Biodiversity for Sustainable Futures

Orthoptera of Alberta: Visual Guide to Common Terrestrial Families (Adults)

Page(s)	Content
2-3	Defining traits of Orthoptera and three Alberta families
4	Tettigoniidae (katydids)
5	Gryllidae (true crickets)
6	Acrididae (grasshoppers and locusts)
7	References

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Gee, G., Summers, M. (2024). Orthoptera of Alberta: Visual Guide to Common Terrestrial Families (Adults). QUBES Educational Resources.

Orthoptera Defining Traits

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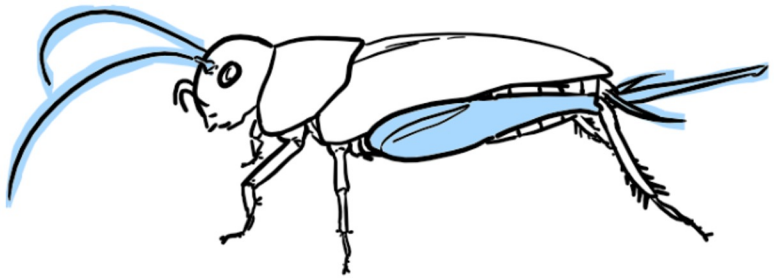
- Hind legs often enlarged for jumping (or digging, running), with hind femur enlarged
- If present, forewings usually thickened, narrow, leathery, and parallel-sided (tegmina)
- If present, hindwings usually broad, fan-shaped, and membranous with numerous cross-veins, folded under tegmina
- Filiform antennae
- Hypognathous head type
- Well developed compound eyes (ocelli may be present or absent)
- Mandibulate chewing mouthparts
- Shield-like pronotum covering much of the thorax
- Tarsi 3- or 4-segmented
- Cerci unsegmented and short
- Females have well-developed ovipositor

Tettigoniidae
katydids

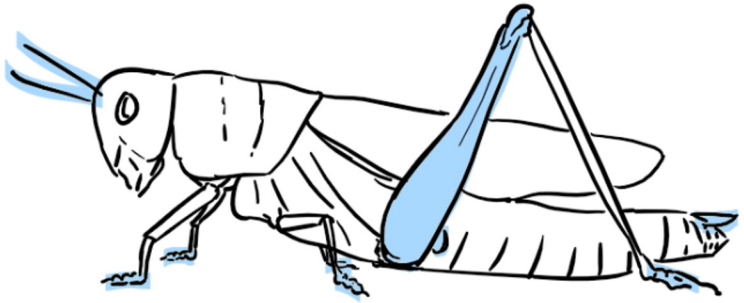
- Long antennae
- Females have a long ovipositor
- Hind legs are long, thin, and sit along to the body
- Tend to be nocturnal
- Solitary

Gryllidae
true crickets



- Long antennae
- Females have a long ovipositor and cerci
- Hind legs splay out to the side
- Tend towards nocturnal
- Social and found in groups

