

Mark S. Thorne  
**College of Tropical Agriculture and Human Resources**  
 Human Nutrition, Food and Animal Sciences  
 FTE Distribution 0% I; 30% R; 70% E

**Education**

<u>Degree</u>	<u>University</u>	<u>Major</u>
Bachelors	University of Wyoming	Rangeland Ecology and Watershed Management
Masters	University of Wyoming	Rangeland Ecology and Watershed Management
PhD	Colorado State University	Rangeland Ecophysiology

**Lifetime and Fellow Achievement Awards**

Rangeland Manager of the Year (2010) – California Pacific Section, Society for Range Management

**Professional Appointments**

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Specialist	University of Hawaii	8/2018 to Present
Associate Specialist	University of Hawaii	8/2007 to 8/2018
Assistant Specialist	University of Hawaii	8/2003 to 8/2007
Interim Specialist	Colorado State University	1/2003 to 6/2003
Instructor	Colorado State University	8/2002 to 12/2002
Range Consultant	Genesis Laboratories, Inc.	8/2002 to 08/2004
Graduate Research Assistant	Colorado State University	5/1998 to 12/2002
Graduate Research Assistant	University of Wyoming	5/1995 to 5/1998
Undergraduate Research Assistant	University of Wyoming	1/1994 to 5/1995
Field Technician	Wyoming Game and Fish	5/1993 to 9/1993
Marine Rifleman (E-4)	United States Marine Corps	4/1988 to 4/1992
Cowboy	Various Ranches	5/1984 to 3/1988

**Courses Taught**

Course Number and Title (credits)

FCC 192 (Colorado State University) Forest Inquiries (2)

**Publications (reverse chronological order)**

Books

Book Chapters

Conference Proceedings

- Thorne, M.S.** and L.J. Cox. 2008. (Editors) Proceedings: 2008 Stockman’s Fall Field Day: Behavior-based grazing management for improved animal performance, pasture condition, and ranch profitability. August 22-23, 2008. University of Hawaii at Manoa, CTAHR Publication, pp. 43.
- Thorne, M.S.** and L.J. Cox. 2007. (Editors) Proceedings: 2007 Mealani Forage Field Day: Risk management for grass-based operations. September 28-29, 2007. University of Hawaii at Manoa, CTAHR Publication, pp.45.
- Thorne, M.S.** and L.J. Cox. 2007. Managing production risk for Hawaiian ranchers. pp 11-15. In: Thorne, M.S. and L.J. Cox (eds.), Proceedings: 2007 Mealani Forage Field Day: Risk management for grass-based operations. September 28-29, 2007. University of Hawaii at Manoa, CTAHR Publication.
- Norman, Arnold, **M.S. Thorne**, and M.H. Stevenson. 2007. Monitoring Heifer Development and diet quality of kikuyu – pangola grass using NIRS and NUTBAL PRO. pp 18-24. In: Thorne, M.S. and L.J. Cox (eds.), Proceedings: 2007 Mealani Forage Field Day: Risk management for grass-based operations. September 28-29, 2007. University of Hawaii at Manoa, CTAHR Publication.
- Deenik, J.L., **M.S. Thorne**, L.J. Cox, H.H. Keyser, and M.H. Stevenson. 2007. Best management practices for the remediation of former sugarcane lands for sustainable livestock production in Hawaii. pp 40-44. In:

