1. **Education**

2017 Agronomy, Texas A&M University, College Station, Texas

2013 Agriculture, emphasis Agronomy, Tarleton State University, Stephenville, Texas

2011 Agronomy and Range Management, emphasis Range Management, Tarleton State University, Stephenville, Texas

1. **Professional Experience**

2017 – Present Assistant Professor – Rangeland Ecophysiology, Texas A&M AgriLife Research, Vernon, Texas

2013 – 2017 Graduate Research Assistant, Texas A&M AgriLife Research, College Station, Texas

2011 – 2013 Graduate Research Assistant, Texas A&M AgriLife Research, Stephenville, Texas

2010 – 2011 Undergraduate Research Assistant, Texas A&M AgriLife Research, Stephenville, Texas

2009 – 2011 Summer Intern, Student Career Experience Program (SCEP), Natural Resources Conservation Service, Graham, Jacksboro, and Henrietta, Texas

1. **Professional/Honor Society Memberships**

Society for Range Management

American Society of Agronomy

Crop Science Society of America

Soil Science Society of America

Texas Section Society for Range Management

Texas Chapter of the Wildlife Society

Alpha Chi

Alpha Zeta

Delta Epsilon Iota

Gamma Sigma Delta

1. **Honors and Awards**

2016. *Marsha and Murray Milford ’55 Graduate Scholarship* in Soil and Crop Sciences, Texas A&M University, College Station, Texas

2015. *1st Place Poster- Agriculture, Doctoral*, TAMUS 12th Annual Pathways Student Research Symposium, Corpus Christi, Texas

2014. *4th Place – CSSA Forage and Grazinglands Section Robert F. Barnes Graduate Student Oral Contest*, ASA-CSSA-SSSA Annual Meeting, Long Beach, California

2013. *Pathways to the Doctorate Fellowship*, Texas A&M University, College Station, Texas

2011. *Outstanding Range Student*, Texas Section Society for Range Management Annual Meeting, San Angelo, Texas

1. **Research Activities**
   1. **Research Projects**

**Will Not-Target Shrub Species become Collateral Damage Following Mesquite Spraying?**

Vernon, Texas Duration: 2017 – Present

Responsibilities: Determine the impacts of aerial herbicide application for mesquite control on the health and survival of lotebush. Monitor changes in insect herbivory and lotebush health and survival post-spraying.

**Differences in Physiological Responses to Soil Water Availability between Partially Top-Killed and Untreated Mesquites**

Vernon, Texas Duration: 2017 – Present

Responsibilities: Determine the impacts of partial top-killing from herbicide on mesquite physiology (gas exchange and leaf pressure-volume characteristics). Use results to develop recommendations for follow-up treatments.

**Effects of Resource Availability on Wildfire Recovery Rates and Emerging Vegetation Pattern in Bastrop State Park**

Bastrop, Texas Duration: 2014 – 2017

Responsibilities: Determine the impacts of burn severity on resource availability and in turn, evaluate the effects of resource availability on vegetative responses (growth rate, species abundance, sap flux, gas exchange). Predict areas where pine recovery is (or is not) optimal for TPWD future planting/management efforts.

**Physiological Responses of Three Oak Species to Prolonged Drought**

College Station, Texas Duration: 2013 – 2014

Responsibilities: Compare responses (gas exchange, leaf water potential, soluble- and non-soluble sugar concentrations) of three oak species to prolonged drought to predict species drought tolerance. Examine species potential as browse for livestock and wildlife.

**Improving Land-Surface Modeling of Evapotranspiration Processes in Tropical Forests**

TAMU Soltis Center, San Isidro de Penas Blancas, Costa Rica Duration: 2015

Responsibilities: Assist with sap flux sensor maintenance and gas exchange measurements in a project comparing transpiration under wet and dry conditions.

**Legume Protein Precipitable Phenolic and Nutrient Concentration Responses to Repeated Defoliation and Ontogeny**

Stephenville, Texas Duration: 2012-2013

Responsibilities: Compare the effects of various levels of simulated herbivory on *Desmodium paniculatum* (panicled tick-clover) and *Lespedeza cuneata* (sericea lespedeza) phenolic, carbon, and nitrogen concentrations, and protein binding of phenolic compounds.

**Nutritional Quality and Condensed Tannin Composition of Trees Used by Browsing Herbivores**

Ukulima Farm, Alma, Limpopo Province, South Africa Duration: 2012

Responsibilities: Identify browse species. Compare seasonal effects on browse nutritional quality and condensed tannin concentrations.

