Observations From Nature

July 1-10, 2011

Photographs by
Joyce and Gary Kochert

July 1

Joyce and I took our boat to Russell Lake on the Georgia-South Carolina border. It was very hot so we went early and left about noon. Crossing under a highway bridge we saw large numbers of Cliff Swallows (*Petrochelidon pyrrhonota*) flying about. They were nesting in colonies under the bridge. There were at least 50 birds nesting under this one bridge. Their nests were made of mud pellets with a small entrance hole. We could see young ones peering out the entrance holes of many of the nests. The bird below is apparently using a nest made from two different mud sources or with a new top added this year.

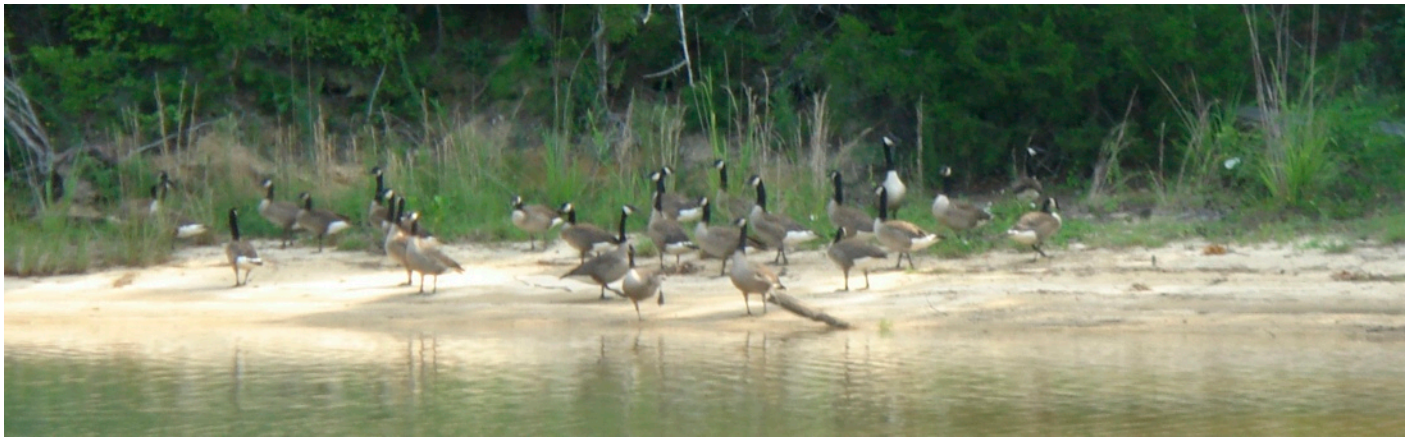
Cliff swallows winter in South America, from Venezuela to Northwestern Argentina. They return north to breed. As their name implies, their original nesting places were on rock cliffs. However, they have adapted readily to man-made structures, and they seem very happy to nest in sheltered locations on buildings or under bridges.

The swallows who “come back to Capistrano” in song are Cliff Swallows. However, they no longer return to the California mission of San Juan Capistrano. Instead they now nest in the Chino Hills north of the mission.

These birds have other interesting characteristics. They have been observed to remove eggs from other individuals nests and to move eggs from their own nests into the nests of others. Those birds less successful in finding enough insects to eat, will watch for another bird to return with insect prey. They will then follow the other bird back to the insect source.

We saw an osprey flying over the lake and soon spotted its nest in the top of a dead tree that was drowned when the lake was constructed. One of the osprey pair was perched on the nest, and we could see one young bird with it. The other bird soon returned carrying a fish.

A large dragonfly periodically buzzed around the boat, and it finally decided to perch on a rope lying near the bow of the boat. Joyce was able to get a picture of it before it departed for further adventures. Its “clubbed” tail, green eyes, long legs with spines on the femur of the rear pair of legs, and golden triangles on the dorsal surface of the club help to identify it as a Black-shouldered Spinyleg Dragonfly (*Dromogomphus spinosus*).



There were lots of Canada Geese (*Branta canadensis)* loitering on the shoreline in groups of ten or twenty. These large groups must have finished their breeding for the year.

When we got a bit too close, they hiked further down the shore.

July 3

I went to the boat dock behind our house to try my luck photographing dragonflies. There were four or five species flying about. I was able to get fairly decent pictures of two types. The one below is,a Slaty Skimmer (*Libellula incesta)*.

