop, *Placopecten magellanicus*. Submitted to the 2018 Sea Scallop Research Set Aside grant competition. *Total-$1,225,538, Research-$272,678* (3/1/2018‐5/29/2020).

R. Mann and **D. B. Rudders**. Age based assessment in the sea scallop. *Placopecten magellanicus*: a pilot study. Submitted to the 2018 Sea Scallop Research Set Aside grant competition. *Total-$692,772, Research-$153,630* (3/1/2018‐5/29/2020).

**D. B. Rudders**. Understanding dredge performance for a lined versus unlined NMFS sea scallop dredge. Submitted to the 2018 Sea Scallop Research Set Aside grant competition. *Total-$160,098, Research-$40,025* (3/1/2018‐5/29/2019).

**D. B. Rudders**. A cooperative high precision dredge survey to assess the mid-Atlantic sea scallop resource area in 2018. Submitted to the 2017 Sea Scallop Research Set Aside grant competition. *Total- $911,864 Research-$182,373* (3/1/2018‐5/29/2019).

Hart, D. Munroe, D. Curchister, E., **Rudders, D.** Shank, B. and Fratatoni, P.Forecasting future range of sea scallops using a trophically linked distribution model: Will climate change constrain scallop distribution in the Mid-Atlantic Bight? NMFS Fisheries and the Environment. *Research-$191,721, VIMS Subcontract-$0* (3/1/2016‐5/29/2020).

1. Submitted (Pending)

**D. B. Rudders** and **S**.A. Roman. A Cooperative High Precision Dredge Survey to Assess the Mid-Atlantic Sea Scallop Resource Area in 2019 and 2020. Submitted to the 2021 Sea Scallop Research Set Aside grant competition. *Total- $2,009,972 Research-$401,994* (3/1/2021‐5/29/2023).

**D. B. Rudders** and **S**.A. Roman. Artificial light as a tool to reduce bycatch in the sea scallop, *Placopecten, magellanicus*, dredge fishery. In preparation for submission to the 2021 Sea Scallop Research Set Aside grant competition.

**D. B. Rudders** and McDowell, J.R. Understanding the feeding ecology of the sea scallop, *Placopecten magellanicus*, through DNA barcoding. In preparation for submission to the 2021 Sea Scallop Research Set Aside grant competition.

**D. B. Rudders**, Fisher, R. and Roman, S.A. Assessing the spatio-temporal variability in the moisture-protein ratio for the sea scallop, *Placopecten magellanicus,* adductor muscle***.*** Preproposal invited for full submission to the FY21 Saltonstall-Kennedy grant competition.

3. Awarded

**D. B. Rudders** and J.S. Sulikowski. Evaluating the Condition and Discard Mortality of Monkfish, *Lophius americanus*, following capture and handling in the sea scallop dredge fishery. Submitted to the 2017 Sea Scallop Research Set Aside grant competition. *Total- $1,192,746 Research-$346,281* (3/1/2017‐5/29/2019).

**D. B. Rudders** and A. Trembanis. A study to assess the effect of tow duration and estimate dredge efficiency for the VIMS sea scallop dredge survey. Submitted to the 2017 Sea Scallop Research Set Aside grant competition. *Total-$1,260,510, Research-$283,615.* (3/1/2017‐5/29/2019).

A. Trembanis and **D. B. Rudders**. A study of incidental mortality in sea scallops investigating predator response and size selective rates of mortality from BACI image surveys. Submitted to the 2017 Sea Scallop Research Set Aside grant competition. *Total-$1,670,248, Research-$556,748, VIMS Sub-contract-$49,955.* (3/1/2017‐5/29/2019).

**D. B. Rudders,** Bushek, D., Munroe, D., Fisher, R., Bochenek, E**.** An investigation into the scallop parasite outbreak on the mid-Atlantic shelf: Transmission, pathways, spatio-temporal variation of infection and consequences to marketability. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total-$1,420,262, Research-$355,066* (3/1/2016‐5/29/2019).

Mann R.,and **D. B. Rudders**. Age structure and growth rate in the sea scallop, *Placopecten magellanicus*. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total-$613,673, Research-$148,571* (3/1/2016‐5/29/2019).

**D. B. Rudders**. Virginia Sea Grant Marine Extension Program 2016-2018: Resilient Communities and Economies. National Oceanic and Atmospheric Administration. *Total-$100,000,* (2/1/2018‐3/31/2019).

