

Sun Wook Kim, PhD

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Appointments

- 2019-Present** Postdoctoral Research Fellow, Australian Research Council Centre of Excellence for Coral Reef Studies, School of Biological Sciences, The University of Queensland (Supervisor: John Pandolfi)
- 2010-2015** Research Scientist, Korea Institute of Ocean Science and Technology (Supervisor: Heung-sik Park)
Collections Manager, Korea South Pacific Ocean Research Center (Supervisor: Heung-sik Park)
- 2007-2010** Research Assistant II, Marine Laboratory, University of Guam (Supervisor: Alexander Kerr)
- 2008** Visiting Research Fellow, Florida Museum of Natural History, University of Florida (Supervisor: Gustav Paulay)

Education

- Ph.D.** The University of Queensland, School of Biological Sciences, 2015-2019.
 - Ecology and evolution of coral range dynamics
Supervisors: John Pandolfi, Cynthia Riginos, Eugenia Sampayo, Maria Beger
- M.Sc.** University of Guam, Department of Biology, 2007-2010.
 - Molecular systematics of the tropical sea cucumbers *Bobadschia* (Holothuriidae: Holothuroidea)
Supervisor: Alexander Kerr
- B.Sc.** Seattle University, College of Science and Engineering, 2002-2007 (with Honours: *cum laude*, President's List, Dean's List).
 - Senior dissertation: Ultrastructural investigation of nonfeeding pilidium larva from *Micrura verrilli* (Heteronemertea: Nemertea)
Supervisor: Megan Schwartz

Publications

Peer-reviewed manuscripts

- Under Review** Shumway, N., Saunders, M.I., Nicol, S., Fuller, R.A., **Kim, S.W.**, Murray, N.J., Watson, J.E.M., Iwamura, T., Ben-Moshe, N., Maron, M. Offshoring offsets: when is flexibility in biodiversity offset location worth the risk? *Conservation Letters*
- 2021** Raja, N.B., Lauchstedt, A., Pandolfi, J.M., **Kim, S.W.**, Budd, A.F., Kiessling, W. Morphological traits of reef corals predict extinction risk but not conservation status. *Global Ecology and Biogeography* 30: 1597-1608. [DOI: 10.1111/geb.13321](https://doi.org/10.1111/geb.13321)
 - Top 10% of journals
 - Top 5% of highest media attention
- Cant, J., Salguero-Gómez, R., **Kim, S.W.**, Sims, C.A., Sommer, B., Brooks, M., Malcolm, H.A., Pandolfi, J.M., Beger, M. The projected degradation of subtropical coral assemblages by recurrent thermal stress. *Journal of Animal Ecology* 90: 233-247. [DOI: 10.1111/1365-2656.13340](https://doi.org/10.1111/1365-2656.13340)

