

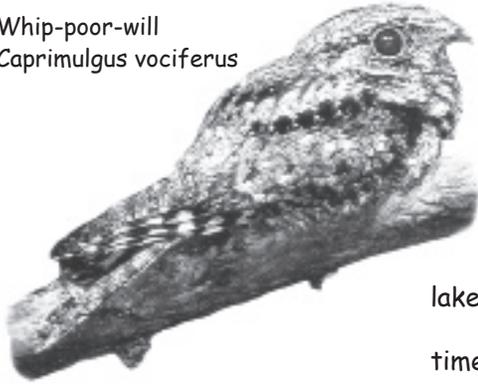
NATURE NOTES

SOUNDS OF NATURE AT THE LAKE

by Aileen Merriam

Sound plays an important part in our enjoyment of life on the waterfront.

Whip-poor-will
Caprimulgus vociferus



"I love the time in early evening after the sun has set and the chorus of whip-poor-wills starts across the lake and continues on into the dark. It is a restful sound and, I guess, is the initial communication between these members of the nighthawk family before they start their hunt for food..."

"The drumming of a grouse in the early morning is comforting, knowing at least one male is attempting to contact a female to procreate the species..."

"The noise from an approaching thunderstorm with the hiss of rain on the lake is a wonder of nature, comforting in some ways, frightening in others..."

"The sounds of waves breaking on the shore are pleasant and relaxing at any time, during storms or just a quiet lapping in the still of morning or evening."

The sounds of nature and the quiet of the countryside are among the reasons that we value spending time away from urban noise and busy-ness. Some of us are lucky to be able to appreciate nature's soundscape through all the seasons. What sounds of nature do you enjoy most?

Sound is also an important part of the lives of birds, amphibians, insects and other creatures.

Many of the sounds we enjoy also signal the breeding season for birds and amphibians. Right now, both chorus frogs and spring peepers are singing in the marsh just upriver. A little later, different frogs will sound forth, ending in summer with the deeper tones of green frogs and bullfrogs.

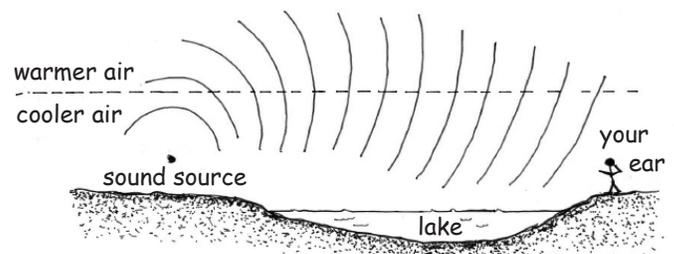
The variety of sounds made by frogs and toads in spring are part of their courtship and mating rituals. Males make sounds to tell females where they are and that they are ready to mate. Most frogs use an air sac located under their mouth to produce mating calls. Air from the lungs inflates the sac, which resonates to produce the mating call.

Birds also sing in spring to attract mates and to declare and defend a territory. Some bird species have been shown to react negatively to loud, man-made sounds, to the point of not nesting in former habitat. There are fewer songbird calls this spring. Researchers say that songbird populations have declined more than 50% from their former numbers.

Sound Over Water

In some atmospheric conditions, sound is amplified and travels farther over water. Your quiet conversation on the dock in the early morning may be heard on the other side of the lake! And your evening peace can be disturbed by loud parties across the water.

Sound waves travel faster in warm air than in cool. When conditions are right, cooler near the water and warmer higher up, the speed of sound also increases with height. The part of a sound wave closest to the ground moves slower than the part of the wave travelling in the warmer air. The result is, the wave changes direction and bends downwards. The downward refraction of the sound means less is lost up into the air, and more of it ends up in your ears!



Sound Bites...

- Sound waves enter our ears and are converted to electrical signals. The signals travel to the brain via the auditory nerve.
- Pleasant, natural sounds make us feel calm and safe, while annoying sounds can do the opposite.
- Examples of sound wave speeds: at 15.5 °C, 341 metres/second; at 30° C, 349 metres/second.

What is the future of natural sounds around us?

If we enjoy natural soundscapes, how can we ensure that they will remain pleasant and enjoyable in the future?

One way is not to bring the city to the country. Listen to the beauty around us and don't make needless noise. Another is to make sound part of what is considered when looking at "lake capacity."

Quotes: Tony Downs

Illustrations: Aileen Merriam