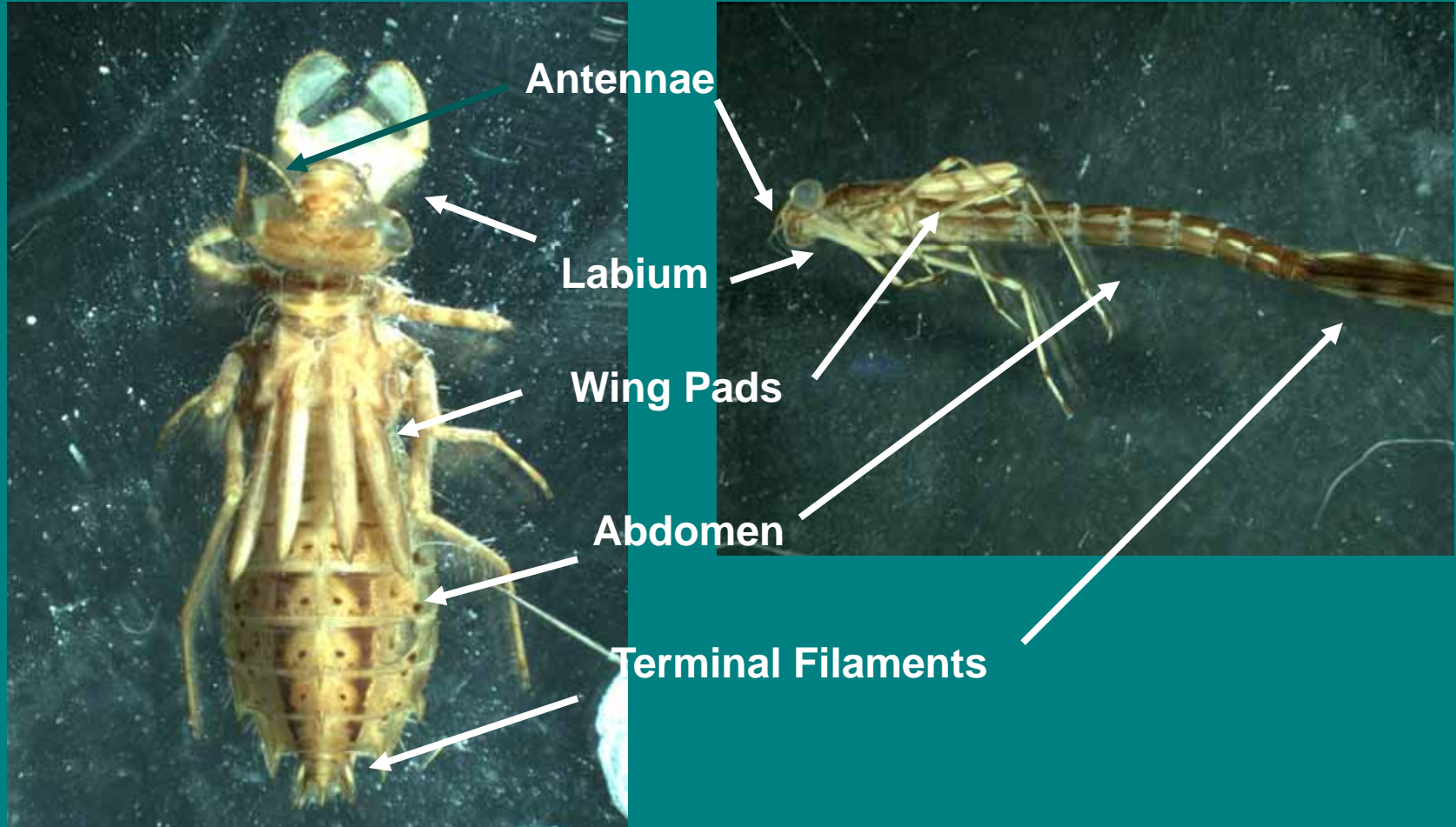


Odonata

Dragonflies and Damselflies



Notable Body Characteristics



Key Difference – Body Shape

Dragonflies



Dragonflies: Robust Body –
Small length:width ratio

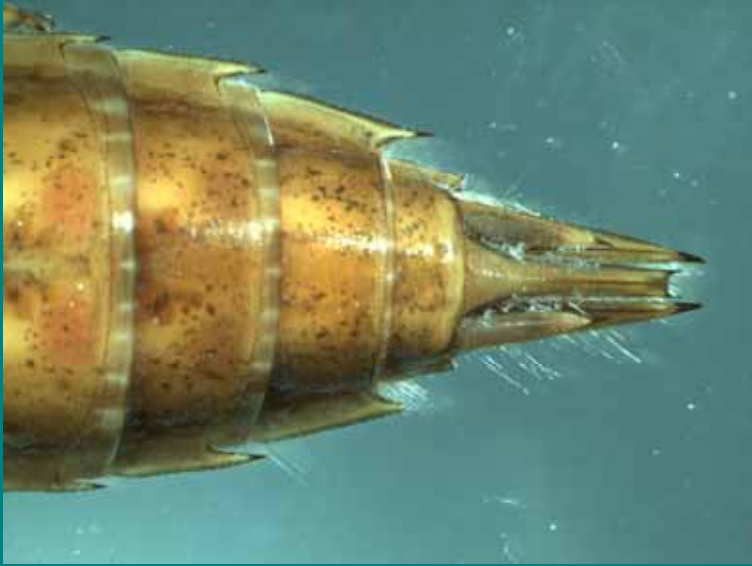
Damselflies



Damselflies: Slender Body –
Large length:width ratio

Key Difference – Anal Appendages

Dragonflies



Dragonflies: short, sharp appendages – 2 cerci, 2 paraprocts and an epiproct. Gills are inside the terminal end of the abdomen.



Damselflies



Damselflies: 3 leaf-like anal appendages – Caudal lamellae. Caudal lamellae are the damselflies gills.



Key Difference – Head Width:Body Width

Dragonflies



Dragonflies: Head is equal to or less than the greatest width of the abdomen

Damselflies



Damselflies: Head is always wider than the greatest width of the abdomen

Damselflies

Zygoptera



Key Difference – Mouthparts (labium)

Lestidae



Lestidae: Labium is narrow at base and gets much wider at apex (y-shaped)

Coenagrionidae



Coenagrionidae: Labium is wide at base and only increases slightly at apex

All Damselflies have hinged mouthparts that are used to capture prey.



Key Difference – anal appendages

Coenagrionidae

Anal appendages short, tapered to a point, often have venation, no cross-banded pattern



Anal appendages long, rounded at apex, typically have a cross-banded pattern

Lestidae



Key Difference – Terminal Filaments

Lestidae



Anal appendages long, rounded at apex, typically have a cross-banded pattern

Coenagrionidae



Anal appendages short, tapered to a point, often have venation, no cross-banded pattern

Secondary Difference – Body Length



Mature Lestidae are longer than mature Coenagrionidae. This should not be used as a primary key characteristic as immature individuals will cause confusion

Dragonflies

Anisoptera



Within the Dragonflies there are two large groups that must first be distinguished, those with spoon-shaped mouthparts (Libelluloidea), and those flat mouthparts (Aeshnoidea)



Spoon-shaped mouthparts:
when mouthpart is folded up
under head it extends up and
covers the front of the face



Flat mouthparts: when
mouthpart is folded up under
head it does not cover the front
of the face



Bottom view of dragonfly mouthparts

Spoon-shaped mouthparts



Flat mouthparts



All Dragonflies have hinged mouthparts that are used to capture prey.



**Aeshnidae with
mouthpart extended**



All Dragonflies have hinged mouthparts that are used to capture prey.