- Thorne, M.S. and L.J. Cox (eds.), Proceedings: 2007 Mealani Forage Field Day: Risk management for grass-based operations. September 28-29, 2007. University of Hawaii at Manoa, CTAHR Publication.
- Castillo, M., M. Nakahara, D. Weise, R. Vihnanek, G. Enriques, A. McAdams, L. Ford, R. Moraga, B. Babb, **M. Thorne**, E. Nonner, D. Frohlich. (2007). The Puu Anahulu wildfire management study: Development of roadside fuels reduction techniques for leeward Hawaii. Page 229 in R.E. Masters and K.E.M. Galley (eds.). Proceedings 23rd Tall Timbers Fire Ecology Conference: Fire in Grassland and Shrubland Ecosystems. Tall Timbers Research Station, Tallahassee, Florida, USA.
- Thorne, M.S.** and L.J. Cox. 2007. Proceedings: 2006 Mealani Forage Field Day: Hawaii Grown Beef: From Pasture to Market. October 7, 2007. University of Hawaii at Manoa, CTAHR Publication, pp.53.
- Thorne, M.S.** 2007. Foraging Behavior and Grazing Management Planning. pp 45-51. In: Thorne, M.S. and L.J. Cox (eds.), Proceedings: 2006 Mealani Forage Field Day: Hawaii Grown Beef: From Pasture to Market. October 7, 2007. University of Hawaii at Manoa, CTAHR Publication, pp. 53.
- Mattos, J., and **M.S. Thorne**. 2007. Slaughter and Market Issues at the Andrade Slaughterhouse. pp 11-12. In: Thorne, M.S. and L.J. Cox (eds.), Proceedings: 2006 Mealani Forage Field Day: Hawaii Grown Beef: From Pasture to Market. October 7, 2007. University of Hawaii at Manoa, CTAHR Publication, pp. 53.
- Thorne, M.S.,** L.J. Cox. 2005. Proceedings: 2005 Mealani Forage Field Day: Improved livestock and forage production through sustainable management practices. University of Hawaii at Manoa, CTAHR P-09/05 pp. 60.
- Thorne, M.S.** 2005. Integrated Management for control of fireweed: An adaptive management approach. pp 23 – 30. In: Thorne, M.S., L.J. Cox (eds.), Proceedings: 2005 Mealani Forage Field Day: Improved livestock and forage production through sustainable management practices. University of Hawaii at Manoa, CTAHR P-09/05, pp. 60
- Thorne, M.S.,** Q.D. Skinner, M.A. Smith, W.A. Laycock, and J.L. Dodd. 1997. Effects of herbivory on willow (*Salix* spp.) canopy volume on mountain rangelands of northern Wyoming. Pp. 144-149 IN: Proceedings Wyoming Water 1997 Conference; What's new in the toolbox? Applied research for management of Wyoming's water resources: A statewide conference. April 21-23, 1997. Casper, WY.
- Refereed Journal Publications
- Krushelnycky, P.D., F. Starr, K. Starr, M. Abran, **M. Thorne**, J. Leary, M. Fukada, D. Rubinoff. 2018. Performance of the biocontrol agent *Secusio extensa* (Lepidoptera: Erebidae) on its target host, *Senecio madagascariensis* (Madagascar fireweed), on an alternate host, *Delairea odorata* (Cape ivy), and on non-target plants, in Hawaii. *Biological Control* 121: 234-246.
- Lee, C.N., G.K. Fukumoto, **M.S. Thorne**, M.H. Stevenson, Y.S. Kim, M. Nakahata, and R.M. Ogoshi. 2017. Nutrient Composition of Sugarcane Forages were influenced by season and the time of harvest. *Dairy and Vet. Sci. J.* 2(1): 555579.
- Lee, KAK, J.R. Carpenter, B.W. Mathews, **M.S. Thorne**, and L.E. Sollenberger. 2010. Effects of age of regrowth and geographical location on forage protein and carbohydrate fractions, silicon content, and their impact on IVOMD of four tropical grasses. *J. Dairy Sci.* 93: 343, E-Suppl. 1.
- Meiman, P.J., **M.S. Thorne**, Q.D. Skinner, M.A. Smith, and J.L. Dodd. 2009. Wild ungulate herbivory of willow outside of National Parks is a significant management consideration. *Rangeland Ecology and Management* 62:460-469.
- Buck, K., J.R. Carpenter, **M.S. Thorne** and B.W. Mathews. 2007. In situ rates of insoluble Macro-mineral release from alfalfa and tropical grasses, and relationships with dry matter disappearance. Proceedings, Western Section, American Society of Animal Science. 58:378-382.
- Gardner, D.R., **M.S. Thorne**, R.J. Molyneux, J.A. Pfister, and A.A. Seawright. 2006. Pyrrolizidine alkaloids in *Senecio madagascariensis* from Australia and Hawaii and assessment of possible livestock poisoning. *Biochemical Systematics and Ecology* 34:736-744.
- Thorne, M.S.,** P.J. Meiman, Q.D. Skinner, M.A. Smith, and J.L. Dodd. 2005. Clipping frequency affects canopy volume and biomass production in planeleaf willow (*Salix planifolia* var. *planifolia* Prush.). *Rangeland Ecology and Management* 58:41-50.
- Thorne, M.S.,** M.J. Trlica, W.C. Leininger, R.D. Child, and D.A. Klein. 2005. Soil CO<sub>2</sub> efflux response to soil loss on two rangeland ecosystems. *Rangeland Ecology and Management* 58:27-34.
- Cibils, A.F., D.M. Swift, R.H. Hart, M.J. Trlica, and **M.S. Thorne**. 2005. Gender-specific responses to winter defoliation of greenhouse-grown *Atriplex canescens* clones under contrasting soil moisture regimes. *Journal of Arid Environments* 61:211-226.
- Thorne, M.S.,** Q.D. Skinner, M.A. Smith, J.D. Rodgers, W.A. Laycock, and A. S. Cerekci. 2002. Evaluation of a

technique for measuring canopy volume of shrubs. *J. Range Manage.* 55:235-240.