**D. B. Rudders**. A cooperative high precision dredge survey to assess the mid-Atlantic sea scallop resource area. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total- $1,979,348 Research-$395,870* (3/1/2016‐5/29/2018).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in Georges Bank Closed Area II and surrounds. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total-$448,215, Research-$89,643* (3/1/2016‐5/29/2017).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in the Nantucket Lightship Closed Area and surrounds. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total-$891,495, Research-$178,389* (3/1/2016‐5/29/2018).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in Georges Bank Closed Area II and the Southern Extension Closure. Submitted to the 2017 Sea Scallop Research Set Aside grant competition. *Total-$400,222, Research-$80,044* (3/1/2017‐5/29/2018).

**D. B. Rudders** and J. Hoenig. Scallop mark-recapture to estimate density dependent mortality and growth. Submitted to the 2016 Sea Scallop Research Set Aside grant competition. *Total-$594,282, Research-$231,628* (3/1/2016‐5/29/2018).

**D.B. Rudders.** Development and implementation of a high precision resource wide dredge survey of the Mid-Atlantic resource area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$966,472, Research-$173,965* (3/1/2015‐5/29/2016).

**D. B. Rudders** , J. Mandelman and J. Sulikowski. Discard mortality of sea scallops following capture and handling in the sea scallop dredge fishery. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,657,181, Research-$439,153* (3/1/2014‐5/29/2017).

Trembanis, A., D. Miller, **D.B. Rudders,** A. Ochse, K. Ochse. Incidental mortality estimates of sea scallops from AUV based BACI surveys. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,656,339, VIMS Subcontract-$45,785* (3/1/2014‐5/29/2017).

**D.B. Rudders.** Supplement to**:** Development and implementation of a high precision resource wide dredge survey of the Mid-Atlantic resource area. Addition to the scope of work to support further investigation into the observation of nematode worms in scallops. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$40,719, Research-$13,437* (10/1/2015‐5/29/2017).

**D. B. Rudders**. A synoptic survey of sea scallop abundance and distribution in the Long Island/Southern New England area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$456,346, Research-$82,142* (3/1/2014‐5/29/2015).

F. Davis, C. Parkins. D. Ward, M Winton, R. Smolowitz and **D. B. Rudders**. Improvements to the CFTDD frame and bag design for flatfish bycatch reduction and energy efficiency. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,082,224, VIMS Subcontract-$16,000* (3/1/2014‐5/29/2015)*.*

K. Thompson, M. Winton, C. Huntsberger, K. Stokesbury, S. Inglis, S. Cadrin, G. DeCelles, D. Zemeckis, C. Bank B. Wright, **D. B. Rudders** and R. M. Smolowitz. Seasonal bycatch survey of the Georges Bank scallop fishery. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$2,769,302, VIMS Subcontract-$29,221* (3/1/2014‐5/29/2015)*.*

**D. B. Rudders**. A synoptic survey of the sea scallop resource in the Mid-Atlantic. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total $1,592,471, Research-$300,597* (3/1/2013‐5/29/2015).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in the Northeast Georges Bank region. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total $281,169, Research-$65,953* (3/1/2013‐5/29/2014).

**D. B. Rudders**. An assessment of sea scallop abundance and distribution in the access area of the Nantucket Lightship area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total $251,702, Research-$62,926* (3/1/2013‐5/29/2014).

Smolowitz, R.J., K. Goetting, D. Ward, K. Stokesbury, S. Inglis, K. Thompson, A. Barkley, S. Cadrin, W.D. DuPaul, **D. B. Rudders** and R. M. Smolowitz. Seasonal bycatch survey of the Georges Bank scallop fishery. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$2,522,307, VIMS Subcontract-$44,110* (3/1/2013‐5/29/2015)*.*

Smolowitz, R.J., K. Goetting, D. Ward, W.D. DuPaul and **D. B. Rudders**. Testing of scallop dredge bag designs for flatfish bycatch reduction. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total $995,712, Research-$25,242* (3/1/2013‐5/29/2014)*.*

**D. B. Rudders**, J. Mandelman and J. Sulikowski. Evaluating the condition and discard mortality of skates following capture and handling in the sea scallop dredge fishery. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,092,642, Research-$291,598* (3/1/2012‐5/29/2015).

