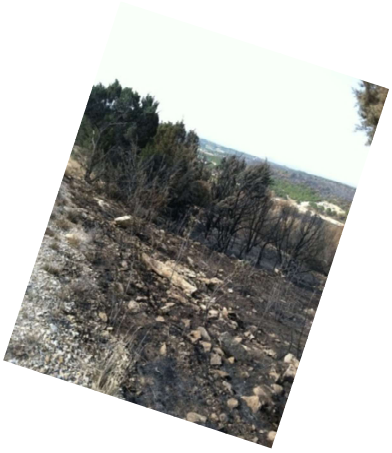
PK Natural History and Bird Watching Committee Group
Spring Season 2016

INTRODUCTION: This is your spring 2016 Newsletter put together by the PK Hills Nature Committee. (Lynne Aldrich, Lynne Brown, Peter Gottschling, Wolf Patrick & Colleen Stegall). And how fitting that this issue represents the five year anniversary of the fire that struck our community in April of 2011!!. That year was the worst in Texas history in wildfires with Texas having more than 50% of the wildfires throughout the entire United States. There was much destruction and there has now been much regeneration that is creating new habitat and new species that the new habitat is supporting. Our community continues to never fail to surprise us and to entertain with all that it has to offer and all that it is affording us the opportunity of learning. For your enjoyment we have also compiled a bird check list that now includes all of the birds that we know so far have been seen in our community. We've added information on the time of year you might expect to see these birds along with how likely you are to see them given their abundance. As you see new birds you don't find on this list be certain to let us know so that we can continue to add to this list.

OVERVIEW (Lynne Aldrich): The Possum Kingdom Complex 2011 wildfires – a grouping of four different fires – burned over 148,000 acres (600 km^2) in Stephens, Young and Palo Pinto Counties. These fires destroyed 166 homes, two churches and threatened over 600 more homes. The Hills Above Possum Kingdom were evacuated on April 17, 2011 with only those things we could quickly pack in our car. We were not allowed back into our community until April 22, 2011 to survey the damage that had been done but were required to leave immediately. We didn't get back in with power until April 25, 2011. During that time frame we had very little information on what to expect or what was actually happening. Click on this link to go to a YouTube showing of the fire that consumed so much habitat in 2011. https://www.youtube.com/watch?v=5mcXsMs3kuo

When we did return we saw nothing but scorched ground and burned trees. Our Cedar – the ***Juniperus ashei*** (**Ashe juniper**, **post cedar**, **mountain cedar**, or **blueberry juniper**) is a drought-tolerant evergreen tree – was our forest and was tinder for the fire and the winds that whipped the fire in many different directions – leaving some areas totally free of damage and others totally consumed. One home (Lynne Aldrich & Peter Gottschling) stood standing but the fire had burned a 360 degree around it, leaving us with what you see in these pictures.



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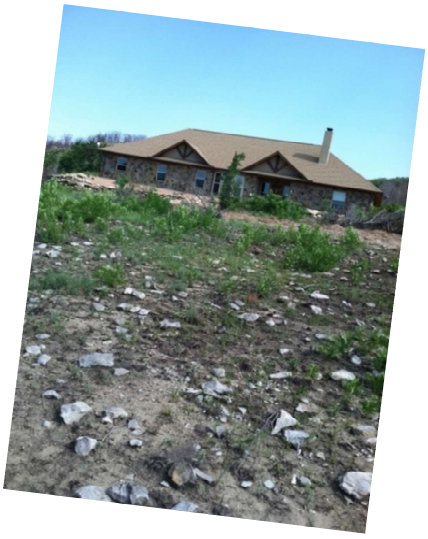
The Hills were more fortunate than others in that only one home was destroyed but many acres within the community were savaged by the fires that raged for so many days.

