William K Vincett, III

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Maryland Geological Survey
2300 Saint Paul Street
Baltimore, MD 21818

SUMMARY

I am a 2022 MS graduate from the University of Delaware with practical experience in lithostratigraphy, biostratigraphy, hydrogeology, geologic mapping, and aquifer interpretation. My masters work used fundamental relative dating techniques to understand the biostratigraphy and paleoecology of Paleogene geologic formations in Delaware. My current position is as a geologic mapper at the Maryland Geological Survey, with mapping projects in the Piedmont and Coastal Plain provinces. I utilize my knowledge of field mapping, structural geology, mineralogy, stratigraphy, sedimentology, and micropaleontology principles to understand the geology of the region where I am mapping.

EDUCATION

University of Delaware, Newark, DE **2022**
Master of Science in Geological Sciences (GPA: 3.9)
Thesis Title: Biostratigraphy and Paleoecology of the Vincentown, Manasquan, and Shark River Formations of Northern Kent County, Delaware – Abstract available online

University of Vermont, Burlington, VT **2017**
Bachelor of Science in Geology (GPA: 3.32, Major GPA: 3.57)

PUBLICATIONS

McLaughlin Jr., Peter P., **Vincett III, William K.**, Gardner, Kristina F., Self-Trail, Jean, Paleocene Chronostratigraphy, Facies Changes, and the Enigmatic PETM in Central Delaware. Geological Society of American National Meeting, 9-12 October 2022, Paper No. 249-10 (link)

Vincett III, William K., McLaughlin Jr., Peter P., Martin, Ronald E., (2021) - Biostratigraphy and Paleoecology of the Vincentown, Manasquan, and Shark River Formations of Northern Kent County, Delaware. Geological Society of America National Meeting, 10-13 October 2021, Paper No. 93-10 (link)

Vincett III, William K., McLaughlin Jr., Peter P., Martin, Ronald E., (2020) - Preliminary Examination of Stratigraphy and Foraminifera of the Paleogene of Central Delaware. Geological Society of America National Meeting, 26-30 October 2020, Paper No. 177-2 (link)

Vincett III, William K., Hazebrouck, Garrett D., Wright, Stephen F., (2017) - Glacial History of the Black River and North Branch Valleys, Weathersfield, Vermont. Geological Society of America Northeastern and North-Central Joint Sections Meeting, 19-21 March 2017, vol. 49. number 2. p. 38 (link)

Wright, Stephen F., **Vincett III, William K.**, Hazebrouck, Garrett D., Miers, Mitchell A., Maglio, Stephen, (2017) - Surficial Geologic Map of Weathersfield, Vermont: Glacial History and Implications for Groundwater Resources. Geological Society of America Northeastern and North-Central Joint Sections Meeting, 19-21 March 2017, vol. 49. no. 2. p. 38 (link)

WORK EXPERIENCE

Maryland Geological Survey, MD DNR, Baltimore, MD **2023 - present**
2300 Saint Paul Street
Baltimore, MD 21818
Supervisor: Stephen Van Ryswick; stephen.vanryswick@maryland.gov; 410-554-5544
Geologist II (August 2023-present)

- I performed field mapping, field checking, and GIS Geologic Mapping Schema (GeMS) creation and conversion for quadrangle, county, and regional maps in Maryland.
- I have logged core for mineralized zones in metabasalt and marble in the Maryland piedmont.

Pennsylvania Department of Environmental Protection, Norristown, PA **2022 - 2023**
2 East Main Street
Norristown, PA 19401
Supervisor: C David Brown; cdbrown@pa.gov; 484-250-4792
Geologic Trainee

- I read and reviewed hydrogeologic and soil reports, provided comments and recommendations to consultants and my supervisor, and wrote technical memos on sites going through Superfund and the Pennsylvania Voluntary Cleanup Program. This position required a firm understanding of hydrogeologic principles as well as laws and technical guidance for cleanup of contaminant releases. Common projects were with No. 2 heating oil, unleaded gasoline, crude oil VOC and SVOCs, and metals.
- This position was in the Environmental Cleanup and Brownfields group and worked with the Pennsylvania Act 2 Land Recycling and Environmental Remediation Standards Program, with a supporting role in the Hazardous Sites Cleanup Program, and the Storage Tank and Spill Prevention Program.
- Interpreted rules and regulations to ensure regulatory compliance with state and federal laws including PA Acts 2-4, PA Hazardous Sites Cleanup Act, Clean Streams Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA-Superfund), and Resource Conservation and Recovery Act (RCRA).

