

SCHOOL of FORESTRY

Monthly Newsletter

AUGUST 2021



NAU FORESTRY PROGRAM

The NAU forestry program is a vibrant, diverse and active place of learning and research and a feeling of community. Here are just some of the activities this month of our internationally distinguished faculty and researchers.

UPCOMING SOCIAL EVENTS

- August 20-** FGSA Potluck at Thorpe Park at 4:00 p.m.
- August 23-** First Day of Fall Semester
- August 25-** Seminar Presentation by Pete Fulé



NAU SCHOOL OF FORESTRY

The School of Forestry is a gateway to a fulfilling forestry career; it's also an invitation to create sustainable solutions for the natural world and outdoor enjoyment for years to come.



PUBLICATIONS THIS MONTH
(PAGE 2)



AWARDS & GRANTS
(PAGE 3)



PRESENTATIONS &
OUTREACH (PAGE 3 &
4)



GRADUATE STUDENT
SPOTLIGHTS (PAGE 4)



UNDERGRADUATE
STUDENT SPOTLIGHTS
(PAGE 4)

For more information visit
nau.edu/forestry





PUBLICATIONS: [NAU Authors in Bold, * Undergraduate Student]

Fulé, P.Z., Garkoti, S.C., and R.L. Semwal. 2021. Frequent burning in chir pine forests, Uttarakhand, India. *Fire Ecology* 17:20, <https://doi.org/10.1186/s42408-021-00106-3>.

Joharchi, O., I.I. Marchenko, **R.W. Hofstetter** and V.V. Abramov. 2021. New data on two gamasid mites (Acari: Mesostigmata from Russia). *Acarina* 29(1): 81-93. <https://acarina.utmn.ru/journal/release/2021/29-1/1063115/>

Torquato, L.P., Hernández, R.E., Duchesne, I., **Auty, D.** and Achim, A., 2021. Black spruce trees from uneven-aged, old-growth stands produce more dimensionally stable wood than trees from fire-origin even-aged stands. *Wood Science and Technology*, pp.1-27.

MacBean, N., R.L. Scott, J. Biedermann, P. Peylin, **T. Kolb**, M. Litvak, P. Krishman, T. Meyers, D.J.P. Moore. 2021. Dynamic global vegetation models underestimate net CO₂ flux mean and inter-annual variability in dryland ecosystems. *Environmental Research Letters*: <https://iopscience.iop.org/article/10.1088/1748-9326/ac1a38>

Moler, E.V.R., T. Kolb, A. Brady, B.N Palmiero, T.R. Wallace, K.M. Waring, A.V. Whipple. 2021. Plant developmental stage influences responses of *Pinus strobiformis* seedlings to experimental warming. *Plant-Environment Interactions* 2(3): 148-164. <https://doi.org/10.1002/pei3.10055>

Saatchi et al., 2021, Detecting vulnerability of humid tropical forests to multiple stressors. *One Earth* 4, 988–1003

Kim, Y.S., Rodrigues, M. and Robinne, F.N., 2021. Economic drivers of global fire activity: A critical review using the DPSIR framework. *Forest Policy and Economics*, 131, p.102563

Bowker, M.A., Rengifo-Faiffer, M.C., Antoninka, A.J., Grover, H.S., Coe, K.K., Fisher, K., Mishler, B.D., Oliver, M., Stark, L.R. 2021. Community composition influences ecosystem resistance and productivity more than species richness or intraspecific diversity. *Oikos* 130:1399-1410.

Blackburn, R.C., Buscaglia, R. and Sanchez Meador, A., 2021. Mixtures of airborne lidar-based approaches improve predictions of forest structure. *Canadian Journal of Forest Research*, (ja). Link: <https://cdnsiencepub.com/doi/10.1139/cjfr-2020-0506>



NEW AWARDS:

Faith Walker \$225,000 three-year grant from the Arizona Department of Health Services for my project entitled ""Rabies virus surveillance using non-traditional sample types collected from the human-wildlife interface"".



