

Lusha M. Tronstad
Lead Invertebrate Zoologist
Wyoming Natural Diversity Database
University of Wyoming
Laramie, Wyoming 82071-3381
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POSITIONS

Lead Invertebrate Zoologist, Wyoming Natural Diversity Database
March 2009 – present
University of Wyoming, Laramie, Wyoming

Center for Invertebrate Studies
January 2025 – present
University of Wyoming, Laramie, Wyoming

Program in Ecology and Evolution Faculty
January 2023 – present
University of Wyoming, Laramie, Wyoming

Adjunct Faculty, Department of Zoology and Physiology
April 2014 – present
University of Wyoming, Laramie, Wyoming

Ecology Lab Coordinator, Robert and Carol Berry Biodiversity Conservation Center
September 2014 – February 2019
University of Wyoming, Laramie, Wyoming

Post-Doctoral Research Scientist, Department of Renewable Resources
April 2008 – February 2009
University of Wyoming, Laramie, Wyoming

EDUCATION

PhD, Department of Zoology and Physiology, May 2008
University of Wyoming, Laramie, Wyoming
Advisor: Dr. Robert O. Hall, Jr.
Minor: Statistics

MS, Department of Biological Sciences, May 2003
University of Alabama, Tuscaloosa, Alabama
Advisor: Dr. Arthur C. Benke

BS, Department of Ecology, May 2001
Montana State University, Bozeman, Montana
Major: Biology-Fish and Wildlife Management
Minor: German

GRANTS

* indicates a student I mentored

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|------|--|
| 2024 | Tronstad, L.M. , K. Cook and B. Tronstad. Statewide butterfly surveys to inform the distribution and habitat requirements of species with ESA status. Bureau of Land Management. \$80,000 |
| 2024 | Tronstad, L.M. and A. Lindsteadt*. Monitoring the rare aquatic beetle, <i>Hygrotus diversipes</i> , at known locations. Bureau of Land Management. \$48,062 |
| 2024 | Madson, A. and L.M. Tronstad . Monitoring the <i>Yermo xanthocephalus</i> (Desert Yellowhead) using high resolution UAS data and novel AI/ML workflows. Bureau of Land Management. \$77,563 |

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- 2024 Hollander, A.*, **L.M. Tronstad** and T. Collier. Assessing the conservation status of Western Pearlshell mussels in Grand Teton National Park. University of Wyoming-National Park Service. \$5000
- 2024 Glassic, H, **L.M. Tronstad**, T.M. Koel & Tronstad. Furthering the conservation of Yellowstone cutthroat trout by investigating the effect of novel Lake Trout suppression techniques on the food web of Yellowstone Lake. Jackson Hole OneFly. \$33,281
- 2024 **Tronstad, L.M.** and B.P. Tronstad. Inventory of Ground Nesting Bees to Inform Elk Management in Fossil Butte National Monument. National Park Service. \$150,000
- 2024 **Tronstad, L.M.** Continued monitoring of aquatic invertebrates at Agate Fossil Beds National Monument. National Park Service. \$41,000
- 2024 **Tronstad, L.M.** and B.P. Tronstad. Inventory of T&E Bees and Butterflies to Inform Vegetation (Invasive Plant Treatment, Mowing, and Burning) Management in Devils Tower National Monument, Jewel Cave National Monument, and Mount Rushmore National Memorial. National Park Service. \$475,000
- 2024 **Tronstad, L.M.**, M.E. Wehtje and B.P. Tronstad. Revisiting abundance and diversity of native bee and other pollinators in Capitol Reef's historic orchards twenty years after implementing recommended management changes. National Park Service. \$59,809
- 2024 **Tronstad, L.M.** Monitoring land snails in the Black Hills: revisiting sites to detect trends. US Forest Service. \$9523
- 2024 **Tronstad, L.M.** Monitoring land snails in the Black Hills: revisiting sites to detect trends. South Dakota Game, Fish and Parks. \$44,208
- 2023 **Tronstad, L.M.** Continued monitoring of aquatic invertebrates at Agate Fossil Beds National Monument. National Park Service. \$62,000
- 2023 Handley, J. and **L.M. Tronstad**. Monitoring and continuing examination of climate influences on reproduction of Desert Yellowhead. Bureau of Land Management. \$57,831
- 2023 **Tronstad, L.M.** and B.P. Tronstad. Surveys for pollinators prior to bentonite mine reclamation. Bureau of Land Management. \$40,141
- 2023 **Tronstad, L.M.**, A.M. Storey*, and L. van Diepen. Investigating parasitism of bumble bees: do species petitioned for Endangered Species Act listing have more parasites? Bureau of Land Management. \$20,000
- 2023 **Tronstad, L.M.** and A. Lindsteadt*. The status and distribution of the Narrow-footed Hygrotus Diving Beetle (*Hygrotus diversipes*) in Wyoming. Bureau of Land Management. \$60,000
- 2023 **Tronstad, L.M.** Analyzing plankton in Yellowstone Lake to monitor the recovery of the ecosystem. Yellowstone National Park, National Park Service. \$127,817
- 2023 **Tronstad, L.M.**, A.M. Storey*, A.M. Dougherty and L.T.A. van Diepen. Assessing parasites of native bumble bees in Grand Teton National Park: are they limiting declining species? University of Wyoming-National Park Service. \$8000
- 2022 Wallace, Z., I. Abernethy, B. Heidel and **L.M. Tronstad**. Biological surveys of Red Creek Badlands Wilderness Study Area, National Landscape Conservation System. \$25,000
- 2022 **Tronstad, L.M.** Conservation ranking of rare invertebrate taxa in Montana and Wyoming. Montana Natural Heritage Program. \$30,000
- 2022 Handley, J. and **L.M. Tronstad**. Surveys for Sessileflower Indian Parsley (*Cymopterus sessiliflorus*) and their pollinators. Bureau of Land Management. \$48,062
- 2022 **Tronstad, L.M.** Developing methods to monitor aquatic invertebrates along the Snake River. Teton Conservation District. \$10,000
- 2022 Handley, J. and **L.M. Tronstad**. Continuing examination of climatic influences on the reproduction of Desert Yellowhead (*Yermo xanthocephalus*). Bureau of Land Management. \$43,607

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- 2022 **L.M. Tronstad.** The status and distribution of Regal Fritillary and Monarch butterflies in Casper and Buffalo Field Offices, Wyoming. Bureau of Land Management. \$42,000
- 2022 **L.M. Tronstad.** Investigating the status and threats of ESA petitioned Bumble Bees in Wyoming. Wyoming Governor's Office. \$99,612
- 2022 **L.M. Tronstad.** Butterflies in western Wyoming: preparing for an upcoming ESA decision and incoming ESA petitions. Wyoming Governor's Office. \$60,958
- 2022 **L.M. Tronstad,** S. Siddons, P. Cavalli, J. Walrath and B. Bear. Identifying the distribution and reproduction of California Floater and Western Pearlshell mussels, Bear River drainage, Wyoming. Wyoming Governor's Office and Wyoming Game and Fish Department. \$160,579
- 2022 **Tronstad, L.M.,** S. Hotaling and D. Finn. Building an integrative future for mountain research in the high Teton Range: linking NPS geophysical research with long-term ecological monitoring of aquatic ecosystems. UW-NPS. \$4500
- 2022 **Tronstad, L.M.,** S. Hotaling and D. Finn. Linking NPS geophysical research with long-term ecological monitoring of alpine aquatic ecosystems in the Teton Range. Teton Conservation District. \$18,000
- 2021 Bell, C. and **L.M. Tronstad.** Pollinator surveys on the Arapaho Ranch, Wyoming. Report prepared for the Arapaho Ranch and the Biodiversity Institute – University of Wyoming by the Wyoming Natural Diversity Database - University of Wyoming, Laramie, Wyoming. \$2000
- 2021 Koel, T.M, A. Walter, **L.M. Tronstad** and E. White. How will methods to suppress an invasive fish affect Yellowstone Lake water quality? \$180,182
- 2021 **Tronstad, L.M.** Surveys for Regal Fritillary and Monarch butterflies in the Rawlins Field Office, Wyoming. Bureau of Land Management. \$42,248
- 2021 **Tronstad, L.M.** Can sound from wind turbines affect pollination and native bees. Bureau of Land Management. \$48,464
- 2021 **Tronstad, L.M.** The status and distribution of the Narrow-footed Hygrotes Diving Beetle (*Hygrotes diversipes*) in Wyoming. Bureau of Land Management. \$75,000
- 2021 **Tronstad, L.M.** Mussels and aquatic invertebrates of the Niobrara River. National Park Service. \$184,909
- 2021 **Tronstad, L.M,** S. Hotaling, R.J. Bixby, K. Jorgenson, S. Collins, D.S. Finn and P. Frandsen. Moving beyond morphology: Integrating molecular metabarcoding into long-term alpine stream research to better understand biodiversity change. University of Wyoming-National Park Service. \$5000
- 2020 **Tronstad, L.M.,** D. Tuthill, J. Crait and N. Gautier. Enhancing knowledge of pollinator diversity. NASA Faculty Grant. \$20,000
- 2020 **Tronstad, L.M.,** P. Deibert and S. Larson. State of knowledge on the interactions between wind facilities and insects: reviewing what is known and identifying potential linkages. U.S. Fish and Wildlife Service. \$58,750.
- 2020 **Tronstad, L.M.** Monitoring of aquatic invertebrates at Agate Fossil Beds National Monument. National Park Service. \$61,820 + \$18,000
- 2020 **Tronstad, L.M.,** D. DeLong and J. Runyon. Developing monitoring protocols for pollinators in the Grey's River District. US Forest Service. \$20,000
- 2020 **Tronstad, L.M.,** M.D. Andersen and G. Beauvais. Developing knowledge on the distribution, status and taxonomy of invertebrates in Montana and Wyoming. Montana Natural Heritage Program. \$20,000.
- 2020 Ayayee, P.A., C. Bell*, **L.M. Tronstad** and L. van Diepen. Impacts of altitude on the gut microbiome and the pathogen presence in western bumble bee species. UW Microbial Ecology. \$11,500

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- 2020 **Tronstad, L.M.**, J.J. Giersch, S. Hotaling, K. Jorgenson, S. Collins, L. Zeglin, R.J. Bixby, and D.S. Finn. Understanding food web structure in high elevation streams in the Teton Range. University of Wyoming-National Park Service. \$5000
- 2020 **Tronstad, L.M.** The status and distribution of the Regal Fritillary (*Speyeria idalia*) and Great Basin Silverspot (*Speyeria nokomis nokomis*) in Wyoming. Wyoming Governor's Office. \$100,000
- 2020 **Tronstad, L.M.** and C. Bell. Developing monitoring protocols for bees in Wyoming. Wyoming Governor's Office. \$20,000
- 2019 Handley, J. and **L.M. Tronstad**. How does climate limit the reproduction of Desert Yellowhead (*Yermo xanthocephalus*)? \$63,631
- 2019 **Tronstad, L.M.** Using eDNA to estimate the distribution of California Floater mussels (*Anodonta californiensis*) in the Bear River drainage in Wyoming. Wyoming Game and Fish Department. \$37,620
- 2019 Jones, G.P., and **L.M. Tronstad**. Physical, chemical and biological characteristics of spring ecosystems in the Medicine Bow National Forest. Region 2 U.S. Forest Service. \$30,000
- 2019 **Tronstad, L.M.**, J.J. Giersch, S. Hotaling, A. Shah, L. Zeglin, R.J. Bixby, H.A. Woods and D.S. Finn. Five years of alpine stream monitoring in the Teton Range: disentangling longer-term signals from year-to-year variability. University of Wyoming-National Park Service. \$5000
- 2019 Chalfoun, A. K.A. Woods and **L.M. Tronstad**. Habitat selection and quality of Wood Frogs in the Bighorn Mountains. Wyoming Game and Fish Department. \$167,291
- 2018 **Tronstad, L.M.** Investigating the distribution of *Zapada glacier* in Wyoming. U.S. Forest Service Region 2. \$27,000
- 2018 **Tronstad, L.M.** The status and distribution of the Regal Fritillary (*Speyeria idalia*), in Wyoming. Wyoming Governor's Office. \$40,500
- 2018 **Tronstad, L.M.**, J.J. Giersch, S. Hotaling, A. Shah, L. Zeglin, R.J. Bixby and D.S. Finn. Assessing thermal tolerance of vulnerable alpine stream insects as part of a long-term monitoring project in the Teton Range, Wyoming. University of Wyoming-National Park Service. \$5000
- 2017 **Tronstad, L.M.** and T. Koel. Nutrient cycling and plankton dynamics of Yellowstone Lake, Yellowstone National Park. National Park Service. \$123,928
- 2017 **Tronstad, L.M.** Investigating the status and distribution of the aquatic beetle, Narrow-foot Hygrotus Diving Beetle (*Hygrotus diversipes*). Bureau of Land Management. \$75,000
- 2017 **Tronstad, L.M.**, J.J. Giersch, S. Hotaling, L. Zeglin, R.J. Bixby and D.S. Finn. Establishing a long-term monitoring network for assessing potential climatic refugia in cold alpine stream types. University of Wyoming-National Park Service. \$5000
- 2017 **Tronstad, L.M.**, G. Jones, M. Andersen and G. Beauvias. Modeling and mapping the distribution of insect prey used by Greater Sage-Grouse during the early brood rearing period. Bureau of Land Management. \$94,000
- 2017 Handley, J. and **L.M. Tronstad**. Pollination and monitoring of Desert Yellowhead (*Yermo xanthocephalus*). Bureau of Land Management. \$56,000
- 2017 Handley, J., **L.M. Tronstad** and M. Andersen. Pollination and status of Absaroka Range Beardtongue (*Penstemon absarokensis*). Bureau of Land Management. \$59,000
- 2017 Handley, J. and **L.M. Tronstad**. Pollination and status of Barneby's Clover (*Trifolium barnebyi*). Bureau of Land Management. \$54,000
- 2017 Heidel, B., I. Abernethy, **L.M. Tronstad**, and Z. Wallace. Biodiversity inventory of Oregon Buttes and Whitehorse Creek Wilderness Study Areas. National Landscape Conservation System. \$25,000

