

Unit Name

Macroevolution Unit

Collaborations

Daniel Goldman, Georgia Tech, USA, Using Robotics to Model Extinct Fishes
Daniel Rokhsar, OIST, Japan, The origin of a phenotypic mutant in an otherwise static lineage
Arjan Mann, Field Museum of Natural History, USA, The Hydrodynamics of Iniopterygian Sharks
Ray Sallan, OIST, Japan, Tooth replacement in fishes
Jaime Villafana, Universidad Austral de Chile, Chile, The Record of Neogene Fishes in Japan
Marco Rosti, OIST, Japan, The Hydrodynamics of Early Fishes
Alan Pradel, Museum National d'Histoire Naturelle, France, The functional morphology of Sacabambaspis
Stephen McCormick, University of Massachusetts, USA, The evolution of salinity tolerance in fishes
Andrew Whitehead, UC Davis Bodega Marine Station, USA, The evolution of salinity tolerance in fishes
Mark Meekan, KAUST, Saudi Arabia, The Evolution of Giant Filter Feeders
Michael Alfaro, UCLA, USA, The evolution of coloration in fishes
Ulf Dieckmann, OIST, Japan, Modeling Macroevolutionary Phenomena
Daniel Pauly, University of British Columbia, Canada, Growth Patterns in Extinct Fishes
Lily Hughes, North Carolina Museum of Natural Sciences, USA, Connectivity in Okinawa Fish Populations
Matt Pennell, University of Southern California, USA, Models of Evolutionary Development
Hiroshi Ito, SOKENDAI, Japan, Ecologically-driven evolutionary stasis
Ivan Sansom, University of Birmingham, UK, Form and function in early vertebrates

Research Personnel

Tai Kubo, Staff Scientist, Lecturer, Waseda University
Harutaka Hata, Staff Scientist
Daohan Jiang, Postdoctoral Scholar
Chloe Nash, Postdoctoral Scholar
Samuel Coatham, Postdoctoral Scholar
Nanako Okabe, PhD Student
Ananth Srinivas, PhD Student
Hana Yuki, Research Intern
Chihiro Kushida, Research Intern
Genki Togawa, Research Intern
Maria Lucia Reyes Suarez, Research Intern

Makenna Annalyn King, Research Intern
Leighna Amelie Sugimoto, Research Intern
Wahei Hagiwara, Research Intern
Towa Sebastian Ota, Research Intern
Rikako Ozaki, Research Intern
Mia Patricia Balis, Research Intern
Daichi Oyama, Research Intern
Marcus Tabors Bartholomew, Research Intern
Solene Bourdas, Research Intern
Yuxin Liu, Research Intern
Sophia Rose Pierucci, Research Intern
Rosamari Orduna, Visiting Research Student

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Harper, M.; Rytwinski, T.; Creed, I.; Helmuth, B.; Smol, J.; Bennett, J.; Hanna, D.; Saravia, L.; Rocha, J.; Carrier-Belleau, C.; Foulk, A.; Riva, A.; Robichaud, C.; Sallan, L.; Sahdra, A.; Cooke, S.
A Multi-Realm Perspective on Applying Potential Tipping Points to Environmental Decision-Making. *Environmental Reviews* 2024, 32.
2. Wibisana, J.; Sallan, R.; Ota, T.; Puchenkov, P.; Kubo, T.; Sallan, L.
Modifiable Clinical Dental Impression Methods to Obtain Whole-Mouth and Detailed Dental Traits From Vertebrates. *Journal of Morphology* 2025, 286.

Poster Presentation at Conference

1. Kopcak, D.; Chang, J.; Nash, C.; Santos, I. T.; Alfaro, Mi. E.; Sallan, L.
Diversity Imbalance Is Pervasive across Vertebrate Trees. 3rd Joint Cnogress on Evolutionary Biology 2024.
2. Nash, C.; Sallan, L. C.; Ozaki, R.
Reef Fish Diversity across the Ryukyu Islands. 3rd Joint Cnogress on Evolutionary Biology 2024.
3. Nash, C.; Sallan, L. C.
The Other Blue Zone: Trait Diversity and Biogeography of Coral Reef Fishes across the Ryukyu Islands. The 9th Okinawa Marine Science Workshop Program 2024.

