

Reference list created March 2024. References assembled from various publications in order to synthesize information on sites or areas where AAR studies have been conducted. The primary sources of these references are Wehmiller et al. (2021) and Wehmiller (2010) (Quat. Geochronology)

Belknap, D.F. 1979. Application of amino acid geochronology to stratigraphy of late Cenozoic marine units of the Atlantic coastal plain [Ph.D. thesis]: Newark, University of Delaware, 348 p.

Belknap, D.F., Wehmiller, J.F., 1980. Amino acid racemization in Quaternary mollusks: examples from Delaware, Maryland, and Virginia. In: Hare, P.E., Hoering, T.C., and King, K., Jr., eds., Biogeochemistry of Amino Acids. New York, John Wiley, 401-414.

Bowen, D.Q., Pillans, B., Sykes, G.A., Beu, A.G., Edwards, A.R., Kamp, P.J.J., Hull, A.G., 1998. Amino acid geochronology of Pleistocene marine sediments in the Wanganui Basin: a New Zealand framework for correlation and dating. Journal of the Geological Society 155, 439–446.

Blakemore, A. G., Murray-Wallace, C. V., Westaway, K. E., Lachlan, T. J., 2015. Aminostratigraphy and sea-level history of the Pleistocene Bridgewater Formation, Mount Gambier region, southern Australia. Australian Journal of Earth Sciences 62, 151-169.

Boyajian, G. E., Thayer, C. W., 1995. Clam calamity: a recent supratidal storm-deposit as an analog for fossil shell beds. Palaios 10, 484-489.

Bronk Ramsey, C., 2009. Bayesian analysis of radiocarbon dates. Radiocarbon 51, 337–360. <http://dx.doi.org/10.1017/S0033822200033865>.

Brothers, L. L., Foster, D. S., Pendleton, E. A., Baldwin, Wayne E., 2020. Seismic stratigraphic framework of the continental shelf offshore Delmarva, U.S.A.: Implications for Mid-Atlantic Bight evolution since the Pliocene. Marine Geology 428, 106287.

Browning, J.V., Miller, K.G., McLaughlin, P.P., Jr., Edwards, L.E., Kulpecz, A.A., Powars, D.S., Wade, B.S., Feigenson, M.D., Wright, J.D., 2009, Integrated sequence stratigraphy of the postimpact sediments from the Eyreville core holes, Chesapeake Bay impact structure inner basin, *in* Gohn, G.S., Koeberl, C., Miller,K.G., and Reimold, W.U., eds., The ICDP-USGS Deep Drilling Project in the Chesapeake Bay Impact Structure: Results from the Eyreville Core Holes: Geological Society of America Special Paper 458, p. 775–810, doi: 10.1130/2009.2458(33).

Bureau of Ocean Energy Management Atlantic Sand Assessment:

<https://www.boem.gov/marine-minerals/atlantic-sand-assessment-project-asap>

<https://www.boem.gov/marine-minerals/building-national-offshore-sand-inventory>

Bureau of Ocean Energy Management Atlantic Sand Assessment State Reports:

Delaware: <https://www.boem.gov/sites/default/files/non-energy-minerals/States-documents/DE-Agreement-M14AS00003-Final-Summary-Report-opt.pdf>

Maryland: <https://www.boem.gov/sites/default/files/non-energy-minerals/States-documents/MD-M14AC00007-MD-Summary-Report-Final-opt.pdf>

Virginia: <https://www.boem.gov/sites/default/files/non-energy-minerals/States-documents/VA-M14AC00013-Final-Summary-Report-opt.pdf>

