NATASHA S. VITEK 29 July 2019

EDUCATION

August 2013-May 2019, Ph.D, *Biology*. The University of Florida August 2011-May 2013. M.S., *Geological Sciences*. The University of Texas at Austin September 2007-May 2011. Bachelor of Sciences, *Geology & Geophysics*. Yale University

EMPLOYMENT

2019-present. Assistant Professor, Department of Ecology and Evolution, Stony Brook University.

PEER-REVIEWED PUBLICATIONS

- 20. **Vitek, N.S.** 2018. Delineating taxonomic boundaries and exploring range shifts within and between species in the fossil record using shell variation in the Eastern Box Turtle (*Terrapene carolina*). PLoS ONE 13:e0193437.
 - Press: "Turtle shells help decode complex links between modern, fossil species." N. Van Hoose. https://www.floridamuseum.ufl.edu/science/turtle-shells-decode-links-between-modern-fossil-species/ "Shell Shock! Can morphometrics distinguish fossil turtle species?" S. Gibson. http://blogs.plos.org/paleocomm/2018/03/08/shell-shock-can-morphometrics-distinguish-fossil-turtle-species/
 - nup.//biogs.pios.org/pareocomm/2016/05/06/shen-shock-can-morphometrics-distinguish-fossif-turue-species/
- 19. Valdes, N.**, Bourque, J.R., Vitek, N.S. 2017. A new soft-shelled turtle (Trionychidae, *Apalone*) from the late Miocene of north-central Florida. Bulletin of the Florida Museum of Natural History 55:117-138.
- 18. **Vitek, N.S.**, Austin, J.D., Bloch, J.I. 2017. Long-term association between the commensal *Podomys floridanus* and *Gopherus polyphemus* in the fossil record of Florida. Bulletin of the Florida Museum of Natural History 55:105-116.

 Press: "Odd couple: Florida Mouse, Gopher Tortoise have been rooming for centuries." M.-L. Watkinson. https://www.floridamuseum.ufl.edu/science/odd-couple-florida-mouse-and-gopher-tortoise/
- 17. **Vitek, N.S.,** Manz, C.L., Gao, T.R, Bloch, J.I., Strait, S.G., Boyer, D.M. 2017. Semi-supervised determination of pseudocryptic morphotypes using observer-free characterizations of anatomical alignment and shape. Ecology & Evolution: 1-15
- 16. **Vitek**, **N.S.**, Danilov, I.G., Nakajima, Y., Hirayama, R. 2017. Redescription of the skull of "*Trionyx*" *kyrgyzensis* and improved phylogenetic taxon sampling of Cretaceous and Paleogene soft-shelled turtles (Trionychidae) of Asia, including the oldest crown trionychids. Journal of Systematic Palaeontology:1-13.
- 15. **Vitek**, **N.S.**, and Joyce, W.G. 2015. A review of the fossil record of New World turtles of the clade Pan-Trionychidae. Bulletin of the Peabody Museum of Natural History 56:185-244.
 - Invited review, part of fossil turtle book project
- 14. Danilov, I.G., Sukhanov, V.B., Obraztsova, E.M., and **Vitek, N.S.** 2015. First reliable record of trionychid turtles in the Paleocene of Asia. Paleontological Journal 49:407-412.
- 13. **Vitek, N.S.,** and Danilov, I.G. 2015. New Material of *Ulutrionyx ninae* from the Oligocene of Kazakhstan with a review of Oligocene trionychids of Asia. Journal of Vertebrate Paleontology 35(5):e973570.
- 12. Danilov, I.G., **Vitek, N.S.**, Averianov, A.O., and Glinskiy, V.N. 2015. A new softshelled turtle of the genus *Khunnuchelys* (Trionychidae: Trionychinae) from the Upper Cretaceous Bostobe Formation of Kazakhstan. Acta Palaeontologica Polonica 60:155-161.
- 11. **Vitek, N.S.**, and Danilov, I.G. 2014. Soft-shelled turtles (Trionychidae) from the Cenomanian of Uzbekistan. Cretaceous Research 49:1-12.
- 10. Danilov, I.G., Hirayama, R., Sukhanov, V.B., Suzuki, S., Watabe, M, and Vitek, N.S. 2014. Cretaceous soft-shelled turtles (Trionychidae) of Mongolia: New diversity, records, and a revision. Journal of Systematic Paleontology 12:799-832.
- 9. Danilov, I.G., Cherepanov, G.O. and **Vitek, N.S.** 2013. Chelonological studies of L.I. Khosatzky with his annotated bibliography on turtles. Proceedings of the Zoological Institute RAS 317:382-425.
- 8. **Vitek, N.S.,** and Danilov, I.G. 2013. Soft-shelled turtles (Trionychidae) from the Bissekty Formation (Upper Cretaceous: Turonian) of Uzbekistan: skull-based taxa and probable skull-shell associations. Cretaceous Research 43:48-58.
- 7. Vitek, N.S., Vinther, J., Schiffbauer, J.D., Briggs, D., and Prum, R. 2013. Exceptional three-dimensional preservation and colouration of an iridescent fossil feather from the Middle Eocene Messel Oil Shale. Paläontologische Zeitschrift 87:493-503
- 6. Danilov, I.G., and **Vitek, N.S.** 2013. Soft-shelled turtles (Trionychidae) from the Bissekty Formation (late Cretaceous: late Turonian) of Uzbekistan: shell-based taxa. Cretaceous Research 41:5-64.
- 5. Danilov, I.G., and **Vitek, N.S.** 2013 (2012). Cretaceous trionychids of Asia: a review of record and biogeography In: Brinkman, D.B., Holroyd, P.A., and Gardner, J.D. (eds.), *Morphology and Evolution of Turtles: Origin and Early Diversification*. Springer, Dordrecht, 419-438.

