

Bruce C. Forbes

Publications List

Arctic Centre, University of Lapland, Rovaniemi, Finland

2018

Articles:

145. Epstein, H., U. Bhatt, M. Raynolds, D. Walker, J. Pinzon, C. J. Tucker, **B.C. Forbes**, T. Horstkotte, M. Macias-Fauria, A. Martin, G. Phoenix, J. Bjerke, H. Tømmervik, P. Fauchald, H. Vickers, R. Myneni, T. Park, and C. Dickerson (2018) Tundra greenness in *State of the Climate 2017*. *Bulletin of the American Meteorological Society* **98**(8): S165-169.
<https://journals.ametsoc.org/doi/pdf/10.1175/2018BAMSStateoftheClimate.1>
144. Riseth, J.Å., H. Tømmervik and **B.C. Forbes** (2018) Sustainable and resilient reindeer herding. In: Tryland, M. and S. Kutz (eds). *Reindeer and caribou: health and disease*. CRC Press/Taylor and Francis, Boca Raton, FL., pp. 23-43. ISBN 13: 978-0-4299-5242-5.
143. Thomas, H.J.D., I. Myers-Smith, A.D. Bjorkman, S.C. Elmendorf, D. Blok, J.H.C. Cornelissen, **B.C. Forbes** et al. (2018) Traditional plant functional groups explain variation in economic but not size-related traits across the tundra biome. *Global Ecology and Biogeography* doi:10.1111/geb.12783.
142. Bjorkman, A.D., I.H. Myers-Smith, S.C. Elmendorf, S. Normand, H.J. D. Thomas, J.M. Alatalo, H. Alexander, A. Anadon-Rosell, S. Angers-Blondin, Y. Bai, G. Baruah, M. te Beest, L. Berner, R.G. Björk, D. Blok, H. Bruelheide, A. Buchwal, A. Buras, M. Carbognani, K. Christie, L.S. Collier, E.J. Cooper, J.H.C. Cornelissen, K.J.M. Dickinson, S. Dullinger, B. Elberling, A. Eskelinen, **B.C. Forbes** et al. (2018) Tundra Trait Team: A database of plant traits spanning the tundra biome. *Global Ecology and Biogeography* doi.org/10.1111/geb.12821.
141. Pointner, G., A. Bartsch, **B.C. Forbes** and T. Kumpula (2018) The role of lake size and local phenomena for monitoring ground-fast lake ice. *International Journal of Remote Sensing* doi:10.1080/01431161.2018.1519281.
140. Walker, D.A., Epstein, H.E., Šibík, J.E., Bhatt, U.S., Romanovsky, V.E., Breen, A.L., Chasníková, S., Daanen, R., Druckenmiller, L.A., Ermokhina, K., **Forbes, B.C.**, Frost, G.V., Geml, J., Kaarlejärvi, E., Khitun, O., Khomutov, A., Kumpula, T., Kuss, P., Leibman, M.O., Matyshak, G., Moskalenko, N., Orekhov, P., Pierce, J., Raynolds, M.K., Timling, I. (2018) Vegetation on mesic loamy and sandy soils along a 1700-km maritime Eurasia Arctic Transect. *Applied Vegetation Science* doi: 10.1111/avsc.12401.
139. Bjorkman, A.D. I.H. Myers-Smith, S.C. Elmendorf, S. Normand., N. Rüger, P.S.A. Beck, A. Blach-Overgaard, D. Blok, J.H.C. Cornelissen, **B.C. Forbes** et al. (2018) Changes in plant functional traits across a warming tundra biome. *Nature* doi.org/10.1038/s41586-018-0563-7.

