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The Hawthorn Chapter of the Missouri Native Plant Society Newsletter is published monthly. Send submissions by the 24th of every month to:

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Missouri Native Plant Society Hawthorn Chapter Newsletter

VOLUME 32, NUMBER 10

OCTOBER 2017

Future Activities

October 7th, Saturday from 10 am to 4 pm: Chestnut Roast. We will once again have a booth at the Chestnut Roast at HARC in Franklin, MO.

October 19th, Thursday at 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway.

November ? : Wreath-Making Workshop. Need a host or hostess for this event.

November 13th, Monday at 6:00 pm: Bimonthly Meeting at Unitarian Church. Our featured speaker is Danielle Fox, City Community Conservationist for Columbia. Please note the time change for this meeting.

November 16th, Thursday at 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway.

December ? : Holiday Party. We need a host or hostess for this event.

December 21st, Thursday at 11:30 am: Lunch at Uprise Bakery. 10 Hitt St., just south of Broadway.

Wreath-Making Workshop & Holiday Party

We are in need of a host/hostess this year for the Wreath-Making Workshop. The event is typically held in November when plant materials have had sufficient time to produce or release seed and dry. If you would like to volun-

teer your space (garage, outdoor area, etc.) please let me know so it can be added to the newsletter.

We are also in need of a host/hostess for the Holiday Party typically held in December.

If you would like to volunteer your home and time for these fun events please email Vanessa at vannadawn@gmail.com And if you are the host/hostess you get to choose the event date since you are providing the space.

Prairie Tea, An Annual Native Plant for a Diversity of Insects



Picture 2 of the flower. Submitted by Randy Tindall.



Picture 1 of the foliage. Submitted by Nadia Navarrete-Tindall.

Prairie tea or goatweed (*Croton monanthogynus*) is a host plant for the goatweed butterfly caterpillar (*Anaea andria*). A similar species, hogwort (*Croton capitatus*) is also a host-plant for this caterpillar.

The aromatic foliage of this annual native can be used to prepare a mild tea steeping the leaves in warm water.

We are always trying to add more plant diversity in our yard and in case a goatweed butterfly was looking for a host plant for her babies I decided to plant it in a large pot. It is really doing well now. This plant can be very attractive in gardens because it's nice round bushy nature and short stature (Picture 1), leaves are sparkly in the sun and can add a nice color contrast in a garden (Picture 2).

Prairie tea can be used as a ground cover to control undesirable plants and protect the soil from drying too fast. It can be used as a companion plant with seasonal plants like tomatoes or peppers or perennial taller wildflowers like whorled milkweed or blazing stars.

Prairie tea reseeds itself so it can also do well in a dry sunny spot in a garden or under the moderate shade of taller herbaceous or shrubby vegetation. It takes advantage of bare ground in disturbed sites like pastures and roadsides. To propagate this plant, gather the seed later in the summer or fall. For successful germination, you will need to expose the seed to cold-moisture conditions for 6 weeks or longer. Seeds will germinate in late spring when the temperatures are warmer.

It's native habitat include sandstone and limestone glades and prairies so there is not surprise to find it growing in very dry and hot sites. Its drought resistance makes it a good candidate for gardens and small farms during these times of extreme and unpredictable weather, especially in the summer.

It does not need watering and grows in poor or fertile soils, so soil amendments are not necessary either. Most importantly, prairie tea provides food and cover to a diversity of insects and birds. There is little information about who pollinate the flowers; however, we have observed sweat bees visiting the tiny inconspicuous flowers in our yard. John Hilty, author of the Illinois Wildflowers website (illinoiswildflowers.info) indicates that the seeds are oily and are consumed by a variety of terrestrial birds and songbirds including mourning dove, wild turkey, prairie chicken, quail, cowbirds and sparrows. Although he describes the smell of the foliage as fetid aroma, I would call it sweet and pleasant. You would need to try it on your own and decide who you agree with (me)!

Article and photos submitted by Nadia Navarrete-Tindall and Randy Tindall.