- Busschers, F. S., Wesselingh, F. P., Kars, R. H., Versluijs-Helder, M. Wallinga, J., Bosch, J. H. A., Timmner, J., Nierop, K. G. J., Meijer, T., Bunnik, F. P. M., De Wolf H., 2014. Radiocarbon dating of late Pleistocene marine shells from the southern North Sea. *Radiocarbon* 56(3), 1151-1166.
- Byrnes, M.R., 1988. Holocene Geology and Migration of a Low-Profile Barrier Island System, Metompkin Island, Virginia. Doctor of Philosophy (PhD), Dissertation, Ocean/Earth/Atmos Sciences, Old Dominion University, DOI: 10.25777/qh0t-n783: https://digitalcommons.odu.edu/oeas_etds/113
- Chen, Z-Q., Hobbs, C.H. III, Wehmiller, J.F., Kimball, S.M., 1995. Late Quaternary Paleochannel Systems on the Continental Shelf, South of the Chesapeake Bay entrance. *Journal of Coastal Research*, 11, 605-614.
- Cheng, H., Edwards, R. L., Shen, C-C., Polyak, V. J., Asmerom, Y., Woodhead, J., Hellstrome, J., Wang, Y., Kong, X., Spötl, C., Wang, X., Alexander, E. C., 2013. Improvements in ^{230}Th dating, ^{230}Th and ^{234}U half-life values, and U-Th isotopic measurements by multi-collector inductively coupled plasma mass spectrometry. *Earth and Planetary Science Letters* 371-372. 82-91.
- Clarke, S. J., Murray-Wallace, C. V., 2006. Mathematical expressions used in amino acid racemisation geochronology—A review. *Quaternary Geochronology* 1, 261–278
- Colman, S.M., Mixon, R.B., 1988. The record of major Quaternary sea-level changes in a large Coastal Plain estuary, Chesapeake Bay, eastern United States. *Palaogeography, Palaeoclimatology, Palaeoecology*, 68, 99-116.
- Colman, S. M., Halka, J. P., 1989. Map showing Quaternary geology of the southern Maryland part of the Chesapeake Bay. U. S. Geological Survey Miscellaneous Field Studies Map MF-1948-C
- Colman, S.M., Mixon, R.B., Ruben, M., Bloom, A.L., Johnson, G.H., 1989. Comment on "Late Pleistocene barrier island sequence along the southern Delmarva Peninsula: Implications for middle Wisconsin sea levels." *Geology*, 17, 84-85.
- Colman, S. M., Halka, J. P., Hobbs, C. H. III., Mixon, R. B., Foster, D. S., 1990. Ancient channels of the Susquehanna River beneath Chesapeake Bay and the Delmarva Peninsula. *Geological Society of America Bulletin* 102, 1268-1279.
- Ian Conery, John P. Walsh, David Mallinson & David R. Corbett (2021): Marine Geology and Sand Resources of the Southern North Carolina Inner Shelf, Marine Georesources & Geotechnology, DOI: 10.1080/1064119X.2021.1967531
- Corrado, J.C., Weems, R.E., Hare, P.E. , Bambach, R.K. , 1986. Capabilities and limitations of applied aminostratigraphy as illustrated by analyses of *Mulinia lateralis* from the late Cenozoic marine beds near Charleston, South Carolina. *South Carolina Geology* 30, 19-46.
- Creveling, J. R., Mitrovica, J. X., Clark, P. U., Waelbroeck. C., 2017. Predicted bounds on peak global mean sea level during marine isotope stages 5a and 5c. *Quaternary Science Reviews* 163, 193-208.
- Cronin, T. M., Szabo, B. J., Ager, T.A., Hazel, J. E., Owens, J. P., 1981. Quaternary climates and sea levels of the U. S. Atlantic Coastal Plain. *Science* 211, 233-240.
- Culver, S.J., Farrell, K.M., Mallinson, D.J., Horton, B.P., Willard, D.A., Thieler, E.R., Riggs, S.R., Snyder, S.W., Wehmiller, J.F., Bernhardt, C.E., Hillier, C., 2008. Micropaleontologic record of late Pliocene and quaternary paleoenvironments in the northern Albemarle Embayment, North Carolina, U.S.A. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 264, 54–77.
- Culver, S.J., Farrell, K.M., Mallinson, D.J., Willard, D.A., Horton, B.P., Riggs, S.R., Thieler, E.R., Wehmiller, J.F., Parham, P., Snyder, S.W., Hillier, C., 2011. Micropaleontologic record of quaternary paleoenvironments in the central Albemarle Embayment, North Carolina, U.S.A. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 305, 227–249.

- Culver, S.J., Farrell, K.M., Mallinson, D.J., Willard, D.A., Horton, B.P., Riggs, S.R., Thieler, E.R., Wehmiller, J.F., Parham, P., Moore, J. P., Snyder, S.W., Hillier, C., 2016. Micropaleontologic record of Pliocene and Quaternary paleoenvironments in the southern Albemarle Embayment, North Carolina, U.S.A. *Palaeogeogr. Palaeoclimatol. Palaeoecol.* 457, 360-379.
- Darby, D. A., 1983. Sedimentology, diagenesis, and stratigraphy of Pleistocene coastal deposits in southeastern Virginia. Fifteenth Annual Virginia Geologic Field Conference.
- Darby, D. A, Evans, A. E. Jr., 1992. Provenance of Quaternary beach deposits, Virginia and North Carolina. In: Wehmiller, J.F. and Fletcher, C.H. (eds), *Quaternary Coasts of the United States: Lacustrine and Marine Systems*, Society of Economic Paleontologists and Mineralogists. Special Publication 48, 113-119.
- Davies, D. J., Powell, E. N., Stanton, R. J., Jr., 1989. Taphonomic signature as a function of environmental process: shells and shell beds in a hurricane-influenced inlet on the Texas coast. *Palaeogeography, Palaeoclimatology, Palaeoecology* 72, 317-356.
- Deaton, C. D., Hein, C. J., Kirwan, M. L., 2017. Barrier island migration dominates ecogeomorphic feedbacks and drives salt marsh loss along the Virginia Atlantic Coast, USA. *Geology* 45, 123-126
- DeJong, B. D., Bierman, P. R., Newell, W. L., Rittenour, T. M., Mahan, S. A., Balco, G., Rood, D. H., 2015. Pleistocene relative sea levels in the Chesapeake Bay region and their implications for the next century. *GSA Today* 25, 4-9.
- Doar, W. R. and Kendall, C G. St.C., 2014. An analysis and comparison of observed Pleistocene South Carolina (USA) shoreline elevations with predicted elevations derived from Marine Oxygen Isotope Stages. *Quaternary Research* 82, 164-174.
- Dockal, J.A. , 1995. Documentation and evaluation of radiocarbon dates from the Cape Fear Coquina (Late Pleistocene) of Snows Cut, New Hanover County, North Carolina. *Southeastern Geology* 35, 169–186.
- Dunbar, J.B., Wakeley, L.D., Miller, S.P., and Swartzel, S.M., 2001. Geology without borders: A conceptual model for Aberdeen Proving Ground, in Ehlen, J., and Harmon, R.S., eds., *The Environmental Legacy of Military Operations*: Boulder, Colorado, Geological Society of America Reviews in Engineering Geology 14, 191-202.
- Farrell et al., 2013. Graphic logging for interpreting process-generated stratigraphic sequences and aquifer/reservoir potential, with analog shelf to shoreface examples from the Atlantic coastal plain province, USA. *Journal of Sedimentary Research* 83, 723–745
- Fenster, M.S., Dolan, R., Jones Smith, J., 2016. Grain-size distributions and coastal morphodynamics along the southern Maryland and Virginia barrier islands. *Sedimentology*, 63, 809–823
- Finkelstein, K., 1992. Stratigraphy and preservation potential of sediments from adjacent Holocene and Pleistocene barrier-island systems, Cape Charles Virginia. In: Wehmiller, J.F. and Fletcher, C.H. (eds), *Quaternary Coasts of the United States: Lacustrine and Marine Systems*, Society of Economic Paleontologists and Mineralogists Special Publication 48, 129-140.
- Finkelstein, K., Ferland, M.A., 1987. Back-barrier response to sea-level rise, Eastern Shore of Virginia. In: Nummedal, D., Pilkey, O.H., Howard, J. (Eds.), *Sea-Level Fluctuations and Coastal Evolution*. SEPM (Society for Sedimentary Geology) pp. 145–155. <http://dx.doi.org/10.2110/pec.87.41.0145>.
- Finklestein, K., Kearney, M. S., 1988. Late Pleistocene barrier-island sequence along the southern Delmarva Peninsula: Implications for middle Wisconsin sea levels. *Geology* 16, 41-45.
- Finklestein, K. L., Kearney, M., S., 1989. Reply to comments "Late Pleistocene barrier islandsequence along the southern Delmarva Peninsula: Implications for middle Wisconsin sea levels." *Geology*, 17, 86-88.
- Foye, A. M., Oertel G. F., 1997. Transgressive systems tract development and incised-valley fills within a Quaternary estuary-shelf system: Virginia inner shelf, USA. *Marine Geology* 137, 227-249.

