



# Curriculum vitae

**Dr. Bjarni D. Sigurdsson**

**Professor of forest science at AUI**

**Visiting professor at CREAM Dec 2017 – May 2018.**

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## Personal Information

Marital status: Married to Anna Jónsdóttir and we have two “children”, Sigurður Sturla Bjarnason (born 1993) and Hekla Hrund Bjarnadóttir (born 1995).

Nationality: ICELANDIC

Age: 51 years

## Languages

Icelandic: Fluent

English: Fluent

Swedish: Fluent

Spanish: Not at all fluent

## Post-graduate work experience

March 2006– ...

**Appointed as co-ordinator of the FS-REM Program at the Agricultural University of Iceland (AUI)**

I was appointed as a co-ordinator for a new B.Sc. and M.Sc. program at AUI, entitled “Forest Science, Restoration Ecology and Management Program”

Jul 2005 – Mar 2006

**Professor of forest science at AUI.**

I started as the first ever appointed professor in forest science in Iceland. My position is both research and education related.

Feb 2001 – Jul 2005

**Senior Researcher at the Icelandic Forest Research, Mógilsá, Iceland**

My field of expertise was studies on carbon fluxes and carbon sequestration in woody ecosystems.

## Higher education

Jan 1990 – Jun 1993

**University of Iceland**

*Dept. of biology*

I attained a B.Sc. degree in biology in spring 1993. My speciality was botany and plant-ecology.

Jan 1996 – Feb 2001

**Swedish University of Agricultural Sciences**

*Dept. for Production Ecology, Faculty of Forestry*

I attained a Ph.D. degree in Forest Ecology / Ecophysiology in February 2001.

## Research interests

Forest ecology, silviculture, ecosystem ecology, biogeochemistry. Mostly carbon, water and nutrient cycles of both managed and natural ecosystems; especially forest ecosystems in the subarctic or the N-Boreal zone. Effects of climate change on ecosystem processes and ecosystem structure in northern regions. Environmental constraints on ecosystem processes and structure during primary succession.

## Past research experience and leadership

I have coordinated three large collaborative research projects in Iceland: ICEWOODS (2003-2008), ForSTREAMS (2009-2011), FORHOT (2012-2018), each with >10 senior researchers from >5 institutes/universities, as well as many smaller research projects.

I am currently the Grant Holder for an European COST project (ES1308 *CLIMMANI - Climate Change Manipulation Experiments in Terrestrial Ecosystems - Networking and Outreach*; 2014-2018) where ca. 160 scientists and PhD students from 24 European countries take part.

I have been appointed as an opponent at eight PhD defences at Univ. Iceland, Univ. of Gothenburgh, Copenhagen Univ. and Univ. of Eastern Finland.

I have two times been a guest editor for a special issue in the ISI journal *Biogeosciences* and I am a co-editor for the ISI journal *Icelandic Agricultural Sciences* and have a chair in the editorial board of both the ISI journal *Scandinavian Journal of Forest Research* and the Russian *Forest Journal (Lesnoi Zhurnal)*.

## Main research projects during past 5 years

### ForHot ([www.forhot.is](http://www.forhot.is))

I co-ordinate a study on how geothermal soil warming affects ecosystem structure and function in natural grasslands and planted spruce forest, with emphasis on plant-soil interactions and nutrient cycles ([www.forhot.is](http://www.forhot.is)). I currently supervise 1 PhD student, one research assistant and interact with 15 other senior researchers, 7 PhD students and 4 M.Sc. students who all are working on this study currently.

### WetWood/MÝRVIÐUR and the SNS-GHG project (2014-2018)

I participate in a study where GHG-balances of drained afforested land and drained unmanaged pasture are compared at Sandælkjarmýri í S-Iceland. I am responsible for CO<sub>2</sub> flux measurements, discharge measurements and estimation of aquatic fluxes. Other collaborators are scientists from Univ. Akureyri, AUI, and Icelnad Forst Research, Mogilsa. This project also recently became a part of a larger Nordic study (SNS-112 *Anthropogenic greenhouse gas emissions from organic forest soils: improved inventories and implications for sustainable management*; 2016-2018).

### Surtsey ([www.surtsey.is](http://www.surtsey.is)) (2004-2016)

I participate in the research group doing ecological studies on primary succession on the volcanic island, Surtsey, which was “born” in 1963 ([www.surtsey.is](http://www.surtsey.is)). My part is on soil development, nutrient cycles and C-fluxes.