Carnegie Museum of Natural History, Pittsburgh, PA **2018 - 2023**
Invertebrate Paleontology Section
4400 Forbes Ave
Pittsburgh, PA 15213
Supervisor: Albert Kollar; kollara@carnegiemnh.org; 412-622-5513
Research Volunteer/Collections Assistant (October 2018 - May 2023)

- Using the Carnegie Museum's invertebrate fossil collections, I wrote and published research on charismatic fossils from two sites in Europe, the Hunsruck Slate in Germany, and the Lyme Regis in England.
- I analyzed historical collections data, catalogs, and manuscripts to ensure accurate specimen identification of fossils that had not been updated since first acquisition (c. 1890s).
- I analyzed the invertebrate fossil collection's growth through time, and under different

directors/curators. I also researched the scientific significance of the museum's collections and made and presented graphics and charts to supervisors.

Delaware Geological Survey, Newark, DE **2022**
257 Academy Street
Newark, DE 19716
Supervisor: Kelvin Ramsey; kwramsey@udel.edu; 302-831-3586
Intern - Middle Atlantic Coastal Plain Stratigraphic Reconciliation Initiative (May - November 2022)

- During this position, I created summary cross sections using the stratigraphic software Strater to visually represent the regional geology of Delaware and the entire Mid-Atlantic Coastal Plain from Virginia to New Jersey. This requires understanding and interpreting the lithologies of geologic formations from adjacent states, and how they relate to stratigraphically similar or equivalent units based on lithostratigraphic, biostratigraphic, and geophysical evidence.
- I have also created summary figures of Delaware coreholes for interpretation of potentially stratigraphic equivalence in Miocene formations. This involved understanding the regional geology of Delaware, as well as commonly used geologic data including core descriptions, geophysical logs, lithologic members and formations, and biostratigraphic information.
- I photographed key sections of core and identified potential samples for pollen and dinoflagellate microfossil analysis to be analyzed for paleoclimate and sea level data. I was looking for fine-grained material without abundant organic matter or sediments which underwent reducing conditions. I also transcribed over 2000 ft of sediment core descriptions for geologic formations ranging in age from Quaternary to Cretaceous from the Delaware Coastal Plain.
- I modernized the workflow for geophysical log digitization for old well logs, decreasing time and improving accuracy on digitized well logs.
- I performed routine measuring of groundwater levels in groundwater monitoring wells, and conducted geophysical logging of wells near Dover, DE. This included learning and using Century software and a geophysical multi-logging tool measuring gamma, resistivity, and specific conductance.

Delaware Geological Survey, Newark, DE **2021**
257 Academy Street
Newark, DE 19716
Supervisor: Peter McLaughlin; ppmclau@udel.edu; 302-831-8263
Research Assistant - Middle Atlantic Coastal Plain Stratigraphic Reconciliation Initiative (May - September 2021)

- I centralized metadata on wireline coreholes in DE, MD, VA, and NJ, including location, formations recovered, biostratigraphic data, and lithostratigraphic data using academic literature and internal records.
- During the position, I provided sediment core descriptions during the drilling of a 300 ft corehole through Cenozoic and Cretaceous marine and terrestrial sediments, providing hands on experience with coring methods and regional coastal plain geology.
- I compiled published and unpublished data on geologic unit type sections.

Delaware Geological Survey, Newark, DE **2020**

257 Academy Street
Newark, DE 19716
Supervisor: Jaime Tomlinson; jaimet@udel.edu; 302-831-2649
Geologic Mapping Intern (July - August 2020)

- I used LiDAR hillshade on ArcMAP to identify over 100 unmapped coastal dune and Carolina Bay landforms in Sussex Co., DE
- I also compiled and reformatted drillers well logs from DNREC to update Delaware Geological Survey databases

Pennsylvania Department of Environmental Protection, Pittsburgh, PA **2019**
Clean Water Section
400 Waterfront Drive
Pittsburgh, PA 15222
Supervisor: Thomas Flanagan; thflanagan@pa.gov; 412-422-4047
Sewage Planning Specialist (March - June 2019)

- In this position, I reviewed planning documents that contained proposed and existing utilities, land survey data, surface elevation, and landscaping data. Most of my work was to review revisions to municipality Official Sewage Facilities Plans in Allegheny and Beaver Counties in southwestern Pennsylvania.
- I also performed technical reviews of documents to ensure compliance with the PA Clean Streams Law, The Clean Water Act, and PA Act 537 - The Pennsylvania Sewage Facilities Act.
- This work was mostly office work, but included some field work with soils, during which I traveled using an official PA State vehicle.