**D.B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in selected areas: the Hudson Canyon and DelMarVa closed areas and inshore areas of the New York Bight. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$678,016 Research-$101,702* (3/1/2012‐5/29/2013).

**D.B. Rudders** and W.D. DuPaul. An inventory of the sea scallop resource in the Georges Bank Closed Area II and surrounds. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$364,498 Research-$63,260* (3/1/2012‐5/29/2013).

Smolowitz, R.J., K. Goetting, D. Ward, K. Stokesbury, S. Inglis, K. Thompson, A. Barkley, S. Cadrin, W.D. DuPaul, **D. B. Rudders** and R. M. Smolowitz. Seasonal bycatch survey of the Georges Bank scallop fishery. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$2,538,554 VIMS Subcontract-$44,110* (3/1/2012‐5/29/2013)*.*

Smolowitz, R.J., K. Goetting, D. Ward, W.D. DuPaul and **D. B. Rudders**. Testing of scallop dredge bag designs for flatfish bycatch reduction. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$888,131 VIMS Subcontract-$21,832* (3/1/2012‐5/29/2013)*.*

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in open access areas: New York Bight and the Southern New England area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$690,010 Research-$90,010* (3/1/2011‐5/28/2013).

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: Nantucket Lightship Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$353,353 Research-$53,353* (3/1/2011‐5/28/2013).

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: DelMarVa Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$353,353 Research-$53,353* (3/1/2011‐5/29/2012)*.*

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: Georges Bank Closed Area II. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$353,353 Research-$53,353* (3/1/2011‐5/29/2012)*.*

Smolowitz, R.J., M. Weeks, K. Stokesbury, C. O’Keefe, S. Cadrin, . W.D. DuPaul and **D. B. Rudders**. Optimizing the Georges Bank scallop fishery by maximizing meat yield and minimizing bycatch. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,847,700 VIMS Subcontract-$42,001* (3/1/2011‐5/29/2012)*.*

Smolowitz, R.J., M. Weeks. W.D. DuPaul and **D. B. Rudders**, R. Enoksen, P. Anthony, T. Bendiksen and H. Bendiksen. Testing of a low profile excluder dredge for flatfish reduction. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$836,800* (3/1/2011‐5/29/2012)*.*

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: Georges Bank Closed Area I. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$350,054 Research-$50,054* (3/1/2010‐5/28/2011).

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: Hudson Canyon Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$348,854 Research-$48,854* (3/1/2010‐5/28/2011).

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in a selected closed area: Nantucket Lightship Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *Total-$354,850 Research-$40,770* (3/1/2009‐5/28/2010).

**D. B. Rudders** and W.D. DuPaul. Continuing the time series: calibrating the NMFS sea scallop survey to the R/V *Hugh R. Sharp*. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$339,750 Research-$40,770* (3/1/2009‐5/28/2010).

**D. B. Rudders** and W.D. DuPaul. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area II and DelMarVa Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$693,000 Research-$83,160* (7/1/2008‐6/30/2009).

W.D. DuPaul and **D. B. Rudders**. Calibrating industry scallop surveys with NOAA vessel platforms. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$678,527 Research-$74,639* (3/1/2007‐5/28/2008).

W.D. DuPaul and **D. B. Rudders**. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area I and II, Nantucket Lightship and Elephant Trunk Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$1,035,155 Research-$113,867* (3/1/2007‐5/28/2008).

W.D. DuPaul and **D. B. Rudders**. An assessment of sea scallop abundance and distribution in selected closed areas: Georges Bank Area I, Nantucket Lightship and Elephant Trunk Closed Area. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐Aside Program. *Total-$532,125 Research-$62,165* (6/1/2006‐5/31/2007).

W.D. DuPaul and **D. B. Rudders**. Evaluation of gear modifications to reduce the bycatch of summer flounder (*Paralichthys dentatus)* in sea scallop dredges. National Oceanic and Atmospheric Administration, Sea Scallop Research Set‐ Aside Program. *$10,350* (8/1/2001‐2/28/2002).

**D. Seminars and Presentations**

1. Invited

**Rudders, D.B**. 2016. Dealing with bycatch: From process to mitigation. Marine Resource Education Program. Norfolk, VA. January 7, 2016.

**Rudders, D.B.** 2014. Dealing with bycatch: From process to mitigation. Marine Resource Education Program. Baltimore, MD. January 23, 2014.

