

Alexander Knyshev, Ph.D.

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RESEARCH INTERESTS

Evolutionary biology, zoology, entomology, systematics, phylogenetics, computational biology.

EDUCATION

2006-2010: **Bachelor of Science**. St. Petersburg State University (Faculty of Biology and Soil Sciences, Department of Entomology), St. Petersburg, Russia.

Thesis title: “A new genus and species of plant bug tribe Orthotylini from Central Asia (Heteroptera: Miridae: Orthotylinae)”.

2010-2012: **Master of Science**. St. Petersburg State University (Faculty of Biology and Soil Sciences, Department of Entomology), St. Petersburg, Russia.

Thesis title: “The genera *Platycranus*, *Hyoidea* and *Angulonotus* (Insecta: Heteroptera: Miridae): taxonomy, phylogeny, distribution, and host associations”.

2013-2018: **Ph.D.** University of California, Riverside (Department of Entomology), Riverside, CA, USA.

Dissertation title: “Systematic research on minute litter bugs Dipsocoromorpha with emphasis on Schizopteridae (Hemiptera: Heteroptera)”.

EMPLOYMENT HISTORY

2011: Research Assistant. Biological Scientific Research Institute, St. Petersburg State University, Russia.

2013-2018: Research Assistant. University of California, Riverside (Department of Entomology), Riverside, CA, USA .

Winter 2015: Teaching Assistant. Insect Biodiversity ENTM107. University of California Riverside, USA.

Spring 2016: Teaching Assistant. Insect Evolution ENTM106. University of California Riverside, USA.

Winter 2017: Teaching Assistant. Insect Biodiversity ENTM107. University of California Riverside, USA.

Spring 2018: Teaching Assistant. Insect Evolution ENTM106. University of California Riverside, USA.

2019: Postdoctoral scholar. University of California, Riverside (Department of

Entomology), Riverside, CA, USA .

TEACHING EXPERIENCE

- 2011: Teaching Assistant. Insect Field Biology course. St. Petersburg State University, Russia.
- 2015: Teaching Assistant. Insect Biodiversity ENTM107. University of California Riverside, USA.
- 2016: Teaching Assistant. Insect Evolution ENTM106. University of California Riverside, USA.
- 2017: Teaching Assistant. Insect Biodiversity ENTM107. University of California Riverside, USA.
- 2018: Teaching Assistant. Insect Evolution ENTM106. University of California Riverside, USA.
- 2018-2019: Bioinformatics and phylogenetics workshops for graduate students. University of California Riverside, USA. Materials are available at <https://alexknyshov.github.io/>

MENTORSHIP EXPERIENCE

- 2014: Mariana Romo (undergraduate), University of California Riverside, USA.
- 2016: Hoeun Park (undergraduate), University of California Riverside, USA.
- 2016: Claudia Vo (undergraduate), University of California Riverside, USA.
- 2017: Kyle Whorral (undergraduate), University of California Riverside, USA.
- 2020: Samantha Hoang (undergraduate), University of California Riverside, USA.

COLLECTION MANAGEMENT EXPERIENCE

- 2014: British Natural History Museum, London, United Kingdom. Examination of Dipsocoromorpha material, identification of undetermined material, imaging type specimens, and loaning selected specimens. (1 week)

FELLOWSHIPS, AWARDS AND GRANTS

- 2011: Russian Foundation for Basic Research. Project No 09-04-00968 (Project leader: Fedor V. Konstantinov).
- 2010-2011: Leading scientific schools. Project No 3332.2010.4 (Project leader: Prof. A.A. Stekolnikov).
- 2011: Student award from the charitable foundation “Inessa’s Fund”.
- 2013: Dean’s Distinguished Fellowship Award (UCR)
- 2014: SysEB Travel Grant Award (for museum work in BMNH)
First place award for Student Seminar Day Poster at University of California Riverside
- 2016: Graduate Dean’s Dissertation Research Grant (UCR)
- 2017: Dr. Mir S. Mulla and Leila Mulla Endowed Scholarship (CNAS UCR)

FIELD EXPERIENCE

- 2009: Field expedition to Altai Territory, western Siberia region, Russia. (4 weeks)
 2014: Field expedition to Las Cruces OTS station and Estacion Biologica Monteverde, Costa Rica. (2 weeks)

ORAL PRESENTATIONS

Knyshov A., R. Hoey-Chamberlain, S. Leon, C. Weirauch (2014). Biodiversity, “wing organs”, and sexual dimorphism: systematics of *Chinannus* Wygodzinsky (Hemiptera: Schizopteridae) and the Ogeriinae. Fifth Quadrennial Meeting of the International Heteropterists' Society.