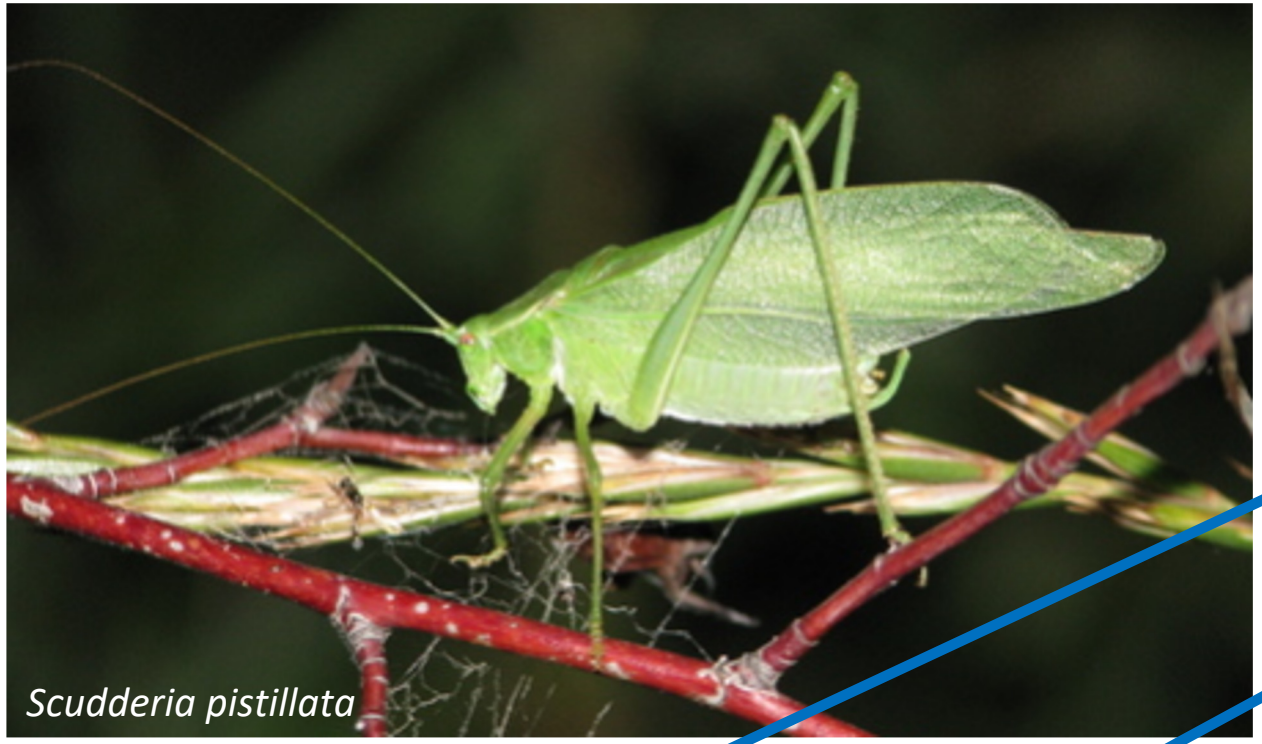
Acrididae
grasshoppers/locusts



Drawn by Gabi Gee

- Short antennae
- Thick femurs sit along the body
- Diurnal

Tettigoniidae (katydids)



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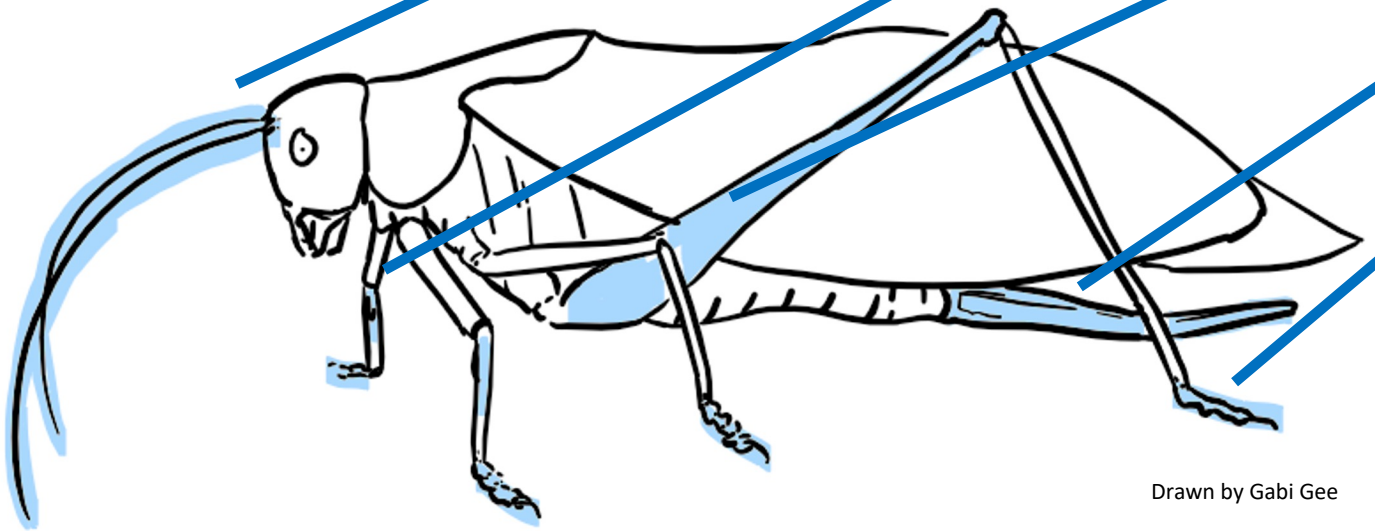

