

Squirrels on the Move

On August 26 I received the call I had been anticipating and dreading, a baby squirrel had been found on the pavement in front of Dottie's in Brattleboro, could I help? The autumn orphaned squirrel season had begun. Sure enough, later that day I got a second call. One of the first squirrel's siblings had been pulled out of a flash flood in a ditch by a brave lad. The two were reunited and are thriving. Given the large numbers of road-killed squirrels I had been seeing, I expected this would be the start of a very busy orphan season. To my surprise, I have not had another call about orphaned squirrels since.

The squirrel behavior this fall is certainly remarkable. I have had calls from people who are seeing gray squirrels where they have never seen them before, including reports of swimming squirrels. I recently took a trip to Maine and could not believe the carnage. Aside from many individual road-killed squirrels, I saw numerous places where it looked like a herd of squirrels had tried to cross six lanes of heavy traffic. I can only imagine the profound desperation that would goad a squirrel to venture into such a death zone.

Why are there so many squirrels this year? It is natural to suspect there is a link to acorns: the lives of squirrels and oaks are bound together through many millennia of evolution. Acorns provide squirrels with quality nutrition in durable packaging. Squirrels offer oaks outward mobility. By transporting acorns from beneath the parent tree, squirrels increase the chances that a resulting seedling will have enough sunlight to grow. Further, by hiding the acorns, the squirrels remove them from the sight of the many birds and mammals that would feast on them. Burying the acorns also increases the chances of germination—if the squirrel does not return to eat them, that is.

Many attribute the high numbers of squirrels this year to the phenomenon of masting (wild tree nuts are called mast). During some years, all of the oaks in a region will produce a huge crop of acorns. While lower numbers of acorns in most years keeps the populations of nut-eaters in check, big mast years produce so many nuts that they can't all be eaten, and many forest oaks began their lives during a year of such abundance. Many factors contribute to the size of an acorn crop. The number of oak flowers is determined by the energy resources available during bud formation the previous year. Next, good weather is needed to ensure pollination. Oaks are wind pollinated,

so dry and breezy conditions are ideal. Red oak acorns take two years to mature. Growing conditions influence how many of these will make it to viable maturity.

Given all of these variables, there is no way to predict when or how often a mast year will occur. Still, they are not a rare phenomenon. There are likely to be at least a few per decade. Why don't we see this many squirrels following every mast year? The last time there were road kill records to rival what I saw on my drive to Maine was likely 1968, fifty years ago, when large numbers of squirrels were seen dead on roads, swimming rivers, and damaging crops. My own observations might help explain why they are so high this year: as a wildlife rehabilitator, I put out a call for acorns each year. For the years of 2015, 2016, and 2017, acorn donations came pouring in, and I found them very easy to gather in any forest where red oaks were abundant. The 2017 mast year gave a boost to already large numbers of fat, healthy squirrels.

This year, our forest oaks have produced very few acorns, and the many squirrels are now forced to move in search of food. They need not only enough to fill their bellies, but to satisfy their drive to prepare for winter. They have become fluffy-tailed refugees. Yet the question remains—with so many refugees, why are there so few orphans? Like the oaks, many mammal species will have more or fewer offspring based upon their own condition going into the mating season. While there are many possible explanations, here is one that I favor: Acorns are a fall crop. Over evolutionary time, squirrels have developed a way to assess the development of this key resource and plan accordingly. One study of red squirrels found larger litters were born in years when there would be more seeds. These squirrels had a way to anticipate a big seed year in advance and had more babies.

Next year we can anticipate a bumper crop of foxes and hawks. — Patti Smith

