

NUTRITIONAL ECOLOGY WORKING GROUP

FALL 2023 NEWSLETTER

VOLUME 5, ISSUE 2



As many of you finish up your busy field seasons, you have plenty to look forward to this winter from the Nutritional Ecology Working Group. Our working group has been busy on many fronts, and we are excited to provide these opportunities to our members.

Our working group elections will occur over the next 45 days, you will receive short biographies on our current slate of members who are candidates for board positions. Please take the time to review these candidates, and vote for them when elections are opened on October 15th.

The **30th Annual TWS Conference** will be held in Louisville in early November, and the Nutritional Ecology Working Group will have several functions at this meeting. For the first time, The Nutritional Ecology Working Group has provided travel grants for students/recent graduates that are presenting during this conference. We will also hold our next annual membership meeting in Louisville on Tuesday, Nov. 7 from 4:30 – 6:00 pm in the Stanley Room, Galt House Hotel. During this meeting we will also usher in our new board members, and I will hand over the reins to Marcus Blum as he starts his tenure as chair.

The Nutritional Ecology Working Group will be hosting a stable isotopes in nutritional ecology workshop and symposium at the 30th Annual TWS Conference. The full day workshop **“Introduction to Stable Isotopes in Nutritional Ecology”** will be held on Sunday, November 5th. On Tuesday, November 7th, during the morning session we will have our symposium **“Animal Foraging, Food Webs, and Nutrition: Linkages Revealed Using Stable Isotopes”** with a suite of [presentations](#).

Our second, 3-day skills workshop, **“Measuring Forage Quantity and Quality for Herbivores”** will be held in Kingsville, Texas, in November. The Nutritional Ecology Working Group provided two, \$500 travel grants to students/recent graduates for this workshop. Dr. Dave Hewitt also solicited and obtained an additional \$500 donation for a third student/recent graduate travel grant from Lyssy and Eckel Feeds out of Texas.

Members of our webinar committee are working hard to find speakers for our fourth winter webinar series. These webinars are a great way to bring together a diverse set of speakers on nutritional ecology, and all webinars are recorded and available to watch on our website <https://wildlife.org/newg/webinar-series/>.

The Nutritional Ecology Working Group hosted our first symposium at the 2022 TWS Annual Conference in Spokane. The symposium, **“Gold and new methods for determining wildlife diets”**, brought together a diverse set of speakers that covered a wide range of nutritional ecology methods for measuring wildlife diets. The recorded versions of these presentations are now available for anyone to watch at <https://wildlife.org/newg/symposium/>.

I look to seeing many of you in Louisville, and I am excited for the direction that our working group is heading!

Dan Thompson

Chair, Nutritional Ecology Working Group

EXCEUTIVE BOARD

Chair

Dan Thompson

Chair-elect

Marcus Blum

Past Chair

Kristin Denryter

Secretary

Katey Huggler

Treasurer

Katie Anderson

Communication/Outreach

Yasaman Shakeri

Board Members at Large

Colter Chitwood

Rachel Cook

Tom Stephenson

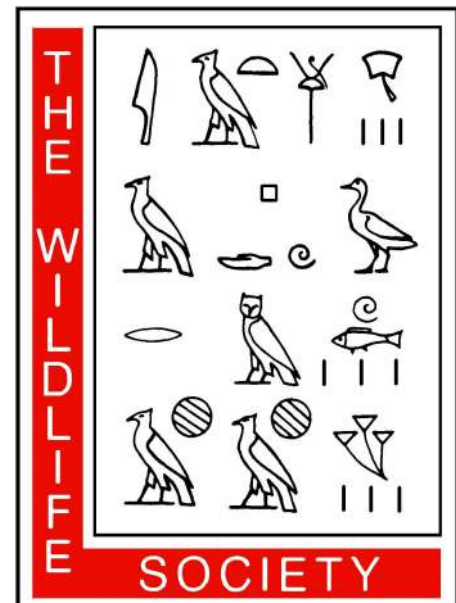


TABLE OF CONTENTS

Message from the Board.....1

Announcements & Upcoming Events.....2-3

Invitation to Submit.....3

Lab Analyses for Nutrition Work.....4

Recent & Relevant Literature.....5

ANNOUNCEMENTS & UPCOMING EVENTS

JOB ANNOUNCEMENT

A Wildlife Biologist 1/2 position will be opening this fall at the Foraging Ecology and Wildlife Nutritional Analysis Lab ([FaWNA Lab](#)) of the Alaska Department of Fish and Game. The position has dual roles, working in a nutrition lab and working with captive moose and caribou.