Booth at the Chestnut Roast



The Hawthorn Chapter booth at the Chestnut Roast from 2016. Submitted by Vanessa Melton.

place at the Horticultural and Agroforestry Research Center in Franklin, MO. We will be setting up at 9 am, and if you helped staff the booth last year the parking situation will be the same. We will also be sharing a large

tent with Forrest Keeling as we did last year. We were in the shade most of the morning and in

the sun for the afternoon. It was chilly in the morning warming up later in the day, so dress in layers if you plan to help with the booth. If you would like to help staff the booth at any time during the day please contact Nancy Langworthy at langworthyn@gmail.com.

Submitted by Nancy Langworthy and Vanessa Melton.

On October 7th we will be setting up a booth at the Chestnut Roast. This event is sponsored by MU and will take

Election Time!

It is that time of year again – election time! This year we need to vote on a President and Secretary both of which offices are currently vacant. The President presides over bi-monthly meetings, assigns Committee members, and handles other Chapter business as it may arise. The Secretary takes notes at bi-monthly meetings and sends those

notes to the Newsletter Editor to be published in the Hawthorn Chapter Newsletter and to the Petal Pusher editor. We will vote on officers at the November meeting and terms will begin January 2018, so if you are considering either of these offices contact Denny Donnell at 573-442-8407 or hdennydjr@yahoo.com.

A list of candidates will appear in the November newsletter.

Submitted by Vanessa Melton.

MDC Calendars for Sale

The Hawthorn Chapter will once again be selling MDC Natural Events calendars for the upcoming year. These make great holiday gifts and will be available by Christmas, but you must place your order by November 15th.

A sign up sheet will be available at the November Members Meeting, but if you would like to pre-order you can email Vanessa Melton at vanndawn@gmail.com or call at 573-864-3905. The Chapter will only be placing one

calendar order with the Missouri Department of Conservation, so once the deadline arrives no more calendars will be ordered.

September Meeting Minutes

Missouri Native Plant Society – Meeting notes 9/11/2017

Treasurer's report – balance of \$14,736.36

New members present: Dr. Hillard, Mary Stuart-Lodgson, Dr. Richard Hart, Bob Bailey, Mike Currier (Ed. Note: Mike Currier was a guest.).

Dr. Hart shared why/how he has come to be at the meeting. Provison Living off of Chapel Hill has given he and some other residents the opportunity to create the "Provison Living Monarch Butterfly Garden" and it has resulted in him spending a great deal of time working on the property.

Reminder – Chestnut Roast at HARC is from 10AM to 4PM on October 7.

Glen Pickett shared that the planting behind the high school career center is doing well and Amy Hempen has done a good job with it despite her being on maternity leave currently. Brian Page brought up the need for some parameters to be considered with the clubs financial management.

John Baker will talk to us at some point about investing our money - and after he does we will likely have to discuss if we want to move forward with that or not. The point was brought up that maybe we need a new committee to discuss our options but Paula pointed out that we need to fill our vacant officer positions of Secretary and President before we would start forming additional committees.

Discussion ensued about the Stadium Blvd planting site and it was generally left that we would be better off installing a new planting somewhere rather than trying to rehabilitate the Stadium site. Glenn Pickett will visit with a City contact who can consult on some alternative MODOT property within town.

Upcoming events: 9/21 Uprise Bakery luncheon 11:30, 10/7 Chestnut festival, 10/14 MO Prairie Foundation hosting and event in Cole Camp MO, 10/19 Uprise Bakery luncheon 11:30, 11/13 next regular meeting at UU church at 6PM – Community Conservationist Danielle Fox will speak to us, 11/16 Uprise Bakery luncheon 11:30

Submitted by John George.

Committee Standings

From our last meeting in September it became apparent that many members may not be aware our Chapter has Committees that handle events, booths, and meeting programs, among other things. They usually operate “behind the scenes” and some haven’t been as active in recent years as in the past. The list of Committees from now as well as back in 2012 are as follows:

Speaker Committee - Gail Plemmons.

Events/Booth Committee – Paula Peters, Ann Wakeman, and Nancy Langworthy (this was from 2012)

Awards Committee - Nancy Langworthy and Vanessa Melton

Field Trip Committee – Paula Peters, Becky, and John White (also from 2012)

Education Grant Committee – Glenn Pickett, Nancy Langworthy, and Lea Langdon.

