

# OBSERVATIONS FROM NATURE

FALL, 2012-PART 2

PHOTOGRAPHS BY  
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## Old Yellow

Ginkgo (*Ginkgo biloba*) trees are especially impressive in the Fall, when their leaves turn a brilliant yellow. All the leaves tend to fall in a very short time, producing a golden carpet under the tree.

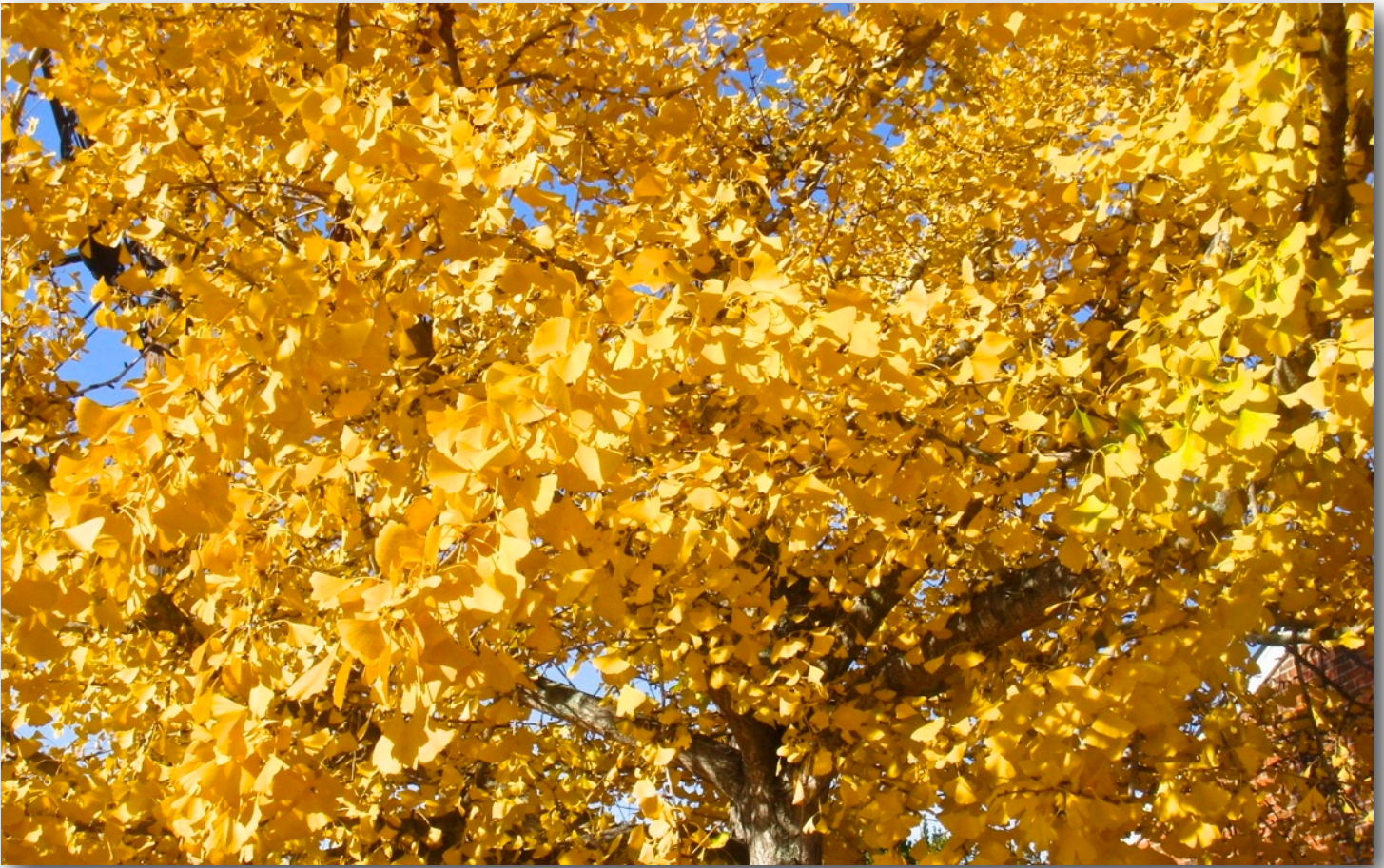
Ginkgo trees are “living fossils” of a sort. Almost identical forms have been found in rocks more than 200 million years old, long before modern broadleaf trees appeared in the fossil record. Different forms or species of Ginkgo existed all over the Northern and Southern hemisphere during the heyday of the dinosaurs. However, they began to decline in diversity and range more than 100 million years ago. By modern times only *Ginkgo biloba* was left, and its natural range was restricted to central China. When the plant was found by Western scientists in Japan in the late 17th century, it was of great interest, both because of its ancient lineage and its unusual reproductive features. Ginkgo has motile sperm which swim about inside the female organ (ovule) and fertilize the egg. No other modern tree has motile sperm. Thus the Ginkgo is more like cycads or ferns, which also have motile sperm, than a modern tree.