1. Presentations at Professional Meetings

R. Mann, **Rudders, D.B.**, Redmond, T., Roman, S.A., Thomas, S., Lond, M.C., and Southworth M. Age based assessment in the sea scallop *Placopecten magellanicus*: a pilot study. ICES WGScallop, Isle of Man, October 8-11, 2019.

S.A. Roman, **Rudders, D.B.**, Knotek, R.J. Sulikowski, J.A., Mandleman, J.A. and Benoit, H.T. Discard mortality of sea scallops (*Placopecten magellanicus*) following capture and handling in the sea scallop dredge fishery.ICES WGScallop, Isle of Man, October 8-11, 2019.

S.A. Roman, **Rudders, D.B.**, Trembanis, A. and Ferraro, D. Impact of Catchability Assumptions on Sea Scallop Survey Biomass Estimates. ICES WGScallop, Isle of Man, October 8-11, 2019.

D. Ferraro, Trembanis, A., Rudders, D.B. and Miller, D. Estimates of sea scallop incidental mortality from AUV-based BACI surveys. ICES WGScallop, Isle of Man, October 8-11, 2019.

S. Roman and **D.B. Rudders**. VIMS Survey Data Treatment Updates. Sea Scallop Plan Development Team Meeting. New Bedford, MA, September 4, 2019.

S. Roman and **D.B. Rudders**. VIMS NL South Deep Information. Sea Scallop Plan Development Team Meeting. New Bedford, MA, September 4, 2019.

**D.B. Rudders**, S. Roman, E. Mohr, and K. Clark. An Assessment of Sea Scallop Abundance and Distribution in the Mid-Atlantic Bight, Nantucket Lightship, Closed Area I and Closed Area II. Sea Scallop Plan Development Team Meeting. Woods Hole, MA. August 27-28, 2019.

**D.B. Rudders**, S. Roman, E. Mohr, and K. Clark. 2019 Update on the Nematode, *Sulcascaris sulcata*: Spatial Distribution and Effect on the Sea Scallop Fishery. Sea Scallop Plan Development Team Meeting. Woods Hole, MA. August 27-28, 2019.

S. Roman and **D.B. Rudders**. Georges Bank Yellowtail Flounder Estimates from VIMS Industry-Based Scallop Dredge Surveys of Closed Area II and Surrounds. Transboundary Resources Assessment Committee (TRAC) Assessment Meeting, St. Andrews, New Brunswick, Canada. July 9-11, 2019

S. Roman, **D.B. Rudders**, A. Trembanis, and D. Ferraro. Impact of Catchability Assumptions on Sea Scallop Survey Biomass Estimates. 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

**D.B. Rudders,** T. Redmond, M. Long, S. Thomas, S. Roman, and R. Mann. Age and Growth Rate Measurement in Scallops from the Mid-Atlantic: A Comparison of Shell Signatures, Hinge Resilia and Isotope Based Methods. 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

J-H. Chang, Hart, D., Fratatoni, P., Shank, B., Munroe, D., Curchitser, E., and **D.B. Rudders.** Forecasting future sea scallop range using a trophically-linked species distribution model: Will climate change constrain scallop distribution in the mid-Atlantic Bight? 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

S. Asci, Peros, J., **Rudders, D.B**. and Roman S. Adapting science based management: recent evolution of rotational management in the Atlantic sea scallop fishery. 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

**D.B. Rudders**, Roman, S. and R. Fisher. Observations on the impact of the nematode, *Sulcascaris sulcata* on the sea scallop fishery. 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

H. Tipton, Trembanis, A., Rasmussen, C. Ferraro, D. and **D.B. Rudders**. Assessing the performance of deep learning strategies in sea scallop (*Placopecten magellanicus*) survey imagery analysis. 22nd International Pectinid Workshop, Santiago de Compostela, Spain. April 24-29, 2019.

T. Redmond, M. Long, S. Thomas, S. Roman, **D.B Rudders** and R. Mann. Age and Growth Rate Measurement in Scallops from the Mid-Atlantic: A Comparison of Shell Signatures, Hinge Resilia and Isotope Based Methods. Aquaculture 2019, New Orleans, LA. March 7-11, 2019.