- Top 10% of journals
- Top 25% of highest media attention

- 2019** **Kim, S.W.**, Sampayo, E.M., Sommer, B., Sims, C.A., Gómez-Cabrera, M.C., Dalton, S.J., Beger, M., Malcolm, H.A., Ferrari, R., Fraser, N., Figueira, W.F., Smith, S.D.A., Heron, S.F., Baird, A.H., Byrne, M., Eakin, C.M., Edgar, R., Hughes, T.P., Kyriacou, N., Liu, G., Matis, P.A., Skirving, W.J., Pandolfi, J.M. Refugia under threat: mass bleaching of coral assemblages in high-latitude eastern Australia. *Global Change Biology* 25: 3918-3931. [DOI: 10.1111/gcb.14772](https://doi.org/10.1111/gcb.14772)
- Top 10% of most cited publications worldwide
 - Top 5% of highest media attention
 - Top 10% of journals
- 2018** **Kim, S.W.**, Blomberg, S.P., Pandolfi, J.M. Transcending data gaps: a framework to reduce inferential errors in ecological analyses. *Ecology Letters* 21: 1200-1210. [DOI: 10.1111/ele.13089](https://doi.org/10.1111/ele.13089)
- Top 10% of journals
- 2015** **Kim, S.W.**, Chung, M., Park, H.-S. Tropical fish species thriving in temperate Korean waters. *Marine Biodiversity* 45: 147-148. [DOI: 10.1007/s12526-014-0247-y](https://doi.org/10.1007/s12526-014-0247-y)
- 2014** **Kim, S.W.**, Miller, A.J., Brunson, C., Netchy, K., Clouse, R., Janies, D., Tardy, E., Kerr, A.M. Shallow-water holothuroids (Echinodermata) of Yap, Federated States of Micronesia. *Pacific Science* 68: 397-420. [DOI: 10.2984/68.3.8](https://doi.org/10.2984/68.3.8)
- Shin, H.-J., **Kim, S.W.**, Choi, Y.-U. Morphological and genetic characters of pearl-spot damselfish *Chromis notata* (Teleostei: Pomacentridae) in Korea. *Ocean and Polar Research* 36: 189-197. [DOI: 10.4217/OPR.2014.36.2.189](https://doi.org/10.4217/OPR.2014.36.2.189)
- 2013** **Kim, S.W.**, Kerr, A.M., Paulay, G. Colour, confusion and crossing: resolution of species problems in *Bobadschia* (Echinodermata: Holothuroidea). *Zoological Journal of the Linnean Society* 168: 81-97. [DOI: 10.1111/zoj.12026](https://doi.org/10.1111/zoj.12026)
- Top 10% of journals
- Michonneau, F., Borrero-Perez, G.H., Honey, M., Kamarudin, K.R., Kerr, A.M., **Kim, S.**, Menez, A., Miller, A., Ochoa, J.A., Olavides, R.D., Paulay, G., Samyn, Y., Setyastuti, A., Solis-Marin, F., Starmer, J., VandenSpiegel D. The littoral sea cucumber (Echinodermata: Holothuroidea) fauna of Guam re-assessed – a diversity curve that does not asymptote. *Cashiers de Biologie Marine* 54: 531-540.

Books

- 2021** Park, H.-S., Yoon, K.-T., **Kim, S.W.**, Lee, D.-W., Satoa, M.M., Faaliga, P. [Introduction to Marine fauna and algae on coral reefs: Samoa](#). Korea Institute of Ocean Science and Technology Press, Korea.
- 2018** Kwon, M., Park, H.-S., Baek, S.-K., Kim, J.-W., Lee, J.-H., Ha, J.-H., **Kim, S.W.**, Ahn, C. [The last blue ocean: Pacific island states and their leaders](#). Korea Institute of Ocean Science and Technology Press, Korea.
- 2015** Park, H.-S., Oh, J.H., **Kim, S.W.**, Choi, H.W., Kim, T.H., Kim, T. eds. [Environment of the Chuuk Lagoon](#). Korea Institute of Ocean Science and Technology Press, Korea.
- 2014** **Kim, S.W.**, Choi, Y.-U., Kim, T., Park, H.-S. eds. [Coral reefs of Chuuk, Federated States of Micronesia](#). Korea Institute of Ocean Science and Technology Press, Korea.

Technical reports

- In Press** Park, H.-S., **Kim, S.W.** Status of coral reefs of Korea. Global Coral Reef Monitoring Network (GCRMN) Report.
- 2016** **Kim, S.W.**, Park, H.-S., Choi, G.-S. Status of coral reefs of Korea. [Global Coral Reef](#)

Monitoring Network (GCRMN) Report.

- 2013 Park, H.-S., Park, S.-H., Kang, D.-H., Lee, H.-S., Kwon, S.-J., **Kim, S.W.**, Yoon, G., Kim, T., Lee, J.-Y. Climate change, tropicalization and their impact on Korean marine ecosystem: research overview. Ministry of Land, Transport and Maritime Affairs (Korea) Report BSPM57160-10209-3.
- Kerr, A.M., **Kim, S.W.**, Miller, A.J. The Shallow-water holothuroids of Chuuk, Federated States of Micronesia. [University of Guam Marine Laboratory Technical Report 155](#).
- Kerr, A.M., **Kim, S.W.** Selected descriptions of sea cucumbers in the genus *Bobadschia* (Holothuriidae) by Cherbonnier, Jäeger, Ludwig, Panning, Selenka and Semper. [University of Guam Marine Laboratory Technical Report 145](#).
- 2012 Park, H.-S., Choi, Y.-U., Yoon, G., **Kim, S.W.**, Kim, T., Chung, M. Establishing research infrastructure in the tropical Pacific: a synthesis report: Biology. Ministry of Land, Transport and Maritime Affairs (Korea) Report BSPM 56560-10135-7.
- 2008 Kerr, A.M., **Kim, S.W.**, Michonneau, F. The Shallow-water Echinoderms of Kosrae. [University of Guam Marine Laboratory Technical Report 123](#).

