

Katherine Richardson Christensen



Born: May 11, 1954 (USA)

Nationality: American; Danish resident

Family: Married (1983) to Jens Bjerregaard Christensen; Two children (born 1988 and 1990).

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Current position:

Professor in Biological Oceanography, Biological Institute, Faculty of Science and Leader, University of Copenhagen's Sustainability Science Centre (sustainability@science.ku.dk).

Adj. Professor in Biological Oceanography, University of Aarhus

Research Profile:

The overall focus of my research is to better understanding of the role of biological processes and biodiversity on the cycling of carbon in the upper ocean and how this impacts food webs and the global carbon cycle. Most of my research has been on marine plankton (primarily phytoplankton). However, I have also studied higher trophic levels such as fish (both larvae and adults) and even harbour porpoises. I am a co-PI in The Center for Macroecology, Evolution and Climate (center leader Carsten Rahbek) supported by the Danish National Research Foundation, where I lead the theme on *macroecology and oceanography*. Recent research foci include

- Climatic control of marine ecological processes, including predicting the influence of climate change on aquatic productivity, quantifying the role of biological processes in ocean uptake of atmospheric CO₂ and how changes in ocean conditions influence the strength of the biological pump.
- The effect of physical/chemical conditions on biodiversity and size distribution of phytoplankton and

- The relationship between phytoplankton distributions and water column stability with special interest in phytoplankton blooms and hydrographic features.

In addition, I have recently been working with an international research team focusing on identifying “planetary boundaries”, i.e. quantifying the global supply of some non-material global resources upon which humankind is dependent.

In 2006-2007, I led the largest project on a round-the world cruise (www.galathea3.dk) with participation of researchers from 4 Danish research institutes where our research aim was to develop a global picture of carbon flow in surface waters of the ocean as well as CO₂ exchange between the ocean and the atmosphere. The project is endorsed by international project, IMBER (Integrated Marine Biogeochemistry and Ecosystem Research, www.imber.info). Until the Galathea cruise, most of my research has been carried out in the North Sea, Skagerrak, Kattegat, North Atlantic and Greenland Seas. In 2009, I was Chairman of the Scientific Steering Committee for a large international scientific conference, CLIMATECHANGE: Global Risks, Challenges and Decisions (www.climatecongress.ku.dk).

Education:

Ph.D. (1980) University of North Wales, U.K. (Carried out while on a Marshall Fellowship from the U.K.)

Thesis: *The Role of Dissolved Organic Material in the Nutrition and Survival of Marine Dinoflagellates*. (Supervisors: Prof. G.E. Fogg, FRS; Dr. I.A.N. Lucas).

B.A. (1976-magna cum laude) Harvard University, Cambridge, Mass.

Graduated (1972) from Yarmouth High School, Yarmouth, Maine.

Employment:

February 1, 2002 – 31 January 2007 Pro-rector, Aarhus University

May, 1998 - Professor, Biological Oceanography, Aarhus University

Sept. 1996 - May, 1998: Research Director of Department of Marine and Coastal Ecology, Danish Institute for Fisheries Research

Jan. 1988 - Aug. 1996: Head of Department of Marine and Coastal Ecology, Danish Institute for Fisheries Research.

June, 1983 - Jan. 1988: Biologist, Danish Institute for Fisheries and Marine Research.

Jan. 1982 - June, 1983: Post-doctoral fellow on contract to Prof. J. A. Raven, University of Dundee, Scotland.

Oct. - Dec. 1981: Computing and data analysis on contract to the Unit of Coastal and Estuarine Studies, University of Wales, U.K.

Feb.-May, 1981: European Scientific Exchange Fellow at the Department of Plant Physiology, University of Umeå, Sweden (sponsored by the Royal Society, London).

Oct. 1979 - Oct. 1981: Demonstrator in Marine Biology, University College of North Wales, Menai Bridge, U.K.

Work-related posts:

International:

2011- Member of the Mistra CEE Executive Committee, appointed by the Royal Swedish Academy of Sciences

2010 - Chairperson of Scientific Advisory Board: EUROFLEETS

2009 - Member of Scientific Advisory Board: ACCENT EU Project

2009 - Member of Steering Committee of the Sustainable Development Knowledge Partnership, established by United Nations Division of Sustainability.