### Esjufjöll (2004-2016)

I coordinate, together with a colleague, ecological studies on primary succession on the glacial “nunataks” in Breiðamerkjurjökull-glacier in SE-Iceland.

### CAR-ES (2005-2009, 2010-2014, 2015-2019)

I am one of eight PI's for the research program “*Centre of Advanced Research on Environmental Services (CAR-ES)*”, which is financed by SNS (co-Nordic research fund for forestry related research). The project group consists of 11 research groups from all the Nordic and the Baltic countries.

## Publications of Bjarni D. Sigurdsson

In total Bjarni D. Sigurdsson (2017) has 69 publications in peer-reviewed scientific journals books and book chapters – 15 other scientific publications in English/Swedish - 122 scientific publications in Icelandic, books, theses', proceedings and reports. Total: 202 scientific publ. since 1998 (10.6 per year). ISI-Citations (2016): 1201. Most cited paper (2016): 330. H-index: 15, Rg score: 34.5. Supervision history (graduated): 2 PhD students and 14 MSc students; Ongoing: 1 PhD student and 3 MSc students.

### In international journals (primary publications):

#### 2018

1. Dajana Radujković, Erik Verbruggen, **Bjarni D. Sigurdsson**, Niki I. W. Leblans, Ivan Janssens, Steven Dauwe, Sara Vicca, James T. Weedon (201X). Prolonged exposure does not increase soil microbial community response to warming along geothermal gradients. *FEMS Microbiology Ecology* (Accepted 27.11.2017)
2. Marja Maljanen, Hem Raj Bhattarai, Christina Biasi & **Bjarni D. Sigurdsson** (2018). The effect of elevated soil temperatures on the production of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), nitric oxide (NO) and nitrous acid (HONO) from volcanic soils in southern Iceland. *Icelandic Agricultural Sciences* 31 (Accepted 05.12.2017).

#### 2017

3. Gargallo-Garriga, Albert, Marta Ayala-Roque, Jordi Sardans, Mireia Bartrons, Victor Granda, **Bjarni D. Sigurdsson**, Niki I. W. Leblans, Michal Oravec, Otmar Urban, Ivan A. Janssens & Josep Peñuelas (2017). Impact of soil warming on the plant metabolome of Icelandic grasslands. *Metabolites* 7(3), 44; doi:10.3390/metabo7030044
4. Leblans, Niki I. W., **Bjarni D Sigurdsson**, Rien Aerts, Sara Vicca, Borgthór Magnússon and Ivan A. Janssens (2017). Icelandic grasslands as long-term C sinks under elevated N inputs. *Biogeochemistry* 134(3): 279–299. doi: 10.1007/s10533-017-0362-5
5. Leblans, Niki, **Bjarni D Sigurdsson**, Sara Vicca, Yongshuo Fu, Josep Penuelas, Ivan Janssens (2017). Phenological responses of Icelandic subarctic grasslands to short-term and long-term natural soil warming. *Global Change Biology* 23(11):4932-4945. doi: 10.1111/gcb.13749.
6. Poepplau, C., Kätterer, T., Leblans, N.I.W., **Sigurdsson, B.D.** (2017). Sensitivity of soil carbon fractions and their specific stabilisation mechanisms to extreme soil warming in a subarctic grassland. *Global Change Biology* 23: 1316-1327, doi: 10.1111/gcb.13491.
7. Marja Maljanen, Heli Yli-Moijala, Christina Biasi, Niki I. Leblans, Hans J DeBoeck, Brynhildur Bjarnadottir and **Bjarni D. Sigurdsson** (2017). The emissions of N<sub>2</sub>O and CH<sub>4</sub> from natural soil temperature gradients in a volcanic area in southwest Iceland. *Soil Biology and Biochemistry* 109: 70-80. doi: 10.1016/j.soilbio.2017.01.021
8. Sardans, Jordi, Mireia Bartrons, Olga Margalef, Albert Gargallo-Garriga, Ivan Janssens, Phillipe Ciais, Michael Obersteiner, **Bjarni D. Sigurdsson**, Han Chen, Josep Peñuelas (2017). Invasive plants increase plant-soil nutrient concentrations in nutrient poor-environments. *Global Change Biology* 23(3): 1282–1291, doi: 10.1111/gcb.13384.

