Curriculum vitae

PERSONAL INFORMATION

HAVENHAND, JONATHAN

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EDUCATION

1981 Bachelor of Science (Honours) University of Stirling, Scotland

1986 PhD (Marine Ecology)"The physiological ecology and life-history strategies of nudibranch molluscs *A. proxima* and *O. muricata"*, Supervisor: Dr C.D.Todd, St Andrews University, Scotland.

CURRENT & PREVIOUS POSITIONS

1986 - 1987 University of Liverpool Marine Biological Station, Isle of Man, U.K.

1987 - 1989 Royal Society of London Research Fellow, KVA Kristineberg, Sweden

1990 - 1992 NATO Research Fellow, Friday Harbor Labs, Univ. Washington, USA

1992 – 1999 Lecturer in Marine Biology, School of Biological Sciences, Flinders University, Australia

2000 – 2002 Associate Professor in Marine Biology, (Flinders University)

2002 – 2003 Lambergs Guest Professor, University of Gothenburg, Sweden

2003 – Researcher, Department of Marine Sciences – Tjärnö, University of Gothenburg

2011 – Honorary Professor, Macquarie University, Australia

2018 – Associate Head (Teaching & Learning), Dept. of Marine Sciences – Tjärnö, Univ. Gothenburg

GRADUATE STUDENTS & POST-DOCS

12 PhD, 4 postdocs (completed)

1 current PhD student (co-supervised)

COMMISSIONS OF TRUST

2002 – 2003 Carl & Thecla Lambergs Guest Professor, University of Gothenburg

2011 – Honorary Professor, Macquarie University, Australia.

2015 – Reviewer for: *Biogeosciences, Current Biology, Frontiers in Marine Science, Global Change Biology, J. Exp. Mar. Biol. Ecol., Limnology & Oceanography, Marine Ecology Progress Series, Marine Biology, Marine Pollution Bulletin, Nature Climate Change, PLoS One, Proceedings of the Royal Society B*.

2015 – Reviewer for: National Science Foundation (USA); Natural Environment Research Council (UK); Royal Society of New Zealand (NZ)

2017 – 2018 Visiting Researcher, Antarctic Climate & Ecosystems, University of Tasmania, Australia

I have undertaken multiple academic reviews for tenure (4) and promotion (7, 4 to Full Professor).

CAREER BREAKS

none

SELECTED RESEARCH FUNDING

Since 2003 all of my own salary, 75% of the salaries for my graduate students, and all of the research expenses for my laboratory have been met from competitive national and international funding sources. During that period, as a sole PI I have obtained over 20 million Swedish kronor (kr), and a further 13 million kr to my laboratory in collaborative grants with colleagues.

I was the only, or primary, applicant for the following grants:

2004 FORMAS 2003-0234 *Development of a behavioural assay for rapid evaluation of novel environmentally benign antifouling substances*. *(1 yr)* **416 kSEK**

2004 VR 621-2004-2653 *Intersexual Arms Races: do gamete compatibilities limit reproduction in marine populations? (3 yr)* **1620 kSEK**

2005 FORMAS 2004-0631 *Understanding shipworm biology: toward the development of novel non-toxic antifoulants against shipworms*. *(3 yr)* **1579 kSEK**

2008 FORMAS 2007-1971 *Ocean Acidification: consequences for fertilization success, larval survival and the capacity for adaptive responses in marine invertebrates. (2 yr)* **1556 kSEK**

2009 FORMAS 2008-637 *Ocean Acidification: further consequences for fertilization success, larval survival and the capacity for adaptive responses in marine invertebrates. (3 yr)* **4195 kSEK**

2015 FORMAS 2014-1193 *Determining the potential for further invasion of the Pacific oyster,* Crassostrea gigas*, in Swedish coastal waters. (3 yr)* **5971 kSEK**

2015 Tryggers Stiftelse *Marine biodiversity & climate change (2 yr)* **222 kSEK**

2018 FORMAS *Can within-species diversity increase resilience of seagrass beds to a changing, and variable, marine climate?* ***2974 kSEK***

In addition to the above I was an active co-author and co-applicant on the following grants (in each case the fractional funding allocated to my component of the work is given):

2008 Naturvårdsverket (EU/BONUS) *Ecosupport - Modeling tool to support decision making in the Baltic in future climate. (Markus Meier PI, 3 yr)* *11% of total =* **1716 kSEK**