Those of you who did not live here during that spring of 2011 will not know what the residents saw and went through during the next few months. But, you have observed some of the destruction in seeing the standing burned trees (now thankfully being removed thanks to the very hard work of our POA and the owners of the lots that are busy removing those burned trees). For some birds, however, dead trees are beneficial and are used for both nesting and for perching so leaving some of those trees may not be a bad idea. We wondered initially if things would ever grow again and what would take the place of what had been. Then we began to see how nature itself takes over – how things change and began to witness the succession that occurs and that is a natural part of this world we live in. The first picture below is from July of 2011, one on right is July 2012 and bottom one is August 2014 with all showing how things have changed over just these four years. Which leads to the intent of this newsletter. Succession and re-growth!! What is succession? It is the gradual evolution of a biological community over time. We are witnessing a secondary succession – one which is creating a continually changing mix of species. New plant species take hold and begin to modify the habitat by changing things like soil content and shade cover. These gradual changes allow new life – better suited to the modified habitat – to establish themselves. These new species are superseded by other new species and this succession allows animals to participate in this succession as well – the interaction between plants, animals and the environment influencing the rate of change taking place.



Much of the wildlife we know and see now was suddenly absent. Grasses were gone and wild flowers did not bloom. Even insects, rodents and snakes were scarce. But as things began to grow and as habitat began to regenerate, the plant life and cover that is necessary for so many of our creatures was beginning to support more and more of the birds and yes – the insects, rodents and snakes!! Succession occurs in stages – with each stage having different species of plants and animals because each stage is suitable for those species and not others. The soil begins to heal and the winds bring in seeds that begin to establish themselves. These bushes and grasses allow other plants and insects to move into this new community. Our succession was slow as we remained in a drought period but each year we saw a difference and each year we were able to see a new or different bird, insect or mammal begin to appear that had not been supported in the prior year's succession. An example of one bird that began to make an appearance was the Black-capped Vireo. While the range of this bird appeared to be expanding we had not seen that bird in our yard until 2013 when the first one appeared but only ever so briefly. Then, each year thereafter it has appeared in the spring, begins to sing and we think has actually been successful in nesting here. They nest closer to the ground so need a denser ground cover for protection – something the elimination of the Cedar has provided and the successional undergrowth that has taken place. Their arrival here has been consistent with other data that shows that species arriving in the Possum Kingdom Area post fire three years AFTER the fire scorched the ground. The cover became just perfect for that species whose habitat preferences do NOT include Juniper which was much of what The Hills had around our community. They prefer deciduous vegetation – a vegetation or **deciduous** plant that includes trees, shrubs and herbaceous perennials that lose all of their leaves for part of the year.

Our area has witnessed a net loss of forest coverage and a net increase of grasslands. The forest we lost was largely Juniper (Cedar). We now have scrubland, lots of Flame leaf Sumac (we had that before) but much less Juniper which created a much denser environment and habitat. The removal of the Ash Juniper stimulated the understory cover. The extra light and nutrients allowed increased production of grasses and forbs. Another bird which took advantage of this change in habitat (succession) was the Wild Turkey. The shrubs, the weeds, the vines and the grasses provide the cover that is required for their nesting. Ground cover just over 18 inches is their ideal and our new eco-system has that in place. This accounts we think for the many more turkeys we see within our community – and in larger numbers than before. Landscapes that are composed of woody cover intermingled with openings of native grasses and herbs in different successional stages are ideal in supporting the turkey whose diet consists of grasses, insects, browse material and forbs. Browse plants include fruit producing species like acorns, mesquite beans, sumac berries and prickly pear which are amongst their likes. They will also eat the green leaves of weeds and forbs when in season.