Drawn by Gabi Gee

- Antennae long, extend at least to abdomen
- May have tympana present on front tibiae
- Long, thin femurs which sit close to the body
- Females have a long blade-like ovipositor
- 4 segmented tarsi
- Solitary
- Tend to be nocturnal

Gryllidae (true crickets)

Gryllus pennsylvanicus

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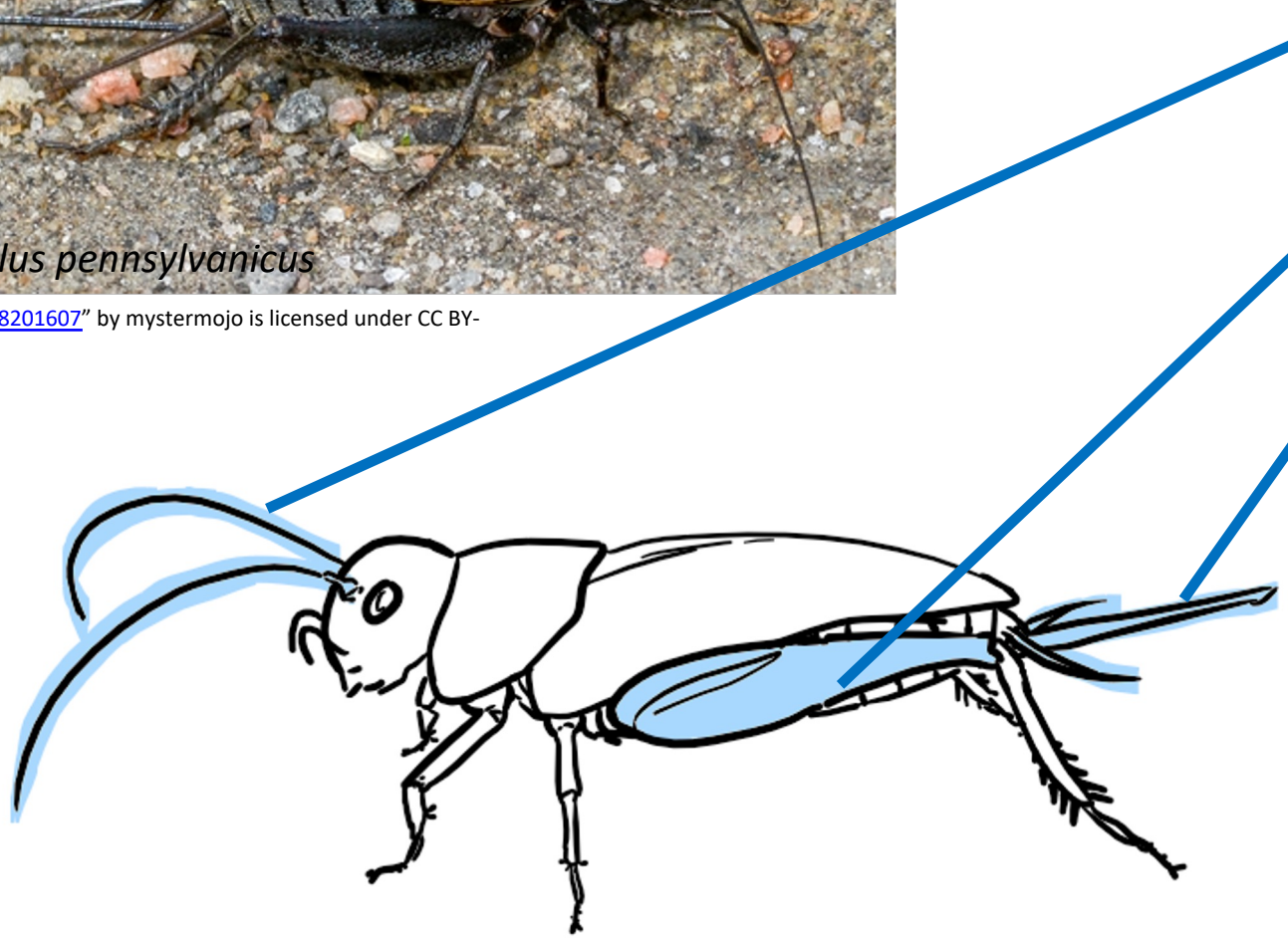
