

Dear friends:

Wonderful to see another full house this week!

A few reminders...

First Day Hike will be on January 1 at John Wilt's farm. Sign up at volunteersignup.org/BRKKM

- NOTE: We will still have a regular chapter meeting on January 7 (at Brookhaven college)

Reminder to **pay your invoices for membership**: Invoices were sent November 11. Payment due by December 31. If not need help, please email malette.treasurer@ntmn.org

If you want to **order an extra badge**, sign up [here](#)

- Replacement green shirts and NTMN stickers will also be available
- If you are a current class member, you don't need to order a name tag – they are included in your class fee

Request for support: If you are making holiday season donations, consider contributing to NTMN

- Our membership has really grown in recent years: We now have 430 active members and an increasing number of projects
- Our administrative staff are all volunteers, and they're doing a great job with the extra work. But our success means operating costs have increased too.
- Costs include, for example:
 - o Meeting Costs: Zoom subscription, video services, small honorariums, hospitality, Big Chapter Projects
 - o Technology: Internet and website fees, website support, software subscriptions, online payment fees
 - o D&O insurance
 - o Sponsorships and state meeting scholarships
 - o Storage/Supplies - Storage unit rental fees, office supplies
- Contact president@ntmn.org or malette.ntmntreasurer@gmail.com with any questions or if you might be interested in helping with fundraising
- Donations can be made here: <https://ntmn.org/donate/>
 - o Or you can send a check to NTMN Treasurer c/o Texas A&M AgriLife Extension Office, 6820 LBJ Freeway, Suite 3200, Dallas TX 75240

Other ways to get involved?

- A survey will be coming out soon so you can sign up for NTMN Committees
- Immediate opportunity? Help coordinate our annual group purchase of NTMN Logo Wear! Contact President@ntmn.org for more information

AT Topic: TARANTULAS!

- Speaker: Erika Swyryn is a dedicated tarantula keeper with over 70 at home. She also fosters cats so there is never a dull moment!
- General biology of Phylum Arthropoda
 - o Also called Arthropods, means "jointed foot"
 - o Have 8 legs (versus 6 of insects or 10 legs for crustaceans)

- Have an exoskeleton and thus must molt in order to grow
- Open circulatory system
 - She rarely touches her Tarantulas because they could easily be injured
- All spiders spin silk, but they use them for different purposes
- Near-sighted, rely mostly on sound and vibration and chemoreception
- True spiders use webs to catch prey, but tarantulas don't use webs to catch prey
- True spiders bite with fangs from side to side versus tarantulas which bit straight down
- Tarantulas are opportunistic feeders and may even eat each other, so they don't usually live communally
- There are new-world and old world-tarantulas which have anatomical and behavioral differences
- Evolved 350 Million years ago – and are perfect killing predators
- Life stages
 - Egg
 - Spiderling (“Sling”) – looks like an egg with legs
 - Juvenile – smaller version of adult; can be juveniles for many years; may have different coloration from the adult
 - Adult
 - Some can live 30 years or more: new world ones tend to live longer than old world species
- Fun Facts
 - 43K species of spiders in the world (4K in the US)
 - Spiders feed on an estimated 400 to 800 million tons of insects and other pests annually. So, they are good in your house!
 - Most spiders live 2 years or less, but tarantulas can live over 30 years
 - Males perform elaborate courtship rituals
 - They have blue blood because it contains copper instead of iron
 - The largest spider on earth by weight is the Goliath Birdeater at 6.2 oz
- New world versus old world tarantulas
 - New world: relatively slower (though still fast!), heavier bodied, not medically significant venom (though their bites still hurt!), urticating hairs, calmer, easier to handle. <Better for new tarantula keepers>
 - Old world: relatively faster (so fast it seems like teleporting!), smaller bodies, more assertive/aggressive/defensive, no urticating hairs, medically significant venom
 - What are urticating hairs? The spider can fling them when stressed, very itchy if they get on your skin!
- Huge diversity in Tarantulas – many shapes, sizes and colors
 - Males usually smaller and shorter lived
- Tarantulas are found in pretty much every ecosystem except water and across most land masses (except Antarctica); within temperate regions; they prefer 70's to low 80's F.
- Habitat characteristics
 - Fossorial: spend most of their time in deeper burrows underground, thus good in colder or hotter climates; will line burrows with silk webbing to reinforce walls for safety
 - Terrestrial: Live in shallow holes or burrows in ground; spend more time out in open

