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BIRD VOCALIZATION: COMMUNICATION AND DELIGHT

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Bird songs pervade forests, meadows and parks every spring. People perceive these songs as charming melodies, but this is a way birds communicate with each other. Different types of vocalization give congeners particular signals.

Song is individual for species and scientists can distinguish them basing on typical features of melody. Like the best singers, passerine can chant sophisticated melodies, manakins sound similar to stridulation of grasshoppers, and some bird performers imitate sounds of other birds.

The avian vocal organ is called the syrinx. It is a bony structure at the bottom of the trachea which is unlike the larynx at the top of the mammalian trachea. The syrinx and sometimes a surrounding air sac resonate to sound waves that are made by membranes in which the bird forces air. The bird controls the pitch by changing the tension on the membranes and both pitch and volume by changing the force of expiration. It can control the both sides of the trachea independently, that is why some species can produce two notes simultaneously.

The spectrum of different sounds produced by birds is large. Sounds fluctuate from pure sounds to noisy sounds. Modulations in amplitude and frequency have a wide range. Bird sounds can be divided into two groups: songs and calls, each one has different function. Males mainly release songs in the breeding season and key functions of songs are to attract females and to compete with other males. Second function of songs is a determination and defense of territorial borders. Calls are produced by both sexes through the whole year. Calls always occur in some particular context with some specific function.

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