- 4. Vitek, N.S., and Danilov, I.G. 2012. New data on the soft-shelled turtles from the Upper Cretaceous Kyrkkuduk I locality of southern Kazakhstan. Proceedings of the Zoological Institute RAS 316:50-56.
- 3. **Vitek, N.S.** 2012. Giant fossil soft-shelled turtles of North America. Palaeontologia Electronica. Vol. 15, Issue 1:13A, 43p.; palaeo-electronica.org/content/2012-issue-1-articles/210-giant-soft-shelled-turtles.
- 2. **Vitek, N.S.** 2011. Insight into the taxonomy and systematics of North American Eocene soft-shelled turtles from a well-preserved specimen. Bulletin of the Peabody Museum of Natural History 52:189-208.
- 1. **Vitek, N.S.,** and Danilov, I.G. 2010. New material and a reassessment of soft-shelled turtles (Trionychidae) from the Late Cretaceous of Middle Asia & Kazakhstan. Journal of Vertebrate Paleontology 30:2, 383-393.

PUBLISHED ABSTRACTS

- 24. **Vitek, N.S.**, Morse, P.E., Strait, S.G., Boyer, D.M., Bloch, J.I. 2019. Changes in relative molar size in the small-bodied mammal *Macrocranion* across the Paleocene-Eocene Thermal Maximum follow predictions of nutritional deficit. Society of Integrative and Comparative Biology Annual Meeting, 3-7 January 2019, Tampa, FL, 418.
- 23. **Vitek, N.S.**, Baker, C.B., Bloch, J.I. 2018. Bringing microvertebrates into the math classroom: STEM integration using 3D printed fossils and other biological objects. Journal of Vertebrate Paleontology, Programs and Abstracts, 234.
- 22. **Vitek, N.S.**, Boyer, D.M., Strait, S.G., Bloch, J.I. 2018. Automated geometric morphometric methods as a component of the phenomic toolkit: a case study using Paleogene peradectids (Mammalia: Marsupialia). Journal of Vertebrate Paleontology, Programs and Abstracts, 234. [Invited symposium participant]
- 21. Bloch, J.I., Morse, P.E., **Vitek, N.S.**, Boyer, D.M., Wing, S. 2018. Implications of immigrant arrival times during the Paleocene-Eocene Thermal Maximum for mammal habitat specificity. Journal of Vertebrate Paleontology, Programs and Abstracts, 92.
- 20. Narducci, R.E., Hulbert, R.C., Bloch, J.I., MacFadden, B.J., Bourque, J.R., Poyer, A.R., Pirlo, J., Vitek, N.S., Grant, C.A., Ziegler, M.J. 2018. Recovery and curation of a critically important late Miocene fossil deposit in North-Central Florida: a rare opportunity for citizen science and public education. Journal of Vertebrate Paleontology, Programs and Abstracts, 189.
- 19. **Vitek, N.S.**, Morse, P.E., Strait, S.G., Boyer, D.M., Bloch, J.I. 2017. Changes in relative molar size of the small-bodied mammal *Macrocranion* (Eulipotyphla, Erinaceomorpha) across the Paleocene-Eocene Thermal Maximum follow the inhibitory cascade model. Climatic and Biotic Events of the Paleocene, 4-7 September, 2013, Snowbird, UT, 50.