One of the dominant species we had in our community was the Juniper/cedar tree. While much of that was burned in the fire, the below ground tissue of other plants was able to regenerate. The woody plants and understory herbs took root and have grown into some of the grasses and shrubs that have taken the place of the Juniper. The Flame Leaf Sumac (see our last issue) was in our area before the fire and is a species that does exceedingly well in disturbed areas. The fires created more disturbance and we saw the Sumac as one of the first plants to begin to come forth and are perhaps even more abundant now. It perhaps is now filling one of the roles that the Cedar/Juniper did – providing a new food source for our birds and wildlife. Deer particularly liked the Cedar berry and many birds found them to their liking as well. But we have observed many species of birds feeding

now on the Sumac berry that include Wild Turkey, Ladder-backed Woodpecker, American Robin, Brown Thrasher, Northern Mockingbird, Cedar Waxwing, Dark-eyed Junco, White-crowned Sparrow, Harris's Sparrow, Song Sparrow, Eastern Bluebird, Spotted Towhee, Northern Cardinal and American Goldfinch. We've also found the Sumac seed in Coyote scat which also in the winter survive on Mesquite seed pods. Be observant and we can add to this list additional species that the Sumac supports. .

So we have seen areas open up with the burning of the Ash Juniper/cedar we had in our community. Large, dense stand of juniper are not beneficial to wildlife although they do play their role. They also significantly reduced the production and diversity of associated plant species. They deny water to other plants thus helping to eliminate the growth of other plant species and undergrowth material. If you have ever hiked the trails through the dense stands of cedar along the BRA peninsula trail system you will notice how barren of wildlife – especially birds – that it is. The fire opened up different areas of our community to new plants and the regeneration of other plants that were able to generate below the ground surface. While the Ash Juniper/Cedar does not re-sprout after being top killed (burned) it will be very slow in recovering but will ultimately play its own role in the natural succession that we have just begun to see. Not in our life time perhaps but sometime in the future succession will once again create that 'forest' of Juniper/Cedar that we began with.

A very interesting research study on the succession that has taken place so far in the Possum Kingdom area was created by Andrea Fonseca and can be viewed at this site. Note that the local information starts at slide 24 (69 slides total). https://prezi.com/lat5zz7hrsgs/untitled-prezi/.

PLANT SUCCESSION IN THE HILLS (Lynne Brown): The Hills has an amazingly diverse landscape after the wildfires. Upon examination, some areas might have regenerated a mix of beautiful native grasses and wildflowers, while others might be covered with more undesirable weeds and invasive species. Much of that growth depends on which seeds and roots remained intact underground after the fires; and also which seeds were blown onto the land to begin new growth. A good resource to research help in creating a balance of native grasses and forbes is www.seedsource.com Native American Seed Company has a "Scorched Earth Recovery Mix" that will aid in reducing erosion and help restore nutrients to lands once covered with juniper/cedar.

Texas Parks and Wildlife, along with other conservation organizations, is extremely concerned with the massive spread of invasive species that often occurs after a natural disaster such as wildfire. An invasive is defined as "a species that is alien to an ecosystem and whose introduction causes economic or environmental harm." Invasive species spread rapidly and significantly decrease the survival of native plants and animals. One invasive that we need to be aware of is the Bastard Cabbage. Many of us have seen fields filled and roadways edged with "beautiful yellow wildflowers."

Little did we know that this plant, the Bastard Cabbage (also called giant mustard), is spreading rapidly and is wiping out possible growth of our native wildflowers. The problem is so rampant that groups such as www.texasinvasives.org, Lady Bird Johnson Wildflower Center, the Department of Agriculture and others, is calling for grassroots support to fight this invasion. We can help by identifying and eradicating these plants on our properties. In the fall/winter, this plant has a flat circular rosette of leaves on the ground. The leaves are lobed and wrinkled. In early spring it sends up long stems – the tip of each stem has a small cluster of flowers about an inch across with many tiny 4-petal flowers ¼ inch wide.

fall/winter Bastard Cabbage

early spring Bastard Cabbage

As summer arrives, the stems branch out and grow 3-5 feet tall, with a large, airy mass of tiny yellow flowers.

mature bastard cabbage

The easiest way to control Bastard Cabbage is to keep it mowed to prevent seed production. The entire plant including taproot can also be removed with a hoe.