Research Grants

- 2020-2022 Australian Biological Resources Study National Taxonomy Research Grants Program. Joint investigator with Eugenia Sampayo (AUD 300,000)
- 2015-2019 Korea Institute of Ocean Science and Technology Research Grant, Korea Institute of Ocean Science and Technology, and Ministry of Oceans and Fisheries. Co-investigator with John Pandolfi (KRW 61,000,000 - approximately AUD 75,000)
- 2016 Australian Coral Reef Society Award (AUD 2,500)

Scholarships, Travel Grants, and Awards

- 2020 Virginia Chadwick Award for outstanding publication, Australian Research Council Centre of Excellence for Coral Reef Studies (AUD 1,000)
- 2019 Virginia Chadwick Award for outstanding publication, Australian Research Council Centre of Excellence for Coral Reef Studies (AUD 1,000)
- 2015-2018 International Postgraduate Research Scholarship, The University of Queensland
- 2015-2018 University of Queensland Centennial Scholarship, The University of Queensland
- 2016 School of Biological Sciences Conference Travel Award (AUD 1,600)
- 2007-2010 Marine Laboratory Graduate Fellowship, University of Guam
- 2009 Lerner-Gray Grant, American Museum of Natural History (USD 680)
- 2005 Bannan Scholarship, Seattle University (USD 6,000)

Conference Presentations (*: presenter)

- 2021 **Kim, S.W.***, Huang, D., Cantalapedra, J.L., Pandolfi, J.M. Evolutionary considerations can help safeguard the future of coral biodiversity [oral]. 14th International Coral Reef Symposium. Virtual Conference in Bremen, Germany.
- Riginos, C.*, Popovic, I., Thia, J.A., Cooke, I., **Kim, S.W.**, Mumby, P.J., Hock, K., Matias, A.M. Asymmetric dispersal in *Acropora tenuis* on the Great Barrier Reef [oral]. 14th International Coral Reef Symposium. Virtual Conference in Bremen, Germany.
- 2019 **Kim, S.W.**, Sommer, B., Beger, M., Pandolfi, J.M.* To move or to stay: climate-driven changes in environmental suitability are taxon-specific for corals [oral]. 2nd Species on the Move Conference. Skukuza, South Africa.
- Huang, D.*, Afiq-Rosli, L., **Kim, S.W.** Protecting evolutionary potential in the face of climate change [oral]. Gordon Research Conference. Hong Kong.