**Libellulidae with
mouthpart extended**



Dragonflies with flat mouthparts

Aeshnidae



Gomphidae



Key Difference – Shape of antennae

Aeshnidae



Aeshnidae: Antennae are long and very narrow, 6-7 segments

Gomphidae



Gomphidae: Antennae are shorter and wide or club-shaped, 4 segments

Secondary Difference – Length:Width Ratio

Aeshnidae



Aeshnidae: Noticeably long, body robust but with large length:width ratio

Gomphidae



Gomphidae: Not noticeably long, body robust with small length:width ratio

Dragonflies with spoon-shaped mouthparts

Libellulidae



Corduliidae



Key Difference – Mouthparts (palpal lobes)

Libellulidae



Libellulidae: Inner edge of palpal lobe has very shallow scallops

Corduliidae



Corduliidae: Inner edge of palpal lobe is deeply scalloped

This is typically the most difficult characteristic for citizen volunteers to learn how to distinguish

In order to see the inner scalloped edges of the spoon-shaped dragonfly mouthparts, the mouthpart must be pulled away from the head.



In order to see the inner scalloped edges of the spoon-shaped dragonfly mouthparts, the mouthpart must be pulled away from the head.



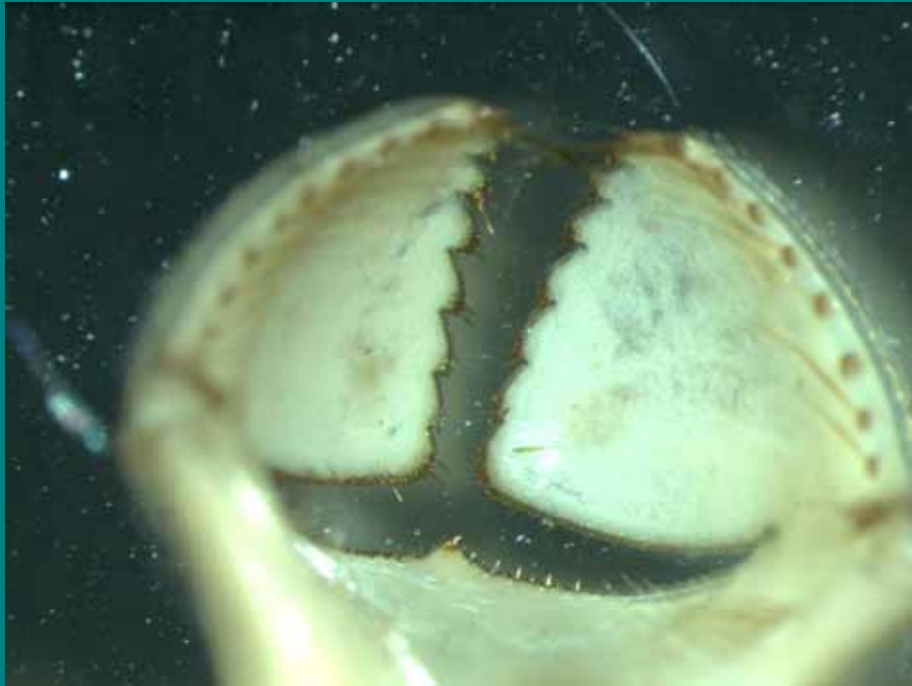
In order to see the inner scalloped edges of the spoon-shaped dragonfly mouthparts, the mouthpart must be pulled away from the head.



In order to see the inner scalloped edges of the spoon-shaped dragonfly mouthparts, the mouthpart must be pulled away from the head.



Once you are comfortable teasing out the mouthparts, play with the lighting while turning the mouthparts until you are able to get a good view of the scalloped edge



Key Difference – Mouthparts (labium)

Libellulidae



Libellulidae: Inner edge of labium has very shallow scallops

Corduliidae



Corduliidae: Inner edge of labium is deeply scalloped

The End