Two plants (weeds) that can be seen in abundance after the wildfires are Sunflowers and Annual Broomweed.

Annual Broomweed

Annual Broomweed

Sunflower

These are not considered invasives since both serve a purpose within the ecological community of The Hills. Sunflowers provide seed for our bird and animal population. Broomweed should not be allowed to “get out of hand”- but is a favorite of our bees. It also provides shade in our blistering summer sun for newly emerging plants, as well as ground cover for our birds and small animals.

NIGHT SKIES (Peter Gottschling): The sky will rotate major constellations during the period from March through early June. Probably the first big change comes from the change to DST March 13. All of a sudden it gets dark an hour later and by the end of May it won't get dark enough to really enjoy the sky until after 10 PM! This will make amateur astronomers into real night owls.

Jupiter will be high in the eastern and then southern sky. It is very bright and will stay close to the constellation Leo. The dominant visual constellation from winter, Orion, will gradually fade into the west helped along a little faster due to the time change. Leo, the lion, has the head shaped like a sickle and two triangles forming the front and rear of the body. The bright star Regulus in the "front" below the sickle has had various names with similar meanings in different cultures from king in Latin to the name in Arabic which translates as "heart of the lion" showing that this constellation has similar lore in Greek, Roman and Middle Eastern cultures. The bright star at the "rear" of the lion is named Denebola, a contraction of an Arabic word meaning "tail of the lion". According to the book "Sharing the Skies, Navajo Astronomy", Denebola is the first in a series of 6 bright stars that rise in the spring and along with the current constellation of Pegasus form the large constellation of the Thunderbird which corresponds to spring and storms in the Navajo seasons.

The other bright group of stars when you look up and north in the spring is the big dipper which is part of the constellation Ursa Major (big bear). By late April it will be at 12 O'clock position as darkness falls in relation to the North Star, Polaris. The big dipper circles Polaris every night but is only visible to us down here at 33° north latitude from late winter to late fall because part of it goes below our horizon sometime during the night. Up north you can see it all night long and judge time by it. To locate the North Star follow the end stars of the bowl of the big dipper and it will point to the North Star. Polaris has long been used by sailors to stay on course and determine latitude. It is the first star in the "handle" of the little dipper which is easily visible here in the dark skies of The Hills. The big dipper also has one of the few double stars visible to the naked eye (for some of us). Check this article out. http://earthsky.org/brightest-stars/mizar-and-alcor-the-horse-and-rider . Can you see the horse-and-rider? Now that I know I am supposed to see it I will try harder.

By dark in Mid-April the harbinger of summer, the summer triangle peers over the northeastern horizon with the bright star Vega, constellation Lyra, moving up followed by the other two Deneb and Altair. Along with the triangle comes the summer milky way which is very bright in the Hills. Under the darkest, clearest skies the summer Milky Way at the zenith can be bright enough to cast shadows on a moonless night.

The winter Milky Way, which is now moving towards the west, has lots of brighter spots which resolve into star clusters in a pair of binoculars. You still have time to check out one of the most amazing objects in the sky, the Orion Nebula (M42), before it moves further west. This cloud of star forming hydrogen gas is twice as big as the full moon.

Enjoy the night sky in The Hills

FEATURED SPECIES: Beneficial insects (Wolf Patrick): Five beneficial insects:

We might be poised for an insect invasion in Possum Kingdom , since we have had such a mild winter, but be careful, some of those little flyers and creepers are helping you. Not all insects are pests in need of eradication, so don't break out the insect killer just yet.

For instance, according to Rodale's Organic Life, the Aphid Midge which is attracted to pollen plants lay larvae that consume 60 plus aphids. Aphids suck the sap out of plants and can cause damage to the plant and the roots.