138. Loranty, M. M., Abbott, B. W., Blok, D., Douglas, T. A., Epstein, H. E., **Forbes, B.C.**, Jones, B. M., Kholodov, A. L., Kropp, H., Malhotra, A., Mamet, S. D., Myers-Smith, I. H., Natali, S. M., O'Donnell, J. A., Phoenix, G. K., Rocha, A. V., Sonnentag, O., Tape, K. D. & Walker, D. A. (2018). Reviews and syntheses: changing ecosystem influences on soil thermal regimes in northern high-latitude permafrost regions. *BioGeosciences* **15**(17): 5287-5313
137. **Forbes, B.C.**, T. Kumpula, N. Meschtyb, R. Laptander, M. Macias-Fauria, P. Zetterberg, M. Verdonen, A. Skarin, Kwang-Yul Kim, L.N. Boisvert, J. C. Stroeve, and A. Bartsch (2018) Coping with a warming winter climate in Arctic Russia: sea ice retreat in Barents and Kara Sea affecting Yamal Nenets reindeer nomadism (in Russian). *Journal of the Russian Geographical Society* 150(1): 3-19.

2017

Articles:

136. Barrio, I.C., E. Lindén, M. te Beest, J. Olofsson, A. Rocha, E.M. Soininen, J.M. Alatalo, T. Andersson, A. Asmus, J. Boike, K.-A. Bråthen, J.P. Bryant, A. Buchwal, C.G. Bueno, K.S. Christie, D. Egelkraut, D. Ehrich, L. Fishback, **B.C. Forbes**, M. Gartzia, P. Grogan, M. Hallinger, M. Heijmans, D.S. Hik, A. Hofgaard, M. Holmgren, T.T. Høye, D. Huebner, I.-S. Jónsdóttir, E. Kaarlejärvi, T. Kumpula, C. Lange, J. Lange, E. Lévesque, J. Limpens, I. Myers-Smith, E.J. Van Nieuwerkerken, S. Normand, E.S. Post, N.M. Schmidt, J. Sitters, A. Sokolov, N. Sokolova, J.D.M. Speed, L. Street, M.K. Sundqvist, O. Suominen, N. Tananaev, J.-P. Tremblay, C. Urbanowicz, D. Watts, M. Wilmking, P.A. Wookey, V. Wright, H. Zimmermann, V. Zverev, M.V. Kozlov (2017) Background invertebrate herbivory on dwarf birch (*Betula glandulosa-nana* complex) increases with temperature and precipitation across the tundra biome. *Polar Biology* doi:10.1007/s00300-017-2139-7.
135. Normand, S., T.T. Høye, **B.C. Forbes**, J.J. Bowden, A.L. Davies, B.V. Odgaard, F. Riede, J.-C. Svenning, U.A. Treier, R. Willerslev, J. Wischniewski (2017) Legacies of historical human activities in Arctic woody plant dynamics. *Annual Review of Environment and Resources* 42: <https://doi.org/10.1146/annurev-environ-110615-085454>.
134. Horstkotte, T., T.A. Utsi, Å. Larsson-Blind, P. Burgess, B. Johansen, J. Käyhkö, L. Oksanen and **B.C. Forbes** (2017) Human–animal agency in reindeer management: Sámi herders' perspectives on vegetation dynamics under climate change. *Ecosphere* **8**(9): e01931. 10.1002/ecs2.1931.
133. Epstein, H.E., U.S. Bhatt, M.K. Reynolds, D.A. Walker, **B.C. Forbes**, M. Macias-Fauria, M. Loranty, G. Phoenix and J. Bjerke (2017) Tundra greenness in *State of the Climate 2016*. *Bulletin of the American Meteorological Society* **98**(8): S148-149.
132. Macias-Fauria, M., S.-R. Karlsen and **B.C. Forbes** (2017) Disentangling the coupling between sea ice and tundra productivity. *Scientific Reports* **7**: 8586 doi:10.1038/s41598-017-06218-8.

