

Where are the Animals?

Isn't it a great day! I glance beyond my computer to the window and beyond, and occasionally see a flicker of life in the form of a junco, but most of what I see is vegetation. This is what my ecology students notice when they go outdoors to their study sites, and when they come to class, one of the most common questions they ask is "Where are all of the animals?" I decided to produce a brief, one-page response that would help us to have a good discussion about what we can do to see more animals. After producing it, I thought that some of the readers of *Nature Trails* might like to discuss these ideas with their children or grandchildren Bob Ross

1. Many animals don't want to be seen, by you or anyone else! Many are in full view but are camouflaged. Some are predators, watching and waiting for prey. And some are the prey who are trying to hide. You will have to work hard to see them!
2. Perhaps the ones you would like to see are temporarily not there. (a) Many move into hiding when we approach because we are large and threatening. (b) Some migrate, and not just in the fall. Some, like robins, raise a family in a valley early in the spring and then go to the mountains where they have a second family. (c) Some are not active because of the time of day; a large number of animals are nocturnal. a
3. Many animals are present in your environment but are buried inside of other things. Some are in wood or soil, and you might see them only if you come upon them just after a catastrophe (flood, mudslide, etc.), or, if they have emerged in order to reproduce and disperse to find new habitats. By numbers of species or by weight, the vast majorities of animals on earth are parasites, and are rarely seen by us.
4. Some animals are not active because of the season. Some hibernate in the winter. Others enter a dormant state in the summer: estivation (some snails), or for just a few hours on a very hot day: torpor (hummingbirds). They may be sitting in full view, but we are so oriented to motion that if they are still, our eyes do not easily pick them out of the visually busy world before us.
5. Some are just not in our line of sight; perhaps they are above you or are low to the ground. Many animals have very specific elevations above the ground, or have specific locations in the trees: toward the center, toward the outside, etc.
6. Some people don't see very many animals because they have an inadequate definition of animals--They equate "animals" only with the warm-blooded things, birds and mammals. For these people, the list gets a boost when the majority of the animals are added in, the insects.
7. When walking along, most people tend to recognize non-moving things that are within the scale of? about 100 times larger to 100 times smaller than themselves. Interestingly, the average human is about 170 cm tall, and the average animal is slightly more than 100 times smaller, at about 1.5 cm, or just outside our scale of visible things. While we hope to see a fox, mountain lion or eagle, the average animal is the size of a beetle. There might be 5 million aphids, thrips, spittle bugs, spiders and other small animals on an acre of land and you might not see a one of them!\ 8. The actual size of an organism is one thing, but the apparent size is another; the farther away the item of interest is from you, the smaller it appears, so even a mountain lion might be in view but you do not see it!
9. Some animals are not seen because people don't want to see them. Some folks don't want to see snakes or spiders, and so they don't; others don't like seeing aphids, and so they don't.
10. Many animals are not seen because they have not been of interest to us for so long that habituation has robbed us from seeing them now. Habituation is learning to ignore the things that are unimportant.
11. While we would like to see big animals, these are widely scattered over the land. Predators such as foxes and mountain lions have to travel long distances in order to find sufficient food. The feeding territory that is defended by a single pair of mountain lions is about 10 square miles. They roam across their territory, but it is not likely that you will see one, even if you are in its territory.