



LIFE SCIENCE NEWS

Published by the Institute of Arctic Biology

Monday, 2 September 2013

Announcements

[Alaska tundra shows surprising resilience after unprecedented fire.](#) Despite the size and severity of the massive 2007 Anaktuvuk River fire on Alaska's North Slope, much of the arctic vegetation has recovered and the tundra is likely to return to its pre-fire condition according to IAB ecologist Sydonia "Donie" Bret-Harte and colleagues in a July 2013 paper in *Philosophical Transactions of the Royal Society B*.

[National Science Foundation program solicitation.](#) Deadline Dec. 6, 2013. Arctic Natural Sciences; Arctic Social Sciences; Arctic System Science; Arctic Observing Network and Polar Cyberinfrastructure.

Events and Seminars

2 September 2013

- **Notice: Labor Day Holiday**

5 September 2013

- **Notice: First day of classes**

6 September 2013

- **Seminar: New Perspectives in Bird Migration**
Scott McWilliams

11:00AM
301 Murie Building

- **IAB/BW Welcome Back BBQ**

5:30PM
Murie Building Plaza

Travel

- **Abels, Mike**, 8/31/13 - 9/2/13, Toolik Field Station, Irving-Scholander Trip

- **Barnes, Brian**, 8/31/13 - 9/3/13, Toolik Field Station, Irving-Scholander trip

- **Bersamin, Andrea**, 9/7/13 - 9/14/13, YK Delta, Data collection

- **Bias, Salena**, 9/8/13 - 9/13/13, YK Delta, Data collection

- **Brown, Casey**, 8/1/13 - 1/1/14, Delta Jct, AK, field work

- **Cable, William**, 6/1/13 - 10/1/13, Bonanza Creek, Field Work; 6/1/13 - 10/1/13, Delta Junction, Field Work

- **Christa Mulder Group**, 6/7/13 - 9/20/13, Bonanza Creek, Weekly phenology checks

LIFE SCIENCES SEMINAR

Friday, 6 September 2013

3:00 PM - Murie Building, Murie Auditorium

Elements to ecology: Stable isotopes reveal much about the ecology and physiology of migratory bird

Scott McWilliams, Professor

Program in Wildlife and Conservation Biology, University of Rhode Island

- **Dunlap, Kriya Group**, 7/4/13 - 10/1/13, Steese Hwy, Yukon River and Salcha, Field work to collect berries, salmon and canine blood samples
- **Edgar, Colin**, 8/23/13 - 9/20/13, Cherskiy, Russia, Install new instruments and perform annual maintenance of equipment at research site
- **Frey, Graham**, 7/1/13 - 10/31/13, Denali Highway, Alaska, Field work
- **Harrington, Phill**, 8/31/13 - 9/2/13, Toolik Field Station, Meetign with TFS/IAB personnel
- **Huettmann, Falk**, 6/29/13 - 9/6/13, Nicaragua, Costa Rica, Germany and Russia, field school, field work, plenary speaker
- **Katie Spellman Group**, 6/7/13 - 9/20/13, Bonanza Creek, Weekly phenology checks
- **Lubchenco, Jane**, 8/28/13 - 9/4/13, Fairbanks, AK, Irving-Scholander Memorial Lecturer
- **McWilliams, Scott**, 9/5/13 - 9/6/13, Fairbanks, Life Sciences Seminar Speaker
- **Nu, Jennifer**, 9/7/13 - 9/14/13, YK Delta, Data collection
- **Orr, Eliza**, 9/8/13 - 9/14/13, YK Delta, Data collection
- **Peterson, Rachell**, 8/31/13 - 9/2/13, Toolik Field Station, Meet with TFS/IAB personnel
- **Suwal, Madan**, 7/10/13 - 10/10/13, Fairbanks, AK, Contract employment
- **Thoms, Marie**, 8/31/13 - 9/2/13, Toolik Field Station, Staff Orientation
- **Winterstein, Mark**, 8/22/13 - 10/15/13, Delta Jct, Tok, Manley, Dalton Hwy, field work, extensive site network installation

Grants and Awards

Go to the IAB funding opportunities webpage, www.iab.uaf.edu/research/funding_opps.php, for the latest on available grants, scholarships, fellowships, and awards.

New IAB Publications

Legend: **f**=faculty, **r**=research scientist, **s**=staff, **e**=emeritus, **a**=affiliate, **g**=grad student, **p**=post-doc, **u**=undergrad student, **h**=high school student

Kovach, R.P. (g), Gharrett, A.J., and **Tallmon, D.A. (r)** (2013). Temporal patterns of genetic variation in a salmon population undergoing rapid change in migration timing. *Evolutionary Applications* 6:795-807 [IAB 3720].