Presentation at Conference

1. Fisher, S.; Trindade Santos, I.; Edde, D.; Sallan, L. C.
Are Elasmobranch Traits a Predictor of Extinction Risk. Joint Meeting of Ichthyologists and Herpetologists 2024.
2. Nash, C.; Yuki, H.; Bartholomew, M.; Yap, N.; Sallan, L. C.
The Other Blue Zone: Trait Diversity and Biogeography of Coral Reef Fishes across the Ryukyu Islands. Society for Integrative and Comparative Biology 2025.
3. Coatham, S.; Rosti, M. E.; Pradel, A.; Sansom, I.; Sallan, L. C.
Swimming in Early Vertebrates: Exploring the Hydrodynamics of Sacabambaspis. Society for Integrative and Comparative Biology 2025.
4. Coatham, S.; Sallan, L. C.

Ancient Ecology: Inferring Biology from Fossils. The Joint Meeting of the Annual Meeting of the Society of Population Ecology and Taiwan-Japan Ecology Workshop 2024 2024.

5. Sallan, L. C.
Macroevolution Unit: Fish Biodiversity Activities. FishBase Consortium Quarterly Meeting 2025.
6. Sallan, L. C.
Mapping Out the Biodiversity of Fishes from the Earliest Fossils to Modern Day Okinawa. Fishbase Symposium 2024 2024.
7. Coatham, S.; Rosti, M. E.; Pradel, A.; Sansom, I.; Sallan, L. C.
Swimming in Ancient Fish: Exploring the Hydrodynamics of Sacabambaspis. The 9th Okinawa Marine Science Workshop Program 2024.
8. Hata, H.; Lavoue, S.; Sallan, L. C.
Assessment of the Taxonomic Status of Nominal Species of the Indo-Pacific Pellona (Teleostei: Clupeiformes: Pristigasteridae). 9th Okinawa Marine Science Workshop 2024.
9. Villafana, J.; Sallan, L. C.; Miyata, S.; Shimada, K.; Rivadeniera, M.
Diversification Patterns of Neogene Fishes (Chondrichthyes, Teleostei) from Japan. 3rd Chilean Paleontological Congress 2024.

Scholarly Contributions (by Unit Members)

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Harutaka Hata	Book Chapter	Albulidae, Bramidae, etc.	Deep-sea Fishes of Japan	Yama-Kei Publishers	
Daohan Jiang	Journal Article	Alternative mutational architectures producing identical M-matrices can lead to different patterns of evolutionary divergence	Genome Biology and Evolution	Oxford University Press	2024
Chloe Nash	Journal Article	Bioregionalization identifies phylogenetic and spatial diversity in a globally distributed clade of coral reef fishes	Global Ecology and Biogeography	Wiley	2025
Harutaka Hata	Journal Article	A new species of rainbow sardine in the genus Dussumieria (Teleostei: Clupeiformes: Dussumeriidae) from New Guinea and Australia	Ichthyology & Herpetology	American Society of Ichthyologists and Herpetologists	2025
Harutaka Hata	Journal Article	Assessment of the applicable name for standard Japanese “Gin-iwashi” (Clupeiformes: Dussumeriidae)	Bbulletin of the Biogeographical Society of Japan	Biogeographical Society of Japan	2024
Harutaka Hata	Journal Article	Clupeiformes fish (Actinopterygii: Teleostei) in the reference collection of Phuket Marine Biological Center	Phuket Marine Biological Center Research Bulletin	Phuket Marine Biological Center	2024
Harutaka Hata	Journal Article	Specimens of the family Icosteidae (Actinopterygii: Teleostei) deposited in the Department of	The University Museum, The University of Tokyo Material Reports	The University Museum, The University of Tokyo	2024

