

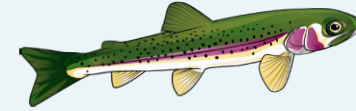
A World of Invertebrates

2023-2024 Academic Year Calendar

Classroom Aquarium Education Program



Classroom Aquarium Education Program



**Known by many names – Trout, Salmonids, or Steelhead in the Classroom.
All of these are part of the Classroom Aquarium Education Program (CAEP)!**

**To learn more, scan
this QR code below!**

Students learn how personal actions impact valuable natural resources through up-close observation of the beginning of a fish's life cycle. Students experience the balance it takes to maintain and preserve California's aquatic habitats and fisheries through the maintenance of their own tank. CAEP is offered statewide in partnership with community organizations.



About this Calendar

This calendar is designed for teachers participating in CAEP. We recognize and appreciate the extraordinary steps you take to educate your students about their species of fish, healthy habitats, and the impacts of human actions.

Each year that you set up an aquarium, hatch, raise, and release fish – you guide your students to a deeper understanding of ecology. Your authorization form ensures the correct species of fish are released into appropriate locations and do not interfere with wild populations of native fish.

Featured on our 2023/24 CAEP Calendar are 12 species of macroinvertebrates that can be found in waterways across California. Learning the importance of macroinvertebrates and how they impact fish throughout their life cycle gives students a clear view of what healthy and biodiverse aquatic habitats can look like. Trout depend on macroinvertebrates as a year-round food source, which is why anglers use fishing flies that imitate the larva, pupa, and adults.

Scan the "QR" code in each page with your phone camera and click on the link that appears to access a treasure trove of supplemental activities and videos, lessons, photos, and information. Here, you can also discover resources to connect to more programs managed by CDFW that work to keep native fish populations wild and intact.

The role of the educator is crucial in the process of maintaining a healthy habitat. We are so grateful for your work, and this calendar is one way we want to support your teaching and say thank you.

Aquatic Bioassessment Lab

The CDFW Aquatic Bioassessment Lab studies, protects, and maintains the health of California's freshwater ecosystems and the diverse life forms that depend on them.

To learn more, scan this QR code below!



Fishing in the City

The CDFW Fishing in the City Program provides aquatic resources for Californians living in urban and suburban areas.

To learn more, scan this QR code below!



Invasive Species Program

The CDFW Invasive Species Program aspires to reduce negative effects of non-native species throughout California.

To learn more, scan this QR code below!

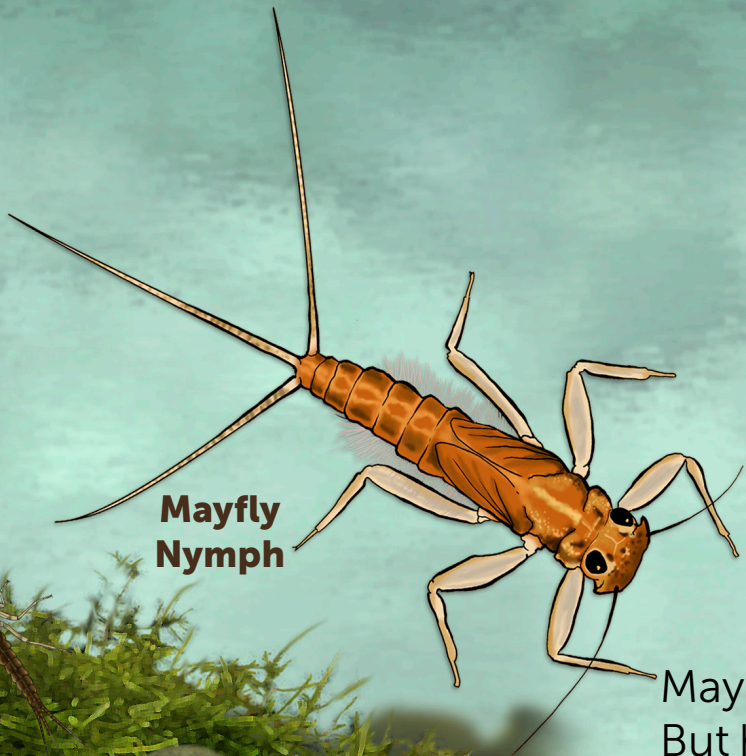


Justice, Equity, Diversity, and Inclusion (JEDI)

CDFW embraces the importance of JEDI principles and intergrates them into our programs.

