Asia Doré Cornelius

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EDUCATION

Ph.D.	**(Range & Wildlife Management)**	September 2025 - Present	Sul Ross State University Texas A&M Kingsville Advisor: Carlos Gonzalez
M.S.	**(Range & Wildlife Management)**	2025	Sul Ross State University Advisor: Carlos Gonzalez
B.S.	**(Biology)**	2022	Sul Ross State University
A.A.	**(General Studies)**	2019	San Antonio College

CURRENT RESEARCH FOCUS

Graduate research examines soil microbial communities in arid rangeland ecosystems with a focus on:

- Arbuscular mycorrhizal fungi (AMF) composition across grazing systems and soil types
- Soil microbiology in habitat restoration and land management across West Texas and South Texas rangelands
- Invasive grass ecology and microbial responses across environmental gradients

WORK EXPERIENCE

2022-Present **Graduate Teaching Assistant**, Sul Ross State University

BIOL 1106 Biology I Lab (1 semester)
NRM 3305 Wildland Plants Lab (1 semester)
BIOL 1107 Biology II Lab (1 semester)
NRM 2305 Soils (3 semesters)
NRM 4303 Range Ecology
NRM 2301 Range Resources
Supervisors: Dr. Bonnie Warnock, Dr. Carlos Gonzalez, Jeffrey Keeling
Duties: Instruction, lesson planning, grading, test design, field demonstrations, plant and soil identification instruction.

INTERNSHIPS

Summer 2024	**Quivira Coalition** Writing landowner reports for two ranches
Summer 2023	**Quivira Coalition** Studied the impact of soil amendments on soil mycorrhizae Participated in a biochar workshop

POSTERS & PRESENTATIONS

Cornelius, A., Avila-Sanchez, J. S., French, J., Frank, M., Gonzalez, C. (2025), October. A Comparative Analysis of Mycorrhiza in Rotational versus Continuous Grazing Systems. Poster. Texas Section of the Society for Range Management. Alpine, TX.

Cornelius, A., Avila-Sanchez, S., French, J., Frank, M., Gonzalez, C. (2025), April. Exploring Mycorrhizal Dynamics: A comparative analysis of rotational vs. continuous grazing systems. Oral Presentation. Sul Ross State University Spring Symposium. Alpine, TX.

Cornelius, A., Avila-Sanchez, S., French, J., Frank, M., Gonzalez, C. (2025), February. Exploring Mycorrhizal Dynamics: A comparative analysis of rotational vs. continuous grazing systems. Oral Presentation. Texas Chapter of The Wildlife Society. Denton, TX.

Cornelius, A., Avila-Sanchez, S., French, J., Frank, M., Gonzalez, C. (2024), October. A Comparative Analysis of Mycorrhiza in Rotational versus Continuous Grazing Systems. Oral Presentation. Texas Section of the Society for Range Management. Society for Range Management. Victoria, TX.

Cornelius, A., French, J., Frank, M., Gonzalez, C. (2024), April. Exploring Mycorrhizal Dynamics: A comparative analysis of rotational vs. continuous grazing systems. Oral Presentation. Sul Ross State University Spring Symposium. Alpine, TX.

Cornelius, A. (2023), March. Diversity and abundance of arbuscular mycorrhizal fungi in plants found in gypseous soils in the Chihuahuan Desert region of Texas. Poster. Texas Academy of Science. San Angelo, TX.

FIELD & LAB SKILLS

- Soil Sampling (bulk density, cores, microbial sampling, horizons)
- Vegetation sampling (cover estimates, point-intercept, biomass clipping)
- Ecological site identification

- Soil pit descriptions
- Rangeland monitoring
- Installation of restoration treatments
- Microscopy
- Mycorrhizal quantification
- Soil chemistry and physical analyses

TECHNICAL & SOFTWARE SKILLS

Data Analysis & Coding
- R programming
- Spatial modeling
- Soil moisture modeling
- Climate data handling

GIS & Remote Sensing
- QGIS, ArcGIS Pro
- DEM processing, wetness index modeling
- Landsat NDVI, SAVI processing
- Geospatial analysis

PROFESSIONAL ASSOCIATIONS

Society for Range Management
Society for Ecological Restoration
The Wildlife Society
The Mycological Society of America
Southwestern Association of Naturalists

RESEARCH INTERESTS

Soil microbial ecology, arbuscular mycorrhizal fungi, desert grasslands, soil-plant interactions, rangeland ecology, invasive species ecology, restoration ecology, biogeography, ecosystem function.