2008 - Board Member, ICROFS (International Centre for Research in Organic Food Systems)

2007 -2010: European Research Council (ERC); Chairperson, Evaluation Panel PE 8, 9 & 10 (Earth System Science) Starting Grants

2006-2007: Member, Scientific Advisory Board: Björn Carlson Stiftelse, Stockholm, Sweden, appointed by the Royal Scientific Academy in Sweden.

2005–2008: Member, Scientific Advisory Committee Royal Netherlands Institute of Sea Research, Texel.

2005–2009: Member of EUROCEANS (EU Network of Excellence) steering committee

2005-2006: Board Member: NORDFORSK

2004-2007: Member, International Institute for Applied Systems Analysis (IIASA), Austria.

2004–2009: Member, Scientific Advisory Panel Leibniz - Institut für Meereswissenschaften, Germany.

2004-2009: Member, Scientific Advisory Council Plymouth Marine Laboratory, UK.

2003-2008: Member, ERASMUS MUNDUS Selection Committee

2002-2006: Member (vice-president), Scientific Committee, European Environmental Agency.

2001-2007: Vice President, ESF (European Science Foundation)

1999-2004: Member, IGBP (International Geosphere Biosphere Program) Scientific Committee

1998–2004: Member, Board of Trustees, ICLARM (International Center for Living Aquatic resource Management), Penang, Malaysia.

Jan. 1998 - 2001 Member, Living Marine Resources Panel, Global Ocean Observing System (GOOS)

1996-1999 Member, Nordisk Forskningspolitisk Råd (Nordisk FPR)

1995-1998 Member of Executive Council European Ocean Board (ESF)

1992-1996: Chairperson of the Advisory Committee on Marine Environment (ACME) - International Council for Exploration of the Seas (ICES)

1988-1992: Member of the Advisory Committee on Marine Pollution (ACMP) (ICES).

1988-1998: Member Biological Oceanography Committee, ICES (Chairman 1989-1992)

1985-1989: Chairperson, ICES Working Group on Phytoplankton Ecology

1983: Lecturer on a UNESCO course on phytoplankton productivity (Santiago, Chile)

Denmark:

2011 - Chairperson of the Committee on Trees and Environment (Fonden for Træer og Miljø)

2010 - Board Member, DHI (Danish Hydraulic Institute)

2009 - Vice Chairperson, Danish Centre for Marine Research (*Dansk Center for Havforskning*)

2008-2010: Chairperson of the Danish Government's Commission on Climate Change Policy

2007 - Member of the Board, Aage V. Jensen Naturfond, Copenhagen

2006 - Chairperson Steering Committee for "Blue Reef project" an EU supported nature restoration project in the ocean.

2005-2009: Chairperson Advisory group to the Danish Education Minister on the reform of gymnasium education

2005-2009: Member of the Board: Danish Fund for Advanced Technology (*Højteknologifonden*)

2004-2005: Chairperson *Karakterkommission* (Commission for examining the grading scale used in Danish education)

2000-2002: Vice Chairperson, Danish Council for Research Education

2000-2001: Vice Chairperson, *Wilhelmudvalget* (Committee to propose to the Danish Government an action plan for meeting the commitments of the Biodiversity Convention)

May 1997-2002: Adjunct Professor (Roskilde University)

1996-2003: Member, The Danish Research Council (*Danmarks Forskningsråd*): Vice chairperson 1996 - 2002; Chairperson: 2002 - 2003

1995-1996: Chairperson, Working group responsible for preparing input concerning Natural Sciences to the Danish national research strategy

1995-1996: Chairperson of the Danish Research Council for the Natural Sciences ("*Statens Naturvidenskabelige Forskningsråd*")

1993: Consultant for Øresundskonsortiet

1992-2002: Member of Research Council for Developing Countries ("*Rådet for Ulandsforskning*". *Udenrigsministeriet*)

1992-1993: Member of a Danish/Swedish Committee to recommend a monitoring program to record any environmental effects of the Bridge over the Øresund.