#### Extension Publications

- Katulski, S., **M.S. Thorne**, J. Odani, and M. Oshiro. 2020. Copper supplementation for beef cattle in Hawaii. University of Hawaii at Manoa, CTAHR Publication LM-36, pp. 10.
- Hewlett, J.P., **M.S. Thorne**, J. Parsons, J. Tranel. 2019. Risk Scenario Planning: Evaluating the potential benefits of adopting a commercial mineral mix supplementation program. RightRisk Technical Guide. TG #19-12018.
- Hewlett, J.P., **M.S. Thorne**, J. Parsons, J. Tranel. 2019. Risk Scenario Planning: Evaluating the potential benefits of free-choice mineral supplementation program. RightRisk Technical Guide. TG #19-12013.
- Thorne, M.S.** and R.T. Hamasaki. 2016. Management of caterpillar pests in Hawai'i pastures. University of Hawaii at Manoa, CTAHR Publication PRM-12, pp. 7.
- Lee, C.N., G.K. Fukumoto, **M.S. Thorne**, M.H. Stevenson, M. Nakahata, and R.M. Ogoshi. 2016. Bana grass (*Pennisetum purpureum*): A possible forage for ruminants in Hawai'i. University of Hawaii at Manoa, CTAHR Publication PRM-11, pp. 8.
- Fukumoto, G.K., **M.S. Thorne**, J.H. Silva, J.L. Deenik, and M.H. Stevenson. 2016. Suitability map for forage-finished beef production using GIS technology: Kaula Island. University of Hawaii at Manoa, CTAHR Publication PRM-10, pp. 6.
- Fukumoto, G.K., **M.S. Thorne**, J.H. Silva, J.L. Deenik, and M.H. Stevenson. 2016. Suitability map for forage-finished beef production using GIS technology: Maui county. University of Hawaii at Manoa, CTAHR Publication PRM-9, pp. 8.
- Parsons, J., J.P. Hewlett, and **M.S. Thorne**. 2015. Forage Risk Analyzer: Assessing changes to your operation in the face of uncertainty. RightRisk: TG-15-09.
- Kim, Y.S., G.K. Fukumoto, M. Stevenson, **M. Thorne**, and R. Jha. 2015. Carcass traits and tenderness of Hawaii grass-fed beef. University of Hawaii at Manoa, CTAHR Publication LM-29, pp. 7.
- Lee, C.N., G.K. Fukumoto, **M.S. Thorne**, M.H. Stevenson, Y.S. Kim, M. Nakahata, and R.M. Ogoshi. 2015. Sugarcane crosses as potential forages for ruminants: Nutrient compositions were influenced by season and time of harvest. University of Hawaii at Manoa, CTAHR publication PRM-8, pp. 9.
- Fukumoto, G.K., **M.S. Thorne**, J.H. Silva, and J.L. Deenik. 2015. Suitability map for forage-finished beef production using GIS technology: Hawaii Island. University of Hawaii at Manoa, CTAHR Publication PRM-7, pp. 6.
- Hewlett, J., J. Parsons, and **M.S. Thorne**. 2013. Risk Management Profiles: Fillizar Ranches manage forage and marketing risks. RightRisk: RMP-201308.001R
- Powley, J., M. Stevenson, and **M. Thorne**. 2013. Meat goat basics for Hawaii. University of Hawaii at Manoa, CTAHR Publication LM-26, pp. 13.
- Thorne, M.S.**, M. Stevenson, and E. Pickett-Fee. 2010. Puuwaawaa grazing management plan and resource analysis. Hawaii Department of Land and Natural Resources Report. University of Hawaii at Manoa, CTAHR, pp 163.
- Thorne, M.S.**, J.L. Deenik, R.W. Godfrey, G.K. Fukumoto, J.S. Powley, M.H. Stevenson, L.J. Duponcheel, and M. Abran. 2010. Ranch pasture and Livestock Management Record Book. University of Hawaii at Manoa CTAHR Publication. Pp. 62.
- Thorne, M.S.**, L. J.Cox, and G. Fukumoto. 2009. Management of Production Risk for Hawaii Ranchers. University of Hawaii at Manoa. CTAHR – PRM-5, pp 8.
- Thorne, M.S.**, and M.H. Stevenson. 2007. Stocking rate: the most important tool in the toolbox. University of Hawaii at Manoa. CTAHR – PRM-4, pp 9.
- Thorne, M.S.**, and L.J. Cox. 2007. Calculating minimum lease rates for grazing in Hawaii. University of Hawaii at Manoa, CTAHR-PRM-3, pp 7.
- Thorne, M.S.**, G.K. Fukumoto, and M.H. Stevenson. 2007. Foraging Behavior and Grazing Management Planning. University of Hawaii at Manoa, CTAHR - PRM-2, pp 11.
- Cox, L.J., Q.A. Edwards, **M.S. Thorne**, G.K. Fukumoto, and L.Y.T. Ching. 2006. Commercial cow-calf management decisions: Calculating your cost of production with Calf-XL 2006. University of Hawaii at Manoa, CTAHR – LM-12. pp.21.
- Thorne, M.S.**, J.S. Powley, and G.K. Fukumoto. 2005. Fireweed control: an adaptive management approach. University of Hawaii at Manoa, CTAHR PRM-1, pp 8.
- Cox, L.J., Q.A. Edwards, **M.S. Thorne**, G. Fukumoto. 2005. Calculating the cost of production for a cow-calf operation. University of Hawaii at Manoa, CTAHR –LM-11.
- Trlica, M.J., and **M.S. Thorne**. 2001. Trend in vegetation characteristics and range condition on the Mantle

Allotment in Dinosaur National Monument from 1996 to 2001. National Park Service Report, Rangeland Ecosystem Science Department, Ft. Collins, Colo.

**Thorne, M.S.,** and M.J. Trlica. 2001. Comparison between methodologies to measure cover characteristics of plant communities within Dinosaur National Monument. National Park Service Report. Rangeland Ecosystem Science Department, Ft. Collins, Colo.

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

**Websites:**

Hawaii Rangelands: <https://rangelandsgateway.org/states/hawaii>

Marianas Grazing Management Academy: <http://manoa.hawaii.edu/ctahr/tpalm/index.html>

UH Livestock Extension You Tube Channel: <https://www.youtube.com/channel/UCzybVKzCpGt3Q-eVqGGpTPg>

**Webinars:**

Mineral Supplementation for Beef Cattle in Hawaii: A Three-part Series. <http://hawaii.erightrisk.com/minerals/>

Strengthening RREA Programing Through Enhanced Connections: A web-based conference series:

<https://globalrangelands.org/rreasp/webinars>

Livestock Extension Virtual Field Day:

<https://www.youtube.com/playlist?list=PLWDZ2pCeumJGnrNtuBNlkuqo3D-zJ8Dqo>

Leadership Roles (Committees, Boards, Advisory, etc.)