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- 2017 **Tronstad, L.M.** and M. Dillon. Continuing investigations of the current status of the declining Western Bumble Bee, *Bombus occidentalis*, in Wyoming. Bureau of Land Management. \$122,000
- 2016 Washkoviak, L., T. Tibbets, G. Jones and **L.M. Tronstad**. Development of a Wyoming wetland monitoring and assessment method: addressing the challenges of highly managed basins and climate change. US Environmental Protection Agency. \$224,107
- 2016 **Tronstad, L.M.**, S. Hotaling, J.J. Giersch and G. Beauvais. Genetic sequencing and species identity of *Zapada* stoneflies from the Teton Mountains, Wyoming. Wyoming Governor's Office. \$11,000
- 2016 **Tronstad, L.M.** Monitoring of aquatic invertebrates at Agate Fossil Beds National Monument. National Park Service. \$54,050
- 2016 **Tronstad, L.M.**, M.E. Dillon and B. Marsicek. Wyoming Native Bee Guide. Forest Service (\$5300) and BLM (\$7500).
- 2016 **Tronstad, L.M.** Wind Farms and Pollinators. Bureau of Land Management. \$15,000
- 2016 **Tronstad, L.M.**, C. Bell* and M.E. Dillon. Investigating the current status of the declining Western Bumble Bee, *Bombus occidentalis*, in Wyoming. Bureau of Land Management and Wyoming Landscape Conservation Initiative (\$112,000), Biodiversity Institute (\$5000), U.S. Forest Service (\$5700) and Wyoming NASA (\$4680)
- 2016 **Tronstad, L.M.** and O.J. Wilmot. Native freshwater mussel follow-up and eDNA investigations: using new techniques to search for Plain Pocketbook and Giant Floater. Wyoming Game and Fish Department, State Wildlife Grant Program. \$225,339
- 2016 **Tronstad, L.M.** and O.J. Wilmot. Native freshwater mussel follow-up investigations: filling survey gaps and exploring newly discovered populations. Wyoming Game and Fish Department, State Wildlife Grant Program. \$77,574
- 2016 **Tronstad, L.M.** and T.M. Koel. Investigating the food web dynamics in Yellowstone Lake 30 years after the invasion of lake trout. National Park Service. \$63,962
- 2016 **Tronstad, L.M.**, J.J. Giersch, S. Hotaling, L. Zeglin and D.S. Finn. A unique 'icy seep' aquatic habitat in the high Tetons: potential refuge for biological assemblages imperiled by climate change. University of Wyoming-National Park Service. \$5000
- 2016 Estes-Zumpf, W.A. and **Tronstad, L.M.** Understanding factors influencing amphibian distributions in Grand Teton National Park and western Wyoming. University of Wyoming-National Park Service. \$5000
- 2016 **L.M. Tronstad**. Monitoring aquatic invertebrates at Agate Fossil Beds National Monument. National Park Service. \$8754
- 2015 **Tronstad, L.M.**, G.P. Jones, M.D. Andersen and G.P. Beauvais. Modeling and mapping the distribution of insect prey used by Greater Sage-Grouse during the early brood rearing period. Wyoming Community Foundation\Wyoming Landscape Conservation Initiative. \$12,691
- 2015 **Tronstad, L.M.** Monitoring aquatic resources at Badlands National Park. National Park Service. \$15,000
- 2015 Barber, B.R. and **L.M. Tronstad**. Girl Scouts in Science: Discovering Wyoming Water. Wyoming EPSCoR. \$34,232
- 2015 Dority, D.* working with **L.M. Tronstad** and M.E. Dillon. Effects of wind turbines on ecological cascades. National Science Foundation, Graduate Research Fellowship Proposal. \$138,000
- 2015 **L.M. Tronstad**, J.J. Giersch, S. Hotaling, D.S. Finn, and Andersen, M.A. Assessing alpine aquatic invertebrate assemblages in Grand Teton National Park, Wyoming. Teton Conservation District. \$5,154
- 2015 Andersen, M.A., J.J. Giersch, S. Hotaling, D.S. Finn, and **L.M. Tronstad**. Assessing alpine aquatic invertebrate assemblages in Grand Teton National Park, Wyoming. University of Wyoming-National Park Service. \$5000

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- 2015 **Tronstad, L.M.** and M.A. Andersen. Aquatic snails of Wyoming. Wyoming Game and Fish Department. \$103,858
- 2015 Estes-Zumpf, W.A., **L.M. Tronstad**, and C. Snoberger. Understanding factors influencing amphibian distributions in western Wyoming. Wyoming Game and Fish Department. \$162,736
- 2014 Estes-Zumpf, W.A. and **L.M. Tronstad**. Designing standardized survey and monitoring for amphibians and reptiles on BLM lands in Wyoming. Bureau of Land Management. \$55,000
- 2014 **L.M. Tronstad**, Abernethy, I.M., W.A. Estes-Zumpf, B. Heidel, and D.A. Keinath. Inventory of sensitive species in the North Fork of the Powder River Wilderness Study Area, Wyoming. Buffalo Field Office of the Wyoming Bureau of Land Management. \$25,000
- 2014 Abernethy, I.M., W.A. Estes-Zumpf, **L.M. Tronstad**, B. Heidel, and D.A. Keinath. Inventory of sensitive species in the Fortification Creek Wilderness Study Area, Wyoming. National Landscape Conservation System Research and Science Program. \$25,000
- 2013 Estes-Zumpf, W.A., **L.M. Tronstad**, I.M. Abernethy, and D.A. Keinath. Inventory of sensitive species in the Gardner Mountain Wilderness Study Area, Wyoming. National Landscape Conservation System Research and Science Program. \$23,982
- 2013 Ford, M.A.* and **L.M. Tronstad**. Assessing the impacts of mosquito control on non-target invertebrates in Spring Creek, Wyoming. Biodiversity Institute, University of Wyoming. \$5000 and Laramie Rivers Conservation District. \$755
- 2013 Beauvais, G.P., **L.M. Tronstad**, J.M. Serb, and K.J. Roe. Describing the mountain snails (*Oreohelix* sp.) of Grand Teton National Park, Wyoming. University of Wyoming-National Park Service. \$5000
- 2013 **L.M. Tronstad**. Survey of native mussels in the Belle Fourche River at Devils Tower National Monument and in the Laramie River at Fort Laramie National Historic Site. National Park Service. \$10,000
- 2013 **L.M. Tronstad**. Interpretive presentation about invertebrate resources at Devils Tower National Monument. National Park Service. \$8,000
- 2012 **L.M. Tronstad**. Macroinvertebrates at Agate Fossil Beds National Monument. National Park Service. \$13,000
- 2012 **L.M. Tronstad**. Invertebrates inhabiting dune ponds in the Killpecker Dunes, Wyoming. Bureau of Land Management. \$6,460
- 2011 **L.M. Tronstad**, M.E. Dillon, and A. Pilmanis. Baseline research for long-term effects of wind farms on pollinators. Bureau of Land Management. \$169,000
- 2011 **L.M. Tronstad**. Assessing climate change using aquatic invertebrate assemblages in high-elevation lakes and streams in Grand Teton National Park. National Park Service. \$30,000
- 2011 **L.M. Tronstad**. Macroinvertebrates at Agate Fossil Beds National Monument. National Park Service. \$24,151
- 2010 **L.M. Tronstad**. Monitoring macroinvertebrate communities in the Little Missouri River and Knife River. National Park Service. \$22,807
- 2010 **L.M. Tronstad**. The land snails of Mount Rushmore National Memorial prior to forest thinning and chipping. National Park Service. \$14,672
- 2010 **L.M. Tronstad**, R.O. Hall, and T.M. Koel. Comparing stream invertebrate assemblages before and after wildlife in Yellowstone National Park. University of Wyoming-National Park Service and Yellowstone National Park. \$10,000
- 2010 **L.M. Tronstad**. The land snails of Devils Tower National Monument. Rocky Mountain Cooperative Ecosystem Studies Unit. \$6,000
- 2010 **L.M. Tronstad** and W.A. Estes-Zumpf. Is the Muddy Creek food web affected by coalbed natural gas inputs? Water Research Program and USGS. \$55,136

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- 2009 **L.M. Tronstad.** Evaluating monitoring protocols for macroinvertebrates in the river systems of the Northern Great Plains. National Park Service. \$35,545
- 2009 **L.M. Tronstad** and H.R. Griscom. Assessment of biological and physical relationships of spring and seep ecosystems across a gradient of human impacts. Devils Tower National Monument. \$18,566
- 2009 **L.M. Tronstad.** Survey of land snails of special concern in the Black Hills National Forest. Black Hills National Forest. \$26,911
- 2009 W.A. Estes-Zumpf, D.A. Keinath, and **L.M. Tronstad.** Shoshone National Forest Service. Shoshone National Forest amphibian and invertebrate surveys. \$6,000
- 2008 A.C. Krist, **L.M. Tronstad**, and T.M. Koel. The effects of invasive lake trout on zooplankton of Yellowstone Lake: release from size-selective predation or rapid evolution? University of Wyoming-National Park Service. \$5,000
- 2006 **L.M. Tronstad.** University of Wyoming Graduate School Student Travel Support. Predicting changes in zooplankton production and nitrogen cycling in Yellowstone Lake due to declining Yellowstone cutthroat trout. \$250
- 2005 **L.M. Tronstad** and R.O. Hall. National Fish and Wildlife Foundation and Jackson Hole One Fly Capital Foundation Conservation Partnership. Decline of Yellowstone cutthroat trout inhibits their recovery through loss of nutrients. \$31,117
- 2005 **L.M. Tronstad** and R.O. Hall. University of Wyoming-National Park Service Grant. Alterations in Yellowstone Lake nitrogen cycling due to introduced lake trout and subsequent decline of Yellowstone cutthroat trout. \$5,000

PUBLICATIONS

In Review or Revision

* mentored student

- Milbrath, M.* , S. Poratti*, A. Hollander* and **L.M. Tronstad.** *In review.* The size and age structure of California floater (*Anodonta californiensis*) and Western pearlshell (*Margaritifera falcata*): a new method of aging thin mussel shells. *Malacologia*
- Weschler, M.* , B. Martin* and **L.M. Tronstad.** *In review.* Behavior. Insect pollinators alter flower-handling time and other behaviors based on proximity to wind turbines. *Journal of Pollinator Ecology.*
- Glassic, H.C., **L.M. Tronstad**, D.R. Lujan*, M.A. Briggs, C.S. Guy, L.K. Albertson and T.M. Koel. *In review.* Suppressing an invasive species using novel methods: isotopic analysis revealed decomposing fish carcasses minimally altered prey sources. *Journal of Fish and Wildlife Management.*
- Tetraeault, T., K. Aho, J.B. Grinath, A. Legg, C. Bell* and **L.M. Tronstad.** *In review.* Changes in a bumblebee alpine pollinator network over 40 years. *Ecological Entomology.*
- Tronstad, L.M.,** A. Vaudo, M. Crawford* and J. Handley. *In revision.* Rare plants have differing roles in sagebrush steppe ecosystems. *Oikos.*
- Poratti, S.* and **L.M. Tronstad.** *In revision.* Freezing changes the values of turbidity. *Wetlands.*
- Crawford, M.* , C. Bell*, M.E. Dillon and **L.M. Tronstad.** *In review.* Flower bloom characteristics alter the abundance and richness of bees captured in passive traps. *Agricultural and Forest Entomology.*
- Tronstad, L.M.,** K. Cook*, C. Detjens, M. Crawford*, A. Holley*, D. MacDonald and T.M. Koel. *In revision.* Plankton response to invasive fish suppression in Yellowstone Lake. *Freshwater Biology.*
- L.M. Tronstad,** Crawford, M.* , Thalen-Wade, L.* , D. Dority*, A. Lester*, M. Weschler* and M.E. Dillon. *In revision.* Turbines may induce self-pollination in plants via wind farm noise. *Nordic Journal of Botany.*

