

How a leaf becomes a bird

an illustrative series by Dante Bresolin

Follow along to learn about how forested streams support threatened and endangered birds in Ontario.

A leaf falls into a stream...

Louisiana waterthrush
(threatened)



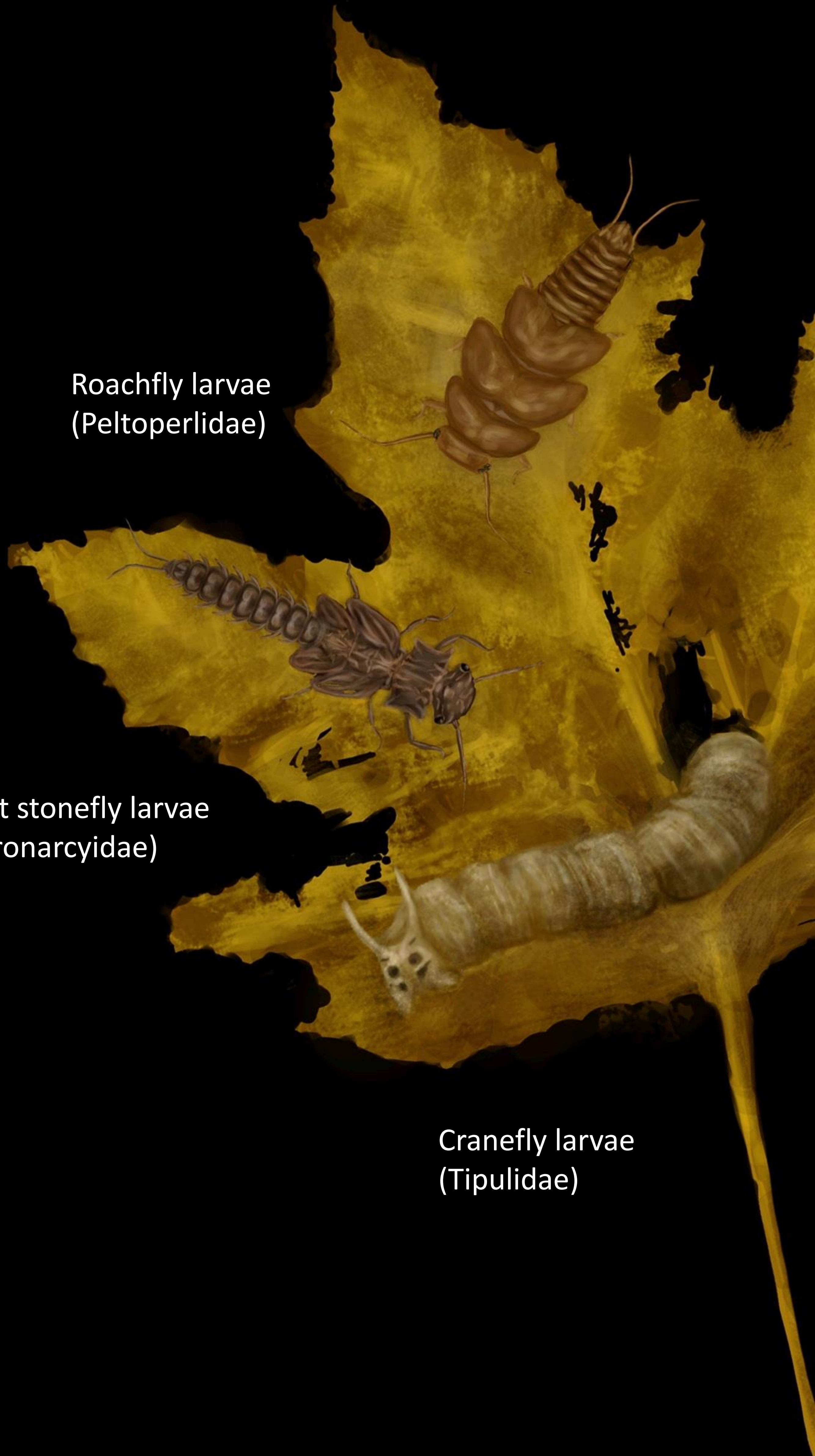
...and shredders shred it up.

