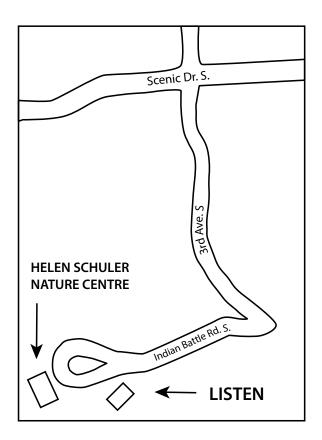
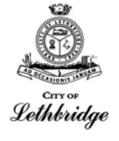
Sound Waves Parabola Focal Po

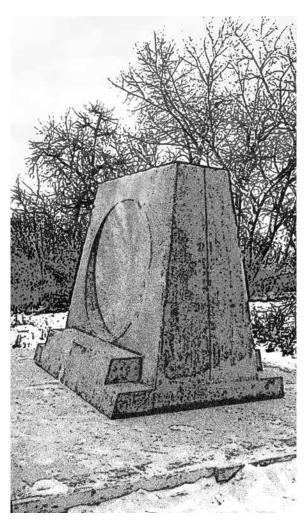






Thanks also to KOOPMAN ARCHITECTURE, INLAND HEIDLBERG CEMENT GROUP, and the LETHBRIDGE ALLIED ARTS COUNCIL.

SPRING SOUNDS



TERRY BILLINGS

The public artwork, *Listen*, is designed to help visitors enjoy the park's acoustic ecology - the relationship between living beings and their environment, understood through sound.

Listen is a sound mirror. The concave area behind the bench is a parabola that reflects sound to a single point 76 cm. or 30 in. from the top of the bench. As a passive hearing aid, **Listen** does not create sound, but will amplify the sounds entering the parabola for a listener who finds this focus with their ear.

With every visit to *Listen*, the soundscape will likely be different. This might be because different animals, insects and birds are nearby, or because a change in wind or weather has shaped or carried sound differently. Repeated attention to the park's soundscape can enhance appreciation of how sound adds a rich, complex and often beautiful dimension to the entire environment.

This seasonal series of guides offers suggestions to help enhance your appreciation of the soundscape.

LISTEN

SPRING SOUNDS

Calls, songs and other sounds in the forest can range from a single call to a complex acoustic tapestry. You don't need to know which kinds of birds, animals or insects are making each sound to enjoy what you hear, though knowing can be rewarding. You can listen for individual voices, just as you might hear specific instruments playing in a concert. Some voices may be higher and faster or lower and slower. Some voices might have a distinct rhythm while others might be a lyrical, free-form trill. You can also enjoy the beauty of how all of the voices merge together and fill the space around you.

As you sit quietly, you might find that the sounds around you change as animals and birds finish alerting each other to your presence and start with other communications. Studies in recent years "have shown that animals such as birds, mammals and even fish recognize the alarm signals of other species. Some can even eavesdrop on one another across classes. Red-breasted nuthatches listen to chickadees. Squirrels and chipmunks eavesdrop on birds, sometimes adding their own thoughts."

With individual sounds, listen for patterns and subtle differences between individual

voices. If you hear a call, listen for a response. Get a sense of where the sound is in space. If you know the source of the sound, listen to hear if they repeat the same sound or if they make a different sound.

Bird vocalizations are divided into two catagories - calls and songs. The distinction between songs and calls is based upon complexity, length, and context. Songs are longer and more complex and are associated with courtship and mating, while calls tend to serve such functions as alarms or keeping members of a flock in contact.²



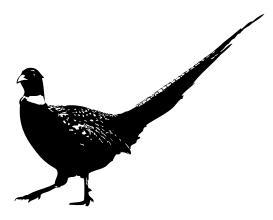
Calls and related behavior are also used to define territory and status. Like most woodpeckers, Northern Flickers drum on objects to communicate and defend territory. In order to make as loud a noise as possible, flickers andwoodpeckers sometimes drum on metal objects. Downy and Hairy Woodpeckers also create a drumming sound as they dig for insects in tree bark.

In spring, you might also hear sounds from birds that are just passing through Lethbridge, from southern wintering grounds to where they nest and breed for the summer further north. The spring dawn chorus commonly consists of least flycatchers, American robins, yellow warblers, warbling vireos, house wrens, goldfinches, and Baltimore orioles. ³



One pair of ravens has been known to nest in Lethbridge, often in the High Level Bridge each Spring, for more than a decade. Ravens make over 30 distinct calls, including mimicking other creatures and natural and man-made sounds. Their most frequent call is a croaking sound. In late winter and early spring, you might hear the sound of twigs being pulled from the tops of trees when they are nest building. On calm, quiet days, the sound of raven's wings is quite distinctive and can carry over a distance.

Another forest mimic is the brown thrasher . Male brown thrashers have more than 3,000 song variations.⁴ They also include imitations of other species in their songs.



One distinctive voice in the park are the calls of male ring-necked pheasants, which sound like a shortened rooster crow. They can also make a brief drumming sound with their wings as they call.

It is interesting to consider how we only hear sounds in a certain range and this range can change as we age. If we had a wider range, we might be able to hear other creatures that are too high or too low for our range, like the very high, ultrasonic sounds of bats' eco-location and the courtship songs of mice.

References

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