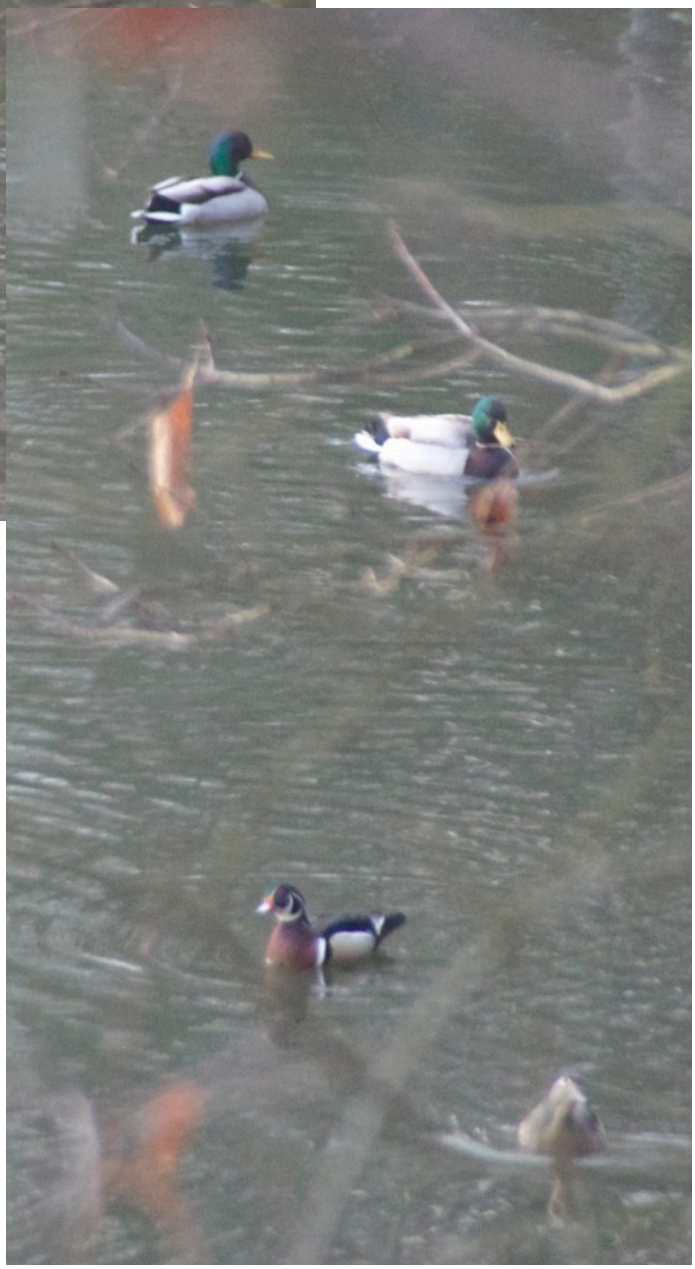
Observations From Nature

February, 2012

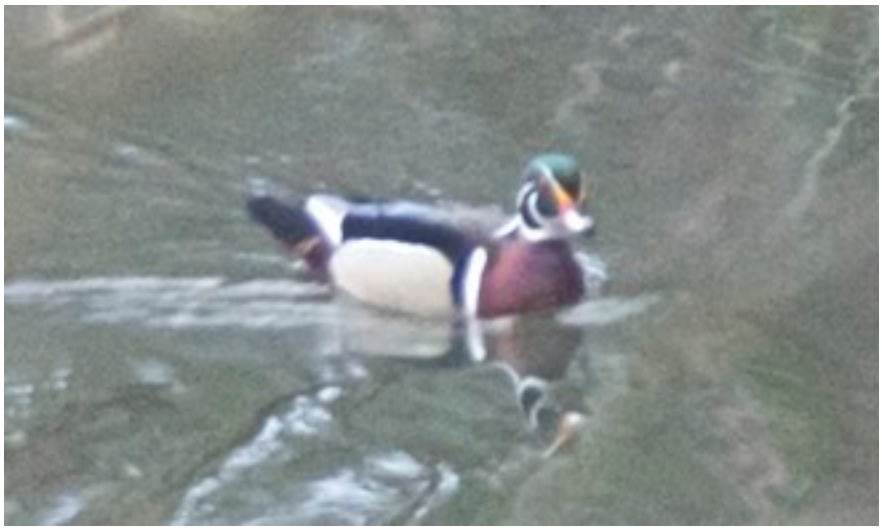
Photographs by
Joyce and Gary Kochert



Some ducks have been stopping in at the lake behind our house. Here are pictures of a pair of Mallard drakes and a pair of Wood Ducks (*Aix sponsa)*. The female Wood Duck in the lower right is “dabbling” to reach something under the water.