To learn more, scan this QR code below!





Mayfly Nymph

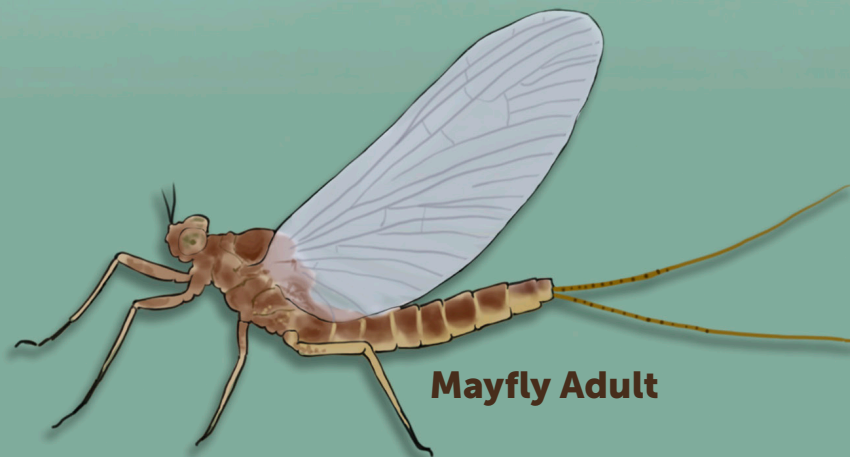
Mayfly

Class: Insecta / Order: Ephemeroptera

Mayflies are unique insects because they molt after having wings! But here's the interesting part: they don't live very long as adults, sometimes just a few hours. They start their lives underwater, and when they're ready, they sprout wings and take to the sky. Unlike other insects, mayflies shed their skin once again, and together they fill the sky with their delicate dance.



Access more resources!



Mayfly Adult

August 2023



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9 International Day of the World's Indigenous People	10 World Lion Day	11 World Mountain Day	12 World Elephant Day
13	14	15	16	17	18	19 World Orangutan Day
20	21	22 World Honey Bee Day	23	24	25	26
27	28	29	30	31		

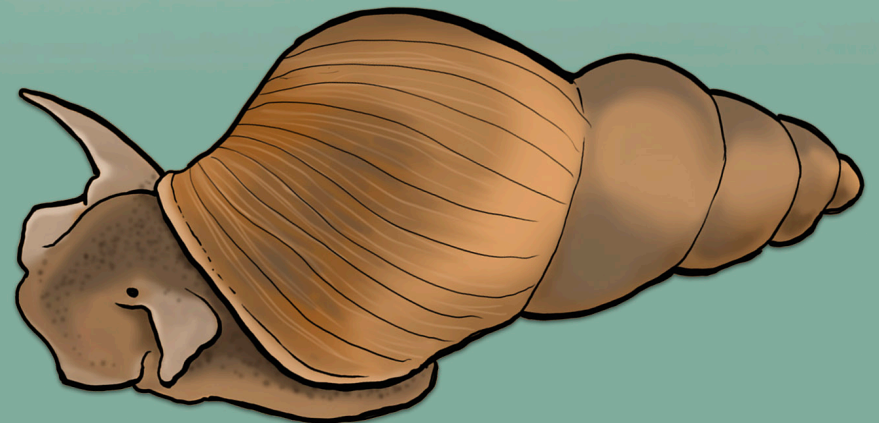
Gilled Snail

Class: Gastropoda / Order: Prosobranchia

With its shiny spiral shell, it might look like a regular snail, but this one breathes underwater! Unlike its land-loving cousins, gilled snails glide and slide along the bottom of the river eating algae and plants. As they munch on algae, they help keep the water clean, so be sure to thank these aquatic heroes if you spot them!



