

Curriculum Vitae

Samuel Starko, PhD (he/him)

Forrest Research Fellow
School of Biological Sciences and Oceans Institute,
University of Western Australia, Crawley, WA, Australia

EDUCATION

Ph.D. Department of Botany, University of British Columbia
May 2019 Vancouver, Canada
Supervisor: Dr. Patrick Martone

B.Sc. Biology (Major) Department of Biology, University of British Columbia
December 2012 Vancouver, Canada

ACADEMIC EMPLOYMENT

Forrest Research Fellow School of Biological Sciences, University of Western Australia
November 2022 – Present Crawley (Perth), Australia
Supervisor: Dr. Thomas Wernberg

Postdoctoral Researcher Department of Biology, University of Victoria
August 2019 – October 2022 Victoria, Canada
Supervisor: Dr. Julia K. Baum

Course Instructor Bamfield Marine Sciences Centre
2018 – 2020 Bamfield, Canada

PUBLICATIONS IN PEER-REVIEWED JOURNALS

42. Starko, S., Epstein, G., Chalifour, L. *et al.* (11 authors total). Ecological responses to extreme climatic events: a systematic review of the 2014 – 2016 Northeast Pacific marine heatwave. *Oceanography and Marine Biology: An Annual Review*. *In press*.
41. Bemmels, J., Starko, S., Weigel, B. *et al.* (11 authors total). Population genomics reveals strong impacts of genetic drift without purging and guides conservation of bull and giant kelp. *Current Biology*. *In press*.
40. Starko, S., Allchurch, A. & Neufeld, C.J. Asynchronous shifts in the demographics of two wave-swept kelp species after nearly four decades. *Journal of Phycology*. *In press*.
39. Pessarrodona, A., Wood, G.V., Kendrick, G., Goldberg, N., Starko, S. & Wernberg, T. Long-term stability of marine forests facing moderate gradual warming in a remote biodiversity hotspot. *Diversity & Distributions*. 30(11): 1-17.
38. Starko, S., van der Mheen, M., Pessarrodona, A., Wood, G.V., Montie, S., Neufeld, C.J., Coleman, M., Filbee-Dexter, K. & Wernberg, T. (2024) Impacts of marine heatwaves in coastal ecosystems depend on local environmental conditions. *Global Change Biology* 30(8): e17469
37. Starko, S., Timmer, B., Reshitnyk, L., Csordas, M. *et al.* (20 authors total). (2024). Local and regional variation in kelp loss and stability across coastal British Columbia. *Marine Ecology Progress Series* 733: 1-26. †Media coverage in multiple outlets
36. Li Shing Hiung, D. *et al.* (41 authors including Starko, S.). (2024). Ocean weather, biological rates and unexplained global ecological patterns. *PNAS Nexus* 3(8): pgae260
35. Wachmann, A., Starko, S., Neufeld, C.J. & Costa, M. (2024). Validating Landsat analysis ready data for nearshore sea surface temperature monitoring in the Northeast Pacific. *Remote Sensing* 16(5), 920.