- 2018** **Kim, S.W.***, Sampayo, E.M., Sims, C.A., Sommer, B., Gómez-Cabrera, M., Dalton, S.J., Beger, M., Malcolm, H., Ferrari, R., Fraser, N., Figueira, W., Smith, S.D.A., Heron, S.F., Baird, A.H., Byrne, M., Eakin, C.M., Edgar, R., Hughes, T.P., Kyriacou, N., Liu, G., Matis, P.A., Skirving, W.J., Pandolfi, J.M. Winners and losers of coral bleaching in subtropical assemblages [oral]. Ecological Society of Australia Annual Conference. Brisbane, QLD. Australia.
- Kim, S.W.***, Sommer, B., Pandolfi, J.M. The role of evolutionary history in the spatial distribution of coral species abundance: an example from coral populations in Australia [oral]. 4th Asia-Pacific Coral Reef Symposium. Cebu, Philippines.
- Cant, J.* , Beger, M., Salguero-Gomez, R., Sims, C., **Kim, S.W.**, Pandolfi, J. Coral community demographics: a predictive framework for the long-term viability of corals at high latitudes [oral]. 4th Asia-Pacific Coral Reef Symposium. Cebu, Philippines.
- Lauchstedt, A.* , Pandolfi, J.M., **Kim, S.W.**, Kiessling, W. Coral traits and their link to extinction risk [oral]. European Geosciences Union General Assembly 2018. Vienna, Austria.
- 2016** **Kim, S.W.***, Blomberg, S., Pandolfi, J.M. Filling the gaps: Imputation of the Coral Trait Database and functional biogeography of scleractinian corals [oral]. 13th International Coral Reef Symposium. Honolulu, HI. U.S.A.
- 2014** **Kim, S.W.***, Park, H.-S. Clash between unique culture and conservation, and reconciliation through science: an effort in Chuuk, FSM [oral]. 3rd Asia-Pacific Coral Reef Symposium. Kenting, Taiwan.
- Kim, S.W.**, Miller, A.K.* , Kerr, A. Holothuroid fauna of Chuuk (Federated States of Micronesia) [poster]. 7th North American Echinoderm Conference. Pensacola, FL. U.S.A.
- 2012** **Kim, S.W.***, Kerr, A.M., Paulay, G. Molecular systematics of the tropical sea cucumbers *Bobadischia* (Holothuriidae: Holothuroidea) [oral]. 12th International Coral Reef Symposium. Cairns, QLD. Australia.
- Borrero-Perez, G.H., Honey, M., Kamarudin, K.R., Kerr, A., **Kim, S.**, Menez, A., Michonneau, F.* , Ochoa, J.A., Olavides, R.D., Paulay, G., Samyn, Y., Setyastuti, A., Solis-Marin, F., Starmer, J., VandenSpiegel, D. The littoral sea cucumber (Echinodermata: Holothuroidea) fauna of Guam re-assessed – a diversity curve that still does not asymptote. 14th International Echinoderm Conference. Brussels, Belgium.
- 2009** Michonneau, F.* , **Kim, S.W.**, Netchy, K., Starmer, J., McPherson, S., Campbell, C.A., Katz, S.G., Kenyon, L., Zill, J., O’Laughlin, M., Kerr, A.M., Paulay, G. Mitochondrial markers reveal many species complexes and non-monophyly in aspidochirotid holothurians. 13th International Echinoderm Conference. University of Tasmania, Tasmania.
- 2008** **Kim, S.W.***, Michonneau, F., Kerr, A.M. Holothurians of Kosrae (Federated States of Micronesia) and Majuro (Republic of the Marshall Islands) [poster]. 5th North American Echinoderm Conference. Melbourne, FL. U.S.A.
- Campbell, C., Honey, M., Kenyon, L., Kerr, A.M., **Kim, S.**, Massin, C., McPherson, S., Mezali, K., Michonneau, F.* , Netchy, K., O’Loughlin, M., Paulay, G., Pawson, D., Rowe, F., Samyn, Y., Smiley, S., Solis-Marin, F., Starmer, J., Thandar, A., Van den Spiegel, D., Werner, T. 2008. The Holothurian PEET project and the Aspidochirotid working group: Integrative taxonomy on a large scale. 5th North American Echinoderm Conference. Melbourn, FL. U.S.A.
- Kim, S.W.***, Kerr, A.M., Paulay, G. Nocturnal Monsters, *Bobadischia*’s Cryptic Diversity (Holothuriidae: Holothuroidea) [poster]. 11th International Coral Reef Symposium. Fort Lauderdale, FL. U.S.A.
- Michonneau, F.* , **Kim, S.**, McPherson, S., Netchy, K., Starmer, J., Kerr, A., Paulay, G. 2008. New insights into the biodiversity and evolution of aspidochirotid holothurians [poster]. 11th International Coral Reef Symposium. Fort Lauderdale, FL. U.S.A.
- 2006** **Kim, S.W.***, Campbell, M.B., Schwartz, M.L. Ultrastructural Investigation of Nonfeeding Pilidium Larva from *Micrura verrilli* (Heteronemertea: Nemertea) [poster]. 7th Larval Biology

Symposium. Oregon Institute of Marine Biology, Coos Bay, OR. U.S.A.

Kim, S.W.*, Campbell, M.B., Schwartz, M.L. Ultrastructural Investigation of Nonfeeding Pilidium Larva from *Micrura verrilli* (Heteronemertea: Nemertea) [poster]. 15th Regional Conference on Undergraduate Research of the Murdock College Science Research Program. University of Portland, Portland, OR. U.S.A.

