

Publications in international peer-reviewed journals:

Grading, R., Lenz, J. (1989): Picocyanobacteria in the high Arctic. *Mar. Ecol. Prog. Ser.* 52: 99-101

Barthel, K.-G., Schneider, R., Grading, R., Lenz, J. (1989): Concentration of live pico- and nanoplankton by means of tangential flow filtration. *J. Plankton Res.* 11: 1213-1221

Grading, R.R., Baumann, M.E.M. (1991): Distribution of phytoplankton communities in relationship to the large scale hydrographical regime in Fram Strait 1984. *Mar. Biol.* 111: 311-321

Grading, R., Spindler, M., Henschel, D. (1991): Development of Arctic sea ice organisms under graded snow cover. *Polar Res.* 10: 295-307

Hirche, H.-J., Baumann, M., Kattner, G., Grading, R. (1991): Plankton distribution and the impact of copepod grazing on primary production in Fram Strait, Greenland Sea. *J. Mar. Systems* 2: 477-494

Nöthig, E.-M., Bathmann U., Jennings, J. C., Fahrbach E., Grading, R., Gordon, L.I., Makarov, R. (1991): Regional relationships between biological and hydrographical properties in the Weddell Gyre in late austral winter 1989. *Mar. Chemistry* 35: 325-336

Grading, R., Weisse, T., Pillen, T. (1992): Significance of picocyanobacteria in the Red Sea and the Gulf of Aden. *Bot. Mar.* 35: 245-250

Grading, R., Spindler, M., Weissenberger, J. (1992): On the structure and development of Arctic pack ice communities in Fram Strait, a multivariate approach. *Polar Biol.* 12: 727-733

Weissenberger, J., Dieckmann, G., Grading, R., Spindler, M. (1992): Sea ice: a cast technique to examine and analyze brine pockets and channel structure. *Limnol. Oceanogr.* 37: 179-183

Schalk, P.H., Brey, T., Bathmann, U., Arntz, W., Gerdes, D., Dieckmann, G., Ekau, W., Grading, R., Plötz, J., Nöthig, E., Schnack-Schiel, S.B., Siegel, V., Smetacek, V.S., van Franekker, J.A. (1993): Towards a conceptual model of the Weddell Sea ecosystem, Antarctica. in: V. Christensen, D. Pauly (eds) *Trophic models of aquatic ecosystems*. ICLARM Conf. Proc. 26, p. 323-337

Kurbjewit, F., Grading, R., Weissenberger, J. (1993): The life cycle of *Stephos longipes* - an example for cryopelagic coupling in the Weddell Sea (Antarctica). *Mar. Ecol. Progr. Ser.* 98: 255-262

Grading, R., Lenz J. (1995): Seasonal occurrence of picocyanobacteria in the Greenland Sea and the central Arctic Ocean. *Polar Biol.* 15: 447-452

Grading, R. (1995): Climate change and biological oceanography of the Arctic Ocean. *Phil. Transact. Royal Soc. Ser. A* 352: 277-286