#### 2016

9. **Sigurdsson, B.D.**, N.I.W. Leblans, S. Dauwe, E. Guðmundsdóttir, P. Gundersen, G.E. Gunnarsdóttir, M. Holmstrup, K. Ilieva-Makulec, T. Kätterer, B. Marteinsdóttir, M. Maljanen, E.S. Oddsdóttir, I. Ostonen, J. Peñuelas, C. Poepplau, A. Richter, P. Sigurðsson, P.M. Van Bodegom, H. Wallander, J. Weedon and I. Janssens (2016). Geothermal ecosystems as natural climate change experiments: the ForHot research site in Iceland as a case study. *Icelandic Agricultural Sciences*. 29:53-71, doi: 10.16886/IAS.2016.05.
10. Brynja Davidsdottir, Tomas Gretar Gunnarsson, Gudmundur Halldorsson, **Bjarni D. Sigurdsson**. (2016). Avian abundance and communities in areas revegetated with exotic

versus native plant species. *Icelandic Agricultural Sciences* 29, 21-37, doi: 10.16886/IAS.2016.03.

11. Thomas Berg Hasper, Göran Wallin, Shubhangi Lamba, Marianne Hall, Fernando Jaramillo, Hjalmar Laudon, Sune Linder, Jane L. Medhurst, Mats Råntfors **Bjarni D. Sigurdsson**, Johan Uddling (2016). Water use by Swedish boreal forests in a changing climate. *Functional Ecology*, 30(5), 690-699, doi:10.1111/1365-2435.12546.

#### 2015

12. Krassimira Ilieva-Makulec, Brynhildur Bjarnadóttir, **Bjarni D. Sigurdsson**. 2015. Soil nematode communities on Surtsey 50 years after the formation of the volcanic island. *Icelandic Agricultural Sciences*, 28, 43-58, doi: 10.16886/IAS.2015.05.
13. Nicholas Clarke, Per Gundersen, Ulrika Jönsson-Belyazid, Janne Kjønaas, Tryggve Persson, **Bjarni D Sigurdsson**, Inge Stupak, Lars Vesterdal (2015). Influence of different tree-harvesting intensities on forest soil carbon stocks in boreal and northern temperate forest ecosystems. *Forest Ecology and Management*, 351, 9–19, doi: 10.1016/j.foreco.2015.04.034.
14. Marja Maljanen, Maarit Liimatainen, **Bjarni D. Sigurdsson**. 2015. Effects of volcanic ash on GHG production rates and soil properties in a drained peat soil in Finland and a comparison to wood ash. *Icelandic Agricultural Sciences*, 28, 25-28, doi: 10.16886/IAS.2015.03.
15. Viggó Marteinson, A. Klonowski, E. Reynisson, P. Vannier, **Bjarni D. Sigurdsson** and M. Ólafsson. 2015. Microbial colonisation in diverse surface soil types in Surtsey and diversity analysis of its subsurface microbiota. *Biogeosciences* 12, 1191-120.

#### 2014

16. Niki Leblans, **Bjarni D. Sigurdsson**, P. Roefs, R. Thuys, Borgþór Magnússon & I. A. Janssens. 2014. Effects of seabird nitrogen input on biomass and carbon accumulation after 50 years of primary succession on a young volcanic island, Surtsey. *Biogeosciences*, 11: 6237-6250, doi:10.5194/bg-11-6237-2014.
17. Guðrún Stefánsdóttir, Ása L. Aradóttir, **Bjarni D. Sigurdsson**. 2014. Accumulation of nitrogen and organic matter during primary succession of *Leymus arinarius* dunes on the volcanic island Surtsey, Iceland. *Biogeosciences*, 11(19): 5763-5771, doi:10.5194/bg-11-5763-2014.
18. Borgþór Magnússon, Sigurður H. Magnússon, Erling Ólafsson, and **Bjarni D. Sigurdsson**. 2014. Plant colonization, succession and ecosystem development on Surtsey with reference to neighbour islands. *Biogeosciences*, 11(19): 5521-5537, doi:10.5194/bg-11-5521-2014.
19. O’Gorman, Eoin J., Jonathan P. Benstead, Wyatt F. Cross, Nikolai Friberg, James M. Hood, Philip W. Johnson, **Bjarni D. Sigurdsson**, and Guy Woodward. (2014) Climate change and geothermal ecosystems: natural laboratories, sentinel systems, and future refugia. *Global Change Biology*, 20(11):3291-3299. doi: 10.1111/gcb.12602
20. Hunziker, Matthias, **Bjarni D. Sigurdsson**, Gudmundur Halldorsson, Nikolaus J. Kuhn. (2014). Coarse root allometry and biomass distribution of *Betula pubescens* in southern Iceland. *Icelandic Agricultural Sciences* 27: 111-125.
21. Teresa G. Bárcena, Lars P. Kiær, Lars Vesterdal, Helena M. Stéfánsdóttir, Per Gundersen, **Bjarni D. Sigurdsson** (2014). Soil carbon stock change following afforestation in Northern Europe: a meta-analysis. *Global Change Biology*, 20(8): 2393–2405.
22. Hiltbrunner, Erika, Rien Aerts, Tobias Bühlmann, Kerstin Huss-Danell, Borgthor Magnusson, David Myrold, Sasha Reed, **Bjarni D. Sigurdsson** and Christian Körner (2014). Expansion of N<sub>2</sub>-fixing plants into cold biomes alters ecosystem functioning. *Oecologia*, 176(1): 11-24. doi:10.1007/s00442-014-2991-x.