Ginkgo trees come in separate sexes. Males bear small structures which resemble a cone

on a pine tree. These shed spores which are wind-borne. The female tree produces naked ovules with a small drop of liquid at the tip. Spores that fall on the liquid are drawn into the ovule. Sperm develop from the spore inside the ovule and fertilization occurs much later.

Ginkgo has been propagated all over the world as an ornamental tree or as a “street” tree. It grows well in a variety of environments and is very resistant to urban pollution. Most of the time, male trees are planted, because the “fruit” formed on females trees gives off a terrific stench after it falls to the ground and begins to decay.





The genus (and common) name, Ginkgo, comes from the Japanese “ginkyo” which means “silver (gin) apricot (kyo)”. As the “fruit” from the female tree ages, it turns to a silver color and somewhat resembles an apricot. The species name “*biloba*” was given because many of the leaves of Ginkgo have a notch at the apex which divides the leaves into two lobes. However, this is not true of all leaves. For example the leaf on the right below has three lobes. If you become interested in Ginkgo trees, there is an unbelievably complete web site called the Ginkgo Pages at: <http://kwanten.home.xs4all.nl>







## ***Daddy Longlegs***

Fall brings many sightings of Daddy Longlegs or Harvestmen. The first common name is easily derived; the second is derived from seeing many of them in the Fall, which is harvest time. They are not spiders; they do not have venom glands and they do not produce silk. They are harmless to humans, but may secrete a foul-smelling compound. Their second pair of legs is longer than the others and function as “feelers”. The body has two segments, a cephalothorax and an abdomen, but the connection between the segments is wide, so their body appears to be a single structure.





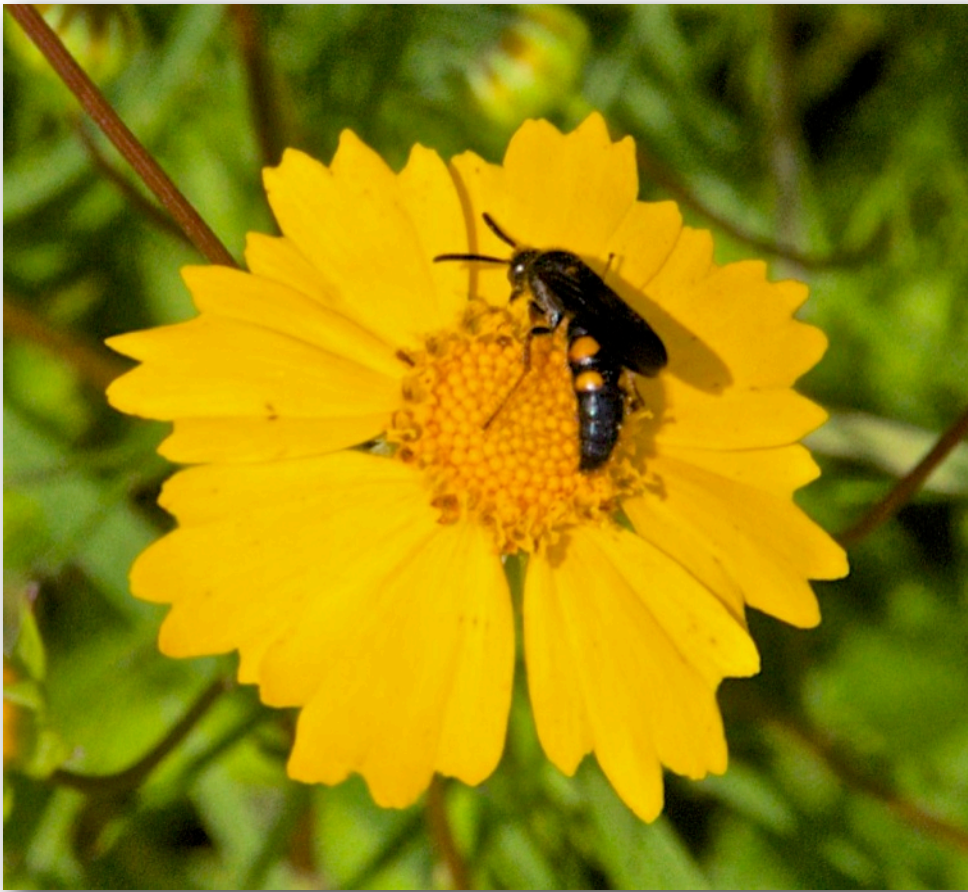
### ***Small and Smaller***

These two small moths came to our outdoor lights. Cameron at [discoverlife.org](http://discoverlife.org) graciously provided identifications for me. The one above is a Signate Melanophia (*Melanophia signatoria*) Signate means “having definite color markings”. The moth to the left is *Bleptina inferior*, the Inferior Owlet Moth. Both of these are small creatures; the upper one has a wingspan of about 1.5 inches, and the one to the left is only about 0.5 inches front to back.