* 1. **Publications**
     1. **Refereed Journal Articles**

6. Aparecido LMT, **Cooper CE**, Ford-Miniat C, Moore GW. In prep. Comparison of radial variability of sap flow between tropical and temperate trees with deep sapwood. Tree Physiology.

5. **Cooper CE**, Aparecido LMT, Muir JP, Morgan CLS, Moore GW. In review. Comparison of transpiration across burn severities in recovering mixed loblolly pine and oak stands in the Lost Pines region of Texas. Ecohydrology.

4. **Cooper CE**,Vogel JG, Muir JP, Moore GW. In review. Physiological responses to prolonged drought differ among three oak (*Quercus*) species. Functional Plant Biology.

3. **Cooper CE**, Muir JP, Morgan CLS, Moore GW. 2018. Tortoise or hare: will resprouting oaks or reseeding pines dominate following severe wildfire? Forest Ecology and Management. 408:54-66.

2. Naumann HD, **Cooper CE**, Muir JP. 2017. Seasonality affects leaf nutrient and condensed tannin concentration in southern African savanna browse. African Journal of Ecology. 55: 168-175. DOI:10.1111/aje.12336

1. **Cooper CE**, Naumann HD, Lambert BD, Muir JP, Kattes DH. 2014. Legume protein precipitable phenolic and nutrient concentration responses to defoliation and ontogeny. Journal of Plant Interactions. 9:468-477.

**5.2.2 Thesis and Dissertation**

2. Cooper CE. 2017. Oak and pine physiological responses to resources availability [dissertation]. College Station (TX): Texas A&M University.

1.Cooper CE. 2013. Protein precipitable phenolic and nutrient concentrations in legumes respond differently to repeated defoliation and ontogeny [thesis]. Stephenville (TX): Tarleton State University.

* 1. **Scientific and Professional Presentations**
     1. **Volunteered -National and International Level**

8. Cooper CE, Zhang T, Ansley RJ. 2018. Physiological responses to soil water availability differ between partially top-killed and untreated mesquites. Society for Range Management Annual Meeting. 2018 Jan. 28 – Feb. 2. Sparks, NV.

7. Cooper CE, Aparecido LMT, Muir JP, Morgan CLS, Heilman JL, Moore GW. 2018. Comparison of pine and oak transpiration across burn severities in the Lost Pines region of Texas. Society for Range Management Annual Meeting. 2018 Jan. 28 – Feb. 2. Sparks, NV.

6. Cooper CE, Moore GW, Muir JP, Morgan CLS. 2016. Burn severity and soil type affect oak growth and nutritive value. Proc. ASA, CSSA & SSSA International Annual Meetings. 2016 Nov. 6 – 9. Phoenix, AZ.

5. Cooper CE, Moore GW, Vogel JG, Muir JP. 2015. Physiological responses to prolonged drought differ among three oak (*Quercus*) species. Proc. AGU Fall Meeting. 2015 Dec. 14 – 18. San Francisco, CA.

4. Cooper CE, Muir JP, Moore GW, Vogel JG. 2015. Effect of drought on browse from three oak species. Forage and Grazinglands Robert F. Barnes Graduate Student Oral Contest. Proc. ASA, CSSA & SSSA International Annual Meetings. 2015 Nov. 15-18. Minneapolis, MN.

3. Cooper CE, Naumann HD, Muir JP, Bow JR, Lambert BD. 2014. Phenolics in southern African browse species. Forage and Grazinglands Robert F. Barnes Graduate Student Oral Contest. Proc. ASA, CSSA & SSSA International Annual Meetings. 2014 Nov 2-5. Long Beach, CA.

2. Cooper CE, Naumann HD, Lambert BD, Muir JB. 2013. Nitrogen concentrations in legumes respond differently to defoliation and ontogenesis. General Forage and Grazinglands: II. Proc. ASA, CSSA, & SSSA International Annual Meetings. 2013 Nov 3-6. Tampa, FL.

1. Cooper CE, Naumann HD, Lambert BD, Muir JP. 2013. Protein precipitating phenolics change with herbivory and seed dispersal. Proc. Joint Annual Meeting of the ADSA and ASAS. 2013 July 8-12. Indianapolis, IN.