**Access more
resources!**



September 2023



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 National Hispanic Heritage Month	2 CDFW Free Fishing Day
3	4 National Wildlife Day	5	6	7 California Biodiversity Day	8	9
10	11	12 World Dolphin Day	13	14	15 World Clean-Up Day	16 International Day for the Preservation of the Ozone Layer
17	18 World Water Monitoring Day	19	20	21 Zero Emissions Day	22 California Native American Day & World Rhino Day	23 California Coastal Cleanup Day
24	25	26 World Environmental Health Day	27	28	29 World Rivers Day & International Day of Awareness of Food Loss and Waste	30

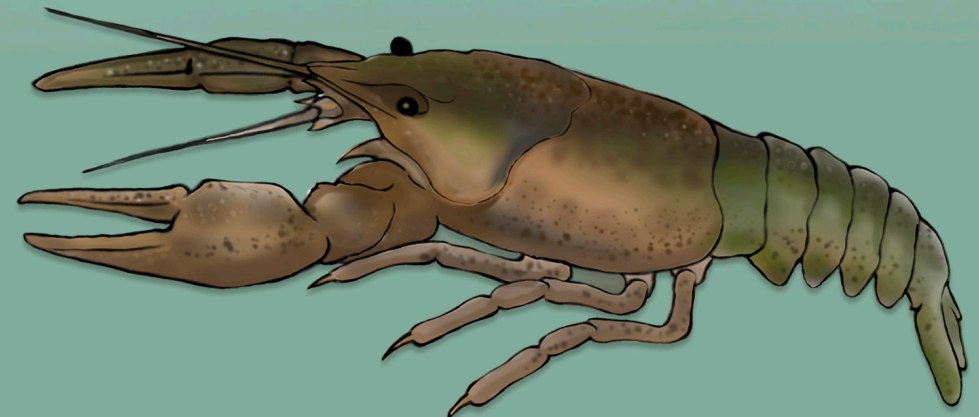
Crayfish

Class: Malacostraca / Order: Decapoda

You may know this creek critter as a crawfish or a crawdad. California is home to several crayfish species, and some of them can live up to 20 years! They are most active at night, but you could spot their colorful hard shell hiding near rocks and plants in rivers and lakes during the day.



**Access more
resources!**

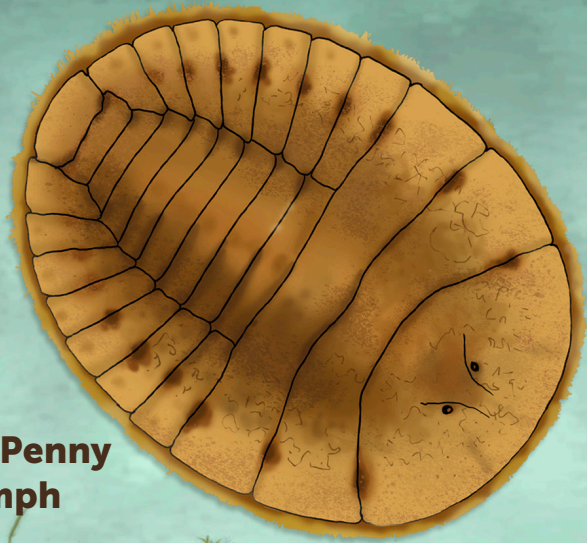


October 2023



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Filipino-American, German-American, Italian-American, and Polish-American Heritage Month & Global Diversity Awareness Month 1	2 World Habitat Day	3	4 World Animal Day	5 Energy Efficiency Day	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24 International Day of Climate Action	25	26	27	28
29	30	31				

**Water Penny
Nymph**



Water Penny

Class: Insecta / Order: Coleoptera

Why do you think these little creatures are called water pennies? The nymphs are round and flat, and their brown color makes them look like a copper coin – so they are named after the penny! Water penny nymphs may not look like insects but they are! In fact, they grow up to be small and shiny beetles.