The small red creatures on these moths’ backs are mite larvae (family Erythraeidae?). They bore a hole through the cuticle of the moth and insert a drinking-straw-like organ to suck out bodily fluids. Later they will exit the moth for the ground, where they become adults, which are free-ranging and predatory.





## Fall Flowers

This scoliid wasp (*Scolia nobilitata*), like many insects, does not have a common name. Adults feed on nectar such as that provided by this Fall flower (*Coreopsis* sp.). There are about 20 species of scoliid wasps in North America. All are non-social, solitary types. The females lay their eggs on the grubs of beetles, after paralyzing them with a sting. The wasp larvae then consume the beetle. Scoliid beetles are important for the biocontrol of certain pests, such as the Japanese Beetle (*Popillia japonica*). Scoliid wasps find beetle grubs by following the grub's tunnel underground or by digging their own tunnels.



Virginia Buttonweed (*Diodia virginiana*) is in the family Rubiaceae, which also contains Coffee (*Coffea arabica* or *C. canephora*, the latter a synonym for *C. robusta*), Quinine (*Cinchona offinalis*) and the familiar garden plant Pentas (*Pentas lanceolata*). The scientific name *Diodia* is from the Greek for "highway or thoroughfare" possibly given because these plants often grow along roads. Virginia Buttonweed can be a problem for those trying to produce picture-book lawns or golf courses, because it has a deep tap-root, and any little fragment of a stem or rhizome can grow into a new plant. It is

also unusual in that it produces self-pollinating flowers both above and below ground.





## ***Hawk Watching***

My granddaughter spotted this hawk outside our living room window. Its image can be seen on the LCD screen of her camera. The other view is a zoomed-in image of the bird. It is a Red-shouldered Hawk (*Buteo lineatus*). The other large *Buteo* that we commonly see is *Buteo jamaicensis*, the Red-tailed Hawk. The black and white banding pattern on the upper surface of the tail and the red patch of feathers on the “shoulder” show that this one is a Red-shouldered Hawk.







## ***Puffball***

My grandson Jack found this puffball (*Calvatia sp.*) at the edge of the road near our mailbox. Puffballs are familiar to children who get outdoors because when mature they produce a nice cloud of spores when stomped. The surface patterning is characteristic of some puffballs, but others retain a smooth white appearance at maturity. All puffballs are said to be edible, but they need to be collected before the spores mature when the flesh is still solid inside. This one is about five inches in diameter.





### ***Backyard Deer***

Some civilized White-tailed deer relaxing in my daughter and son-in-laws back yard in a busy subdivision of Alpharetta, Georgia. They look quite comfortable even without cushions. Crows, squirrels, raccoons, opossums, and coyotes are other animals that have adapted to urban life quite well.



These Fall leaves all came from the same Sweetgum (*Liquidambar styraciflua*) tree.





## ***Illegal Aliens***

This Fall, we saw an explosion in the population of Kudzu Bugs (*Megacopta cribrari*), which were accidentally introduced from Asia and first seen in Georgia in October, 2009. They have now spread over a large area of the Southeast, and are becoming a major problem.

Kudzu bugs are less than 0.5 inches long; about the size of the familiar Ladybird Beetles (also called Ladybugs, several species in the family Coccinellidae). However, Kudzu bugs are not beetles, but are more closely related to stinkbugs.

Two generations are generally produced during the summer season. Both generations show a preference for plants in the bean family (Fabaceae). The first generation

mostly develop on Kudzu (*Pueraria lobata*) or Wisteria (*Wisteria sp.*), and the second generation invades soybeans and other bean-related crops and wild hosts. They can cause serious losses on crop plants, The yield of untreated Soybeans can be reduced 20% by an invasion of Kudzu Bugs.

In the Fall, Kudzu bugs try to find a sheltered place to overwinter. Some enter cracks on trees or shrubs or crawl into undergrowth. Unfortunately, others seek to enter houses or other buildings (particularly white or light-colored structures) where they can be a real nuisance, because they can be present in large numbers. Kudzu Bugs secrete a foul-smelling substance that can stain furniture, wallpaper, or paint. They will also stain human skin if they are handled, and there are some reports of rashes or blisters produced on the skin of sensitive individuals.