The incumbent will be responsible for running nutritional assays, maintaining lab equipment, managing a database, analyzing data, performing quality control and assurance, and contributing to nutrition and physiology research (including presenting and publishing original work) within the Alaska Department of Fish and Game. The Wildlife Biologist position is permanent and includes healthcare, retirement, and generous leave--~4 weeks accrued in the first year. The recruitment will be posted in September or October on [Workplace Alaska](#); interested persons should sign up there for job alerts to be notified once the recruitment opens. For more information, contact the hiring manager at Kris-tin.denryter@alaska.gov



NEWG X / Twitter Account!



NEWG officially has a twitter account! Check us out at [@NEWG_TWS](#)

NEWG INITIATES SCHOLARSHIP PROGRAM!

In spring 2023, the NEWG Executive Board made the decision to start a scholarship program, including a scholarship committee that could advertise opportunities and process applications. Fast forward through summer, and we have our first ever NEWG scholarship winners! Annually, the Executive Board will decide whether to put NEWG funds toward scholarships that support workshop or conference attendance, or both. Generally, the focus will be on students or young professionals. With this year's skills workshop scheduled for November in Kingsville, Texas, it was a perfect test run of our new scholarship program.

We received 9 applications from the U.S. and Canada, and we were able to award 3 scholarships of \$500 each to offset the cost of registration for attending the workshop! The Executive Board planned to award 2 scholarships, but Dr. David Hewitt and the Caesar Kleberg Wildlife Research Institute were able to leverage their partnership with Lyssy & Eckel Feeds to help us offer a third scholarship! Our inaugural scholarship winners were Jocelyn Biro (Ph.D. Student, Wilfrid Laurier University), Lindsay Millward (Ph.D. Student, Oregon State University), and Lara Mengak (Ph.D. Student, Oregon State University). All three are registered for the workshop and excited for the skills and experiences they will gain from it. Following completion of the workshop, they will each provide a summary of their experiences that will run in a future newsletter. Additionally, as a condition of the scholarship program, all three will work with the Executive Board to serve on a NEWG committee for the next year.

INVITATION TO SUBMIT!

Rachel Cook and Lisa Shipley will be guest editing a special issue in the journal *Animals: Integrating Nutrition into Management of Large Ungulate Populations*

The aim of this Special Issue is to gather 12–20 articles with state-of-the-art knowledge focused on integrating nutrition into the management of large ungulate populations: successes, failures, or inherent challenges. Both original research papers or well-researched viewpoint or review papers are welcome in this Special Issue. You can find the full announcement at: https://www.mdpi.com/journal/animals/special_issues/OXBJ51O8ON The deadline for manuscript submissions is January 31, 2024. If interested in submitting a manuscript for this issue, please send a 200-300 word abstract to Rachel Cook (rachierae@gmail.com) including a few sentences on how your paper specifically integrates nutrition into management of large ungulates.





LAB ANALYSES FOR NUTRITION WORK

We are still looking for tips and suggestions for our comprehensive list of analyses for nutrition work. We are close to finishing our preliminary list of laboratories in the USA and Canada that offer *in vitro* digestibility assays, bomb calorimetry and sequential fiber analysis, tannin precipitation, etc. and provide a key to help you determine which assays you need and which labs can perform those assays.

If you have some good tips on where you've sent forage samples, please email us at tws.nutritional.ecology@gmail.com and we'll add them to our list.

Right: Sampling forage quality at Starkey Experimental Forest and Range. Photo: Jennifer Merems.



