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Curriculum Vitae

Name: Andreas Brunner

Title: Professor

Education:

- University of Freiburg, Germany, 1993, Dr. rer. nat. (Ph.D.), Silviculture
- State Forest Service (Landesforstverwaltung) Baden-Württemberg, Germany, 1994, Grosse Forstliche Staatsprüfung (Forestry state exam)
- University of Munich, Germany, 1988, Diplom-Forstwirt Univ. (M.Sc.), Forestry

Employment:

- Professor in silviculture, 2005 – present, Norwegian University of Life Sciences
- Senior scientist, 1999 – 2005, The Royal Veterinary and Agricultural University, Danish Centre for Forest, Landscape and Planning, Denmark
- Post-doctorate associate, 1996 – 1999, University of Freiburg, Institute of Silviculture, Germany
- Post-doctorate associate, 1994 – 1996, University of British Columbia, Vancouver, B.C., Canada
- Trainee, 1992 – 1994, State Forest Service (Landesforstverwaltung) Baden-Württemberg, Germany
- Research Assistant, 1989 – 1992, University of Munich, Institute of silviculture, Germany

Professional Activities:

- Fellow of The Royal Swedish Academy of Agriculture and Forestry, since 2016
- Head of research committee at Department of Ecology and Natural Resource Management, Norwegian University of Life Sciences, 2008 - 2010
- Associate Editor, Canadian Journal of Forest Research, 2004 - 2007

Scientific publications

Reviewed Publications

- (1) Sharma, R.P., Brunner, A. 2016. Modelling individual tree height growth of Norway spruce and Scots pine from national forest inventory data in Norway. *Scandinavian Journal of Forest Research*. DOI 10.1080/02827581.2016.1269944.
- (2) Río M., Pretzsch H., Alberdi I., Bielak K., Bravo, F., Brunner A., Condés S., Ducey M.J., Fonseca T., von Lüpke N., Pach M., Peric S., Perot T., Souidi Z., Spathelf P., Sterba H., Tijardovic M., Tomé M., Vallet P., Bravo-Oviedo A. 2016. Characterization of the structure, dynamics, and productivity of mixed-species stands: Review and perspectives. *European Journal of Forest Research* 135: 23-49.
- (3) Sterba, H., del Rio, M., Brunner, A. & Condes, S. 2014. Effect of species proportion definition on the evaluation of growth in pure vs. mixed stands. *Forest Systems*, 23 (3): 547-559.
- (4) Brunner, A., & Gizachew, B. 2014. Rapid detection of stand density, tree positions, and tree diameter with a 2D terrestrial laser scanner. *European Journal of Forest Research*, 133: 819-831.
- (5) Gizachew, B., Brunner, A., Øyen, B.-H. 2012. Stand responses to initial spacing in Norway spruce plantations in Norway. *Scandinavian Journal of Forest Research* 27: 637-648.
- (6) Sharma, R.P., Brunner, A., Eid, T. 2012. Site index prediction from site and climate variables for Norway spruce and Scots pine in Norway. *Scandinavian Journal of Forest Research* 27: 619-636.
- (7) Gizachew, B., Brunner, A. 2011. Density-growth relationships in thinned and unthinned Norway spruce and Scots pine stands in Norway. *Scandinavian Journal of Forest Research* 26: 543-554.
- (8) Sharma, R.P., Brunner, A., Eid, T., Øyen, B.-H. 2011. Modelling dominant height growth from national forest inventory individual tree data with short time series and large age errors. *Forest Ecology and Management* 262: 2162-2175.
- (9) Hynynen, J., Niemistö, P., Viherä-Aarnio, A., Brunner, A., Hein, S., Velling, P. 2010. Silviculture of birch (*Betula pendula* Roth. and *Betula pubescens* Ehrh.) in northern Europe. *Forestry* 83: 102-119.
- (10) Solberg, S., Brunner, A., Hansen, K.H., Lange, H., Næsset, E., Rautiainen, M., Stenberg, P. 2009. Mapping LAI in a Norway spruce forest using airborne laser scanning. *Remote Sensing of environment* 113: 2317-2327.
- (11) Brunner, A., Hahn, K., Biber, P., Skovsgaard, J.P. 2006. Conversion of Norway spruce: A case study in Denmark based on silvicultural scenario modelling. In: Hasenauer, H. (ed.), *Sustainable forest management. Growth models for Europe*. Springer, Berlin. 343-371.
- (12) Lüpke, B. von, Ammer, C., Bruciamacchie, M., Brunner, A., Ceitel, J., Collet, C., Deuleuze, C., Diplacido, J., Jankovic, J., Kantor, P., Kazda, M., Larsen, J.B., Lexer, M., Löf, M., Longauer, R., Madsen, P., Modrzyński, J., Mosandl, R., Pampe, A.,