The next ne is a Widow Skimmer (*Libellula lucuosa*). It has a distinctive wing pattern. As you can see, this creature has suffered considerable damage to both its port wing tips. However, it was still able to fly quite well. These two species were running regular patrols along the lake shore, interrupted by

sojourns on favored perches, from where they sallied forth to chase other passing dragonflies from their territory. The Widow Skimmer seemed quite aggressive against both other Widow Skimmers and the Slaty Skimmers. I never saw the Slaty Skimmers chase a Window Skimmer.

Some creature had deposited an impressive group of feces on the boardwalk to the lake. It was obvious that some food with a lot of seeds had been consumed. The seeds reminded me of the seeds from a Wild Cherry (*Prunus* serotina*)* tree that have been falling onto my driveway. So I collected some seeds from the driveway and washed some out of the feces for comparison. They look pretty similar to me. So I think the culprit had been eating wild cherry fruit, and I suspect it was an opossum (*Didelphis virginiana*).

Top 5 seeds are collected from a known wild cherry tree. Bottom 5 are from feces sample on the left.

On the way back to the house, one of the many Gray Squirrels (*Sciurus carolinensis*) around paused on its way up a tree to look suspiciously at me. It is obvious that the feed I put out for the birds keeps the local squirrels in fine fettle.

July 4

I saw a neat spider on the bedroom carpet. It has an interesting pattern of chevrons on its top, so I think it is an Eastern Parson Spider (*Herpyllus ecclesiasticus*). This is a member of the Ground Spider group which has about 2,000 species world-wide. They are not regarded as dangerous, although they can bite if trapped in clothing, for example. They do not spin webs, but hunt actively at night, and their prey is mostly other spiders. They make a silk retreat to hide in during the day. You can see two large spinnerets on the rear of this one. I wondered why its scientific name should include “ecclesiasticus”, and its common name should be “Parson Spider”. it turns out that the pattern of markings on its back was thought to resemble and old style cravat (tie) worn by clergy in the 18th century.

July 6

Another visit to the boat dock. This time I was looking at the water striders. Every year the lake supports a hugh crop of these. They start out small in the early part of the summer and seem to get fewer and larger as the season wears on. They have many common names, water skater, magic bugs, water scooters, for example, but the one I like best is Jesus bug. They have lots of microscopic hairs that trap air and make them waterproof. This prevents them from penetrating the surface tension and sinking into the water. You can see the dimples they make in the water in the photographs below. Their front pair of legs is modified for feeling vibrations in the water, which might come from struggling prey, and for grabbing prey. The middle pair is used as oars for propelling them, and the hind pair is used for steering.

As true bugs (Hemiptera), their mouthparts are modified into a hollow tube. They skate around on the water looking for a dead or dying creature that has fallen into the water. They pierce the prey and suck out the insides.

