FIELD OBSERVATION REPORT

By Mary Wilson
January 21, 2018

Poppy Reserve

On January 8th & 9th there was 1.71 inch of rain at the reserve. It takes approximately 10 days for the poppies to germinate. Went to do research and the 2018 wildflower season has started. There were filaree cotyledons and some plants were starting to get the true leaves and there was some grasses starting to come up. I did find a few poppy cotyledons and hopefully there will be more rain in the near future to help promote growth.

The poppy cotyledons will first produce the "seed leaves" and these are of the embryo within the seed of the plant. They form along with the root and are present in the seed prior to germination. The cotyledon is the first part of a seed to emerge from the soil and serves a valuable purpose for the young seedling because it stores essential nutrients that help the seedling survive and grow. When the true leaves grow they take over food production from the seedling leaves and they will wither.

Original cotyledons will eventually wither away.

Poppies start with 2 seed leaves then 4 seed leaves (cotyledons) and then will start producing the true leaves.

Arthur B. Ripley Desert Woodland

In my report in July 2017 I stated the male juniper trees had produced their brown cones for the season but it looked like they were producing new green cones. This was true. I went back through the research notes that Milt Stark and I had put together and in September 2016 the male trees were forming new cones (about the time they usually do). We also concluded that the male cones opened up and the wind blew the pollen around January and February of the year. The female trees would form receptors at the ends of the branchlets to receive the pollen and new small berries would start forming around April. So why did the male trees start producing more cones in July? The answer is I don't know. We did have a good rain in December of 2016 so this may be part of the answer. The interesting thing is the female trees have not produced a lot of receptors to receive pollen during July through December, it is like they are going to stay in their pattern of receiving pollen in January or February 2018. There are a few small berries so there was a small amount of germination. This is why I love research – you think you are getting close to a pattern or answer to a question you had and nature throws in something different.

NEWS FROM THE PAST

The following article was applied to mat board. It was written by Milt Stark. Unfortunately there is no name or date of the newspaper but was probably either the Ledger Gazette or the Antelope Valley Press. Milt had his own style of writing and I hope you enjoy the article as much as I did.

Of wildflowers and stuff

Popcorn flower: one of early flowers

POPCORN FLOWER
Plagiobotrys Arizonicus

By MILT STARK
Popcorn flower
Plagiobotrys Arizonicus
Borage family

One of the first spring flowers in the area is the Popcorn Flower, an erect annual growing six to eight inches high with hairy leaves and stalk. Tiny white, sweet-scented blossoms cluster st the end of the stalk giving the appearance of popcorn.

The Spanish called this flower "Nievitas", the diminutive of nieve or snow which it certainly gives the impression of when seen in masses. Indians used the rich purple dye found in the roots to color plant fibers used in basketry etc. Also the purple dye reportedly reacts to acids and alkalies similiar to litmus.

Popcorn flowers are found throughout the foothills surrounding Antelope Valley from March until May. The photograph with this article was taken on Godde Pass Road where at the present time there are only a few flowers. In another two or three, however these will be seen on the hillsides above the road between the aqueduct and the summit in great numbers.

Plants in the Borage Family have rather small flowers with five united petals growing along one side of a coiled spike. These resemble the neck of a fiddle and are similar to some species in the Phacelia Family which also have hairy stems and leaves.

The significant difference is that Borage Family plants produce tiny nutlets which break apart when ripe.

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Sometimes when people admire my wildflower photographs, they ask me for my secret. I usually tell them, "It's really very simple. I get up early in the morning, shoot very fast film and throw away all of the pictures I don't like."

Why early in morning? Well because this is when most of the flowers are at their best when there is the best chance for the wind not to be blowing. Moving flowers rarely make good pictures.

Why fast film (ie: film with the greatest sensitivity to light)? Because in close up wildflower photography these is a real need for both a reasonably fast shutter speed (1/125 to 1/500 second) to stop the motion of the subject and a small lens opening (f16 or preferably f22) to give the greatest depth of field (THAT AREA IN A PHOTOGRAPH, IN FRONT AND BEHIND THE SUBJECT WHICH IS IN SHARP FOCUS(. This can only be achieved with fast film or by providing supplemental lighting which at times is not practical.