G. DeCelles, S. Roman and **D.B. Rudders**. Advances in fishery independent surveys to support stock assessment. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

D. Ferarro, A. Trembanis, **D. Rudders**, and D. Miller. Applications of autonomous underwater vehicle seabed imaging in fishery-independent sea scallop surveys. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

A. Trembanis, C. Rasmussen, D. Ferraro, **D. Rudders** and D. Miller. Developing and implementing deep learning strategies for analyzing sea scallop images. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

A. Weissman, J..Mandelman, **D. Rudders** and J. Sulikowski. Discard mortality of *Lophius americanus* in the scallop dredge fishery. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

Jui-Han Chang, D. Hart, E. Curchitser, P. Fratantoni, D Munroe, **D. Rudders** and Burton Shank. Forecasting future range of sea scallops using a trophically-linked species distribution model: Will climate change constrain scallop distribution in the mid-Atlantic bight? American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

J. Sulikowski, T. Platz, C. Brown, J. Jurek, E. Hutchins, J. Mandelman, G. Connors, and **D. Rudders**. From skates to scallops: A cooperative research love story. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

M. C. Long, R. Mann, **D. Rudders**, S. Roman, T. Chute, S. Walker and K. Cronin.  Growth rate measurement in scallops: Revisiting Merrill after 50 Years on the library shelf. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

**D. Rudders**, S. Roman, R. Fisher, D. Bushek, D. Munroe, E. Bochenek, E. McGurk and B. Galuardi. Investigating the impact of the nematode, *Sulcascaris sulcata*: Spatial distribution and effect on the sea scallop fishery. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

**D. Rudders**, A. Trembanis, S. Roman, D.Ferraro and H. Tipton. Understanding density dependent effects on catchability and dredge performance for a sea scallop dredge survey. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

S. Phillip, A. Trembanis, D. Miller, D. Ferraro and **D. Rudders**. Association of predators and deep sea scallops off New England. American Fisheries Society Annual Meeting, Atlantic City, NJ. August 19-23, 2018.

Jui-Han Chang, D. Hart, E. Curchister, P. Fratantoni, D. Munroe, **D. B. Rudders** and B. Shank. Forecasting future range of sea scallops using a trophically-linked species distribution model: will climate change constrain scallop distribution in the mid-Atlantic bight? ICES Annual Science Conference. Ft. Lauderdale, FL. September 18-21, 2017.

S. Roman and **D. B. Rudders**. Can multiple commercial vessels be used to monitor sea scallop abundance in the mid-Atlantic? American Fisheries Society Annual Meeting, Tampa, FL. August 20-24, 2017.

S. Borsetti, D. Munroe, E. Bochenek, **D.B. Rudders**, C. Dobson. Spatial variance in life history characteristics of the Waved Whelk (Buccinum undatum) in the mid-Atlantic. American Fisheries Society Annual Meeting, Tampa, FL. August 20-24, 2017.

Weissman, A., Mandleman, J., **Rudders, D.B.** and J. Sulikowski. Stress and observations of mortality of the monkfish, *Lophius americanus* in the scallop dredge fishery. 21st International Pectinid Workshop. Portland, Maine. April 19-25, 2017.

**D.B. Rudders**, Bochenek, E., Bushek, D., Fisher, R., McDowell, J., Munroe, D., and S. Roman. Searching for scallop zero: observations on a re-emerging epizootic. 21st International Pectinid Workshop. Portland, Maine. April 19-25, 2017.

Roman, S. and **D.B. Rudders**. Examination into a multi-vessel, industry-based sea scallop dredge survey. 21st International Pectinid Workshop. Portland, Maine. April 19-25, 2017.

Ferraro, D., Trembanis, A., Miller, D., **Rudders, D.B.**, and H. Brown. Estimating Atlantic sea scallop (*Placopecten magellanicus*) incidental mortality through before-after-control-impact surveys. 21st International Pectinid Workshop. Portland, Maine. April 19-25, 2017.

Sulikowski, J., H. Benoit, R. Knotek, D.B. Rudders and J. Mandleman. Evaluating the Condition and Discard Mortality of Winter Skate, Leucoraja Ocellata, Following Capture and Handling in the Sink Gillnet Fishery. American Fisheries Society Annual Meeting, Kansas City, MO. August 21-25, 2016.

**Rudders, D.B**., Knotek, R., Sulikowski, J., Mandleman, J., Benoit, H. and S. Roman. Estimating the discard mortality rate of sea scallops following capture and handling in the commercial dredge fishery. American Fisheries Society Annual Meeting, Kansas City, MO. August 21-25, 2016.