UH-Manoa Faculty Senate (May 2021 – Present)

UH-Manoa Faculty Senate, Committee on Administration and Budget (May 2021-Present)

CTAHR Research Advisory Committee to the Assoc. Dean/Director of Research (2020-Present)

CTAHR Extension Reporting Advisory Committee to the Assoc. Dean/Director of Extension (2020-2021)

HNFAS Department – Department Tenure and Promotion Committee (2021-Present)

Coordinator, UH/CTAHR Livestock Extension Group (2019- present)

Renewable Resources Extension Act National Strategic Planning Committee (2016 – 2018)

HNFAS Department – Research and Extension Committee Chair (2004-present)

CTAHR Faculty Senate – Research Committee (2005-2007)

CTAHR Faculty Senate – Research Committee (2009 – 2011)

CTAHR Strategic Planning Goal 3 Committee (2005 – 2007)

Associate Graduate Faculty in Animal Science, University of Hawaii at Manoa (2005 – present)

Associate Graduate Faculty in Nutrition, University of Hawaii at Manoa (2019 – present)

Adjunct Associate Professor, Dept. Wildland Resources, Utah State University (2008-present)

WERA-1008, Rangelands West Partnership (2004-present)

WERA-1008, Rangelands West Partnership – Executive Board (2009-2012)

**Graduate Students**

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master’s Committees	0	1
Chair of PhD Committees	1	0
Member of Master’s Committees	0	3
Member of PhD Committees	1	1

**Grant Support**

<u>Title of Grant:</u>	2004 Mealani Forage Field Day: Meeting a world of demand.
<u>Source of Grant:</u>	USDA-NRCS
<u>Total Dollar Value (Your share of the grant value):</u>	\$10,500
<u>Dates of Grant:</u>	06/2004 – 12/2004
<u>Role (PI, CoPI):</u>	PI

<u>Title of Grant:</u>	UH Rangelands West Incentive Grant – Building Knowledge of Sustainable Rangeland Management Using Information Technology
<u>Source of Grant:</u>	USDA-WSARE

Total Dollar Value (Your share of the grant value): \$4,000  
Dates of Grant: 06/2004 – 04/2007  
Role (PI, CoPI): coPI

Title of Grant: Best Management Practices for the Sustainable Productivity of Hawaii's Range and Pasture Lands  
Source of Grant: USDA-CSREES  
Total Dollar Value (Your share of the grant value): \$50,000  
Dates of Grant: 10/2004 - 09/2009  
Role (PI, CoPI): PI

Title of Grant: Hawaii Grazing and Livestock Management Academy  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$53,152  
Dates of Grant: 10/2004 – 10/2007  
Role (PI, CoPI):

Title of Grant: 2005 Mealani Forage Field Day: Improved Livestock and Forage Production Through Sustainable Management Practices  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$8,800  
Dates of Grant: 06/2005 – 12/2005  
Role (PI, CoPI): PI

Title of Grant: 2005 Sheep Producer's Sustainable Grazing Management Workshop  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$7,810  
Dates of Grant: 06/2005 – 12/2005  
Role (PI, CoPI): PI

Title of Grant: Animal Nutrition and Forage Production Profiling Project  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$17,110  
Dates of Grant: 06/2005 – 05/2007  
Role (PI, CoPI): PI

Title of Grant: Best Management Practices for the Remediation of Former Sugarcane and Pineapple Lands for Sustainable Livestock Production in Hawaii  
Source of Grant: USDA-TSTAR  
Total Dollar Value (Your share of the grant value): \$262,013  
Dates of Grant: 08/2005 – 08/2008  
Role (PI, CoPI): PI

Title of Grant: CES Outreach and Education Program for NAIS Implementation Project  
Source of Grant: USDA/HDOA  
Total Dollar Value (Your share of the grant value): \$81,200  
Dates of Grant: 10/2005 – 04/2007  
Role (PI, CoPI):

Title of Grant: 2006 Mealani Forage Field Day: Hawaii Grown Beef – From Pasture to Market  
Source of Grant: USDA-NRCS

Total Dollar Value (Your share of the grant value): \$13,122  
Dates of Grant: 06/2006 - 12/2006  
Role (PI, CoPI): PI

Title of Grant: 2006 Sheep Producer's Sustainable Grazing Management Workshop  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$12,242  
Dates of Grant: 06/2006 -12/2006  
Role (PI, CoPI): PI

Title of Grant: Survey of the Natural Resources, Fine-fuel Loads, and Extent of Fountain Grass Invasion on Rangelands in the Puu Waawaa Area of West Hawaii  
Source of Grant: West Hawaii Wildfire Management Organization  
Total Dollar Value (Your share of the grant value): \$86,241  
Dates of Grant: 07/2006 – 06/2008  
Role (PI, CoPI): PI

Title of Grant: 2007 Mealani Forage Field Day: Risk Management for Grass-Based Operations  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$14,209  
Dates of Grant: 07/2007 – 03/2008  
Role (PI, CoPI): PI

Title of Grant: CES Outreach and Education Program for the NAIS Implementation Project  
Source of Grant: USDA/HDOA  
Total Dollar Value (Your share of the grant value): \$49,000  
Dates of Grant: 07/2007 – 06/2008  
Role (PI, CoPI): PI

Title of Grant: Development of Best Management Practices for the Control of Madagascar Fireweed (*Senecio madagascariensis* Poiret) in Maui County  
Source of Grant: Maui County Research and Development  
Total Dollar Value (Your share of the grant value): \$34,056  
Dates of Grant: 09/2007 – 08/2008  
Role (PI, CoPI): PI

Title of Grant: Development of Best Management Practices for the Control of Madagascar Fireweed (*Senecio madagascariensis* Poiret) in Hawaii  
Source of Grant: Hawaii Farm Bureau Federation Research and Market Development Program  
Total Dollar Value (Your share of the grant value): \$40,000  
Dates of Grant: 09/2007 – 08/2008  
Role (PI, CoPI): PI