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
		Zoology, The University Museum, The University of Tokyo			
Daohan Jiang	Journal Article	Genetic and selective constraints on the optimization of gene product diversity	Molecular Systems Biology	EMBO Press	2024
Harutaka Hata	Journal Article	Redescription and distributional range extension of the poorly known anchovy <i>Stolephorus brachycephalus</i> (Teleostei: Clupeiformes: Engraulidae).	Natural History Bulletin of the Siam Society	The Siam Society	2024
Harutaka Hata	Journal Article	Enhanced data on <i>Stolephorus grandis</i> and <i>Stolephorus waitei</i> (Teleostei: Clupeiformes: Engraulidae), two species endemic to the Sahul Shelf, western Pacific Ocean	Zootaxa	Magnolia Press	2024
Harutaka Hata	Journal Article	Taxonomic status of nominal species of the hair-fin anchovy genus <i>Setipinna</i> previously regarded as synonyms of <i>Setipinna tenuifilis</i> (Valenciennes, 1848) and <i>Setipinna paxtoni</i> Wongratana, 1987 (Teleostei: Clupeiformes: Engraulidae: Coiliinae)	Marine Biodiversity	Senckenberg Society for Nature Research	
Daohan Jiang	Journal Article	A general evolutionary model for the emergence of novel characters from serial homologs	bioRxiv	Cold Spring Harbor Laboratory	2025
Harutaka Hata	Journal Article	" <i>Thrissina mystica</i> sp. nov., a new thryssa (Teleostei: Clupeiformes: Engraulidae: Coiliinae) from the northwestern Indian Ocean "	Ichthyological Research	Ichthyological Society of Japan	2025
Harutaka Hata	Journal Article	First record of <i>Thrissina samam</i> from Phuket, Thailand (Teleostei: Clupeiformes: Engraulidae), with a key to Thai species of <i>Thrissina</i>	Natural History Bulletin of the Siam Society	The Siam Society	2024
Harutaka Hata	Journal Article	Review of the mackerel genus <i>Rastrelliger</i> (Teleostei: Scombridae) with redescription of <i>R. chrysozonus</i> (Rüppell, 1836) and <i>R. kanagurta</i> (Cuvier, 1816)	Diversity	MDPI	2025
Samuel Coatham	Journal Article	Running performance in <i>Australopithecus afarensis</i>	Current Biology	Cell Press	2025
Harutaka Hata	Journal Article	New records of the Saber Anchovy <i>Stolephorus acinaces</i> (Teleostei: Clupeiformes: Engraulidae) from Vietnam	Vietnam Journal of Marine Science and Technology	Publishing House for Science and Technology, Vietnam Academy of Science and Technology	

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Harutaka Hata	Journal Article	List of the specimens of family Mullidae (Actinopterygii: Teleostei) deposited in Phuket Marine Biological Ccenter	Phuket Marine Biological Ccenter Research Bulletin	Phuket Marine Biological Ccenter	
Harutaka Hata	Journal Article	Homoploid Hybrid Speciation in a Marine Pelagic Fish Megalaspis cordyla (Carangidae)	Systematic Biology	Oxford Academic	
Harutaka Hata	Journal Article	Fish types deposited in the Department of Zoology, the University Museum, the University of Tokyo – Part 6: Gobioidae, Scombroidei, Xiphoidei, Channoidei, Pleuronectiformes and Tetraodontiformes	The University Museum, The University of Tokyo Material Reports	The University Museum, The University of Tokyo	2025
Daohan Jiang	Poster Presentation at Conference	Genetic and selective constraints on the optimization of gene product diversity	Annual Meeting of The Society for Molecular Biology and Evolution		2024
Harutaka Hata	Presentation at Conference	Taxonomic study of Clupeiformes (Encouragement Award of the Ichthyological Society of Japan Commemorative Lecture)	2024 annual meeting of the Ichthyological Society of Japan	Ichthyological Society of Japan	2024
Harutaka Hata	Presentation at Conference	Possible cases of hybrid speciation in marine fishes in the western Pacific	2024 annual meeting of the Ichthyological Society of Japan	Ichthyological Society of Japan	2024
Harutaka Hata	Presentation at Conference	Assessment of the taxonomic status of nominal species of the Indo-Pacific Pellona (Teleostei: Clupeiformes: Pristigasteridae)	9th Okinawa Marine Science Workshop	Okinawa Marine Science Workshop	2024
Harutaka Hata	Presentation at Conference	Morphological and ecological difference of Planiliza subviridis complex from Ryukyu Archipelago	2024 annual meeting of the Ichthyological Society of Japan	Ichthyological Society of Japan	2024
Harutaka Hata	Presentation at Conference	Redescriptions of two nominal species of the genus Ilisha (Clupeiformes: Pristigasteridae)	8th Okinawa Fish Seminar	Okinawa Churashima Foundation	2025
Harutaka Hata	Presentation at Conference	Taxonomic review of nominal species previously regarded as synonyms of Pellona ditchella Valenciennes, 1847 (Teleostei: Clupeiformes: Pristigasteridae)	2024 annual meeting of the Ichthyological Society of Japan	Ichthyological Society of Japan	2024
Daohan Jiang	Seminars	Genetic and selective constraints on the optimization of gene product diversity	Light of Evolution Cloud Forum, Genetics Society of China		2024
Harutaka Hata	Seminars	Current situation of researches on Clupeiform fishes	Specieal lecture in National Kaohsiung University of Science and Technology	National Kaohsiung University of Science and Technology (Nanzi Campus)	2025

