

Nightlife

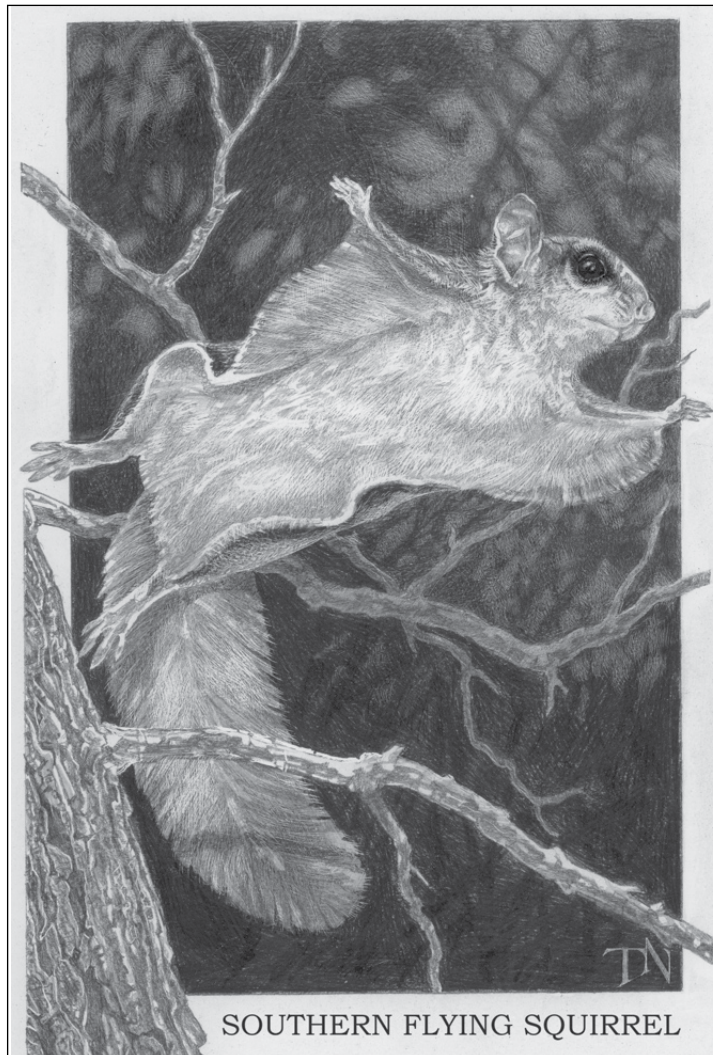
BY ERIC DINERSTEIN
Contributing Writer

ILLUSTRATION BY TRUDY NICHOLSON
Contributing Artist

Night owls: a term we assign to those who keep late hours—carousing, reading, bingeing on Netflix, or engaging in activities best left unmentioned. In general, speaking as a mammalogist, I find that the human species goes to bed early. Maybe a quick trip outside with the dog after dinner or a glance at the moon or the stars. Then it's back inside, hardly enough time to encounter the world of living things moving, flying, and foraging out there in the dark. We are, in our diurnal ways, an anomaly among the world's 6,400 species of mammals, as most are nocturnal. The same is true for many species of amphibians, but relatively few birds.

I became a night owl as a result of my research interests. In Costa Rica and Panama in 1980, I conducted my Ph.D. field research on tropical fruit bats. I learned so much about the natural world—and made observations that my diurnal fellow biologists never witnessed—simply by walking around late at night in rainforests while checking my mist nets for captured bats or listening to the sounds. At night, rainforests come alive with the vocalizations of kinkajous, frogs, calling insects, and owls. But, my own knowledge of our nocturnal neighbors back here in

the temperate zone has been rather limited except for a spotted owl study in the winter of 1980 on the slopes of Mt. Baker, WA. For these reasons, I have dedicated the Local Nature columns for 2022 to the theme of introducing the nocturnal wildlife of Cabin John so that I can learn more as well.



SOUTHERN FLYING SQUIRREL

Among the topics we will explore are how widespread nocturnal behavior is among animals, how this behavior evolved, and the remarkable adaptations species have evolved to navigate life at night.

But first, a plea directly related to appreciating nature at night. Light pollution has been well documented to upset the natural rhythms of nocturnal wildlife. Lights are safety essentials on busy highways and intersections but not continuously in backyards or, for that matter, in parking

lots. If you have bright outdoor flood lights that remain on all night, you may disrupt the behavior of many nocturnal animals and increase their mortality by making them more visible to predators, upsetting mating patterns, and causing disorientation. The simple, cheap solution to being a good neighbor and a friend to nocturnal animals while still attending to safety is to rig outdoor beams with a motion sensor and timer so they become active only when needed.

Now please join me in this and subsequent columns this year as we peer into the fascinating lives of the night movers.