Nominating Committee - this changes every year

The President assigns members to the Committees and Committee Members appoint a Chair for each Committee. What does each Committee do you may ask?

The Speaker Committee finds speakers for our bi-monthly meetings, the Awards Committee accepts nominations for a Blazing Star Award which is a State Award given to someone who makes a difference in our local community through the use or promotion of native plants, the Field Trip Committee chooses locations and dates for field trips, and the Education Grant Committee accepts nominations from local primary or secondary school teachers looking for additional funds for special projects they do in school involving native plants. The Event/Booth Committee chooses which events throughout the year we will attend with our

booth, rounds up volunteers for those events, and chooses special events our Chapter holds through the year such as the Holiday Party and Wreath-Making Workshop. The Nominating Committee is chosen each year by the President to select candidates for offices that are open in that year.

Each Committee is to have three members, and right now the Speaker Committee desperately needs two more volunteers who would be willing to help Gail find and contact potential speakers. If you are interested in serving on this Committee contact Denny Donnell at 573-442-8407 or hdennydjr@yahoo.com. Some members of these Committees might no longer be interested in serving on these Committees especially since some of the lists are from 2012, so other openings might appear. See future articles in upcoming newsletters for more information.

Submitted by Vanessa Melton.

Don't forget to start collecting dried material for the Wreath-Making Workshop next month!

Can You Pick the Bees Out of This Insect Lineup?

By JOANNA KLEIN, Original Article Appeared in the New York Times, SEPT. 11, 2017

How can we save the pollinators if we don't even recognize them? Some of the insects pictured (to the left) are bees, and some are not. Can you tell which are which?

In an online survey, 30 percent made comparable errors (and were not able to correctly identify the bees). (The true bees are Numbers 2, 3, 5, 6, 7, and 9.) The survey had more than 1,000 respondents recruited by word of mouth and on social media, and may have been biased toward people with an interest in bees. Perhaps the Velvet Ant (No. 8) fooled you — it threw off about half of respondents, according to the survey, which was published Tuesday in the journal *Frontiers in Ecology and the Environment*.

For the record, that furry ant isn't even an ant — it's a wingless wasp. Just like the rest of the world, the United States has a bee problem. Bees pollinate our plants, which make the food that humans and nearly everything else relies on for sustenance.

Since 2006, when researchers coined the phrase “colony collapse disorder” to describe the losses to commercial honeybee colonies, scientists, conservation groups, the government and news media have issued warnings of declining bee populations and the necessity of conserving these economically and ecologically significant pollinators.

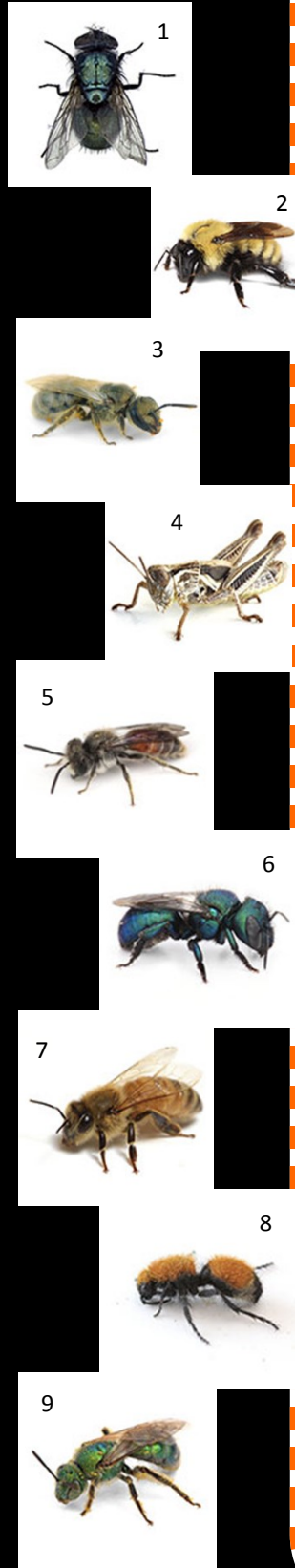
By now, we understand their importance: 99 percent of respondents in the survey said as much. But, however much we may value bees, we don't know much about their diversity. “We realized there was a huge misunderstanding or lack of knowledge about most kinds of bees,” said Joseph S. Wilson, an evolutionary ecologist at Utah State University, Tooele, who helped lead the survey. “Everyone knew that bees were good, but even though they know that they're good, most people had no idea how many kinds of bees live here.”

