

Exploring How and Why Birds Sing

By George H. Breiding

Beginning in mid-winter and continuing into mid-summer, the West Virginia hills and valleys come alive with a loud *sa-wheet, sweet, sweet, watcheer, wah-cheer, wah-cheer, birdee, birdee, birdee*. That's a description of one of the calls of the state bird, the northern cardinal, commonly called the redbird. It's a versatile songster with more than 25 variations in its repertoire.

Once one hears that wonderful oration, one has to wonder, how and why do birds sing? Actually, birds don't sing. They play instruments, a more complicated process than the account that follows. They make musical sounds by means of internal organs called the trachea and the syrinx, commonly known as the windpipe and the voice box.

The muscle-like syrinx or voice box is located between the base of the windpipe and the lungs. The sound is produced by forcing air out of the lungs and vibrating the membranes of the voice box that differs in each species, thus each species renders a different sound.

Light and temperature dominate bird activities. As sunlight increases in spring, the rays strike the birds eyes, triggering a hormonal response that results in the development of the sex glands in both male and females. The intensity and duration of sunlight influence the singing and breeding periods, also daily and seasonal movement. A reverse action takes place as the sun retreats in autumn and winter.



Male Chipping Sparrows sing a long, dry trill of evenly spaced, almost mechanical-sounding chips. Songs are about 3.6 seconds long on average, consisting of around 55 nearly identical chip notes in a row.

The male sings to attract a mate and maintain a territory, an arbitrary area that provides adequate food for him, her and eventually their brood. The song serves as a warning to other males of the same species: "Stay away from the sound of my voice and the lady in my life."

The song also assures the female that all is well on the home area as she incubates the eggs and the hatchlings. Calls or alarm notes are emitted as a danger signal, to communicate and assemble a flock.

Do the females "sing?" Not many do. One that does, the rose-breasted grosbeak, a reliably common species that looks like an over-sized streaked sparrow, occurs in the summer in wooded areas in parts of the state.

Birds are said to sing or "play their instruments" because they're happy. Bachelor birds sing more before they are mated than after they acquire a mate.

Both male and female Northern Cardinals sing. Males in particular may sing throughout the year, though the peak of singing is in spring and early summer.



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Experienced bird watchers go afield during spring migration and identify dozens of species by their songs or more correctly the tunes they play. Go out in late May or early June away from city noise, listen and try to hear as many different tunes or songs as you can. There's more to a bird's "song" than meets the ear.

The late George H. Breiding was a major ornithologist, naturalist and environmental educator in the state for nearly 40 years.