Bret-Harte, M.S. (f), **Mack, M.C. (r)**, **Shaver, G.R. (r)**, **Huebner, D.C. (s)**, Johnston, M., Mojica, C.A., Pizano, C., and Reiskind, J.A. (2013). The response of Arctic vegetation and soils following an unusually severe tundra fire. *Philosophical Transactions of the Royal Society B: Biological Sciences* 368: [IAB 3721].

Oberbauer, S.F., Elmendorf, S.C., Troxler, T.G., Hollister, R.D., Rocha, A.V., **Bret-Harte, M.S. (f)**, Dawes, M.A., Fosaa, A.M., Henry, G.H.R., Hoyer, T.T., Jarrad, F.C., Jonsdottir, I.S., Klanderud, K., Klein, J.A., Molau, U., Rixen, C., Schmidt, N.M., **Shaver, G.R. (r)**, Slider, R.T., Totland, O., Wahren, C.-H., and Welker, J.M. (2013). Phenological response of tundra plants to background climate variation tested using the International Tundra Experiment. *Philosophical Transactions of the Royal Society B: Biological Sciences* 368: [IAB 3722].

Jafarov, E.E., Romanovsky, V.E., **Genet, H. (p)**, **McGuire, A.D. (f)**, and Marchenko, S.S. (2013). The effects of fire on the thermal stability of permafrost in lowland and upland black spruce forests of interior Alaska in a changing climate. *Environmental Research Letters* 8: [IAB 3723].

Sheriff, Michael J. (p), Fridlinger, Robert W., **Toien, Oivind (r)**, **Barnes, Brian M. (f)**, and Buck, C. Loren (2013). Metabolic rate and prehibernation fattening in free-living Arctic ground squirrels. *Physiological and Biochemical Zoology* 86:515-527 [IAB 3724].

Thompson, D.P. (g) and **Barboza, P.S. (f)** (2013). Responses of caribou and reindeer (*Rangifer tarandus*) to acute food shortages in spring. *Can. J. Zool.* 610-618 [IAB 3726].

Qi, M., Wang, P., O'Toole, N., **Barboza, P.S. (f)**, Ungerfeld, E., **Leigh, M.B. (f)**, Selinger, L.B., Butler, G., Tsang, A., McAllister, T.A., and Forster, R.J. (2011). Snapshot of the Eukaryotic Gene

Expression in Muskoxen Rumen—A Metatranscriptomic Approach. PLoS ONE 6:e20521EP - [IAB 3727].

Ashley, N.T., **Barboza, P.S. (f)**, Macbeth, B.J., Janz, D.M., Cattet, M.R.L., Booth, R.K., and Wasser, S.K. (2011). Glucocorticosteroid concentrations in feces and hair of captive caribou and reindeer following adrenocorticotrophic hormone challenge. *General and Comparative Endocrinology* 172:382-391 [IAB 3728].

Wang, P., Qi, M., **Barboza, P. (f)**, **Leigh, M.B. (f)**, Ungerfeld, E., Selinger, L.B., McAllister, T.A., and Forster, R.J. (2011). Isolation of high-quality total RNA from rumen anaerobic bacteria and fungi, and subsequent detection of glycoside hydrolases. *Can. J. Microbiol.* 57:590-598 [IAB 3729].

Gustine, D.D. (g), **Barboza, P.S. (f)**, Lawler, J.P., Arthur, S.M., Shults, B.S., Persons, K., and Adams, L.G. (2011). Characteristics of foraging sites and protein status in wintering muskoxen: insights from

isotopes of nitrogen. *Oikos* 120:1546-1556 [IAB 3730].

Gustine, D.D. (g), **Barboza, P.S. (f)**, Lawler, J.P., Adams, L.G., **Parker, K.L. (r)**, Arthur, S.M., and Shults, B.S. (2012). Diversity of nitrogen isotopes and protein status in caribou: implications for monitoring northern ungulates. *Journal of Mammalogy* 93:778-790 [IAB 3731].

Taillon, Joelle, **Barboza, Perry S. (f)**, and Cote, Steeve D. (2013). Nitrogen allocation to offspring and milk production in a capital breeder. *Ecology* 94:1815-1827 [IAB 3732].

Clauss, Marcus, Lechner, Isabel, **Barboza, Perry (f)**, Collins, William, Tervoort, Theo A., Sudekum, Karl-Heinz, Codron, Daryl, and Hummel, Jurgen (2011). The effect of size and density on the mean retention time of particles in the reticulorumen of cattle (*Bos primigenius f. taurus*), muskoxen (*Ovibos moschatus*) and moose (*Alces alces*). *British Journal of Nutrition* 105:634-644 [IAB 3733].

See the [UAF Cornerstone](http://cornerstone.uaf.edu) for more news and events (<http://cornerstone.uaf.edu>).

Quote of the Day

Wherever you go, go with all your heart.

[Confucius](#)