The photos on this page closer views of the Wood Duck male and female. The male is one of the most colorful of American waterfowl. Unlike most other ducks, Wood Ducks have sharp claws and are well adapted for perching in trees. They nest in cavities of trees, and readily take to man-made wooden nesting boxes if these are available. The day after hatching, the nestlings jump from the nest, and are fully capable of fending for themselves.

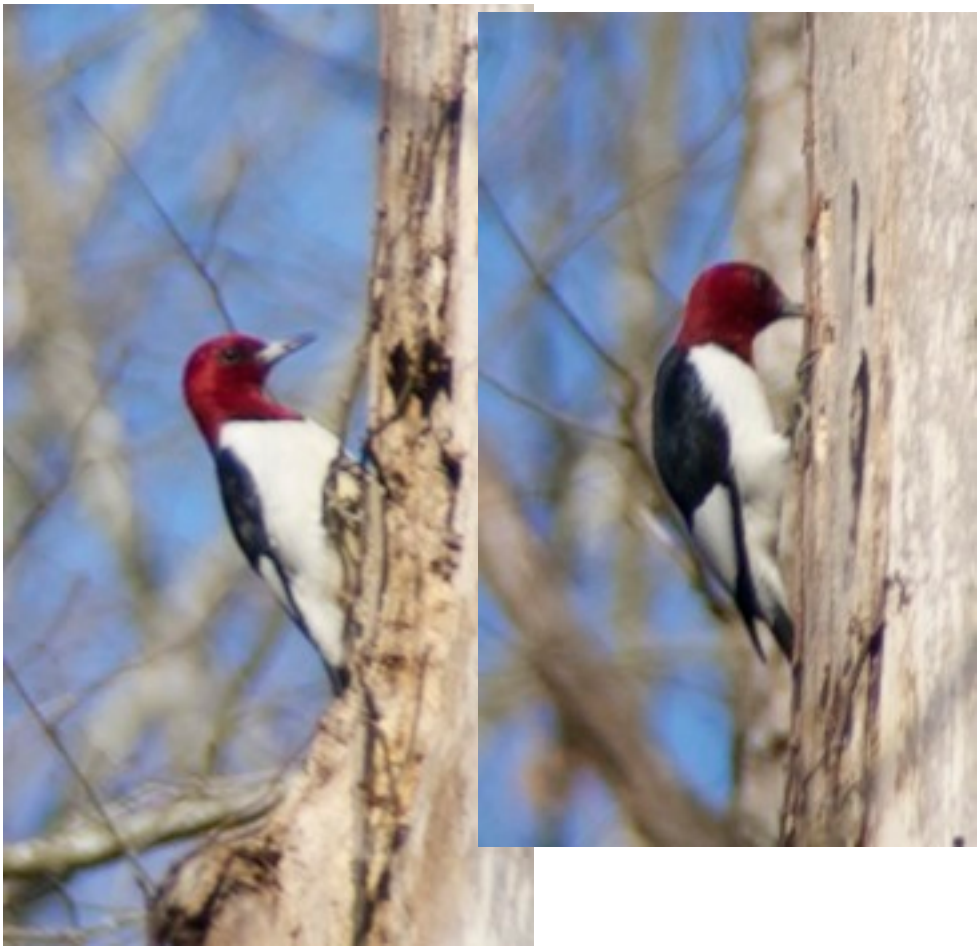
Wood ducks were nearly exterminated in the late 19th century due to unregulated hunting and habitat destruction. However, their populations were able to recover after laws were passed to regulate hunting, and nest boxes began to be erected by conservation groups.