- 18. Morse, P.E., **Vitek, N.S.**, Bloch, J.I. 2017. Change in relative abundance of primates and small mammal faunal composition before, during, and after the Paleocene-Eocene Thermal Maximum in the Southern Bighorn Basin. Climatic and Biotic Events of the Paleocene, 4-7 September, 2013, Snowbird, UT, 51.
- 17. Bloch, J.I., Morse, P.E., **Vitek, N.S.**, Boyer, D.M., Wing, S. 2017. Decoupling of plant and mammal responses to climate change across the Paleocene-Eocene Thermal Maximum in the Northern Hemisphere. Climatic and Biotic Events of the Paleocene, 4-7 September, 2013, Snowbird, UT, 52.
- 16. **Vitek, N.S.,** Strait, S.G., Boyer, D.M., Bloch, J.I. 2017. Morphological response of three closely related small-bodied mammals (Eulipotyphla, Erinaceomorpha) to climate change across the Paleocene-Eocene Thermal Maximum. Journal of Vertebrate Paleontology, Programs and Abstracts, 209.
- 15. **Vitek, N.S.,** Morse, P.E., Strait, S.G., Boyer, D.M., Bloch, J.I. 2016. Multivariate change in the dental morphology of the small-bodied insectivorous mammal *Macrocranion* (Eulipotyphla, Erinaceomorpha) across the Paleocene-Eocene Thermal Maximum. Journal of Vertebrate Paleontology, Programs and Abstracts, 244.
- 14. Danilov, I.G., **Vitek, N.S.**, Nakajima, Y., Hirayama, R.. 2016. Phylogenetic position of some fossil soft-shelled turtles from the Cretaceous and Paleogene of Asia. Journal of Vertebrate Paleontology, Programs and Abstracts, 122.
- 13. **Vitek, N.S.,** Manz, C.L., Bloch, J.I., Boyer, D.M., Strait, S.G. 2015. Differentiating tooth shape using automated three-dimensional geometric morphometrics: testing alignment sensitivity and utility for analyses of small mammals across the Paleocene-Eocene Thermal Maximum. Journal of Vertebrate Paleontology, Programs and Abstracts, 232. [Invited symposium participant]
- 12. Rosenbach, K.L.**, Vitek, N.S., Manz, C.L., Bloch, J.I., Boyer, D.M., Strait, S.G. 2015. Morphological disparity of insectivores (Mammalia, Eulipotyphla) across rapid environmental changes during the Paleocene-Eocene Thermal Maximum. Journal of Vertebrate Paleontology, Programs and Abstracts, 204.
- 11. **Vitek, N.**, C. Manz, J. Bloch, D. Boyer, and S. Strait. 2014. Evolution of small mammals during the Paleocene-Eocene Thermal Maximum: A case study using automated geometric morphometric methods to quantify tooth shape and size. SVP Programs and Abstracts, 248-249.
- 10. Wang, Z.*, **N. Vitek***, U.P. Karadkar, A.M. Molineux. 2014. Bringing museum collections to the public through a smartphone app. 10th North American Paleontological Convention Abstract Book. The Paleontological Society Special Publications 13:98.
- 9. **Vitek, N.** 2013. New patterns of spatiotemporal variation in the Eastern Box Turtle (*Terrapene carolina*) and their influence on evolutionary hypotheses. SVP Program and Abstracts, 233.