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Harutaka Hata	Seminars	Current research of Clupeiformes	Special lecture in National Museum of Marine Biology and Aquarium Technology	National Kaohsiung University of Science and Technology (Nanzi Campus)	2025
Harutaka Hata	Seminars	Current situation of researches on Clupeiform fishes	Specieal lecture in National Kaohsiung University of Science and Technology	National Kaohsiung University of Science and Technology (Nanzi Campus)	2025
Harutaka Hata	Seminars	Role of specimens and museums	Specieal lecture in National Kaohsiung University of Science and Technology	National Kaohsiung University of Science and Technology (First Campus)	2025
Daohan Jiang	Seminars	Alternative mutational architectures producing identical M-matrices can lead to different patterns of evolutionary divergence	Evolution Seminar, OIST		2024

Honors, Awards & Fellowships (only by unit members)

2025-01-16	Harutaka Hata, Editor's Choice, Editor's Choice, 2025, MDPI, The paper "Hata, H. and Motomura, H. 2023. Description of Stolephorus horizon n. sp. from Fiji and Tonga, and redescription of Stolephorus scitulus (Fowler, 1911) (Teleostei: Clupeiformes: Engraulidae). Taxonomy, 3: 356–380. " was selected as the Editors Choice of the journal
2024-09-07	Harutaka Hata, Encouragement Prize, 日本魚類学会奨励賞, 2024, The Ichthyological Society of Japan, Taxonomic studies of Clupeiformes

External Service

2024 - Ongoing	Invited Observer, FishBase Consortium, Observer for 2 years prior to joining as a member
2024 - Ongoing	Associate Editor, Royal Society Publishing, Proceedings of the Royal Society B, Proceedings of the Royal Society B
2024	Peer Reviewer, Nature

Other Institutional Service

2024	Lab Tour, Seishin-Gakuin High School Students, (University)
2024	Lab Tour, OIST Science Challenge, (University)
2024	Lab Tour, Admissions Workshop, (University)
2024	Lab Tour for Social Business Platform, (University)

Outreach Activities (For Unit Members Only)

2025-04-14	Nicole Yap, Career Talk , SEED Programme
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2025-03-13	Nicole Yap, Feedback for high school students' poster presentations, Tsuyama High School
2025-02-13	Nicole Yap, Feedback for high school students' poster presentations, Nanao High School
2024-11-24	Nanako Okabe, University of Kitakyushu and Kyushu Institute of Technology on this coming Friday
2024-10-09	Nanako Okabe, Student visit& Poster session: Yokohama City Yokohama Science Frontier High School (Kanagawa Prefectura)
2024-08-20	Nanako Okabe, RED program: Musashi High School and Junior High School (Tokyo Metropolis)
2024	Rikako Ozaki, Onna x OIST Childrens School of Science, OIST