As far as throwing pictures away, this sometimes can be the most difficult of the three instructions, especially at first. All of those glorious colors are so appealing and at six to nine dollars a roll for processing a print you have to think twice before you dump one.

However in the long run, you will enjoy your prints more when you become slective, keeping only those which have composition and color and which depict the flower as you think it should be depicted.

For the amatuer, photography should be a very personal kind of activity. It should matter not that your wife and friends think the picture ghastly. If you think it good, that's what counts. Of course it may never be hung in the front room or win a prize in the local competition, but at least you can enjoy it.

Who knows, eventually someone as nutty as you may come along enjoy it with you?

The color photos were taken at the Poppy Reserve and are called forget-me-not/popcorn flower *Crytantha pterocarya.*

In Milt's book, A Flower-Watcher's Guide, he states for-get-me-not/popcorn flower, "Over the area there are as many as 7 species of this flower. All of them are referred to as a for-get-me-not. Although it is easy to see why some people refer to these flowers as popcorn flowers, the true popcorn flower is a different genus (*Plagiobothrys arizonicus)".*

DESERT KANGAROO RAT

(Dipodomys deserti)

By Mary Wilson

(Photo from Milt Stark Files)

The kangaroo rat lives in the desert scrub of the Mojave and Sonoran deserts of California and Arizona, and west through southern Nevada.

The kangaroo rat is as big as a mouse but has large hind legs and feet. Its hair is a yellow buff color above and white below. It has fairly large eyes and the tail has a white-tipped tuft at the end.

It weights around 1to 6 oz., length with tail 6-14 inches, sexual maturity 12-13 weeks, mating season Jan-May, gestation period 32 days, and has a lifespan of 2 to 5 years.

They live in large dens with wide openings which they dig themselves at the base of bushes, like creosote bush, or in the banks of wind drifted sand. There may be 6 to 12 entrances which they block off during the day. Their burrows are up to 4-1/2 feet deep, with many passages which connect to food storage rooms and a nest chamber. The nest is made out of grass and other plants. It spends most of its day underground sleeping, and comes out to feed at night when it is cooler.

The female kangaroo rat has 3 or more litters of babies a year. She is pregnant for 29 to 32 days. The newborns weigh about 1/16 oz. The babies are weaned at 3 to 4 weeks. They are solitary creatures, only one animal occupies a burrow, and have territories of about ½ acre.

The kangaroo rat mostly eats seeds, leaves, stems and insects. It has adapted to desert life by getting its water from the food it eats. Another great adaptation the kangaroo rat has is a cheek pouch, which it can store food in for weeks while finding shelter.

Kangaroo rats are unique in the animal world in that nature has provided them with the ability to survive with very little water, and in the deserts with no water at all. They do not store it in their bodies for future use like other animals. They have the ability to convert the dry seeds they eat into water, and they never sweat nor pant like other animals to keep cool. They also have specialized kidneys which allow them to dispose of waste materials with very little output of water.

The hind feet are large with hairy soles that aid in jumping in loose, soft sand. They drum the ground with their hind legs and kick sand at objects. The small ears are hairless. Like most nocturnal animals, the kangaroo rat has large and luminous eyes. The tail, always longer than the head and body, is covered with fur, and the end is tufted with longer hairs. The long tail acts as a balance when the animal is making long hops. The tracks of the kangaroo rat show only the marks of the hind feet and the tail.

Predators include coyotes, foxes, badgers, snakes and owls. The kangaroo rat's main defense against animal predators is its agility in leaping. If cornered by an enemy, they have been observed rapidly kicking sand in the face of their attacker.

The kangaroo rats are not endangered, and their status in the wild is very good .

Kangaroo rats are a staple for the reserve burrowing owls.

TOO CUTE

This burrowing owl fledgling was greeting the morning on May 29, 2017 at 6:40 a.m.