Alisa O. Vershinina • Curriculum Vitae
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Research Interests

evolutionary history of the Arctic

Current Position

2015 - present: PhD Student, UCSC, Department of Ecology and Evolutionary Biology.
Project: "Evolution and extinction of horses in Ice Age Beringia".

Research Positions

2012 – 2015: **Karyosystematics lab. Research Assistant.** Zoological Institute of Russian Academy of Sciences.
Tested phylogenetic signal in chromosome evolution of Lepidoptera.

2008 – 2012: **Lukhtanov lab.** Zoological Institute of Russian Academy of Sciences.
Tested hypothesis of fissions and fusions in butterfly chromosome evolution.
Reconstructed phylogenetic relationships of *Agrodiaetus* subgenus (Lepidoptera, Lycaenidae).

Education

2010 – 2012: **M. Sc. in Biology**, St. Petersburg State University, Russia.
Department of Entomology.

2006 – 2010: **B. Sc. in Biology**, St. Petersburg State University, Russia.
Department of Entomology.

Publications in Peer-Reviewed Journals

Total: 7, including 5 as the first author.

in press: 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) EquCab3, an Updated Reference Genome for the Domestic Horse. *bioRxiv.* *https://doi.org/10.1101/306928*

Maschenko E.N., Potapova O.R., **Vershinina A. O.**, Shapiro B., Streletskaya 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.

Vershinina A. O., Lukhtanov V. A. (2017) “Evolutionary Mechanisms of Runaway Chromosome Number Change in Agrodiaetus Butterflies.” *Scientific Reports* 7 (1): 8199.

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.

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

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.

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.

Additional Courses and Workshops

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. Course of lectures on general and functional genomics in evolutionary biology.

2008 (summer): Dennis Lavrov’s Molecular Phylogenetics course. St. Petersburg State University, Russia.

Teaching experience

Summer 2018: **Teaching Assistant for Dr. Beth Shapiro**
“Arctic Ecology and Environmental Change”,
UCSC, Department of Ecology and Evolutionary Biology.
Taking undergraduate students on a field trip across the Arctic.

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

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

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

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. (*summary 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 of the school").*

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

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

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

Awards and grants

2014 – 2015: Russian Foundation for Basic Research.

Principal investigator. Funding: 12,000$

Project: "Cytogenetic mechanisms and dynamics of chromosome evolution during phylogenesis of butterflies and caddisflies (Insecta: Lepidoptera,Trichoptera)"

2009-2015: **Research Assistant** in five grants from the Russian Foundation for Basic Research and one grant from the Russian Scientific Fund. Principal investigators: Dr. Vladimir A. Lukhtanov, Dr. Valentina G. Kuznetsova.

2011: “Inessa’s Fund” Russian Charitable Foundation, **student award**.

Outreach

Spring 2017: Lakeview Middle School in Watsonville. Strawberry DNA extraction.

Fall 2017, and 2018: UCSC WEST.
STEM poster presentation for the Workshops for Engineering and Science Transfers.

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 in the field.

Wet lab experience

2015-present**: UC Santa Cruz**, Paleogenomics lab.
Working in sterile facility, ancient DNA extraction, next-gen sequencing library preparation.

2008-2015**: Zoological Institute of Russian Academy of Sciences**, Karyosystematics lab. Chromosome preparation and staining, fluorescence microscopy.

2014, June: **Biology Centre of the Academy of Sciences of the Czech Republic**, Institute of Entomology.
Chromosome preparation and staining, fluorescence microscopy.

Professional societies memberships

Russian Entomological Society (from 2012).
The Society of Vertebrate Paleontology (from 2016).
The Society for Molecular Biology and Evolution (from 2017)