- Pommerening, A., Stefancik, I., Tesar, V., Thompson, R., Zientarski, J. 2004. Silvicultural strategies for conversion. In: Spiecker, H., Hansen, J., Klimo, E., Skovsgaard, J.P., Sterba, H., Teuffel, K. von (Eds.), Norway spruce conversion - options and consequences, European Forest Institute Research Report 18, Brill, Leiden, Boston. Pp. 121-164.
- (13) Brunner, A., Kimmins, J.P. 2003. Nitrogen fixation in coarse woody debris of western red cedar and western hemlock forests on northern Vancouver Island. *Can. J. For. Res.*: 33: 1670-1682.
- (14) McFarlane, D.W., Green E.J., Brunner, A., Amateis, R.L. 2003. Modeling loblolly pine canopy dynamics for a light capture model. *Forest Ecology and Management* 173: 145-168.
- (15) McFarlane, D.W., Green E.J., Brunner, A., Burkhart, H. 2002. Predicting survival and growth rates for individual loblolly pine trees as a function of light capture under different stand conditions. *Can. J. For. Res.* 32: 1970-1983.
- (16) Brunner, A., Nigh, G. 2000. Light absorption and bole volume growth of individual Douglas-fir trees. *Tree Physiology* 20: 323-332.
- (17) Brunner, A. 1998. A light model for spatially explicit forest stand models. *Forest Ecology and Management* 107: 19-46.
- (18) Ammer, C., Burschel, P., Brunner, A. 1994. Erste Ergebnisse einer Untersuchung über die Eignung verschiedener Baumarten zur Rekultivierung von Tonabbauflächen. [*First results from an investigation into the suitability of various tree species for the recultivation of former open clay pits.*] *Forstwissenschaftliches Centralblatt* 113: 175-193.
- (19) Brunner, A. 1994. Ökologische Lichtmessung im Wald. [*Ecological light measurements in forests.*] *Forstarchiv* 65: 133-138.
- (20) Brunner, A., Huss, J. 1994. Die Entwicklung von Bergmischwaldkulturen in den Chiemgauer Alpen. [*The development of artificially regenerated species of the mixed mountain forest in the eastern Bavarian Alps.*] *Forstwissenschaftliches Centralblatt* 113: 194-203.

Other publications

- (1) Brunner, A. 2016. Tynne mer, tidlig, kraftig og ofte. *Norsk Skogbruk* 5-2016: 46-47.
- (2) Brunner, A. 2012. Skogen vokser bedre i dag! *Norsk Skogbruk* 5-2012: 32-33.
- (3) Eid, T., Brunner, A., Sjøgaard, G., Astrup, R., Tomter, S., Løken, Ø., Eriksen, R. 2010. Estimation, availability and production of tree biomass resources for energy purposes – a review of research challenges in Norway. *INA fagrapport 15*. Department of Ecology and Natural Resource Management. Norwegian University of Life Sciences. 91 pp.
- (4) Bøhler, F., Brunner A., Øyen, B.-H. 2008. Toppkapping i ungskogpleie av gran: vekstreaksjoner på toppkappede trær. *Forskning fra Skog og landskap* 4/08. 18 s.