1991-1995: Member Research Council for the Natural Sciences ("*Statens Naturvidenskabelige Forskningsråd*")

1991-2006: Member of Board of Directors, Danish Environmental Research Institute (*Danmarks Miljøundersøgelser*)

1991-1996: Member of Advisory Board to the Environmental Ministry's Marine Research Program 90

1991-1996: Chairperson, Subgroup on Marine and Freshwater. Strategic Environment Research Program ("*Strategisk Miljøforskningsprogram*")

1991: Member of "Expert panel". Consensus Conference on nitrogen and phosphorus in the aquatic environment

1990 - present: Member of diverse steering groups for International scientific Meetings and Evaluation Groups

1989 - present: Member of "*Miljøklagenævnet*"

Teaching and supervision at the University level:

1984 - 1998: Guest lecturer in phytoplankton ecology and biological oceanography, University of Copenhagen; external examiner for a number of Ph.D. and Masters Degree examinations at the University of Copenhagen and other Scandinavian Universities; External supervisor for 4 PhD students (Danish Technical University and the University of Wales, UK) and several Masters students (University of Copenhagen).

Since 1998, teaching and graduate student supervision have been a part of my official job responsibilities the Universityies of Aarhus and Copenhagen and I have, in that time, supervised or co-supervised

- 11 PhD candidates (three still in progress) and
- > 25 Masters students.

I have had responsibility for the development and execution of undergraduate courses (and examinations) on the following topics:

- Phytoplankton Physiology
- Biodiversity
- Dynamics of the open ocean (biological oceanography)

In addition, I have been a contributing lecturer/examiner in courses on.

- Marine biology
- Marine Ecology
- Microbial Ecology and
- Environmental Studies

I have received no formal pedagogical training. However, student evaluation of my teaching has been uniformly positive. Copies of these evaluations are on file at the Dept. of Biology, University of Aarhus.

Public outreach:

Lectures: I am frequently invited to give lectures on my research for scientific and non-scientific gatherings (> 50 per year in recent years). My non-scientific audiences range from school children to political fora and formal gatherings.

Press and Electronic media: I frequently give interviews to the press on my research and, especially, climate change related issues..

Popular Science – books and articles: Since 2005, I have authored or co-authored the following scientific publications aimed at a general audience:

Richardson, K. 2009. Climate Change and Life on Earth. In: *100 places to remember before they disappear*. Co + Life A/S.

Rahmstorf, S. & K. Richardson. 2008. *Our Threatened Oceans*. Haus Publishing, London.

Richardson, K. 2008. Broer og naturen i danske farvande. In: *Landet, vandet og broen*. Sund & Bælt Holding, A/S. Copenhagen pp.38-51.

Rahmstorf, S. & K. Richardson 2007. *Wie bedroht sind die ozeane? Biologische und physikalische Aspekte*. Forum für Verantwortung. Fischer Taschenbuch Verlag 280 pp.

Richardson, K. 2005. Oceaner af vand . In: *Viden om Vand*. Kaufmann, I. & Keiding, S. R. (eds.). Aarhus Universitetsforlag. 176 pp. (a textbook for gymnasium students)

Richardson, K., Mouritsen, L.T. 2006, "På vej mod et surt hav - udledning af CO2 ændrer verdenshavene", *Aktuel Naturvidenskab*, vol. 5, s. 4-7.

Lund-Hansen, L.C., M.H. Nielsen, A. Bruhn & K. Richardson. 2005 "Havets græsmark vokser ujævnt – om strøm og algevækst i Lillebælt" *Aktuel Naturvidenskab* vol 3, 15-18.

Richardson, K., Mouritsen, L.T. & Sørensen, L.L. 2006. The marine carbon cycle from North to South along the Galathea route -an on going project investigating the global carbon cycle. *IMBER Update* December 2006.

Editorial and Evaluation Activities:

I am a review editor for *Marine Ecology Progress Series* and review scientific articles on an *ad hoc* basis for a number of scientific journals including, *Marine Ecology Progress Series*, *Limnology and Oceanography*, *Deep Sea Research*, and *Journal of Plankton Research*. In addition, I am frequently asked to sit on evaluation panels for academic positions, especially for Scandinavian Universities, where there is a requirement of having both genders represented in evaluation panels.

External Funding:

I have consistently since the mid-1990s, maintained external funding (primarily from Danish Research Councils and EU). In total, this funding exceeds 15 million DKK. For most of these grants, I was the responsible grant holder. The largest of these externally funded projects was the Galathea project in 2006-7, with a total of over 6 million DKK from external sources including the Danish Research Council, Villum Kann Rasmussen Foundation, Nordea Foundation and Knud Højgaard Foundation. Currently, I receive most of my funding from the Center for Macroecology, Evolution and Climate, and two projects funded by the Strategic Research Council of Denmark. I have currently 3 PhD students and one post-doc.