#### 2013

23. Halldorsson, Gudmundur, **Bjarni D. Sigurdsson**, Brynja Hrafnkelsdottir, Edda S. Oddsdottir, Ólafur Eggertsson and Erling Olafsson (2013). New pests on trees and shrubs and changes in pest dynamics: a review. *Icelandic Agricultural Sciences* 26: 69-84.
24. **Bjarni D. Sigurdsson** and Gudleifsson, Bjarni E. (2013). Impact of afforestation on earthworm populations in Iceland. *Icelandic Agricultural Sciences* 26: 21-36.
25. Lars Vesterdal, Nicholas Clarke, **Bjarni D. Sigurdsson**, Per Gundersen (2013). Do tree species influence soil carbon stocks in temperate and boreal forests? *Forest Ecology and Management* 309: 4-18. DOI: 10.1016/j.foreco.2013.01.017
26. Rakel J. Jonsdottir, **Bjarni D. Sigurdsson**, Anders Lindström. (2013) Effects of nutrient loading and fertilisation at planting on growth and nutrient status of Lutz spruce (*Picea x lutzii*) seedlings during the first growing season in Iceland. *Scandinavian Journal of Forest Research* 28(7), 631-641. DOI: 10.1080/02827581.2013.824503
27. **Bjarni D. Sigurdsson**, Jane L. Medhurst, Göran Wallin, Ólafur Eggertsson, Sune Linder. 2013. Growth of mature boreal Norway spruce was not affected by elevated [CO<sub>2</sub>] and/or air temperature unless nutrient availability was improved. *Tree Physiology* 33(11): 1192-1205. doi:10.1093/treephys/tpt043.

#### 2010

28. Jon A. Jonsson and **Bjarni D. Sigurdsson** (2010). Effects of early thinning and fertilization on soil temperature and soil respiration in a poplar plantation. *Icelandic Agricultural Sciences* 23: 97-109.
29. **Sigurdsson, Bjarni D.** & Borgþór Magnússon (2010). Ecosystem respiration, vegetation development and soil nitrogen in relation to breeding density of seagulls on a pristine volcanic island, Surtsey, Iceland. *Biogeosciences* 7, 883-891.
30. Gundersen, P., Laurén, A., Finér, L., Ring, E., Koivusalo, H., Sætersdal, M., Weslien, J.-O., **Sigurdsson, B.D.**, Högbom, L., Laine, J., and Hansen, K. 2010. Environmental services provided from riparian forests in the Nordic countries. *Ambio* 39: 555-566.
31. M. Maljanen, **B. D. Sigurdsson**, J. Guðmundsson, H. Óskarsson, J. T. Huttunen, and P. J. Martikainen (2010) Land-use and greenhouse gas balances of peatlands in the Nordic countries – present knowledge and gaps. *Biogeosciences* 7, 2711-2738.

