**Personal**



**Name:** Chris Ware

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**Date of birth:** 28th of October, 1981

**Present position:** Postdoctoral researcher CSIRO

**Career objective**

Throughout my research career studying invasion biology and macroecology, I have developed a strong sense of the need to link scientific understanding to the management of natural systems. I have developed my knowlegde of modelling and computer programming in this regard, and believe modelling approaches hold great potential for developing the understanding required to address challenges posed by Global Change. I wish to work in a position which allows me to further my skills in these fields, and through the development of tools, systems, and knowledge, contribute to the improved management of natural systems to support human welfare.

**Academic work**

**Academic degrees:**

2011-2014 PhD, University of Tasmania

*Measuring and managing invasive species threats in the Arctic*

2007-2008 Bachelor Antarctic Studies with Honours, University of Tasmania

*Aliens in Antarctic* (Hons, 1st Class)

2000-2004 Bachelor of Science, University of Tasmania

**Studies abroad:**

2011-2013 University of Tromsø, Norway,

*PhD work, and research technician.*

2009 University Centre in Svalbard, Norway

*Ecology field work, and field course participant.*

2001 University of Victoria, Canada

*Second year courses taken as part of my UTas BSc.*

**Research positions:**

2015- Experimental Scientist at CSIRO, Land & Water, Canberra

*Project-oriented work related to conservation planning, involving spatial modelling, computer programming, data management, and paper writing.*

2014-2015 **Postdoctoral researcher at CSIRO, Land & Water Flagship, Canberra**

*Currently undertaking postdoctoral research within the Macroecological Modelling and Research Group.*

2013-2014 **Studentship contract at CSIRO, Canberra**

*Completion of PhD work.*

2011-2013 **Research assistant at the University of Tromsø, Norway**

*Independent research work connected to my PhD, involving DNA lab work, biological sampling, data analysis, spatial modelling, and report writing.*

2010-2011 **Scientific officer at the Australian Antarctic Division**

*Research work for the project ‘Aliens in Antarctic’ involving biological sampling and taxonomy, and report writing.*

2010-2011 **Field assistant at the Australian Antarctic Division**

*Field work for the terrestrial ecology programs on sub-Antarctic Macquarie Island involving biological sampling and taxonomy, and sample curation.*

2010 **Research officer, the Tasmanian Infection Prevention and Control Unit**

*Data analysis, literature reviews, and manuscript writing related to hospital acquired infections, and infection surveillance.*

2009 **Assistant at Greening Australia**

*Field sampling and data handling work for a carbon sequestration research project.*

2006-2007 **Field assistant with the University of Tasmania**

*Field work for fire and fungal ecology PhD projects.*

2005 **Field and GIS assistant, Tasmanian Department of Environment**

*Field and GIS processing work for the Tasmanian Vegetation Mapping Program.*

**Awards**

**Scholarships and funding:**

2011-2014 Australian Postgraduate Award ($69,000 AUD).

2013 Fram Centre (40,000 NOK). Incentive funding for conference travel.

2012-2013 Fram Centre (900,000 NOK) “Shipping pathways of species introduction.”

2012 University of Tasmania conference travel scholarship ($2000 AUD).

2011-2012 Fram Centre (900,000 NOK) “Shipping pathways of species introduction.”

2011-2012 Svalbard’s Environmental Protection Fund (650,000 NOK) “Terrestrial invasive species pathways.”

2010 Norwegian Polar Institute (50,000 NOK) “Invasive species pathways.”

2007-2008 Antarctic Tasmania Honours Scholarship ($5000 AUD)