Cruise Participation:

I have participated in >60 research cruises starting in 1975 (RV KNORR - WHOI). From 1979 - 1981, I sailed often aboard the RV Prince Madog (University of Wales) and was chief scientist on a number of occasions. Since 1983, I have participated (often as chief scientist) cruises aboard the Danish Fisheries Research Vessel, Dana. I was responsible for the largest research project on the Danish Galathea3 expedition, was on board for a

total of approximately 3 months and was the overall cruise leader on one leg (Sydney to the Solomon Islands, December 2006). In May, 2008, I joined an American team of researchers on the RV KNORR studying plankton-mediated carbon flow in the North Atlantic. In August 2008, I was chief scientist on a cruise aboard RV Dana from Greenland to Denmark examining ocean-atmosphere flux of CO₂ and carbon turnover in surface waters. I am scheduled to participate in a cruise in the Greenland Sea in August-September 2012.

Publications and bibliometric data:

Over 80 publications in or submitted to refereed international journals and books
Over 50 non-reviewed publications

As August 2011: ISI H index = 27; average number of citations per item = 38; Total citations (minus self citations) = 2260

Publications: Katherine Richardson (Christensen)

Refereed Journal publications:

1. Richardson, K., G.E. Fogg. 1982. The role of dissolved organic material in the nutrition and survival of marine dinoflagellates. *Phycologia* 21 (1): 17-26.
2. Oquist, G., Å. Hagstrom, P. Alm, G. Samuelsson, K. Richardson. 1982. Chlorophyll a fluorescence, an alternative method for estimating primary production. *Marine Biology* 68: 71-75.
3. Samuelsson, G., K. Richardson. 1982. Photoinhibition at low photon flux densities in a marine dinoflagellate (*Amphidinium carterae*). *Marine Ecology* 70: 21-26.
4. Richardson, K., J. Beardall, J.A. Raven. 1983. Adaptation of unicellular algae to irradiance: an analysis of strategies. *New Phytologist* 93: 157-191.
5. Manahan, D.T., K. Richardson. 1983. Competition studies on the uptake of dissolved organic nutrients by marine bacteria and bivalve larvae (*Mytilus edulis*). *Marine Biology* 75(2/3): 241-248.
6. Richardson, K., H. Griffiths, M.L. Reed, J.A. Raven, N.M. Griffiths. 1984. Inorganic carbon assimilation in the Isoetids, *Isoetes lacustris* L. and *Lobelia dortmana* L. from Loch Brandy, Angus Scotland. *Oecologia* 61: 115-121.
7. Richardson, K., G. Samuelsson, J-E. Hallgren. 1984. The relationship between photosynthesis measured by ¹⁴C incorporation and by uptake of inorganic carbon by unicellular algae. *Journal of Experimental Marine Biology and Ecology* 80: 241-250.
8. Raven, J.A., K. Richardson. 1984. Dinoflagellate flagella: a cost-benefit analysis. *New Phytologist* 98: 259-276.
9. Richardson, K., M.F. Lavin-Pèrigrina, E.G. Mitchelson, J.H. Simpson. 1985. The seasonal distribution of chlorophyll a in relation to physical structure in the Western Irish Sea. *Oceanologica Acta* 8 (1): 77-86.
10. Richardson, K. 1985. Plankton distribution and activity in the North Sea/Skagerrak-Kattegat frontal area in April, 1984. *Marine Ecology Progress Series* 26: 233-244.
11. Støttrup, J.G., K. Richardson, E. Kirkegaard, N.J. Pihl. 1986. The cultivation of *Acartia tonsa* Dana for use as a live food source for marine fish larvae. *Aquaculture* 52: 87-96.
12. Richardson, K., M.R. Heath. 1986. Phytoplankton distribution and primary productivity in relation to hydrographic features in the Aberdeen Bank Area: September, 1984. *DANA* 6: 1-10.