Aphid Midge

Aphids

The Ladybug looks like a red bumper car with black polka dots. This little bug also feeds on aphids as well as some other insects. They are attracted to nectar and pollens so plant those types of plants to attract them and help them reproduce.


Ladybug

If you like growing tomatoes, let the Pirate bug hang around your plants. This fella will consume your hornworms and certain other caterpillars. The name Hornworm is a little misguiding, this pest is actually a caterpillar and it blends in so well with the tomato plant (its favorite) that most of the damage is done before you know what caused it. So let the Pirate bug be your buddy and it will stand guard.


Pirate Bug

Wasps are not typically among our favorite species. Almost every good Texan has a can of wasp spray sitting around. However, there are Hunting Wasps and Parasitic Wasps that are very small, which allows them to get to other insect's eggs. These little guys are considered to be of the most beneficial insects we have. They are also attracted to pollen and nectar producing plants.

Wasp

The Lacewing is another beneficial insect. This insect produces larvae that eats nearly everything in sight. They enjoy aphids, caterpillars, mites, and moth eggs among other things. This crawler (larvae) may be a creepy looking bug, but it definitely deserves a reserved spot in your garden or flower bed. The Adult usually lays its eggs where aphids are available in numbers. Each egg is hung on the plant, on the underside of a leaf. Immediately after the Larvae start cracking that egg shell, they shed, then start crawling after those aphids. Like the Lady-Bug, these guys are so popular you can purchase them!!

Lacewing Egg

Lacewing Larvae

Adult Lacewing

Reference sites:

http://www.rodalesorganiclife.com/garden/10-insects-you-want-around-plants

https://www.google.com/search?q=aphids+pictures&sa=X&biw=1280&bih=597&tbm=isch&imgil=20zP4H9pXaY3YM%253A%253BzlHsrOAG0MQTPM%253Bhttp%25253A%25252F%25252Fentnemdept.ufl.edu%25252Fcreatures%25252Forn%25252Ftrees%25252Fcrapemyrtle_aphid.htm&source=iu&pf=m&fir=20zP4H9pXaY3YM%253A%252CzlHsrOAG0MQTPM%252C_&usg=__UAFtJny-dsyB2PrWg167vLJC9XY%3D&ved=0ahUKEwi3pZeIyqDLAhWqlIMKHY6aCxwQyjcIMQ&ei=VB3WVrerC6qpjgSOta7gAQ#imgrc=20zP4H9pXaY3YM%3A

https://en.wikipedia.org/wiki/Chrysopidae

Wasps and hornets (Colleen Stegall) –This article will serve as a tool to help identify the many, many wasps in our area. Though the variety in species is not great, the numbers are. We want to know ‘why’ there are so many so early; ‘who’ they are; and ‘what’ do we do about it.

Have you noticed during our mild winter of 2015/2016 that we did not go long without seeing these insects? With the many warm days we had we would see them either flying freely or on the ground in a semi-docile state. The wasps’ year starts in the spring. As the days start to warm up the queen wasps come out of hibernation where they spend the winter months. She and the workers spend the spring looking for a suitable place for their nest. This year, however, many wasps survived the winter months inside crevices on the sides of buildings, trees or other structures resulting in a larger number to begin the season. Just today, I have found nests under construction.

Now lets discuss the individual species in the immediate area.

Yellow jackets are one half to three quarter inch in length. They are social creatures that live in hidden nests inside trees, underground, in crevices of homes or any void they can find. They eat insects and almost any sweet thing they can find from nectar to soda. So beware of taking that next drink! Yellow jackets are aggressive and capable of inflicting numerous stings. In warm climates such as ours, the nests sometimes live years at a time. The numbers in these older nests can hold thousands at a time making them very dangerous.

Boldfaced Hornets are considered very aggressive and capable of signaling to other nest mate to attack an intruder. They are black with light or pale yellow markings on sturdy bodies. They build paper nests that can hold hundreds of individuals. Their sentries stand on guard and will call for an attack for no apparent reason. Beware of these insects.