GLIDING THROUGH LIFE

As a child, my favorite cartoon was *The Rocky and Bullwinkle Show*. The stars were the clever Rocky, a flying squirrel, and his friend, Bullwinkle J. Moose, animated residents of Frostbite Falls, Minnesota. Every week, the pair matched wits with their antagonists, the devious Boris Badenov and his partner, Natasha Fatale. I never knew at age 7 that flying squirrels actually existed

in nature and could be found in the nearby forests in New Jersey where I grew up. When I did become aware of flying squirrels from my mammalogy textbooks, the Rocky

CONTINUED ON NEXT PAGE ...►

NIGHTLIFE

CONTINUED FROM PREVIOUS PAGE

connection was apt: they struck me as creatures designed by evolution but with an assist from a cartoonist. The flying squirrel's enormous black eyes for seeing at night, long black whiskers, soft gray-brown fur, white undersides, and a skin fold that stretches between their paws and limbs allow this mammal to accomplish daredevil leaps and glides between distant trees. At rest, the skin fold fits over its shoulders like a cape. These 8-to-10-inch-long mammals with a flat 4-to-5-inch tail are arguably the most adorable mammals on Earth. They live among us in the D.C. area but only where there are large tracts of forest. But even if you live next to a large tract, as we do in Cabin John, you probably have never seen one. Besides being active only at night they are also rather shy. Unless one somehow crawls into a cranny of your house you probably won't encounter them, although you might hear the squeaky-wheel sounds they make.

If you have bright outdoor flood lights that remain on all night, you may disrupt the behavior of many nocturnal animals and increase their mortality by making them more visible to predators, upsetting mating patterns, and causing disorientation.

The name flying squirrel is a misnomer. Bats are the only true flying mammals with about 1,400 species. However, there are several different lineages in the squirrel family (Sciuridae) and under a dozen or so species that, instead of flying, glide long distances through forests and savannas. Outside the squirrel family is another glider, the flying lemur. The flying lemur neither flies nor is a true lemur but instead is placed in its own Family (Cynocephalidae) and Order (Dermoptera, as opposed to the squirrels in the Rodentia). They are restricted to the tropical forests of southeast Asia (the sunda flying lemur) or the southern islands of the Philippines (the Philippines flying lemur).

Although not as maneuverable as bats, the aerial displays of flying squirrels are still impressive, and my first encounter with one of these night gliders was unforgettable. When I was studying tigers in Nepal in the 1970s I would spend the night in tree houses to photograph the giant cats at dawn patrolling their territories on the jungle track below my perch. One night while camped out in a fragrant tree related to frankincense, I fell asleep and woke suddenly to a loud scratching above me. At first, I thought a leopard had climbed up to join me. When I turned on my flashlight, I was startled to

CONTINUED ON PAGE 10

NIGHTLIFE

CONTINUED FROM PAGE 9

see a giant Indian flying squirrel (*Petaurista petaurista*) staring straight at me! It had made its day roost in a cavity in my tree, or his tree. He scampered up the trunk and jumped into the night. I watched in awe as it landed on a tree easily 75 feet away. The scientific literature reports that this species is capable of long-distance glides over 1,000 feet!

Our Cabin John variety of flying squirrel (*Glaucomys volans*) doesn't glide as far as its South Asian relative, but the leaps of this smaller species are still impressive. They glide up to 200 feet but most "flights" are of much shorter distance. Prior to landing on the next tree, they turn their skin fold into a parachute and adjust the angle of landing to dampen the shock of touchdown. These arboreal mammals, while daredevils in the air, are feeble crawlers on the ground.

Sometimes these gliding mammals sail between trees in small groups in search of food. Flying squirrels live on oak acorns, hickory nuts, and beechnuts, which they store for winter consumption to tide them over until spring. Both sexes are territorial and males have larger home ranges than females (2.5-16 hectares for adult males vs 2-7 hectares for females). Male and female territories overlap and are often centered around large red or white oak trees or hickories that provide seasonal bonanzas.

Where nut trees are dense, home ranges are smaller; where the trees are more dispersed, the squirrels spread out. In fragmented forests, squirrels must range across several patches. Large tracts of forest, like we have along Cabin John Creek, are preferred for obvious reasons over fragmented forests.

In winter, flying squirrels don't hibernate but instead roost together in a heap of

several related individuals. Home is a cavity excavated by a woodpecker or a crevice in an old tree. Flying squirrels supplement their nut diets with insects, buds, fungi, carrion, birds' eggs, and even nestlings.

From southeastern Canada to Florida, across the eastern half of North America, this charming member of our night fauna is there for you to find it. But you will have to look hard. The sworn enemy of our local flying squirrels, their real-life Boris Badenovs, are snakes and screech owls (see next month's column), but also raccoons and probably any mammal or bird of prey that can catch them. But they must catch them first. These nimble acrobats escape with a spread of their skin folds and glide to safety in the next tree, leaving the snake and befuddled raccoon behind. **VN**