## ***Flower to Fruit***

In the April 2012 notes, I had a page on the Flowering Dogwood (*Cornus florida*) flower. There I described that the central yellow mass is really a group of flowers; the four white “petals” are really modified leaves (bracts).

Now in the Fall, the flowers have matured and each is represented by a cluster of red berries (below). These are quite pretty, but don’t last long in our yard, because the Gray Squirrels (*Sciurus carolinensis*) eat them shortly after they mature. Many other mammals and several types of birds will also eat the fruits, but I have only seen squirrels eating them on the tree which provided these photographs.

Dogwood fruits are often called “berries”, but they are technically drupes. A drupe is a fleshy fruit with a single seed, such as a peach, olive, cherry, or plum. The seed is covered by a hard stony layer.

Flowering Dogwood is pollinated by many insects, but the most frequent were found to be Halictid and Andrenid bees. Halictids are small, often metallic-colored bees, sometimes called “sweat bees”. The many species of Andrenids are typically small solitary bees, with each female excavating and provisioning her own nest.

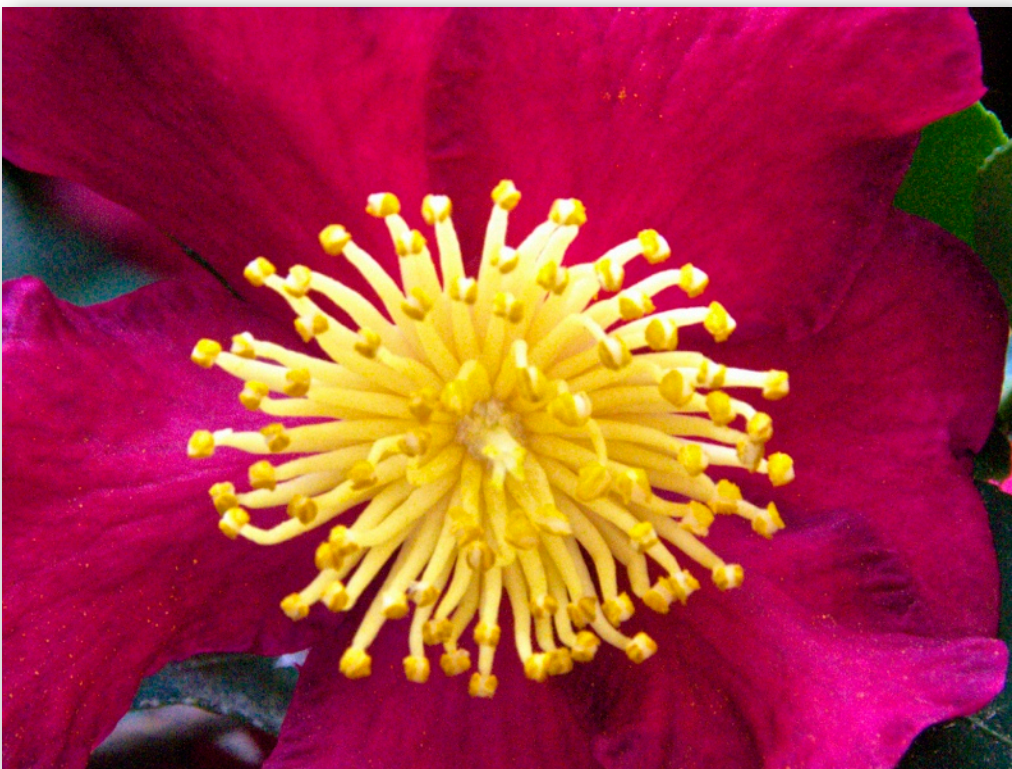