Knyshov A., R. Hoey-Chamberlain, S. Leon, C. Weirauch (2014). A taxonomic revision of the genus *Chinannus* Wygodzinsky (Hemiptera: Schizopteridae) with a phylogenetic analysis of the Ogeriinae. Entomological Society of America Annual Meeting, Portland, Oregon.

Knyshov A. and C. Weirauch (2015). Structural diversity and phylogenetic relationships within Dipsocoromorpha (Hemiptera: Heteroptera). The Hemipteroid Insect Phylogenetics (HIP) Workshop, Urbana-Champaign, Illinois.

Knyshov A. and C. Weirauch (2015). Phylogeny and morphology of Dipsocoromorpha (Hemiptera: Heteroptera). 7th Dresden Meeting on Insect Phylogeny, Dresden, Germany.

Knyshov A., R. Hoey-Chamberlain, C. Weirauch (2016). Blunt labium, acute problem: taxonomic mess in the *Corixidea* genus group (Heteroptera: Schizopteridae). 2016 International Congress of Entomology, Orlando, Florida.

Knyshov A., E. Gordon, C. Weirauch (2017). Sequence capture of archival insect specimens using custom PCR-generated baits. Entomological Society of America Annual Meeting, Denver, Colorado.

POSTER PRESENTATIONS

Knyshov A., R. Hoey-Chamberlain, C. Weirauch (2013). Comparative morphology of the male abdomen in minute litter bugs (Heteroptera: Dipsocoromorpha: Schizopteridae). Entomological Society of America Annual Meeting, Austin, Texas.

Knyshov A., S. Du, R. Hoey-Chamberlain, S. Frankenberg, J. Rodriguez, C. Weirauch (2017). Evolutionary history of minute litter bugs (Hemiptera: Dipsocoromorpha) based on morphological and molecular data. Entomological Society of America Annual Meeting, Denver, Colorado.

PUBLICATIONS (starting with the most recent)

Knyshov, A., Weirauch, C., & Hoey-Chamberlain, R. A taxonomic revision of the genus *Voragocoris* (Hemiptera: Heteroptera: Schizopteridae) with description of seven new species. In preparation.