French, H.M., Demitroff, M., Streletskev, D., Forman, S.L., Gozdzik, J., Konishchev, V.N., Rogov, V.V., Lebedeva-Verba, M.P., 2009. Evidence for Late-Pleistocene permafrost in the Pine Barrens, southern New Jersey. *Earth's Cryosphere* 3, 17-28.

Frey, R. W., Dorjes, J., 1988. Fair- and foul-weather shell accumulations on a Georgia Beach. *Palaios* 3, 561-576.

Genau, R. B., Madsen, J. A., McGeary, S., Wehmiller, J. F., 1994. Seismic reflection identification of Susquehanna River paleochannels on the mid-Atlantic coastal plain. *Quaternary Research* 42, 166-175.

Groot, J.J., Ramsey, K.W., Wehmiller, J.F., 1990. Ages of the Bethany, Beverdam, and Omar Formations of southern Delaware: Delaware Geological Survey Report of Investigations, No. 47, 1-19.

Harris, M.S., 2000. Influence of a complex geologic framework on Quaternary coastal evolution: An example from Charleston, South Carolina [Ph.D. thesis]: Newark, University of Delaware, 330 p.

Heaton, T. J., Köhler, P., Butzin, M., Bard, E., Riemer, R. W., Austin, W. E. N., Bronk Ramsey, C., Grootes, P. M., Hughen, K. A., Kromer, B., Reimer, P. J., Adkins, J., Burke, A., Cook, M. S., Olsen, J., Skinner, L. C., 2020. Marine 20 – The marine radiocarbon age calibration curve (0-55,000 CALBP). *Radiocarbon*, 62 (4), 779-820. DOI:10.1017/RDC.2020.68

Hine, A. C., Snyder, S. W. P., 1985. Coastal lithosome preservation: evidence from the shoreface and inner continental shelf off Bogue Banks, North Carolina. *Marine Geology* 63, 307-330.

Hobbs, C.H., III, 2004. Geological history of Chesapeake Bay, USA: *Quaternary Science Reviews*, v. 23, p. 641–661.

Hughes, W. B., 1991. Application of marine seismic profiling to a ground water contamination study, Aberdeen Proving Ground, Maryland. *Ground Water Monitoring and Remediation*, 11, 97-102.

Jacobs, J. M., 1980. Stratigraphy and lithology of Quaternary landforms on the eastern coast of the Chesapeake Bay, MS Thesis, University of Delaware, Newark DE USA, 1-84.

Kaufman D. S., 2006. Temperature sensitivity of aspartic and glutamic acid racemization in the foraminifera *Pulleniatina*. *Quaternary Geochronology* 1, 188-207.

Kaufman, D. S. Manley, W. F., 1998. A new procedure for determining DL amino acid ratios in fossils using reverse phase liquid chromatography. *Quaternary Science Reviews (Quaternary Geochronology)* 17, 987-1000.

Kidwell, S. M. Best, M. M. R., Kaufman, D. S. 2005. Taphonomic trade-offs in tropical marine death assemblages: Differential time-averaging, shell loss, and probable bias in siliciclastic vs. carbonate facies. *Geology* 33, 729-732.

Kowalewski, M., Goodfriend, G.A., and Flessa, K.W., 1998. The high-resolution estimates of temporal mixing in shell beds: the evils and virtues of time-averaging. *Paleobiology* 24, 287-304.

Kowalewski, M., Avila Serrano, G.E., Flessa, K.W., and Goodfriend, G.A., 2000. Dead delta's former productivity: Two trillion shells at the mouth of the Colorado River. *Geology* 28, 1059-1062.

Kowalewski, M., Casebolt, S., Hua, Q., Whitacre, K. E., Kaufman, D. S., Kosnik, M. A., 2018. One fossil record, multiple time resolutions: Disparate time-averaging of echinoids and mollusks on a Holocene carbonate platform. *Geology* 46, 51-54.