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131. **Forbes, B.C.**, T. Kumpula, N. Meschtyb, R. Laptander, M. Macias-Fauria, P. Zetterberg, M. Verdonen, A. Skarin, K.-Y. Kim, L.N. Boisvert, J.C. Stroeve and A. Bartsch (2016) Sea ice, rain-on-snow and tundra reindeer nomadism in Arctic Russia. *Biology Letters* **12**. doi: 10.1098/rsbl.2016.0466.
130. Uboni, A., T. Horstkotte, E. Kaarlejärvi, A. Sévêque, F. Stammer, J. Olofsson, **B.C. Forbes** and J. Moen (2016) Long-term trends and role of climate in the population dynamics of Eurasian reindeer. *PLoS ONE* doi.org/10.1371/journal.pone.0158359.
129. Barrio, I.C., Bueno, C.G., Gartzia, M., Soininen, E., Christie, K., Speed, J., Ravolainen, V., **Forbes, B.C.**, Gauthier, G. Horstkotte, T., Hoset, K., Høy, T., Jónsdóttir, I., Levesque, E., Morsdorf, M., Olofsson, J., Wookey, P., and Hik, D.S. (2016) Biotic interactions mediate patterns of herbivore diversity in the Arctic. *Global Ecology and Biogeography* doi:10.1111/geb.12470.
128. Abbott, B.W., Jones, J., Schuur, E., Chapin III, F.S., Bowden, W., Bret-Harte, M. Epstein, H., Flannigan, M., Harms, T., Hollingworth, T., Mack, M., McGuire, A.D., Natali, S., Rocha, A., Tank, S., Turetsky, M., Vonk, J., Wickland, K., Aiken, G., Alexander, H., Amon, R., Benscoter, B., Bergeron, Y., Bishop, K., Blarquez, O., Bond-Lamberty, B., Breen, A., Buffam, I., Cai, Y., Carcaillet, C., Carey, S., Chen, J., Chen, H., Christensen, T., Cooper, L., Cornelissen, H.J., de Groot, W., DeLuca, T., Dorrepaal, E., Fetcher, N., Finlay, J., and **Forbes, B.C.** et al. (2016) Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. *Environmental Research Letters* **11**. doi:10.1088/1748-9326/11/3/034014.
127. Keskitalo, E.C.H., T. Horstkotte, S. Kivinen, **B.C. Forbes** and J. Käyhkö (2016) “Generality of mis-fit”? The real-life difficulty of matching scales in an interconnected world. *Ambio* doi:10.1007/s13280-015-0757-2.
126. Epstein, H.E., U.S. Bhatt, M.K. Reynolds, D.A. Walker, **B.C. Forbes**, M. Macias-Fauria, M. Loranty, G. Phoenix and J. Bjerke (2016) Tundra greenness In: Jeffries, M.O., J.A. Richter-Menge, and J.E. Overland (eds.) Arctic Report Card 2016, NOAA <http://arctic.noaa.gov/Report-Card>.
125. Huitric, M., G. Peterson, J.C. Rocha, M. Carson, D. Clark, **B.C. Forbes**, G.K. Hovelsrud, S.D. Mathiesen, A. Perl and A. Quinlan (2016) What factors build or erode resilience in the Arctic? In: M. Carson and G. Peterson (eds) *Arctic Resilience Report*. Stockholm Environment Institute and Stockholm Resilience Centre, Stockholm. <http://www.arctic-council.org/arr>

Publications intended for the general public:

124. Oksanen, L. **B. Forbes**, J. Kumpula, T. Kumpula, J. Käyhkö and S. Stark (2016) Laidunnus ei ole juuri lisännyt eroosiota (Grazing is not just increased erosion). 29.09.2016 *Helsingin Sanomat* <http://www.hs.fi/mielipide/a1475032859887>
123. **Forbes, B.C.** (2016) Beware of action that would put age-old tundra nomadism at risk in Yamal. 23.09.2016. *The Siberian Times* <http://siberiantimes.com/other/others/features/f0257-beware-of-action-that-would-put-age-old-tundra-nomadism-at-risk-in-yamal-says-expert/>