2008 VR/FORMAS Linné Grant *Adaptation in Changing Marine Environments (Pam Fredman PI, 10yr) ~ 10% of total =* **8800 kSEK**

2008 AUSTRALIAN RESEARCH COUNCIL *The impact of ocean acidification on the fertilization, larval development and recruitment of key Australian marine organisms (Ove Hoegh-Guldberg PI, 3 yr) 25% of total =* **692 kSEK**

2009 EU-FP7 *WreckProtect - Strategies for protection of shipwrecks in the Baltic Sea against forthcoming attack by marine borers: a synthesis and information project based on the effects of climate change. (Charlotte Gjelstrup PI, 3 yr)* *7% of total =* **480 kSEK**

2009 VR 2008-6429 Climate change and predatory invasion of the Antarctic marine environment. (Per Moksnes, PI, 2 yr) 50% of total = **185 kSEK**

2010 EU-INTERREG IVA *Sea meets Land – Climate, Management and Planning together. (Ingela Isaksson, PI, 3 yr)* *0.2% of total =* **76 kSEK**

2010 FORMAS 2009-1086 *Effects of climate change and biodiversity on marine ecosystem services: a case-study in seagrass beds. (L. Gamfeldt PI, 3 yr)* *50% of total =* **1207 kSEK**

2014 UCL-Australia *A new, rapid method for whole-effluent toxicology (WET) assessment of offshore releases and contaminated sediments. (Craig Styan PI, 2 yr)* *50% of total =* **787 kSEK**

2016 Hasselblad Stiftelse *Acidification of Swedish seas in a changing environment (1 yr)* **200 kSEK**

PEER REVIEWED PUBLICATIONS

Google Scholar Metrics (2020-09-09):

113 scientific articles; 4664 citations; Overall H-Index = 38, H-index last 10 years = 28

Peer-reviewed articles since 2015:

1. Britton D, M Schmid, F Noisette, **JN Havenhand**, ER Paine, CM McGraw, . . . CL Hurd (2020). Adjustments in fatty acid composition is a mechanism that can explain resilience to marine heatwaves and future ocean conditions in the habitat-forming seaweed *Phyllospora comosa* (Labillardiere) C.Agardh. *Glob Chang Biol.* **DOI**:10.1111/gcb.15052
2. Hurd CL, J Beardall, S Comeau, CE Cornwall, **JN Havenhand**, P Munday, L Parker, JA Raven, CM McGraw (2019) Ocean acidification as a multiple driver: how interactions between changing seawater carbonate parameters affect marine life. *Marine & Freshwater Research.* **71:** 263-274. **DOI: 1**0.1071/MF19267
3. Green L, **JN Havenhand**, L Kvarnemo (2019) Evidence of rapid adaptive change to local salinity in the sperm of an invasive fish. *Evolutionary Applications.* **DOI:** 10.1111/eva.12859
4. Kinnby A, RT Pereyra, **JN Havenhand**, P DeWit, H Pavia, K Johannesson (2019) Factors affecting formation of adventitious branches in the seaweeds *Fucus vesiculosus* and *F. radicans. BMC Ecology* **19:**22. **DOI:** 10.1186/s12898-019-0239-7.

5. Falkenberg LJ, CA Styan, **JN Havenhand** (2019) Sperm motility of oysters from distinct populations differ in their response to ocean acidification and freshening. *Scientific Reports.* **DOI:** 10.1038/s41598-019-44321-0

6. Boyd PW, S Collins, S Dupont, K Fabricius, J-P Gattuso, **JN Havenhand** *et al.* (2019). Handbook to support the SCOR Best Practice Guide for 'Multiple Drivers' Marine Research. U.Tasmania, SCOR. **DOI:** 10.25959/5c92fdf0d3c7a

7. Turner LM, **JN Havenhand**, C Alsterberg, AD Turner, SK Girisha, A Rai, MN Venugopal, I Karunasagar, A Godhe (2019). Toxic algae silence physiological responses to multiple climate drivers in a tropical marine food chain. *Front. Physiol.* **10**:373. **DOI:** 10.3389/fphys.2019.00373

8. **Havenhand JN**, HL Filipsson, S Niiranen, M Troell, A-S Crépin, S Jagers, D Langlet, S Matti, D Turner, M Winder, P deWit, LG Anderson (2018) Ecological and functional consequences of coastal ocean acidification: perspectives from the Baltic-Skagerrak System. *Ambio* **DOI:** 10.1007/s13280-018-1110-3