Title of Grant: Hawaii Rainfall and Forage Production Index Project  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$146,668  
Dates of Grant: 10/2007 – 09/2010  
Role (PI, CoPI): PI

Title of Grant: 2008 Stockman's Fall Field Day: Behavior-based Grazing Management for Improved Animal Performance, Pasture Condition, and Ranch Profitability  
Source of Grant: USDA-NRCS  
Total Dollar Value (Your share of the grant value): \$15,930  
Dates of Grant: 07/2008 – 06/2009  
Role (PI, CoPI): PI

Title of Grant: Development of Best Management Practices for the Control of Madagascar Fireweed (*Senecio madagascariensis* Poiret) in Maui County  
Source of Grant: Maui County Research and Development  
Total Dollar Value (Your share of the grant value): \$19,929  
Dates of Grant: 07/2008 – 08/2010  
Role (PI, CoPI): PI

Title of Grant: Australian Leucaena Study Tour  
Source of Grant: HDOA – Agribusiness Development Corporation  
Total Dollar Value (Your share of the grant value): \$43,000  
Dates of Grant: 10/2008 – 12/2010  
Role (PI, CoPI): PI

Title of Grant: Extension Outreach and Assistance in Improved Pasture and Livestock Management Practices for Pacific Islanders  
Source of Grant: USDA-OASDFR  
Total Dollar Value (Your share of the grant value): \$297,224  
Dates of Grant: 12/2008 – 11/2011  
Role (PI, CoPI): PI

Title of Grant: Pasture Forage and Weed Database and Herbarium for Maui County  
Source of Grant: Maui County Research and Development  
Total Dollar Value (Your share of the grant value): \$8,000  
Dates of Grant: 07/2009 – 08/2010  
Role (PI, CoPI): PI

Title of Grant: Quantifying Secondary Compounds in Common Pasture Vegetation for Behavior Based Grazing Management in Hawaii  
Source of Grant: USDA-WSARE  
Total Dollar Value (Your share of the grant value): \$40,401  
Dates of Grant: 01/2010 – 12/2012  
Role (PI, CoPI): PI

Title of Grant: Outreach and Assistance in Tropical Pasture and Livestock Management for Pacific Islanders  
Source of Grant: USDA-OASDFR  
Total Dollar Value (Your share of the grant value): \$1,036,222  
Dates of Grant: 10/2010 – 08/2013  
Role (PI, CoPI): PI

Title of Grant: Ecology, Toxicology, and Management of Madagascar Fireweed (*Sececio madagascariensis* Poiret) in Tropical and Sub-tropical Rangelands  
Source of Grant: USDA-TSTAR  
Total Dollar Value (Your share of the grant value): \$258,449

Dates of Grant: 11/2010 – 10/2013  
Role (PI, CoPI): PI

Title of Grant: Fireweed Biological Control Project: *Secusio extensa* Rearing and Distribution  
Source of Grant: USDA-CSREES  
Total Dollar Value (Your share of the grant value): \$15,556  
Dates of Grant: 07/2012 -06/2013  
Role (PI, CoPI): PI

Title of Grant: Best Management Practices for the Sustainable Productivity of Hawaii’s Range and Pasture Lands – Supplemental Funding for Hawaii Rainfall and Forage Index Project  
Source of Grant: USDA-CSREES  
Total Dollar Value (Your share of the grant value): \$70,000  
Dates of Grant: 10/2012 – 09/2014  
Role (PI, CoPI): PI

Title of Grant: Enhancing the Sustainability of Grass-Finish Beef Production in Hawaii via Carcass and Meat Quality Improvement  
Source of Grant: USDA-WSARE  
Total Dollar Value (Your share of the grant value): \$49,948  
Dates of Grant: 09/2013 – 10/2016  
Role (PI, CoPI): coPI

Title of Grant: Fireweed Biocontrol in Hawaii’s Rangelands: Integrating Research and Extension for Better Management.  
Source of Grant: USDA-CSREES  
Total Dollar Value (Your share of the grant value): 10/2013 – 09/2015  
Dates of Grant: \$54,610  
Role (PI, CoPI): coPI

Title of Grant: Assessment of *Secusio extensa* for the Biological Control of Fireweed (*Senecio madagascariensis*) in Hawaii  
Source of Grant: USDA-NIFA-RIPM  
Total Dollar Value (Your share of the grant value): \$98,940  
Dates of Grant: 10/2013 - 09/2016  
Role (PI, CoPI): coPI

Title of Grant: Linking the Effects of Stocking Density, Forage Environment, and Climatic Conditions to Animal Performance in Tropical Forage Finish Beef Production Systems.  
Source of Grant: USDA-CSREES  
Total Dollar Value (Your share of the grant value): \$99,878  
Dates of Grant: 10/2014 – 09/2016  
Role (PI, CoPI): PI

Title of Grant: Development of Individual Free-Choice Mineral Supplementation Program for Sustainable Grazing Management of Hawaii’s Rangelands  
Source of Grant: USDA-WSARE  
Total Dollar Value (Your share of the grant value): \$332,601  
Dates of Grant: 04/2016 – 12/2019  
Role (PI, CoPI): PI

