

TABT UPDATES AND URLS OF THE WEEK FOR APRIL 2024

Item 1 – Professional Development Opportunity

TABT Announces Call for the TABT Strand at CAST

You can be one of the hundreds of session presenters who will generously share their teaching strategies at CAST November 14-16 in San Antonio. TABT invites you to turn your innovative strategies and lesson plans into proposals for sessions that can benefit educators and students across Texas and beyond. The call for proposals opens April 3. The call closes May 31. Presenters will be notified of acceptance after June 30 and of the schedule by mid-August. Begin preparation now and be on the lookout for additional information about how to submit a TABT Strand Proposal in an upcoming email. To let us know of your intent to submit, contact Alton Biggs at altonb@gmail.com.

Item 2 – Science Update

Ferdinand Marletaz, et al., “The hagfish genome and the evolution of vertebrates”

(*Nature*, 627:8005, 28 March 2024, Pages (811-820) [OPEN ACCESS](#))

A chromosome-scale genome assembly for the hagfish *Eptatretus atami*, combined with a series of phylogenetic analyses, sheds light on ancient polyploidization events that had a key role in the early evolution of vertebrates.

Franz Meitinger, et al., “Control of cell proliferation by memories of mitosis”

(*Science*, 383:6690, 29 March 2024, Pages (1441-1448))

A study reveals how cells measure time spent in mitosis and relay that information to daughter cells.

Item 3 – Quote of the Week for 1 April 2024

“We’re often silent. We don’t yell and we don’t complain. We’re patient, as always. Because we don’t have the words yet.” – *Svetlana Alexievich, Belarusian journalist and essayist*

Item 4 – URL of the Week for 1 April 2024

HowToSmile.org

The link below takes you to the main topics of a huge library of resources, scroll down to Life Sciences for biology-specific resources. When you click on an activity, you will get information about how long it will take, the age range it appeals to, and how long it will take to prepare.

<https://www.howtosmile.org/topics>

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Item 2 – Science Update

Roel van Klink, *et al.*, “Disproportionate declines of formerly abundant species underlie insect loss”

(*Nature*, 628:8007, 11 April 2024, Pages (359-364) [OPEN ACCESS](#))

An analysis of more than 500 sites distributed worldwide finds that declines in the abundance of terrestrial insects are attributable mainly to decreases in species that were formerly abundant, rather than being the result of losses of rare species.

Tyler Coale, *et al.*, “Nitrogen-fixing organelle in a marine alga”

(*Science*, 384:6692, 12 April 2024, Pages (1441-1448))

Many partnerships have been formed between nitrogen-fixing microbes and carbon-fixing eukaryotes that need nitrogen to grow. The possibility of a eukaryote with a nitrogen-fixing organelle derived from endosymbiosis, which is called a nitroplast, has been speculated.

Item 3 – Quote of the Week for 15 April 2024

"The art of life is to know how to enjoy a little and to endure very much." – William Hazlitt, English essayist

Item 4 – URL of the Week for 15 April 2024

Everglades Wildlife Watch

The Everglades Wildlife Watch is a project that gives you a glimpse into the wild world of the Florida Everglades! By combining in-the-field volunteering with online participation, researchers can paint a region-wide picture of the types of animals that call South Florida home. Organized by the Florida Fish and Wildlife Conservation (FWC) Commission, this project focuses on improving our understanding of wildlife population patterns on the FWC's Wildlife Management Area (WMA) System. Researchers need your help in identifying the animals captured on camera to give them the most accurate picture of wildlife activity in these areas.

[Participate Here](#)

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ITEM 2 – Organizational Notes

TABT Business

1. Where will TABT travel in the summer of 2025? Help us decide by voting here: <https://forms.gle/fspQPMp7mvDovEY18>
2. Any members interested in volunteering to manage the TABT website, please email TABT President Chris Carrell at ccarrell@llanoisd.org.

Item 3 – Science Update

Joeri Zwerts, et al., “FSC-certified forest management benefits large mammals compared to non-FSC” (*Nature*, 628:8008, 18 April 2024, Pages (563-568) [OPEN ACCESS](#))

Camera-trap images of 55 mammal species in 14 logging concessions in western equatorial Africa reveal greater animal encounter rates in FSC-certified than in non-certified forests.

Liming Zhang, et al., “A naturally isolated symbiotic bacterium suppresses flavivirus transmission by Aedes mosquitoes”

(*Science*, 384:6693, 19 April 2024, Pages (OL))

Researchers examined the microbiota of Aedes mosquitoes for potential agents to control dengue and Zika virus transmission.

Item 4 – Quote of the Week for 22 April 2024

“If you love to work, and you have a goal, you’ll get there.” – *Estee Lauder, American businesswoman*

Item 5 – URL of the Week for 22 April 2024

Population Education

Population Education, a program of Population Connection, provides K-12 teachers with innovative, hands-on lesson plans and professional development to teach about human population growth and its effects on the environment and human well-being.

<https://populationeducation.org/>

Item 6 – Thanks To Our Sponsors

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Item 3 – Science Update

Neil Rosser, et al., “Hybrid speciation driven by multilocus introgression of ecological traits”
(*Nature*, 628:8009, 25 April 2024, Pages (811-817) [OPEN ACCESS](#))

Mating between different species has often been considered an evolutionary dead end, but a study in longwing butterflies suggests that such hybridization could underlie the origins of a new species.

Carolin Sommer-Trembo, et al., “The genetics of niche-specific behavioral tendencies in an adaptive radiation of cichlid fishes”

(*Science*, 384:6694, 26 April 2024, Pages (470-475))

Researchers looked in depth at 57 of these cichlid species with regard to their behavior, ecomorphology, and genomics. They found that a tendency to explore, was related to niche adaptation, and they identified a regulatory gene that is highly associated with this behavior. These findings suggest the existence of an adaptive syndrome driven in part by a tendency to explore what is new.

Item 4 – Quote of the Week for 29 April 2024

“To love what you do and feel that it matters – how could anything be more fun?” – Katharine Graham, American newspaper publisher

Item 5 – URL of the Week for 29 April 2024

The Jackson Laboratory

The Jackson Laboratory Genomic Education division specializes in developing lessons, activities, and hands-on laboratory protocols for teaching and learning about genetics and genomics.

<https://www.jax.org/education-and-learning/high-school-students-and-undergraduates/teaching-the-genome-generation/stem-learning-resources>

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