2015

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122. Virtanen, R., L. Oksanen, T. Oksanen, J. Cohen, **B.C. Forbes**, B. Johansen, J. Käyhkö, J. Olofsson, J. Pulliainen and H. Tømmervik (2015) Where do the treeless tundra areas of northern highlands fit in the global biome system? *Ecology and Evolution* doi: 10.1002/ece3.1837.
121. Myers-Smith, I.H. S. Elmendorf, P. Beck, M. Wilmking, M. Hallinger, D. Blok, K.D. Tape, S.A. Rayback, M. Macias-Fauria, **B.C. Forbes**, J.D.M. Speed, N. Boulanger-Lapointe, C. Rixen, E. Levesque, N.M. Schmidt, C. Baittinger, A. Trant, M. Dawes, T. Lantz, S. Weijers, R.H. Jørgensen, A. Buchwal, A. Buras, A. Naito, V. Ravolainen, G. Schaepman-Strub, J. Wheeler, S. Wipf, D. Hik, K. Guay and M. Vellend (2015) Climate sensitivity of shrub growth across the tundra biome. *Nature Climate Change* DOI: 10.1038/NCLIMATE2697.
120. **Forbes, B.C.** (2015) Arctic vegetation cover: patterns, processes and expected change. In: B. Evengård, J.N. Larsen and Ø. Paasche (eds.) *The New Arctic*. Springer, Cham, Switzerland, pp. 117-132.

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119. Myers-Smith, I.H., M. Hallinger, M. Wilmking, D. Blok, U.S. Klaassen, S. Rayback, S. Weijers, A. Trant, K.D. Tape, A.T. Naito, M. Dawes, C. Rixen, S. Wipf, J. Wheeler, A. Buchwal, C. Baittinger, M. Macias-Fauria, **B.C. Forbes**, E. Levesque, N. Boulanger-Lapointe, I. Beil, and V. Ravolainen (2014) Methods for measuring arctic and alpine shrub growth. *Earth Science Reviews* **140**: 1-13.
118. **Forbes, B.C.**, G. Kofinas, H. Beach, C. Brattland, P. Kankaanpää, C. Keskitalo, M. Lennert, C.L. Meek, V.K. Metcalf, M.D. Robards, and O.R. Young (2014) Resource governance. In: J.N. Larsen and G. Fondahl (eds.) *Arctic Human Development Report: Regional Processes and Global Linkages*. TemaNord, pp. 253-296.
117. Larsen, J.N., O.A. Anisimov, A. Hollowed, N. Maynard, P. Prestrud, T. Prowse, J. Stone, A. Constable, A. Derocher, **B.C. Forbes**, S. Glomsrød, D. Hodgson, E. Hofmann, G.K. Hovelsrud, G.L. Ljubicic, H. Loeng, E. Murphy, S. Nicol, A. Oskal, J.D. Reist, P. Trathan, B. Weinecke and F. Wrona (2014) Chapter 28, Polar regions. In: *Intergovernmental Panel on Climate Change - 5th Assessment Report*. UNEP/WMO.

2013

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116. **Forbes, B.C.** (2013) Cultural resilience of social-ecological systems in the Nenets and Yamal-Nenets Autonomous Okrugs, Russia: A focus on reindeer nomads of the tundra. *Ecology and Society* **18**(4):36. doi.org/10.5751/ES-05791-180436.

