



NATURE NOTES

Dedicated to the Enjoyment and Conservation of the Natural Beauty of Sun City Texas at Georgetown

VOLUME 24

Issue 1

January 2021

The Nature Club will hold Zoom meetings as a result of Covid 19 restrictions. These are informative and fun to attend. Last minute details and reminders are sent via e-mail. Hope to see you in a future meeting.

Scheduled Zoom meetings as of January 1, 2021

Tuesday, Jan 19, 2:30 p.m., "Native Plants in Sun City" to be presented by Larry Fowler.

Tuesday, Feb 2, 2:30 p.m. "Mammals in Our Midst" to be presented by Steve Kelley.

Past Zoom meetings are available online at [this link](#).

****Watch you e-mail for Zoom Invitations and reminders.****

MEMBERSHIP DUES: \$8 for 2021

Dues include our monthly programs and all Special Interest Group programs and activities.

SPECIAL INTEREST GROUPS (SIGs)

Nature Club activities are posted on the Nature Club website calendar. E-mails are sent to Club members only.



AMPHIBIANS, REPTILES & MAMMALS

Watch for emails concerning future meetings

SIG Chair: Steve Kelly

REPTILE ID, RELOCATION & MAPPING

FREE service, call:

- Steve Kelley 512-639-0539
- Jim Christiansen 512-868-3504
- John Leek 713-825-0145
- Joe Plunkett 774-226-0810
- City of Georgetown Animal Control 512-930-3592



We encourage residents to leave harmless, beneficial reptiles in their landscapes, but call us so we can identify and map all reptiles.

ASTRONOMY SIG

Watch for Special Viewing announcements.



No meetings are currently scheduled.

Watch for emails about the resumption of activities

SIG Chairs: Richard Wagoner & David Lingo

BIRDING SIG

No meetings are currently scheduled.

Watch for emails about the resumption of activities.



BIRD WALKS

No walks are currently scheduled. Watch for emails about the resumption of activities.

SIG Chairs: Ed Rozenburg & Martin Byhower



BUTTERFLY/MOTH SIG

No meetings are currently scheduled. Watch for emails about the resumption of activities.

BUTTERFLY WALKS

No walks are currently scheduled. Watch for emails about the resumption of activities

SIG Chair: Ed Rozenburg



ENVIRONMENTAL SIG

No meetings are currently scheduled.

Watch for emails about the resumption of activities

SIG Chair: Pamela Tanner



GEOLOGY SIG

No meetings are currently scheduled.

Watch for emails about the resumption of activities

SIG Chair: Paul Swetland

NATIVE PLANTS SIG

No meetings are currently scheduled. Watch for emails about the resumption of activities

SIG Chair: Larry Fowler



The science events to watch for in 2021

Climate change and COVID-19 vaccines are among the themes set to shape research.

Climate comeback

2021 looks set to be a pivotal year for the fight against climate change. US president-elect Joe Biden has made clear that he will move to restore the country's leadership in that regard, including by rejoining the Paris climate agreement to fight global warming. (President Donald Trump pulled the United States out of the accord, and the nation officially left the day after the 2020 election.) A key moment for climate negotiations will come at the United Nations' climate conference in Glasgow, UK, in November. Countries will make a new round of pledges on cuts to greenhouse-gas emissions — the first since they signed the Paris agreement in 2015. The European Union and China have ambitious plans to become carbon neutral by 2050–60; scientists are waiting to see whether Biden will set similar goals for the United States.

COVID detectives

A task force established by the World Health Organization will head to China in January 2021 to try to identify the source of the COVID-19 pandemic. The group, which includes epidemiologists, virologists and public- and animal-health researchers, will begin their search in Wuhan, the Chinese city where infections with the coronavirus SARS-CoV-2 were first identified in 2019. The initial stages of the project will look at meat and animals sold at the Huanan market — visited by many of the first people reported to have COVID-19 — and trace their journeys through China and across borders. Discovering the origins of the virus could take years, but experts think some new information will come to light by the end of the year.

Vaccines and the pandemic

2020 saw the roll-out of the first vaccines authorized for use against COVID-19. The effectiveness of several new vaccines will become clearer in early 2021. Of particular interest will be the results of phase III clinical trials of immunizations developed by the US pharmaceutical companies Novavax and Johnson & Johnson. These jabs are likely to be easier to distribute than the RNA-based vaccines made by Pfizer–BioNTech and Moderna, which have already returned phase III results but must be stored at very low temperatures. As *Nature* went to press, the Pfizer vaccine already had emergency authorization for use in some countries. Late last year, Novavax launched two large trials of its viral-spike-protein vaccine in the United Kingdom and the United States, which will report in early 2021. The company could produce as many as two billion vaccine doses per year. Johnson & Johnson is testing a single-shot version of its vaccine; by contrast, those from Pfizer and Moderna require two.

Stem-cell revamp

Stem-cell scientists will be eagerly awaiting updated guidelines for research from the International Society for Stem Cell Research (ISSCR). The ISSCR, a membership organization, last issued guidelines four years ago. The revamp, which will include guidance on studies of human 'embryo-like structures' grown from stem cells in vitro, could provide ammunition for lengthening the '14-day rule', which dictates that researchers cannot work with a human embryo produced in vitro for more than two weeks after fertilization and is enshrined in law in many countries. Extending the limit could allow scientists to better understand why so many early pregnancies end in miscarriage.

Crunch time for Alzheimer's drug

US regulators are slated to decide whether the first drug reported to slow down the progression of Alzheimer's disease can be used as a treatment. The drug, aducanumab, made by pharmaceutical company Biogen, is an antibody that binds to a sticky brain protein called amyloid, which most scientists think could be the main trigger for the disease. Evidence that the drug works is mixed. Two phase III clinical trials have offered conflicting results, and an independent advisory panel convened by the US Food and Drug Administration to assess the drug's effectiveness says that the data do not support its use. The only Alzheimer's drugs approved so far treat cognitive symptoms such as memory loss, rather than the progression of the disease.

Mars gets busy

China's ambitious agenda for space science continues in 2021. A Chinese probe destined for Mars should touch down there in February. The Tianwen-1 mission will look for water and signs of life using 13 instruments, including cameras, radar and particle analysers. If successful, it will be the country's first exploration of the red planet and the only time a probe carrying an orbiter, lander and rover has touched down there. Craft from the United Arab Emirates and the United States should also arrive at the red planet around the same time.

Long-awaited telescope launch

October will see the long-awaited launch of the James Webb Space Telescope — which its developer, NASA, calls the "largest, most powerful and complex space telescope ever built". The US\$8.8-billion Webb will seek to repeat the success of the Hubble Telescope, which revolutionized astronomy when it launched in 1990 and has made more than 1.3 million observations since. Webb will cover more wavelengths than Hubble, enabling scientists to peer deeper into the Universe.

By Holly Else, [Nature ISSN 1476-4687 \(online\)](#), December 22, 2020