34. Csordas, M., Starko, S., Neufeld, C.J., Thomson, S.A. & Baum, J.K. (2024). Multi-scale stability of an intertidal kelp (*Postelsia palmaeformis*) near its northern range edge through a prolonged heatwave. *Annals of Botany*. 133(1): 61-72
33. Starko, S. (2024). Unusual morphologies raise questions about the evolution of branching in kelps (Laminariales). *Ecology & Evolution*. 14: e70109.
32. Filbee-Dexter, K., Starko, S., Pessarrodona, A., Wood, G., Norderhaug, K.M., Pineiro-Corbeira, C. & Wernberg, T. (2024). Marine protected areas are not a silver bullet for kelp conservation. *Journal of Phycology* 60(2): 202-213.
31. Eger, A. et al. (79 coauthors, incl. Starko, S). (2024). The Kelp Forest Challenge: a collaborative global movement to protect and restore 4 million hectares of kelp forests. *Journal of Applied Phycology* 36: 951-964.
30. Wood *et al.* (30 authors incl. Starko, S.). (2024). Upscaling marine forest restoration: challenges, solutions and recommendations from the Green Gravel Action Group. *Frontiers in Marine Sciences* 11: 1364263.
29. Wernberg, T., Thomsen, M.S., Baum, J.K. *, Bishop, M.J. *, Bruno, J.F. *, Coleman, M.A. *, Filbee-Dexter, K. *, Gagnon, K. *, He, Q. *, Murdiyarso, D. *, Rogers, K. *, Silliman, B. * Smale, D.A. *, Starko, S. * & Vanderklift, M.A. * (2024). Impacts of climate change on marine foundation species. *Annual Reviews of Marine Science* 16: 247-282.
28. Starko, S., Fifer, J., Claar, D.C., Davies, S.W., Cunning, R., Baker, A.C. & Baum, J.K. (2023). Marine heatwaves threaten cryptic coral diversity and erode associations among coevolving partners. *Science Advances* 9: eadf0964 †Media coverage in multiple outlets including *CBC, Globe & Mail*
27. Maucieri, D., Starko, S. & Baum, J.K. (2023). Tipping points and interacting effects of chronic human disturbance and acute heat stress on coral diversity. *Proceedings of the Royal Society B* 290 (1996): 20230209
26. Whalen, M., Starko, S., Lindstrom, S.C. & Martone P.T. (2023). Heatwave restructures marine intertidal communities across a stress gradient. *Ecology* 104 (5): e4027
25. Bringloe, T.T., Fort, A., Inaba, M., Sulpice, R., Ghriofa, C.N., Mols-Mortensen, A., Filbee-Dexter, K., Vieira, C., Kawai, H., Hanyuda, T., Krause-Jensen, D., Olesen, B., Starko, S. & Verbruggen, H. (2022). Whole genome population structure of North Atlantic kelp confirms high latitude glacial refugia. *Molecular Ecology* 31 (24): 6437 – 6488.
24. Starko, S., Neufeld, C.J., Gendall, L., Timmer, B., Campbell, L., Yakimishyn, J., Druehl, LD. & Baum, J.K. (2022). Microclimate predicts kelp forest extinction in the face of direct and indirect marine heatwave effects. *Ecological Applications* 32: e2673 †Media coverage in the *National Observer*
23. Hollarsmith, J., Andrews, K., Naar, N., Starko, S., Calloway, M., Obaza, A., Buckner, E., Tonnes, D., Selleck, J. & Therriault, T.W. (2021). Towards a conceptual framework for managing and conserving marine habitats: A case study of kelp forests in the Salish Sea. *Ecology and Evolution* 12(1): e8510.
22. Epstein, H.E., Hernandez-Agreda, A., Starko, S., Baum, J.K., Vega Thurber, R. (2021). Inconsistent patterns of microbial diversity and composition between highly similar sequencing protocols: a case study with reef-building corals. *Frontiers in Microbiology* 12: 740932
21. Lindstrom, S.C., Lemay, M.A., Starko, S., Hind, K.R. & Martone, P.T. (2021). New and interesting seaweed records from the Hakai area on the central coast of British Columbia: Chlorophyta. *Botanica Marina* 65 (5): 343-361.
20. Starko, S., Wilkinson, D. & Bringloe, T.T. (2021). Recent global model underestimates the true extent of Arctic kelp habitat. *Biological Conservation* 57: 109082
19. Bringloe, T.T., Zaparenkov, D., Starko, S., Grant, W.S., Vieira, C., Kawai, H., Filbee-Dexter, K., Klimova, A., Klochkova, T., Krause-Jensen, D., Olesen, B. & Verbruggen, H. (2021). Whole-genome sequencing reveals forgotten lineages and recurrent hybridizations within the kelp genus, *Alaria* (Phaeophyceae). *Journal of Phycology* 57: 1721-1738.