### ***Frequent Flier***

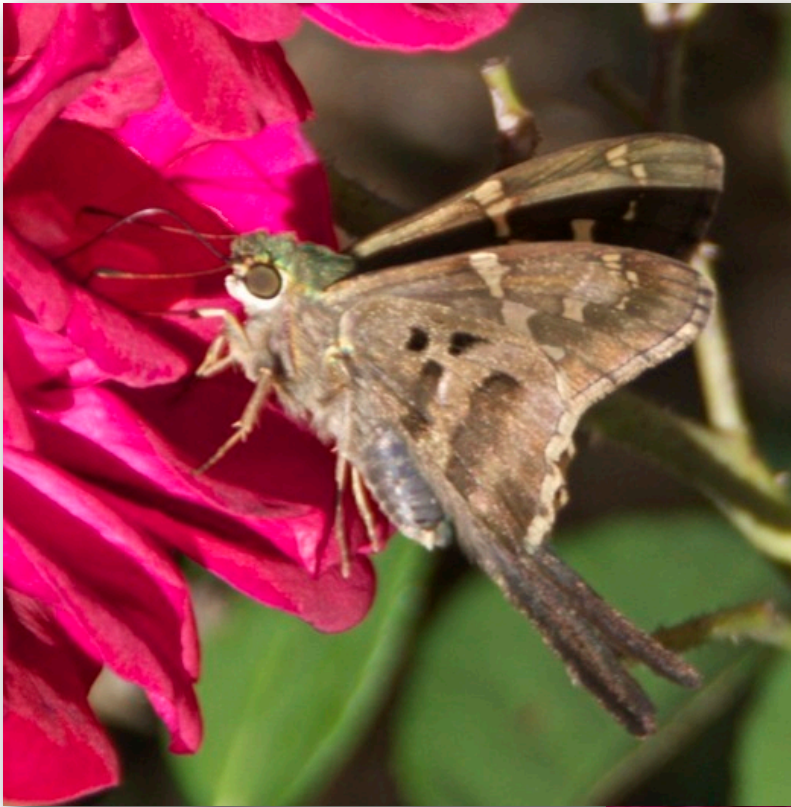
Carolina Grasshoppers (*Dissosteira carolina*) are identified by the several dark spots over their body and the ridge along the top of the pronotum (the plate on the back just in front of the wings). This ridge is marked with an arrow in the photograph. They are strong fliers and sometimes can be seen hovering in a courtship display. Despite its name, the Carolina Grasshopper is found throughout the United States.



### ***Early Christmas***

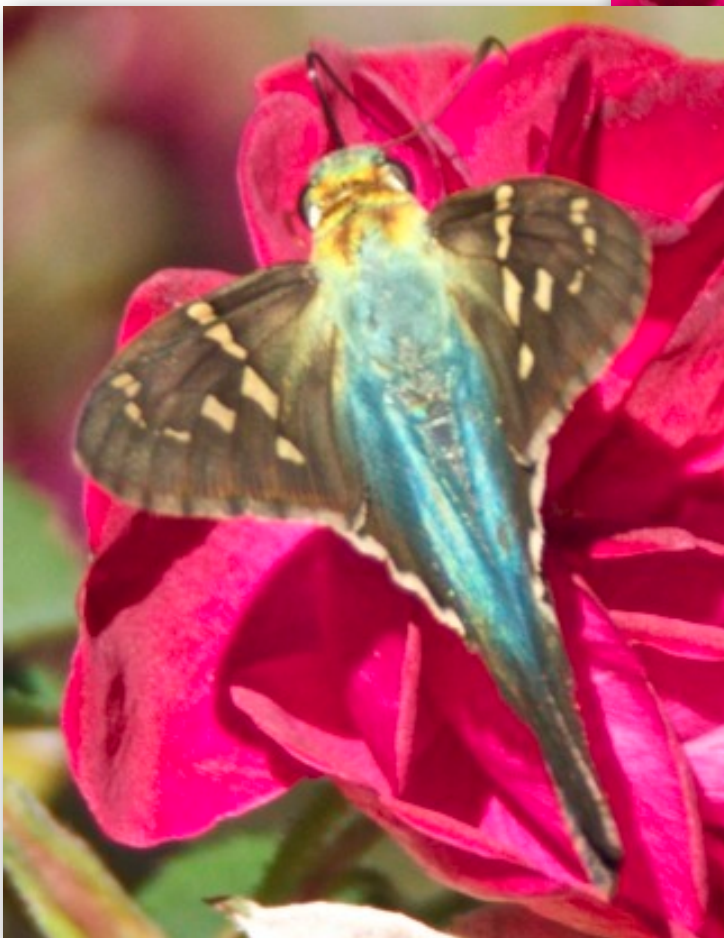
The many stamens of this *Camellia sasanqua* var. Yuletide) contrast with the red petals.





## ***Long Tail***

I found this Long-tailed Skipper butterfly (*Urbanus proteus*) on a rose bush in Statesboro, Georgia. It is widely distributed in tropical and subtropical Central and South America. The Northern limit of its permanent range is Florida, but it strays as far north as Connecticut. The larvae sometimes make a nuisance of themselves by eating the leaves of beans or ornamentals such as Wisteria. When mature the larvae roll themselves up in a leaf to pupate.



The two photographs above show the iridescent blue-green back, the long antennae with clubbed tips, and the long proboscis searching in the rose flower for nectar.