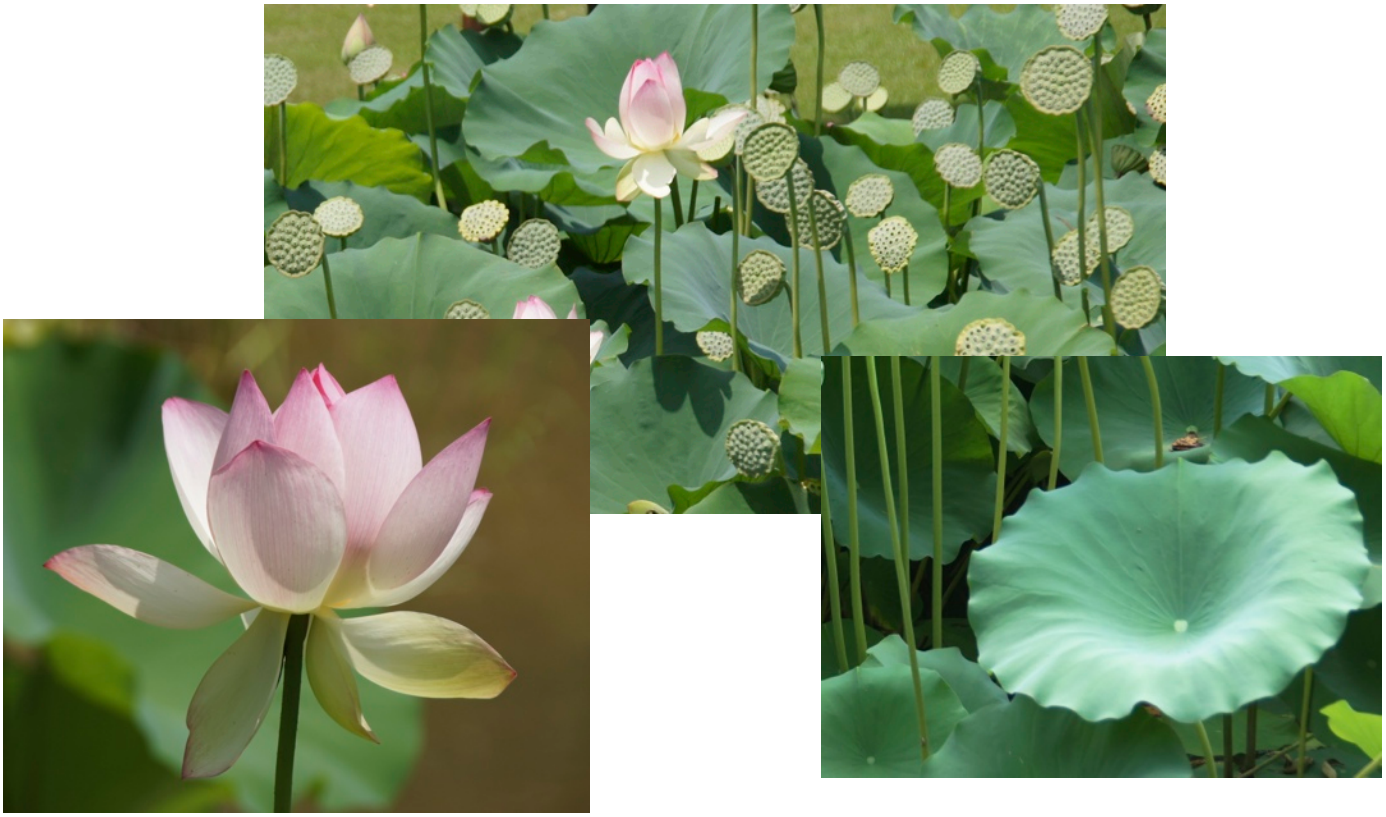
There are lots of species of water striders, perhaps 1500 world-wide. I am not yet able to identify the ones here, but I hope to learn more in time. The ones pictured are less than 1/2 inch long.

There is still a steady stream of birds to the feeders. However, we don't have much variety. House finches (*Carpodacus mexicanus*) are one of the most frequent visitors, and they are now bringing some of their offspring to learn the ropes. House finches have only appeared at our feeders in the last few years. They are native to the Western U.S., and somehow spread to the Eastern U.S. When we first moved to Athens, in 1967, we never saw them. We did (and still do)have the somewhat similar looking Purple Finches (*Carpodacus purpureus*) in the winter.

At any rate, the House Finches are fun to watch, and they have a delightful song.

July 8

This morning we started for Florida for a week with children and grandchildren. As we drove along we saw a small pond with lots of lotus in bloom. These were Asian Lotus (*Nelumbo nucifera*), which are native to Tropical Asia and Queensland, Australia.



These plants are tremendously beautiful to look at, and they have great significance in Asian religion and mythology. Since they are able to produce such beauty from the muddy mire where they grow, lotuses have been seen as symbols of purity or resurrection. Gods of Asian religions are often depicted sitting on a lotus flower. Their seed pods (see below for the American Lotus) are quite ornamental also.

There were many dragonflies flitting around the lotus pond, so I spent some time trying to photograph them. On the right above is a male Common Whitetail (*Plathemis lydia*) sharing a perch with a male Eastern Pondhawk (*Erythemis simplicicolis*). Upper left is another view of the male Pondhawk. Lower left is a closer view of the Common Whitetail.

The dragonfly above is a Yellow-sided Skimmer (*Libellula flacida*). Some males have light yellow sides on their thorax. This one appears very white on its sides. Females have yellow sides on their abdomen.

On the right above is a Slaty Skimmer (*Libellusa incesta*) perched on a lotus bud. It is demonstrating how it can hold its fore and hind wings in opposition. Dragonflies frequently beat their wings in opposition when they fly.