18. Higham, T., Ferry, L., Schmitz, L., Irschick, D., **Starko, S.**, Anderson, P.S.L., Bergmann, P., Jamniczky, H., Navon, D., Feilich, K., Carrington, E., Farina, S., Johnson, M., Kawano, S., Law, C., Luongo, S., Martone, P.T., Messier, J., Monteiro, L.R., Rico-Guevara, A., Santana, S.,E. & Niklas, K.J. (2021). Linking ecomechanical models and functional traits to understand phenotypic diversity. *Trends in Ecology and Evolution* 36 (9): 860-873.
17. **Starko, S.**, Bringle, T.T., Soto Gomez, M., Darby, H., Graham, S.W. & Martone, P.T. (2021). Genomic rearrangements and sequence evolution across brown algal organelles. *Genome Biology and Evolution* 13 (7): evab124.
16. Lemay, M.A., Chen, M.Y., Mazel, F., Hind, K.R., **Starko, S.**, Keeling, P.J., Martone, P.T. & Wegener Parfrey, L. (2021). Morphological complexity affects the diversity of marine microbiomes. *The ISME Journal* 15: 1372-1386
15. Demes, K.W.*, **Starko, S.*** & Harley, C.D.G. (2021). Multiple stressors drive convergent evolution of performance properties in marine macrophytes. *New Phytologist* 229: 2311-2323
14. Campbell, J. & **Starko, S.** (2021). Allometric models effectively predict *Saccharina latissima* fresh biomass on local scales. *Journal of Applied Phycology* 33: 491-500.
13. **Starko, S.**, Demes, K.W., Neufeld, C.J. & Martone, P.T. (2020). Convergent evolution of niche structure in Northeast Pacific kelp forests. *Functional Ecology* 34: 2131-2146. †**Highlighted by journal**
12. Claar, D.C., **Starko, S.**, Tietjen, K., Cuning, R., Baker, A., Gates, R. & Baum, J.K. (2020). Dynamic symbioses reveal pathways to coral survival through prolonged heatwaves. *Nature Communications* 11: 6097 †**Media coverage in Science**
11. Bringle, T.T., **Starko, S.**, Wade, R.M., Vieira, C., Kawai, H., De Clerck, O., Cock, J.M., Coelho, S.M., Destombe, C., Valero, M., Neiva, J., Pearson, G.A., Faugeron, S., Serrao, E.A., & Verbruggen, H. (2020). Phylogeny and evolution of the brown algae. *Critical Reviews in Plant Sciences* 39 (4): 281-321
10. **Starko, S.**, Soto Gomez, M., Darby, H., Demes, K., Kawai, H., Yotsukura, N., Lindstrom, S.C., Keeling, P., Graham, S., & Martone, P.T. (2019). A comprehensive kelp phylogeny sheds light on the evolution of an ecosystem. *Molecular Phylogenetics and Evolution* 136: 138-150. †**Media coverage in the Hakai Magazine**
9. Hind, K.A., **Starko, S.**, Burt, J.M., Lemay, M.A., Salomon, A.K. & Martone, P.T. (2019). Trophic control of cryptic coralline algal diversity. *Proceedings of the National Academy of Sciences* 116.30: 15080-15085.
8. **Starko, S.***, Bailey, L.A., Creviston, E., James, K.A., Warren, A., Brophy, M.K., Danasel, A., Fass, M.P., Townsend, J.A., & Neufeld, C.J.*. Environmental heterogeneity mediates scale-dependent declines in kelp diversity on intertidal rocky shores. *PLOS One* e0213191.
7. **Starko, S.**, Boo, G.H., Martone, P.T., & S.C. Lindstrom (2018). A molecular investigation of *Saccharina sessilis* from the Aleutian Islands reveals a species complex, necessitating the new combination *Saccharina subsessilis*. *Algae*. 33 (2): 157-166.
6. **Starko, S.**, Mansfield, S., & P.T. Martone (2018). Cell wall chemistry and tissue structure underlie shifts in the material properties of a perennial kelp. *European Journal of Phycology* 53 (3): 307-317.
5. Neufeld, C.J.*, **Starko, S.***, & K.C. Burns (2017). Disturbance and diversity in a continental archipelago: a mechanistic framework linking area, height and exposure. *Ecosphere* 8 (10): ecs2.1957.
4. **Starko, S.**, and P.T. Martone (2016). An empirical test of ‘universal’ biomass scaling relationships in kelps: evidence of convergence with seed plants. *New Phytologist* 212(3): 719-729. †**Media coverage in Science**
3. **Starko, S.**, Smyth, C., & Kucera, H. (2016) Attachment strength of the herbivorous rockweed isopod, *Idotea wosnesenskii* (Isopoda, Crustacea, Arthropoda) depends on properties of its algal host. *Journal of Experimental Marine Biology and Ecology* 477: 1 – 6.
2. **Starko, S.** & P.T. Martone. (2015). Evidence of an evolutionary- developmental trade-off between drag avoidance and tolerance strategies in wave-swept kelps (Laminariales, Phaeophyceae, Heterokontophyta). *Journal of Phycology* 52 (1): 54 – 63.
1. **Starko, S.***, Claman, B*. and P.T. Martone. (2015). Biomechanical consequences of branching in flexible wave-swept macroalgae. *New Phytologist* 206: 133-140. †**Media coverage in the Globe & Mail**

*Asterisks denote equal contribution by more than one author

Underlined author denotes a student mentee

†Denotes select media coverage and journal highlights

MANUSCRIPTS IN REVIEW

McHenry, J. *et al.* (22 authors incl. **Starko, S.**). A blueprint for national assessments of the blue carbon capacity of kelp forests applied to Canada's coastline. *In Review* (2nd round). *NPJ Ocean Sustainability*
bioRxiv preprint: <https://doi.org/10.1101/2024.04.05.586816>

Edgeloe, J., **Starko, S.**, Pessarrodona, A., Batley, J., Coleman, M.A., Wernberg, T. & Wood, G. Strong genetic differentiation in *Cystophora racemosa* across 850km of its range. *In Review. Journal of Phycology*

Edwards, G.E., Filbee-Dexter, K., Schwoerbel, J., **Starko, S.**, Hurd, C. & Wernberg, T. Temperature and nutrient source drive population-specific patterns of dissolved inorganic nitrogen uptake in a common kelp. *In Review. Marine Ecology Progress Series.*