Invited Talks

- 2019** Range dynamics of scleractinian corals under climate change. Jeju National University, Korea; Korea Institute of Ocean Science and Technology Jeju Division, Korea.
- 2014** Climate change on biodiversity and biogeography. Korea-Italy Bilateral Symposium (hosted by Embassy of Italy in Seoul). Korea Institute of Ocean Science and Technology, Korea.
- 2013** Integrative taxonomy at work: the overview of the genus *Bobadschia*. Marine Science Institute, University of the Philippines Diliman, Quezon City, Philippines.
Cataloguing Chuuk's underwater beasts. University of Guam, Mangilao, GU. USA.
The status quo of coral reefs in Chuuk and the role of Korea South Pacific Ocean Research Center (KSORC). University of Guam, Mangilao, GU. USA.
- 2011** Biogeography, biodiversity and molecular phylogenetics: Philippines' importance in the global context. University of the Philippines Visayas, Philippines.

Teaching experience

- 2015-2018** Tutor (U.S. equivalent of Teaching Assistant) for courses: Marine Ecology and Conservation; Marine Science; Australia's Marine Environment
- 2015-2017** Tutor (U.S. equivalent of Teaching Assistant) for International Program for Stanford University
- 2004-2006** Teaching Assistant (General Biology, Invertebrate Zoology), Tutor (Calculus), Laboratory Assistant (Molecular Biology), Seattle University

Scientific Expeditions

- 2021** Heron Island, Australia. Coral demographics survey
- 2019** Independent State of Samoa. Macroinvertebrate survey and underwater survey training
- 2017** The Republic of Palau. Coral recruitment experiment
Solitary Islands, Australia. Coral bleaching survey
- 2016** Heron Island, Australia. Coral fragment sampling
Moreton Bay area, Australia. Coral fragment sampling and coral bleaching survey
Cook Island and Julian Rocks, Australia. Coral bleaching survey
Solitary Islands, Australia. Coral fragment sampling and coral bleaching survey
- 2015** The Republic of Palau. Coral coring, and invertebrate sampling and cataloguing training
Heron Island, Australia. Coral fragment sampling
- 2014** Chuuk (Tol and outer atolls), Federated States of Micronesia. Coral diversity survey, invertebrate and fish sampling.
- 2013** Bolinao, Philippines. Invertebrate sampling and cataloguing training
Chuuk, Federated States of Micronesia. Coral diversity survey, invertebrate and fish sampling
- 2012** Kosrae, Federated States of Micronesia. Coral diversity survey and invertebrate sampling
Chuuk, Federated States of Micronesia. Invertebrate sampling
- 2011** Ulleung island, Korea. Invertebrate sampling
Dokdo island, Korea. Marine reserve biodiversity survey

- Jeju island, Korea. Marine reserve biodiversity survey
 Chuuk, Federated States of Micronesia. Invertebrate biodiversity survey
 Iloilo, Philippines. Invertebrate biodiversity survey and sampling
2010 Guam, U.S.A. Invertebrate sampling
2009 Wake island, U.S.A. Research Cruise (R/V Hi'ialakai, NOAA). Invertebrate biodiversity survey and sampling
 Yap, Federated States of Micronesia. Invertebrate biodiversity survey and sampling
 Guam, U.S.A. Invertebrate sampling
2008 Majuro, Republic of the Marshall Islands. Invertebrate biodiversity survey and sampling
 Kosrae, Federated States of Micronesia. Sea cucumber biodiversity survey and sampling
 Guam, U.S.A. Invertebrate sampling
 Florida Keys, FL. U.S.A. Invertebrate sampling
2007 O'ahu, HI. U.S.A. Echinoderm biodiversity survey
2006 Seattle, WA. U.S.A. Nemertean sampling

Media Coverage

- 2013-2014** The Last Blue Ocean. June, 2013 – May, 2014 editions. Monthly Chosun.