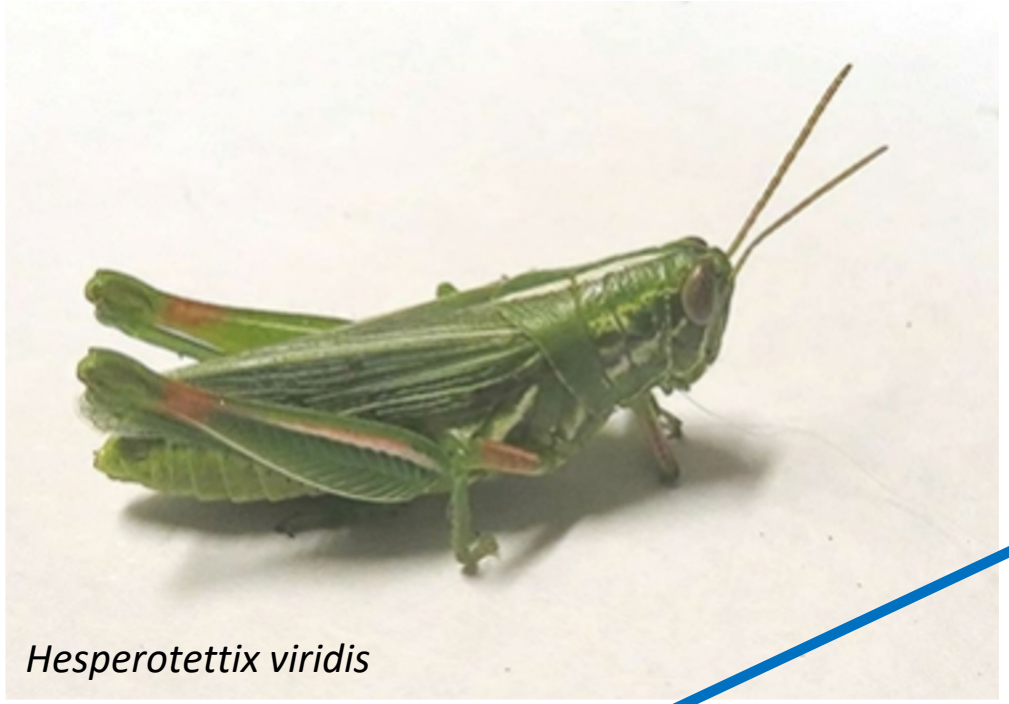


Drawn by Gabi Gee

- Antennae long, tapering, extending at least to abdomen
- Femurs positioned outwards from body
- Females have cerci and long, slender ovipositor
- Tympana on front tibia
- Tarsi have no more than 3 segments
- Gregarious (social and gather in groups) and make a lot of noise
- Tend to be nocturnal

Acrididae (short-horned grasshoppers)