13. Richardson, K., M.R. Heath, N.J. Pihl. 1986. The distribution of herring larvae in relation to hydrographic features in the Aberdeen Bank Area: September, 1984. DANA 6: 25-36.
14. Richardson, K., G. Kullenberg. 1987. Physical and biological interactions leading to plankton blooms. Rapp. P.-V. Réun. Cons. int. Explor. Mer 187: 19-26.
15. Kiørboe, T., P. Munk, K. Richardson. 1987. Specific dynamic action (SDA) in herring (*Clupea harengus*) larvae. Mar. Ecol. Prog. Ser. 40: 1-10.
16. Kiørboe, T., P. Munk, K. Richardson, V. Christensen, H. Paulsen. 1988. Plankton dynamics and herring larval growth drift and survival in a frontal area. Mar. Ecol. Prog. Ser. 44: 205-219.
17. Rasmussen, J., K. Richardson. 1989. Response of *Gonyaulax tamarensis* to the presence of a pycnocline in an artificial water column. J. Plank. Res. 11 (4): 747-762.
18. Nielsen, T.G., K. Richardson. 1989. Food chain structure of the North Sea plankton communities: Seasonal variations of the role of the microbial loop. Mar. Ecol. Prog. Ser. 56: 75-87.
19. Bartsch, J., K. Brander, M. Heath, P. Munk, K. Richardson, E. Svendsen. 1989. Modelling the advection of herring larvae in the North Sea. Nature 340: 632-636.
20. Heath, M., K. Richardson. 1989. Comparative ecology of herring (*Clupea harengus* L.) in the Northeast Atlantic. J. Fish. Biol. 35 (A): 49-57.
21. Richardson, K. 1989. Algal blooms in the North Sea: The good, the bad and the ugly. DANA 8: 83-93.
22. Heath, M., K. Richardson, T. Kiørboe. 1990. Optical assessment of phytoplankton nutrient depletion. J. Plank. Res. 12: 381-396.
23. Richardson, K. 1991: Comparison of ¹⁴C primary production determinations made by different laboratories. Mar. Ecol. Prog. Ser. 72, 189-201.
24. Richardson, K., A. Christoffersen. 1991. Seasonal distribution and production of phytoplankton in the southern Kattegat. Mar. Ecol. Prog. Ser. 78: 217-227.
25. Kaas, H., J. Larsen, F. Møhlenberg, K. Richardson. The *Chrysochromulina polylepis* Manton and Parke bloom in the Kattegat (Scandinavian) May-June, 1988. Distribution, primary production and nutrient dynamics in the late stage of the bloom. 1991. Mar. Ecol. Prog. Ser. 79: 151-161.
26. Nielsen, T.G., B. Løkkegaard, K. Richardson, Fl. Bo Pedersen, L. Hansen. 1993. The structure of the plankton communities in the Dogger Bank Area (North Sea) during a stratified situation. Mar. Ecol. Prog. Ser. 95: 115-131.
27. Koefoed Bjørnsen, P., H. Kaas, H. Kaas, T.G. Nielsen, M. Olesen, K. Richardson. 1993. Dynamics of a subsurface phytoplankton maximum in the Skagerrak. Mar. Ecol.

Prog. Ser. 95: 279-294.

28. Heilmann, J.P., K. Richardson, G. Ærtebjerg. 1994. Annual distribution and activity of phytoplankton in the Skagerrak/Kattegat frontal region. *Mar. Ecol. Prog. Ser.* 112: 213-223.

29. Richardson, K., J.P. Heilmann. 1995. Primary production in the Kattegat: past and present. *Ophelia* 41: 317-328.

30. Hansen, I.S., G. Ærtebjerg, K. Richardson. 1995. A scenario analysis of reduced nitrogen input on oxygen conditions in the Kattegat and The Belt Sea. *Ophelia* 42: 75-93.

31. Williams, P.J. le B., C. Robinson, M. Søndergaard, A-M. Jespersen, T.L. Bentley, D. Lefèvre, K. Richardson, B. Riemann. 1996. Algal 14C and total carbon metabolisms. Experimental observations with the diatom *Skeletonema costatum*. *J. Plank. Res.* 18: 1961-1974.

32. Nielsen, E. & K. Richardson. 1996. Can changes in the fisheries yield in the Kattegat (1953-1992) be linked to changes in primary production? *ICES Journal of Marine Science*, 53: 988-994.

33. Richardson, K. 1997. Harmful or Exceptional Phytoplankton blooms in the Marine Ecosystem. *Advances in Marine Biology* 31: 301-385.