Krantz, D.E., Hobbs, C.H., III, Wikle, G.L., 2016, Atlantic Coast and Inner Shelf, in Bailey, C.M., Sherwood W.C., Eaton, L.S., and Powars, D.S., eds., *Geology of Virginia*: Martinsville, Virginia, Virginia Museum of Natural History, p.341–380.

Lamothe, M., Wehmiller, J. F., Noller, J. S., 1998. Comparison of approaches to dating Atlantic coastal plain sediments, Virginia Beach, VA. <http://udspace.udel.edu/handle/19716/13228>

Leatherman, S. P., Rice, T. E., Goldsmith, V. 1982. Virginia Barrier Island Configuration: A Reappraisal. *Science* 215, 285-287.

Leupke, G., 1990. Economic heavy minerals in sediments from an offshore area east of Cape Charles, Virginia. U.S. Geological Survey Open File Report 90-451, p 1-10.

Litwin, R. J., Smoot, J. P., Pavich, M. J., Markewich, H. W., Brook, G., Durika, N. J., 2013. 100,000-year-long terrestrial record of millennial-scale linkage between eastern North American mid-latitude paleovegetation shifts and Greenland ice-core oxygen isotope trends. *Quaternary Research* 80, 291-315.

Long, J.H.; Hanebuth, T.J.J.; Alexander, C.R., and Wehmiller, J.F., 2021. Depositional environments and stratigraphy of Quaternary paleochannel systems offshore of the Georgia Bight, southeastern U.S.A. *Journal of Coastal Research*, 37(5), 883–905. Coconut Creek (Florida), ISSN 0749-0208.

Mallinson, D., Burdette, K., Mahan, S., Brook, G., 2008. Optically stimulated luminescence age controls on late Pleistocene and Holocene coastal lithosomes, North Carolina, USA. *Quaternary Research* 69, 97-109.

Mallinson, D. J., Culver, S. J., Riggs, S. R., Thieler, E. R., Foster, D., Wehmiller, J., Farrell, K. M., Pierson, J., 2010. Regional seismic stratigraphy and controls on the Quaternary evolution of the Cape Hatteras region of the Atlantic passive margin, USA. *Marine Geology* 268, 16-33.

Mangerud, J., Kaufman, D., Hansen, J. Svendsen, J. I. 2008. Ice-free conditions in Novaya Zemlya 35,000-30,000 cal years B. P. as indicated by radiocarbon ages and amino acid racemization evidence from marine molluscs. *Polar Research* 27, 187-208.

Martin, R. E., Wehmiller, J. F., Harris, M. S., Liddell, W. D., 1996. Comparative taphonomy of bivalves and foraminifera from Holocene tidal flat sediments, Bahia la Choya, Sonora, Mexico (Northern Gulf of California): Taphonomic Grades and Temporal Resolution. *Paleobiology* 22, 80-90.

Mattheus, C.R., Ramsey, K.W., and Tomlinson, J.L., 2020a, Geologic map of offshore Delaware: Delaware Geological Survey Geologic Map Series No. 25, scale 1:40,000.

Mattheus, C.R., Ramsey, K.W. and Tomlinson, J.L., 2020b, The evolution of Coastal Plain incised paleovalleys over multiple glacio-eustatic cycles: Insights from the Inner Continental Shelf of Delaware. *Journal of Sedimentary Research* In Press.

McBride, R. A., Fenster, M. S., Seminack, C. T., Richardson, T. M., Sepanik, J. M., Hanley, J. T., Bundick, J. A., Tedder, E., 2015. Holocene barrier-island geology and morphodynamics of the Maryland and Virginia open-ocean coasts: Fenwick, Assateague, Chincoteague, Wallops, Cedar, and Parramore Islands. *In* Brezinski, D. K., Halka, J. P., and Ott, R. A., Jr., eds., Tripping from the Fall Line: Field Excursions for the GSA Annual Meeting, Baltimore 2015. 309-423.

McCartan, L., Owens, J.P., Blackwelder, B.W., Szabo, B.J., Belknap, D.F., Kriausakul, N., Mitterer, R.M., Wehmiller, J.F., 1982. Comparison of amino acid racemization geochronometry with lithostratigraphy, biostratigraphy, uranium-series coral dating, and magnetostratigraphy in the Atlantic coastal plain of the southeastern United States. *Quaternary Research* 18, p. 337-359.

McCartan, L., Lemon, E.M., Jr. , Weems, R.E., 1984. Geologic map of the area between Charleston and Orangeburg, South Carolina. U.S. Geological Survey Miscellaneous Investigations Series, Map I-1472, scale 1:250,000.

McFarland, E.R., Beach, T.A., 2019, Hydrogeologic framework of the Virginia Eastern Shore: U.S. Geological Survey Scientific Investigations Report 2019-5093, 26 p., 13 pl., <https://doi.org/10.3133/sir20195093>.

Miller, G. H., Andrews, J. T., 2019. Hudson Bay was not deglaciated during MIS-3. *Quaternary Science Reviews* 225, 105944.

Miller, G. H., Magee, J. W., Jull, A. J. T. 1997. Low-latitude glacial cooling in the Southern Hemisphere from amino-acid racemization in emu eggshells. *Nature* 35, 241- 244.