Belted Kingfishers (*Megaceryle alcyon*) frequently sit on a post in the lake. I often hear their rattling calls as they fly about the lake. Occasionally, I see one plunge into the water after some small fish. Unusually for birds, the female of this species is more brightly colored than the male. The one in the picture is a female. Both sexes have the blue "belt" across their breast, but only the females have the orange belt and orange color on the sides of the breast.

Belted Kingfishers nest in tunnels that they excavate in dirt banks. Each tunnel is about 6 feet long with an enlarged nest chamber at the end.

The *species* part of its scientific name is derived from a Greek legend about a mythical bird, Alcyon (or Halcyon) that nested on the surface of the sea and had a magical ability to calm the wind and waves.



This Spring, we have two Red-headed Woodpeckers (*Melanerpes erythrocephalus*) trying to establish a family. The males have selected some suitable dead trees, and they are calling and displaying in hopes of attracting a female. They call loudly and periodically fly around the tree in a conspicuous way.

The genus name, *Melanerpes* means in Latin "black creeper", and the species name *erythrocephalus* means "red head".

Crocus (*Crocus sp.*) are now blooming. These are among the earliest of the flowering bulbs. In the center are the yellow stamens and the three red-orange stigmas.

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Saffron, used both for flavor and coloring, is a spice derived from the stigmas of *Crocus sativus*. Collecting Crocus stigmas is done by hand, and is a very tedious process. It is understandable why saffron is usually regarded as the most expensive spice by weight. About ninety percent of the world's saffron comes from Iran.

The photo above shows the yellow anthers and the three stigmas. The form used for saffron production has been selected to have much longer stigmas than the one from my yard pictured here (see photo from the web on left).

January 15

This gaudy creature is a Muscovy Duck (*Cairina moschata*). I have seen it a couple of times investigating a dilapidated wood duck box in the corner of the lake. Last year, it was frequently in the box, but I did not notice any young.

Muscovy Ducks are native to Mexico, Central America and South America. Surprisingly, it is quite tolerant to colder temperatures. It has been widely introduced as a domestic duck, and small feral breeding populations have established themselves at many places in the U.S. and Canada. I believe this one is a member of such a feral population. No one around the lake has any domestic ducks, at any rate.

The Muscovy Duck was domesticated by Native Americans, and it is still widely found. It is the only domestic duck not derived from Mallard stock. They are unique because of the red caruncles around their eyes and above their beak. The males also have a crest on top of their head which they can raise to try to intimidate rivals.

The name “Muscovy” means “from the region of Moscow”, but these ducks are not native to there and were not introduced there until well after their transport to Western Europe. It is not known how they got the name “Muscovy”. The native wild form is mostly black, but domesticated ones have been produced in a wide variety of black and white, chocolate, and pure white forms.

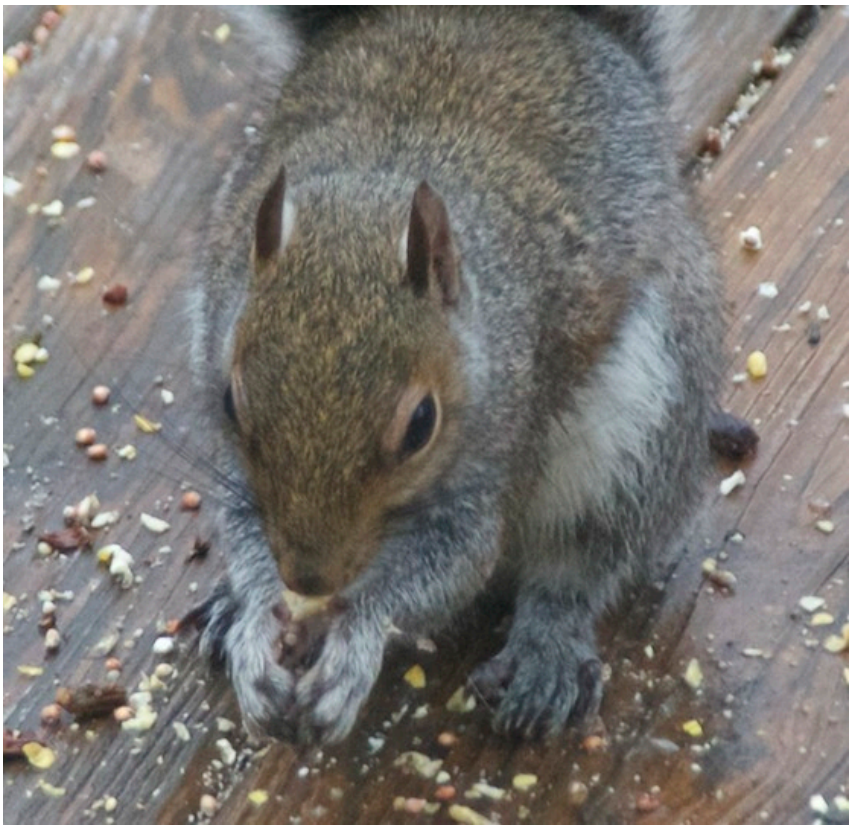
A dead pine tree finally “gave up the ghost” and fell down. After peeling off some of the bark, I found these interesting surface marks on the underlying wood. They are tunnels excavated in the inner bark and phloem by bark beetle adults and larvae.