**D.B. Rudders**, Roman, S., Fisher, R., McDowell, J., Bushek, D., Munroe, D. and S. Roman. Observations on a re-emerging epizootic of the sea scallop, *Plaopecten magellanicus*, resource. Annual meeting of the Tidewater chapter of the American Fisheries Society. Virginia Beach, VA. March 10, 2017.

**Rudders, D.B**., Knotek, R., Mandleman, J., and J. Sulikowski. Discard mortality of sea scallops following capture and handling in the commercial dredge fishery. 20th International Pectinid Workshop. Galway, Ireland. April 22-28, 2015.

Dupaul, W.D. and **Rudders, D.B**. Scallop area management: strategies to maximize yield. 20th International Pectinid Workshop. Galway, Ireland. April 22-28, 2015.

Trembanis, A., Ferraro, D., **Rudders, D.B**. Abundance, automated image detection, crowd sourcing, and incidental mortality estimates of Sea Scallops (Placopecten magellanicus) from AUV based surveys. 20th International Pectinid Workshop. Galway, Ireland. April 22-28, 2015.

**Rudders, D.B.** Virginia Institute of Marine Science dredge survey methods.Sea scallop survey methodology peer review. March 17-19, 2015 (4 Presentations).

Knotek, R., **D.B. Rudders**, J. Mandelman, J. Sulikowski and H. Benoit. The survival of Rajids discarded in the New England scallop dredge fishery. American Fisheries Society Annual Meeting, Quebec City, CA. August 17-20, 2014.

K. Thompson, M. Winton**, D.B. Rudders**, K. Goetting, C. Huntsberger and R. Smolowitz. Seasonal bycatch survey of the sea scallop access areas on Georges Bank. American Fisheries Society Annual Meeting, Quebec City, CA. August 17-20, 2014.

Shank, B., J.-H. Chang, D. Hart, K. Bolles, W. DuPaul, S.Gallager, **D.B. Rudders**, R. Taylor, N. Vine, A. York. Cokriging as a method for combining resource surveys, decreasing uncertainty, and mitigating bias. American Fisheries Society Annual Meeting, Quebec City, CA. August 17-20, 2014.

## Davis, F., R. Smolowitz, D.B. Rudders. Dredge bag design modifications as a tool to reduce flatfish bycatch in the Atlantic sea scallop fishery. American Fisheries Society Annual Meeting, Quebec City, CA. August 17-20, 2014.

Hudson, J.M., **D.B. Rudders** W.D. DuPaul and R.B Carnegie. Histopathological analysis of sea scallops, *Placopecten magellanicus*, from the Mid-Atlantic following observations of reduced meat quality and elevated mortality.106th Annual Meeting of the National Shellfisheries Association. Jacksonville, FL. March 29-April 2, 2014.

Bergeron, J.B, **D.B. Rudders** and R. Mann. Latitudinal and bathymetric variation in ontogenetic morphology in the sea scallop. *Placopecten magellanicus.* 106th Annual Meeting of the National Shellfisheries Association. Jacksonville, FL. March 29-April 2, 2014.

**D.B. Rudders**. An integrated approach to yellowtail flounder bycatch mitigation in the Georges Bank sea scallop fishery. American Fisheries Society Annual Meeting. Little Rock, AR, August 24-28, 2013.

Davis, F., **Rudders, D.B**., and R. Smolowitz. Testing of bag design modification to reduce flatfish bycatch in the Northwest Altantic sea scallop fishery. 19th International Pectinid Workshop. Florianopolis, Santa, Catarina, Brazil. April 10-16, 2013.

K. Goetting, F. Davis, K. Thompson, C. Huntsberger, B. Valenti, R. Smolowitz, and **D. B. Rudders**. Contributing to management decisions through a comprehensive scallop survey on Georges Bank. 19th International Pectinid Workshop. Florianopolis, Santa, Catarina, Brazil. April 10-16, 2013.

**Rudders, D**.**B.** R.J. Smolowitz and K. Goetting. Bycatch mitigation through fishing gear based approaches: Evaluation of the impacts of the Coonamessett Farm Turtle Deflector Dredge on the scallop resource and finfish bycatch.104th Annual Meeting of the National Shellfisheries Association. Seattle, WA. March 25-29, 2012.