- Miller, G. H., Magee, J. W., Johnson, B. J., Fogel, M. L., Spooner, N. A., McCulloch, M. T., Ayliffe, L. K. 1999. Pleistocene extinction of Genyornis newtoni: human impact on Australian megafauna. *Science* 283, 205-208.
- Miller, G.H., Kaufman, D.S., Clarke, S.J., 2013. Amino acid dating. In: Elias, S.A., & Mock, C.J. (Eds.), *Encyclopedia of Quaternary Science: Second Edition* (pp. 37-48). Waltham, MA: Elsevier.
- Miller, K. G., Sugarman, P. J., Browning, J. V., Sheridan, R. E., Kulhanek, D. K., Monteverde, D. H., Wehmiller, J. F., Lombardi, C., Feigenson, M. D., 2013. Pleistocene sequence stratigraphy of the shallow continental shelf, offshore New Jersey: Constraints of Integrated Ocean Drilling Program Leg 313 core holes. *Geosphere* 9, 74–95
- Miller, W. III , 1982. The paleoecologic history of late Pleistocene estuarine and marine fossil deposits in Dare County, North Carolina. *Southeastern Geology*, 23, 1-13.
- Mirecki, J. E., 1990. Aminostratigraphy, geochronology, and geochemistry of fossils from late Cenozoic marine units in southeastern Virginia [Ph. D. thesis]: Newark, University of Delaware, 199 p..
- Mirecki, J. E., Wehmiller, J. F., Skinner, A., 1995. Geochronology of Quaternary coastal units, southeastern Virginia. *Journal of Coastal Research* 11, 1135-1144.
- Mixon, R.B. , 1985. Stratigraphic and geomorphic framework of uppermost Cenozoic deposits in the southern Delmarva Peninsula, Virginia and Maryland. *U.S. Geological Survey Professional Paper* 1067-G, 53 pp. <https://pubs.er.usgs.gov/publication/pp1067G>
- Mixon, R. B., Szabo, B. J., Owens, J. P., 1982. Uranium-series dating of mollusks and corals, and age of Pleistocene deposits, Chesapeake Bay area, Virginia and Maryland. *U. S. Geological Survey Professional Paper* 1067-E, 18 pp. <https://pubs.usgs.gov/pp/1067e/report.pdf>
- Mixon, R. B., Berquist, C. R. Jr., Newell, W. L., Johnson, G. H., Powars, D. S., Schindler, J. S., Rader, E. K., 1989. Geologic map and generalized cross sections of the coastal plain and adjacent parts of the piedmont, Virginia. *U. S. Geological Survey Miscellaneous Investigations series, Map I-2033*.
- Murray-Wallace, C.V., 2018. Quaternary History of the Coorong Coastal Plain, Southern Australia: an Archive of Environmental and Global Sea-Level Changes. Springer, Cham, p. 229
- Nadeau, M-J., Grootes, P. M., Voelker, A., Bruhn, F., Duhr, A., Oriwall, A. 2001. Carbonate ^{14}C background: does it have multiple personalities? *Radiocarbon* 43, 169-176.
- Nicholas, W. A., Chivas, A. R., Murray-Wallace, C. V., Fink, D., 2011. Prompt transgression and gradual salinization of the Black Sea during the early Holocene constrained by amino acid racemization and radiocarbon dating. *Quaternary Science Reviews* 20, 3769-3790.
- Oaks, R.Q., Coch, N.K., Sanders, J.E., Flint, R.F., 1974. Post-Miocene shorelines and sea levels, southeastern Virginia, in Oaks, R.Q., Jr., and DuBar, J. R., eds., Post-Miocene stratigraphy, central and southern Atlantic coastal plain: Logan, Utah, Utah State University Press, p. 53-87.
- Oertel, G. F., Foyle, A. M., 1995. Drainage Displacement by Sea-Level Fluctuation at the Outer Margin of the Chesapeake Seaway. *Journal of Coastal Research*. 11, 583-604.
- Oertel, G. F., Kearney, M. S., Leatherman, S. P., Woo, H-J. 1989. Anatomy of a barrier platform: outer barrier lagoon, southern Delmarva Peninsula, Virginia. *Marine Geology* 88, 303-318.
- Oertel, G. F., Allen, T. R., Foyle, A. M., 2008. The influence of drainage hierarchy on pathways of barrier retreat: an example from Chincoteague Bight, Virginia USA. *Southeastern Geology* 45, 179-201.
- Oldale, R.N., Valentine, P.C., Cronin, T.M., Spiker, E.C., Blackwelder, B.W., Belknap, D.F., Wehmiller, J.F., Szabo, B.J., 1982. Stratigraphy, structure, absolute age, and paleontology of the upper Pleistocene deposits at Sankaty Head, Nantucket Island, Massachusetts. *Geology* 10, 246-252.

O'Neal, M.L., Wehmiller, J.F., and Newell, W.L., 2000. Amino acid geochronology of Quaternary coastal terraces on the northern margin of Delaware Bay, southern New Jersey, USA, in Goodfriend, G.A., Collins, M.J., Fogel, M.L., Macko, S.A., and Wehmiller, J.F., eds., Perspectives in Amino Acid and Protein Geochemistry: Oxford, Oxford University Press, p. 301-319.

Olszewski, T. D., Kaufman, D. S., 2015. Tracing burial history and sediment recycling in a shallow estuarine setting (Copano Bay, Texas) using postmortem ages of the bivalve *Mulinia lateralis*. *Palaios* 30, 224-237.