Newly emerged adult beetles fly off to search for a new host tree. They bore a hole through the outer bark to gain access to the nutritious inner bark and phloem. While they do this, they emit chemicals (pheromones), which attract additional beetles, into the air. The host tree then becomes infected by multiple beetles, and mating of the beetles can occur. The adults tunnel out a small chamber for their eggs, the larvae hatch, tunnel through some bark, pupate, and then emerge as brood adults ready to infect additional trees. World-wide, there are about 6,000 species of Bark Beetles.

Some bark beetles are serious pests of trees. The Southern Bark Beetle (*Dendroctonus frontalis*), for example, attacks and can kill all Pine species in its range, but prefers Loblolly (*Pinus taeda*) and Short-leaf Pine (*P. echinata*).

Great Blue Herons (*Ardea herodias*) are year-round residents around the lake. The colors on this one are very nice, and the long plumes can be seen hanging from its breast. These plumes caused many herons and egrets to be killed, because they used to be very fashionable for ladies hats.

Squirrels, such as this Grey Squirrel (*Sciurus carolinensis*) have only four fingers and a rudimentary "thumb" on their front feet. Lacking an opposable thumb, they cannot hold their food with one paw as a human would with an apple. They have to hold their food with both front paws as the one pictured on the right is doing in a characteristic squirrel pose.



Some tiny early flowers are blooming along our driveway. The top picture show Bluets (*Houstonia sp*). There are about 20 species of *Houstonia* native to the U.S. They are low, tiny plants; the flower on those above is less than one inch across. I think the one pictured is *H. caerulea,* sometimes called “Quaker Ladies”. Bluets exhibit a range of flower colors; purple to white can occur in one small population.

The picture to the left is another tiny flower, a Field Pansy or Johnny-Jump-Up (*Viola bicolor*). The latter name apparently comes from the fact that it very quickly appears in the spring, thus it seems to “jump up”. Its flowers are also only about one inch across.

Native Americans supposedly used this plant to treat coughs and colds.

