# Miguel Alvarez

Dr. rer. nat.

Nussallee 1
53115 Bonn
Germany

★ +49 (228) 73 1669

malvarez@uni-bonn.de



#### **Personal Details**

Birth October, 27th 1978, Las Cabras, Chile.

Nationality Chilean.

Marital status Partnership, one daughter.

Business Institut für Nutzpflanzenwissenschaften und Ressourcenschutz (INaddress RES), Pflanzenernährung, Rheinische Friedrich-Wilhelms-Universität

Bonn, Karlrobert-Kreiten-Str. 13, 53115 Bonn, Deutschland.

Hobbies Drawing, linocut, bouldering.

#### Scientific Interests

**Ecological Indicators • Vascular Plant Diversity • Vegetation-plot Databases • Wetlands Ecology** .

### Working Experience

- since 2018 **Research Associate**, *Institute of Crop Science and Resource Conservation, University of Bonn, Germany*, scientific coordination in the context of the project Future Rural Africa.
- 2013–2018 **Research Associate**, *Institute of Crop Science and Resource Conservation, University of Bonn, Germany*, scientific coordination in the context of the projects GlobE-wetlands and RCR (Resilience, Collapse and Reorganization in social-ecological systems of African savannas).
- 2009–2013 **Research Associate**, *Institute of Crop Science and Resource Conservation, University of Bonn, Germany*, scientific coordination in the context of the SWEA project (Small-Wetlands in East Africa).
  - 2009 **Research Associate**, *Centre for Remote Sensing of Land Surfaces, University of Bonn, Germany*, data analysis and modelling of land-use changes in Benin (activities in the context of the IMPETUS project).
  - 2008 **Research Assistant**, *Geobotany*, *University of Bonn, Germany*, statistical data analysis.

2006–2008 **Research Assistant**, *Geobotany*, *University of Freiburg*, *Germany*, maintenance of a database focusing on ephemeral wetland vegetation in South America.

### **Education and Academic Degrees**

- 2005–2007 **PhD studies (Dr. rer. nat., summa cum laude)**, *Department of Geobotany, University of Freiburg, Germany*, Thesis: "Soil seed bank and ecology of ephemeral wetlands in Cholchol (9<sup>th</sup> Region, Chile)", original in German.
- 1997–2002 **Agronomy (Agronomy Engineer)**, *Universidad Austral de Chile*, *Valdivia*, *Chile*, Thesis: "Vegetation cover and soil seed bank in two neighbouring grassland communities in the Province Osorno (10<sup>th</sup> Region, Chile)", original in Spanish.

#### **Grants and Awards**

- 2011 **A.F.W. Schimper Stiftung**, seed fellowship for field research outside of Europe (in Chilean Patagonia), Germany.
- 2008 Hans-Spemann-Preis, award for the PhD thesis, Dr.-Gerhard-Fritz-Stiftung.
- 2004–2006 **German Academic Exchange Service (DAAD)**, fellowship for PhD studies at the University of Freiburg, Germany.
- 2005–2013 Diverse travel and education grants supported by **DAAD**, the **Otti Wilmanns Stiftung**, and the **Wissenschaftliche Gesellschaft in Freiburg im Breisgau**.

### Teaching and Training

- 2017–2018 **Scientific Data and Relational Databases**. 2-days training workshop organized once at the British Institute of East Africa (Kenya) and once at the Addis Ababa University (Ethiopia).
- 2015–2018 **R and its Applications in GIS**. 1-week training workshop organized once at the University Haramaya (Ethiopia), once at Addis Ababa University (Ethiopia), and once at the University of Bonn (Germany).
- 2011–2015 **R and its Applications in Statistics**. 1-week training workshop organized four times at the University of Bonn and twice at the University of Freiburg.

#### Co-supervised Theses

currently **Kai Behn**, "Classification, characterization and regeneration of wetland vegetation in East Africa", University of Bonn, PhD Thesis.

**Gereon Heller**, "Invasion dynamics of woody species in Baringo and Churo, Kenya", University of Bonn, PhD Thesis.

**Assefa Wosnie**, "Ecological assessment of pollutant effects in Lake Koka, Rift Valley, Ethiopia", Addis Ababa University, PhD Thesis.

**Jane Macharia**, "Bio-indication of invertabrates and vascular plants in the Ewaso Narok Swamps, Kenya", University of Bonn, PhD Thesis.

**Bernice Sainepo Mereina**, "Effects of biological invasions on land uses at Lake Baringo, Kenya", University of Bonn, PhD Thesis.