Baum, J. *et al.* (incl. **2021 Western North America Heat Dome Data Consortium**). Widespread ecological responses and cascading effects of the record-breaking 2021 North American heatwave. *In review. Nature Ecology & Evolution.*

Bringloe, T.T., Zaparenkov, Grant, W.S., **Starko, S.**, Fort, A., Inaba, M., Sulpice, R., Saunders, G.W. & Verbruggen, H. Emerging opportunities and challenges to defining species using genome-wide data: a case study in Northeast Pacific ribbon kelp lineages (genus *Alaria*). *In Review. Journal of Phycology.*

Lindstrom, S.C., Lemay, M.A., **Starko, S.**, Hind, K.A. & Martone, P.T. New and interesting seaweed records from the Hakai area on the central coast of British Columbia: Phaeophyceae. *In Review. Botany.*

Pinero-Corberra, C. *et al.* (13 authors total incl. **Starko, S.**). Quantifying the habitat dependency of species. *In Review. Nature Sustainability.*

SELECTED AWARDS & FUNDING

*I have received a career total of approximately **\$1,492,500 USD in funding** (\$742,817 CAD + \$1,246,088 AUD + \$101,875 USD) including grants, fellowships and awards, demonstrating a high capacity to attract research income.*

2022 – 2025	\$433,000 AUD	Forrest Research Fellowship (~2% success rate)– Forrest Research Foundation
2024	\$783,088 AUD	ARC Discovery Grant (~15% success rate) – Australian Research Council (one of two Chief Investigators)
2023	\$49,500 USD	Wild Genomes Research Grant – Revive & Restore (Principal Investigator)
2022	\$30,000 AUD	FF Research Support – University of Western Australia
2021 – 2023	\$120,000 CAD	Mitacs Accelerate Postdoctoral Fellowship (\$60,000 per year) – Mitacs
2019 – 2021	\$90,000 CAD	NSERC Postdoctoral Fellowship (\$45,000 per year) – NSERC
2021	\$299,992 CAD	2021-2022 Ecosystem and Ocean Sciences Framework (One of three team members) – Department of Fisheries and Oceans Canada
2021		Luigi Provasoli Award for Outstanding Paper – Journal of Phycology
2016 – 2018	\$71,000 CAD	Killam Memorial Doctoral Scholarship (Top UBC Scholarship) – University of British Columbia
2016 – 2018	\$43,000 CAD	NSERC Postgraduate Scholarship (\$21,500 per year) – NSERC
2015 – 2019	\$72,800 CAD	UBC Four Year Fellowship (\$18,200 per year) – University of British Columbia
2018	\$700 CAD	Kit Malkin Memorial Scholarship – University of British Columbia
2018		Runner-up for Best Talk – Western Society of Naturalists
2018	\$1000 USD	Bold Award for Best Talk – Phycological Society of America

2018	\$100 CAD	Best Talk – UBC Graduate Student Symposium
2015, 2018	\$675 CAD	Kit Malkin Memorial Award – University of British Columbia
2017	\$500 CAD	Best Poster – Canadian Society of Ecology & Evolution
2016	\$500 CAD	Graduate Student Travel Award – University of British Columbia
2015	\$16,000 CAD	Catalyst Paper Scholarship – University of British Columbia
2015	\$675 CAD	Kit Malkin Memorial Scholarship – University of British Columbia
2015	\$1500 USD	Grant-in-Aid of Research – Phycological Society of America
2014		Best Talk – UBC Graduate Student Symposium
2014	\$2000 CAD	Teaching Scholarship – Bamfield Marine Sciences Centre
2014	\$4500 CAD	Faculty of Science Graduate Award – University of British Columbia
2014	\$17,500 CAD	NSERC CGS Master’s Scholarship – University of British Columbia
2014	\$375 CAD	Hoshaw Travel Scholarship – Phycological Society of America
2014	\$275 USD	NWASS Travel Scholarship – Northwest Algal and Seagrass Society
2013	\$100 CAD	Best Talk – Northwest Algal Symposium
2012	\$1000 CAD	Undergraduate Student Scholarship – Bamfield Marine Sciences Centre

POPULAR MEDIA ARTICLES

Starko, S., Timmer, B., Neufeld, C.J. & Baum, J.K. (2024). Why some of British Columbia’s kelp forests are more threatened than others. *The Conversation*.

Starko, S. & Baum, J.K. (2023). Coral Reefs : How climate change threatens the hidden diversity of marine ecosystems. *The Conversation*. *Republished by *The Globe & Mail* (Canada’s most widely read newspaper).

INVITED PRESENTATIONS

Starko, S. (2024). Seaweed forests in a changing ocean. *Jane Goodall Foundation Dinner*. Perth, Australia. Invited Oral Presentation.