Governor's Institute of Vermont, Burlington, VT **2018 - 2019**
Environmental Science and Technology Institute (eSAT)
20 West Canal Street, Ste. C5
Winooski, VT 05404
Supervisor: Christine Massey; Christine.massey@uvm.edu; 802-343-5861
Assistant Faculty (Summers)

- Instructed high-school, high-achieving students in naturalistic observations of environments.
- Taught students how to use the EPA Habitat Assessment and Physiochemical Parameters Protocol to assess physical information and characterization of streams in Vermont
- Assisted leading field trips to assess stream quality based on physical parameters in three Vermont streams with varying amounts of anthropogenic inputs and contamination
- Led ~30 high-school students in an instructional discussion about environmental justice and natural disasters, using Hurricane Maria and its impacts on Puerto Rico as a case study

Vermont Geological Survey, Montpelier, VT **2017**
1 National Life Drive, Main 2
Montpelier, VT 05620
Supervisor: Jon Kim; jon.kim@vermont.gov; 802-522-5401
Intern (6/2017-8/2017)

- Generated GIS maps comparing surficial and lithological units to radon-in-air tests in Vermont for the VT Health Department
- Tested for herbicide and nitrate contamination in Sutton, VT and presented findings to

partners at VT Agency of Agriculture
- Performed elemental analysis in PFAS contaminated soil using Laser Ablation-ICPMS, and prepared samples for XRD and XRF analysis of clay mineralogy
- Analyzed borehole geophysical well-logs, searching for water production zones and fracture sets to further understand groundwater flow in contaminated drinking water.

Vermont Geological Survey, Montpelier, VT **2016**
and University of Vermont, Burlington, VT
180 Colchester Ave
Burlington, VT 05405
Supervisor: Stephen Wright (ret); swright@uvm.edu; 802-656-4479
Summer Intern (6/2016-7/2016)
- As part of a team of four students and a professor, I helped collect over 2000 surficial geology, soils, and landform observations of a town in Vermont to create a geologic map and complete an independent Advanced Field Geology course at the University of Vermont. Field data were collected during 3 weeks of camping at a Vermont State Park.
- During this project, the team identified and interpreted the glacial history and deposition of glacially produced landforms and soils using field observations. Part of the project was to identify potential sand resources in the area.
- Field observations were supplemented by nearby water wells to understand the three-dimensional depositional history of the Black River and North Branch valleys. This project also utilized Ground-Penetrating Radar (GPR) to identify subsurface sedimentary structures to track glacial landforms underground.
- I co-authored two surficial geology posters at the 2017 Northeastern and North-Central Geological Society of America meeting.

University of Vermont, Geology Department, Burlington, VT **2016 - 2017**
Delehanty Hall, University of Vermont
180 Colchester Ave
Burlington, VT 05405
Supervisor: Andrea Lini; alini@uvm.edu; 802-656-0245
Researcher (9/2016-12/2016)
- I was selected to research study abroad programs with whom the College of Arts and Sciences might attempt to establish partnerships. I used the geology undergraduate curricula at the University of Vermont and the potential partner institution to compare the programs, including number of students and courses taught.
- I ultimately presented this comprehensive list of potential partner universities to the Associate Dean of the College of Arts and Sciences and department supervisors.

Introductory Geology Laboratory Assistant (9/2016-5/2017)
- I served as a supplementary instructor and answered questions on field trip sites for the University of Vermont Introduction to Geology course.
- I also passed a defensive driving online course, and safely drove department vehicles with undergraduate students to local sites for field trips. Sites were between 5 and 45 minutes away from the University.

