

## Dr. Yujie Niu

**Humboldt Fellow** (Humboldt Postdoctoral Researcher)

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### Introduction

Yujie Niu has a PhD in grassland science. He is concerned not only with grassland ecosystems, but also with the experimental and disciplinary framework of the disturbance and restoration ecology, and with the consequences of human influence on terrestrial ecosystem (climate change and extreme events, overgrazing, agricultural fertilization), and small mammal effects on soil-plants. In particular, he is interested in the plant community dynamics and grassland degradation and restoration.

### Education & Professional Career

- 2021.11- **Humboldt Postdoctoral Researcher** Alexander von Humboldt Foundation, University of Bayreuth, Germany (2021.11-2022.02 German course, Carl Duisberg Training Center Munich)
- 2020.11-2021.11 **Postdoc**, Disturbance ecology, University of Bayreuth, Bayreuth, Germany.
- 2017-2020 PhD, **Grassland Science**, Gansu Agricultural University.
- 2014-2017 Master Degree, **Biodiversity of Grassland**, Gansu Agricultural University.
- 2010-2014 **Double Bachelor Degree**, Grassland Science & Animal Science, Gansu Agricultural University.

### Position in scientific societies and journals

- **Member of** the Ecological Society of China, Eurasian Dry Grassland Group (EDGG), Bayreuth Center of Ecology and Environmental Research (BayCEER), the European Geosciences Union (EGU), International Association for Vegetation Science (IAVS) Asia
- **Reviewer of** Rangeland Ecology & Management; Mountain Research and Development; Science of the Total Environment; Urban Forestry & Urban Greening; Plants; Frontiers in Microbiology; Environmental Research Letters; Journal of Environmental Management; Agronomy, Journal of Rangeland Science; Plant and Soil; Heliyon; etc.
- **Editor: Guest editor** of Frontier in plant science (with Yanfu Bai, Yann Hautier, Sergio Rossi for SI: Vegetation-based Degradation and Restoration on the Alpine Grasslands of Tibetan Plateau)

### Teaching activities

- **Vegetation science** (Plant functional traits), **Experimental Ecology** (in charging of global change collaboration experiments (NutNet, Droughtnet, Dragnet, Event2, and NutNet add-on experiments), **Stability, Resilience, Inertia** in Bayreuth university. **Frontiers in Ecology**, and **Design and Analysis of Ecological Experiments** in Gansu Agricultural University

### Selected Awards and Honors from 2019

- 2022, Best oral presentation, **Asian Grassland Conference 2022** (organized by EDGG)
- 2021, Excellent PhD thesis award of Gansu Province from 2019 to 2020. **Education Department of Gansu Province.**
- 2020, 9<sup>th</sup> *Liang Xi* Outstanding PhD Student Award, the **Chinese Forestry Society.**
- 2020, The *Wang Dong* Scholarship, the **Chinese Grassland Society.**
- 2019, President's award (the highest award on GAU), **Gansu Agricultural University (GAU).**
- 2019, *Tsung-Dao Lee* Scholarship, **The peoples Government of Gansu Province.**
- 2019, National scholarship for doctoral students, **the Ministry of Education of the People's Republic of China.**
- 2019, Merit Student for PhD, **Education Department of Gansu Province.**