- 8. **Vitek, N.S.** 2013. Morphometric analysis of spatiotemporal variation supports reinterpretation of the fossil record of the Eastern Box Turtle (*Terrapene carolina*). Geological Society of America South-Central Section 47th Annual Meeting, 4-5 April, 2013.
- 7. **Vitek, N.S.** and R.W. Burroughs, 2012. Variation in complex systematic problems: a case study. SVP Program and Abstracts, 189-190.
- 6. **Vitek, N.S.** and R.W. Burroughs. 2012. Cf. *Terrapene*: a complicated evolutionary history. Symposium on Turtle Evolution Program and Abstracts Volume, 45.
- 5. Vitek, N. 2011. Giant fossil soft-shelled turtles of North America. Journal of Vertebrate Paleontology, Program and Abstracts Book, 210A.
- 4. **Vitek, N.S.** 2011. Giant fossil soft-shelled turtles of North America. Texas Herpetological Society Student Research Symposium Program and Abstracts Volume, 15.
- 3. **Vitek, N.** 2010. Character reinterpretation and fossil soft-shelled turtle taxa (Trionychidae) work together to recover new relationships. Journal of Vertebrate Paleontology, SVP Program and Abstracts Book, 182A.
- 2. Danilov, I.G. and **Vitek**, **N.S.** 2009. Cretaceous Trionychids of Asia: a review of record and biogeography. Gaffney Turtle Symposium (17-18 October 2009, Drumheller, Canada). Drumheller, Canada, 52-58.
- 1. **Vitek, N.** and Danilov, I.G. 2008. [Morphology and systematic position of trionychid turtles from the Late Cretaceous of Kazakhstan and Tadzhikistan]. In Modern Paleontology: Classic and Newest Methods. The fifth All-Russian Scientific School for Young Scientists in Paleontology. Abstracts. Paleontological Institute of the Russian Academy of Sciences, Moscow, 17–18 [in Russian].

EXTERNAL GRANTS & AWARDS

- **2018. P.E.O. Scholar Award**. Excellence in graduate student research. \$15,000.
- 2017. FPS Morgan Award. Turtle research with mentored undergrad. \$1,000
- 2012. Paleontological Society of Austin Research Grant. Master's thesis research. \$500
- 2012. GSA Research Award. Research in St. Petersburg, Russia. \$1,872
- 2012. James M. & Thomas J. M. Schopf Award. Master's thesis research. \$800
- 2011. NSF Graduate Research Fellowship. deferred until fall 2013. Graduate study in paleontology. \$100,000

INTERNAL GRANTS & AWARDS

- **2018. Austin Award**. Excellence in graduate student research.
- 2017. GSC travel award. Ph.D research. \$350
- **2017. UF Open Access Publishing Fund**. Ph.D. research publication \$1,560.
- **2013.** Miss Lucy Dickinson Fellowship. Ph.D. research. \$18,000
- 2013. University of Florida matching NSF Research Funds. Ph.D. research. \$6,000
- 2012. Off-Campus Research Funds. Master's thesis research. \$700
- 2012. Lundelius Scholarship. Masters' thesis research. \$900
- **2011. Dorothy B. Banks Scholarship**. Graduate study. \$24,000
- 2011. Belknap Prize. Outstanding achievement in geology. \$1,000
- 2011. Bensinger Prize. Research in St. Petersburg, Russia and Austin, Texas. \$3,000
- 2010. Yale College Dean's Research Fellowship. Senior thesis research in North Dakota. \$2,490
- **2010. Robert C. Bates Fellowship**. Research in St. Petersburg, Russia. \$3,506
- 2008. Leitner Project Award. Research in St. Petersburg, Russia. \$6,626

HISTORICAL APPOINTMENTS

August 2013-present Ph.D student, University of Florida, Department of Biology

Advanced to candidacy September 2015.

June 2018-July 2018. Research Assistant, NSF DBI-1701714 & NSF DBI-1756306

January 2017-June 2018. UF Graduate Student Fellow.

August 2016-December 2016. Teaching Assistant, PCB4674: Evolution (online).

August 2013-August 2016. NSF Graduate Research Fellow.

August 2018-December 2018. Teaching Assistant, PCB4674: Evolution (online).