#### 2009

32. Brynhildur Bjarnadóttir, **Bjarni D. Sigurdsson** and Anders Lindroth (2009). Seasonal and annual variation of carbon fluxes in a young Siberian larch (*Larix sibirica*) plantation in Iceland. *Biogeosciences* 6: 2895-2906.
33. Jan Weslien, Leena Finér, Jon A. Jonsson, Harri Koivusalo, Ari Laurén, Thomas Ranius, **Bjarni D. Sigurdsson** (2009) Effects of increased forest productivity and warmer climates on carbon sequestration, runoff water quality and accumulation of dead wood in a Boreal landscape: a modeling study. *Scandinavian Journal of Forest Research* 24: 333-347.
34. Kostianinen, Katri, Seija Kaakinen, Pekka Saranpää, **Bjarni D. Sigurdsson**, Sven-Olof Lundqvist, Sune Linder & Elina Vapaavuori. 2009. Stem wood properties of mature Norway spruce after three years of continuous exposure to elevated carbon dioxide and temperature. *Global Change Biology* 15(2): 368-379

#### 2008

35. Lindroth, Anders, Fredrik Lagergren, Mika Aurela, Brynhildur Bjarnadóttir, Torben Christensen, Ebba Dellwik, Achim Grelle, Andreas Ibrom, Torbjörn Johansson, Harry Lankreijer, Samuli Launiainen, Tuomas Laurila, Meelis Mölder, Eero Nikinmaa, Kim Pilegaard, **Bjarni D. Sigurdsson** and Timo Vesala. 2008. Leaf area index is the principal scaling parameter for both gross photosynthesis and ecosystem respiration of northern deciduous and coniferous forests. *Tellus* 60B: 129-142.
36. Ward, Eric J., Ram Oren, **Bjarni D. Sigurdsson**, Paul G. Jarvis & Sune Linder. 2008. Fertilization effects on mean stomatal conductance are mediated through changes in the hydraulic attributes of mature Norway spruce trees. *Tree Physiology* 28(4): 579-596.

37. Asrun Elmarsdóttir, Arne Fjellberg, Gudmundur Halldórsson, Maria Ingimarsdóttir, Olafur K. Nielsen, Per Nygaard, Edda Sigurdis Oddsdóttir, **Bjarni D. Sigurdsson**. 2008. Effects of afforestation on biodiversity. In AFFORNORD: Effects of afforestation on ecosystems, landscape and rural development. Edited by G. Halldórsson, E.S. Oddsdóttir, and B.D. Sigurdsson. TemaNord 2008:562, Nordic Council of Ministers, Copenhagen. pp. 37-47.
38. Harald Sverdrup, Salim Belyzaid, Asrun Elmarsdóttir, Borgthor Magnusson, **Bjarni D. Sigurdsson**. 2008. Modelling ground vegetation changes. In AFFORNORD: Effects of afforestation on ecosystems, landscape and rural development. Edited by G. Halldórsson, E.S. Oddsdóttir, and B.D. Sigurdsson. TemaNord 2008:562, Nordic Council of Ministers, Copenhagen. pp. 49-55.
39. **Bjarni D. Sigurdsson**, Harald Sverdrup, Salim Belyazid, and Brynhildur Bjarnadóttir. 2008. Effects of afforestation on the carbon cycle. In AFFORNORD: Effects of afforestation on ecosystems, landscape and rural development. Edited by G. Halldórsson, E.S. Oddsdóttir, and B.D. Sigurdsson. TemaNord 2008:562, Nordic Council of Ministers, Copenhagen. pp. 87-99.

#### 2007

40. Hyvönen, Riitta, Göran I. Ågren, Sune Linder, Tryggve Persson, M. Francesca Cotrufo, Alf Ekblad, Michael Freeman, Achim Grelle, Ivan A. Janssens, Paul G. Jarvis, Seppo Kellomäki, Anders Lindroth, Denis Loustau, Tomas Lundmark, Richard J. Norby, Ram Oren, Kim Pilegaard, Michael G. Ryan, **Bjarni D. Sigurdsson**, Monika Strömgren, Marcel van Oijen and Göran Wallin. 2007. Tansley review. The likely impact of elevated [CO<sub>2</sub>], nitrogen deposition, increased temperature and management on carbon sequestration in temperate and boreal forest ecosystems. *New Phytologist*, 173: 463–480.
41. Brynhildur Bjarnadóttir, **Bjarni D. Sigurdsson** and Anders Lindroth. 2007. Estimate of annual carbon balance of a young Siberian larch (*Larix sibirica*) plantation in Iceland. *Tellus B* 59 (5): 891–899.
42. Brynhildur Bjarnadóttir, Anna Cecilia Inghammar, Mona-Maria Brinker and Bjarni D. Sigurdsson. 2007. Single tree biomass and volume functions for young Siberian larch trees (*Larix sibirica*) in eastern Iceland. *Icelandic Agricultural Sciences*, 20, 125-135.
43. Haraldsson, Hörður V., Harald U. Sverdrup, Salim Belyazid, **Bjarni D. Sigurdsson**, Guðmundur Halldórsson. 2007. The Systems Analysis and System Dynamic process preparing for assessment of effects of afforestation in Iceland. *Icelandic Agricultural Sciences*, 20: 107-124.