Title of Grant: The Effects of Stocking Density, Forage Environment, and



	Climate on Animal Performance in Tropical Forage Finish Beef Production USDA-CSREES
<u>Source of Grant:</u>	
<u>Total Dollar Value (Your share of the grant value):</u>	\$80,000
<u>Dates of Grant:</u>	10/2016 – 09/2018
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	<i>Prosapia bicincta</i> (Two-line spittlebug) Detection and Control in Hawaii County
<u>Source of Grant:</u>	Hawaii County R&D/BIRC&DC
<u>Total Dollar Value (Your share of the grant value):</u>	\$22,473
<u>Dates of Grant:</u>	06/2017 – 06/2019
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	Hawaii Rangeland Management Education and Outreach Program
<u>Source of Grant:</u>	USDA-RREA
<u>Total Dollar Value (Your share of the grant value):</u>	\$45,000
<u>Dates of Grant:</u>	07/2017 – 06/2021
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	<i>Prosapia bicincta</i> (Two-line Spittlebug) Detection and Control in Hawaii
<u>Source of Grant:</u>	HDOA
<u>Total Dollar Value (Your share of the grant value):</u>	\$300,000
<u>Dates of Grant:</u>	08/2017 – 10/2019
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	<i>Prosapia bicincta</i> (Two-line Spittlebug) Detection and Control in Hawaii
<u>Source of Grant:</u>	Hawaii Dept. of Natural Resources-HISC
<u>Total Dollar Value (Your share of the grant value):</u>	\$50,000
<u>Dates of Grant:</u>	09/2017 – 04/2019
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	Strengthening RREA Programing Through Enhanced Connections: A Web-based Conference Series
<u>Source of Grant:</u>	USDA-RREA
<u>Total Dollar Value (Your share of the grant value):</u>	\$49,995
<u>Dates of Grant:</u>	09/2018 – 08/2021
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	Livestock Extension Group Coordination: Extension POW 14- 242
<u>Source of Grant:</u>	USDA-CSREES
<u>Total Dollar Value (Your share of the grant value):</u>	\$124,973
<u>Dates of Grant:</u>	10/2019 – 09/2024
<u>Role (PI, CoPI):</u>	PI
<u>Title of Grant:</u>	<i>Prosapia bicincta</i> (Two-line Spittlebug) Detection and Control in Hawaii
<u>Source of Grant:</u>	HDOA
<u>Total Dollar Value (Your share of the grant value):</u>	\$673,989
<u>Dates of Grant:</u>	10/2019 – 04/2022
<u>Role (PI, CoPI):</u>	PI

Title of Grant: Improved Detection and Control of Tropical Invasive Insect Pests – Twolined Spittlebug.  
Source of Grant: USDA-Agricultural Research Service (PBARC)  
Total Dollar Value (Your share of the grant value): \$89,156  
Dates of Grant: 11/20/2020 -06/30/2022  
Role (PI, CoPI): PI

Title of Grant: Production, Marketing and Finance Risk Education for Hawaii Beef Producers Underserved by Crop Insurance  
Source of Grant: Western Extension Risk Management Education (awarded to Utah State University)  
Total Dollar Value (Your share of the grant value): \$70,000  
Dates of Grant: 04/01/2021 -03/30/2022  
Role (PI, CoPI): co-PI

Title of Grant: Economic Evaluation of Beef Cattle Production Models and Marketing Alternatives in Hawaii  
Source of Grant: Western Sustainable Agricultural Education and Research  
Total Dollar Value (Your share of the grant value): \$51,389  
Dates of Grant: 07/01/2021 -06/30/2022  
Role (PI, CoPI): PI

Title of Grant: Expanding Range Extension Capacity Through RangeDocs: Searchable Rangeland Science.  
Source of Grant: USDA/NIFA - RREA  
Total Dollar Value (Your share of the grant value): \$100,000 (\$17,726)  
Dates of Grant: 07/01/2021 -06/30/2022  
Role (PI, CoPI): CoPI

Title of Grant: Sustaining Hawaii County Agriculture: Resources to Support On-Farm Consultation and Service Programs  
Source of Grant: Hawaii County R&D  
Total Dollar Value (Your share of the grant value): \$15,594  
Dates of Grant: 07/01/2021 -06/30/2022  
Role (PI, CoPI): PI

Title of Grant: Hawaii Rangeland Management Education and Outreach Program  
Source of Grant: USDA/NIFA-RREA  
Total Dollar Value (Your share of the grant value): \$30,000  
Dates of Grant: 10/01/2021 -09/30/2024  
Role (PI, CoPI): PI

Title of Grant: Evaluating Production and Nutrient Cycling of Grazing Management Systems in Hawaiian Forests and Pastures  
Source of Grant: USDA-CSREES, McIntire-Stennis  
Total Dollar Value (Your share of the grant value): \$125,000  
Dates of Grant: 10/01/2021 -09/30/2026  
Role (PI, CoPI): PI

Title of Grant: Detection and Management Strategies for the Control of *Prosapia bicincta* (Twolined Spittlebug) in Hawaii  
Source of Grant: Hawaii Dept. Land and Natural Resources - HISC  
Total Dollar Value (Your share of the grant value): \$184,788  
Dates of Grant: 10/01/2021 -09/30/2022  
Role (PI, CoPI): PI