January 2018-May 2018. Teaching Assistant, BIO2010L: Integrated Principles of Biology Lab

September 2011-May 2013 Master's Student, The University of Texas at Austin, Jackson School of Geosciences

January 2013-May 2013. Teaching Assistant, GEO 302M: The Age of Mammals

^{*}co-first authors

^{**}mentored student

September 2012-December 2012. Teaching Assistant, UGS 303: Geology in the Movies. **September 2011-August 2012.** Research Fellow under the Dorothy B. Banks Scholarship

September 2007-May 2011. Undergraduate Collections Assistant, Yale Peabody Museum.

BROADER IMPACTS

Mentor, independent undergraduate research

Natalí Valdes, October 2013-December 2014, independent research then senior thesis research. Thesis received Highest Honors from Department of Anthropology

Kierstin Rosenbach, December 2014-present, independent research. Recipient of 2015 Biology Graduate Student Association Grant in Aid of Research; Research presented at professional meeting (see abstract #12)

Karlena Cahill, January 2015-January 2016, independent research.

Sabrina Han, April 2016-2017, independent research

Kimberly Placencia, August 2016-February 2018, independent research. Research presented at departmental undergraduate research symposium (2017).

Michael Christie August 2017-May 2018, independent research

Haley Busenbarrick August 2017-May 2018, independent research, co-advised with Paul Morse

Creator and co-teacher, Super-Sized Life, January 2015-December 2019: a project to use 3D prints of biological objects to teach math to K-12 students. IRB ID# IRB201600806

Exhibit committee co-chair, Vertebrate Paleontology Temporary Exhibit. Fall 2016-Fall 2017. Co-lead committee to design, budget, and execute interactive week-long exhibit celebrating the vertebrate paleontology collections for the Florida Museum of Natural History 100th Anniversary celebration.

Exhibit co-designer, Student Research Exhibits. Fall 2015. Design and execute a window exhibit to highlight vertebrate paleontology student research at the Florida Museum of Natural History. Posters from the exhibit won both annual prizes for best student poster. Judging based partly on quality of supporting material designed for exhibit.

Content Developer for "Fossil Roulette" smartphone application & tumblr, May 2012-September 2018: Write 52+ short articles about remarkable specimens in the non-vertebrate paleontology collections, and create graphics to accompany articles. Volunteer work is associated with NSF DBI-1057396. Content also released on fossilroulette.tumblr.com starting February 2014.

Outreach Volunteer, Florida Museum of Natural History, September 2013-May 2019.

Special Programs Volunteer, North Carolina State Museum of Natural Sciences, 2003-2007.

Outreach Volunteer, Non-Vertebrate Paleontology, Texas Natural Sciences Center, September 2011-May 2013

Explore UT Volunteer, The University of Texas at Austin. March 2012, 2013.

Paleo-Knowledge Bowl Volunteer, Yale Peabody Museum, November 2009.

PROFESSIONAL SERVICE & EXPERIENCE

Committee Membership

Ph.D. Admissions Committee, Department of Ecology & Evolution Stony Brook University 2019-present.

Darwin Day Committee, Department of Ecology & Evolution Stony Brook University 2019-present.

Annual Awards Committee, Department of Ecology & Evolution Stony Brook University 2019-present.

Museum Seminar Committee, student representative, Florida Museum of Natural History, 2015-2016; 2018-2019.

Student & Post-Doctoral Liaison Committee, member, Society of Vertebrate Paleontology, 2015-2019.

Library committee, student representative, University of Florida, 2016 – 2017.

Faculty search committee, for shark biologist at the University of Florida. 2016.

Graduate Student Council, biology representative, University of Florida, 2015-2016.

Undergraduate Teaching Committee, Florida Museum of Natural History, 2015-2016.

Faculty search committee, for invertebrate paleontologist at UT Austin. 2013.

Reviewer for:

Alabama Bulletin of Natural History, 2012

Bulletin of the New Mexico Museum of Natural History, 2018

Bulletin of the Yale Peabody Museum of Natural History, 2015

Cretaceous Research, 2015, 2019

Herpetological Review, 2018

Integrative and Comparative Biology, 2019

Integrative Organismal Biology, 2019

Journal of Paleontology, 2010

Journal of Vertebrate Paleontology, 2011, 2012, 2013, 2016

Palaeontologia Electronica, 2019

PeerJ, 2015, 2016, 2018

Russian Journal of Herpetology, 2011

Scientific Reports, 2017, 2019.

