

June 2020

**Research Interests:** evolutionary history of the Arctic, paleogenomics.

#### Where I stand

I stand with the #BlackLivesMatter movement. No lives matter until Black lives matter.  
I stand in solidarity with the UC [COLA campaign](#). My rent burden is 51% ([what is it?](#)).  
I do not tolerate discrimination based of sexual orientation, gender identity and national or ethnic origin.

#### Research Positions

2015 – 2020: **Paleogenomics Lab. Graduate Researcher**, U California, Santa Cruz.  
2012 – 2015: **Karyosystematics lab. Research Assistant**. Zoological Institute of Russian Academy of Sciences.  
2008 – 2012: **Lukhtanov lab**. Zoological Institute of Russian Academy of Sciences, St-Petersburg State University.

#### Education

2015 - 2020: **PhD in Ecology and Evolutionary Biology**, U California Santa Cruz. Adviser: Beth Shapiro.  
Thesis: "Evolutionary history of Early-Middle and Late Pleistocene equids, revealed by analysis of their paleogenomes".  
2010 – 2012: **MSc in Biology**, St. Petersburg State University, Russia. Department of Entomology.  
2006 – 2010: **BSc in Biology**, St. Petersburg State University, Russia. Department of Entomology.

#### Publications in Peer-Reviewed Journals

Total published: 9, including 7 as the first author.

**Vershinina A. O.**, J.D. Kapp, G.F. Baryshnikov, B. Shapiro (2019) The case of an arctic wild ass highlights the utility of ancient DNA for validating problematic identifications in museum collections. *Molecular Ecology Resources*. 2020;00:1–9.

[link](#) [Apologies for the typo in the main text: *Equus hydruntinus* species name.]

**Vershinina A. O.**, Kapp J.D., Soares A. E. R., Heintzman P. D., Lowson C., Cassatt-Johnstone M., Shidlovskiy F. K., Kirillova I.V., Shapiro B. (2019) Ancient DNA analysis of a Holocene bison from the Rauchua River, North Western Chukotka, and the existence of a deeply divergent mitochondrial clade. *Russian Zoological Journal*. 98(10):1091-1099. [link](#)

Kalbfleisch, T. S., E. Rice, M. S. DePriest, B. P. Walenz, M. S. Hestand, J. R. Vermeesch, B. L. O'Connell, I. T. Fiddes, **A. O. Vershinina**, J. L. Petersen, C. J. Finno, R. R. Bellone, M. E. McCue, S. A. Brooks, E. Bailey, L. Orlando, R. E. Green, D. C. Miller, D. F. Antczak, and J. N. MacLeod. (2018) Improved reference genome for the domestic horse increases assembly contiguity and composition. *Communications Biology*. 1:197. [link](#)

Maschenko E.N., Potapova O.R., **Vershinina A. O.**, Shapiro B., Streletskaia I. D., Vasiliev A. A., Oblogov G. E., Kharlamova A. S., van der Plicht J., Tikhonov A. N., Serdyuk N. V., Tarasenko K. K. (2017) The Zhenya Mammoth (*Mammuthus primigenius* (Blum.)): taphonomy, geology, age, morphology and ancient DNA of a 48,000 year old frozen mummy from Western Taymyr, Russia. *Quaternary International*, 445: 104-134. [link](#)

**Vershinina A. O.**, Lukhtanov V. A. (2017) Evolutionary Mechanisms of Runaway Chromosome Number Change in *Agrodiaetus* Butterflies. *Scientific Reports* 7 (1): 8199. [link](#)  
Media coverage: <http://translate.google.com/translate?js=n&sl=auto&tl=en&u=https://ria.ru/20170815/1500189391.html>

**Vershinina, A. O.** and Kuznetsova, V. G. (2016) Parthenogenesis in Hexapoda: Entognatha and non-holometabolous insects. *Journal of Zoological Systematics and Evolutionary Research*, 54: 257–268. [link](#)

**Vershinina A.O.**, Anokhin B.A., Lukhtanov V.A. (2015) Ribosomal DNA clusters and telomeric (TTAGG)<sub>n</sub> repeats in blue butterflies (Lepidoptera, Lycaenidae) with low and high chromosome numbers. *Comparative Cytogenetics* 9(2):161-171. [link](#)

**Vershinina A.O.**, Lukhtanov V.A. 2013. Dynamics of chromosome number evolution in the *Agrodiaetus phyllis* species complex (Insecta: Lepidoptera). *Cell and Tissue Biology* 7 (4): 379-381. [link](#)

**Vershinina A.O.**, Lukhtanov V.A. 2010. Geographical distribution of the cryptic species *Agrodiaetus alcestis alcestis*, *A. alcestis karacetinae* and *A. demavendi* (Lepidoptera: Lycaenidae) revealed by cytogenetic analysis. *Comparative Cytogenetics* 4: 1-11. [link](#)

### Continuing education

2020 (June): "The Pathology of Perfectionism: How to Tame the Inner Critic" (6h online training approved by the American Psychological Association).