Starko, S. (2022) How heatwaves are impacting marine habitats. *Les Ecologistes Invited Seminar*. Simon Fraser University. Vancouver, British Columbia, Canada. Invited Seminar.

Starko, S., (2022). Impacts of recent warming on kelp forest habitats in Barkley Sound. *WCVI Chinook Marine Risk Assessment Workshop*. British Columbia. Invited Oral Presentation.

Starko, S. (2022) Marine heatwaves threaten critical underwater forests. *Queen’s Conference on Ocean Sustainability*. Queen’s University. Kingston, Ontario, Canada. Invited Oral Presentation

Starko, S. & Neufeld, C.J. (2021) Local drivers of kelp forest resilience. Puget Sound Kelp Research & Monitoring Work Group. Olympia, Washington, USA (held virtually). Invited Oral Presentaton.

Starko, S. (2021) Seaweed communities in a changing ocean: examining the role of local environment. *Friday Harbor Laboratories Seminar Series*. University of Washington. Washington, USA. Invited Seminar.

Starko, S. (2021) Kelp forests in a changing ocean. *Spring Seminar Series*. Hatfield Marine Sciences Centre, Oregon State University. Newport, Oregon, USA. Invited Seminar.

Starko, S. (2020) Local drivers of kelp forest resilience. *BC Kelp Analytical Working Group*. Virtual meeting. Invited Seminar.

Starko, S. (2019) The role of environmental heterogeneity in mediating long-term changes in Barkley Sound kelp forests. Washington State Core Kelp Team (Department of Natural Resources, National Ocean and Atmospheric Administration). Virtual. Invited Seminar.

Starko, S. (Sept 2019) Kelp forests in a changing ocean. *Biology Department Seminar*. University of Victoria. Victoria, Canada. Invited Seminar.

- Starko, S.** (2019). The role of environmental heterogeneity in mediating long-term changes in Barkley Sound kelp forests. *ShoreZone Partners Meeting*. Portland, Oregon, USA. Invited Oral Presentation.
- Starko, S.** (2019) Kelp forests in a changing ocean. *Biology Department Seminar*. University of Victoria. Victoria, Canada. Invited Seminar.
- Starko, S.** (Nov 2018). Functional and morphological diversification during kelp evolution. *Botany Seminar Series*. University of British Columbia. Vancouver, Canada. Invited Seminar.
- Starko, S.** (Aug 2018). Kelp diversity through deep and shallow time. *Summer Seminar Series*. Bamfield Marine Sciences Centre. Bamfield, Canada. Invited Seminar.
- Neufeld, C.J. & **Starko, S.** (Feb 2018). Habitat heterogeneity drives scale-dependent kelp biodiversity loss in Barkley Sound. *Workshop on Research Priorities for Nearshore Algae in Coastal British Columbia. PSEC/DFO West Vancouver Laboratories*. West Vancouver, Canada. Invited Presentation.
- Starko, S.** & Neufeld, C.J. (Jul 2017). Wave exposure decreases plant species richness and occupancy in a continental archipelago. *Summer Seminar Series*. Bamfield Marine Sciences Centre. Bamfield, Canada