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Peer Reviewed

60. **Tronstad, L.M.**, C. Bell, K. Cook and M.E. Dillon. 2025. Using species distribution models to assess the status of the declining Western Bumble Bee (Hymenoptera: Apidae: *Bombus occidentalis*). *Environments* 12:2 <https://doi.org/10.3390/environments12010002>
59. Sadler, I.G.*, **L.M. Tronstad**, C. Fisher*, R.O. Hall, T.M. Koel. 2024. Yellowstone wildfires increased stream ion concentrations and export: nitrogen's response varied by form. *Nitrogen* 5:1181-1195 <https://doi.org/10.3390/nitrogen5040075>
58. **Tronstad, L.M.**, A. Lindsteadt* and S. Hotaling. 2024. Integrating historical with contemporary data for Narrow-foot Hygrotus Diving beetle (*Hygrotus diversipes*): perspectives studying invertebrates of management and conservation concern. *Western North American Naturalist* 84:447-477
57. Weschler, M.* and **L.M. Tronstad**. 2024. Wind energy and insects: reviewing the state of knowledge and identifying potential interactions. *PeerJ* 12:e18153 <https://doi.org/10.7717/peerj.18153>
56. Jorgenson, K.*, S. Hotaling, **L.M. Tronstad**, D.S. Finn, and S.M. Collins. 2024. Trophic flexibility and hydrology structure alpine stream food webs: implications for a fading cryosphere. *EcoSphere* 15:e70039 <https://doi.org/10.1002/ecs2.70039>
55. **Tronstad, L.M.** and B.P. Tronstad. 2024. Assessing methods to monitor aquatic invertebrates in a large river: comparing rock baskets and Hess samplers in the Snake River, Wyoming, USA. *Hydrobiology* 3:209–223. <https://doi.org/10.3390/hydrobiology3030014>
54. Glassic, H.C. *, J. Junker, C.S. Guy, D.R. Lujan*, **L.M. Tronstad**, M.A. Briggs, L.K. Albertson, T. Brenden, T. Walsworth and T.M. Koel. 2024. An invasive predator substantially alters energy flux without changing food web functional state or stability. *Aquatic Conservation: Marine and Freshwater Ecosystems* 34:e4240. <https://doi.org/10.1002/aqc.4240>
53. Handley, J. and **L.M. Tronstad**. 2024. Low seed viability of a rare aster. *Journal of Pollination Ecology* 36:249-261. [https://doi.org/10.26786/1920-7603\(2024\)771](https://doi.org/10.26786/1920-7603(2024)771)
52. **Tronstad, L.M.**, I.A. Oleksy, D.L. Preston, G. Gianniny, K. Cook*, A. Holley*, P. Farnes, T.M. Koel and S. Hotaling. 2024. Despite a century of warming, increased snowfall has buffered the ice phenology of North America's largest high-elevation lake against climate change. *Environmental Research Letters* 19:054028. <https://doi.org/10.1088/1748-9326/ad3bd1>
51. Ayayee, P.A, G. Custer, **L.M. Tronstad** and L. van Diepen. 2024. Unveiling salinity-driven shifts in microbial community composition across compartments of naturally saline inland streams. *Hydrobiologia*. <https://doi.org/10.1007/s10750-024-05479-5>
50. **Tronstad, L.M.**, Lujan, D.R.*, M.A. Briggs, L.K. Albertson, H.C. Glassic*, C.S. Guy and T.M. Koel. 2024. Novel technique for suppressing an invasive apex predator minimally alters nitrogen dynamics in Yellowstone Lake, Wyoming. *Hydrobiologia*. <https://doi.org/10.1007/s10750-023-05450-w>
49. Short, Z.* and **L.M. Tronstad**. 2024. Monarchs reproduce in eastern Wyoming and were not parasitized by *Ophryocystis elektroscirrha*. *Prairie Naturalist*. 56:1-9. <https://www.eaglehill.us/prnaonline/access-pages/PRNA-56/028-Short-accesspage.shtml>
48. Glassic, H.C. *, D. Chagaris, C.S. Guy, **L.M. Tronstad**, D.R. Lujan*, M.A. Briggs, L.K. Albertson, T. Brenden, T. Walsworth and T.M. Koel. 2023. Yellowstone Cutthroat Trout recovery in Yellowstone Lake: complex interactions among invasive species suppression, disease, and climate change. *Fisheries*. <https://doi.org/10.1002/fsh.10998>
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- Crawford, M.S. and **L.M. Tronstad**. 2020. The status and distribution of Regal Fritillary (*Speyeria idalia*) and Monarch (*Danaus plexippus*) butterflies in eastern Wyoming. Report prepared by the Wyoming Natural Diversity Database for the Wyoming Governor's Office.
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- Tronstad, L.M.** 2020. Aquatic invertebrate monitoring at Agate Fossil Beds National Monument: 2017 annual report. Report prepared by the Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming for the Northern Great Plains Inventory and Monitoring Program, National Park Service, Rapid City, South Dakota.
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- Tronstad, L.M.**, J.C. Bish, R.O. Hall, and T.M. Koel. 2013. Comparing stream invertebrate assemblages before and after wildfire in Yellowstone National Park. University of Wyoming-National Park Service.
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- Tronstad, L.M.**, J.C. Bish, R.O. Hall, and T.M. Koel. 2012. Comparing stream invertebrate assemblages before and after wildfire in Yellowstone National Park. Report prepared by the Wyoming Natural Diversity Database, Laramie, Wyoming for University of Wyoming-National Park Service, Laramie, Wyoming.
- Tronstad, L.M.** and H. Griscom. 2012. Assessment of biological and physical relationships of spring and seep ecosystems across a gradient of human impacts. Report prepared for the USDI National Park Service, Devils Tower National Monument by the Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming.
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- Tronstad, L.M.,** J.C. Bish, R.O. Hall, and T.M. Koel. 2011. Comparing stream invertebrate assemblages before and after wildfire in Yellowstone National Park. Report prepared by the Wyoming Natural Diversity Database, Laramie, Wyoming for Yellowstone National Park, Mammoth, Wyoming.
- Tronstad, L.M.** 2011. Comparing aquatic invertebrate monitoring protocols in the Niobrara River at Agate Fossil Beds National Monument. Report prepared by the Wyoming Natural Diversity Database, University of Wyoming, Laramie, Wyoming for the Inventory and Monitoring Program, National Park Service, Rapid City, South Dakota.
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- Tronstad, L.M.,** J.C. Bish, R.O. Hall, and T.M. Koel. 2011. Comparing stream invertebrate assemblages before and after wildfire in Yellowstone National Park. Report prepared by the Wyoming Natural Diversity Database, Laramie, Wyoming for the University of Wyoming-National Park Service Research Center, Laramie, Wyoming.
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- Tronstad, L.M.** 2011. *Oreochelix* land snails of Heart Mountain Ranch and Tensleep Preserve, Wyoming. Report prepared by the Wyoming Natural Diversity Database, Laramie, Wyoming for The Nature Conservancy, Cody, Wyoming.
- Tronstad, L.M.** and M.D. Andersen. 2011. Monitoring rare land snails in the Black Hills National Forest. Report prepared by the Wyoming Natural Diversity Database, Laramie, Wyoming for the Black Hills National Forest Service, Custer, South Dakota.
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- L.M. Tronstad** and R.O. Hall. 2008. Alterations in Yellowstone Lake nitrogen cycling due to introduced lake trout and subsequent decline of Yellowstone cutthroat trout. Prepared for the University of Wyoming-National Park Service.
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- Crait, J.R., **L.M. Tronstad**, M. Ben-David and R.O. Hall. 2004. Influence of biopollution on ecosystem processes: the impact of introduced lake trout on streams, predators, and forests in Yellowstone National Park. Progress report. Environmental Protection Agency-STAR.
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PRESENTATIONS

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*mentored student

- 2025 Cook, K. and **Tronstad, L.M.** Pond attributes associated with egg mass and tadpole density of an isolated amphibian population. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Sadler, I., **Tronstad, L.M.**, A. Walters and T.M. Koel. Investigating the effects of lake trout suppression on water quality in Yellowstone Lake. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Lindsteadt, L. and **Tronstad, L.M.** . Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Milbrath, M. and **Tronstad, L.M.** Evaluating growth and dietary variation in response to alinity in Northern Plains Killifish (*Fundulus kansae*) and Fathead Minnows (*Pimephales promelas*) in Wyoming. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Hollander, A and **Tronstad, L.M.** Western Pearlshell mussels in Grand Teton National Park: reassessing the conservation status of a native mussel. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Hollander, A and **Tronstad, L.M.** Pseudotime machine: using an archaeological bivalve record to inform the management of modern freshwater mussels. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 **Tronstad, L.M.**, D. Finn and S. Hotaling. Ten years of monitoring alpine streams in the Teton Range, Wyoming: changes depend on hydrologic source. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 **Tronstad, L.M.**, K. Cook, D. MacDonald, I. Sadler and T.M. Koel. Monitoring the food web in Yellowstone Lake to inform efforts of suppressing invasive lake trout. Society of Freshwater Science, San Juan, Puerto Rico.
- 2025 Poratii, S.*, **L.M. Tronstad**, P. Cavalli, K. Gelwicks and S. Siddons. Investigating the environmental and biological pressures on two native Wyoming freshwater mussels: California floater and Western pearlshell. Freshwater Mollusk Conservation Society. Ann Arbor, Michigan.
- 2025 Hollander, A and **Tronstad, L.M.** Insights from the past: using an archaeological bivalve record to inform the management of modern freshwater mussels. Freshwater Mollusk Conservation Society. Ann Arbor, Michigan.
- 2025 Cook, K., B.P. Tronstad and **L.M. Tronstad**. Butterflies are responding to multiple habitat scales in Wyoming. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Hollander, A*. and **L.M. Tronstad**. Assessing the conservation status of native Western pearlshell mussels in Grand Teton National Park. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 **Tronstad, L.M.**, C. Bell* and B.P. Tronstad. Refining methods to collect bees in Wyoming: height, distance and duration of sampling with pan traps and vane traps. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Storey, A.M.*, B.P. Tronstad, L. van Diepen and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Bensch, W.* and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Crawford, N.* and **L.M. Tronstad**. Balancing pollinator conservation with the management of invasive plants in the Northern Great Plains. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Weschler, M.*, B. Martin* and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.

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- 2025 Poratti, S.*, and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Lindsteadt, A.* and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Milbrath, M.*, A. Lindsteadt* and B. Evaluating growth and dietary variation in response to salinity in Northern Plains Killifish (*Fundulus kansae*) and Fathead Minnows (*Pimephales promelas*) in Wyoming waters. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Freeman, B.*, S. Poratti* and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Sadler, I.*, T. Koel and **L.M. Tronstad**. The Wildlife Society-Wyoming and Colorado Chapters, Fort Collins, Colorado.
- 2025 Poratii, S.*, **L.M. Tronstad**, P. Cavalli, K. Gelwicks and S. Siddons. Investigating the environmental and biological pressures on two native Wyoming freshwater mussels: California floater and Western pearlshell. American Fisheries Society Utah Chapter, Logan, Utah.
- 2024 Weschler, M.*, **L.M. Tronstad**. Insect interactions with wind turbines: the state of knowledge and future directions. Entomological Society of America, Phoenix, Arizona.
- 2024 Lindsteadt, A.* and **L.M. Tronstad**. The fundamental and realized niches of a rare aquatic beetle in an extreme environment. Entomological Society of America, Phoenix, Arizona.
- 2024 Crawford, N.* and **L.M. Tronstad**. The effects of management actions on pollinator population dynamics within the Northern Great Plains National Parks. Entomological Society of America, Phoenix, Arizona.
- 2024 **Tronstad, L.M.**, M. Weschler*, A.M. Storey*, J. Handley and B.P. Tronstad. Wind energy facilities alter seed production and pollinator assemblages along a 28 km gradient. Entomological Society of America, Phoenix, Arizona.
- 2024 Tronstad, B.P., **L.M. Tronstad**, F. Maslan, M. Wehtje, J. Fife, E. Hagerott, D. Jackson, C. Yobp, K. Engdahl and T. Tronstad. Three methods used to survey bees in historic orchards at Capitol Reef National Park, Utah. Entomological Society of American, Phoenix, Arizona.
- 2024 Storey, A.M.*, **L.M. Tronstad**, and L. van Diepen. 2024. Factors related to bumblebee parasitism in urban and wild Wyoming. The Entomological Society of America Annual Meeting, Phoenix, Arizona.
- 2024 Weschler, M.*, **Tronstad, L.M.**, A.M. Storey*, J. Handley and B.P. Tronstad. Proximity to wind turbines influenced insect pollinator assemblages and native plant pollination. Wind Wildlife Research, Corpus Christi, Texas.
- 2024 Weschler, M.* and **L.M. Tronstad**. Wind energy and insects: current and future investigations. USFWS Migratory Birds & Science Applications Program, Virtual Meeting. Presentation. 2024.
- 2024 Hotaling, S., **L.M. Tronstad** and D. Finn. 2024. 10 years of alpine stream monitoring in the Teton Range: Are rock glaciers a critical, overlooked component of climate resiliency for mountain aquatic ecosystems? Biennial Scientific Conference on the Greater Yellowstone Ecosystem. Big Sky, Montana.
- 2024 **Tronstad, L.M.** and S. Hotaling. The first 10 years of the Teton Alpine Stream Research project: what we've learned and where we're going. Hank Harlow Seminar Series, AMK Research Station, Grand Teton National Park.
- 2024 Poratti, S.* and **L.M. Tronstad**. Mussels in the Bear River. Public presentation to community. Cokeville Public Library, Cokeville, Wyoming.
- 2024 Glassic, H.C., **L.M. Tronstad**, D. MacDonald, I.G. Sadler*, C.S. Guy and T.M. Koel. Furthering the conservation of Yellowstone cutthroat trout by investigating the effect of

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carcass analog pellets on the food web of Yellowstone Lake. Yellowstone Lake Science Panel Meeting, Bozeman, Montana.