**Publications**

**Scientific peer reviewed publications:**

1. **Ware C**, Williams KJ, Harding J, Hawkins B, Harwood T, Manion G, Perkins GC, Ferrier S (accepted) Improving biodiversity surrogates for conservation assessment: a test of methods and the value of targeted biological surveys. *Diversity & Distributions*.
2. Rumpf S, Alsos IG, **Ware C** (accepted) Prevention of microbial species introductions to the Arctic: The efficacy of footwear disinfection measures on cruise ships. *Neobiota*.
3. Hoskins AJ, Bush A, Gilmore J, Harwood T, Hudson LN, **Ware C**, Williams KJ, Ferrier S (2016) Downscaling land‐use data to provide global 30 ″estimates of five land‐use classes. *Ecology and Evolution*. 1, 3040-55.
4. **Ware C**, Sundet JH, Jelmert A, Berge J, Pellissier L, Wisz MS, Kriticos D, Alsos IG (2016). Biological introduction threats from shipping in a warming Arctic. *Journal of Applied Ecology*.
5. Douglas MR, Slynko YV, Dgebuadze YY, Olenin S, Aleksandrov B, Boltachev A, Slynko EE, Khristenko D, Minchin D, Pavlov DF, Reshetnikov AN, Vekhov DA, **Ware C** , Douglas ME (2015) Invasion Ecology: An International Perspective Centered in the Holarctic. *Fisheries*.
6. Alsos IGA, **Ware C**, Elven R (2015) Past Arctic aliens have passed away, current ones may stay. *Biological Invasions*, 1-11.
7. Huiskes AHL, Bergstrom DM, Gremmen NJM, Lee JE, Terauds A, Crosbie K, Frenot Y, Hughes KA, Imura S, Kiefer K, Lebouvier M, Raymond B, Tsujimoto M, **Ware C**, Van de Vijver B, Chown SL (2014) Aliens in Antarctica: evidence for reducing transfer of plant propagules by human visitors. *Biological Conservation*. 17, 278-284.
8. **Ware C**, Kirkpatrick, JB, Sundet JH, Jelmert A, Berge J, Coutts ADM, Floerl O, Pellissier L, Wisz MS, Alsos IG (2013). Climate change, non-indigenous species and shipping: assessing the risk of species introduction to a high-Arctic archipelago. *Diversity and Distributions*, 20, 10-19.
9. Chown SL, Huiskes AHL, Gremmen NJM, Lee JE, Terauds A, Crosbie K, Frenot Y, Hughes KA, Imura S, Kiefer K, Lebouvier M, Raymond B, Tsujimoto M, **Ware C**, Van de Vijver B, Bergstrom DM (2012). A continent wide risk assessment for the establishment of alien species in Antarctica. *PNAS*, 109 (13): 4938-4943 \* cited more than 100 times
10. **Ware C**, Bergstrom DM, Müller E, Alsos IG (2011) Humans introduce viable seeds to the Arctic on footwear. *Biological Invasions*, 14 (3): 567-577
11. Hughes KA, Lee JE, Tsujimoto M, Imura S, Bergstrom DM, **Ware C**, Lebouvier M, Huiskes AHL, Gremmen NJM, Frenot Y, Bridge PD, Chown SL (2011) Food for thought: Risks of non-native species transfer to the Antarctic region with fresh produce. *Biological Conservation,* 144(5): 1682-1689
12. Hughes KA, Lee JE, **Ware C**, Kiefer K, Bergstrom DM (2010) Impact of anthropogenic transportation to Antarctica on alien seed viability. *Polar biology*, 33(8): 1125-1130
13. Mitchell B*,* **Ware C***,* McGregor A*,* Brown S*,* Wells A*,* Stuart RL*,* Wilson F, Mason M (2011) ASID (HICSIG)/AICA Position Statement: Preventing catheter-associated urinary tract infections in patients. *Healthcare Infection*, 16(2): 45-52.
14. Mitchell B*,* **Ware C***,* McGregor A*,* Brown S*,* Wells A (2011) *Clostridium difficile* infection in Tasmanian Public hospitals 2006-2010. *Healthcare Infection*, 16(3): 101-106.

**Unpublished reports**

1. **Ware C**, Williams KJ, Harwood, T, Ferrier S (2017) Contextual analysis of ecological change for Tasmania. CSIRO Publication Number EP172170.
2. Mitchell B, Wilson F, **Ware C**, Brown S, McGregor A, & Dancer S (2012) Evaluating environmental cleanliness in hospitals and other healthcare settings. What are the most effective and efficient methods to use? Department of Health and Human Services, Hobart.
3. **Ware C**, Alsos IG, & Berge J (2012) Ships as potential dispersal vectors of invasive marine organisms into high-Arctic Svalbard. Report to the Governor of Svalbard.
4. **Ware C**, Muller E, and Alsos IG (2008) Risk assessment of seed introduction by visitors to Svalbard. Report to the Governor of Svalbard.
5. Bergstrom DM, **Ware C** (2008) Aliens in Antarctica project – inspection of fresh food for alien propagules. Report to the Australian Antarctic Division.