- Schnack-Schiel, S.B., Thomas, D., Dieckmann, D.S., Eicken, H., Gradinger, R., Spindler, M., Weissenberger, J., Mizdalski, E., Beyer, K. (1995): Life cycle strategy of the Antarctic calanoid copepod *Stephos longipes*. *Progr. Oceanogr.* 36: 45-75
- Gradinger, R., Nürnberg, D. (1996): Snow algal communities on Arctic pack ice floes dominated by *Chlamydomonas nivalis* (Bauer) Wille. *Proc. NIPR Symp. Polar Biol.* 9: 35-43
- Gradinger, R. (1996): Occurrence of an algal bloom under Arctic pack ice. *Mar. Ecol. Progr. Ser.* 131: 301-305
- Gradinger, R., Zhang, Q. (1997): Vertical distribution of bacteria in Arctic sea ice of the Barents and Laptev Sea. *Polar Biol.* 17:448-454
- Ikävalko, J., Gradinger, R. (1997): Nanoflagellates and helizoans in the Arctic sea ice studied alive using light microscopy. *Polar Biol.* 17: 473-481
- Gradinger, R., Spindler, M.(1997): Coupled ecosystems in the ice-covered Arctic Ocean. In: Stel, J.H., Behrens, H.W.A., Burst, J.C., Droppert, L.J., v.d. Meulen, J. (eds.) *Operational oceanography. The Challenge for European co-operation.* Elsevier, Amsterdam pp. 385-391.
- Zipan, W., Dieckmann, G., Gradinger, R. (1997): Ecology of newly formed sea ice in the Weddell Sea, Antarctica. I. Chlorophyll a and nutrients. *Chinese J. Polar Sci.* 8: 18-26.
- Zhang, Q., Gradinger, R., Spindler, M. (1998): Dark survival of marine microalgae in the high Arctic (Greenland Sea). *Polarforschung* 65: 111-116
- Gradinger, R., Ikävalko, J. (1998): Organism incorporation into newly forming Arctic sea ice in the Greenland Sea. *J. Plankton Res.* 20: 871-886
- Gradinger, R., Schiel, S. (1998): The potential effect of ice formation on Antarctic copepods: salinity induced mortality of *Calanus propinquus* and *Metridia gerlachei*. *Polar Biol.* 20: 139-142
- Gradinger, R. (1998): Life at the underside of Arctic sea-ice: biological interactions between the ice cover and the pelagic realm. *Memor. Soc. Fauna Flora Fenn.* 74: 53-60
- Eicken, H., Weissenberger, J., Bussmann, I., Freitag, J., Schuster, W., Valero Delgado, F., Evers, K.-U., Jochmann, P., Krembs, C., Gradinger, R., Lindemann, F., Cottier, F., Hall, R., Wadhams, P., Reiemann, M., Kuosa, H., Ikävalko, J., Leonard, G.H., Shen, H., Ackley, S.F., Smedsrud, L.H. (1998): Ice-tank studies of physical and biological sea-ice processes. In: Shen, H.T. (ed.) *Ice in surface waters.* Balkema, Rotterdam. pp 363-370
- Gradinger, R., Friedrich, C., Spindler, M. (1999): Abundance, biomass and composition of the sea ice biota of the Greenland Sea pack ice. *Deep-Sea Res.* 46: 1457-1472

- Gradinger, R. (1999): Vertical fine structure of algal biomass and composition in Arctic pack ice. *Mar. Biol.* 133: 745-754
- Zhang, Q., Gradinger, R., Spindler, M. (1999): Experimental study on the effect of salinity on growth rates of Arctic sea ice algae from the Greenland Sea. *Boreal Environm. Res.* 4: 1-8
- Mock, T., Gradinger, R. (1999): Determination of Arctic ice algal production with a new and easy in situ incubation technique. *Mar. Ecol. Prog. Ser.* 177: 15-26
- Janssen, H.H., Gradinger, R. (1999): Turbellaria (Archoophora: Acoela) from Antarctic sea ice endofauna - examination of their micromorphology. *Polar Biol.* 21: 410-416
- Gradinger, R. (1999): Integrated abundance and biomass of sympagic meiofauna from Arctic and Antarctic pack ice. *Polar Biol.* 22: 169-177
- Giesenhagen, C., Detmer, A.E., de Wall, J., Weber, A., Gradinger, R.R., Jochem, F.J. (1999): How are planktonic microbial food webs and algal blooms affected by melting of Antarctic sea ice? - Microcosm simulations. *Aquatic Microb. Ecol.* 20: 183-201
- Krembs, C., Gradinger, R., Spindler, M. (2000): Implications of brine channel geometry and surface area for the interaction of sympagic organisms in Arctic sea ice. *J. Exp. Mar. Biol. Ecol.* 243: 55-80
- Mock, T., Gradinger, R. (2000): Effects of nutrient availability on photosynthetic carbon assimilation by cultured Arctic sea ice algae. *Mar. Ecol. Prog. Ser.* 202: 1-11
- Krembs, C., Mock, T., Gradinger, R. (2001): A mesocosm study of physical-biological interactions in artificial sea ice: effects of brine channel surface evolution and vertical brine movement on algal biomass. *Polar Biol.* 24: 356-364
- Schnack-Schiel, S., Dieckmann, G., Gradinger, R., Melnikov, I., Spindler, M., Thomas, D. (2001): Meiofauna in sea ice of the Weddell Sea (Antarctica). *Polar Biol.* 24: 724-728
- Zhang, Q., Gradinger, R., Qingsong, Z., Jiangning, Z. (2001): Response of Arctic marine microalgae to changes of salinity. *Acta Oceanol. Sin.* 20: 141-151
- Gradinger, R.R. (2001): Adaptation of Arctic and Antarctic ice metazoa to their habitat. *Zool* 140: 339-345
- Werner, I., Gradinger, R. (2002): Under-ice amphipods in the Greenland Sea and Fram Strait (Arctic): environmental controls and seasonal patterns below the pack ice. *Mar. Biol.* 140: 317-326
- Meiners, K., Spindler, M., Gradinger, R. (2003): Vertical distribution of transparent exopolymer particles (TEP) in sea ice of the Fram Strait (Arctic) during autumn. *Mar. Ecol. Prog. Ser.* 248: 1-13