9. Jagers SC, S Matti, A-S Crépin, D Langlet, **JN Havenhand**, M Troell, HL Filipsson, V Galaz, LG Anderson (2018) Societal causes of, and responses to, ocean acidification. *Ambio* **DOI:** 10.1007/s13280-018-1103-2

10. Johannesson K, A-K Ring, K Johannesson, E Renborg, P Jonsson, **JN Havenhand** (2018) Oceanographic barriers to gene flow promote genetic subdivision of the tunicate *Ciona intestinalis* in a North Sea Archipelago. *Marine Biology* **165:** 126- **DOI:** 10.1007/s00227-018-3388-x

11. Boyd PW, S Collins, S Dupont, K Fabricius, J-P Gattuso, **JN Havenhand** *et al.* (2018) Experimental strategies to assess the biological ramifications of multiple drivers of global ocean change – a review. *Global Change Biology* **DOI**: 10.1111/gcb.14102

12. Pansch C, G Hattich, ME Heinrichs, A Pansch, Z Zagrodzka, **JN Havenhand** (2018) Long-term exposure to acidification disrupts reproduction in a marine invertebrate. *PLoS One* **13**(2): e0192036

13. Bausch AR, MA Gallego, J Harianto, P Thibodeau, N Bednarsek, **JN Havenhand**, T Klinger (2018) Influence of bacteria on shell dissolution in dead gastropod larvae and adult *Limacina pteropods* under ocean acidification conditions. *Mar. Biol.* **165:** 40 **DOI:** 10.1007/s00227-018-3293-3

14. Smith K, RB Aronson, B Steffel . . . **JN Havenhand**, et al (2017) Climate change and the threat of novel marine predators in Antarctica. *Ecosphere* 8(11):e02017. 10.1002/ecs2.2017

15. Svensson O, J Gräns, M Celander, **JN Havenhand**, et al (2017) Immigrant reproductive dysfunction facilitates ecological speciation. *Evolution* **71:** 2510-2521. **DOI:** 10.1111/evo.13323

16. Lind O, M Järvå, M Alm-Rosenblad . . . **JN Havenhand**, et al (2017) Analysis of aquaporins from the euryhaline barnacle *Balanus improvisus* reveals differential expression in response to changes in salinity. *PLoS One* DOI:10.1371/ journal.pone.0181192

17. Falkenberg L, A-L Wrange A-L, A Kinnby, **JN Havenhand**, A Lockyer, CA Styan (2017) Low sensitivity of reproductive life-stages in the Pacific oyster (*Crassostrea gigas*) to abamectin. *Chemosphere* **182:** 665-671. DOI: 10.1016/ j.chemosphere.2017.05.085

18. Turner L, C Alsterberg, A Turner, K Girisha, A Rai, **JN Havenhand**, M Venugopal, I Karunasagar, A Godhe (2016) Pathogenic marine microbes influence the effects of climate change on a commercially important tropical bivalve. *Scientific Reports* **6:** 32413. DOI: 10.1038/srep32413

19. Nasrolahi A, **JN Havenhand**, A-L Wrange, C Pansch (2016) Population and life-stage specific sensitivities to temperature and salinity stress in barnacles. *Scientific Reports* **6**: 32263. DOI: 10.1038/srep32263

20. Vihtakari M, **JN Havenhand**, P Renaud, I Hendriks (2016) Variable individual- and species-level responses to ocean acidification. *Frontiers in Marine Sciences* **15:** 51. DOI:10.3389/fmars.2016.00051

21. Frommel AY, D Margulies, JB Wexler, . . . **JN Havenhand** (2016) Ocean acidification has lethal and sub-lethal effects on larval development in yellowfin tuna, *Thunnus albacares*. *J. Exp. Mar. Biol. Ecol.* **482:** 18-24

22. Appelqvist C, **JN Havenhand** (2016) A phenological shift in the time of recruitment of the shipworm, *Teredo navalis* L., mirrors marine climate change. *Ecology & Evolution.* DOI:10.1002/ece3.2126

23. Wrange A-L, G Charrier, A Thonig, . . . **JN Havenhand**, et al (2016) Global and regional genetic patterns of the bay barnacle, *Balanus (Amphibalanus) improvisus* (Darwin). *PLoS One.* DOI:10.1371/journal.pone.0147082

24. Falkenberg LJ, **JN Havenhand**, CA Styan (2016) Sperm Accumulated Against Surface: a novel alternative bioassay for environmental monitoring. *Mar. Env. Res.* **114:** 51-57