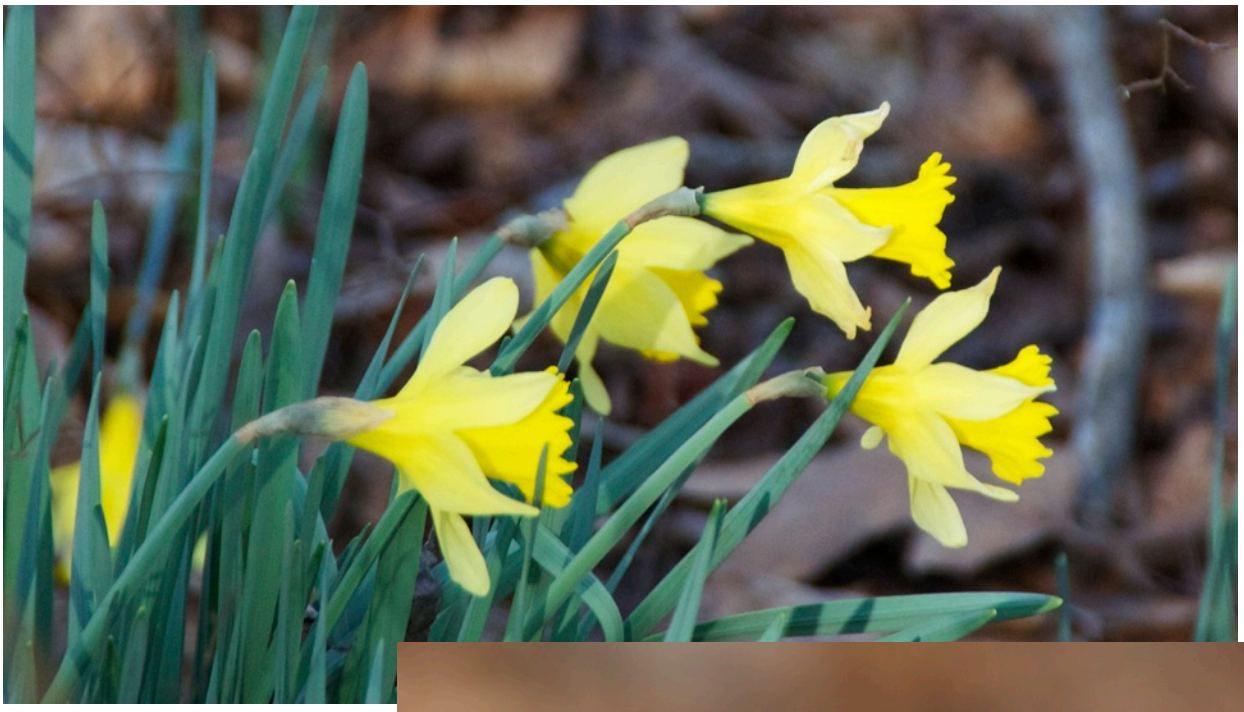
Plants, of course, cannot run away or hide when threatened by a predator, so they have evolved various ways of protecting themselves from being eaten. Many plants produce bad-tasting or poisonous compounds to discourage herbivores. Others arm themselves with protective, pointed structures. Here are two examples of such armor. The left example shows branches on a young Honey Locust (*Gleditsia triacanthos*) that have been modified to have very pointed tips. These are called spines. On the right are prickles on a Blackberry (*Rubus sp*), which are much smaller outgrowths of the plant's epidermis or cortex

Some of our local stems have woody outgrowths on their twigs. They are said to be “winged”. The picture above is Sweet Gum (*Liquidamber styraciflua*). This time of year it is most conspicuous because of the woody seed capsules (gumballs) that are lying around everywhere (right).

Our other common tree with winged stems is Winged Elm (*Ulmus alata*), also called “Corked Elm” or “Wahoo Elm” (below). It is very common in the Georgia Piedmont. The wood of Winged Elm is hard, but flexible and resistant to splitting. It is often used for the rockers of rocking chairs or for hockey sticks.

When the leaves are off, we have a good opportunity to observe characteristics of woody branches and twigs. At the tip of each branch is a terminal bud. This is the tip structure where growth will start in the spring. The bud is typically covered with hard scales. When the bud begins to grow, the scales fall off. Each scale leaves a scar on the stem where it was previously attached. These bud scale scars can be seen on the stem for a year or more. By looking down the stem, the scars from last year's bud scales can often be found. The distance between last year's bud scale scars and this year's terminal bud indicates the distance the twig grew last year. In the twig to the left I have marked the position of last year's bud scale scars with an arrow, and I have magnified the picture to show them a bit more clearly below. The yellow arrow shows how much the twig grew last year.

To the right is a magnified picture of the terminal bud of the twig to the left.