- Arboreal: spend most of their life in canopy of trees; more common in tropical areas; build web tunnels for protection from predators and elements (for protection, even protection from storms such as hurricanes)
- Predation and defense
 - Don't see well, limited chemo-reception
 - Mostly detect vibration, sound and movement via tiny hairs on their exoskeleton. They can "feel" voices, wind, presence of other animals/prey
- Spider silk and webs
 - Strong: 5x stronger than steel, 2x stronger than Kevlar
 - Flexible: can stretch up to 30% without breaking
 - Lightweight: thinner than a human hair
 - Trapping prey: used in multiple ways, species dependent
 - Creating shelter (including webs, tunnels, lining for burrows)
 - Constructing egg sacs
- Predation and defense
 - Use venom for both predation and defense
 - Their venom can cause pain, tissue necrosis, and systemic reactions
 - Tarantula venom in US Species is not considered dangerous, but can cause allergic reactions
 - When threatened, they can flick these hairs at their attacker causing intense pruritus, local histamine release and in some cases systemic reactions
- Tarantula Predators? Pretty much everyone
 - Other tarantulas and spiders, birds, reptiles, amphibians, mammals, insects
- Reproduction: Fascinating!
 - Very dangerous for the male because the female is bigger and stronger
 - Can happen any time, for some may be seasonal
 - Male 'migrate en mass' to mate
 - Males will approach female's home and drum rapidly to communicate readiness and she will drum back if receptive
 - Males are smaller and lighter than females for speed and have tibial hooks to hold her up and back (to decrease risk of getting attacked)
 - Pedipalps look like boxing gloves to hold sperm for delivery
 - If fangs are out, he is in danger!
 - Then, he needs to RUN! (If he doesn't die from exhaustion first)
- All arthropods can regenerate limbs when they molt (though it may take multiple molts until a limb is fully reformed)
- Keeping tarantulas as pets is becoming more popular as they are known for being calm and unassuming
- Texas species? There are 6 (all in *Aphonopelma* genus, so look similar)
 - Texas Tan Tarantula: the only one local for DFW. Rich dark brown color, carapace is golden, reddish abdomen. Can have some color variation
 - Texas Black Spot: found in Central and West TX
 - Chiricahuan Gray Tarantula: smallest of the TX tarantulas; West Texas
 - Texas Brown Tarantula: most widespread across TX and surrounding states
 - Rio grande Gold: the only one that looks a little different from the others
 - Amistad Brown Tarantula
- *Aphonopelma* characteristics

- Native to the Americas
- The larger, heavier bodied ones
- Slow-growing and long-living (i.e., females can live 30 years)
- Tarantulas are under threat
 - Populations are in decline worldwide
 - Why? Habitat loss, pollution, chemicals, disease, climate pattern changes, etc
 - Illegal trade (the hobby trade and international trade)
- How many spiders are on earth? There are about 2.8 Million spiders for every person
- Questions? Erika Swyryn erika85@yahoo.com 817-917-5684

Questions:

- How can you mail Tarantulas?
 - Need to send overnight via FedEx, like in a deli cup that is size appropriate, and put with damp moss and a paper towel wrapped around it (to stay moist). May need a heat or cold pack depending on the season
- What are the most common ideas that people have had about tarantulas which have been debunked?
 - People think they will jump and bite. They won't.
 - People think they are aggressive. They aren't
 - People think they are hard to keep. They aren't.
- Are female tarantulas OK to keep in a small enclosure given that in the wild they will roam?
 - Yes. The spiders are happy to stay still and ambush the crickets she feeds them
 - Females don't roam, males may want to roam when they are ready to mate
- Do all new world spiders have Urticating hairs?
 - Most of them do, but not all
- Are there any "artificial" spiders that have been bred to be different from what is found in nature?
 - Some influencers are trying to do this (by cross breeding species) to get attention on social media, but this is highly controversial and opposed by scientists. Thus, be careful if you want to purchase a spider – you don't want an artificially cross-bred spider
- If you want to see tarantulas in the wild, where do you go?
 - They are very hard to find and see, even though they are here!
- How frequently do they molt as adults?
 - Depends on the species, ambient temperatures (warmer temperatures grow faster), how often they are fed (more food leads to faster growth)
- Does she have a favorite tarantula?
 - Has different favorites for different reasons. For example, she loves seeing the arboreal spiders but she also loves her large birdeater tarantula
- How often do they mate? Typical number of eggs in a clutch?
 - Varies by species. For example, clutch size can range for 30 or over 2,000
- What is the difference between a wolf spider and a tarantula?
 - Similar but different, like a sea turtle versus a box turtle.
- Considering what you do? Do you have any good lost and found stories?
 - Sometimes she gets a runner, which makes her worried about her cats catching them

- She had one run under her husband's couch and she had to push away all her cats while she caught the spider. That was fun 😊
- What are the effects of a venomous bite and how is it treated?
 - New world tarantulas: Just treat the symptoms. So, clean it well and maybe use antihistamines
 - Old world tarantulas: go to the hospital. In this US, this has only rarely found to be an issue in Florida
- How do they shed without breaking their molt?
 - When they shed they are still wet, though the molt will dry over time