CONFERENCE PRESENTATIONS

- Starko, S.** (2023). Assessing long-term changes in British Columbia kelp forests. *PICES: 5th Climate Change Symposium*. Bergen, Norway. Oral Presentation.
- Starko, S.** (2022). Assessing long-term changes in British Columbia kelp forests. *International Temperate Reef Symposium*. Hobart, Tasmania. Oral Presentation.
- Starko, S.**, Neufeld, C.J., Gendall, L., Timmer, B., Yakimishyn, J., Druehl, L. & Baum, J.K. (2021). Microclimate predicts kelp forest extinction in the face of direct and indirect marine heatwave effects *Western Society of Naturalists Virtual*. Oral Presentation
- Starko, S.**, Claar, D.C., Cunning, R., Baker, A. & Baum, J.K. (2020). Symbiont fidelity and evolutionary dead ends in the face of prolonged marine heatwaves. *Western Society of Naturalists Virtual*. Oral Presentation
- Mauceri, D.**, **Starko, S.** & Baum, J.K. (2020). Impacts of local and global stressors on the structure and diversity of coral reef communities. *Coral Reef Week Virtual*. Oral Presentation.
- Neufeld, C.J.** & **Starko, S.** (2020). Widespread declines in canopy-forming kelp (*Macrocystis pyrifera* and *Nereocystis luetkeana*) along a local 2.5°C gradient in sea surface temperature. *Western Society of Naturalists*. Virtual. Oral Presentation
- Starko, S.** & Neufeld, C.J. (2020). Kelp forest declines in Barkley Sound: Lessons from the outer coast. *Salish Sea Ecosystem Conference*. Virtual. Oral Presentation.
- Whalen, M.**, **Starko, S.**, Lindstrom, S.C. & Martone, P.T. (2019). Community-level responses of intertidal seaweeds and sessile invertebrates to a marine heatwave in Central British Columbia. *Western Society of Naturalists Meeting*. Ensenada, Mexico. Oral Presentation
- Starko, S.**, Soto Gomez, M., Demes, K., Darby, H., Kawai, H., Lindstrom, S.C., Keeling, P., Graham, S., & Martone, P.T. (2018). A robust phylogeny of the kelps sheds light on the evolution of an ecosystem. *Phycological Society of America Meeting*. Vancouver, Canada. Oral Presentation. †**Awarded Runner-up Best Talk**
- Starko, S.**, Soto Gomez, M., Demes, K., Darby, H., Kawai, H., Lindstrom, S.C., Keeling, P., Graham, S., & Martone, P.T. (2018) A robust phylogeny of the kelps sheds light on the evolution of an ecosystem. *UBC Botany Graduate Student Symposium*. Vancouver, Canada. Oral Presentation. †**Awarded Best Talk**
- Starko, S.**, Neufeld, C.J. (2018). Habitat heterogeneity drives scale-dependent kelp biodiversity loss in Barkley Sound. *Phycological Society of America*. Vancouver, Canada. Poster
- Starko, S.**, Soto Gomez, M., Demes, K., Darby, H., Kawai, H., Lindstrom, S.C., Keeling, P., Graham, S., & Martone, P.T. (2018) A robust phylogeny of the kelps sheds light on the evolution of an ecosystem. *Phycological Society of America*. Vancouver, Canada. Oral Presentation. †**Awarded PSA Bold Award for Best Talk**

- Starko, S.**, Soto Gomez, M., Demes, K., Darby, H., Kawai, H., Lindstrom, S.C., Keeling, P., Graham, S., & Martone, P.T. (2018) A robust phylogeny of the kelps sheds light on the evolution of an ecosystem. *UBC Botany Graduate Student Symposium*. Oral Presentation. †**Awarded Best Talk**
- Starko, S.**, Boo, G.H., Lindeberg, M. and S.C. Lindstrom (2017). Species of “*Hedophyllum*” in the Aleutian Island, Alaska. *Western Society of Naturalists*. Pascedena, USA. Poster.
- Starko, S.** & Martone, P.T. (2017). Biomass partitioning in kelp: universal constraints on plant-like morphologies. *Ecological Society of America*. Portland, Oregon, USA. Poster.
- Starko, S.** & Martone, P.T. (2017). Biomass partitioning in kelp: universal constraints on plant-like morphologies. *Canadian Society for Ecology & Evolution*. Victoria, Canada. Poster. †**Awarded Best Poster**.
- Neufeld, C.J.* & **Starko, S.***, Students of CCE, & K.C. Burns (2017). Wave exposure predicts plant species richness and occupancy on small islands in a continental archipelago. *UBC Botany Graduate Student Association Symposium*. Vancouver, BC. Oral. †**Awarded People’s Choice Award for Best Talk**
- Starko, S.** & Martone, P.T. (2016). An empirical test of “universal” biomass scaling relationships in kelps: evidence of convergence with seed plants. *100th Western Society of Naturalists Meeting*. Monterey, USA. Oral.
- Starko, S.** & Martone, P.T. (2016). An empirical test of “universal” biomass scaling relationships in kelps: evidence of convergence with seed plants. *International Seaweed Symposium*. Copenhagen, Denmark. Oral.
- Starko, S.**, Hind, K., Anderson, L.M., Lindstrom, S.C., & Martone, P.T. (2015). Seaweed diversity of Calvert Island. *Hakai Research Exchange*. Nanaimo, BC. Poster.
- Starko, S.** & Martone, P.T. (2015). Evidence of an evolutionary-developmental trade-off between drag avoidance and tolerance in wave-swept intertidal kelps. *Pacific Ecology and Evolution Conference*. Bamfield, Canada. Poster. †**Awarded Best Poster**
- Starko, S.** & Martone, P.T. (2014). Ontogenic strategies of intertidal kelp species to mitigate dislodgement risk. *UBC Botany Graduate Student Symposium*. Vancouver, Canada. Oral. †**Awarded Best Talk**
- Starko, S.**, Claman, B.Z. & Martone, P.T. (2013). Biomechanical cost of branching in flexible, wave-swept macroalgae *Pacific Ecology and Evolution Conference*, Bamfield, BC.
- Smyth C. & **Starko, S.** (2013). Stickin’ with you: morphological and behavioural adaptations to survive wave action in the herbivorous intertidal isopod, *Idotea wosnesenskii*. *Pacific Ecology and Evolution Conference*, Bamfield, BC. Oral.
- Starko, S.** & Martone, P.T. (2013) Strategies of intertidal kelp species to mitigate dislodgement risk through development. *Northwest Algal Symposium*. Camp Casey Conference Centre, Whidbey Island, USA. †**Awarded Best Talk**
- Starko, S.**, Claman, B.Z. & Martone, P.T. (2012). Biomechanical cost of branching in flexible, wave-swept macroalgae. *Northwest Algal Symposium*, University of British Columbia, Vancouver, Canada..

