

Cicada



A **cicada** is an insect of the order Hemiptera, suborder Auchenorrhyncha, in the super family **Cicadoidea**, with large eyes wide apart on the head and usually transparent, well-veined wings. There are about 2,500 species of cicada around the world, and many remain unclassified. Cicadas live in temperate to tropical climates where they are among the most widely recognized of all insects, mainly due to their large size and remarkable acoustic talents. Cicadas are sometimes colloquially called "locusts", although they are unrelated to true locusts, which are a kind of grasshopper. They are also known as "jar flies". Cicadas are related to leafhoppers and spittlebugs. In parts of the southern Appalachian Mountains in the United States they are known as "dry flies" because of the dry shell they leave behind.

Cicadas do not bite or sting, are benign to humans and plants, and therefore are not considered pests. Many people around the world regularly eat cicadas: the female is prized as it is meatier. Cicadas have been (or are still) eaten in Ancient Greece, China, Malaysia, Burma, Latin America and the Congo. Shells of cicadas are employed in the traditional medicines of China.^[2]



The name is a direct derivation of the Latin *cicada*, meaning "buzzer". In classical Greek it was called a *tettix*, and in modern Greek *tzitzikas* - both names being onomatopoeic.

Description: The adult insect, sometimes called an imago, is usually (1 to 2 inches) long, although some tropical species can reach 15 cm (6"), e.g. *Pomponia imperatoria* from Malaysia. Cicadas have prominent eyes set wide apart on the sides of the head, short antennae protruding between or in front of the eyes, and membranous front wings. Desert cicadas are also among the few insects known to cool themselves by sweating, while many other cicadas can voluntarily raise their body temperatures as much as 22 °C above ambient temperature.



Cicada song: Male cicadas have loud noisemakers called "timbals" on the sides of the abdominal base. Their "singing" is not the stridulation (where two structures are rubbed against one another) of many other familiar sound-producing insects like crickets: the timbals are regions of the exoskeleton that are modified to form a complex membrane with thin, membranous portions and thickened "ribs". Contracting the internal timbale muscles produces a clicking sound as the timbals buckle inwards. As these muscles relax, the timbals return to their original position producing another click. The interior of the male abdomen is substantially hollow to amplify the resonance of the sound. A cicada rapidly vibrates these membranes, and enlarged chambers derived from the tracheae make its body serve as a resonance chamber, greatly amplifying

the sound. They modulate their noise by wiggling their abdomens toward and away from the tree that they are on. Additionally, each species has its own distinctive *song*.



Average temperature of the natural habitat for this species is approximately 29°C. (84°F). During sound production the temperature of the tymbale muscles were found to be slightly higher. Cicadas like heat and do their most spirited singing during the hotter hours of a summer day.

Although only males produce the cicadas' distinctive sound, both sexes have tympana, which are membranous structures used to detect sounds and thus the cicadas' equivalent of ears. Males can disable their own tympana while calling. Adult cicadas have a sideways-ridged plate where the mouth is in normal insects.

Some cicadas produce sounds up to 120 dB (SPL) "at close range", among the loudest of all insect-produced sounds.^[8] Conversely, some small species have songs so high in pitch that the noise is inaudible to humans. Species have different mating songs to ensure they attract the appropriate mate. It can be difficult to determine which direction(s) cicada song is coming from, because the low pitch carries well and because it may, in fact, be coming from many directions at once, as cicadas in various trees all make noise at once.

In addition to the mating song, many species also have a distinct distress call, usually a somewhat broken and erratic sound emitted when an individual is seized. A number of species also have a courtship song, which is often a quieter call and is produced after a female has been drawn by the calling song.