**Rudders, D**.**B.** and W.D. DuPaul. Calibrating industry vessels to the NMFS sea scallop time series*.* 103rd Annual Meeting of the National Shellfisheries Association. Baltimore, MD. March 27‐31, 2011.

**Rudders, D**.**B.** A simulation study to evaluate sampling designs for highly autocorrelated populations: With an application to sea scallop closed areas103rd Annual Meeting of the National Shellfisheries Association. Baltimore, MD. March 27‐31, 2011.

**D. B. Rudders** and W. D. DuPaul\*. Sea scallop resource assessment: Calibrating industry vessels for synoptic surveys. 17th International Pectinid Workshop, Santiago de Compostela, Galicia (Spain). April 22‐28, 2009.

**D. B. Rudders** and R.A Fisher. Evolution of gear design to improve the size selectivity of Black Sea Bass, *Centropristis striata*, habitat traps. American Fisheries Society Annual Meeting, San Francisco, CA. September, 5, 2007.

**D. B. Rudders** and W. D. DuPaul. Industry‐based sea scallop dredge surveys in support of rotational area management. American Fisheries Society Annual Meeting, San Francisco, CA. September, 5, 2007.

W. D. DuPaul and **D. B. Rudders.** Review of scallop ring size increase since 1994 in the U.S. scallop fishery. International Pectinid Workshop. Halifax, Nova Scotia. May 11‐17, 2007.

Yochum, N., W. DuPaul and **D. B. Rudders.** 2006. Size‐selectivity of the New Bedford Style, Atlantic sea scallop dredge configured with 4‐inch (102 mm) rings: A gear comparison study. International Council for the Exploration of the Sea (ICES) 2006; Fishing Technology in the 21st Century: Integrating Fishing and Ecosystem Conservation. October 30‐November 3, 2006. Boston, Massachusetts. (Poster)

Smolowitz\*, R, R. Silva, H. O. Milliken, J. T. DeAlteris, W. DuPaul and **D. B. Rudders.** Reducing the bycatch mortality of sea turtles in the USA northwest Atlantic Ocean fisheries. International Council for the Exploration of the Sea (ICES) 2006; Fishing Technology in the 21st Century: Integrating Fishing and Ecosystem Conservation. October 30‐November 3, 2006. Boston, Massachusetts.

**Rudders, D.B**., W. DuPaul and N. Yochum. Rotational area management in the Northwest Atlantic sea scallop fishery: Are current management strategies flexible enough? 98th Annual Meeting of the National Shellfisheries Association. March 26‐30, 2006. Monterey, California. (Poster).

DuPaul\*, W D., **D. B. Rudders** and R. J. Smolowitz. Industry trials of a sea scallop dredge modified to minimize the catch of sea turtles. 15th International Pectinid Workshop, Mooloolabar, Australia. April 20‐26, 2005.

W.D. DuPaul, **D.B. Rudders** and R.J. Smolowitz. Interim report: industry trials of a modified sea scallop dredge to minimize the catch of sea turtles. Northeast Regional Bycatch Forum. Wakefield, MA.

J. D. Lange, W. D. DuPaul\* and **D. B. Rudders**. An evaluation of sea scallop closed area boundaries in the Mid‐Atlantic. 95th Annual Meeting of the National Shellfisheries Association, New Orleans, LA. April 13‐17, 2003.

Goff, K,D., DuPaul, W.D., and **D.B. Rudders**. The use of a 4‐inch (101 mm) sea scallop (*Placopecten magellanicus*) ring dredge in the context of an area management strategy. National Shellfish Association Annual Meeting. Mystic, CT.

**Rudders, D.B.** and W.D. DuPaul. Survey methodology for the evaluation of the sea scallop *Placopecten magellanicus* population in the mid‐ Atlantic closed areas. 13th International Pectinid Workshop. La Serena, Chile.

DuPaul, W.D., K.D. Goff and **D.B. Rudders**. Results of sequential increases in sea scallop *Placopecten magellanicus* dredge ring size and the use of modified dredges specifically for area management strategies. 13th International Pectinid Workshop. La Serena, Chile.

DuPaul, W.D., J.E. Kirkley and **D.B. Rudders**. Sea scallop gear and biology: a mismatch in resource management. National Shellfish Association Annual Meeting. Halifax, NS.