Gradinger, R.R., Bluhm, B.A. (2004) *In situ* observations on the distribution and behavior of amphipods and Arctic cod (*Boreogadus saida*) under the sea ice of the high Arctic Canadian Basin. *Polar Biol.* 27: 595-603

Gradinger, R., Bluhm, B.A. (2005): Arctic Ocean Exploration 2002. *Polar Biology* 28:169-170

Gradinger, R., Meiners, K., Plumley, G., Zhang, Q., Bluhm, B.A. (2005): Abundance and composition of the sea ice meiofauna in off-shore pack ice of the Beaufort Gyre in summer 2002 and 2003. *Polar Biol.* 28:171-181

Eicken, H., Gradinger, R., Graves, A., Mahoney, A., Rigor, I. (2005): Sediment transport by sea ice in the Chukchi and Beaufort Seas: Increasing importance due to changing ice conditions? *Deep-Sea Research II* 52: 3281-3302

Iken, K., Bluhm, B.A., Gradinger, R. (2005): Food web structure in the high Arctic Canada Basin: evidence from ^{13}C and ^{15}N analysis. *Polar Biol.* 28:238-249

Jin M, Deal CJ, Wang J, Shin KH, Tanaka N, Whitley TE, Lee SH, Gradinger RR. (2006) Controls of the landfast ice-ocean ecosystem offshore Barrow, Alaska. *Annals Glaciol.* 44, 63-72

Bluhm, BA, Gradinger RR Piraino S (2007) First record of sympagic hydroids (Hydrozoa, Cnidaria) in Arctic coastal fast ice.. *Polar Biol.* DOI: 10.1007/s00300-007-0316-9

Li M, Deal C, Wang J, Alexander V, Gradinger RR, Saitoh S, Jida T, Wan Z, Stabeno P (2007) Ice-associated phytoplankton blooms in the southeastern Bering Sea. *Geophysical Research Letters*, 34, doi:10.1029/2006GL028849.

In press:

Bluhm, B.A., Gradinger R. Regional variability in food availability for Arctic marine mammals. *Ecol. Applic.*

Submitted:

Nielson M, Bluhm B, Gradinger R, O'Brien D: Using stable isotopes to assess carbon and nitrogen turnover in the Arctic sympagic amphipod *Onisimus litoralis*.

Gradinger R: Sea ice algae: major contributors to primary production and algal biomass in the Chukchi and Beaufort Sea during May/June 2002. *Deep Sea Res.*

Contribution to books

Gradinger, R. (1995): Protisten im Lückensystem des arktischen Meereises. In: Hempel, I., Hempel, G. (eds.): *Biologie der Polarmeere*. Fischer, Jena. pp. 95-102

Gradinger, R. (1998): Natürliche und anthropogen beeinflusste Veränderungen im arktischen marinen Ökosystem. In: Lozan, J.L., Graßl, H., Hupfer, P., Sterr, H. (eds.): *"Warnsignal Klima - Wissenschaftliche Fakten*. GEO, Hamburg. pp. 277-280

Peinert, R., Bauerfeind, E., Gradinger, R., Haupt, O., Krumbholz, M., Peecken, I., Werner, I. Zeitzschel, B. (2001): Biogenic particle sources and vertical flux patterns in the seasonally ice-covered Greenland Sea. In: Schaefer, P., Ritzrau, W., Schlueter, M., Thiede, J. (eds.): *The northern North Atlantic. A changing environment*. Springer, Berlin, pp. 69-79

Gradinger, R.R. (2002): Sea ice organisms. In: Bitton, G. (ed.): *The encyclopedia of environmental microbiology*. Wiley, New York, p. 2833-2844

Gradinger, R. (2005): Wegener. In: Nuttall M (ed). *Encyclopedia of the Arctic*. Routledge. New York. 2164-2166

Gradinger, R. (2005): Plankton. In: Nuttall M (ed). *Encyclopedia of the Arctic*. Routledge. New York. 1648-1649

Gradinger, R. (2005): Large marine ecosystems. In: Nuttall M (ed). *Encyclopedia of the Arctic*. Routledge. New York. 1168-1171

Gradinger, R. (2005): Greenland Sea. In: Nuttall M (ed). *Encyclopedia of the Arctic*. Routledge. New York. 795-796

Gradinger R, Bluhm BA. (2006) *Das Leben im Eispalast: Flora und Fauna des arktischen Meereises. (Life in the crystal palace: flora and fauna of the Arctic sea ice)*. In: Hempel H, Schiel S: *Leben im Meer* (book chapter)