- (5) Øyen, B.-H., Brunner, A., Bøhler, F. 2007. Toppkapping som metode i ungskogpleien. Skogeieren 9/2007: 12-13.
- (6) Brunner, A. 2007. Bioenergi fra norske trær. Debattinnlegg. Dagsavisen 15. 05. 2007: 4.
- (7) Brunner, A., Johannsen, V.K., Vesterdal, L. 2005. Effekten af statsskovenes overgang til naturnær drift på kulstofbinding i skovene. [*Effect of conversion to nature-based management in the Danish state forests on carbon sequestration*] Arbejdsrapport fra Miljøstyrelsen Nr. 10. Miljøministeriet, København. 70 s.
- (8) Brunner, A., Rune, F. 2004. Genetablering af skov på stormfaldsarealer ved naturlig foryngelse. [*Restocking of storm-felled forests using natural regeneration*] Arbejdsrapporter Skov & Landskab 11. Danish Centre for Forest, Landscape and Planning, KVL. 99 pp. http://www.sl.kvl.dk/upload/ap_sl11.pdf
- (9) Brunner, A., Butler Manning, D., Huss, J., Rozenbergar, D., Diaci, J., Schousboe, F., Hansen, L.W. 2004. Scenarios of regeneration and stand production of beech under different silvicultural regimes with Regenerator. EU-project Nat-Man "Nature-based management of beech in Europe", Deliverable 18, 34 & 35. Danish Centre for Forest, Landscape and Planning, KVL. 90 pp. <http://www.flec.kvl.dk/natman/html/menu.asp?id=124>
- (10) Brunner, A., Rajkai, K., Gacsi, Z., Hagyó, A. 2004. Regenerator – a forest regeneration model. EU-project Nat-Man "Nature-based management of beech in Europe", Deliverable 10, 25 & 26. Danish Centre for Forest, Landscape and Planning, KVL. 74 pp. & software. <http://www.flec.kvl.dk/natman/html/menu.asp?id=124>, <http://www.sl.kvl.dk/OmSkovOgLandskab/Medarbejdere/abr/Forskning.aspx>
- (11) Skovsgaard, J.P., Brunner, A., Sørensen, I.H., Ravn, H.P. 2004. Konvertering af rødgran ved underplantning. [*Conversion of Norway spruce by underplanting.*] Videnblad 4.1-6, Skov & Landskab. 2 pp.
- (12) Brunner, A., Sørensen, I.H., Skovsgaard, J.P. 2003. Skærmstilling og underplantning af rødgran i Gludsted Plantage. [*Shelterwood regeneration of Norway spruce in Gludsted Plantation*] Arbejdsrapporter Skov & Landskab 13. Danish Forest and Landscape Research Institute. 75 pp. http://www.sl.kvl.dk/upload/ap_sl13.pdf
- (13) Brunner, A. 2003. Naturlig foryngelse af nåletræ. [*Natural regeneration of conifers.*] Videnblad 4.1-5, Skov & Landskab. 2 pp.
- (14) Brunner, A. (ed.) 2002. Restocking of storm-felled forests: new approaches. Proceedings of an international workshop in Denmark, March 2001. Danish Centre for Forest, Landscape and Planning, Reports no. 12. 114 pp.
- (15) Brunner, A. 2002. Plukhugst - et naturnært dyrkningssystem - kan det bruges? [*Single tree selection – a nature-based silvicultural system – can it be used in practice?*] Skoven 4/02: 196-198.
- (16) Brunner, A. 2001. Plantningsmetodens indflydelse på rodudvikling. [*Influence of planting methods on root development.*] Videnblad 4.6-12, Skov & Landskab. 2 pp.
- (17) Brunner, A. 2001. Naturlig tilgroning efter stormfald. [*Natural restocking after storm damages.*] Videnblad 3.1-6, Skov & Landskab. 2 pp.

- (18) Brunner, A., Klitgaard, O.L. 2001. Genopbygning af tyske skove efter orkanskader – fra temadag i Freiburg. [*Restocking of German forests after storm damages - workshop in Freiburg.*] Skoven særnummer februar 2001: 60 - 62.
- (19) Brunner, A. 2000. Sammenligning af naturnær og traditionel skovdrift i Hestehave og Ringelmoose Skov, Kalø. FSL forsøg nr. 1396. Beskrivelse af skovenes tilstand i efteråret 1999. [*Comparing nature-oriented and traditional forestry in Hestehave and Ringelmoose Forest, Kalø. FSL experiment no. 1396. Description of the forest's composition and structure in fall 1999.*] Naturnær skovdrift, Arbejdsnotat nr. 12. Forskningscentret for Skov & Landskab. 134 pp.
- (20) Brunner, A. 2000. Genopbygning af tyske skove efter orkanskader: Erfaringer fra Sydtykland efter 1990. [*Restocking of German forests after storm damages: experiences from Southern Germany after 1990.*] Skoven 02/00: 90-93. (også i særnummer februar 2001: 52-55)
- (21) Brunner, A. 2000. Genopbygning af tyske skove efter orkanskader: Erfaringer fra Nordtyskland. [*Restocking of German forests after storm damages: experiences from Northern Germany.*] Skoven 06-07/00: 285-288. (også i særnummer februar 2001: 56-59)
- (22) Brunner, A. 1993. Die Entwicklung von Bergmischwaldkulturen in den Chiemgauer Alpen und eine Methodenstudie zur ökologischen Lichtmessung im Wald. [*The development of artificial regeneration of the mixed mountain forest presented at the example of a permanent research project in the eastern Bavarian Alps and a methodical study of ecological light measurements in forests.*] Forstliche Forschungsberichte München 128. 262 pp.
- (23) Brunner, A. 1991. Root investigations in energy forests on rotavated peat soils in southern Sweden. In: McMichael, B.L., Persson, H. (eds.): Plant Roots and their environment. Proceedings of an ISSR-symposium, August 21st - 26th, 1988, Uppsala, Sweden. Developments in agricultural and managed-forests ecology 24: 199-203. Elsevier, Amsterdam.