

Orthoptera – Grasshoppers, Katydid, Crickets

Grasshoppers, katydids, and crickets are found all over the world. There are around 10,000 species described at present. Most of those in the US are native. Most overwinter as eggs but there are exceptions. Adults generally perish once the cold weather of winter arrives.

Grasshoppers will have 1 generation per year with 3 stages: egg, nymph, adult. The eggs are laid in the soil and then in spring a nymph hatches. The hatching is dependent upon soil moisture and air temperature. The nymph will go through 4-6 molts, called instars. The shape of their wing pad determines the instar. With each of these molts, their wings and antennae will lengthen and their genitalia will develop. Interestingly, they must hang upside down in order to complete molting and not be deformed.

Grasshoppers feeding on foliage changes the abundance and richness of some of the species. It also allows for nutrients to be available as food to other critters instead of tied up in the dead plant tissues. Orthoptera are 50-70% protein.

This family is usually discussed in 2 terms – long-horned and short-horned. The long-horned grasshoppers reproduce by the female mounting the male and the male providing a spermatophore – a protein-rich “gift” from the male that the female eats. In short-horned grasshoppers, the male mounts the female and the spermatophore is deposited inside of her. Long-horns deposit their eggs into slits in twigs; short-horns deposit eggs into the soil.

Grasshoppers prefer sunny areas with vegetation that isn't thick, whereas katydids and crickets prefer woods and mature forests.

Adult identifications are somewhat easily made by the color and shape of their body structures. The nymphs lack the necessary characteristics for accurate ID and must be raised for species identification.

Orthoptera are known for their songs. Similar to birds, they have different songs for different reasons – courtship, territory protection, protest, alert. Stridulation, rubbing wings or legs, is how the song is produced. In crickets, stridulation is produced by the right wing; katydids use their left wing. In grasshoppers, these calls are made in tandem with some movement or color flashing. Other grasshopper sounds include crepitation – made by snapping the wings in flight – and drumming – shaking the hind legs.

Acrididae (Short-horned Grasshoppers)

Dichromorpha viridis – Short-winged Green Grasshopper

Dissosteira carolina – Carolina Grasshopper

Encoptolophus sordidus – Clouded Grasshopper

Melanoplus bivittatus femoratus – Two-striped Grasshopper

Melanoplus differentialis – Differential Grasshopper

Melanoplus femurrubrum – Red-legged Grasshopper

Melanoplus viridipes – Green legged grasshopper

Gryllidae (True Crickets)

Allonemobius fasciatus – Striped Ground Cricket

Anaxipha exigua – Say's Trig Cricket

Eunemobius carolinus – Carolina Ground Cricket

Neoxabea bipunctata – Two-spotted Tree Cricket

Oecanthus forbesii – Forbes' Tree Cricket

Oecanthus fultoni – Snowy Tree Cricket

Oecanthus nigricornis – Black-horned Tree Cricket

Oecanthus niveus – Narrow-winged Tree Cricket

Tetrigidae (Pygmy Grasshoppers)

Tetrix ornata – Ornate Pygmy Grasshopper

Tettigoniidae (Katydids)

Amblycorypha oblongifolia – Oblong-winged Katydid
Amblycorypha sp – Round-headed Katydid
Conocephalus strictus – Straight-lanced Meadow Katydid
Scudderia sp – Bush Katydid
Scudderia furcata – Fork-tailed Bush Katydid
Metroptera roeselii – Roesel's Katydid
Neoconocephalus nebrascensis – Nebraska Cone-head
Neoconocephalus retusus – Round-tipped Conehead