**Popular articles**

1. Heed past lessons to save Arctic from invasive species ([2013](https://theconversation.com/heed-past-lessons-to-save-arctic-from-invasive-species-20181)) *The Conversation.*
2. Arctic at risk from invasive species ([2013](http://www.theecologist.org/News/news_analysis/2173097/arctic_at_risk_from_invasive_species.html)) *The Ecologist.*

# Nautical Stowaways to Increase as Global Oceans Warm ([2013](http://www.natureworldnews.com/articles/4752/20131104/nautical-stowaways-increase-global-oceans-warm.htm)) *Nature World News.*

1. Blindpassasjerer påvirker Svalbards artsmangfold (Stowaways affect Svalbard biodiversity) ([2012](http://svalbardposten.no/index.php?page=vis_nyhet&NyhetID=2824&sok=1)) *Svalbardposten.*
2. Arctic plant invasions: the shoe cleaner who wants to save Svalbard ([2008](http://www.spiegel.de/international/europe/arctic-plant-invasion-the-shoe-cleaner-who-wants-to-save-svalbard-a-575841.html)) *Spiegel online.*

**Conference presentations**

**2016** Alaskan Invasive Species Conference (Fairbanks, Alaska): keynote presentation ‘The past, present, and future of species invasions in the Norwegian high-Arctic.’

**2016** Alaskan Invasive Species Conference (Fairbanks, Alaska): keynote presentation ‘Biological introduction risks from shipping in a warming Arctic.’

**2015** Species on the Move (Hobart, Australia): oral presentation ‘Fine-grained paleoclimate surfaces as a key input to understanding and projecting patterns of biodiversity persistence under climate change.’

**2013** International Congress on Biological Invasions (Qingdao, China): oral presentation ‘Climate change, non-indigenous species, and shipping: assessing the risk of species introduction to a high-Arctic archipelago.’

**2013** Symposium on Aliens Speices in the Holarctic (Borok, Russia): oral presentation ‘Assessing marine bioinvasion hazards in high-Arctic Svalbard.’

**2013** ForBio Annual Conference (Oslo, Norway): oral presentation ‘Using DNA barcoding to evaluat bioinvasion risks associated with ballast water transport of zooplankton to the Arctic.’

**2013** Arctic Frontiers (Tromsø, Norway): oral presentation ‘Assessing marine bioinvasion hazards in high-Arctic Svalbard.’

**2012** AECO cruise conference (Oslo, Norway): oral presentation, ‘Efficacy of new environmental management measures in Arcrtic tourism’

**2012** NEOBIOTA2012 (Ponte Vedra, Spain): oral presentation, ‘Assessing marine bioinvasion hazards in high-Arctic Svalbard.’

**2012** IPY Science conference (Montreal, Canada): oral presentation, ‘Pathways of marine species introduction to Svalbard.’

**2010** International Polar Year conference (Oslo, Norway): oral presentation, ‘Human mediated seed dispersal in the High Arctic’

**Professional activities**

**Reviewed papers for following journals:**

* Ecography
* ICES Journal of Marine Science
* Diversity and Distributions
* Aquatic Invasions
* Journal of Biogeography
* Nature Communications

**Workshops attended**

**2018** Rountable discussion on Roundtable on Sustainable development Goals in the Arctic – invited participant.

**2014** Strategic Environmental Impact Assessment of Development in the Arctic (Tromsø, Norway) – invited participant.

**2013**  1st Science-Industry Workshop on Expedition Cruise Tourism in Svalbard (Oslo, Norway) – invited participant.

**2013** Workshop on Biofouling Management for Sustainable Shipping (Melbourne, Australia).

**Other work**

2000-2010 Hiking guide, Cradle Mountain Huts and the Bay of Fires, Tasmania

2007-2009 Australian Student Volunteers leader, various locations around Australia

2006-2008 Hiking gude, Tasmanian Expeditions, Tasmania

2006-2007 Teacher, Bicycle Education Program, Tasmania

**Referees**

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