

Sang Il Kim

Curriculum Vitae – May 2020

Museum of Comparative Zoology
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EDUCATION

Harvard University

Ph.D. in Organismic and Evolutionary Biology

Advisor: Professor Brian D. Farrell

Cambridge, MA
Expected May 2021

A.M. in Organismic and Evolutionary Biology

Advisor: Professor Brian D. Farrell

November 2018

A.B. in Organismic and Evolutionary Biology with highest honors

Thesis: Phylogeny, Systematics and Evolution of the Family Lucanidae Latreille (Insecta: Coleoptera)

Advisor: Professor Brian D. Farrell

May 2015

RESEARCH INTERESTS

Phylogeny and evolution of beetles (expertise in Cerambycidae and Lucanidae); biogeography (esp. Beringian, Caribbean, and Gondwanan); adaptive radiation; cryptic species; species delimitation; and adaptation to tropical and temperate climates.

PROFESSIONAL SOCIETIES

Cambridge Entomological Club (2012 - Present)
Coleopterists Society (2009 - Present)
Connecticut Entomological Society (2007 - 2011)
Entomological Society of America (2013 - Present)

Entomological Society of Korea (2009 - Present)
Society for Systematic Biologists (2016 - Present)
Systematics Association (2015 - Present)
Willi Henning Society (2013 - Present)

TEACHING

Teaching Fellow, *BIOS S-158: Biodiversity of the Dominican Republic*, Harvard University (2018)

Teaching Fellow, *OEB10: Foundations of Biological Diversity*, Harvard University (2018)

Teaching Fellow, *OEB275R: Phylogenetics and Phylogeography in the Era of Genomics*, Harvard University (2019)

GRANTS AND FELLOWSHIPS

2015 - Present Graduate Student Fellowship, Harvard University
2019 GSAS Professional Development Fund, Harvard University: Participation in the 2019 Annual Meeting of the Entomological Society of America in St. Louis, MO
2019 Putnam Expedition Grant, Museum of Comparative Zoology: Field expedition to Southeast and East Asia
2018 GSAS Professional Development Fund, Harvard University: Participation in the 2018 Joint Annual Meeting of the Entomological Societies of America, Canada, and British Columbia in Vancouver, Canada
2016 Systematics Research Fund, The Systematics Association: Phylogeny of Prioninae may reveal an 'inordinate apathy' for old beetle lineages
2016 David Rockefeller Center for Latin American Studies Summer Research Travel Grant: Field expedition to Puerto Rico and the Dominican Republic
2010 - 2015 Harvard Faculty Scholarship
2014 James M. O'Neil Memorial Undergraduate Travel and Research Fund Grant: Travel to the Dominican Republic and participation in the Harvard Summer Study Abroad Program, Biodiversity of Hispaniola
2013 MCZ Ernst Mayr Travel Grants: Visit to the Muséum National d'Histoire Naturelle, Paris, for a taxonomic review of the *Dorcus velutinus* species group (Coleoptera: Lucanidae)
2013 MCZ Grants-in-Aid of Undergraduate Research (Fall): Phylogeny of world stag beetles may reveal a Gondwanan origin of Darwin's beetle: Testing Jenneal's hypothesis
2013 Harvard College Research Program (Fall): Phylogeny of world stag beetles may reveal a Gondwanan origin of Darwin's beetle: Testing Jeannel's hypothesis
2013 MCZ Grants-in-Aid of Undergraduate Research (Summer): Unveiling cryptic diversity in the stag beetle populations of the *Dorcus velutinus* species group (Coleoptera: Lucanidae)
2013 Harvard College Research Program (Summer): Unveiling cryptic diversity in the stag beetle populations of the *Dorcus velutinus* species group (Coleoptera: Lucanidae)
2012 MCZ Grants-in-Aid of Undergraduate Research (Fall): Systematic review of the *Dorcus velutinus* species group (Coleoptera: Lucanidae) through an integrative taxonomic approach
2008 - 2010 Paul Mellon '25 Scholarship for researches in science and mathematics, Choate Rosemary Hall

AWARDS AND HONORS

- 2020 Graduate Student Research Enhancement Award - Program Award, The Coleopterists Society: "Target enrichment phylogenomics of longhorned beetle genus *Anoplophora* Hope, 1839 (Cerambycidae: Lamiinae) with emphasis on their adaptation to the temperate zone"
- 2020 Derek Bok Award for Distinction and Excellence in Teaching, Harvard University (OEB275R: Phylogenetics and Phylogeography in the Era of Genomics)
- 2019 The President's Prize - 2nd place, Graduate Student Oral Presentation (SysEB, Taxonomy and Diversity), The Annual Meeting of the Entomological Society of America, St. Louis, MO
- 2019 Derek Bok Award for Distinction and Excellence in Teaching, Harvard University (OEB10: Foundations of Biological Diversity)
- 2016 Graduate Student Research Award, The Society of Systematic Biologists: "Is the Caribbean a cradle for diversification? A case study of diurnal longhorn beetle radiation"
- 2010 Youth Incentive Award, The Coleopterists Society
- 2008 Two Special Awards, Connecticut Science Fair awarded by the Yale Peabody Museum of Natural History and Connecticut College, Department of Biological Sciences
- 2008 Second Honors, Connecticut Science Fair