Do you? Tell us approximately how many different bee species you think there are in the United States: 100, 850, 4,000, 20,000? About 4,000 bee species live in this country. If you were off, you weren't alone: Only 14 percent of survey respondents were able to get within 1,000 of this number. And knowing at least a bit about the diversity of bees — each with their own habitats, behaviors, shapes and sizes — is crucial to efforts to save them, Dr. Wilson said.

Inside our bubble of bee knowledge, we mainly hear about the European honeybee and bumblebees. After all, those are the bees that pollinate California's almonds and many other crops and wildflowers. They live together in groups and most are raised commercially, which makes it easier to track their decline. But there are many more wild bees out there. Some are even more efficient pollinators and play an important role in pollinating wild plants. Habitat loss and pesticides may threaten these wild bees, but it's unclear how much their numbers are changing, despite conservation reports warning of their decline.

But how do you tell them apart? Many differences are microscopic and subtle. Others, like size, coloring, places on the body for carrying pollen or hairiness, are easily distinguished.

Cont. on the following page. See Insect Lineup cont.



Insect Lineup cont.

Dr. Wilson said you probably don't need to know about each species, but knowing your local bees could help you preserve their habitat.

That's because most bees are specialists, preferring specific flowers for pollen collection or particular soils for building homes. Bumblebees and honeybees live in social colonies, building hives in cracks, holes and crevices, but most other bees lead solitary lives underground. Some bees build nests in hollowed out raspberry branches, like leaf cutter bees, which construct nursery rooms using leaves as walls where they lay no more than 10 eggs in a lifetime in the wild. If you think bees live in papier-mâché tree nests — you're wrong. Again, those are wasps, like the velvet ant above (No. 8).

To discover your local bees, just sit and watch. The next time you see a shiny green bee buzzing around your sweaty body (No. 9), it could be a sweat bee, which, not so picky about habitat, is common in rural and urban areas. And to promote wild bees in your own yard, plant a variety of regional flowers that bloom across seasons and create areas for nesting. "We don't have to suddenly make our backyard look like the Sonoran desert," Dr. Wilson said, "but just flowers or bare dirt can do wonders."

Submitted by Nancy Langworthy with Editors additions in parentheses.

Grass Identification Workshop taught by Paul McKenzie, USFWS Sept. 1-2, 2017

This workshop was a crash course in grass identification, with a focus on describing structure terminology and understanding grass reproductive structures especially those used for species identification. The class had about 20 participants ranging from undergraduate students, private land owners, and professionals. We used the book, 'Agnes Chases's First Book of Grasses', 4th edition by L.G. Clark and R. W. Pohl to assist with terminology and general overview, but keyed species using 'Steiermark's Flora of Missouri, Vol. 1' by G. Yatskievych. There are multiple levels used to identify grasses; inflorescence arrangement, leaf blade structure (sheath and junction of sheath and leaf blade, i.e. ligule) and flower structure. A combination of these will help you determine what species you are examining.

At the macro-level, inflorescence arrangement and can easily be used to determine some family/genus/species from a distance. The three main inflorescent types are panicle (with branches), raceme (with pedicels) and spike (flowers are attached directly to stem). Turkey foot (a.k.a. Big Bluestem *Andropogon gerardii*) is species that can easily be determined by inflorescence structure, usually having three racemes, similar to a turkey's foot. Indian grass (*Sorghastrum nutans*) is another species that I identify by the golden inflorescence on a blueish stem, and to me always looks like a candle flame.

Moving down the plant, the leaf blades, blade sheaths, nodes, and ligules (membrane flap that sticks out when the leaf is pulled back) are other structures used to determine grass species (Fig. 1). The leaves of the invasive Reed Canary Grass (*Phalaris arundinacea*) have a curved pointed ligule that can be used to confirm this species identity. And the infamous cutgrasses (*Leersia* sp.) that have needlelike hairs on the leaves that act like tiny sawteeth, which I first encountered walking Ozark streams and found my legs bleeding from all the cuts.