2011–2016 Co-supervision of 1 diploma thesis, 4 Master-theses and 2 further dissertations at the University of Bonn.

#### Further Skills

- Databases Custodian of CL-Dataveg (South America) and SWEA-Dataveg (Eastern Africa). Turboveg and development of R packages taxlist and vegtables. Relational databases with HSQLDB, PostgreSQL and PostGIS.
- Computer **R** as user and developer (packages hosted at GitHub and CRAN), **markdown**, and LATEX. Juice and QGIS.
- Languages Spanish (native speaker), English (fluent), German (fluent), Italian (basics), Swahili (basics).

## Working Groups and Memberships

- since 2016 Freundeskreis Botanischer Gärten der Universität Bonn.
- since 2015 Working Groups Phytosociological Nomenclature and Ecoinformatics, International Association of Vegetation Science.
- since 2015 Freshwater Plant Specialist Group, International Union for Conservation of Nature.
- since 2014 Naturhistorischer Verein der Rheinlande und Westfalens.
- since 2014 Editorial Board of Phytocoenologia.
- since 2014 East Africa Natural History Society and Friends of the Nairobi Arboretum.
- since 2011 International Association of Vegetation Science (IAVS).
- since 2009 National Geographic Society.
- 2009–2015 Gesellschaft für Naturkunde in Württemberg.
- since 2008 Reinhold-Tüxen-Gesellschaft.

#### **Publications**

**61** scientific contributions in English, Spanish and German.

2 books and 2 book chapters.

57 articles in journals.

Selected Behn K, Becker M, Burghof S, Möseler BM, Willy DK, Alvarez M, 2018. Using articles vegetation attributes to rapidly assess degradation of East African wetlands. Ecological Indicators 89: 250-259. 10.1016/j.ecolind.2018.02.017

> Alvarez M, Luebert F, 2018. The taxlist package: managing plant taxonomic lists in R. Biodiversity Data Journal 6: e23635. 10.3897/bdj.6.e23635

> **Alvarez M**, 2017. Classification of aquatic and semi-aquatic vegetation in two East African sites: Cocktail definitions and syntaxonomy. *Phytocoenologia* 47: 345-364. 10.1127/phyto/2017/0078

> Scherer L, Curran M, Alvarez M, 2017. Expanding Kenya's protected areas under the Convention on Biological Diversity to maximize coverage of plant diversity. Conservation Biology 31: 302-310. 10.1111/cobi.12792

Beuel S, **Alvarez M**, Amler E, Behn K, Kotze DC, Kreye C, Leemhuis C, Wagner K, Willy DK, Ziegler S, Becker M, 2016. A rapid assessment of anthropogenic disturbances in East African wetlands. *Ecological Indicators* 67: 684–692. 10.1016/j.ecolind.2016.03.034

### Congress Contributions (oral presentations)

- 2018 **Alvarez M**, Fisher E, Möseler BM, San Martín, Ramírez C, San Martín C. *Vegetation of Magellanic seasonal wetlands: How much do we really know about them?*. 3<sup>th</sup> Symposium of the A.F.W. Schimper-Stiftung, Illmitz, Austria.
- 2017 Alvarez M, Deil U, Chytrý M. Vegetation units of ephemeral wetlands in extraand oro-tropical South America: Distribution according to predictive models. 25<sup>th</sup> International Conference on Phytosociology. Santiago de Compostela, Spain.
- 2017 **Alvarez M**, Leemhuis C, Gabiri G, Behn K, Beuel S. *Hydrological gradients in and land uses in a sub-Saharan floodplain: the potential use of indicator plants for bio-monitoring.* European Conference of Tropical Ecology. Brussels, Belgium.
  - **Alvarez**, Choge S, Heller G, Malombe I, Matheka K, Becker M. *Invasion by Prosopis juliflora in the Lake Baringo basin (Kenya): competition ability or opportunity?* 21<sup>st</sup> AETFAT Congress, Nairobi, Kenya.
- 2016 **Alvarez M**, Behn K, Malombe I, Curran M, Scherer L. *Vegetation of East African wetlands: human impact and resulting changes in species composition.* 15<sup>th</sup> Meeting on Vegetation Databases, University of Potsdam, Germany.
- 2015 **Alvarez M**, Deil U. Occurrence and distribution of ephemeral wetland communities in South America: completing vegetation data with herbarium records. International Symposium of Mediterranean Temporary Ponds, Universitá degli Studi di Sassari, Sardinia, Italy.

Bonn, October 11, 2018