34. Richardson, K., T. Gissel Nielsen, Fl. Bo Pedersen, JP. Heilmann, B. Løkkegård & H. Kaas. 1998. Spatial heterogeneity in the structure of the planktonic food web in the North Sea. *Mar. Ecol. Prog. Ser.* 168: 197-211.

35. Richardson, K. & Fl. Bo Pedersen. 1998. Estimation of new production in the North Sea: consequences for temporal and spatial variability in phytoplankton. *ICES J. Mar. Science*. 55: 574-580.

36. Richardson, K. 1998. 10 Years of Wadden and North Sea Protection: Evaluation and Perspectives. *Senckenbergiana maritima*. 29 (1/6): 7 - 11.

37. Richardson, K., S.H. Jonasdottir, S.J. Hay & A. Christoffersen. 1999. *Calanus finmarchicus* egg production and food availability in the Faroe-shetland channel and northern North Sea: October - March. *Fish. Oceanogr.* 8 (Suppl.1): 153-162.

38. Heath, M.R., J.O. Backhaus, K. Richardson, E. McKenzie, D. Slagstad, A. Allego, H. Madden, J. Mardaljevic, D. Hainbucher, A. Schacht, S. Jonasdottir, D. Beare, J. Dunn & S. Hay. 1999. Climate fluctuations and the abundance of *Calanus finmarchicus* in the North Sea. *Fish. Oceanogr.* 8 (Suppl.1): 163-176.

39. Heilmann, J.P. & K. Richardson. 1999. Phytoplankton distribution and activity in the northern Adriatic Sea. In T.S. Hopkins, A. Artegiani, G. Cauwet, D. Degobbis, A. Malej (eds) *Ecosystem Research. Report 32, the Adriatic Sea (EUR 18834)*. European Commission. s.347 - 362

40. Heilmann, J.P., K. Richardson. 1999. The cell size structure of the phytoplankton community related to hydrographic and chemical properties of the northern Adriatic waters. In T.S. Hopkins, A. Artegiani, G. Cauwet, D. Degobbis, A. Malej (eds) Ecosystem Research. Report 32, the Adriatic Sea (EUR 18834). European Commission. s. 331-346.
41. Richardson, K., A. Visser and Fl. B. Pedersen. 2000. Subsurface phytoplankton blooms fuel summer production in the North Sea. *J. Plankton Research*. 22(9): 1663 - 1671.
42. Richardson, K. 2000. Integrating "Environment" and Fisheries Management objectives in the ICES Area. *ICES Journal of Marine Science* 57(3): 766 - 770.
43. Heath, M.R., J.G. Fraser, A. Gislason, S.J. Hay, S.H. Jonasdottir, K. Richardson. 2000. Winter distribution of *Calanus finmarchicus* in the northeast Atlantic. *ICES J. of Marine Science*.
44. Richardson, K & T. Cedhagen. 2001. Pelagic-benthic coupling: Are we asking the right questions? *Senckenbergiana maritime* 31(2): 215-224.
45. Olsen, R.B., K. Richardson & V. Simonsen. 2002. Population differentiation of eelpout *Zoarces viviparus* in a Danish fjord. *Mar.Ecol. Prog.Ser.* 227: 97-107.
46. Richardson, K. 2002. Linking plankton and fish production throughout ICES' history. *ICES Journal of Marine Science*. 215: 156-163.
47. Maar, M. T.G. Nielsen, K. Richardson & U. Christaki, O.S. Hansen, T. Zervoudaki and E.D. Christou. 2002. Spatial and temporal variability of the food web structure during the spring bloom in the Skagerrak. *Mar. Ecol. Prog. Ser.* 238: 11-29.
48. Richardson, K., B. Rasmussen, T. Bunk & L. Mouritsen. 2003. Multiple sub-surface phytoplankton blooms occurring simultaneously in the Skagerrak. *Journal of Plankton Research* 25 (7): 799-813.
49. Mouritsen, L. & K. Richardson. 2003. Vertical microscale patchiness in nano- and microplankton distribution in a stratified estuary. *Journal of Plankton Research*. 25 (7):783-797.
50. Maar, M. .G. Nielsen, S. Gooding, K. Tønnesen, P. Tiselius, S. Zervoudaki, E. Christou, A Sell and K. Richardson. 2004. Trophodynamic function of late summer zooplankton community (copepods, appendicularians and protozooplankton) in the Skagerrak. *Marine Biology* 144:917-933.
51. Heath, M.R., Boyle, P.R., Gislason, A., Gurney, W.S.C., Hay, S.J., Head, E.J.H., Holmes, S., Ingvarsdottir, A., Jonasdottir, S.H., Lindeque, P., Pollard, R.T., Rasmussen, J., Richards, K., Richardson, K., Smerdon, G. and Spiers, D. 2004. Comparative ecology of overwintering *Calanus finmarchicus* in the northern North Atlantic, and implications for life cycle patterns. *ICES Journal of Marine Science* 61:691-708.
52. Collie, J.S., Richardson, K. and J.H. Steele. 2004. Regime shifts: can theory illuminate the mechanisms? *Progress in Oceanography* 60:281-302.