Owens, J. P. , Denny C. S., 1978. Geologic map of Worcester County Maryland. Maryland Geological Survey, Baltimore. <https://jsscholarship.library.jhu.edu/handle/1774.2/34631>

Parham, P. R., Riggs, S. R., Culver, S. J., Mallinson, D. J., Rink, W. J., Burdette, K., 2013. Quaternary coastal lithofacies, sequence development and stratigraphy in a passive margin setting, North Carolina and Virginia, USA. *Sedimentology* 60, 503-547.

Pendleton, E. A., Ackerman, S. D., Baldwin, W. E., Danforth, W. W., Foster, D. S., Thieler, E. R., and Brothers, L. L., 2015, High-resolution geophysical data collected along the Delmarva Peninsula, 2014, USGS Field Activity 2014-002-FA (ver. 3.0, December 2015): U.S. Geological Survey data release., p. Available online: <http://dx.doi.org/10.5066/F5067MW5062F5060>.

Pico, T., Creveling, J. R., Mitrovica, J. X., 2017. Sea level records from the U. S. mid-Atlantic constrain Laurentide ice sheet extent during marine isotope stage 3. *Nat. Commun.* 8, 15612 doi: 10.1038/ncomms15612

Pigati, J. S., Quade, J., Wilson, J., Jull, A. J. T., Lifton, N. A., 2007. Development of low-background vacuum extraction and graphitization system for 14C dating of old (40-60 ka) samples. *Quaternary International* 166, 4-14.

Potter, E.-K., Lambeck, K., 2004. Reconciliation of sea-level observations in the Western North Atlantic during the last glacial cycle. *Earth and Planetary Science Letters* 217, 171–181.

Powars, D.S., 2011. Middle and late Pleistocene geology of the Eastern Shore of Virginia and relationship to the Chesapeake Bay impact structure with impact debris core display: 41st Virginia Geological Field Conference, Wachapreague, Virginia, October 29–30, 2011, p. 15–35.

Powars, D.S., Bruce, T.S., 1999. The effects of the Chesapeake Bay impact crater on the geological framework and correlation of hydrogeologic units of the Lower York-James Peninsula, Virginia: U.S. Geological Survey Professional Paper 1612, 82 p.

Powell, E. N., Logan, A., Stanton, R. J. Jr., Davies, D. J., Hare, P. E., 1989. Estimating time-since-death from the free amino acid content of the mollusk shell: a measure of time averaging in modern death assemblages? Description of the technique. *Palaios* 4, 16-31.

PSDS: Program for the Study of Developed Shorelines.
<http://beachnourishment.wcu.edu/>

Raff, J.L., Shawler, J.L., ^{*}Ciarletta, D.J., Hein, E.A., Lorenzo-Trueba, J., Hein, C.J., 2018. Insights into barrier-island stability derived from transgressive/regressive state changes of Parramore Island, Virginia, *Marine Geology*, v. 403, p. 1-19, doi:10.1016/j.margeo.2018.04.007.

Ramsey, K.W., 2010. Stratigraphy, correlation, and depositional environments of the Middle to Late Pleistocene interglacial deposits of southern Delaware. *Delaware Geological Survey Report of Investigations* 76, p 1-43.

Ramsey, K.W., 2011, Geologic map of the Fairmount and Rehoboth Beach Quadrangles, Delaware: Delaware Geological Survey Geologic Map Series No. 16, scale 1:24,000.

Ramsey, K.W., and Tomlinson, J.L., 2012, Geologic Map of the Bethany Beach and Assawoman Bay Quadrangles, Delaware: Delaware Geological Survey Geologic Map Series No. 18, scale 1:24,000.

Reusser, L. J., Bierman, P. R., Pavich, M. J., Zen, E-an, Larsen, J. Finkel, R., 2004. Rapid late Pleistocene incision of Atlantic passive margin river gorges. *Science* 305, 499-502.

Riggs, S. R., Belknap, D.F., 1988. Upper Cenozoic processes and environments of continental margin sedimentation: eastern United States. In "The Atlantic Continental Margin: U.S." (R. E. Sheridan and J. A. Grow, Eds.), pp. 131-176. Geological Society of America DNAG Vol. I-2.

Riggs, S. R., Cleary, W. J., Snyder, S. W., 1995. Influence of inherited geologic framework on barrier shoreface morphology and dynamics. *Marine Geology* 126, 213-234.

Riggs, S. R., York, L. L., Wehmiller, J. F., Snyder, S. W., 1992. Depositional patterns resulting from high-frequency Quaternary sea-level fluctuations in northeastern North Carolina. In: Fletcher, C. H. III and Wehmiller, J. F. (Eds.). *Quaternary Coasts of the United States: Marine and Lacustrine Systems*. Society of Economic Paleontologists and Mineralogists Special Publication 48, p. 155-160.

Rojas, A., Martínez, S. 2016. Marine isotope stage 3 (MIS3) versus Marine isotope stage 5 (MIS5) fossiliferous marine deposits from Uruguay. In G. M. Gasparini et al. (eds), *Marine Isotope Stage 3 in Southern South America, 60 ka B. P. – 30 ka B.p.* Springer Earth System Sciences, DOI 10.1007/978-3-319-40000-6_14

Rojas A., Martínez S., 2020. The Fossil, the Dead, the Living: Beach Death Assemblages and Molluscan Biogeography of the Uruguayan Coast. In: Martínez S., Rojas A., Cabrera F. (eds) *Actualistic Taphonomy in South America. Topics in Geobiology*, vol 48. Springer, Cham https://doi.org/10.1007/978-3-030-20625-3_2

Ryan, D. D., Lachlan, T. J., Murray-Wallace, C. V., Price, D. M., 2020. The utility of single foraminifera amino acid racemization analysis for the relative dating of Quaternary beach barriers and identification of reworked sediment. *Quaternary Geochronology*, 60, 101103

Scott, T.W., Swift, D.J.P., Whittecar, G.R., Brook, G.A., 2010. Glacioisostatic influences on Virginia's late Pleistocene coastal plain deposits. *Geomorphology* 116, 175-188.