**5.3.2 Volunteered – Regional and State Level**

3. Cooper CE, Naumann HD, Muir JP, Lambert BD. 2014.  Leaf nitrogen and protein precipitable phenolic concentration responses to insect herbivory differ between plant functional types. Proc. 111th Annual Meeting of the Southern Association of Agricultural Scientists. 2014 Feb 2-5. Dallas, TX.

1. Cooper, CE, Naumann HD, Lambert BD, Muir JP. 2013. Protein affinity of protein precipitating phenolics in leaves changes with repeated defoliation of *Desmodium paniculatum*. Proc. 67th Southern Pasture and Forage Crop Improvement Conference. 2013 April 22-24. Tyler, TX.
2. Cooper CE, Lambert BD, Muir JP. 2013.  Effect of simulated herbivory on protein precipitable phenolic content of *Desmodium paniculatum*. Proc. 110th Annual Meeting of the Southern Association of Agricultural Scientists. 2013 Feb 2-5. Orlando, FL.

**6. Teaching Activities**

**6.1 College-level Classroom Teaching**

1. 2016. Graduate Teaching Assistant, Lab Instructor for SCSC 301: Soil Science, Texas A&M University. Fall 2016.

**6.2 Graduate Student Committees**

1. Katherine Hood, M.S. Candidate, Department of Wildlife, Sustainability, and Ecosystem Sciences, Tarleton State University (Fall 2017 – Present).

**6.3 Undergraduate Student Mentees**

4. Ashley Cross, Texas A&M University

3. Travis Boehne, Texas A&M University

2. Nicholas Alfaro, Texas A&M University

1. Aggie Research Scholars, Texas A&M University

**7. Extension- Related Activities**

Although my appointment at Texas A&M AgriLife Research is 100% research, I anticipate having many opportunities to work with extension specialists and county agents in the future. Extension activities are proposed in many of my grant proposals that are currently in review.

**8. Service-Related Activities**

**8.1 Scientific Society Activities**

2. Oral Presentation Judge, 2017 Texas Section Society for Range Management Meeting, San Angelo, TX. Oct. 11 – 13, 2017

1. Youth Activities Committee, Texas Section Society for Range Management. 2017 – Present.

**8.2 University and Vernon Research Center Service Activities**

**8.2.1 Texas A&M AgriLife Research – Vernon Campus**

3. Member, Vernon Center Coordinating Committee. January 2018 – Present.

2. Search committee for Program Coordinator II at Texas Foundation Seed Service/Texas A&M AgriLife Research, Vernon, TX. Nov. 2 - 3, 2017.

1. Presenter, Chillicothe ISD STEM Conference, May 2017.

**8.2.2 Department of Ecosystem Science and Management, Texas A&M University**

4. Packet Reviewer, 2018 Texas A&M University Diversity Fellowship, College Station, TX. March 2018.

3. Graduate Committee Faculty, January 2018 – Present.

2. Poster Judge, 14th Annual TAMUS Pathways Symposium, Tarleton State University, Stephenville, TX. Nov. 2 - 3, 2017.

1. Recruitment Committee Chair, ESSM Graduate Student Association, 2015 - 2016.

**8.2.3 Department of Wildlife, Sustainability, and Ecosystem Sciences, Tarleton State University**

2. Affiliate Graduate Faculty (January 2018 – Present).

1. Plant ID Team Assistant Coach, 2012 - 2013.

**8.3 Solicited Reviews**

**8.3.1 Solicited Manuscript Reviews**

Formal Manuscript Reviews for the Following Journals: Plant Ecology (1), Native Plants Journal (1), Oecologia (1), Tree Physiology (1)

**9. Other Recognition**

**9.1 Popular Press Articles**

2017. “Five years after historic wildfire, many lost pines still struggling” - Interview over Texas A&M research in Bastrop State Park. *Texas Standard – NPR*, January 30, 2017.

2017. “Five years after historic wildfire, many lost pines still struggling.” *Austin American Statesman*, January 29, 2017. <http://www.mystatesman.com/news/five-years-after-historic-wildfire-many-lost-pines-still-struggling/75GkKHTCz0eA54lh0MJY6I/>

2017. “Oaks may replace pines in severely burned ‘Lost Pines’ region without human intervention.” *AgriLife Today*, January 20, 2017. (author: Kay Ledbetter) <https://today.agrilife.org/2017/01/20/oaks-may-replace-pines-severely-burned-lost-pines-region-without-human-intervention/>

2014. “Grant will research native oaks and drought”. *Native Plant Society of Texas News* 32(3):3. (author: Bob Kamper) <http://npsot.org/wp/story/2014/5684/>