- 2024 Sadler, I.G.*, **L.M. Tronstad**, A. Walter and T.M. Koel. Understanding the effects of Lake Trout suppression techniques on lake-wide water quality, nutrient dynamics, and metabolism of Yellowstone Lake. Yellowstone Lake Science Panel Meeting, Bozeman, Montana.
- 2024 Storey, A.M.*, **L.M. Tronstad** and L.T.A. van Diepen. Unraveling bee declines: qPCR analysis of parasite prevalence in Intermountain West Bumblebees. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 Hollander, A. *, **L.M. Tronstad** and T. Collier. Comparing modern freshwater mussels to historic populations through an archaeological collection. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 Cook, K., B.P. Tronstad and **L.M. Tronstad**. Habitat characteristics associated with butterflies in western Wyoming. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 Lindsteadt, A.* and **L.M. Tronstad**. Walking the plank in Wyoming's seas: the physiology and habitat selection of a rare beetle in extreme conditions. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 **Tronstad, L.M.**, M. Weschler*, A.M. Storey*, J. Handley and B.P. Tronstad. Wind energy facilities alter seed production and pollinator assemblages along a 28 km gradient. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 Poratti, S.K.*, **L.M. Tronstad**, S. Siddons, K. Gelwicks, P. Cavalli and J. Walrath. An upstream battle: potential impacts and constraints on native mussels in the Bear River, Wyoming. The Wildlife Society Wyoming Chapter, Cody, Wyoming.
- 2024 Milbrath, M.*, S.K. Poratti* and **L.M. Tronstad**. Investigating the size structure, age structure, and distribution of the native California floater and Western pearlshell mussels in the Bear River watershed. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 Poratti, S.K.*, **L.M. Tronstad**, S. Siddons, K. Gelwicks, P. Cavalli and J. Walrath. Investigating the status of two native Wyoming freshwater mussels in the Bear River watershed. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 **Tronstad, L.M.** and B.P. Tronstad. Assessing methods to monitor aquatic invertebrates in large rivers: comparing rock baskets and Hess samplers in the Snake River. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 Hollander, A. *, **L.M. Tronstad** and T. Collier. Comparing modern freshwater mussels to historic populations through an archaeological collection. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 Lindsteadt, A.* and **L.M. Tronstad**. Walking the plank in Wyoming's seas: The physiology and habitat selection of a rare beetle in extreme conditions. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 Sadler, I.*, **L.M. Tronstad**, A. Walters, and T. Koel. 2024. Identifying baseline patterns in nutrient concentrations and algal biomass in Yellowstone Lake. Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 **Tronstad, L.M.** Practical methods to collect eDNA samples and interpret results: experience from tailgates, canoes and backpacking. eDNA workshop at the Colorado-Wyoming American Fisheries Society, Laramie, Wyoming.
- 2024 Munroe, J., M. Morriss, G. Carling, D. Finn, **L.M. Tronstad** and S. Hotaling. Characterizing the environmental and geochemical landscape of rock glacier outflows in the Intermountain West, USA. Geosciences Union, Vienna, Austria.
- 2024 Weschler, M.* and **L.M. Tronstad**. Wind energy and Insects: reviewing the state of knowledge and identifying potential interactions. Great Plain Cooperative Ecosystem Studies Unit annual meeting. Lincoln, Nebraska.

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- 2023 Lindsteadt, A. * and **L.M Tronstad**. A unique aquatic beetle that lives in harsh streams. Restoration meeting for the Petroleum Association of Wyoming, Casper, Wyoming.
- 2023 **Tronstad, L.M.** Petitioned pollinators in Wyoming: filling data gaps and increasing knowledge. Restoration meeting for the Petroleum Association of Wyoming, Casper, Wyoming.
- 2023 **Tronstad, L.M.** Monitoring headwater streams in the Teton Range as the climate warms: implications for rare animals. Rocky Mountain Cooperative Ecosystems Study Unit Meeting, Moose, Wyoming.
- 2023 Lindsteadt, A. * and **L.M Tronstad**. Why so salty? How a rare and endemic animal lives in harsh environments. Western Division of the American Fisheries Society, Boise, Idaho.
- 2023 Sadler, I. *, **L.M. Tronstad**, A. Walters and T.M. Koel. Investigating nutrient responses to lake trout suppression methods in Yellowstone Lake. Conservation Actions to Restore Yellowstone Lake, Bozeman, Montana.
- 2023 **L.M. Tronstad**, B.P. Tronstad, K. Cook* and T.M. Koel. Benthic invertebrate response to lake trout suppression. Conservation Actions to Restore Yellowstone Lake, Bozeman, Montana.
- 2023 Glassic, H.C.*, **L.M. Tronstad**, D.R. Lujan*, M.A. Briggs, L.K. Albertson, C.S. Guy, and T.M. Koel. Food web dynamics minimally altered by fish carcass deposition to suppress invasive lake trout. Conservation Actions to Restore Yellowstone Lake, Bozeman, Montana.
- 2023 Hotaling, S, **L.M. Tronstad** and D.S. Finn. How is a fading cryosphere impacting high-mountain streams? Insights from the first nine years of the Teton alpine stream project. ASLO, Palma de Mallorca, Spain.
- 2023 Brighenti, S, C. Millar, N. Colombo, L. Carturan, V. Lencioni, A. Scotti, M. Tolotti, M.C. Bruno, A. Janicke, A. Fischer, A. Gschwentner, M. Hayashi, A. Reato, S. Hotaling, **L.M. Tronstad**, D. Finn, D. Herbst, and F. Comiti. Springs from cold rocky landforms: icy seeps in warming mountains. European Conference on Permafrost, Puigcerda, Spain.
- 2023 Storey, A.M. *, **L.M Tronstad**, A.M. Dougherty and L.T.A. van Diepen. Parasites of Wyoming's Native Bumble Bees: A Smoking Gun? Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Martin, B. *, M. Weschler*, A.M. Storey*, **L.M Tronstad**. Does pollinator visitation differ between operating and proposed wind facilities? Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Sadler, I. *, **L.M Tronstad**, A. Walters and T.M. Koel. Potential nutrient responses to lake trout (*Salvelinus namaycush*) suppression methods in Yellowstone Lake. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Weschler, M.* and **L.M Tronstad**. Evidence for insect interactions with wind energy facilities and their ecological implication. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Poratti, S.*, **L.M Tronstad**, S. Siddens, K. Gelwicks, P. Cavalli and J. Walrath. Evaluating California Floater and Western Pearlshell distribution and reproduction in the Bear River Watershed. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Short, Z. * and **L.M Tronstad**. The presence of Monarchs and parasites in eastern Wyoming. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 **L.M Tronstad**, A.M Storey*, Z. Short*, C. Bell* and B. Tronstad. What's the buzz: understanding pollinator declines in Wyoming. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 Lindsteadt, A.* and **L.M Tronstad**. Is being salty wearing you down? Shifting paradigms on the distributions of rare and endemic animals. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.

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- 2023 Cook, K.*, **L.M. Tronstad** and A. Chalfoun. Multi-scale habitat selection of an isolated wood frog (*L. sylvaticus*) population in the Snowy Range. Wyoming Chapter of The Wildlife Society. Laramie, Wyoming.
- 2023 **Tronstad, L.M.**, H.C. Glassic*, D.R. Lujan*, M.A. Briggs, L.K. Albertson, C.S. Guy and T.M. Koel. 2023. Adding lake trout carcasses to spawning sites in Yellowstone Lake minimally altered food web dynamics: insights into invasive species management using stable isotopes. Colorado/Wyoming American Fisheries Society meeting, Fort Collins, Colorado.
- 2023 Lindsteadt, A.* and **L.M. Tronstad**. How a rare and endemic animal lives in an extreme environment. Colorado/Wyoming American Fisheries Society meeting, Fort Collins, Colorado. *Awarded best student oral presentation.
- 2023 Cook, K.*, **L.M. Tronstad** and A. Chalfoun. Habitat selection of the wood frog (*Lithobates sylvaticus*) in the Snowy Mountains of Wyoming. Colorado/Wyoming American Fisheries Society. Fort Collins, Colorado.
- 2023 Sadler, I., **L.M. Tronstad**, A. Walters and T. Koel. Do methods to suppress invasive lake trout alter Yellowstone Lake nutrient dynamics? Colorado/Wyoming American Fisheries Society. Fort Collins, Colorado.
- 2023 Poratti, S.K., **L.M. Tronstad**, S. Siddons and K. Gelwicks. Investigating mussel distribution and reproduction in the Bear River Watershed. Colorado/Wyoming American Fisheries Society. Fort Collins, Colorado.
- 2023 Glassic, H.C.*, **L.M. Tronstad**, D.R. Lujan, M.A. Briggs, L.K. Albertson, C.S. Guy, and T.M. Koel. Fish carcass deposition to suppress invasive lake trout minimally altered food-web dynamics. Montana American Fisheries Society. Butte, Montana.
- 2023 Cook, K.*, **L.M. Tronstad** and A. Chalfoun. Habitat selection of the wood frog (*Lithobates sylvaticus*) in the Snowy Mountains of Wyoming. Colorado Partners in Amphibian and Reptile Conservation, Denver, Colorado.
- 2022 Price, T.L.*, **L.M. Tronstad**, D.S. Finn, S. Hotaling and T.L. Hamilton. Microbial diversity differs across alpine streams in a glaciated mountain range of Northwestern WY, United States. Midwest Geobiology.
- 2022 Glassic, H.C.*, D. Chagaris, C.S. Guy, M.A. Briggs, L.K. Albertson, **L.M. Tronstad**, T.O. Brenden, D.R. Lujan, T. Walsworth and T.M. Koel. Realistic Native Fish Conservation Benchmarks: Accounting for Lake Trout Predation, Climate, and Disease. National American Fisheries Society. Spokane, Washington.
- 2022 Handley, J. and **L.M. Tronstad**. Low seed production and declining populations of a Threatened plant. Botany.
- 2022 Handley, J. and **L.M. Tronstad**. A Threatened plant is limited by low seed production and declining populations. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Lindsteadt, A.* and **L.M. Tronstad**. Needle in a haystack: studying a tiny aquatic beetle in Wyoming's salty, intermittent streams. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 **Tronstad, L.M.**, G.P. Jones, J. Handley and P. Parry. The availability of Sage-grouse prey during brood-rearing varied among years and with vegetation structure. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Weschler, M.* and **L.M. Tronstad**. Insect attraction to wind turbines: current knowledge and future avenues of research. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Bell, C.*, M. Crawford*, Z. Short*, D. Tuthill and **L.M. Tronstad**. Challenges and successes for community scientists gathering pollinator information. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Cook, K.*, **L.M. Tronstad** and A. Chalfoun. Habitat selection of an isolated population of wood frog (*Lithobates sylvaticus*) in Wyoming. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.