Shawler, J.L., Ciarletta, D.J., Lorenzo-Trueba, J., Hein, C.J., 2019. Drowned foredune ridges as evidence of prehistoric barrier-island state changes, In: *Coastal Sediments '19*, Proceedings of the 12th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes.

Shawler, J. L., Ciarletta, D., J., Connell, J. E., Boggs, B. Q., Lorenzo-Trueba, J., Hein, C. J., 2020. Relative influence of antecedent topography and sea-level rise on barrier-island migration. *Sedimentology*, doi:10.1111/sed.12798.

Sheridan R.E., Ashley, G.M., Miller, K.G., Waldner, J.S., Hall, D.W., Uptegrove, J., 2000. Offshore-onshore correlation of upper Pleistocene strata, New Jersey coastal plain to continental shelf and slope. *Sedimentary Geology* 134, 197-207.

Simonson, A. E., Lockwood, R., Wehmiller, J. F., 2013. Three approaches to radiocarbon calibration of amino acid racemization in *Mulinia lateralis* from the Holocene of the Chesapeake Bay, USA. *Quaternary Geochronology* 16, 62-72.

Sweeney, E. M., Pendleton, E. A., Ackerman, S. D., Andrews, B. D., Baldwin, W. E., Danforth, W. W., Foster, D. S., Thieler, E. R., and Brothers, L. L., 2015. High-resolution geophysical data collected along the Delmarva Peninsula 2015, U.S. Geological Survey Field Activity 2015-001-FA (ver. 3.0, May 2016): U.S. Geological Survey data release p. Available online: <http://dx.doi.org/10.5066/F5067P5055KK5063>.

Szabo, B. J., 1985. Uranium-series dating of fossil corals from marine sediments of southeastern United States Atlantic Coastal Plain. *Geological Society of America Bulletin* 96, 398-406

Thompson, W. G., Spiegelman, M. W., Goldstein, S. L., Speed, R. C., 2003. An open-system model for U-series age determinations of fossil corals. *Earth and Planetary Science Letters* 210, 365-381.

Tomiak, P. J., Penkman, K. E. H. Hendy, E. J., Demarchi, B., Murrells, S., Davis, S. A., McCullagh, P., Collins, M. J. (2013). Testing the limitations of artificial protein degradation kinetics using known-age massive *Porites* coral skeletons. *Quaternary Geochronology* 16, 87-109.

- Toscano, M.A., 1989. Comment on "Late Pleistocene barrier island sequence along the southern Delmarva Peninsula: Implications for middle Wisconsin sea levels." *Geology*, 17, 85-86.
- Toscano, M.A., 1992. Record of Oxygen Isotope Stage 5 on the Maryland inner shelf Atlantic Coastal Plain -- A post-transgressive highstand regime. In: Wehmiller, J.F. and Fletcher, C.H. (eds), *Quaternary Coasts of the United States: Lacustrine and Marine Systems*, Society of Economic Paleontologists and Mineralogists Special Publication 48, 89-99.
- Toscano, M. A., York, L. L., 1992. Quaternary stratigraphy and sea-level history of the U. S. middle Atlantic coastal plain. *Quaternary Science Reviews* 11, 301-328.
- Toscano, M.A., Kerhin, R.T., York, L.L., Cronin, T.M., Williams, S.J., 1989. Quaternary Stratigraphy of the inner continental shelf of Maryland: Maryland Geological Survey Report of Investigations No. 50, 116 p.
- Uptegrove, J., Waldner, J. S., Stanford, S. D., Monteverde, D. H., Sheridan, R. E., Hall, D. W., 2012. Geology of the New Jersey offshore in the vicinity of Barneget Inlet and Long Beach Island. New Jersey Geological and Water Survey Geologic Map Series GMS 12-3 . <https://www.nj.gov/dep/njgs/pricelst/gmseries/gms12-3.pdf>
- Wehmiller, J. F. 1977. Amino acid studies of the Del Mar, California midden site: apparent rate constants, ground temperature models, and chronological implications. *Earth and Planetary Science Letters* 37, 184-196.
- Wehmiller, J. F. 1982. A review of amino acid racemization studies in Quaternary mollusks: stratigraphic and chronologic applications in coastal and interglacial sites, Pacific and Atlantic coasts, United States, United Kingdom, Baffin Island, and Tropical Islands. *Quaternary Science Reviews* 1, 83-120.
- Wehmiller, J. F., 1984. Interlaboratory comparison of amino acid enantiomeric ratios in fossil Pleistocene mollusks. *Quaternary Research* 22, 109-120.
- Wehmiller, J. F., 2013a. United States Quaternary coastal sequences and molluscan racemization geochronology - what have they meant for each other for the past 45 years? *Quaternary Geochronology* 16, 3-20.
- Wehmiller, J. F., 2013b. Interlaboratory comparison of amino acid enantiomeric ratios in Pleistocene fossils. *Quaternary Geochronology*, 16: 173-182.
- Wehmiller, J. F., Belknap, D. F., 1982. Amino acid age estimates, Quaternary Atlantic Coastal Plain: Comparison with U-series dates, biostratigraphy, and paleoclimatic control. *Quaternary Research* 18, 311-336.
- Wehmiller, J. F., G. H. Miller, 2000. Aminostratigraphic dating methods in Quaternary geology. In: Noller, J. S., Sowers, J. M., and Lettis, W. R., (Eds.). *Quaternary Geochronology, Methods and Applications*, American Geophysical Union Reference Shelf, v. 4, p. 187-222.
- Wehmiller J. F., Pellerito, V., 2015. An evolving database for Quaternary aminostratigraphy. *GeoResJ*, 6, 115-123. <http://www.sciencedirect.com/science/article/pii/S2214242815000170>
- Wehmiller, J. F., Belknap, D. F., Boutin, B. S. , Mirecki, J. E. , Rahaim, S. D. , York, L. L., 1988. A review of the aminostratigraphy of Quaternary mollusks from United States Atlantic Coastal Plain sites. In: Easterbrook, D. L. (Ed.). *Dating Quaternary Sediments*, Geological Society of America Special Paper 227: 69-110.
- Wehmiller, J.F., York, L.L., Bart, M.L., 1995. Amino acid racemization geochronology of reworked Quaternary mollusks on US Atlantic coast beaches: Implications for chronostratigraphy, taphonomy, and coastal sediment transport. *Marine Geology* 124, 303-337.
- Wehmiller, J. F., H. A. Stecher III, L. L. York, Friedman, I., 2000. The thermal environment of fossils: effective ground temperatures (1994-1998) at aminostratigraphic sites, U.S. Atlantic coastal plain. In Goodfriend, G. A., Collins, M. J., Fogel, M. L., Macko, S. A., Wehmiller, J. F., eds.: *Perspectives on Amino Acid and Protein Geochemistry*, 219-250. Oxford.