- Knyshov, A.,** Weirauch, C., & Hoey-Chamberlain, R. Phylogenetic relationships of Dipsocoromorpha (Insecta: Hemiptera: Heteroptera) inferred by molecular and morphological data. In preparation.
- de Almeida, F.R.A., Carvalho-Filho, F.D.S., **Knyshov, A.,** Fernandes, J.A.M. (2020) *Voragocoris weirauchae* sp. n. (Heteroptera: Schizopteridae: Schizopterinae), a further minute litter bug species from Brazil. *Zootaxa* 4729(1): 138-144.
- Knyshov, A.,** Hoey-Chamberlain, R., & Weirauch, C. (2019) Hybrid enrichment of poorly preserved museum specimens refines homology hypotheses in a group of minute litter bugs (Hemiptera: Dipsocoromorpha: Schizopteridae). *Systematic Entomology* 44 (4): 985-995.
- Knyshov, A.,** Gordon, E. R. L., & Weirauch, C. (2019) Cost-efficient high throughput capture of museum arthropod specimen DNA using PCR-generated baits. *Methods in Ecology and Evolution* 10 (6): 841-852.
- Silveira, D.D., Barcellos, A., **Knyshov, A.** (2019) *Hoplonannus australis* sp. nov. (Hemiptera, Schizopteridae): amended diagnosis of the genus and first record from South America. *Zootaxa* 4568(2): 394-400.
- Knyshov, A.,** Hoey-Chamberlain, R., & Weirauch, C. (2018) Comparative morphology of male genitalic structures in the minute litter bugs Dipsocoromorpha (Insecta: Hemiptera: Heteroptera). *Journal of morphology* 279(10): 1–38.
- Frankenberg, S., Hoong, C., **Knyshov, A.,** & Weirauch, C. (2018) Heads up: evolution of exaggerated head length in the minute litter bug genus *Nannocoris* Reuter (Hemiptera: Schizopteridae). *Organisms Diversity & Evolution* 18(2): 211-224.
- Weirauch, C., Hoey-Chamberlain, R., & **Knyshov, A.** (2018) Synopsis of Schizopteridae (Hemiptera, Heteroptera, Dipsocoromorpha) from the United States, with description of seven new species from the US and Mexico. *ZooKeys* 796: 49–82.
- Weirauch, C., Whorral, K., **Knyshov, A.,** & Hoey-Chamberlain, R. (2018) Giant among dwarfs: *Meganannus lewisi*, gen. n. and sp. n., a new genus and species of minute litter bugs from Costa Rica (Hemiptera: Schizopteridae). *Zootaxa* 4370(2): 156-170.
- Weirauch, C., **Knyshov, A.,** & Hoey-Chamberlain, R. (2017) *Machadonannus brailovskyi* n. sp., a new species of Schizopteridae (Hemiptera: Heteroptera) from the Afrotropical Region. *Dugesiana* 24(2): 279-286.
- Knyshov A.,** S. Leon, R. Hoey-Chamberlain, C. Weirauch (2016). Pegs, Pouches and Spines: systematics and comparative morphology of the New World litter bug genus *Chinannus* Wygodzinsky, 1948. *Thomas Say Monographs*, Entomological Society of America, Annapolis, MD, 112 pp.
- Choe, D. H., Park, H., Vo, C., & **Knyshov, A.** (2016). Chemically Mediated Arrestment of the

Bed Bug, *Cimex lectularius*, by Volatiles Associated with Exuviae of Conspecifics. *PloS one*, 11(7), e0159520.

F.V. Konstantinov and **A.A. Knyshov** (2015). The tribe Bryocorini (Insecta: Heteroptera: Miridae: Bryocorinae): phylogeny, description of a new genus and adaptive radiation on ferns. *Zoological Journal of the Linnean Society* 175(3): 441-472.

Knyshov A.A. and F.V. Konstantinov (2013). A taxonomic revision of the genus *Hyoidea* Reuter, 1876 (Heteroptera: Miridae: Orthotylinae). *Acta Entomologica Musei Nationalis Pragae* 53(1): 1-32.

Knyshov A.A. and F.V. Konstantinov (2013). A taxonomic revision of the genus *Platycranus* Fieber, 1870 (Heteroptera: Miridae: Orthotylinae). *Zootaxa* 3637(3): 201-253.

Knyshov A.A. and F.V. Konstantinov (2012). A new genus and species of the tribe Orthotylini (Heteroptera: Miridae: Orthotylinae) from Central Asia. *European Journal of Entomology*, 109(1): 117-128.

Volynkin A.V., L.A. Trilikauskas, R.T. Bagirov, M.V. Burmistrov, A.M. Byvaltsev, S.V. Vasilenko, M.S. Vishnevskaya, Yu.N. Danilov, A.Yu. Dudko, R.Yu. Dudko, **A.A. Knyshov**, O.V. Kosova, D.V. Kostrov, T.M. Krugova, R.O. Kuznetsova, D.V. Kuz'menkin, A.A. Legalov, A.L. Lvovsky, A.A. Namyatova, S.V. Nedoshivina, Yu.E. Perunov, A.V. Reschikov, S.Yu. Sinev, V.V. Solovarov, Z.I. Tyumaseva, I.A. Udalov, P.Ya. Ustyuzhanin, R.V. Filimonov, S.E. Tshernyshev, S.V. Chesnokova, M.V. Shcherbakov, L.V. Yanygina (2012). Invertebrates of the Tigirek State Reserve. In: Biota of Tigirekskiy Natural Reserve. *Proceedings of the Tigirek State Natural Reserve*, 2011(4): 165-226. [in Russian].

Knyshov A.A. and A.A. Namyatova (2010). Addition to Heteroptera fauna of State Tigirekskiy Nature Reserve (Altay Territory). *Vestnik (Herald) of St. Petersburg University*, Series 3, Issue 3: 9-20. [in Russian].