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- 2022 Short, Z.*, M. Crawford* and **L.M. Tronstad**. What habitats are butterflies of management concern using in Wyoming? The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Crawford, M.* and **L.M. Tronstad**. Pollination networks for 3 rare plants. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2022 Weld, S., D. Finn, **L.M. Tronstad**, S. Hotaling and B. Bixby. Chemical parameters influence algal communities in alpine streams with different hydrologic sources. Society for Freshwater Science. Grand Rapids, Michigan.
- 2022 Jorgenson, K.*, **L.M. Tronstad**, S. Hotaling, D. Finn and S. Collins. High variability in resource use among alpine stream food webs fed by different hydrologic sources. Society for Freshwater Science. Grand Rapids, Michigan.
- 2022 Shah, A., **L.M. Tronstad**, S. Hotaling and D. Finn. How vulnerable are high-elevation stoneflies to climate change? It depends on which traits you measure. Society for Freshwater Science. Grand Rapids, Michigan.
- 2022 **Tronstad, L.M.**, K. Cook*, C. Detjens, M. Crawford*, A. Holley*, D. MacDonald and T.M. Koel. Monitoring plankton to assess the control of invasive lake trout. Colorado-Wyoming American Fisheries Society, virtual.
- 2022 K. Cook*, **Tronstad, L.M.**, and A. Chalfoun. Pond attributes associated with breeding presence of an isolated population of the wood frog (*Lythobates sylvaticus*). Colorado-Wyoming American Fisheries Society, virtual.
- 2022 Lindsteadt, A*. and **Tronstad, L.M.** How a rare aquatic beetle makes a living in salty, ephemeral streams in central Wyoming. Colorado-Wyoming American Fisheries Society, virtual.
- 2021 **Tronstad, L.M.** Wyoming's Pollinators. What's all the buzz: Native bees and pollinators. NatureServe Topic Call.
- 2021 Handley, J, M. Crawford* and **L.M. Tronstad**. Pollination mechanisms of three rare plant species. Botany Conference, Virtual Meeting.
- 2021 Glassic, H.*, C. Guy, D. Lujan*, **L.M. Tronstad**, M. Briggs*, L. Albertson, and T. Koel. Diet plasticity in invasive Lake Trout has implications for native species conservation and invasive species suppression. Western Division American Fisheries Society.
- 2021 Weld, S., B. Bixby, **L.M. Tronstad**, S. Hotaling and D. Finn. Biological Responses to hydrologic sources of alpine streams. Society for Freshwater Science, Virtual Meeting.
- 2021 **L.M. Tronstad**, M. Crawford*, T. Rodgers and S. Siddons. Directing field surveys for California Floater (*Anodonta californiensis/nuttalliana clade*) and Western Pearlshell (*Margaritifera falcata*) using eDNA in the Bear River basin. Freshwater Mollusk Conservation Society Meeting, Virtual Meeting.
- 2021 Cook, K, **L.M. Tronstad** and A. Chalfoun. Habitat selection and quality of an isolated wood frog (*Lithobates sylvaticus*) population. Colorado/Wyoming American Fisheries Society Meeting, Virtual Meeting.
- 2021 **L.M. Tronstad**, M. Crawford*, T. Rodgers and S. Siddons. The distribution of native mussels using environmental DNA. Colorado/Wyoming American Fisheries Society Meeting, Virtual Meeting.
- 2020 Packebush, M.*, C. Bell*, P. Ayayee and **L.M. Tronstad**. Investigating pathogens in Rocky Mountain Bumble Bees (*Bombus*). Entomological Society of America.
- 2020 Packebush, M.*, C. Bell*, P. Ayayee and **L.M. Tronstad**. Investigating pathogens of Bumble Bees (*Bombus*) in the Central Rocky Mountains. Wyoming Research Scholars Program Symposium.
- 2020 DeLong, C.K.* and **L.M. Tronstad**. Investigating pollinators along a gradient of flower diversity: the importance of tall forb communities in the Rocky Mountains. Wyoming Research Scholars Program Symposium.

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- 2020 Handley, J. and **L.M. Tronstad**. Pollination and seed-set of Barneby's clover (*Trifolium barnebyi*). Ecological Society of America, Salt Lake City, Utah.
- 2020 Handley, J. and **L.M. Tronstad**. Pollination and seed-set of Barneby's clover (*Trifolium barnebyi*). Botany Annual Meeting
- 2020 Lujan, D.* , **L.M. Tronstad**, T.M. Koel, M. Briggs, L. Albertson, H. Glassic*, C. Guy. The effects of lake trout suppression methods on lower trophic levels in Yellowstone Lake. Society for Freshwater Science, Madison, Wisconsin.
- 2020 Price, T.* , T.L. Hamilton, S. Hotaling, **L.M. Tronstad**, D.S. Finn, L.H. Zeglin, K.A. Kuehn. Fungal diversity and biomass in glacial stream biofilms in the Teton Range, Wyoming. Society for Freshwater Science, Madison, Wisconsin.
- 2020 Briggs, M.* , L. Albertson, D. Lujan*, **L.M. Tronstad**, H. Glassic*, C. Guy, T. Koel. Effects of Lake Trout carcass treatment on benthic invertebrates in Yellowstone Lake. Society for Freshwater Science, Madison, Wisconsin.
- 2020 Hotaling, S., A.A. Shah, T.J. Cline, J.J. Giersch, K.L. McGowan, **L.M. Tronstad**, D.S. Finn, H.A. Woods, E. Peitzsch, C. Florentine, D. Jacobsen, M. E. Dillon, J.L. Kelley, and C.C. Muhlfeld. Assessing the future of mountain stream biodiversity from genes to communities. Society of Freshwater Science, Madison, Wisconsin.
- 2020 Ayayee, P.A., **L.M. Tronstad**, L.T.A. van Diepen. Characterizing free-living and macroinvertebrate-associated microbiomes in hypersaline freshwater streams in Wyoming. Ecological Society of America.
- 2020 Cook, K.* , **L.M. Tronstad** and A. Chalfoun. Habitat selection of a relict amphibian threatened by disease. Colorado/Wyoming American Fisheries Society Meeting, Laramie, Wyoming.
- 2020 Lujan, D.* and **L.M. Tronstad**. Lower trophic level responses to Lake Trout suppression methods in Yellowstone Lake. Colorado/Wyoming American Fisheries Society Meeting, Laramie, Wyoming.
- 2020 **L.M. Tronstad**, S. Hotaling, D. Finn, A. Shah and M. Dillon. Western Glacier Stonefly (*Zapada glacier*): Wyoming's first invertebrate listed under the Endangered Species Act. Colorado/Wyoming American Fisheries Society Meeting, Laramie, Wyoming.
- 2020 Wallace, Z. and **L.M. Tronstad**. Factors affecting the distribution of amphibians in western Wyoming. Colorado/Wyoming American Fisheries Society Meeting, Laramie, Wyoming.
- 2020 **Tronstad, L.M.** and D.* Lujan. Yellowstone Lake. Invited seminar by the Colorado State University-American Fisheries Society subunit. Fort Collins, Colorado.
- 2020 Cook, K.* , **L.M. Tronstad** and A. Chalfoun. Wood Frog Habitat Selection and Quality in the Bighorn Mountains of Wyoming. Colorado Partners in Amphibian and Reptile Conservation Meeting. Boulder, Colorado.
- 2020 Glassic, H.* , C. Guy, M. Briggs*, L. Albertson, D. Lujan*, **L.M. Tronstad** and T. Koel. Comparative historical feeding ecology of native and nonnative salmonids during the suppression of a nonnative apex predator in Yellowstone Lake, Wyoming. Montana American Fisheries Society. Kalispell, Montana.
- 2020 Briggs, M.* , L. Albertson, H. Glassic*, C. Guy, T. Koel, D. Lujan* and **L.M. Tronstad**. Effects of Lake Trout carcass deposition on benthic invertebrates of Yellowstone Lake. Montana American Fisheries Society. Kalispell, Montana.
- 2019 Handley, J. and **L. Tronstad**. Pollination and seed-set of Barneby's Clover (*Trifolium barnebyi*). The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Dority, D.* , C. Bell*, **L.M. Tronstad** and M. Dillon. Investigating ecological effects of wind turbines on native bee communities in Wyoming. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Bell, C.* , **L.M. Tronstad** and M. Dillon. Evaluating the best monitoring protocols for bees: vane traps, bee cups and netting are not equal. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.

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- 2019 Lester, A.*, M. Crawford* and **L.M. Tronstad**. Thermal and sonic effects of wind turbines: investigating possible impacts on the pollinator community. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Wallace, Z and **L.M. Tronstad**. Factors affecting the distribution of amphibians in western Wyoming. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Green, M*, **L.M. Tronstad** and G. Jones. Effects of a later, colder summer on the food availability of Greater Sage-Grouse chicks. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Crawford, M.*, C. Bell* and **L.M. Tronstad**. How bloom density alters the effectiveness of pollinator traps. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 **Tronstad, L.M.** and M. Crawford*. The status and distribution of Regal Fritillary butterflies in Wyoming. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Cook, K.*, **L.M. Tronstad** and A. Chalfoun. Wood frog habitat selection and quality in the Bighorn Mountains of Wyoming. The Wildlife Society-Wyoming Chapter, Sheridan, Wyoming.
- 2019 Graves, T., W. Janousek, C. Bell*, S. Cannings, J. Heron, R. Hatfield, H. Loffland, J. Koch, L. Richardson, A. Rohde, J. Rykken, C. Sheffield, D. Sikes, J. Strange, **L.M. Tronstad**, A. Nicholas and D. Keinath. Help inform USFWS species status assessment for the Western Bumblebee. Bombuss Conference 2.0, Toronto, Ontario.
- 2019 Handley, J. and **L.M. Tronstad**. Pollination and seed-set of Desert Yellowhead (*Yermo xanthocephalus*). Botany 2019. Tucson, Arizona.
- 2019 Lujan, D.*, **L. Tronstad**, T. Koel, M. Briggs*, L. Albertson, H. Glassic* and C. Guy. Bottom-up effects of Lake Trout Suppression in Yellowstone Lake. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 Tibbets, T., **L.M. Tronstad**, L. Washkoviak and Alexis Lester*. Development of a macroinvertebrate multi-metric index to assess impacts to wetlands in the irrigated floodplains of Wyoming. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 Hamilton, T., T. Price, S. Hotaling, **L.M. Tronstad**, D. Finn and L. Zeglin. Diverse microbial communities associated with ice, biofilms, and sediments in the high Teton Range. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 **Tronstad, L.M.**, Hotaling, D. Finn, J. Giersch, O. Wilmot and L. Zeglin. Icy seeps may act as refugia for alpine stream invertebrates: evidence from the central Rocky Mountains. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 Briggs, M.*, L. Albertson, H. Glassic*, C. Guy, T. Koel, D. Lujan* and **L.M. Tronstad**. Effects of lake trout suppression methods on amphipods in Yellowstone Lake. Society for Freshwater Science. Salt Lake City, Utah.
- 2019 Hotaling, S, A.A. Shah, K.L. McGowan, **L.M. Tronstad**, J.J. Giersch, D.S. Finn, H. A. Woods, M.E. Dillon, and J.L. Kelley. Linking thermal tolerance to gene expression in alpine stoneflies imperiled by climate change. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 Bixby, R., M. Hobbs, D. Finn and **L.M. Tronstad**. Stream source affects algal community structure. Society of Freshwater Science, Salt Lake City, Utah.
- 2019 Wilmot, O.J, **L.M. Tronstad**, S. Siddons and M. Murphy. Using eDNA to investigate native freshwater mussel distribution in eastern Wyoming. Colorado/Wyoming American Fisheries Society Meeting. Fort Collins, Colorado.
- 2019 Lujan, D.*, **L.M. Tronstad**, T. Koel, M. Briggs*, L. Albertson, H. Glassic* and C. Guy. Effects of Lake Trout Suppression Methods on Nutrient Cycling and Lower Trophic Levels in Yellowstone Lake. Colorado/Wyoming American Fisheries Society Meeting. Fort Collins, Colorado. *Best Student Poster Award*
- 2019 Cook, K.*, **L.M. Tronstad** and W. Estes-Zumpf. Do larger and more Daphnia reduce the presence of Chytrid. Colorado/Wyoming American Fisheries Society Meeting. Fort Collins, Colorado.