2018 (December): Edward Tufte's one-day course "Presenting Data and Information".

2013 – 2014: Bioinformatics Institute in St. Petersburg, Russia. Student program "Bioinformatics".

2012 (December): The V-th International school on molecular genetics for young scientists "Variability of the genome", Zvenigorod, Russia.

2008 (summer): Dennis Lavrov's Molecular Phylogenetics course (St. Petersburg).

### Teaching experience

Spring 2019: **Teaching Assistant for Dr. Beth Shapiro** "Biodiversity in the Age of Humans", UCSC.

Summer 2018: **Teaching Assistant for Dr. Beth Shapiro** "Arctic Ecology and Environmental Change", UCSC. (Taking undergraduate students on a [field trip across the Arctic \(link\)](#)).

March 2013, 2014: **Teaching Assistant for Dr. Fedor Konstantinov** "Introduction to Phylogenetics", St. Petersburg State University, Russia.

2011-2012: **Teaching Assistant**, Practice on Field Entomology, St. Petersburg State University, Russia.

2009: **Teaching Assistant**, Young Entomologists Club, St. Petersburg, Russia. Teaching entomology to kids.

2009-2014: **Private Tutor**. Teaching biology to high school students.

### Talks and posters

2020 June: Beringia Centre (**invited outreach speaker**).

2019 June: North American Paleontological Convention, Riverside CA, USA (**invited speaker**).

2019 January: Neotoma Paleoecological Database All-Hands Workshop, Minneapolis MN, USA (**invited speaker**).

2017 November: Entomology 2017, Entomological Society of America's 65 th Annual Meeting, Denver CO, USA (**invited speaker**).

2017 July: The Society for Molecular Biology & Evolution Annual Meeting 2017, Austin TX, USA (**first-author poster presentation**).

2014 November: Modern Phylogenetic Comparative Methods and their Application in Evolutionary Biology, Seville, Spain. (**first-author poster presentation**).

2014 August: 7th International Conference on the Biology of Butterflies, Turku, Finland (**first-author poster presentation**).

2014 March: Current issues in evolutionary biology, Moscow, Russia (**talk**).

2012 December: The V-th International school on molecular genetics for young scientists "Variability of the genome", Zvenigorod, Russia (**first-author poster presentation, awarded for "The best poster"**).

2012 September: Chromosome 2012, Novosibirsk, Russia (**talk**).

2012 August: XIV Congress of Russian Entomological Society, St.Petersburg, Russia. (**talk**).

2010 August: Karyosystematics of the Invertebrates "Karyo V", Novosibirsk, Russia (**talk**).

### Awards and grants

2019: UCSC Chancellor's Dissertation-Year fellowship (salary and tuition covered for one quarter).

2014 – 2015: Russian Foundation for Basic Research “Young scientists” grant №14-04-31726 (\$12,000).  
2011: “Inessa’s Fund” Russian Charitable Foundation, student award.

### **Service and outreach**

**Reviewer for:** Zoological Journal of the Linnean Society, BMC Biology, Proceedings B.  
2018-2020: **mentoring** six graduate students at UCSC EEB graduate student mentorship program.  
2015-present: **translating** written and verbal academic communications and documents between English and Russian.  
2019 (Winter): Lakeview Middle School in Watsonville, CA. Classroom visits.  
2017 (Spring): Lakeview Middle School in Watsonville, CA. Strawberry DNA extraction.  
2017, 2018, 2019 (Fall): STEM poster presentation for the Workshops for Engineering and Science Transfers at UCSC.  
2018-2019: supervising two undergraduate students at UC Santa Cruz:  
undergraduate thesis with Christian Lowson (\$800 support from the UCSC Kenneth S. Norris Center). Individual bioinformatics project with Christopher Garrison.

### **Dry and wet lab skills**

R, python, bash, markdown, ipython notebooks, git <https://github.com/avershinina>  
Inkscape, GIMP.  
Working in sterile facilities, bone powdering, ancient DNA extraction, next-gen sequencing library preparation, in-solution hybridization capture. TapeStation, qPCR.  
Chromosome preparation and staining, fluorescent microscopy.

### **Research Expeditions**

2014: Field trip to Israel (10 days).  
2009: Field trip to Voronezh Region, Russia (2 weeks). Volunteering and helping kids to catch and observe insects.

### **Professional societies memberships**

Russian Entomological Society (2012-2015).  
The Society of Vertebrate Paleontology (2016).  
The Society for Molecular Biology and Evolution (2017).  
Data Visualization Society (2019-present).