53. Lassen, M.F. M.Bramm, K. Richardson, F. Yusoff and M.Shariff. 2004. Phytoplankton community composition and size distribution in the Langat River estuary, Malaysia. *Estuaries* 27(4): 716-727.
54. Liboriussen, L., Landkildehus, F., Meerhoff, M., Søndergaard, M., Christoffersen, K., Richardson, K., Søndergaard, M., Lauridsen, T., Jeppesen, E. 2005. Global warming: Design of a flow-through shallow lake mesocosm climate experiment. *Limnology and Oceanography – Methods*, 3: 1-9.
55. Richardson, K. S. Markager, E. Buch, M.F. Lassen and A.S. Kristensen. 2005. Seasonal distribution of pelagic primary production, phytoplankton biomass and size distribution in the Greenland Sea. *Deep Sea Research I* 52: 979-999.
56. Møller. E.F., T.G. Nielsen. K. Richardson. 2006. The zooplankton community in the Greenland Sea; composition and role in carbon turnover. *Deep Sea Research I* 53: 76-93.
57. Blachowiak-Samolyk, K., S. Kwasniewski, K. Richardson, K. Dmoch, E. Hansen, H. Hop and S. Falk-Petersen. 2006. Arctic zooplankton do not perform diel vertical migration (DVM) during midnight sun. *Marine Ecology Progress Series* 308: 101-116.
58. Jónasdóttir, S., K. Richardson, M.R. Heath, A. Ingvarsdóttir & A. Christoffersen. 2008. Spring production of *Calanus finmarchicus* at the Iceland-Scotland Ridge. *Deep Sea Research I*. 55: 471-489
59. Lund-Hansen, L. C., Nielsen, M. H., Bruhn, A. Christiansen, C., Vang, T., Richardson, K., Ayala, P. 2008. A consistent high primary production and chlorophyll-a maximum in a narrow strait – Effects of hydraulic control. *Journal of Marine Systems* 74: 395-405.
60. Christensen, J.T. & K. Richardson. 2008. Stable isotope evidence of long-term changes in North Sea food web structure. *Marine Ecology Progress Series* 368: 1-8 (Feature article).
61. Bramm, M.E., M. K. Lassen, L. Liboriussen, K. Richardson, M. Ventura, & E. Jeppesen. 2009. The role of light for fish-zooplankton interactions during winter in shallow lakes – a climate change perspective. *Freshwater Biology* 54: 1093-1107.
62. Rockström, J., W. Steffen, K. Noone, Å. Persson, S. Chapin, E.F.Lambin, T.M. Lenton, M. Scheffer, C. Folke, J. Schellnhuber, B. Nykvist, C.A. DeWit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P.K Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R.W. Corell, V.J. Fabry, J. Hansen, D. Liverman, K. Richardson, P. Crutzen & J. Foley. 2009. A Safe Operating Space for Humanity. *Nature*. 461: 472-475.
63. Rockström, J., W. Steffen, K. Noone, Å. Persson, S. Chapin, E.F.Lambin, T.M. Lenton, M. Scheffer, C. Folke, J. Schellnhuber, B. Nykvist, C.A. DeWit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P.K Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R.W. Corell, V.J. Fabry, J. Hansen, D. Liverman, K. Richardson,

- P. Crutzen & J. Foley. 2009. Planetary Boundaries: Exploring the safe operating space for humanity. *Ecology and Society*, 14(2): 32.
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