## Selected presentations at academic conferences from 2020

- **Yujie Niu** et al., (2022). Species loss and non-dominant species determine the temporal stability of plant community. 11-15/September 2022, **International Mountain Conference (IMC)**. Innsbruck, Austria. **Oral** presentation.
- **Yujie Niu** et al., (2022). Stable plant community biomass production despite species richness collapse under lasting extreme climate. 28 August -2 September 2022, **INTECOL 2022** (The International Congress of Ecology). Geneva, Switzerland. **Oral** presentation.
- **Yujie Niu** et al., (2022). *Plant community dynamics in a 13 years seasonal warming experiment*, 7-9/June 2022, **Frontiers in Experimental Research on Changing Environments** “(Frontiers 2022)”, UFZ, Leipzig, Germany. **Oral** presentation.
- **Yujie Niu** et al., (2022). *2022 Mechanisms of collapse and reorganization of plant communities under climate extreme*, 27-29/April 2022, **Humboldt Network Meeting**. Rostock, Germany. Poster.
- **Yujie Niu** et al., (2022). *Soil cracking is a critical turning point in the collapse processes of Kobresia ecosystems on Tibetan Plateau*. 19-21/April 2022, **Asian Grassland Conference 2022** (Virtual). **Oral** presentation. (**Best oral presentation**)
- **Yujie Niu** et al., (2020) *Soil cracking induced by overgrazing triggers the severe degradation or initiates the natural recovery of overgrazed alpine meadows on the Tibetan plateau?* 4-8/ May, 2020. **The EGU General Assembly 2020**. Vienna, Austria. (**Sharing Online**)

## Research projects (Leader)

- 11.2021-, Mechanisms of collapse and reorganization of plant communities under climate extreme. Humboldt Research Fellowship for Postdoctoral Researchers. Alexander von Humboldt-Stiftung
- 2017-2020, *The soil cracking on alpine rangelands of Tibetan Plateau*. The Fostering Foundation for the Excellent Ph.D. Dissertation of Gansu Agricultural University (No. YB2017001). ¥ 200,000.
- 2017-2020, *Ecological impacts of soil cracking on the degradation of alpine rangelands on Tibetan plateau*. Key Laboratory of Grassland Ecosystem of the Ministry of Education (No. GAU-XKJS-2018-014). ¥ 40, 000.

## Selected publications

- Ye G, *et al.*, **Niu Y\*** (2023). Soil microbial and macroinvertebrate functional diversity in response to Zokor disturbance in Tibetan alpine meadows. *Catena*, 225, 107014.
- **Niu Y\***, Squires V, Jentsch A (2023). Risks of China’s increased forest area. *Science*, 379 (6631), 447-448.
- **Niu Y\***, Schuchardt M, Heßberg A, Jentsch A (2022). Stable plant community biomass production despite species richness collapse under lasting extreme climate change. *Science of the Total Environment*. 161166.
- **Niu Y\***, et al., (2021). Plant community distribution induced by microtopography due to soil cracks developed on overgrazed alpine meadows on the Tibetan Plateau. *Land degradation & development*.32 (11), 3167– 3179.
- **Niu Y**, et al., (2020). Cyclic formation of zokor mounds increases plant diversity and renews plant communities in alpine meadows on the Tibetan Plateau. *Plant and Soil*. 446:65-79.
- **Niu Y**, et al., (2019). Overgrazing leads to soil cracking that later triggers the severe degradation of alpine meadows on the Tibetan Plateau. *Land degradation & development* 30: 1243-1257. (**Cover Article**)
- **Niu Y**, et al., (2019). Vegetation distribution along mountain environmental gradient predicts shifts in plant community response to climate change in alpine meadow on the Tibetan Plateau. *Science of The Total Environment* 650: 505-514.

## Selected book chapters

- **Niu Y\***, Squires R, Hua L (2023). High-Altitude Aeolian Desertification and sand dunes on the Tibetan Plateau. In *Sand Dunes of the Northern Hemisphere: Distribution, Formation, Migration and Management* (pp. 369–382). Taylor & Francis Group, Boca Raton: CRC Press.
- Hua L, **Niu Y**, & Squires R (2018). Climatic change on grassland regions and its impact on grassland-based livelihoods in China. In *Grasslands of the world: diversity, management and conservation* (pp. 369–382). Taylor & Francis Group, Boca Raton: CRC Press.

## Cover Pages

- The cover image based on the Research Article *Overgrazing leads to soil cracking that later triggers the severe degradation of alpine meadows on the Tibetan Plateau* by **Niu Y**, et al. June 2019, *LDD* 30(10)