Underlined author denotes speaker

†Denotes presentation award

TEACHING

2023	<i>Marine Ecosystems</i> – University of Western Australia (Component instructor)
2022	<i>Special topics: Climate Change</i> – University of Victoria (Discussion leader)
2021	<i>Special topics: Climate Change</i> – University of Victoria (Discussion leader)
2020	<i>Research in Marine Ecology</i> – Bamfield Marine Science Centre (Instructor, developer)
2019	<i>Coastal Community Ecology</i> – Bamfield Marine Science Centre (Instructor)
2018	<i>Marine Ecology</i> – Bamfield Marine Science Centre (Instructor)
2017	<i>Marine Populations & Dynamics</i> – Bamfield Marine Sciences Centre (TA)
2017	<i>Coastal Community Ecology</i> – Bamfield Marine Sciences Centre (TA)
2016	<i>Ecological Adaptations of Seaweeds</i> – Bamfield Marine Sciences Centre (TA)
2016	<i>Survey of the Algae</i> – University of British Columbia (TA)

2015	<i>Laboratory Investigations in Life Science</i> – University of British Columbia. (TA)
2015	<i>Coastal Community Ecology</i> – Bamfield Marine Sciences Centre. (TA)
2014	<i>Ecological Adaptations of Seaweeds</i> – Bamfield Marine Sciences Centre. (TA)
2014	<i>Survey of the Algae</i> – University of British Columbia. (TA)
2013	<i>Eukaryotic Microbiology</i> – University of British Columbia. (TA)
2013	<i>Genetics, Evolution & Ecology</i> - University of British Columbia. (TA)

STUDENT ADVISING EXPERIENCE

2024	Emma Buch. <i>Visiting MSc. Student. (University of Copenhagen)</i> Co-supervisor
2024	Molly Mai. <i>MSc. student.</i> Co-supervisor
2024	Carme Pacin. <i>Visiting PhD Student (U. Santiago de Compostela).</i> Visit supervisor
2023 – 2024	Celina Burkholz. <i>PhD student.</i> Co-Supervisor (Completed)
2023	Louise Richardson. <i>MSc. student.</i> Supervisor of record (Completed)
2023	Jane Edgeloe. <i>PhD student.</i> Co-supervisor
2022 – 2023	Grace Edwards. <i>PhD student.</i> Co-supervisor
2021 – 2022	Tannin Standing. <i>Honours student.</i> Unofficial co-supervisor (Completed)
2021 – 2022	Brittnie Spriel. <i>Honours student.</i> Unofficial co-supervisor (Completed)
2021 – 2022	Matthew Csordas. <i>PhD. Student.</i> Unofficial mentor
2022	Brian Timmer. <i>PhD. Student.</i> Unofficial mentor
2020	Alyssa Allchurch. <i>Undergraduate Researchers.</i> Supervisor of record (Completed)
2019 – 2020	Dominique Mauceri. <i>MSc. Student.</i> Role : Unofficial mentor
2019 – 2020	Rebecca Hansen. <i>Workstudy and Honours Student.</i> Role : Unofficial mentor
2017 – 2019	Megan K Brophy, Andreea Danasel, Megan P Fass, James A Townsend, Lauren A Bailey, Elandra Creviston, Katelyn A James, Alison Warren, <i>Undergraduate Researchers.</i> Course Instructor and research mentor