## Presentations at Conferences

- Title: Establishment and Pest Status of the Twolined Spittlebug, *Prosapia bicincta*, in Hawaii  
Authors (\*presenter): \*Wilson, S. M. Wright, **M. Thorne**, D. Peck.  
Name of Conference: Entomological Society of America  
Location: Denver, Colorado  
Date of Presentation: October 31-November 3, 2020
- Title: Changes in vegetative community composition following Twoline Spittlebug (*Prosapia bicincta*) infestations in Hawaii Rangelands.  
Authors (\*presenter): \***Thorne, M.S.**, M. Wright, S. Wilson, J. Mack, and M. Oshiro.  
Name of Conference: 73<sup>rd</sup>. Annual Meeting of the Society for Range Management  
Location: Denver, Colorado  
Date of Presentation: February 16-20, 2020
- Title: Detection and management of Two-Lined Spittlebug (*Prosapia bicincta*) on Hawaii Rangelands.  
Authors (\*presenter): \***Thorne, M.S.**, M. Wright, G. Fukumoto, D. Oishi, S. Wilson, J. Mack, and M. Oshiro  
Name of Conference: 72<sup>nd</sup> Annual meeting of the Society for Range Management.  
Location: Minneapolis, Minnesota.  
Date of Presentation: February 10-14, 2019
- Title: Mineral Supplementation Program Development and Education for Hawaii Rangelands.  
Authors (\*presenter): \***Thorne, M.S.**, J.P. Hewlett, G.K. Fukumoto, M.A. Oshiro  
Name of Conference: Association of Natural Resource Professionals 2018 Conference  
Location: Beloxi, Mississippi  
Date of Presentation: April 29-May 3, 2018
- Title: Development of an individual free-choice mineral supplementation program for improved grazing management in Hawaii's rangelands.  
Authors (\*presenter): \***Thorne, M.S.**, J.P. Hewlett, G.K. Fukumoto, M.A. Oshiro.  
Name of Conference: 71<sup>st</sup> Annual meeting of the Society for Range Management  
Location: Sparks, Nevada  
Date of Presentation: January 27-February 3, 2018
- Title: Effects of animal behavior on core-body temperature and production efficiency of grass-finished cattle.  
Authors (\*presenter): \*Oshiro, M., **M.S. Thorne**, C.N. Lee, Y.S. Kim, G. Fukumoto.  
Name of Conference: 71<sup>st</sup> Annual meeting of the Society for Range Management  
Location: Sparks, Nevada  
Date of Presentation: January 27-February 3, 2018
- Title: Developing the next Renewable Resources Extension Act strategic plan for 2018-2022  
Authors (\*presenter): \*Dalke, A., B. Hutchinson, S. Merrigan, G. Ruyle, J. Tanaka,

Name of Conference: **M.S. Thorne.**  
 Location: 71<sup>st</sup> Annual meeting of the Society for Range Management  
 Date of Presentation: Sparks, Nevada  
 January 27-February 3, 2018

Title: Animal behavior, body core temperature, and production efficiency of grass-finished cattle.

Authors (\* presenter): \***Thorne, M.S.**, M.A. Abran, C.N. Lee, G. Fukumoto  
Name of Conference: 69<sup>th</sup> Annual meeting of the Society for Range Management  
 Location: Corpus Christi, Texas  
 Date of Presentation: January 31-February 4, 2016

Title: Forage quality and weaning weight influences grass-finished cattle performance and meat quality

Authors (\* presenter): \***Thorne, M.S.**, G.K. Fukumoto, Y.S. Kim, C.N. Lee, M.H. Stevenson, and M. A. Abran  
Name of Conference: 68<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Sacramento, California  
 Date of Presentation: January 30 – February 7, 2015

Title: Grazing management for tropical grass-finish beef production  
Authors (\* presenter): \***Thorne, M.S.**, G.K. Fukumoto, Y.S. Kim, C.N. Lee, M.H. Stevenson, and M. A. Abran  
Name of Conference: 68<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Sacramento, California  
 Date of Presentation: January 30 – February 7, 2015

Title: Drought management tools for Hawaii’s rangelands  
Authors (\* presenter): \***Thorne, M.S.**, G.K. Fukumoto, M.H. Stevenson, and M. A. Abran  
Name of Conference: 68<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Sacramento, California  
 Date of Presentation: January 30 – February 7, 2015

Title: Conditioned preference training of livestock for tropical weed management.  
Authors (\* presenter): \*Stevenson, M.H., and **M.S. Thorne.**  
Name of Conference: 68<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Sacramento, California  
 Date of Presentation: January 30 – February 7, 2015

Title: Hawaii Rainfall and Forage Production Index: An Evaluation Tool for Drought Affected Rangelands  
Authors (\* presenter): \***Thorne, M.S.**, J.P. Hewlett, G.K. Fukumoto, M. Stevenson, and M. A. Abran  
Name of Conference: 67<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Orlando Florida  
 Date of Presentation: February 8-13, 2014.

Title: Secondary Compound Interactions: The effect of condensed tannins on the toxicity of fireweed (*Senecio madagascariensis*) to cattle  
Authors (\* presenter): \*Wong, C., F. Provensa, **M.S. Thorne**, J. Phister, and D. Gardner  
Name of Conference: 65<sup>th</sup> Annual Meeting of the Society for Range Management  
 Location: Spokane Washington

Date of Presentation: January 29 – February 3, 2012

Title: Extension Outreach in Tropical Range and Livestock Management for Pacific Islanders.