Outreach, Professional Service and Additional Qualifications

Professional service

- 2019-Present** International Union for Conservation of Nature (IUCN) Red List assessment specialist for scleractinian corals
 National Coordinator and data specialist, Global Coral Reef Monitoring Network (GCRMN) East Asia Division

Climate change, Pacific Island science programs:

- 2013** The Last Blue Ocean: conducted government leader interviews – published in Monthly Chosun June, July, September, October and December 2013 and January, February, April, May 2014 editions:
- Hon. Tommy Remengesau (President, the Republic of Palau)
 - Hon. Christopher Loek (President, the Republic of Marshall Islands)
 - Hon. Alik Alik (Vice President, Federated States of Micronesia)
 - Hon. Lorin Robert (Secretary of the Ministry of Foreign Affairs, Federated States of Micronesia)
 - Hon. Johnson Elimo (Governor, Chuuk State, Federated States of Micronesia)
 - Hon. Alanso Cholymay (Senator and Chief at large, Chuuk State, Federated States of Micronesia)
 - Hon. Samiu Kuita Vaipulu (Deputy Prime Minister and Minister of Infrastructure, The Kingdom of Tonga)
 - Hon. Tuilaepa Sailele Malielegaoi (Prime Minister, The Independent State of Samoa)
 - Ms. Myra Moeka'a (Secretary, Ministry of Foreign Affairs and Immigration, The Cook Islands)
 - Hon. Edward Natapei (Minister, Ministry of Foreign Affairs, The Republic of Vanuatu)
 - Hon. Gordon Darcy Lilo (Prime Minister, The Solomon Islands)
 - Hon. Peter Shannel Agovaka (Minister, Ministry of Foreign Affairs, The Solomon Islands)
 - Hon. Anote Tong (President, Republic of the Kiribati)
 - Hon. Enele Sopoaga (Prime Minister, Tuvalu)
 - Mr. Tevita Boseiwaqa (Secretary, Ministry of Lands and Mineral Resources, Fiji)
- 2011** Educational Poster for the government of Chuuk State, Federated States of Micronesia:
- Importance of Mangrove forest

Journal reviewer for:

Science Advances, Nature Ecology and Evolution, Current Biology, Ecology Letters, Proceedings of the Royal Society B: Biological Sciences, Science of the Total Environment, Functional Ecology, Methods in Ecology and Evolution, Coral Reefs, Zoological Journal of the Linnean Society

Workshop and seminar organizations:

- 2014** 3rd Asia Pacific Coral Reef Symposium. Co-chair: Mini-symposium 15 – Reef conservation research in Micronesia. Howard Hotel, Kenting, Taiwan. June 2014.
3rd South Pacific – Asia Marine Science (SPAM) Workshop. Howard Hotel, Kenting, Taiwan. June 2014.
- 2013** 2nd South Pacific – Asia Marine Science (SPAM) Workshop. University of Guam, USA. June 2013.
- 2012** 8th International Coral Reef Initiative (ICRI) East Asia Regional Workshop. Ocean Suites Hotel Jeju, Korea. September 2012.
1st South Pacific – Asia Marine Science (SPAM) Workshop. Korea Institute of Ocean Science and Technology, Korea. April 2012.
- 2010** Seminar Series POETS Coordinator, Marine Laboratory, University of Guam

Diving:

Scuba Diving International (SDI) Divemaster with specialties: Underwater Navigation, Night/Limited Visibility, Deep, and Enriched Air Nitrox

Computing:

R, Python, Unix shell, SQL, Cluster computing – PBS Torque batch system, GIS software and modules (Quantum GIS, ArcQIS)

Histology:

Transmission electron microscopy – sample preparation and microscope operation

References

1. John M. Pandolfi, Ph.D. (Principal supervisor for doctoral degree)
Professor
Australian Research Council Centre of Excellence for Coral Reef Studies
School of Biological Sciences, The University of Queensland
Tel: (61) 7-3365-3050
Email: j.pandolfi@uq.edu.au
2. Eugenia Sampayo, Ph.D. (Co-supervisor for doctoral degree)
Australian Research Council Centre of Excellence for Coral Reef Studies
School of Biological Sciences, The University of Queensland
Tel: (61) 7-3365-2729
Email: e.sampayo@uq.edu.au
3. Alexander M. Kerr, Ph.D. (Principal supervisor for master's degree)
Professor
Marine Laboratory, University of Guam
Tel: (671) 735-2182
Email: alexander.kerr@aya.yale.edu