SERVICE AND OUTREACH

2024 – Present	Guest Editor – <i>Frontiers in Marine Science</i>
2023 – Present	Associate Editor – <i>Journal of Phycology</i>
2024 – Present	Program Organizing Committee – <i>International Seaweed Symposium 2024</i>
2020 – Present	Project Advisor – <i>Kelp Rescue Initiative</i> – Bamfield Marine Sciences Centre
2025	Volunteer/Presenter – <i>DBCA High School Program</i>
2022 – 2024	Secretary (Executive Council) – <i>Forrest Research Foundation</i>
2023	Public Talk – <i>Perth Dinghy Sailing Club</i>
2021	On-Camera Interviewee – <i>Canada's National Parks (TV Program)</i>
2021	Presenter – <i>BMSC Climate Action Webinar Series</i>
2020	Session Chair – <i>Western Society of Naturalists</i>
2020	“Live dive” volunteer guide – <i>Bamfield Marine Sciences Centre</i>
2020	Session Co-organizer and Chair – <i>Salish Sea Ecosystem Conference</i>
2019 – 2020	Organizer – <i>Ecology @ UVic paper discussion group</i> – Victoria, Canada
2017 – 2018	Student Organizing Committee – <i>Western Society of Naturalists Meeting</i> – Tacoma, USA
2017	Volunteer Coral Reef Ecology Instructor and SCUBA leader – <i>Operation Wallacea</i> – Akumal, Mexico
2016 – 2017	Botany Student Representative – <i>Ecology Faculty Search Committee</i> – Departments of Botany & Zoology – University of British Columbia – Vancouver, Canada
2015 – 2016	School Outreach Volunteer – <i>Let's Talk Science</i> – Vancouver, Canada
2015	Organizer – <i>Student paper discussion group</i> – Bamfield Marine Sciences Centre
2014 – 2015	Graduate Student Equipment Manager – <i>BMSC Graduate Student Society</i> – Bamfield Marine Sciences Centre
2012	Organizing Committee – <i>Northwest Algal Symposium</i> – Vancouver, Canada

WORKING GROUP PARTICIPATION

2021 – Present	Global Ecosystem Services Assessment of Kelp Forests (GEAK). – initial meetings online, in person meeting in Arendal, Norway (June 2022)
2022 – Present	Kelp Forest Alliance
2021 – Present	Green Gravel Action Group – Initial meeting: Apr 2021
2020 – 2023	BC Kelp Analytical Working Group invited participant – Meeting held monthly (virtual)
2019	NSF-funded ‘Rules of Life’ Working Group invited participant – Initial meeting: April 2019, Portland, Oregon, USA

PEER REVIEWER ACTIVITIES

Grant reviewer: *The National Science Foundation, USA (NSF) Division of Ocean Sciences (x2).*

Peer reviewer: *PNAS, Ecology Letters, Current Biology, Global Change Biology, Ecological Monographs, Journal of Ecology, Functional Ecology, Restoration Ecology, Biological Conservation, Conservation Biology, Restoration Ecology, Ecography, Methods in Ecology and Evolution, Communications Biology, Coral Reefs, BMC Genomics, Marine Ecology Progress Series, Limnology & Oceanography, Aquatic Coral Reefs, Frontiers in Marine Science, iScience, Scientific Reports, Ecosphere Chinese Journal of Limnology & Oceanography, Journal of the World Aquaculture Society, Botany, Journal of Phycology, American Journal of Botany, Phycological Research, Marine Environmental Research, Journal of Experimental Marine Biology & Ecology,*

SELECT MEDIA COVERAGE

2023	<i>Coral Reefs: How climate change threatens the hidden diversity of marine ecosystems</i> – Globe & Mail
2022	<i>West coast kelp forests are in hot water but scientific insights might help save our underwater rainforests</i> – National Observer
2022	<i>How urchins and the blob tag-teamed kelp forests</i> – Hakai Magazine
2021	<i>In surprising sign of resilience, some corals can survive long heat waves</i> – Science Magazine
2021	<i>Certain corals can recover from bleaching during long heatwaves</i> – New Scientist
2021	<i>Ecology: Shifting relationships help corals recover from bleaching</i> – Nature Asia
2021	<i>Des populations de coraux survivent mieux au blanchiment sans nuisance humaine</i> – CBC Radio Canada
2019	<i>DNA analysis reveals cryptic underwater ecosystem engineers</i> – AAAS EurekAlert!
2019	<i>Where did kelp come from?</i> - Hakai
2016	<i>Redwoods of the sea reveal fundamental growth patterns for photosynthesis</i> – Science Magazine
2015	<i>UBC researchers study ocean stress on seaweeds</i> – Globe & Mail

QUALIFICATIONS RELEVANT TO FIELD WORK

CAUS SCUBA Diver (Canada) – AAUS equivalent
PATTA Commercial Scientific Diver (Australia)
PADI Divemaster
PADI Drysuit Diver
Several RAID Specialties (e.g., Limited visibility, Full face mask)
Small Vessel Operator Permit (SVOP) – Canada
Marine Emergency Duties – Canada
Radio Operator Certificate (ROC-M) – Canada

REFERENCES

Prof. Patrick T. Martone – University of British Columbia (PhD Supervisor)
Email: patrick.martone@botany.ubc.ca

Prof. Julia K. Baum – University of Victoria (Previous Postdoc Supervisor)
Email: baum@uvic.ca

Prof. Thomas Wernberg – University of Western Australia (Current Postdoc Supervisor)
Email: thomas.wernberg@uwa.edu.au