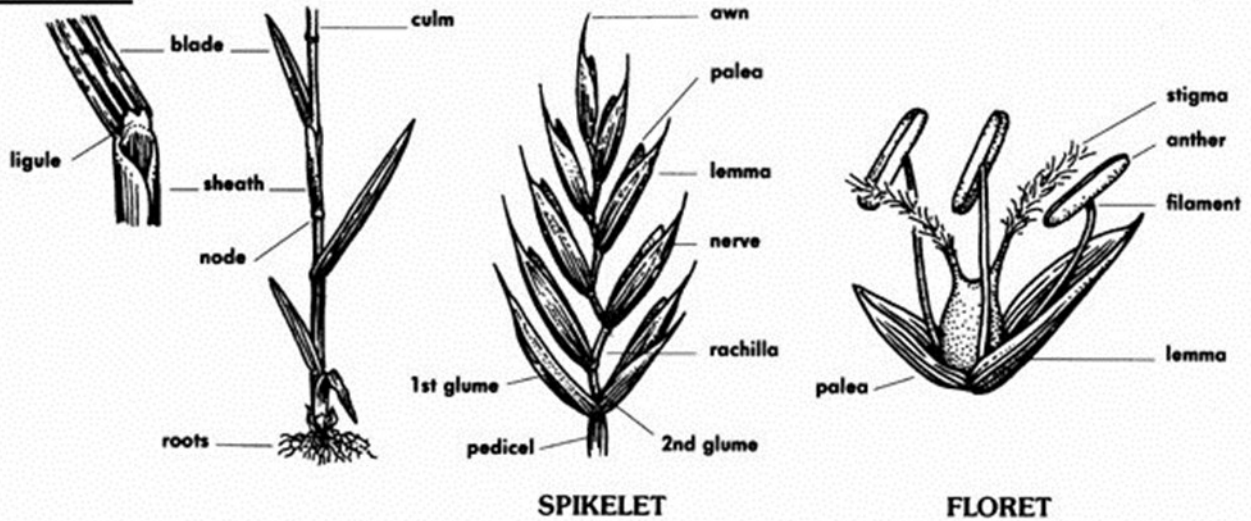
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Grass Workshop cont.

Figure. 1. Structure of grass plants, spikelet and floret.

PLATE 12.

GRASSES



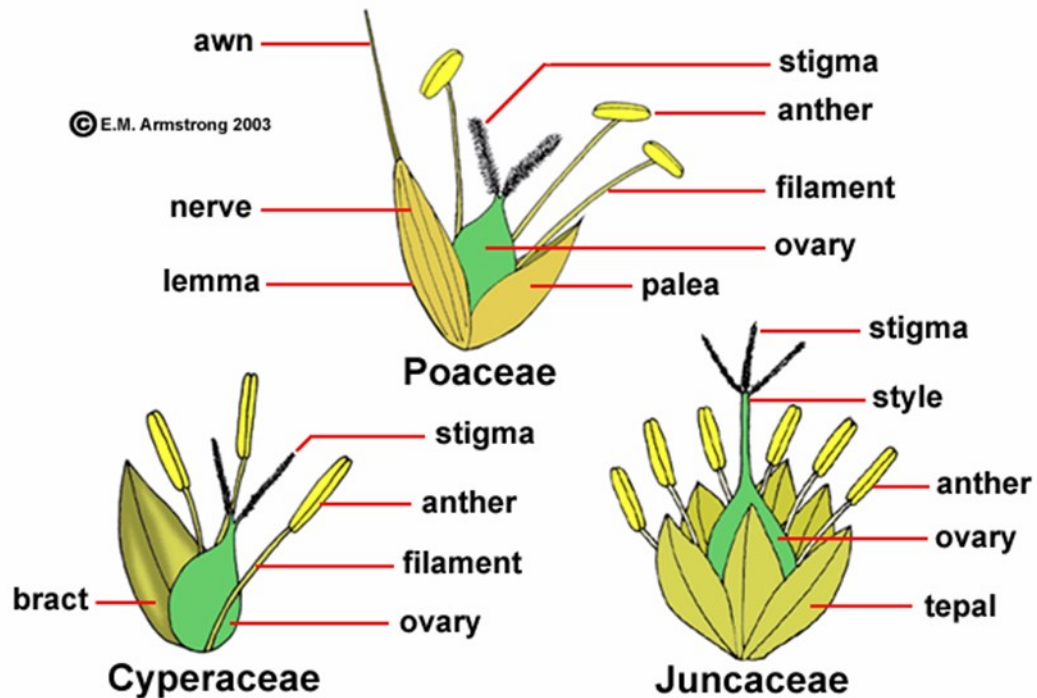
as published in Swink, F. and G. Wilhelm. 1994. *Plants of the Chicago region*. 4th ed. Indianapolis: Indiana Academy of Science.

