

Curriculum Vitae (3 pages)

DMYTRO KRYVOKHYZHA

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Evolutionary Biology Center (EBC), Norbyvägen 18D, 75236 Uppsala, Sweden

EDUCATION:

- 2013 - present PhD student, Dept. of Ecology and Genetics, Evolutionary Biology Center (EBC), Uppsala University, Sweden.
- 2011 - 2013 Erasmus Mundus Master Program in Evolutionary Biology (MEME) [[Link](#)]:
1st semester - Uppsala University, Sweden.
2nd semester - University of Montpellier II, France.
3rd semester - University of Montpellier II (external research project at the Max Planck Institute for Evolutionary Biology, Germany).
4th semester - Uppsala University (external research project at Harvard University, USA).
- 2009 - 2010 M. Sc. in Biology, V. N. Karazin Kharkiv National University, Ukraine.
- 2005 - 2009 B. Sc. in Biology, V. N. Karazin Kharkiv National University, Ukraine.

RESEARCH EXPERIENCE:

Project: **Genome evolution and adaptation in the tetraploid weed *Capsella bursa-pastoris* (Brassicaceae).** (2013-present)

Supervisor - Martin Lascoux, Uppsala University

- Gene expression analyses using RNA-seq data.
- Population genetic analyses of whole-genome sequence data.
- Analyses of phenotypic variation using various linear models.

Project: **Hybridization between closely and distantly related *Heliconius* butterflies: analysis of the whole-genome sequences.** (Mar - Oct 2013 with a break in Jul-Aug).

Supervisor - James Mallet, Harvard University.

- Whole-genome DNA sequences alignment, genotype calling and filtering.
- Whole-genome and sliding window phylogeny.
- Estimation of F_{ST} , Tajima's D , π , d_{xy} , Patterson's D (based on the F_4 -population test).
- Gene ontology characterization.
- Test for positive selection using dN/dS.

Project: **Association of adaptive changes in gene expression with different organs in hybrid sculpins (Teleostei: Cottidae: *Cottus*).** (Sep 2012 - Feb 2013).

Supervisor - Arne Nolte, Max Plank Institute for Evolutionary Biology.

- RNA-Seq and microarray data analyses, gene ontology term enrichment analysis.
- Comparison of different methods of microarray gene expression study.

Project: **Comparative phylogeography of some Indo-Pacific Mugilidae fishes.** (Apr - Jul 2012).

Supervisor – Jean-Dominique Durand and Philippe Borsa, University of Montpellier II.

- DNA extraction, PCR amplification, DNA electrophoresis.
- Sequences editing and alignment.
- Phylogenetic reconstruction and inference of phylogeography.

Project: **The peculiarities of a hybrid complex of spined loaches of the genus *Cobitis* (Teleostei: Cypriniformes: Cobitidae) in Eastern Ukraine: morphological and genetic diversity.** (2008-2010)

Supervisor – Gennadiy A. Shandikov, V. N. Karazin Kharkiv National University.

- Field collection of spined loaches using nets and fish traps.
- Specimen preservation in ethanol and formalin, and maintenance of collection.
- Cytometric analysis of erythrocytes.
- Analysis of morphological characters, allozymes, PCR-RFLP

PUBLICATIONS:

ARTICLES

Kryvokhyzha D, Holm K, Chen J, Cornille A, Glémin S, Wright S, Lagercrantz U, Lascoux M. 2016. The influence of demographic history on variation of gene expression and flowering time in the ubiquitous weed *Capsella bursa-pastoris* (Brassicaceae). *Molecular Ecology*, *Molecular Ecology*, 25(5), pp.1106–1121. [[Link](#)]

Cornille A, Salcedo A, **Kryvokhyzha D**, Glémin S, Holm K, Wright SI, Lascoux M. 2016. Genomic signature of successful colonization of Eurasia by the allopolyploid shepherd's purse (*Capsella bursa-pastoris*). *Molecular Ecology*, 25(2), pp.616–629. [[Link](#)]

Shandikov. GA, **Kryvokhyzha D**, Slipko I. 2009 A first record of the Caucasian dwarf goby, *Knipowitschia caucasica* (Teleostei, Perciformes, Gobiidae), in the Siverskiy Donets River drainage, Ukraine. *Vestnik Zoologii*, 43(4), pp.368. [[Link](#)]

Shandikov. GA. **Kryvokhyzha D**. 2008. To the question about species composition and some peculiarities of biology of spined loaches of the genus *Cobitis* (Teleostei: Cypriniformes: Cobitidae) in the Upper and Middle Siverskiy Donets River, Ukraine. *The Journal of V. N. Karazin Kharkiv National University. Series: Biology*, 8(814), pp.91-118. [In Russian] [[Link](#)]

THESIS

Kryvokhyzha D. 2014. Whole genome resequencing of *Heliconius* butterflies revolutionizes our view of the level of admixture between species. *Biology Education Centre, Uppsala University and Department of Organismic and Evolutionary Biology, Harvard University*. 30 p. [[Link](#)]

CONFERENCE

Kryvokhyzha D, Till Cypionla T, Nolte AW. 2013 Associations of adaptive changes in gene expression with different organs in hybrid sculpins (Pisces, *Cottus*). *SMBE-2013, Chicago, USA*. (poster)

GRANTS AND AWARDS:

- 2013 The Society for Molecular Biology and Evolution (SMBE) Travel Grant Award to attend the SMBE Annual Conference.
- 2013 National Geographic Society's Global Exploration Fund: project "Hidden Biodiversity on the Roof of the World", expedition to the Pamir Mountains (Tajikistan, Afghanistan, and Kyrgyzstan).
- 2011 Erasmus Mundus Scholarship for Master studies.

INTERNSHIPS AND TRAININGS:

- 24-25 Mar 2015 Approximate Bayesian Computation by Daniel Wegmann, Uppsala University, Sweden.
- 30 Jan – 10 Feb 2012 European course of Paleontology, Ecole Normale Supérieure de Lyon, France.
- 16-27 Jan 2012 European course of Comparative Genomics, Ecole Normale Supérieure de Lyon, France.
- 16-27 Aug 2010 Summer school "Sustainable development in the Baltic region 2010", Folkuniversitetet, Gothenburg, Sweden.
- 18 May – 12 Jun 2010 Laboratory of Fish Genetics, Institute of Animal Physiology and Genetics, Academy of Sciences of the Czech Republic, (DNA and karyotype analyses).
- Feb-Mar 2010 Department of Evolutionary Genetic Bases of Systematics, I. I. Schmalhausen Institute of Zoology of NAS of Ukraine, Kiev, Ukraine (allozyme analysis).
- 5–12 Oct 2008 "Methods of reconstruction of phylogeny based on molecular data", Southern Federal University, Rostov-on-Don, Russia.

INTERESTS: interspecific hybridization, polyploidy, speciation, evolutionary genomics, population genetics, evolutionary ecology, phylogenetics, bioinformatics, systematics.

LANGUAGES: English (TOEFL IBt 102 points), Ukrainian (native), Russian (native).