Wehmiller, J.F., Simmons, K.R., Cheng, H., Edwards, R.L., Martin-McNaughton, J., York, L.L., Krantz, D.E., Shen, C.-C., 2004. Uranium-series coral ages from the US Atlantic Coastal Plain: the “80 ka problem” revisited. *Quaternary International* 120, 3-14.

Wehmiller, J.F., Thieler, E.R., Miller, D., Pellerito, V., Bakeman Keeney, V., Riggs, S.R., Culver, S., Mallinson, D., Farrell, K.M., York, L.L., Pierson, J., Parham, P.R., 2010. Aminostratigraphy of surface and subsurface Quaternary sediments, North Carolina coastal plain, USA, *Quaternary Geochronology* 5, 459-492. doi:10.1016/j.quageo.2009.10.005.

Wehmiller, J. F., Harris, W. B., Boutin, B. S., Farrell, K. M. F., 2012. Calibration of amino acid racemization (AAR) kinetics in United States mid-Atlantic Coastal Plain Quaternary mollusks using $^{87}\text{Sr}/^{86}\text{Sr}$ analyses: Evaluation of kinetic models and estimation of regional Late Pleistocene temperature history. *Quaternary Geochronology* 7, 21-36.

Wehmiller, J. F., York, L. L., Pellerito, V., Thieler, E. R., 2015. Racemization-inferred age distribution of mollusks in the US Atlantic margin coastal system. Geological Society of America Annual Meeting, Baltimore. Available at: <https://gsa.confex.com/gsa/2015AM/webprogram/Paper263915.html>

Wehmiller, J. F., Brothers, L., Foster, D. S. Ramsey, K. W., 2019a. Southern Delmarva barrier island beaches: linking offshore and onshore units using racemization geochronology to infer sediment sources during shoreline migration. Paper 13-5, Geological Society of America, SE Sectional meeting, Charleston SC. <https://gsa.confex.com/gsa/2019SE/webprogram/Paper326646.html>

Wehmiller, J. F. Ramsey, K. W., Howard, S., Mattheus, C. R., Harris, M. S., Luciano, K., 2019b. New perspectives on US Atlantic coastal plain aminostratigraphy gleaned from extensive analyses of shell specimens from inner continental shelf vibrocores. Paper 39-1, Geological Society of America, SE Sectional Meeting, Charleston SC. <https://gsa.confex.com/gsa/2019SE/webprogram/Paper326300.html>

Williams, C. P., 1999. Late Pleistocene and Holocene stratigraphy of the Delaware inner continental shelf. MS Thesis, University of Delaware, Newark. 175 pages.

York, L. L., 1990. Aminostratigraphy of U. S. Atlantic coast Pleistocene deposits: Maryland continental shelf and North and South Carolina coastal plain. Ph D thesis, Newark, Univ. of Delaware, 580 p.

York, L. L., Wehmiller, J. F., 1992. Aminostratigraphic results from Cape Lookout, N.C. and their relation to the preserved Quaternary marine record of SE North Carolina. *Sedimentary Geology* 80, 279-291.

York, L. L., Wehmiller, J. F., Cronin, T. M., Ager, T. A., 1989. Stetson Pit, Dare County, North Carolina: an integrated chronologic, faunal, and floral record of subsurface coastal Quaternary sediments. *Palaeogeography, Palaeoclimatology, Palaeoecology* 72, 115-132.

Wehmiller, J.F., Brothers, L.L., Ramsey, K.W., Foster, D.S., Mattheus, C.R., Hein, C.J., Shawler, J.L., 2021. Molluscan aminostratigraphy of the US Mid-Atlantic Quaternary coastal system: Implications for onshore-offshore correlation, paleochannel and barrier island evolution, and local late Quaternary sea-level history. *Quat. Geochronol.* 66. <https://doi.org/10.1016/j.quageo.2021.101177>