115. Zeng, H., Jia, G.S. and **Forbes, B.C.** (2013) Response of phenological shifts to climate and anthropogenic factors as detected from multi-satellite data. *Environmental Research Letters* **8**. doi:10.1088/1748-9326/8/3/035036.
114. Bernes, C., K.A. Bråthen, **B.C. Forbes**, A. Hofgaard, J. Moen and J.D.M. Speed (2013) What are the impacts of reindeer/caribou (*Rangifer tarandus* L.) on arctic and alpine vegetation? A systematic review protocol. *Environmental Evidence* **2**: 6. doi:10.1186/2047-2382-2-6.
113. Xu, L., R.B. Myneni, F.S. Chapin III, T.V. Callaghan, J.E. Pinzon, C.J. Tucker, Z. Zhu, J. Bi1, P. Ciais, H. Tømmervik, E.S. Euskirchen, **B.C. Forbes**, S.L. Piao, B.T. Anderson, S. Ganguly, R.R. Nemani, S.J. Goetz, P.S.A. Beck, A.G. Bunn, C. Cao and J.C. Stroeve (2013) Temperature and vegetation seasonality diminishment over northern lands. *Nature Climate Change* **3**: 581-586. doi:10.1038/NCLIMATE1836.
112. Epstein, H. E., U. S. Bhatt, D. A. Walker, M. K. Raynolds, P. A. Bieniek, J. Comiso, J. Pinzon, C. J. Tucker, I. V. Polyakov, G. J. Jia, H. Zeng, **B. C. Forbes**, M. Macias-Fauria, L. Xu, R. Myneni, G. V. Frost, G. R. Shaver, M. S. Bret-Harte, M. C. Mack, A. V. Rocha (2013) Vegetation. In: Jeffries, M.O., J.A. Richter-Menge, and J.E. Overland (eds.) Arctic Report Card 2013 <http://www.arctic.noaa.gov/reportcard>
111. **Forbes, B.C.** (2013) Tundra biome. In: D. Gibson (ed.) Oxford Bibliographies in Ecology. New York: Oxford University Press. <http://www.oxfordbibliographies.com>
110. Huntington, H.P. T. Arnbom, F. Danielson, M. Enghoff, E. Euskirchen, **B.C. Forbes** et al. (2013). Disturbance, feedbacks and conservation. In: Meltofte, H. (ed.) *Arctic Biodiversity Assessment: Status and trends in Arctic biodiversity*. Conservation of Arctic Flora and Fauna, Akureyri, pp. 521-543.
109. Ims, R.A., D. Ehrich, **B.C. Forbes**, B. Huntley, D.A. Walker and P.A. Wookey (2013). Terrestrial ecosystems. In: Meltofte, H. (ed.) *Arctic Biodiversity Assessment: Status and trends in Arctic biodiversity*. Conservation of Arctic Flora and Fauna, Akureyri, pp. 334-389.
108. **Forbes, B.C.** (2013) Review of “The reindeer botanist: Alf Erling Porsild, 1901-1977”. *Arctic* **66**: 504-506.

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107. Macias Fauria, M., **B.C. Forbes**, P. Zetterberg and T. Kumpula (2012) Eurasian Arctic greening reveals teleconnections and the potential for structurally novel ecosystems. *Nature Climate Change* **2**: 613–618. doi:10.1038/NCLIMATE1558.
106. Kumpula, T., **Forbes, B.C.**, F. Stammer and N. Meschytyb (2012) Dynamics of a coupled system: multi-resolution remote sensing in assessing social-ecological responses during 25 years of gas field development in Arctic Russia. *Remote Sensing* **4**: 1046-1068.

