

TABT Updates and URLs of the Week for January 2019

Item 1 – Professional Development Opportunity

TABT Spring Break MiniTrips

Do you want to see iconic Texas wildlife, learn about farming, ranching and history from experts? TABT is sponsoring two Spring Break MiniTrips to Anahuac, Texas. The cost is \$250.00 per person (plus your travel and meals) for the trip. On conclusion you'll be eligible for 13 clock hours of instruction provided by TABT with approval of Texas Education Agency. If you're interested, in reserving a spot for Trip #1 (10-13 March, 2019) or Trip #2 (17-20 March, 2019) contact Alton Biggs at altonb@ix.netcom.com.

Item 2 – Professional Development Opportunity

Genes in Space – Houston

TABT friend [miniPCR](#) and partners have created [Genes in Space](#), a free science competition where teachers and students can design DNA research proposals for space. St. Thomas High School in Houston will be hosting a workshop on February 8th for teachers to get hands-on experience with the program materials. For more information, contact Daniel Bryant, Daniel.bryant@sths.org or click on the following link to register: <https://goo.gl/forms/aiFiGgPxgQLyHpLn1>

Item 3 – Science Update

Young Chen, *et al.*, “Thermal stress induces glycolytic beige fat formation via a myogenic state”

(*Nature*, 565:7738, 10 January 2019, Pages 180-185)

Some fat cells convert energy into heat, so targeting them to induce weight loss is appealing. The discovery that a subset of the cells burns glucose, rather than both glucose and lipids, could improve our ability to do just that.

L.A. Ashton, *et al.*, “Termites mitigate the effects of drought in tropical rainforest”

(*Science*, 363:6423, 11 January 2019, Page 174-177)

Removing termites from plots in a Malaysian forest reveals their role in maintaining ecosystem function during drought.

Item 4 – Quote of the Week for 11 January 2019

“We are all of us walking communities of bacteria. The world shimmers, a pointillist landscape made of tiny living beings.” Lynn Margulis, *American evolutionary biologist and author*

Item 5 – URL of the Week for 11 January 2019

DNA Interactive

This site, developed by a team at Cold Spring Harbor Laboratory and funded by HHMI, provides students and teachers with an interactive history of genetics and the discovery of DNA. A DNAi Teacher Guide includes 15 ready to use lessons for the classroom.

<http://www.dnai.org/>

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Item 2 – Professional Development Opportunity

TABT Recommends Our Affiliates

Texas Association of Biology Teachers (TABT) is an affiliate of both the Science Teachers Association of Texas (STAT) and the National Association of Biology Teachers (NABT). If you aren't a member of one or the other, you should give them your consideration. Both have great materials and are leaders in the field. You can find STAT at <http://www.statweb.org/> and NABT at <http://www.nabt.org/>.

Item 3 – Science Update

Shinnosuke Higuchi, *et al.*, “Inner ear development in cyclostomes and evolution of the vertebrate semicircular canals”

(Nature, 565:7739, 17 January 2019, Pages 374-350)

The differentiation of the inner ear in the lamprey *Lethenteron camtschaticum* and hagfish *Eptatretus burgeri* sheds light on the evolution of the semicircular canals of jawed vertebrates.

Heather Grab, *et al.*, “Agriculturally dominated landscapes reduce bee phylogenetic diversity and pollination services”

(Science, 363:6424, 18 January 2019, Page 282-284)

Studies of pollinators and crops suggest that phylogenetic loss is not equivalent to species loss in agricultural systems.

Item 4 – Quote of the Week for 21 January 2019

“Science begets knowledge; opinion begets ignorance.” Hippocrates, *Greek physician*

Item 5 – URL of the Week for 21 January 2019

Royalty Free Images

The U.S. Geological Survey curates a sizeable collection of public domain photographs covering not just rocks, volcanos, national parks, and earthquakes, but fascinating early images of native cultures, political figures, historical events, and more.

<https://library.usgs.gov/photo/#/>

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Item 1 – Professional Service Opportunities

TABT Committees and Nominations

TABT is in need of one volunteer for each of the following committees: Nominations Committee, Publications Committee, Election Committee, Long Range Planning Committee, Awards Committee, Honorary Membership Committee, and TABT Booth Committee. If you are interested in volunteering for any of these committees - or for the positions of TABT President Elect or TABT Secretary-Treasurer - please contact Claire Vollmar at vollmars@satx.rr.com.

Item 2 – Science Update

Yi-Wei Chen, *et al.*, “Southward propagation of Nazca subduction along the Andes”

(Nature, 565:7740, 24 January 2019, Pages 441-447)

Tectonic plates lost to the deep mantle carry a record of ancient surface tectonic processes. A method for retrieving such records has been developed that could clarify the links between tectonics and mountain building.

Youbong Hyun, *et al.*, “A regulatory circuit conferring varied flowering response to cold in annual and perennial plants.”

(Science, 363:6425, 25 January 2019, Page 409-412)

Annual and perennial plants diverge in flowering behavior by varying the balance between shared flowering-control pathways.

Item 3 – Quote of the Week for 28 January 2019

“It is the function of science to discover the existence of a general reign of order in nature and to find the causes governing this order. And this refers in equal measure to the relations of man – social and political – and to the entire universe as a whole.” Dmitri Mendeleev, *Russian chemist*

Item 4 – URL of the Week for 28 January 2019

Wisconsin Fast Plants

Teachers can use Wisconsin Fast Plants resources to support classroom inquiry. The site has numerous lessons for every grade level. Consider participating in the Plants in Space program by growing control plants in your classroom and comparing them to plants being grown in on the International Space Station. Check out classroom activities like Farming in Space that motivate kids with a real problem to solve: supporting long-term space flight.

<https://fastplants.org/origin/>

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