PUBLICATIONS AND PRESENTED PAPERS

Publications

1. **Kim, S.I.**, B.A.S. de Medeiros, B. Byun, S. Lee, J. Kang, B. Lee, and B.D. Farrell. 2018. West meets East: How do rainforest beetles become circum-Pacific? Evolutionary origin of *Callipogon relictus* and allied species (Cerambycidae: Prioninae) in the New and Old Worlds. *Molecular Phylogenetics and Evolution* 125: 163–176
2. **Kim, S.I.**, and B.D. Farrell. 2015. Phylogeny of world stag beetles (Coleoptera: Lucanidae) reveals a Gondwanan origin of Darwin's stag beetle. *Molecular Phylogenetics and Evolution* 86: 35–48
3. Kim, J.I., and **S.I. Kim**. 2014. *Insect Fauna of Korea: Lucanidae and Passalidae*. Incheon: National Institute of Biological Resources, Ministry of Environment, Republic of Korea (Two volumes, one in Korean and the other in English).
4. **Kim, S.I.**, and J.I. Kim. 2010. Review of family Lucanidae (Insecta: Coleoptera) in Korea with the description of one new species. *Entomological Research* 40(1): 55–81.
5. Chen, Y.J.*, **S.I. Kim***, and X. Wan. *Submitted*. Mitogenomic characteristics of the *Dorcus velutinus* species complex (Coleoptera: Lucanidae) and the first large intergenic spacer with short sequence repeats in stag beetles. (*co-first authors)

Presentations

1. **Kim, S.I.**, and B.D. Farrell. 2019. Target enrichment adds values to history: DNA mining from museum specimens. *Ten-Minute Graduate Student Oral Presentation Competition at the 2019 Annual Meeting of the Entomological Society of America, St. Louis, Missouri, U.S.A.*
2. de Medeiros, B.A.S., **S.I. Kim**, F.L. Silva, Z. Wang. 2019. Target enrichment using PCR-based probes: Applications of a flexible and low-cost sequencing method. *Ten-Minute Paper Oral Presentation at the 2019 Annual Meeting of the Entomological Society of America, St. Louis, Missouri, U.S.A.*
3. de Medeiros, B.A.S., **S.I. Kim**, Z. Wang, F.L. Silva. 2019. Target enrichment using historical specimens and PCR products as probes. *Invited Symposium Oral Presentation at the 2019 Annual Meeting of the Entomological Collections Network, St. Louis, Missouri, U.S.A.*
4. **Kim, S.I.**, and B.D. Farrell. 2016. West meets East: How do tropical beetles disperse across Beringia? Evolutionary origin of *Callipogon relictus* and allied species (Cerambycidae: Prioninae) in the rainforests of the New and Old Worlds. *Invited Symposium Oral Presentation at the XXV International Congress of Entomology, Orlando, Florida, U.S.A.*
5. **Kim, S.I.**, and B.D. Farrell. 2015. Phylogeny and biogeography of the prionine genus *Callipogon* Audinet-Serville (Coleoptera: Cerambycidae) with special emphasis on the origin and conservation of its Palearctic member, *Callipogon relictus* Semenov. *Ten-Minute Paper Oral Presentation at the 2015 Annual Meeting of the Entomological Society of America, Minneapolis, Minnesota, U.S.A.*
6. **Kim, S.I.**, and B.D. Farrell. 2014. First molecular phylogeny of world stag beetles (Coleoptera: Lucanidae) reveals a Gondwanan origin of Darwin's stag beetle: Testing Jeannel's hypothesis. *Ten-Minute Paper Oral Presentation at the 2014 Annual Meeting of the Entomological Society of America, Portland, Oregon, U.S.A.*
7. **Kim, S.I.**, T. Han, T. Kang, J. Jeong, Y. Lee, N.E. Pierce, P.D. Perkins, and H. Park. 2012. Revision of the *Dorcus velutinus* species group (Coleoptera: Lucanidae) through an integrative taxonomic approach. *Oral presentation at the XXIV International Congress of Entomology, Daegu, Republic of Korea.*

RELEVANT SKILLS

Morphological work: Species description and taxonomy (experiences in Lucanidae and Cerambycidae), insect family identification, generating morphological data for cladistics analysis, computer-based programs using likelihood, parsimony and Bayesian inferences, morphometrics, and principal components analysis and canonical discriminant analysis on quantitative characters.

Molecular work: DNA extraction (spin column-based and Phenol-Chloroform extractions; high-yield extraction from dried museum specimens through non-destructive sampling), PCR, DNA sequencing (Sanger and Illumina), bioinformatic pipelines for processing raw Illumina sequence reads; computer-based phylogenetic/phylogenomic programs using