Paper Wasps are generally less aggressive and considered by some agriculturists to be more beneficial than harmful as they consume some harmful insects to crops, including caterpillars, flies and beetle larvae. As their name suggests, they make their nests out of ‘paper’ they manufacture themselves. They are very busy in the spring and fall looking for appropriate nesting spots and hideouts usually on window and door frames, in hollow metal fence posts and PVC furniture, and on playground equipment. Though less aggressive, they are still capable of inflicting multiple stings when provoked. We see a lot of these species here in The Hills.

Red Wasps I have to say are my least favorite because I know from personal experience their sting is quite painful. They typically grow to one inch, are red all over their body with purplish black wings. Their nests can grow to 800 individuals and can be found in exposed locations such as eaves of houses, outbuildings or storage sheds which they begin to build in the spring. Their nests are paper like made from wood or other vegetation. They too are considered to be beneficial as they feed on insects and also feed the larvae chewed up insects.

Mud Daubers sometimes called dirt daubers, are typically one inch in length. There are many different types of daubers, but the ones most commonly seen in our area are the Black and yellow mud daubers that primarily prey on relatively small, colorful spiders, such as crab spiders, orb weavers and some jumping spiders. The nest is composed of a series of cylindrical cells that are plastered over to form a smooth nest about the size of a lemon. These daubers build a simple, one-cell, urn-shaped nest that is attached to crevices, cracks and corners. Each nest contains one egg.

Usually, they clump several nests together and plaster more mud over them. They are solitary individuals that although are capable of stinging, rarely do so.

So, do we want these pests hanging around our homes or do we want to get rid of them all? According to Texas A&M Agrilife Extenstion Service, not necessarily so. The dauber, though the nest is unsightly can offer a benefit as well as the paper wasp and my least favorite the red wasp since these individuals feed on harmful insects. Some propose to use the insect eaters as a 'Biological Pest Control'. If you do want to be more aggressive, according to Orkin, you can rid your areas of these by using a simple water hose after dark using extreme caution. The hornet is so aggressive, professional exterminators are recommended. Some propose blocking out crevices in houses and outbuildings to deter the yellow jackets and paper wasps, but there are too many crevices when you consider the many trees in the area. Poisons are readily available, but it is recommended by all sources to do the pest control in the early morning or late evening when the individuals are returning to their nests and moving more slowly. Recommended home remedies include Wasp and Hornet Freeze, Wasp-X, Bonide Wasp & Hornet Aerosols that give a quick knock down of the nest from as far as 15-20 feet. These aerosols have oily bases so care should be considered when not wanting to stain a surface.

As with all pest control, whether biological or chemical, professional expertise is always recommended as identity may be an issue and safety is of the utmost.

As for me, there are too many darn buzzing things around my porch swing!!! Where's my fly swatter?

Resources include:
Orkin www.orkin.com/stinging-pests
Texas A&M AgriLife Extension Services http://texasinsects.tamu.edu/
Wikipedia https://en.wikipedia.org
Do Your Own Pest Control http://www.doyourownpestcontrol.com/

FINAL WORDS: And – HOT OFF THE PRESS (well, actually a little old now): We mentioned in our last newsletter some of the birds around during the winter which include Eastern Screech Owl and the fact that they mate in the winter. Well, they have and one of our community members built their very own nest box last year in the hopes of attracting the Screech Owl. Well, they have and there was one nesting in that box in February of this year. By now it will have fledged. The Eastern Screech Owl is a hole nester and tree cavities are generally used in the wild BUT they will readily take to a man-made nest box!! So, if you want to attract that bird consider building one and put it up in an area where there are trees that provide a fairly open understory. You can then watch the pair (they are usually monogamous) with the female spending her time in the cavity/box while her mate searches for food that he brings back to her and her brood.