2011

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105. Yu, Q., H.E. Epstein, D.A. Walker, G.V. Frost and **B.C. Forbes** (2011) Modeling dynamics of tundra plant communities on the Yamal Peninsula, Russia, in response to climate change and grazing pressure. *Environmental Research Letters* **6** doi:10.1088/1748-9326/6/4/045505.
104. Myers-Smith, I., **B.C. Forbes** and 30 others (2011) Shrub expansion in tundra ecosystems: Dynamics, impacts and research priorities. *Environmental Research Letters* **6** doi:10.1088/1748-9326/6/4/045509.
103. Walker, D.A., H.E. Epstein, M.K. Raynolds, P. Kuss, M. Kopecky, G.V. Frost, F.J.A. Daniëls, M.O. Leibman, N.G. Moskalenko, G.V. Matyshak, O.V. Khitun, A.V. Khomutov, **B.C. Forbes** et al. (2011) Environment, vegetation and greenness (NDVI) along the North America and Eurasia Arctic transects. *Environmental Research Letters* **6** doi:10.1088/1748-9326/7/1/015504.
102. Kumpula, T., A. Pajunen, **B.C. Forbes** and F. Stammler (2011) Land use and cover change in arctic Russia: ecological and social implications of industrial development. *Global Environmental Change* **21**: 550–562.
101. **Forbes, B.C.**, F. Stammler, T. Kumpula, N. Meschtyb, A. Pajunen, and E. Kaarlejärvi (2011) Yamal reindeer breeders, gas extraction, and changes in the environment: adaptation potential of nomad economy and its limits (in Russian). *Environmental Planning and Management* **1(12)C**: 52-68.
100. Callaghan, T.V., Johansson, M., Brown, R.D., Groisman, P.Ya., Labba, N., Radionov, V., Bradley, R.S., Blangy, S., Bulygina, O.N., Christensen, T.R., Colman, J., Essery, R.L.H., **Forbes, B.C.** et al. (2011) Multiple effects of changes in Arctic snow cover. *Ambio* **40**: 32–45.
99. Whiteman, G., R. de Vos, F.S. Chapin III, V. Yli-Pelkonen, J. Niemelä and **B.C. Forbes** (2011) Low carbon cities and the role of companies. *Business, Strategy and the Environment* **24(4)**: 251-265.
98. Callaghan, T.V., Johansson, M., Brown, R.D., Groisman, P.Ya., Labba, N., Radionov, V., Barry, R.G., Bradley, R.S., Blangy, S., Bulygina, O.N., Christensen, T.R., Essery, R.L.H., **Forbes, B.C.** et al. (2011) Changing snow cover and its impacts. In: *Snow, water, ice and permafrost in the Arctic* (SWIPA). AMAP, Oslo.
97. Walker, D.A., **B.C. Forbes** et al. (2011). Cumulative effects of rapid land-cover and land-use changes on the Yamal Peninsula, Russia. In: G. Gutman and A. Reissel (eds.). *Eurasian Arctic Land Cover and Land Use in a Changing Climate*. Springer, Berlin, pp. 207-235.
96. Eicken, **Forbes, B.C.** and Wiggins, H. (2011) State of the Arctic Conference 2010: International perspectives on progress of research responsive to information needs of decision-makers *Ambio* DOI 10.1007/s13280-011-0153-5.

Publications intended for the general public:

95. **Forbes, B.C.** (2011) A lesson in global warming and gas exploitation? *WWF Circle* **2/2010**: 15-18.

Articles:

94. Bartsch, A., T. Kumpula, **B.C. Forbes** and F. Stammer (2010) Detection of snow surface thawing and refreezing using QuikSCAT: implications for reindeer herding. *Ecological Applications* **20**: 2346-2358.
93. Kumpula, T., **B.C. Forbes** and F. Stammer (2010) Remote sensing and local knowledge of hydrocarbon exploitation: the case of Bovanenkovo, Yamal Peninsula, West Siberia *Arctic* **63**: 165-178.
92. **Forbes, B.C.**, M. Macias Fauria and P. Zetterberg (2010) Russian Arctic warming and 'greening' are closely tracked by tundra shrub willows. *Global Change Biology* **16**: 1542–1554.
91. Pajunen, A, E. Kaarlejärvi, **B.C. Forbes** and R. Virtanen (2010) Classification, compositional differentiation and vegetation-environment relationships of willow-characterised vegetation in the western Eurasian Arctic. *Journal of Vegetation Science* **21**: 107–119.
90. **Forbes, B.C.** (2010) Reindeer herding. In: *Arctic Biodiversity Trends 2010: Selected indicators of change*. CAFF International Secretariat, Akureyri, Iceland, pp. 86-88.
89. Macdonald, C., Lockhart, L., Gilman, A., Baker, T., Cantin, D., Davies, I., **Forbes, B.C.**, Makarevich, P., Mosbech, A., Pawlak, J., Titov, O. and Zhilin, A. (2010) Effects of oil and gas activity on the environment and human health. In: *Assessment of Oil & Gas Activities*. AMAP, Oslo, pp. 5_1-163.
88. Crate S.A., **Forbes, B.C.**, King, L., Kruse, J. (2010) Contact with nature. In: J.N. Larsen, P. Schweitzer and G. Fondahl (eds.) *Arctic Social Indicators: a follow-up to the Arctic Human Development Report*. TemaNord 2010:519. Nordic Council of Ministers, Copenhagen, pp. 109
87. Murray, M.S., L. Anderson, G. Cherkashov, C. Cuyler, **B.C. Forbes** et al. (2010) *International Study of Arctic Change: Science Plan*. ISAC International Program Office, Stockholm.
86. **Forbes, B.C.**, E. Kaarlejärvi T. Kumpula, N. Meschtyb, A. Pajunen, F. Stammer and T. Tuisku (2010) Lessons from ENSINOR: planning and implementation of an interdisciplinary research project. In: T. Huttunen and M. Ylikangas (eds.) *Witnessing Change in Contemporary Russia*. Kikumora, Helsinki, pp. 406-427.