We next stopped at a fish hatchery near Warm Springs, Georgia. There was a small aquarium with some native fishes and some ponds with fish outside. The one depicted here from the aquarium is a Spotted Gar (*Lepisosteus oculatus*). Gar scales are quite distinctive. They are diamond-shaped, shiny, thick, and hard like a suit of armor. Native Americans used them for arrow points.

Barn swallows (*Hirundo* rustica*)* were nesting under the eaves of the headquarters building. The young were just about ready to leave the nest. The parents fluttered about anxiously while I took pictures, but the young in the nest looked quite unperturbed. You could see that the nest had been constructed mostly of mud, and many of the individual mud pellets brought by the parents were visible on the surface of the nest.

The nest was constructed partially on top of a set of mud tubes constructed by the Organ-pipe Mud Dauber (*Trypoxylon politum*). It looks as if different mud sources were used for the different “pipes”. Each tube contained several cells; each cell had several paralyzed spiders and a single mud-dauber

egg. After the egg hatched into a larva, it begin to eat the spiders. The mature larva then pupated and finally emerged as an adult mud dauber. Several of the adults have already emerged from this nest by tunneling out through the wall of their cell. Adult mud-daubers do not eat spiders; they subsist on nectar from flowers. However they are experts at hunting and paralyzing spiders to stock their “organ pipes”. Males stay in the nest and guard it from predators, parasites, or other insects that might carry off the spider provisions or the young.

The exhibition pond had a lot of turtles, including the one pictured below, which is probably a River Cooter (*Pseudemys concinna*).

At Kolomoki Mounds State Park, near Blakely, Georgia, the Passion Flowers (*Passiflora incarnata*) were blooming. These plants and the large fruit they produce are sometimes called Maypops. “Passion” in the name refers to the Passion of Jesus Christ. In the magnified view below you can see the three stigmas (slightly out of focus on the highest part of the flower). These represent the three nails used to nail Jesus to the cross. The five anthers below represent the five wounds of Jesus (four from the nails and one from the spear), and the many purple radial filaments represent the crown of thorns.

July 9

We crossed into Florida, and stopped just north of Tallahassee where Lake Jackson is adjacent to the highway. There was a great expanse of American Lotus (*Nelumbo lutea*) growing in the shallows there, so it was a good chance to compare it with the Asian Lotus we had seen yesterday. The main difference is flower color; the American Lotus flower is light yellow instead of the pink exhibited by the Asian form (page 8). The American Lotuses already had some mature capsules, and all stages from flower buds to mature seeds could be seen.

Flower with immature capsule and many stamens.

Capsule is fertilized, corolla has wilted.

Immature capsule.

Mature capsule with seeds.

Mature seeds in capsule.

There were also some dragonflies about. However, they stayed frustratingly out of range. I did get this picture of a Halloween Pennant (*Celithemis eponina*) that landed on a broken-off lotus stem.

Our next stop was Fannin Springs State Park, Florida. There were many interesting things to see there. A large spring emerges and forms a stream that shortly flows into the Suwanee River.

I saw the Banded Water Snake (*Nerodia sipedon*) (below) concealed in the vegetation near the spring.

There were many Golden Silk Spiders (*Nephila clavipes*), also called Banana Spiders, along the Park's boardwalks. Golden Silk Spiders are one of the largest non-tarantula spiders in North America. Their leg span can be greater than five inches. The silk they produce for their web is a nice golden color in the right light. The photograph is a female with a much smaller male lurking in the web above her. Some webs had two or three males, hoping to get lucky, in addition to the female (who constructed the web).

A little further along the boardwalk was a Wheel Bug (*Arilus* cristatus*)* on a grass stem. The closeup below shows the mouthparts that are modified into a hollow tube and used for piercing prey. Once the prey is impaled, digestive juices are injected and the inside of the unfortunate victim is sucked out. Wheel bugs can give a painful bite with their beak. The cog-wheel looking dorsal armor is also evident in the closeup.

One of the first things we heard on arriving at the house in Florida was the calls of tree frogs. This one was spotted on the lawn and placed on the wall in the corner of the porch. It is a Cope's Gray Treefrog (*Hyla chrysoscellis*), and it is almost 2.5 inches long.