PROFESSIONAL REFERENCES

Peter P. McLaughlin, Jr.
Geologist, Senior Scientist
Delaware Geological Survey
ppmclau@udel.edu; (302) 831-8263
Delaware Geological Survey
University of Delaware
Newark, DE 19716-7501

Ronald Martin
Professor Emeritus
University of Delaware
daddy@udel.edu; (484) 643-2383
University of Delaware
255 Academy Street
Newark, DE 19716

Albert Kollar
Collections Manager
Carnegie Museum of Natural History
kollara@carnegiemnh.org; (412) 622-5513
Carnegie Museum of Natural History
4400 Forbes Avenue
Pittsburgh, PA 15213

CERTIFICATIONS/PROFICIENCIES

- Geologist-in-Training (GIT) certification (PA): *GT000329*
- QGIS, ArcGIS, Microsoft Word, PowerPoint, Excel, Adobe Illustrator, Adobe Photoshop, GeoMapApp, AutoCAD, JMP, ImageJ

AWARDS/GRANTS

University of Delaware - *Outstanding Teaching Assistant Award in Earth Sciences* **2022**
University of Delaware - *Graduate Student Travel Award* **2021**
Cushman Foundation for Foraminiferal Research - *Joseph A. Cushman Award for Student Travel* **2021**
Geological Society of America - *Graduate Student Research Grant* **2020**
University of Vermont - Outstanding Senior in Geology - *Charles G. Doll Award* **2017**
Sigma Gamma Epsilon - First Recipient - *W.A. Tarr Award* **2017**
Sigma Gamma Epsilon - *Eta Kappa Chapter* **2016, 2017**
University of Vermont - *Hawley Award* **2016**

TEACHING EXPERIENCE

Science Olympiad **2020, 2023, 2024**
Maryland Science Olympiad Tournaments (Geologic Mapping-Division C)-2024
Maryland Science Olympiad Tournaments (Dynamic Planet-Divisions B, C)-2024
Delaware State Tournament Event Co-Supervisor (Geologic Mapping-Division C)-2024

Delaware State Tournament Event Co-Supervisor (Dynamic Planet-Division C)-2020, 2023, 2024
Delaware State Tournament Event Co-Supervisor (Dynamic Planet-Division B)-2023, 2024

Carnegie Museum of Natural History, Pittsburgh, PA **2018 - 2023**
Research Volunteer/Collections Assistant

University of Delaware, Newark, DE **2019 - 2022**
Teaching Assistant-Geology 110 (Earth's Evolving Systems)-Spring 2020, Spring 2021, Spring 2022
Teaching Assistant-Geology 304 (Sedimentology and Stratigraphy)-Fall 2020, Fall 2021
Teaching Assistant-Geology 113 (Earth Science)-Summer 2020
Teaching Assistant-Geology 107 (Geology of Dynamic Earth)-Fall 2019

Chesapeake Bay Bowl - National Ocean Sciences Bowl, Lewes, DE **2022**
Scorekeeper/Volunteer

Governor's Institute of Vermont, Burlington, VT **2018, 2019**
Assistant Faculty

Environmental Science Day Camp, Perkins Museum, Burlington, VT **2016**
Assistant Teacher

SERVICE

Volunteering

Delaware High School Science Olympiad, Dover, DE	**2020, 2023, 2024**
Carnegie Museum of Natural History, Pittsburgh, PA	**2018 - 2023**
Chesapeake Bay Bowl - National Ocean Sciences Bowl, Lewes, DE	**2022**
DE Sea Grant - Horseshoe Crab Spawning Survey, Kent County, DE	**2021, 2022**

University of Delaware

College of Earth, Ocean, and Environment EmPOWER - Peer Mentor	**2020 - 2022**
Faculty Senate Library Committee - Member	**2020 - 2021**
Earth Science Graduate Student Organization - Treasurer	**2020 - 2021**
College of Earth, Ocean, and Environment EmPOWER - Masters Representative	**2020 - 2021**
Graduate Student Government - Earth Sciences Senator	**2020 - 2021**
Graduate Student Government - Sustainability Committee Member	**2020 - 2021**
Graduate Student Government - Sustainability Committee Co-Chair	**2019 - 2020**

University of Vermont

Club Squash - President	**2016 - 2017**
Club Squash - Treasurer	**2015 - 2016**

COURSEWORK

Geological Oceanography, Physical Oceanography, Paleoclimatology, Stratigraphy & Sedimentology, Environmental Isotope Geochemistry, Field Geology, Structural Geology, Geomorphology, Tectonics, Glacial Geology, Calculus I-II, Physics I-II, Chemistry I-II

SOCIETY MEMBERSHIP

North American Micropaleontological Society (SEPM)	**2019-present**
Cushman Foundation for Foraminiferal Research	**2019-present**
American Association for the Advancement of Science	**2017-present**

Geological Society of America	**2017-present**
Pittsburgh Geological Society	**2018-2023**
American Geophysical Union	**2018-2023**