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- 2019 Cook, K.*, **L.M. Tronstad** and W. Estes-Zumpf. Do larger and more *Daphnia* reduce the presence of Chytrid. Colorado Partners in Amphibian and Retile Conservation Meeting. Boulder, Colorado.
- 2019 **Tronstad, L.M.**, T. Tibbets, L. Washkoviak and A. Lester*. An invertebrate multimetric index for Wyoming's wetlands: using invertebrates to assess ecosystem quality. Colorado/Wyoming American Fisheries Society Meeting. Fort Collins, Colorado.
- 2019 **Tronstad, L.M.**, Z. Wallace, O. Wilmot and M. Murphy. How do geology and water quality influence the distribution of amphibians in the Rocky Mountains of Wyoming?: Combining visual and eDNA surveys to investigate amphibian occupancy. Colorado/Wyoming American Fisheries Society Meeting. Fort Collins, Colorado.
- 2019 Briggs, M.*, L. Albertson, H. Glassic*, C. Guy, T. Koel, D. Lujan* and **L.M. Tronstad**. Effects of lake trout suppression methods on amphipods in Yellowstone Lake. Montana American Fisheries Society. Billings, Montana.
- 2018 **Tronstad, L.M.**, S. Hotaling, J.J. Giersch, D.S. Finn, O.J. Wilmot, A. Shah, and M.E. Dillon. Alpine stoneflies of the Teton Range: their habitat, distribution and status. The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Bell, C.*, **L.M. Tronstad** and M.E. Dillon. Species distribution models of the Western Bumble Bee, *Bombus occidentalis*, in Wyoming. The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Wilmot, O.J., **L.M. Tronstad**, S. Siddons, B. Fitzpatrick and M. Murphy. Using eDNA to investigate native freshwater mussel distribution in eastern Wyoming. The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Crawford, M.*, D. Dority*, **L.M. Tronstad** and M.E. Dillon. Investigating potential effects of wind turbine color on attracting insects. The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Dority, D.*, **L.M. Tronstad** and M.E. Dillon. Investigating ecological effects of wind farms on insect communities. The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Handley, J., and **L.M. Tronstad**. Pollination and seed-set of Desert Yellowhead (*Yermo xanthocephalus*). The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Cook, K.A.*, **L.M. Tronstad** and W.A. Estes-Zumpf. Do larger and more *Daphnia* reduce the presence of Chytrid fungus? The Wildlife Society-Wyoming Chapter, Laramie, Wyoming.
- 2018 Crawford, M.*, D. Dority, **L.M. Tronstad** and M.E. Dillon. Investigating potential effects of wind turbine color on attracting pollinating insects. The Ecological Society of America, New Orleans, Louisiana.
- 2018 Bell, C., **Tronstad, L.M.**, and M.E. Dillon. Species distribution models of the western bumble bee, *Bombus occidentalis*, in Wyoming. Oral presentation. The Ecological Society of America Conference. New Orleans, Louisiana.
- 2018 Finn, D.S., R. Acosta, H. Hampel, R. Vázquez, **L.M. Tronstad**, S. Hotaling, J. J. Giersch, and A.C. Encalada. Vulnerability of high-altitude macroinvertebrates to climate change in tropical and temperate zones. Tropical Aquatic Ecosystems in the Anthropocene, Quito, Ecuador.
- 2018 Finn, D.S., **L.M. Tronstad**, S. Hotaling, J.J. Giersch, R. Bixby, and L. Zeglin. Alpine streams fed by subterranean ice as potential climate refugia for temperature-sensitive taxa. Society for Freshwater Science, Detroit, Michigan.
- 2018 Crawford, M.*, D. Dority, **L.M. Tronstad** and M.E. Dillon. Investigating potential effects of wind turbine color on attracting pollinating insects. Undergraduate Research Day, University of Wyoming, Laramie, Wyoming.
- 2018 Hotaling S., Shain D.H., Lang S.A., **Tronstad L.M.**, Weisrock D.W., Kelley J.L. Population genomics of the glacier ice worm, *Mesenchytraeus solifugus*. EVO-WIBO.

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- 2018 Hotaling S., Shain D.H., Lang S.A., **Tronstad L.M.**, Weisrock D.W., Kelley J.L. Population genomics of the glacier ice worm, *Mesenchytraeus solifugus*. Washington State University Showcase.
- 2018 **Tronstad, L.M.**, S. Hotaling, J.J. Giersch, D.S. Finn and O. Wilmot. Aquatic invertebrate assemblages living in three alpine stream types in the Teton Range, Wyoming. Colorado/Wyoming American Fisheries Society, Laramie, Wyoming.
- 2018 Cook, K., **L.M. Tronstad** and T. Koel. Comparing the food web of Yellowstone Lake before and after two decades of lake trout removal. Colorado/Wyoming American Fisheries Society, Laramie, Wyoming.
- 2018 Wilmot, O., **L.M. Tronstad**, S. Siddons, B. Fitzpatrick and M. Murphy. Using eDNA to investigate two apparently rare mussels in eastern Wyoming. Colorado/Wyoming American Fisheries Society, Laramie, Wyoming.
- 2018 Hotaling S., Giersch J.J., Finn D.S., **Tronstad L.M.**, Muhlfeld C.C. and Weisrock D.W. 2018. Conservation genomics of alpine stoneflies threatened by climate change. Society for Integrative and Comparative Biology, San Francisco, California.
- 2017 Wurzel, S.*, M. Ford *, D. Dority* and **L.M. Tronstad**. Permethrin's effect on non-target invertebrates in Spring Creek, Laramie, Wyoming. The Wildlife Society, Jackson, Wyoming.
- 2017 Lester, A.* and **L.M. Tronstad**. The effect of mosquito control on bees and insect pollination. The Wildlife Society, Jackson, Wyoming.
- 2017 Bell, C. *, **L.M. Tronstad** and M.E. Dillon. The status and distribution of the Western Bumble Bee in Wyoming. The Wildlife Society, Jackson, Wyoming.
- 2017 Cook, K. *, **L.M. Tronstad** and T.M. Koel. The Yellowstone Lake food web after two decades of lake trout (*Salvelinus namaycush*) removal. The Wildlife Society, Jackson, Wyoming.
- 2017 Crawford, M.*, D. Dority, **L.M. Tronstad** and M.E. Dillon. Wind turbine color may attract insects to wind farms. The Wildlife Society, Jackson, Wyoming.
- 2017 D.S. Finn, S. Hotaling, **L.M. Tronstad**, J.J. Giersch and L. Zeglin. Tetons alpine streams: unsung heroes of diversity and vulnerability. AMK Research Station Summer Seminar Series, Grand Teton National Park, Wyoming.
- 2017 Hotaling, S., J.J. Giersch, D.S. Finn, **L.M. Tronstad**, C.C. Muhlfeld and D.W. Weisrock. Conservation genomics of an alpine stonefly threatened by climate change. Society for Freshwater Science, Raleigh, North Carolina.
- 2017 Wurzel, S. *, M. Ford *, D. Dority* and **L. Tronstad**. The effect of spraying mosquitoes on macroinvertebrates in Spring Creek, Laramie, Wyoming. Undergraduate Research Day, University of Wyoming, Laramie, Wyoming.
- 2017 Bell, C. *, M.E. Dillon and **L.M. Tronstad**. Species distribution models of the Western Bumblebee, *Bombus occidentalis*, in Wyoming using historic and current data. Entomology Society of America, Denver, Colorado.
- 2017 Wurzel, S. *, M. Ford*, D. Dority* and **L. Tronstad**. The effect of spraying mosquitoes on macroinvertebrates in Spring Creek, Laramie, Wyoming. Wyoming Mosquito Management Association Meeting, Laramie, Wyoming.
- 2017 **Tronstad, L.M.** and L. Thelen-Wade*. Do wind farms alter insects and plants? Travelle Chapter of the Izaak Walton League of America, Laramie, Wyoming.
- 2016 Wilmot, O.J., **L.M. Tronstad** and P. Mathias. Native freshwater mussel follow-up investigations: filling survey gaps and exploring newly discovered populations. The Wyoming Chapter of the Wildlife Society.
- 2016 **Tronstad, L.M.**, S. DePaolo*, M.D. Andersen and M.E. Dillon. Do native bees respond to landscape position in sagebrush ecosystems of Wyoming? Natural Areas Conference, Davis, California.

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- 2016 **Tronstad, L.M.** Comparing quantitative methods of collecting aquatic invertebrates in prairie streams. Colorado-Wyoming Chapter of the American Fisheries Society Meetings, Laramie, Wyoming.
- 2016 **Tronstad, L.M.** Basic information about Mountainsnails. The Wyoming Chapter of the Wildlife Society.
- 2016 **Tronstad, L.M.** and B. Marsicek. Monarchs and Milkweeds Citizen Science Program. Wyoming Citizen Science Conference, Lander, Wyoming.
- 2016 **Tronstad, L.M.** What fish eat and what is in the river. Fly fishing symposium hosted by the University of Wyoming Biodiversity Institute, Laramie, Wyoming.
- 2016 **Tronstad, L.M.** Crustaceans and Mollusks: Species of Greatest Conservation Need in Wyoming. Public seminar hosted by the Wyoming Game and Fish Department, Saratoga, Wyoming and the Bureau of Land Management, Rawlins, Wyoming.
- 2016 Girl Scouts Citizen Scientist mentored by **L.M. Tronstad**, B. Barber and M. Lockwood. Evaluating the Laramie River Restoration project. Public presentation, University of Wyoming, Laramie, Wyoming.
- 2016 Foley M.E., S. Hotaling, L. Zeglin, J.J. Giersch, D.S. Finn, **L.M. Tronstad**, C.C. Muhlfeld, D.W. Weisrock. Microbial diversity of alpine streams: a North American perspective. Evolution, Dallas, Texas.
- 2016 Dority, M.I.*, **L.M. Tronstad** and M.E. Dillon. Investigating ecological effects of wind turbines on herbivorous insect abundance and associated plant damage. University of Wyoming Undergraduate Research Day, Laramie, Wyoming.
- 2016 Dority, D.*, **L.M. Tronstad** and M. Dillon. Ecological effects of wind farms: investigating plant-pollinator interactions. Front Range Student Ecology Symposium, Fort Collins, Colorado.
- 2016 Barber, B., **L.M. Tronstad**, L. Nysson, M. Lockwood and L. Buckner. Girl Scouts in science: discovering Wyoming water. National Alliance for Broader Impacts, Philadelphia, Pennsylvania.
- 2016 Dority, D.*, **L.M. Tronstad** and M.E. Dillon. Effects of wind turbines on ecological cascades. University of Wyoming Undergraduate Research Day, Laramie, Wyoming.
- 2015 **Tronstad, L.M.**, S. Hotaling, and J.C. Bish*. Assessing aquatic invertebrates along elevation gradients in Grand Teton National Park, Wyoming. Society of Freshwater Science, Milwaukee, Wisconsin.
- 2015 **Tronstad, L.M.** Wyoming's Spineless Wildlife: current status of rare invertebrates in Wyoming. The Wildlife Society and Wyoming Landscape Conservation Initiative Meeting, Lander, Wyoming.
- 2015 **Tronstad, L.M.** B.R. Marsicek, and S. Schell. How pollinators can help your garden. Wheatland University of Wyoming Extension. Wheatland, Wyoming.
- 2015 **Tronstad, L.M.** B.R. Marsicek, and B.P. Tronstad. The pollinators: bees, butterflies, birds, bugs and more! Plenary Session at the Natrona County Master Gardeners Meeting. Casper, Wyoming.
- 2015 **Tronstad, L.M.** and M.A. Andersen. The status and distribution of an endemic aquatic beetle petitioned for Endangered Species Act listing in Wyoming. Colorado-Wyoming Chapter of the American Fisheries Society Meetings, Fort Collins, Colorado.
- 2015 Dority, D.*, M. Ford* and **L.M. Tronstad**. Does mosquito control reduce the aquatic invertebrates in Spring Creek, Laramie, Wyoming? University of Wyoming Undergraduate Research Day, Laramie, Wyoming.
- 2015 DePaolo, S.*, **L. Tronstad**, and M. Dillon. Are early blooming specialist plants more susceptible to phenological mismatch in changing climates? Society for Integrative and Comparative Biology, West Palm Beach, Florida.

