

Hyuk Je Lee PhD



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Molecular Ecology and Evolution Laboratory (MEEL)
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RESEARCH AREA

- Molecular Ecology
- Evolutionary Genetics/Genomics
- Biodiversity/Phylogeography
- Conservation/Restoration Genetics/Genomics
- eDNA (environmental DNA)-based Biomonitoring
- Evolutionary Ecology
- Evolution of Morphology
- Ecological Genetics/Genomics
- Community Genetics

ACADEMIC EDUCATION

- Sep 2003 - Oct 2008 **Ph.D. in Zoology (Molecular/Evolutionary Ecology)**, Dept. of Integrative Biology, Univ. of Guelph, ON, Canada, supervisor: Dr. Elizabeth G. Boulding
- Mar 1999 - Feb 2001 **M.Sc. in Biological Sciences (Marine Ecology)**, Dept. of Biological Science, Sungkyunkwan Univ., Seoul, South Korea, supervisor: Dr. Jeong Ha Kim
- Mar 1992 - Feb 1999 **B.Sc. in Genetic Engineering**, Dept. of Genetic Engineering, Sungkyunkwan Univ., Seoul, South Korea, supervisor: Drs. Jeong Ha Kim and Suk-chan Lee

PROFESSIONAL RESEARCH AND TEACHING EXPERIENCES

- Oct 2025 - Current **Executive Director for Start-up Innovation**, Sangji University, Korea
- Nov 2024 - Current **Director of Industry-University Cooperation**, Sangji University, Korea
- Jan 2023 - Current **Vice President**, Asian Society for Hydrobiology (ASH)
- Apr 2022 - Current **Review Editor**, Frontiers in Genetics (Evolutionary and Population Genetics section)
- Jan 2022 - Current **Editor-in-Chief (Vice President)** Korean Journal of Environmental Biology (KCI), Korea
- Jan 2015 - Current **Member of Board of Directors**, The Korean Society for Integrative Biology, Korea
- Apr 2013 - Current **Assistant/Associate/ Professor**, Dept. of Biological Science, Sangji University, Korea
- Aug 2018 - Mar 2013 **Postdoctoral Associate Fellow**, Zukunftskolleg, Lab. for Zoology and Evolutionary Biology Dept. of Biology, Univ. of Konstanz, D-78457 Konstanz, Germany

SELECTED PUBLICATIONS LIST

1. Choi H-k, Jang JE, Kim AR, Fu'adil Amin MH, Byeon SY, Wang JH, Lee HG, Kim H-W, Byun H-W, **Lee HJ** (2025, In Review) Fish community assessment using eDNA and conventional methods across river systems, sections, microhabitats, and seasons: Toward improved monitoring strategies in Korea. **Environmental DNA**
2. Byeon SY, Moon K, Choi SK, Choi H-k, Kim S, Kang JH, Park SR, **Lee HJ** (2025) Genetic diversity and seascape population structure in eelgrass (*Zostera marina*) meadows in the northwestern Pacific. **Global Ecology and Conservation** 61: e03688.
3. Choi H-k, **Lee HJ** (2025) Genetic diversity and phylogeographic structure of the endangered Korean Bitterling (*Tanakia signifer*) and its symbiotic mussel (*Nodularia breviconcha*), based on mitochondrial DNA variation: implications for conservation. **Conservation Genetics** 26: 513-528.
4. Choi H-k, **Lee HJ** (2024) Host size matters for reproduction: Evolution of spawning preference and female reproductive phenotypes in mussel-symbiotic freshwater bitterling fishes. **Ecology and Evolution** 14: e11142.
5. **Lee HJ**, Kim YR, Choi H-k, Byeon SY, Hwang SY, An K-G, Bae D-Y (2024) Seasonal variation in longitudinal connectivity for fish community in the Hotancheon from the Geum River, as assessed by environmental DNA metabarcoding. **Journal of Ecology and Environment** 48: 05.

6. Kim YR, Kim HR, Kim JY, Myeong HH, Kang JH, Kim B-J, Lee HJ (2023) Spatio-temporal genetic structure of the striped field mouse (*Apodemus agrarius*) populations inhabiting national parks in South Korea: Implications for conservation and management of protected areas. **Frontiers in Ecology and Evolution** 11:1038058.
7. Jang JE, Kim JK, Yoon S-M, Lee H-G, Lee W-O, Kang JH, Lee HJ (2022) Low genetic diversity, local-scale structure, and distinct genetic integrity of Korean chum salmon (*Oncorhynchus keta*) at the species range margin suggest a priority for conservation efforts. **Evolutionary Applications** 15: 2142-2157.
8. Choi H-k, Jang JE, Byeon SY, Kim YR, Maschette D, Chung S, Choi S-G, Kim H-W, Lee HJ (2021) Genetic diversity and population structure of the Antarctic toothfish *Dissostichus mawsoni*, using mitochondrial and microsatellite DNA markers. **Frontiers in Marine Science** 8: 666417.
9. Jang JE, Byeon SY, Kim HR, Kim JY, Myeong HH, Lee HJ (2021) Genetic evidence for sex-biased dispersal and cryptic diversity in the greater horseshoe bat, *Rhinolophus ferrumequinum*. **Biodiversity and Conservation** 30: 847-864.
10. Kang JH, Jang JE, Kim JH, Kim S, Keshavmurthy S, Agostini S, Reimer JD, Chen CA, Choi K-S, Park SR, Lee HJ (2020) The origin of the subtropical coral *Alveopora japonica* (Scleractinia: Acroporidae) in high-latitude environments. **Frontiers in Ecology and Evolution** 8:12.