Authors (\* presenter): \***Thorne, M.S.**, J. Deenik, R. Godfrey, G. Fukumoto, J. Powley, M. Stevenson, L. Duponcheel, A. Badilles

Name of Conference: 64<sup>th</sup> Annual Meeting of the Society for Range Management

Location: Billings Montana

Date of Presentation: February 6-10, 2011

Title: Grazing Management of Arid Perennial Grasses or The Strange Case of the Puu Waawaa – Puu Anahulu Ahupuaa

Authors (\* presenter): \***Thorne, M.S.**

Name of Conference: Western Society for Weed Science Annual Meeting

Location: Kona Hawaii

Date of Presentation: March 11, 2010

Title: Content Development Process for Rangelandswest.org, Symposium on Western Rangelands Partnership: using the internet for information transfer

Authors (\* presenter): \***Thorne, M.S.**

Name of Conference: 62<sup>nd</sup> Annual Meeting of the Society for Range Management

Location: Albuquerque, New Mexico

Date of Presentation: February 8-13, 2009

Title: Haleakala Ranch: Managing for resource stability, economic productivity, and community wellbeing in Hawaii.

Authors (\* presenter): \*Friel, G., **M.S. Thorne**, and M. Stevenson

Name of Conference: 62<sup>nd</sup> Annual Meeting of the Society for Range Management

Location: Albuquerque, New Mexico

Date of Presentation: February 8-13, 2009

Title: Wild ungulate herbivory of willow outside of national parks is a significant management consideration.

Authors (\* presenter): \*Meiman, P.J., **M.S. Thorne**, Q.D. Skinner, M.A. Smith, and J.L. Dodd

Name of Conference: 62<sup>nd</sup> Annual Meeting of the Society for Range Management

Location: Albuquerque, New Mexico

Date of Presentation: February 8-13, 2009

Title: Fireweed (*Senecio madagascariensis* Poiret) control: an adaptive management approach

Authors (\* presenter): \***Thorne, M.S.**, D.R. Gardner, J.S. Powley, G.K. Fukumoto, and M.H. Stevenson

Name of Conference: 2008 Extension Galaxy III Conference, Joint Council of Extension Professionals

Location: Indianapolis, Indiana

Date of Presentation: September 15-19, 2008

Title: Remediation of former sugarcane lands for sustainable forage production

Authors (\* presenter): \***Thorne, M.S.**, J.L. Deenik, H.H. Keyser, L.J. Cox, and M.H. Stevenson.

Name of Conference: 2008 Joint meeting of the Society for Range Management and the American Forage and Grassland Council

Location: Louisville, Kentucky

Date of Presentation: January 26-31, 2008

Title: Fireweed (*Senecio madagascariensis* Poiret) control: an adaptive management approach

Authors (\* presenter): \***Thorne, M.S.**, D.R. Gardner, J.S. Powley, G.K. Fukumoto, and M.H. Stevenson

Name of Conference: 2008 Joint meeting of the Society for Range Management and the American Forage and Grassland Council

Location: Louisville, Kentucky

Date of Presentation: January 26-31, 2008

Title: CO<sub>2</sub> exchange rates and plant-soil responses to soil loss on shortgrass prairie and sagebrush steppe sites

Authors (\* presenter): \***Thorne, M.S.**, M.J. Trlica, W.C. Leininger, R.D. Child, and D.A. Klein

Name of Conference: Society for Range Management 56<sup>th</sup> Annual Meeting,

Location: Casper, Wyoming

Date of Presentation: Feb. 1-6, 2003

Title: Soil loss effects on photosynthetic rates of western wheatgrass and blue grama grass

Authors (\* presenter): \***Thorne, M.S.**, M.J. Trlica, W.C. Leininger, and R.D. Child

Name of Conference: Society for Range Management 54<sup>th</sup> Annual Meeting

Location: Kailua-Kona, Hawaii

Date of Presentation: Feb. 17-23, 2001

Title: Soil loss effects on soil respiration rates of two rangeland ecosystems.

Authors (\* presenter): \***Thorne, M.S.**, M.J. Trlica, W.C. Leininger, and R.D. Child

Name of Conference: Society for Range Management 54<sup>th</sup> Annual Meeting

Location: Kailua-Kona, Hawaii

Date of Presentation: Feb. 17-23, 2001

Title: Estimates of the variability in measuring canopy volume among observers and within observations

Authors (\* presenter): \***Thorne, M.S.**, J.D. Rodgers, Q.D. Skinner, M.A. Smith, W.A. Laycock, J.L. Dodd, and S. Cerecki

Name of Conference: Society for Range Management 51<sup>st</sup> Annual Meeting

Location: Guadalajara, Jalisco. Mexico

Date of Presentation: Feb. 8-12, 1998

Title: Final Report-Effects of herbivory on Willow (*Salix* spp.) canopy volume on mountain rangelands of northern Wyoming

Authors (\* presenter): \***Thorne, M.S.**, Q.D. Skinner, M.A. Smith, W.A. Laycock, and J.L. Dodd

Name of Conference: Society for Range Management 51<sup>st</sup> Annual Meeting

Location: Guadalajara, Jalisco. Mexico

Date of Presentation: Feb. 8-12, 1998

Title: Final Report-Effects of the frequency of simulated browsing events on Willow (*Salix* spp.) biomass production

Authors (\* presenter): \***Thorne, M.S.**, Q.D. Skinner, M.A. Smith, W.A. Laycock, and J.L. Dodd

Name of Conference: Society for Range Management 51<sup>st</sup> Annual Meeting

Location: Guadalajara, Jalisco. Mexico

Date of Presentation: Feb. 8-12, 1998

Title: Effects of herbivory on Willow (*Salix* spp.) canopy volume on mountain rangelands of northern Wyoming

Authors (\* presenter): \***Thorne, M.S.**, Q.D. Skinner, M.A. Smith, and W.A. Laycock

Name of Conference: Society for Range Management 50<sup>th</sup> Annual Meeting

Location: Rapid City, South Dakota

Date of Presentation: Feb. 16-21, 1997