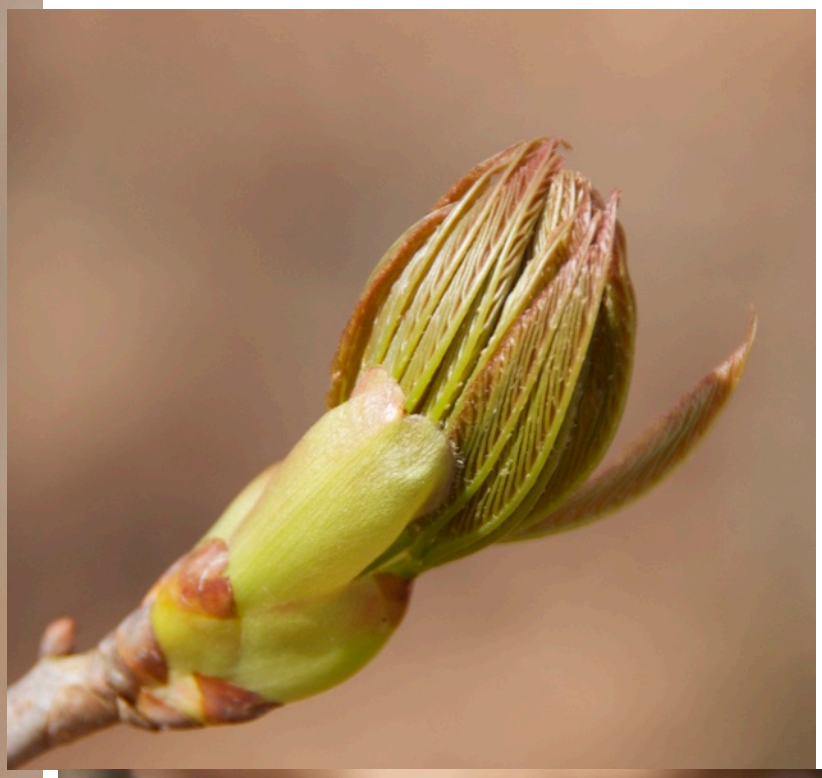
The Daffodils are out early this year. They are native to Europe, North Africa, and Asia. Daffodil is often used synonymously with “Narcissus”, and indeed the scientific name of Daffodils is *Narcissus*. There are many species and more than 25,000 horticultural varieties. The name “Daffodil” apparently arose through confusion with another spring-flowering bulb, the Asffodel (*Asphodelus sp*.). “Daffodil” may come from the Dutch pronunciation of “De Asffodel”. At any rate, Daffodil is now widely used in the U.S. as the common name of these plants. In the Southern U.S. the term “Jonquil” is sometimes used to describe Daffodils. Strictly speaking, Jonquil should only be used for those cultivars derived from *Narcissus jonquilla*. To be safe, call them all Daffodils.

In Greek mythology, Narcissus was a youth who was so enamored with his appearance that he spent all his time looking at his reflection in a pool of water. He ultimately fell in and drowned or starved to death. Bulbs of Daffodils contain a toxic compound, lycorine, and the sap contains calcium oxalate, which can cause dermatitis in those who handle them frequently, such as florists.

See the website of the American Daffodil Society (daffodilusa.org) for a lot more information.

This is an interesting grave site from a cemetery in Lexington, Georgia. It incorporates marine shells (now badly deteriorated) in its covering. These shells looks like some sort of a marine clam, maybe one of the Cockle Shells. They would have had to be brought in from some distance, since the grave is inland. The grave has no date or any other marking that I can find. It is a small grave, so could be that of a child.

Here is a link to some similar, shell-covered graves in Texas: http://blueeyesandbluebonnets.com/2010/06/tombstone-tuesday-seashells. No one seems to know for sure what symbology is involved in having this sort of shell on a grave.



The first trees or shrubs to open their leaves in our woods are the Buckeyes. These views show a bud opening to reveal the cluster of flower buds and the palmately compound leaves. This is the Red Buckeye (*Aseculus pavia*), which only reaches shrub or small tree size in our area.

American Beech (*Fagus grandifolia*) is one of the last trees to lose its leaves in the Spring. The persistent, light tan leaves make Beeches very conspicuous in the forest this time of year. The photo on the left shows a Beech, with its leaves from last year still hanging on, next to a Buckeye shrub, the first to leaf out in the Spring.

American Beech has unusual, needle-shaped terminal buds. These can se seen in the other photos.

The upper left photograph shows a Red Cedar (*Juniperus virginiana*) that has burst out with a large number of tiny cones. These are the male cones (lower photo) which will soon be releasing pollen. In Red Cedar, male and female cones are usually born on separate trees. The tiny female cones (upper right) form small, bluish berries after being fertilized. Some of these berries still linger on the tree till late winter (lower right).