Publications intended for the general public:

85. **Forbes, B.C.** (2010) Who are the peoples of the North? *WWF Circle 2/2010*: 6-9.
84. **Forbes, B.C.** (2010) Marks from vehicles in Arctic tundra. In: C. Nellemann and E. Corcoran (eds.). *Dead Planet, Living Planet – Biodiversity and Ecosystem Restoration for Sustainable Development. A Rapid Response Assessment*. United Nations Environment Programme, GRID-Arendal, p. 35.
83. Stammer, F. and **B.C. Forbes** (2010) Jamalín nenetsit haluavat yhä jatka paimentolaista elämäntapaansa tundralla (Yamal Nenets still want to continue their nomadic livelihood on the tundra). *Helsingin Sanomat* 22 April 2010, p. C7.

2009

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82. **Forbes, B.C.**, F. Stammer, T. Kumpula, N. Meschtyb, A. Pajunen and E. Kaarlejärvi (2009) High resilience in the Yamal-Nenets social-ecological system, West Siberian Arctic, Russia. *Proceedings of the National Academy of Sciences of the USA* **106**: 22041-22048.
81. Walker D.A., M.O. Leibman, H.E. Epstein, **B.C. Forbes** et al. (2009) Spatial and temporal patterns of greenness on the Yamal Peninsula, Russia: interactions of ecological and social factors affecting the Arctic normalized difference vegetation index. *Environmental Research Letters* doi:10.1088/1748-9326/4/4/045004.
80. **Forbes, B.C.** and T. Kumpula (2009) The ecological role and geography of reindeer (*Rangifer tarandus*) in northern Eurasia. *Geography Compass* **3/4**: 1356-1380.
79. **Forbes, B.C.** and F. Stammer (2009) Arctic climate change discourse: the contrasting politics of research agendas in the West and Russia. *Polar Research* **28**: 28–42.
78. Kitti, H., **B.C. Forbes** and J. Oksanen (2009) Long- and short-term effects of reindeer grazing on tundra wetland vegetation. *Polar Biology* **32**: 253-261.

Publications intended for professional communities:

77. Stammer, F., **B.C. Forbes** et al. (2009) "Ilechts" declaration on coexistence of oil and gas activities and indigenous communities on Nenets and other territories in the Russian North (in English and Russian). Arctic Centre, University of Lapland, Rovaniemi. www.arcticcentre.org/declaration

2008

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76. **Forbes, B.C.** (2008) Equity, vulnerability and resilience in social-ecological systems: a contemporary example from the Russian Arctic. *Research in Social Problems and Public Policy* **15**: 203-236.

2007

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75. Willard, B.E., D.J. Cooper and **B.C. Forbes** (2007) Natural regeneration of alpine tundra vegetation after human trampling: a 42-year data set from Rocky Mountain National Park, Colorado, USA. *Arctic, Antarctic and Alpine Research* **39**: 177-183.

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74. **Forbes, B.C.** (2006) The challenges of modernity for reindeer management in northernmost Europe. *Ecological Studies* **184**: 11-25.
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