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- 2014 **Tronstad, L.M.**, W. Estes-Zumpf, and A. Farag. What trace elements bioaccumulate in the Muddy Creek food web: from food sources to fish and birds. Colorado-Wyoming Chapter of the American Fisheries Society Meetings, Laramie, Wyoming.
- 2014 **Tronstad, L.M.**, W. Estes-Zumpf, and A. Farag. Bioaccumulation of mercury and selenium in a southern Wyoming watershed. Society of Freshwater Science, Portland, Oregon.
- 2014 **Tronstad, L.M.** Butterflies and moths of Wyoming: life cycle, habitats, pollination, threats, and common species. University of Wyoming Extension Training. Laramie, Wyoming.
- 2014 Ford, M.A.* and **L.M. Tronstad**. The impacts of mosquito control on insects in Spring Creek, Laramie. Public seminar with panel discussion afterwards. Laramie, Wyoming.
- 2014 Ford, M.A.* and **L.M. Tronstad**. Assessing the impacts of Permethrin application using ultra-low volume foggers on non-target invertebrates in Spring Creek. Wyoming Mosquito Management Association, Evanston, Wyoming.
- 2014 Abernethy, I., W. Estes-Zumpf, **L. Tronstad**, D. Keinath, and B. Heidel. Multi-taxa inventories on National Landscape Conservation System lands in Wyoming. Central Mountains and Plains Section of the Wildlife Society, Sheridan, Wyoming.
- 2013 Wilmot, O.* and **L.M. Tronstad**. Lake trout caused a trophic cascade in the benthos of Yellowstone Lake. University of Wyoming Undergraduate Research Day, Laramie, Wyoming.
- 2012 **Tronstad, L.M.**, J.C. Bish*, R.O. Hall, and T.M. Koel. The chemical and biological responses of three streams to wildfire in Yellowstone National Park. AMK Summer Seminar Series, Grand Teton National Park.
- 2012 **Tronstad, L.M.** and W. Estes-Zumpf. Trace elements in the Muddy Creek food web prior to most coalbed natural gas development. Wyoming Landscape Conservation Initiative, Rock Springs, Wyoming.
- 2012 **Tronstad, L.M.** and M.A. Andersen. Surveys for the endemic aquatic beetle, *Hygrotus diversipes*, in Wyoming. Wyoming Chapter of the Wildlife Society, Laramie, Wyoming.
- 2012 Bish, J.C.* and **L.M. Tronstad**. How wildfire affected aquatic invertebrates in Yellowstone National Park, Wyoming. University of Wyoming Undergraduate Research Symposium, Laramie, Wyoming.
- 2011 **Tronstad, L.M.** Using watersheds as conservation tools. The Nature Conservancy. Cody, Wyoming.
- 2011 **Tronstad, L.M.** and W. Estes-Zumpf. Trace elements in the muddy creek food web prior to coalbed natural gas development. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2011 **Tronstad, L.M.** and W. Estes-Zumpf. Is the Muddy Creek food web affected by coalbed natural gas inputs? Priority and Selection Committee for the Wyoming Water Research Program. Cheyenne, Wyoming.
- 2011 **Tronstad, L.M.** and W. Estes-Zumpf. Are trace elements bioaccumulating in the Muddy Creek food web? Wyoming Water Association. Casper, Wyoming.
- 2011 Bish, J.C.*, **L.M. Tronstad**, R.O. Hall, and T.M. Koel. How wildfire affected aquatic invertebrates in Yellowstone National Park, Wyoming. The Wildlife Society-Wyoming Chapter, Jackson, Wyoming.
- 2011 Bish, J.C.* and **L.M. Tronstad**. How wildfire affected aquatic invertebrates in Yellowstone National Park, Wyoming. University of Wyoming Undergraduate Research Symposium. Laramie, Wyoming.
- 2010 Krist, A.C., **L.M. Tronstad**, and H. Julien. Life-history shifts in a copepod: evidence for rapid evolution following the introduction of a non-native species. North American Benthological Society Meetings. Santa Fe, New Mexico.
- 2009 **Tronstad, L.M.**, R.O. Hall, A.C. Krist, H. Julien, and T.M. Koel. Consequences of the invasion of predaceous lake trout in the Yellowstone Lake ecosystem, Yellowstone National Park, Wyoming. The Wildlife Society-Wyoming Chapter. Cody, Wyoming.

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- 2008 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Effect of lake trout on the ecosystem structure and function of Yellowstone Lake. A Comprehensive Appraisal of Long-Term Suppression of Lake Trout in Yellowstone Lake. Gardner, Montana.
- 2008 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Biogeochemical response of forested watersheds to wildfire. North American Benthological Society Meetings. Salt Lake City, Utah.
- 2008 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Biogeochemical response of forested watersheds to wildfire. University of Wyoming, Graduate Student Symposium, Laramie, Wyoming.
- 2007 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Predicting sources and sinks of nitrogen in Yellowstone Lake before and after the decline of Yellowstone cutthroat trout. North American Benthological Society Meetings. Columbia, South Carolina.
- 2007 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Introduction of lake trout in Yellowstone Lake resulted in a trophic cascade and altered nutrient cycling. University of Wyoming, Graduate Student Symposium, Laramie, Wyoming.
- 2006 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Predicting changes in zooplankton production and nitrogen cycling in Yellowstone Lake due to declining Yellowstone cutthroat trout. North American Benthological Society Meetings. Anchorage, Alaska.
- 2006 Tronstad, B.P., **L.M. Tronstad** and A.C. Benke. Rapid growth and development of Chironomidae (Diptera) in a subtropical floodplain. North American Benthological Society Meetings. Anchorage, Alaska. Poster.
- 2006 Kennedy, T.B., S.A. Pugh, J. Culp, B.J. Weibell, **L.M. Tronstad** and A.C. Benke. Ecological dynamics of food web components of the Sipsey river floodplain ecosystem. Alabama Fisheries Association, Perdido Beach, Alabama.
- 2005 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Impact of invasive fish on nitrogen transport to adjacent stream habitats. North American Benthological Society Meetings. New Orleans, Louisiana.
- 2005 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Impact of invasive lake trout on nitrogen transport to adjacent stream habitats in the Yellowstone Lake ecosystem. American Fisheries Society Colorado-Wyoming Chapter, Ft. Collins, Colorado.
- 2005 **Tronstad, L.M.**, C.A. Fisher*, R.O. Hall and T.M. Koel. Response of three forested watersheds to disturbance: comparing nutrient export before and after wildfire. University of Wyoming, Graduate Student Symposium, Laramie, Wyoming.
- 2005 Hall, R.O., B.J. Koch, M.C. Marshall, B.W. Taylor and **L.M. Tronstad**. How body size mediates the role of animals in nutrient cycling in aquatic ecosystems. British Ecological Society. London, England.
- 2004 **Tronstad, L.M.**, R.O. Hall and T.M. Koel. Decline in nitrogen transported by Yellowstone cutthroat trout spawning migrations. North American Benthological Society Meetings, Vancouver, British Columbia.
- 2004 Fisher, C.A.*, B.W. Taylor., R.O. Hall, B.J. Koch, M.C. Marshall, **L.M. Tronstad** and A.J. Ulseth. Improvements to estimating matrix effects using the OPA ammonium method. North American Benthological Society Meetings, Vancouver, British Columbia. Poster.
- 2004 Ben-David, M., R.O. Hall, J. R. Crait and **L.M. Tronstad**. Influence of bio-pollution on ecosystem processes: the impact introduced lake trout have on streams and terrestrial predators in Yellowstone National Park. Environmental Protection Agency Regional Meeting, Denver, Colorado.
- 2003 **Tronstad, L.M.**, B.P. Tronstad and A.C. Benke. Desiccation survival strategies of invertebrates in a subtropical floodplain, with special reference to Chironomidae (Diptera). North American Benthological Society Meeting, Athens, Georgia.
- 2002 **Tronstad, L.M.**, B.D. Marshall, R.C. Krueger and B.L. Kerans. Salmonid whirling disease severity and assemblages of Chironomidae (Diptera). North American Benthological Society Meeting, Pittsburgh, Pennsylvania.

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- 2001 **Tronstad, L.M.**, B.D. Marshall, R.C. Krueger and B.L. Kerans. Estimating salmonid whirling disease severity using Chironomidae (Diptera) assemblages. Montana Academy of Science Meeting, Bozeman, Montana.
- 1997 **Tronstad, L.M.** The genetic variation in Montana's *Cervus elaphus nelsoni* (Rocky Mountain Elk). Intermountain Junior Science and Humanities Symposium, Salt Lake City, Utah. Poster.

TEACHING EXPERIENCE

Bee Identification, Fall 2023, 2022 (2 credits)

University of Wyoming, Laramie, Wyoming

- Used dichotomous key to identify bees
- Learned key features and anatomy of bees
- Became skilled at processing bees for identification
- Students learn to interpret their own data

Wyoming Wildlands, Guest Lecturer, Fall 2022

University of Wyoming, Laramie, Wyoming

- Taught students about US Endangered Species Act
- Discussed working with species of conservation and management concern
- Policies surrounding federally protected species

Ecological Analysis, Spring 2024, 2022 (3 credits)

University of Wyoming, Laramie, Wyoming

- Learned a variety of tools to analyze ecological data including mixed-effects models, predictive distribution modeling, time series and others
- Used Program R to process data
- Required to write 5 hours per week
- Students wrote and interpreted their own data for publication

Graduate and Undergraduate Student Mentor, January 2010 – present

University of Wyoming, Laramie, Wyoming

- Direct graduate students in all aspects of their research project
- Mentor undergraduate students through all phases of their independent research project
- Guidance includes proposal writing, collecting and analyzing data, presenting results and publishing their manuscript
- Supervise a productive laboratory group

Mentor National Park Service Staff, 2010-present

Agate Fossil Beds National Monument, Devils Tower National Monument

- Teach park interns and staff about basic stream ecology
- Demonstrate methods and coach hands-on experience

Aquatic Entomology, Guest Lecturer, Fall 2023, 2021, 2019, 2014, 2010, 2008

University of Wyoming, Laramie Wyoming

- Taught class about invertebrate survival strategies during adverse conditions
- Instructed students about bioassessment using aquatic invertebrates
- Created lectures about aquatic insect orders

Entomological Writing, Fall 2021, 2020 (3 credits)

University of Wyoming, Laramie, Wyoming

- Taught graduate students to write professional publications
- Students learned to write articles for popular press and submitted to magazines
- Created educational videos for social media on their research topics
- Students learned to edit writing from others

Undergraduate Research, Fall 2023, 2020 (variable credits)

University of Wyoming, Laramie, Wyoming

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- Guided undergraduate students through research process
- Students learned to write about their projects
- Students read and reviewed peer-reviewed articles related to their project

Aquatic Invertebrate Identification, Fall 2023, Spring 2020 (3 credits)

University of Wyoming, Laramie, Wyoming

- Taught graduate students to use dichotomous keys to identify aquatic invertebrates
- Students learned to write manuscript about the data they collected
- Students learned to use Program R to analyze the data they collected

Limnology Lecture and Laboratory, Fall 2017, 2013 (3 credits and 2 credits)

University of Wyoming, Laramie, Wyoming

- Instructed students on the biology, chemistry and physics of inland waters
- Lecture included discussions of journal articles and term papers
- Laboratory activities included field trips to lakes and streams
- Taught students to identify algae, zooplankton and aquatic invertebrates
- Students learned to measure nutrients, dissolved oxygen and acid neutralizing capacity

Principles of Wildland Water Quality, Fall 2008

University of Wyoming, Laramie, Wyoming

- Co-taught lecture course on all aspects of water quality
- Instructed students on stream designations and water quality standards
- Group projects allowing students to apply the knowledge learned

Graduate Student Mentor, April 2008 – February 2009

University of Wyoming, Laramie, Wyoming

- Helped mentor 2 PhD students and 4 MS students on energy-related projects
- Assisted in day to day activities including project guidance, laboratory and field work, analysis and editing

Limnology Laboratory, Fall 2004 – 2006

University of Wyoming, Laramie, Wyoming

- Set-up and took down for all laboratory activities
- Instructed student on each topic
- Lead field trips sampling lakes and streams

Wyoming EPSCoR Teacher Training Program in Science, summer 2006

University of Wyoming, Laramie, Wyoming

- Introduced student teacher to ecology, invertebrates and research methods
- Assisted student teacher in classroom during spring 2007

Mentor for Undergraduate Research Assistants, 2003 – 2007

University of Wyoming, Laramie, Wyoming

- Trained numerous undergraduates in laboratory and field procedures
- Taught students invertebrate identification

