

# Yaquan Chang

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## EDUCATION

2018.09-2020.06 (expected) **MSc.**, University of Copenhagen, Center for Macroecology, Evolution and Climate, University of Copenhagen. Thesis: *Impacts of forest harvesting intensity on forest functional diversity in Denmark*. Advisor: Dr. Naia Morueta-Holme

2014.09-2018.06 **BSc.**, Nanjing Forestry University, College of Biology and the Environment, Ecology. Thesis: *Comparing Balsam Fir Potential Species Distribution in two Distinct Areas of New Brunswick, Canada*. Advisor: Dr. Charles P.-A. Bourque (GPA: 87.4/100; rank: 2/35)

## RESEARCH EXPERIENCE

2019.07-2019.08 Project out of course scope, Project: *LiDAR-derived variables as a proxy for functional diversity of woody plant and response to forest management intensity*

- Computing LiDAR-derived metrics
- Plant identification and forest structure measurement in the field
- image recognition to measure canopy closure
- Constructing multivariate linear models to checking how LiDAR-derived and field-derived models explain functional diversity in R
- Evaluating models based on Akaike information criteria weight (AIC)

2019.04-2019.06 Group member, Project: *A Statistical and GIS-based approach to plan and manage the Giant Hogweed in Vordingborg municipality*

- Checking the collinearity of explanatory variables
- Constructing species distribution models of Giant Hogweed with General Linear Model (GLM), General Additive Model (GAM), Classification and Regression Trees (CART), and Random Forest (RF) in R
- Evaluating models based on the area under the curve (AUC)
- Setting field validation points of the model

2018.08-2019.04 Research Assistant, Project: *Relating Modelled Habitat Suitability for Abies Balsamea to On the Ground Species Structural Characteristics in Naturally Growing Forests of New Brunswick, Canada*

- Constructing species distribution models with General Linear Model (GLM), General Additive Model (GAM), Classification and Regression Trees (CART), and Random Forest (RF) in R
- Evaluating models based on the area under the curve (AUC)
- Calculating aboveground biomass and site index in Matlab

- Relating model results to site characteristics
- 2017.09-2018.05 Visiting Student, University of New Brunswick, completed BSc thesis
- Running Potential Species Distribution (PSD model) in Fortran
  - Calculating radial growth rate & aboveground biomass of balsam fir in Matlab
  - Comparing site characteristics in two areas of New Brunswick
- 2015.05-2017.05 Project Leader, Nanjing Forest University, Project: *Dynamic Evolution of Vegetation in Yangtze River Basin and its Hydrological and Ecological Benefits*
- Running the LPJ-model in Fortran
  - Calculating water use efficiency (WUE) based on net primary production (NPP) & evapotranspiration (ET)
  - Analysing the spatial distribution of WUE in ArcGIS
  - Analysing sensitivity by changing model inputs in Matlab

## PUBLICATIONS and PROFESSIONAL PRESENTATIONS

**Yaquan Chang**, Alfred Figueras Anton, Oriol García Antúnez, Andreas Davidsen, Jens Lindgaard. 2019. How to upgrade current management plans for the invasive species Giant Hogweed in Denmark – a case study from Vordingborg municipality, Zealand. *The Euroleague for Life Sciences (ELLS) Scientific Student Conference*. Uppsala, Sweden (Poster presentation; In prep)

**Yaquan Chang**, Charles P.-A. Bourque. Relating modelled habitat suitability for *Abies Balsamea* to on the ground species structural characteristics in naturally growing forests of New Brunswick, Canada, 2019 (In revision)

Haozhou Wang, **Yaquan Chang**, Chuan Li, Qiurong Liu, Min Zhong, Qinxuan Chen. 2017. Analysis of Image Capacity in Resources Survey between Two UAV Photogrammetry Softwares: PIX 4D Mapper and Photoscan. *Gansu Science and Technology*. 33(22): 46-51 (In Chinese)

Haozhou Wang, **Yaquan Chang**, Zenxin Zhang. 04.2016. Yaira Measurement Data Multidimensional Visualization Software. (Software Copyright. Patent No.: 2016SR178462.; in Chinese)

## TEACHING EXPERIENCE

- Fall 2018 Teaching Assistant, Environmental Education Online Course, Cornell University
- Co-leading a TA project related to Urban Green Spaces
- Fall 2016 Undergraduate Mentor, Nanjing Forestry University

## FELLOWSHIPS, AWARDS, AND HONORS

2019	Herboms Bog-legat (book grant), University of Copenhagen (1607 DKK)
2018	7 <sup>th</sup> Liangxi Merit Award, Chinese Society of Forestry (2000 RMB)
2018	3+1+1 Scholarship, University of New Brunswick (2000 CAD)
2017-18	International Differential Award, University of New Brunswick (7500 CAD)
2017	Special Award of 14th International Junior Forest Contest, Russian Federal Forest Agency
2016	Star of Innovation and Creation, College of Biology and the Environment, Nanjing Forestry University
2015-18	Merit Student, Nanjing Forestry University (3000 RMB in total)

## PROFESSIONAL CERTIFICATIONS

2016.06	Urban Environmental Education Certificate, Cornell University
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## WORKSHOPS AND COURSES

2018.06	<i>Principles and Applications of Species Distribution Model Summer Course</i> , Peking University <ul style="list-style-type: none"><li>• Modelling, testing, ensemble, and CC projections for SDMs in R</li><li>• Introduction to BIOMOD2 in R</li></ul>
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## VOLUNTEER SERVICE AND APPOINTMENTS

2019.09-Present	Volunteer editor, Wiley Ecology China Wechat Official account
2019.01	Conference Assistant, 13 <sup>th</sup> Annual Danish Water Forum
2018.06-2018.08	Volunteer, Inner Mongolia Project, The Nature Conservancy <ul style="list-style-type: none"><li>• Doing reviews regarding conservation tillage and soil degradation</li></ul>
2015.02-2016.05	Volunteer, Yingming Reading Club, Nanjing, Jiangsu

## REFERENCES

Dr. Naia Morueta-Holme	Dr. Charles P.-A. Bourque	Dr. Jiang Jiang
Assistant Professor	Professor	Professor
University of Copenhagen	University of New Brunswick	Nanjing Forestry University
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