But one of the most definitive ways to determine grass species is to use flower structure, even though a hand lens is usually needed and flowers only occur during part of the season. Grasses, a.k.a. the Poaceae family (Fig. 2), are identified by three main flower structures: palea (lower bract), lemma (upper bract) and ovary; using their characteristics and arrangements as distinctions between species, and from sedges Cyperaceae and rushes Juncaceae. Groups of individual flowers on the same pedicel are termed spikelets and contain two additional bracts at the base called glumes (Fig. 1); River Oats (*Chasmanthium latifolium*) are a good example of a spikelet.

Figure 2. Flower structures of the grasses (Poaceae), sedges (Cyperaceae) and rushes (Juncaceae).

Cont. on the following page.

Grass Workshop cont.



Once we got a handle on the terminology and what to look for, we did what any good botanists would do, went to the field. We visited a nearby restored prairie, Turkey Foot Prairie, where we saw many of the warm-season prairie grass species in bloom such as Big Bluestem, Little Bluestem (*Schizachyrium scoparium*), Greasy grass (a.k.a. Purple top, *Tridens flavus*, known for the greasy feeling inflorescence), and Virginia wild rye (*Elymus virginicus*); and nearby an old waste area that had Windmill grass (*Chloris verticillata*), Bermuda grass (*Cynodon dactylon*), Witch grass (*Panicum capillare*), Headless or Rough dropseed (*Sporobolus compositus*), and Sand burr (*Cenchrus longispinus*). On the second day we visited Pertle Springs, an old CCC camp that was once open grassland, but now has grown up in trees and contains shade loving grass species. We saw Deertongue panicum (*Dichanthelium clandestinum*), Beaked panicum (*Panicum anceps*), River Oats and Wood reed (*Cinna arundinacea*).

In conclusion, Paul McKenzie conducted a very educational workshop; explaining difficult terminology in an easy-to-understand format. I would recommend this workshop to anyone, even beginning botanists.

Submitted by Janice Albers.

Please Step Forward for Service

Please contact one of the officers ready to volunteer a little time to a very good environmental and educational service. We need people to serve as officers, to grow plants for fundraising, and we need people to man our information booth at events such as Earth Day and the Spring Bradford Plant Sale. If you receive this by mail, please consider requesting email delivery.

- Regular (\$16.00)*
- Student (\$11.00)
- Contributing (\$26.00) Designate Chapter or State
- Paper Postal Service (\$5.00)
- State Lifetime (\$200.00)
- Chapter Lifetime (\$120.00—you must also be a member of the state organization to utilize this option)
- Chapter Only (\$6.00—this is for members who already belong to State and another Chapter)

*Includes both Chapter (\$6) and State (\$10) dues.

Make check payable to **Missouri Native Plant Society**. Send check and this form to: Paula Peters, 2216 Grace Ellen Dr., Columbia, MO 65202.

MEMBERSHIP FORM

Missouri Native Plant Society—Hawthorn Chapter
July 1st through June 30th.

Name _____

Address _____

Phone: Evening _____

Day or Cell _____

Email _____ **(This is for Chapter Newsletter Delivery.)**

As of July 2015 printed paper Petal Pusher newsletters sent by post will cost an additional \$5.00 more than standard membership. Email delivery brings not only a color copy of the newsletter, but also updates and announcements between newsletters. The local Chapter newsletter will be sent by email.

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