

The Seldom Seen Neighbors

By Greg Sykes (greg@grsykes.com)

Familiarity with wildlife tends to focus on common, conspicuous creatures such as robins, gray squirrels, ducks, geese, and deer. So many more critters crawl, swim, or fly hidden in our midst. This article introduces two seldom seen neighbors.

Most people have never seen the southern flying squirrel (*Glaucomys volans*) even though it is a common Northern Virginia resident, in part because this diminutive rodent is nocturnal. Their warning chirps sound like bird peeps, except most birds other than owls are asleep at that time of night. During daylight hours, flying squirrels snooze in their nests, which could be anything from a tree cavity (especially those suitable for woodpeckers) to a birdhouse. About the length of a chipmunk, flying squirrels even fit into wren-sized birdhouse openings! They layer nests with twigs in the lower section and soft material such as dried grass and moss up top. In here, they have two litters per year, breeding in late winter and early summer. Young are independent after three months and able to reproduce at one year old. The wild rodents live around five years; the record for a captive specimen was 19 years! Their home territory averages six acres, but varies widely based on resources and the animal's gender. The species ranges across the eastern half of the U.S., extending north into southern Canada and south to fragmented Central American populations.

Flying squirrels do not "fly" with flapping wings as birds and bats do. Instead, these rodents glide by extending their appendages and the connecting membrane catches the air. In "flight," the flattened tail becomes a rudder. When fleeing a threat, flying squirrels bolt up a tree, jump off and glide to the base of another tree, climb up that second trunk, jump and glide again, and continue to a safe zone.

Humans and flying squirrels are the only known vectors for *Rickettsia prowazekii*, the bacteria that causes epidemic typhus. This disease spreads through contaminated feces and infected lice and fleas. Fortunately, humans and flying squirrels rarely interact so the risk of acquiring this pathogen from the squirrels is low. A good idea is to wear a respirator and disposable gloves when cleaning old nests, then wash up.

Flying squirrel populations are kept in check mostly by black rat snakes. Other natural predators include owls and small carnivores such as weasels and bobcats. In turn, flying squirrels eat a variety of nuts, supplemented with insects, lichen, bird eggs, fungi, and even scavenge on carrion! They are often social and seen foraging together. Seed dispersal, especially of nut trees, is a major ecological function performed by flying squirrels.



Figure 1. Many adaptations suit flying squirrels for their arboreal, nocturnal lifestyles, including large eyes, long whiskers, and sharp claws. This one is out in daylight because the author, not seeing any bird activity in a birdhouse, went to clean it and out sprang this critter! After a few minutes of clinging to the tree trunk, it climbed back to its nest box.

This next organism is one that few people see, but many certainly hear loud and clear in KPW! It is the Cope's gray treefrog (*Hyla chrysoscelis* subgenus *Dryophytes*). At three to four centimeters long, this frog may be one of the area's smaller species, but its blaring, sharp rasps pierce the summer evenings. Only the males call, attempting to entice females. Mating periods and winter hibernation are the only times Cope's gray treefrogs leave their arboreal homes. Breeding May through August, females reproduce twice per year. They lay eggs in places like vernal pools, which are detached from streams, ponds, and other fish-filled waters. Whereas the tadpoles are safe from hungry fish, wading birds and predatory aquatic larvae, such as dragonflies, control the frog population. In the trees, the adult amphibians gobble up insects, managing pest levels. They spend winters just under the soil surface at bases of trees. The high glycerol levels in their blood help these frogs survive through freezing temperatures. They live in the eastern half of the U.S. and southern Canada.

Whereas people often think of a toad's skin as dry and warty while a frog is smooth and wet, many of the world's Anura (the taxonomic order for frogs and toads) have skin textures and moistures falling between these two extremes—and the Cope's gray treefrog is one such species. Furthermore, this critter slowly changes color to fit its surroundings, from dark shades to light variations of mottled greens (the typical color of young frogs), grays, or browns. No wonder these guys are hard to spot! They secrete a poison that irritates mucosal membranes. In case of contact, wash hands thoroughly. This secretion deters predation and scientists think it might have anti-fungal properties. The best action is to leave them be—an excellent policy for all wildlife.



Figure 2. The Cope's gray treefrog looks identical to the gray treefrog (*H. versicolor*) yet these species never interbreed. The two frogs' calls are slightly different; only the Cope's call in this area, which is the basis of the pictured specimen's identification. Lab tests reveal that the Cope's chromosome count is diploid (one pair) whereas the gray is tetraploid (two chromosome pairs). Scientists think that these frogs shared a common ancestor 10,000 years ago or so.

More information on flying squirrels is at:

<http://www.nsr.ttu.edu/tmot1/glauvola.htm>

http://dnr.maryland.gov/wildlife/Pages/plants_wildlife/Southern_FlyingSquirrel.aspx

https://animaldiversity.org/site/accounts/information/Glaucomys_volans.html

For Cope's gray treefrog:

http://virginiaherpetologicalsociety.com/amphibians/frogsandtoads/copes-gray-treefrog/copes_gray_treefrog.php

<https://srelherp.uga.edu/anurans/hylchr.htm>

https://amphibiaweb.org/cgi/amphib_query?rel-intro_isocc=like&rel-submittedby=like&include_synonymies=Yes&show_photos=Yes&rel-scientific_name=contains&where-scientific_name=&where-genus=&where-species=&where-common_name=Cope%27s+Gray+Treefrog&where-clade=&where-subfamily=&where-isocc=&where-species_account=&where-iucn=&where-cites=&where-submittedby=

* * * * *