PRESENTATIONS/OUTREACH:

Catrin Edgeley was interviewed by Moab community radio KZMU about how community relationships with the landscape might change after the Pack Creek Fire <https://www.kzmu.org/tuesday-june-22-2021/>

NAU wrote a news article about **Cat's recent NCAR/NSF grant** <https://news.nau.edu/edgeley-wildfire-evacuation/#.YNM9DxNKiBZ>

Bailey, L.N., Antoninka, A.J., Bowker, M.A. 2021. Successful inoculation of biocrust on gypsum soils does not influence vascular plant establishment. ESA 2021.

Rengifo-Faiffer, C., Bowker, M., Antoninka, A. 2021. *Syntrichia caninervis* morphological plasticity in response to climate disturbances. ESA 2021.

Bowker, M.A., Rengifo-Faiffer, M.C., Antoninka, A.J., Grover, H.S., Coe, K.K., Fisher, K., Mishler, B.D., Oliver, M., Stark, L.R. 2021. Community composition influences ecosystem resistance and productivity more than species richness or intraspecific diversity. ESA 2021

Matt Bowker was part of the multi-disciplinary, cross-unit "CrustFlux" team that co-mentored two students from NAU's Astronomy's REU program. **Andrew Richardson, Jim LeMoine, Mark Salvatore, David Trilling, Mariah Carbone and George Koch** were all part of this collaboration, representing Astronomy, ECOSS, SICCS and Forestry. The project focused on gas exchange and spectral properties of developing biocrusts to inform off-world detection of life. The students presented their research talks on August 3 2021.

Pete Fulé made the following presentations to local/national audiences, online or in person:

Fulé, P.Z. 2021. Podcast: Protecting Morocco's Rarest Forests by Dr. Peter Fulé. Tangier American Legation Institute for Moroccan Studies, June 25, 2021, Tangier, Morocco.
<https://legation.org/podcast-protecting-moroccos-rarest-forests-by-dr-peter-fule/>

Fulé, P.Z. 2021. Protecting Morocco's rarest forests. Invited presentation to the Tangier American Legation Institute for Moroccan Studies, June 12, 2021, Tangier, Morocco.

Fulé, P.Z., and L. Taiqui. Principes et Applications de la Dendrochronologie. Graduate College presentation, Université Abdelmalek Essaâdi, Faculté des Sciences, May 17, 2021.

Fulé, P.Z. Panelist for Fulbright Morocco: Graduate and post-graduate scholarships to the United States. Université Abdelmalek Essaâdi, Tétouan, Morocco. May 7, 2021.

Fulé, P.Z. Earth Day 2021: Video presentation for American Cultural Association in Morocco.

https://www.facebook.com/AmericanCulturalAssociation/videos/154815016566888/?_rdc=1&_rdr. April 22, 2021.

Fulé, P.Z. English At Home Morocco: invited guest. Presentation on language, research, and Earth Day themes for Moroccan secondary students. April 21, 2021. American Language Center, Mohammedia, Morocco.

Fulé, P.Z. Fire-Climate Interactions at Stand to Landscape Scales. Presentation for US Forest Service International Program and Moroccan partners, April 5, 2021. Tétouan, Morocco.



GRADUATE STUDENT SPOTLIGHT:

Cristina Rengifo-Faiffer presented a invited talk in the Symposium “Dimensions of Biodiversity in a dryland moss: *Syntrichia* from genomes to ecosystems” at the BL2021 conference, a joint meeting of multiple bryological and lichenological societies.

Rengifo-Faiffer et al. 2021. Moss-dominated biocrusts show successional reversal and compositional resistance after persistent rainfall reduction. BL 2021.

Anita Antoninka and Lydia Bailey mentored Natalia Morales Lopez through NAU Biology’s REU program. Natalia presented a poster about her research on August 5 2021.

Natalia Morales Lopez, Lydia Bailey, Anita Antoninka, Matthew Bowker. 2021. Establishment of endangered gypsum forbs of the Mojave Desert with the help of soil communities. Biology REU symposium, NAU.



UNDERGRADUATE STUDENT SPOTLIGHT:

Kat Taylor. 2021. Change in biocrust CO₂ measurements over 5 weeks of observations. Astronomy REU symposium, NAU.

Gary Kong. 2021. Analysis of biocrust activity in light and dark conditions. Astronomy REU symposium, NAU.

Kimberly Merrill and Sierra Highley. Aug 2021. Pinyon resin defense against the fungus *Ophiostoma ips*. REU symposium, NAU.