Software: Morphosource Batch Conversion (https://github.com/nsvitek/CT_tools/tree/master/morphosource_batch_convert)

Fossil Preparation Volunteer,

Florida Museum of Natural History, January 2014 – March 2014.

North Carolina State Museum of Natural Sciences, April 2006-June 2011.

Training

Reproducible research short course, iDigBio, 1-2 June 2015

Geometric morphometrics workshop, University of California, Berkeley, 16-20 July 2012

Signature Course Teaching, for first-year interdisciplinary instruction. The University of Texas at Austin Fall 2012.

Volunteer,

Session Moderator, Society of Vertebrate Paleontology, 2016

10th North American Paleontological Convention, 15-18 February, 2014.

Geological Society of America South-Central Section – 47th Annual Meeting, 4-5 April, 2013.

INVITED LECTURES & PRESENTATIONS

2015. 15 June iDigBio, 3D Digitization of Fossils for Educators & Citizen Scientists Workshop: "Base-ten conversion." Copresented with Chris Baker. Can be viewed at

https://www.idigbio.org/wiki/index.php/Digitization_Technology_for_Educators_and_Citizen_Scientists_Workshop

2015. Orlando Science Center: "What About Fossils Too Small to See?"

2013. Paleontological Society of Austin: "The Eastern Box Turtle in Time and Space."

2013. The University of Texas at Austin, Jackson School of Geosciences Vertebrate Paleontology Research Group: "The Space-Time Turtle Continuum."

2011. The University of Texas at Austin, Jackson School of Geosciences Vertebrate Paleontology Research Group: "The Long and Winding Road to Turtle Zen."

OTHER PRESENTATIONS

Vitek, N.S. and R.W. Burroughs. 2013. The impacts of intraspecific variation on phylogenetic resolution in *Terrapene*. 2013 Box Turtle Conservation Workshop, 22-23 March 2013, Asheboro, NC.

Vitek, N.S. 2013. Patterns of morphological variation in the shell of the Eastern Box Turtle (*Terrapene carolina*). 2013 Box Turtle Conservation Workshop, 22-23 March 2013, Asheboro, NC.

Vitek, N.S. 2013. Spatiotemporal variation in the Eastern Box Turtle (*Terrapene carolina*). Jackson School Research Symposium, 2 February 2013, Austin, TX.

OTHER PUBLICATIONS

Vitek, N.S. In Revision. *Podomys floridanus*. Vertebrate Fossil Species of Florida. To be published at https://www.flmnh.ufl.edu/florida-vertebrate-fossils/species/

Vitek, N.S. In Revision. *Apalone ferox*. Vertebrate Fossil Species of Florida. To be published at https://www.flmnh.ufl.edu/florida-vertebrate-fossils/species/

Block, J.I., Morse, P.E., Vitek, N.S. 2018. Paleontological Resource Use Permit PA10-WY-185. Annual Report 2017. Bureau of Land Management, United States Department of the Interior.

Vitek, N.S. 2013. The Eastern Box Turtle (*Terrapene carolina*) in space and time. M.S. Thesis. The University of Texas at Austin.

Vitek, N.S. 2012. The Systematics of Strange Turtles. Guest post on the Palaeontologia Electronica blog. Posted March 25, 2012. http://www.palaeo-electronica.org/blog/?p=694

FIELD WORK

2015-2019 Florida, Miocene & Pleistocene, various sites with the Florida Museum of Natural History 2013-2019 Wyoming, Paleocene-Eocene, Fort Union and Willwood Fms. with the University of Florida 2013, Texas, Pleistocene, Phillips Cave, with the University of Texas at Austin 2010, 2011. Montana/North Dakota, Hell Creek Fm., with the Marmarth Research Foundation/Yale University 2010, 2011. North Carolina, Pekin Fm., with the North Carolina State Museum of Natural Sciences 2007. Montana, Hell Creek Fm., with the North Carolina State Museum of Natural Sciences

PROFESSIONAL AFFILIATIONS

Geological Society of America Paleontological Society Society of Integrative and Comparative Biology Society of Vertebrate Paleontology