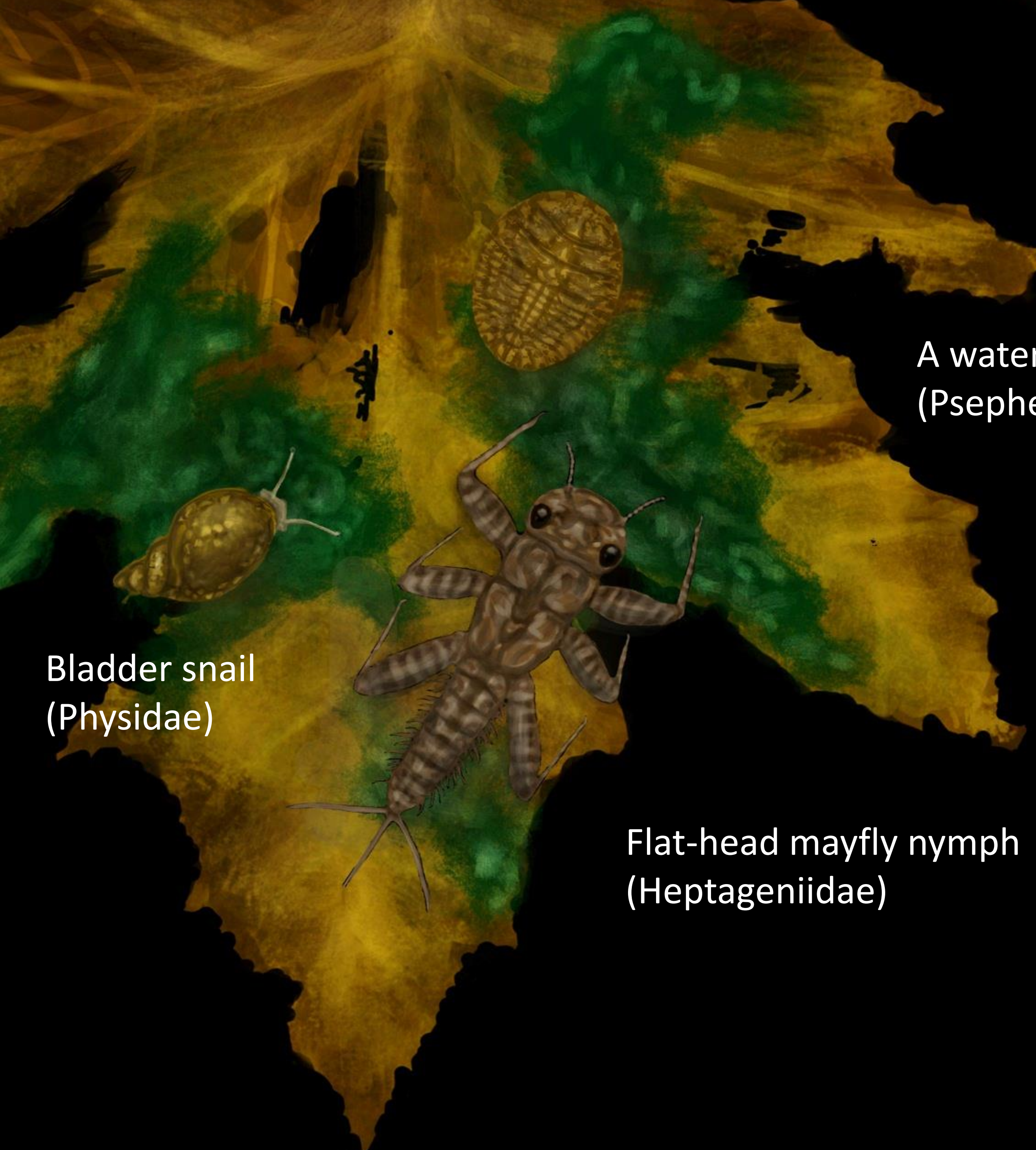
Shredders are aquatic insects that eat leaves and other plant matter. By breaking down leaves, they move energy from the trees to the water.

Roachfly larvae
(Peltoperlidae)

Giant stonefly larvae
(Pteronarcyidae)

Cranefly larvae
(Tipulidae)





Bladder snail
(Physidae)

A water penny
(Psephenidae)

Flat-head mayfly nymph
(Heptageniidae)

Scrapers eat the slime...

Scrapers use specialized mouthparts to eat scum from surfaces. This scum – also called biofilm – is home to bacteria, algae and other microbes that help break down leaves.

...and collectors eat the crumbs.

Collectors are generalists, collecting whatever scraps they can. Think of them like the river's cleanup crew; nothing goes to waste.



Small minnow mayfly nymph (Baetidae)



Bloodworm (Chironomidae)



Small square-gill mayfly nymph (Caenidae)

Predators hunt their prey,

Predators will eat just about anything they can catch. With oar-like legs and feathery gills, they're at the top of the food chain - for now, that is.



Predaceous diving beetle (Dytiscidae)

Alderfly nymph (Sialidae)



until one day...

Damselfly naiad (Zygoptera)



...adults leave
the stream,



Chimney swift (threatened)



Bank swallow (threatened)

**and the birds
have their
feast.**

All sorts of larvae emerge from the water as winged adults. Flying above streams, they make a great meal for birds like swifts and swallows, that catch insects in flight.

From the leaves that started it all, to the trees where they nest:

Forested streams support our birds at risk.

Prothonotary warblers (endangered) rely on dead trees along streams and swamps for nesting. Because of this, aquatic insects can be an important food source.





To learn more...

About Ontario's species at risk

www.ontario.ca/page/species-risk-ontario

About your local waterways and protecting them

www.conservationontario.ca/conservation-authorities/find-a-conservation-authority

About stream invertebrates

www.macroinvertebrates.org