#### 2006

44. Jónsson, Jón Ágúst, Guðmundur Halldórsson and **Bjarni D. Sigurdsson** (2006). Changes in bird life, surface fauna and ground vegetation following afforestation by black cottonwood (*Populus trichocarpa*). *Icelandic Agricultural Sciences* 19: 33-41.

#### 2005

45. Medlyn, B.E., P. Berbigier, R. Clement, A. Grelle, D. Loustau, S. Linder, L. Wingate, P.G. Jarvis, **B.D. Sigurdsson** & R.E. McMurtrie. 2005. The carbon balance of coniferous forests growing in contrasting climatic conditions: a model-based analysis. *Agricultural and Forest Meteorology* 131: 97-124.
46. **Sigurdsson, Bjarni D.**, Borgthor Magnusson, Asrun Elmarsdóttir & Brynhildur Bjarnadóttir (2005). Biomass and composition of understory vegetation and the forest floor carbon stock across Siberian larch and mountain birch chronosequences in Iceland. *Annals of Forest Science* 62 (8): 881-888.
47. Gudmundsdóttir, Gerður & **Bjarni D. Sigurdsson**. 2005. Photosynthetic temperature response of mountain birch (*Betula pubescens* Ehrh.) in comparison with three other broadleaved tree species in Iceland. *Icelandic Agricultural Sciences* 18: 43-51.

#### 2004

48. Katri Kostianen, Seija Kaakinen, Pekka Saranpää, **Bjarni D. Sigurdsson**, Sune Linder, and Elina Vapaavuori (2004). Effect of elevated [CO<sub>2</sub>] on stem wood properties of mature Norway spruce grown at different soil nutrient availability. *Global Change Biology* 10: 1-13.

49. Einarsson, Stefán Freyr, **Bjarni D. Sigurdsson** & Arnór Snorrason. 2004. Estimating aboveground biomass for Norway spruce (*Picea abies*) in Iceland. *Icelandic Agricultural Sciences* 16-17: 53-63.

### 2003

50. Bergh, J., M. Freeman, **B.D. Sigurdsson**, S. Kellomäki, K. Laitinen, S. Niinistö, & H. Peltola. 2003. Modelling the short-term effects of climate change on the productivity of selected tree species in Nordic countries. *Forest Ecology and Management* 183: 327-340.

### 2002

51. **Sigurdsson, B.D.**, P. Roberntz, M. Freeman, H. Saxe, M. Næss, H. Thorgeirsson & S. Linder 2002. Impact studies on Nordic forests: effects of elevated CO<sub>2</sub> and fertilisation on gas exchange. *Canadian Journal of Forest Research*, 32:779-788.

52. Snorrason, A., **B.D. Sigurdsson**, G. Guðbergsson, K. Svavarsdóttir & Th.H. Jónsson. 2002. Carbon sequestration in forest plantations in Iceland. *Icelandic Agricultural Sciences* 15: 79-91.

### 2001

53. **Sigurdsson, B.D.** 2001. Elevated [CO<sub>2</sub>] and nutrient status modified leaf phenology and growth rhythm of young *Populus trichocarpa* trees in a three-year field study. *Trees*, 15: 403-413.

### 2000

54. **Sigurdsson, B. D.** & Snorrason, A. 2000. Carbon sequestration by afforestation and revegetation as a means of limiting net-CO<sub>2</sub> emissions in Iceland. *Biotechnology, Agronomy, Society and Environment*, 4 (4): 303-307.

55. **Sigurdsson, B.D.**, H. Thorgeirsson & S. Linder. 2001. Growth and dry-matter partitioning of young *Populus trichocarpa* trees during three years of elevated CO<sub>2</sub> and fertilisation. *Tree Physiology*, 21: 941-950.