**Rudders, D.B.** and W.D. DuPaul. A comparison of size selectivity and relative efficiency of sea scallop trawls and dredges. National Shellfish Association Annual Meeting, Las Vegas, NV.

**Rudders, D.B.** and W.D. DuPaul. A comparison of size selectivity and relative efficiency of sea scallop trawls and dredges. New England Fishery Management Council (Sea Scallop Committee). Warwick, RI.

**E. Active Memberships in Professional Societies**

1. National Shellfish Association
   1. Session organizer at the 107th Annual Meeting of the National Shellfisheries Association. Monterey, CA. March 22-26, 2015. Session Title: Commercial Shellfish Fisheries.
   2. Session organizer at the 104th Annual Meeting of the National Shellfisheries Association. Seattle, WA. March 25-29, 2012. Session Title: Commercial Shellfish Fisheries.
2. American Fisheries Society
   1. Session co-organizer at the annual meeting of the American Fisheries Society, Atlantic City, NJ, August 19-23, 2018. Session Title: Fisheries independent surveys: lessons learned and paths forward
   2. Session co-organizer at the annual meeting of the American Fisheries Society, Tampa, FL, August 18-20, 2017. Session Title: Recent Advances in Conservation Engineering – the National Bycatch Reduction Engineering Program.
   3. Session co-organizer at the annual meeting of the American Fisheries Society, Kansas City, MO. August 21-25, 2016. Session Title: Release and Discard Mortality Estimation: Lessons from Freshwater and Saltwater Environments
   4. Session co-organizer at the annual meeting of the American Fisheries Society, Portland, OR, August 15-20, 2015. Session Title: Exploring the benefits of collaborative fisheries research and conservation engineering to reduce bycatch and bycatch mortality
   5. Session co-organizer at the annual meeting of the American Fisheries Society, Quebec City, CA, August 17-21, 2014. Session Title: Out of Sight, Not Out of Mind: Estimating and Reducing Release Mortality in Commercial and Recreational Fisheries
   6. Session co-organizer at the annual meeting of the American Fisheries Society, Little Rock, AR, September 8-12, 2013. Session Title: Dealing with Bycatch.

**IV. Outreach and Service**

**A. Federal/State/Local Government**

1. Sea Scallop Plan Development Team (September 2010 to present) ‐ Provide technical advice to the New England Fishery Management Council on topics pertinent to sea scallop management.
2. International Council for the Exploration of the Seas (ICES)
   1. Chair-appointed member of the Working Group on Fishing Technology and Fish Behavior – WGFTFB (2015-present)
   2. Full member of the Scallop Working Group - WGScallop (2019-present)

**B. Other Professional Services**

1. Manuscript Reviews

* 1. Fisheries Research *(1 in 2010, 2 in 2015, 3 in 2016, 7 in 2017, 3 in 2018)*
  2. Reviews in Fisheries and Aquaculture *(1 in 2015)*
  3. Journal of Shellfish Research *(1 in 2010, 1 in 2012, 1 in 202))*
  4. Canadian Journal of Fisheries and Aquatic Science *(2 in 2009, 1 in 2016)*
  5. North American Journal of Fisheries Management *(1 in 2018)*
  6. Marine Policy *(1 in 2020)*

1. Served as Judge for best student presentations at 2019 and 2020 American Fisheries Society annual meetings

**C. Governance**

1. Member of the VIMS Fellowship Committee (2020-Present)
2. Member of the VIMS Professional and Professional Faculty Council (PPFC). 2011-2015.

**D. Student Mentoring**

1. Internal
   1. Jessica Bergeron (2015)
   2. Tony Nalovic (2014)
   3. Sarit Truskey (program intern 2016)
   4. Haixing Wang (2017-18)
   5. Brittany Baker (VIMS REU – 2019)
   6. Kaitlyn Clark (2019-present)
2. External
   1. Ryan Knotek - University of New England (2012-14).
   2. Danielle Ferraro - University of Delaware (2014-16)
   3. Richard Malloy - School for Marine Science and Technology (UMASS)(2014-2016)
   4. Amelia Smith. - University of New England (2016-2019)
   5. Sarah Borsetti. - Rutgers University (2016-present)
   6. Brooke Anderson (University of New England – 2018-19)
   7. Hunter Tipton (University of Delaware - 2018-present)