Hesperotettix viridis

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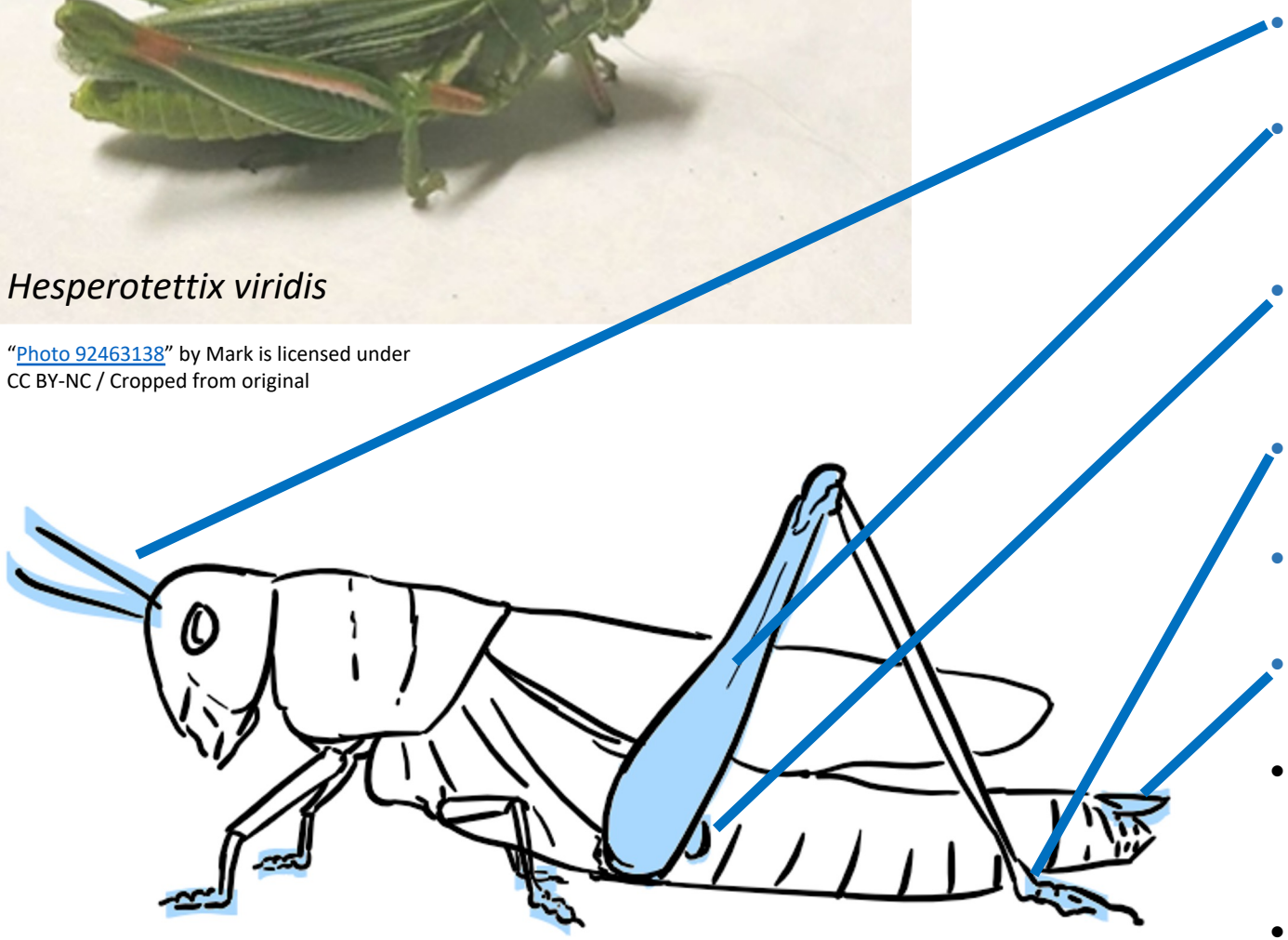

Drawn by Gabi Gee

- Stout antennae
- Thick femurs with knobbly flexor surfaces that sit against the body
- Tympana on both sides of first abdominal segment
- 3 segmented tarsi
- Males and females have cerci
- Females have a short ovipositor
- Solitary (some species can become gregarious, undergoing morphological change into locusts)
- Diurnal

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