56. Medlyn, B.E., C.V.M. Barton, M. S. J. Broadmeadow, R. Ceulemans, P. de Angelis, M. Forstreuter, M. Freeman, S.B. Jackson, S. Kellomäki, E. Laitat, A. Rey, P. Roberntz, **B.D. Sigurdsson**, J. Strassmeyer, K. Wang, P. S. Curtis & P. G. Jarvis. 2001. Elevated [CO<sub>2</sub>] effects on stomatal conductance in European forest species: a synthesis of experimental data. *New Phytologist*, 149: 247-264.

### 1998

57. **Sigurdsson, B. D.**, Á. L. Aradóttir & I. B. Strachan. 1998. Cover and canopy development of a newly established poplar plantation in south Iceland. *Icelandic Agricultural Sciences*, 12: 35-46.

58. Strachan, I. B., **B. D. Sigurdsson** & J. H. McCaughey. 1998. Soil hydrology at the Gunnarsholt experimental plantation: Measurements and results. *Icelandic Agricultural Sciences*, 12: 27-34.

59. Strachan, I. B., Ó. Arnalds, F. Pálmason, H. Þorgeirsson, **B. D. Sigurdsson**, H. Sigurðardóttir & G. Novoselac. 1998. Soils of the Gunnarsholt experimental plantation. *Icelandic Agricultural Sciences*, 12: 15-26.

## In Icelandic peer-reviewed journals (primary publications):

### 2011

60. Ásrún Elmarsdóttir, **Bjarni Diðrik Sigurðsson**, Edda Sigurdís Oddsdóttir, Arne Fjellberg, Bjarni E. Guðleifsson, Borgþór Magnússon, Erling Ólafsson, Guðmundur Halldórsson, Guðmundur A. Guðmundsson, Guðríður Gyða Eyjólfsdóttir, Kristinn Haukur Skarphéðinsson, María Ingimarsdóttir og Ólafur K. Nielsen. Áhrif skógræktar á tegundaauði [*Effects of afforestation on species richness in Iceland*]. Náttúrufræðingurinn 81(2): 69-81.

### 2004

61. **Sigurðsson, B.D** & B. Magnusson. 2004. Frævistfræði alaskalúpínu (Seed ecology of the Nootka lupin). Náttúrufræðingurinn 72 (3-4): 110-116. (In Icelandic, English summary).

### 2003

62. Magnusson, B., S.H. Magnusson & **B.D. Sigurðsson** 2003. Áhrif alaskalúpínu á gróðurfar (*Effects of introduced Nootka lupin (Lupinus nootkatensis) on plant succession in Iceland*). Náttúrufræðingurinn 71 (3-4): 98-111. (In Icelandic, English summary).

## Books, book chapters and edited books:

### 2015

63. [PUBLISHED BOOK]. **Bjarni Diðrik Sigurðsson** (2015). Sveppahandbókin. 100 tegundir íslenskra villisveppa. [The Mushroom Handbook: 100 Species of Icelandic Mushrooms] Mál og menning, Reykjavík. 287 pp. ISBN: 978-9979-3-3552-8

### 2014

64. [EDITED BOOK] Guðmundur Halldórsson, Francesca Bampa, Anna Björk Þorsteinsdóttir, **Bjarni D. Sigurðsson**, Luca Montanarella & Andrés Arnalds (Eds.). (2014). Soil carbon sequestration for climate, food security and ecosystem services. Proceedings of the international conference, 27-29 May 2013, Reykjavik, Iceland (Vol. EUR 26540 EN). Ispra, Italy: European Commission, 338 pp.

### 2013

65. [CHAPTER IN A PUBLISHED BOOK] **Bjarni Diðrik Sigurðsson** (2013). Sauðfjárbætur í skóglendi Íslands: Ný viðhorf. Í: Sauðfjárrækt á Íslandi (ritstj. Ragnhildur Sigurðardóttir). Uppheimar, 135-143 (In Icelandic).
66. [CHAPTER IN A PUBLISHED BOOK] **Bjarni Diðrik Sigurðsson** (2013). Skógar – lungu jarðar. Í: Skógarauðlindin – ræktun, umhirða og nýting (ritstj. Hallur Björgvinsson o.fl.), Landbúnaðarháskóli Íslands, 40-43 (In Icelandic).

### 2008

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