Teaching Assistant, August 2001 – May 2003

University of Alabama, Tuscaloosa, Alabama

- Freshman biology majors laboratory
- Freshman honors biology laboratory

Tutor, December 2001 – May 2003

Tuscaloosa, Alabama

- Instructed a local teacher in biology, geology, chemistry, physics and ecology

Mentor for Undergraduate Research Assistant, 2002 – 2003

University of Alabama, Tuscaloosa, Alabama

- Trained undergraduate to identify aquatic invertebrates

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STUDENT MENTORING

Graduate Students Advised

- Walker Bensch. Current. How elk trampling alters nesting native bees and floral resources at Fossil Butte National Monument. MS. Zoology and Physiology.
- Miles Milbrath. Current. Can beaver dam analogs reduce salinity and selenium in the Muddy Creek watershed? MS. Zoology and Physiology.
- Audrey Lindsteadt. Current. Revising the paradigm of rare species living in harsh environments. PhD. Zoology and Physiology.
- Nina Crawford. Current. How pollinators respond to management actions in national parks of the Black Hills. PhD. Zoology and Physiology.
- Alexis Hollander. Current. Comparing growth of extant mussels to those prior to European contact. PhD. Ecosystem Science and Management.
- Amy Storey. Current. Parasitism of bumble bees in Wyoming. MS. Zoology and Physiology.
- Samantha Poratti. Current. The distribution and reproduction of California Floater and Western Pearlshell Mussels in the Bear River drainage, Wyoming. MS. Zoology and Physiology.
- Isabella Sadler. Current. How Lake Trout suppression alters the water quality of Yellowstone Lake. MS. Zoology and Physiology and the Program in Ecology and Evolution.
- Audrey Lindsteadt. 2024. Fundamental and realized niche of a rare aquatic beetle. MS. Zoology and Physiology. Outstanding Thesis Award, Rocky Mountain Cooperative Ecosystem Studies Unit.
- Michelle Weschler. 2023. Wind energy and Insects: reviewing the state of knowledge and identifying potential interactions. MS. Zoology and Physiology. Outstanding Thesis Award, Great Plains Cooperative Ecosystem Studies Unit Award.
- Katrina Cook. 2023. Habitat quality and selection of wood frogs (*Lithobates sylvaticus*) in the Snowy Mountains. MS. Zoology and Physiology. Co-advised with Anna Chalfoun.
- Madison Crawford. 2022. Rare plant and butterfly monitoring in Eastern Wyoming: The pollination mechanisms of Laramie chickensage (*Artemisia simplex*) and the status and distribution of the Regal Fritillary (*Argynnis idalia*) and Monarch (*Danaus plexippus*). MS. Zoology and Physiology.
- Dominique Lujan. 2020. Effects of lake trout (*Salvelinus namaycush*) suppression methods on lower trophic levels in Yellowstone Lake, Wyoming. MS. Department of Zoology and Physiology.
- Christy Bell. 2019. Sampling methods and distribution modeling of bees: the status of the western bumble bee (*Bombus occidentalis*) in Wyoming. MS. Zoology and Physiology. Co-advisor with Michael Dillon.
- Delina Dority. 2019. Are insects more abundant at wind farms?: evidence from Wyoming with emphasis on native bees. MS. Zoology and Physiology. Co-advisor with Michael Dillon.
- Sarah DePaolo. 2015. Predicting potential impacts of wind energy development on plants and pollinators. MS. Zoology and Physiology. Co-advisor with Michael Dillon.

Graduate Student Committees

- Sam Dilworth, PhD, Ecosystem Science and Management, current
- Tyler Bradshaw, MS, Ecosystem Science and Management, current
- Alyssa Baldwin, MS, Ecosystem Science and Management, current
- Kate Davis- PhD, Ecosystem Science and Management, current
- Karen Jorgenson-MS, Department of Zoology and Physiology, 2022
- Hayley Glassic-PhD, Department of Ecology, 2022
- Michele Larson-PhD, Zoology and Physiology, 2018
- Tonya Chamberlain-MS, Zoology & Physiology 2013
- Kelsey Swanson- MS, Entomology 2012

Undergraduate Student Research Projects

- Milbrath, M. 2024. The effects of salinity on the growth and diets of prairie minnows. Wyoming Research Scholars Program. \$9000
- Freeman, Brianna. 2024. Food web structure of the Bear River using isotopic analysis. Wyoming Space Grant Consortium and Wyoming Research Scholars. \$5000 + \$8000
- Tonascia, J., Amy-Marie Storey and L.M. Tronstad. 2023. Factors of sampling bias in the collection of flying insects. Undergraduate Research Fellowship for the Wyoming Space Grant Consortium. \$5000.

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- Plett, E., A. Lindsteadt and L.M. Tronstad. 2023. Intraspecific Predation of *Hygrotus* Larvae. Undergraduate Research Fellowship for the Wyoming Space Grant Consortium and Wyoming Research Scholars Program. \$5000 + \$8000
- Milbrath, M. 2023. Evaluating age and reproduction of California Floater and Western Pearlshell mussels. Wyoming Research Scholars Program. \$8000
- Short, Zoe. 2022. Estimating movement, parasite loads and habitat use of Monarchs in east-central Wyoming. Wyoming Research Scholars Program. \$7000
- Martin, Brenna. 2022. Do wind facilities alter the behavior of pollinators? Wyoming Space Grant Consortium. \$5000
- Baker, Riley. 2021. Investigating the effects of grazing on three declining bumble bee species in eastern Wyoming. Wyoming Space Grant Consortium. \$5000
- Short, Zoe. 2021. Estimating the habitat of Monarch and Regal Fritillary butterflies in Wyoming. Wyoming Space Grant Consortium and Wyoming Research Scholars Program. \$5000 + \$5000
- Cooke, Lydia. 2021. Investigating floral preferences and density to improve conservation of declining bumble bee populations in eastern Wyoming. Wyoming Space Grant Consortium. \$5000
- Packebush, M. 2020. Investigating the pathogens causing declines of bumble bees in Wyoming. Wyoming Space Grant Consortium and Wyoming Research Scholars Program. \$4990 + \$6600
- Burns, R. 2020. Use of remote sensing and spatial modeling to characterize connectedness of tall-forb habitats for pollinators in western Wyoming. Wyoming Space Grant Consortium. \$5000
- DeLong, C.K. 2020. Investigating the pollinator diversity in healthy and degraded tall forb communities. Wyoming NASA Undergraduate Fellowship and Wyoming Research Scholars Program. \$5000 + \$9000
- DeLong, C.K. 2019. Pollinators: a hidden world of diversity. Larsh Bristol Fellowship. \$5000
- Crawford, M. 2018. How does bloom density affect the capture success of a rare pollinating insect? Wyoming Space Grant Consortium and Wyoming Research Scholars Program. \$5000 + \$5000
- Lester, A. 2017. Does the city's mosquito control program alter local pollinators and plant seed-set? Wyoming Space Grant Consortium. \$5000
- Crawford, M. 2017. Investigating potential effects of wind turbine color on attracting pollinating insects. Wyoming Space Grant Consortium and Wyoming Research Scholars Program. \$5000 + \$5000
- Wurzel, S. 2017. Does mosquito control alter the aquatic invertebrates in an urban stream? Wyoming Research Scholars Program. \$5000
- Thelen-Wade, L. 2016. Do wind turbines alter the seed-set of Prickly Pear? Izaak Walton League. \$5000
- Lester, A. 2016. Do wind farms alter Wyoming soils? Haub School Creative Research Grant. \$1000
- Bell, C. 2016. Investigating the current status of the declining Western Bumble bee, *Bombus occidentalis*, in Wyoming. Wyoming Space Grant Consortium. \$5000
- Dority, D. 2015. Effects of wind turbines on ecological cascades? Wyoming Space Grant Consortium. \$5000
- Dority, M.I. 2015. Investigating ecological effects of wind turbines on herbivorous insect abundance and associated plant damage. EPSCoR Research Fellowship. \$5000
- Dority, D. 2014-2015. Does spraying mosquitoes reduce the aquatic invertebrate food available to fish? INBRE. \$5000
- Ford, M. 2013. Assessing the impacts of mosquito control on non-target invertebrates in Spring Creek, Wyoming. Biodiversity Institute. \$5000
- Wilmot, O. 2013. Lake trout induced a trophic cascade in the benthos of Yellowstone Lake. University of Wyoming-National Park Service. \$5000
- Bish, J.C. 2010-2012. Effect of wildfire on aquatic invertebrate assemblages. University of Wyoming-National Park Service. \$5000

AWARDS

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| 2019 | Awarded the 2019 Women in Science Own It! Professional Award by my peers and students |
| 2018 | Nominated for the 2018 Women in Science Own It! award by my students |
| 2016 | Inducted into the Montana State Athletics Hall of Fame for 2001 Indoor Track and Field Conference Champions |
| 2015 | Recognized by Mortar Board Honor Society for contributions to students |
| 2012 | Photo of Devils Tower chosen by jury and displayed in the Berry Biodiversity Conservation Center, University of Wyoming |

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- 2011 Photo of *Oreohelix strigosa cooperi* (Cooper's mountainsnail) chosen by jury and displayed in the Berry Biodiversity Conservation Center, University of Wyoming
- 2007 Outstanding Oral Presentation, Graduate Student Symposium, University of Wyoming, Laramie, Wyoming
- 2006 Vern Bressler Fisheries Scholarship, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming
- 2006 Conservation and Environmental Issues Graduate Research Award, North American Benthological Society
- 2006 University-Wide Plummer Scholarship. School of Environment and Natural Resources, University of Wyoming, Laramie, Wyoming
- 2005 Colorado Lakes and Reservoir Management Association Scholarship
- 2005 University of Wyoming Alumni Association Graduate Student Scholarship
- 2005 University-Wide Plummer Scholarship. School of Environment and Natural Resources, University of Wyoming, Laramie, Wyoming
- 2005 Dr. George E. Menkens Memorial Scholarship, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming
- 2005 North American Benthological Society President's Award
- 2005 Jo Anne MacDonald Wiegand Excellence Fund, College of Arts and Sciences, University of Wyoming, Laramie, Wyoming
- 2004 L. Floyd Clarke Graduate Scholar Award, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming
- 2004 Vern Bressler Fisheries Scholarship, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming
- 2004 University-Wide Plummer Scholarship. School of Environment and Natural Resources, University of Wyoming, Laramie, Wyoming
- 2003 Chermock Prize for outstanding graduate students in Ecology and Systematics, University of Alabama, Tuscaloosa, Alabama
- 2002 Inge and Ilouise Hill Research Fellowship for outstanding graduate students, University of Alabama, Tuscaloosa, Alabama
- 2000 Sue Burton Cannon Award for outstanding language student, Montana State University, Bozeman, Montana

TECHNICAL EXPERTISE

- Certified in First Aid through ProTraining on 24 April 2020
- Specialized in stream, lake and wetland habitats
- Experience measuring and calculating nutrient cycling in a variety of aquatic ecosystems
- Skilled in aquatic invertebrate identification including Chironomidae (Diptera)
- Experienced identifying and working with pollinating insects
- Trained in identification of mollusks, including snails and mussels
- Proficient at collecting and analyzing water, algae, zooplankton, invertebrates and fish
- Experienced analyzing samples for nutrients and trace elements
- Skilled in invertebrate secondary production calculations
- Experienced with water chemistry techniques and interpretation
- Skilled at studying food webs and global change
- Adept at investigating pollen networks
- Able to use isotopes to answer research questions
- Knowledge of statistical techniques, including time series analysis and spatial statistics
- Skilled with Program R

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- Adept at using ecological modeling techniques
- Invertebrate identification, including aquatic, semi-aquatic and terrestrial taxa
- Experience collecting and identifying invertebrates in the Rocky Mountain region
- Able to identify larval, pupal, and adult stages of insects
- Skilled in managing large datasets
- Proficient with computer applications (i.e., word processing, statistical software, spreadsheets, etc.)
- Experienced using ArcGIS software
- Experienced at backing a trailer, driving four-wheel drive vehicles, motorcycles and four wheelers
- Speak and write German

SERVICE

- Graduate Student Committee, Program in Ecology and Evolution, University of Wyoming
- Member of Western Freshwater Mussel Strategy Steering Committee
- Member of the Pacific Northwest Native Freshwater Mussel Workgroup
- Taught families about pollinators at the Laramie Pollinator Jubilee.
- Served as an expert for US Fish and Wildlife Service's Species Status Assessments for Regal Fritillary and Narrow-foot Hygrotus Diving Beetle.
- Served on the UW Grand Teton Campus Crossing Divides Initiative, Aquatics group
- Read to first grade students for Wyoming Reads Program
- Helped US Forest Service Region 4 develop pollinator monitoring protocols
- Worked with second grade class to understand science
- Western Bumble Bee working group
- Peer-review manuscripts
- Program leader at the Wyoming Natural Diversity Database
- Help with the citizen science projects, Know Your Native Mussels, and Monarchs and Milkweeds through the University of Wyoming Biodiversity Institute
- Create field guides to invertebrates to aid citizen scientists and managers
- Helped organize the annual partner's meeting at the Wyoming Natural Diversity Database
- Educate K-12 students and the public about aquatic ecosystems and invertebrates
- Volunteered to lead invertebrate portions of the Wyoming annual Bioblitz, 2013-present
- Organized and lead the graduate student workshop committee for the North American Benthological Society Meetings, 2004-2006
- Selection Committee for the Animal Ecologist Faculty Position at the University of Wyoming, Department of Zoology and Physiology, 2004-2005
- Montana State Track and Field Team Captain, 2000-2001
- Montana State University Track and Field Team, 1997-2001
- Phi Kappa Phi Honor Society, 2000-2001
- Golden Key Honor Society, 2000-2001
- SPURS (Sophomore Service Organization), 1998-1999
- Alpha Lambda Delta Academic Honor Society (Public Relations Officer), 1998-1999
- Montana State High Jump Champion, 1996

WORKSHOPS ATTENDED

- Resource selection function, Laramie, Wyoming 2018
- Ecological sampling and study design, Laramie, Wyoming 2018
- Data management practices to address S-rank inconsistencies (NatureServe) 2022
- Species Ranking: Range and occupancy workshop (NatureServe) 2022