RECENT AND RELEVANT LITERATURE

The list of recent publications provided is for informational purposes only and inclusion on the list should not be considered endorsement by NEWG

- Beltran, R.S., Hernandez, K.M., Condit, R., Robinson, P.W., Crocker, D.E., Goetsch, C., Kilpatrick, A.M. and Costa, D.P. (2023). Physiological tipping points in the relationship between foraging success and lifetime fitness of a long-lived mammal. *Ecology Letters*.
- Besser, A. C., Manlick, P. J., Blevins, C. M., Takacs-Vesbach, C. D., & Newsome, S. D. (2023). Variation in gut microbial contribution of essential amino acids to host protein metabolism in a wild small mammal community. *Ecology Letters*.
- Fry, T. L., Friedrichs, K. R., Ketz, A. C., Duncan, C., Van Deelen, T. R., Goldberg, T. L., & Atwood, T. C. (2023). Long-term assessment of relationships between changing environmental conditions and the physiology of southern Beaufort Sea polar bears (*Ursus maritimus*). *Global Change Biology*.
- Gasch, K., Habe, M., Krauss, J. S., Painer-Gigler, J., Stalder, G., & Arnold, W. (2023). The Influence of Photoperiod, Intake of Polyunsaturated Fatty Acids, and Food Availability on Seasonal Acclimatization in Red Deer (*Cervus elaphus*). *Animals*.
- Hobson, K. A. (2023). Stable isotopes and a changing world. *Oecologia*.
- Kelsey, K. C., Højlund Pedersen, S., Leffler, A. J., Sexton, J. O., & Welker, J. M. (2023). Snow and vegetation seasonality influence seasonal trends of leaf nitrogen and biomass in Arctic tundra. *Ecosphere*.
- Lamb, S., McMillan, B.R., van de Kerk, M., Frandsen, P.B., Hersey, K.R. and Larsen, R.T. (2023). From conception to recruitment: Nutritional condition of the dam dictates the likelihood of success in a temperate ungulate. *Frontiers in Ecology and Evolution*.
- LaSharr, T. N., Jakopak, R. P., Dwinnell, S. P., Rafferty, R. T., Thonhoff, M., Kaiser, R. C., ... & Monteith, K. L. (2023). Maternal effects and the legacy of extreme environmental events for wild mammals. *Ecology*.
- LaSharr, T. N., Dwinnell, S. P., Jakopak, R. P., Randall, J., Kaiser, R. C., Thonhoff, M., ... & Monteith, K. L. (2023). Behavior, nutrition, and environment drive survival of a large herbivore in the face of extreme winter conditions. *Ecosphere*.
- Monzingo, D.S., J.G. Cook, R.C. Cook, and L.A. Shipley. (2023). Influences of succession and biogeoclimate on forage resources for elk in northern Idaho. *Northwest Science*.
- Ortega, A. C., LaSharr, T. N., Kauffman, M. J., & Monteith, K. L. (2023). Energy expenditure of fat in a large herbivore is non-linear over winter. *Ecology*.
- Penk, S.R., Sadana, P., Archer, L.C., Pagano, A.M., Cattet, M.R., Lunn, N.J., Thiemann, G.W. and Molnár, P.K. (2023). A body composition model with multiple storage compartments for polar bears (*Ursus maritimus*). *Conservation Physiology*.
- Rode, K.D., Taras, B.D., Stricker, C.A., Atwood, T.C., Boucher, N.P., Durner, G.M., Derocher, A.E., Richardson, E.S., Cherry, S.G., Quakenbush, L. and Horstmann, L. (2023). Diet energy density estimated from isotopes in predator hair associated with survival, habitat, and population dynamics. *Ecological Applications*.
- Ruprecht, J., Wisdom, M. J., Clark, D. A., Rowland, M. M., & Levi, T. (2023). Density-dependent changes in elk resource selection over successional time scales following forest disturbance. *Ecological Applications*.
- Wagler, B.L., Smiley, R.A., Courtemanch, A.B., Lutz, D., McWhirter, D., Brimeyer, D., Hnilicka, P., Robinson, T.J. and Monteith, K.L. (2023). Implications of forage quality for population recovery of bighorn sheep following a pneumonia epizootic. *The Journal of Wildlife Management*.

Have you recently published on nutritional ecology? [Send us a link](#) to your article to be included in the next newsletter!