**Access more
resources!**

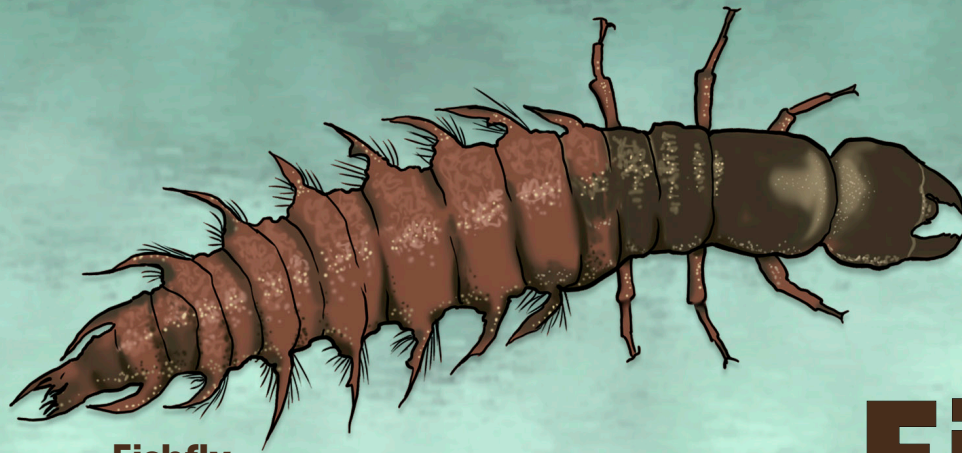


**Water Penny
Adult**

November 2023



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Native American Heritage Month	2	3	4 World Paper Free Day
5	6	7	8	9	10	11
12	13	14	15 America Recycles Day	16	17 Take a Hike Day	18
19	20	21	22	23	24	25
26	27	28	29	30		



**Fishfly
Nymph**

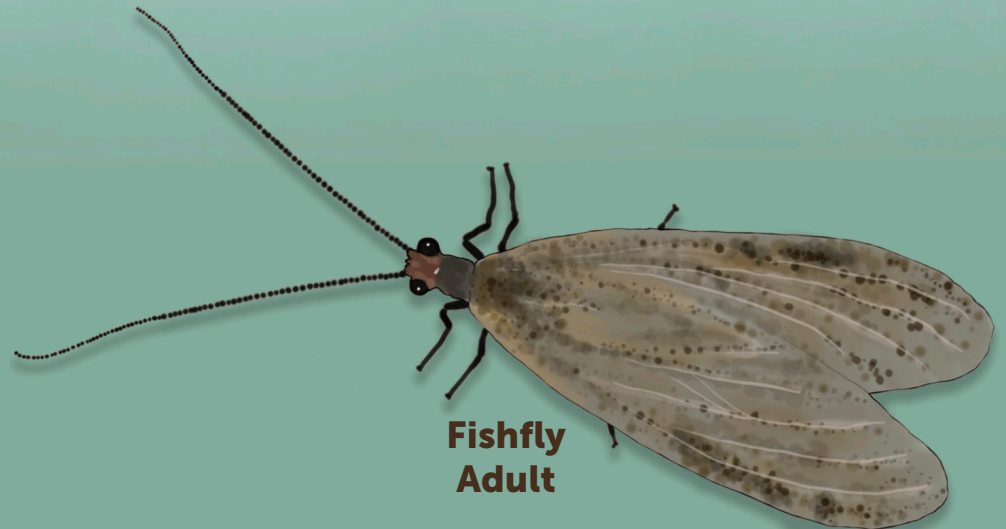
Fishfly

Class: Insecta / Order: Megaloptera

You might spot an adult fishfly zipping through the air on a warm summer evening, but only if you live near a river, lake, or stream. Consider yourself lucky to see this cool flying insect because they spend most of their life underwater. When they are young, they are found underwater living as nymphs, eating tiny plants and animals.



**Access more
resources!**



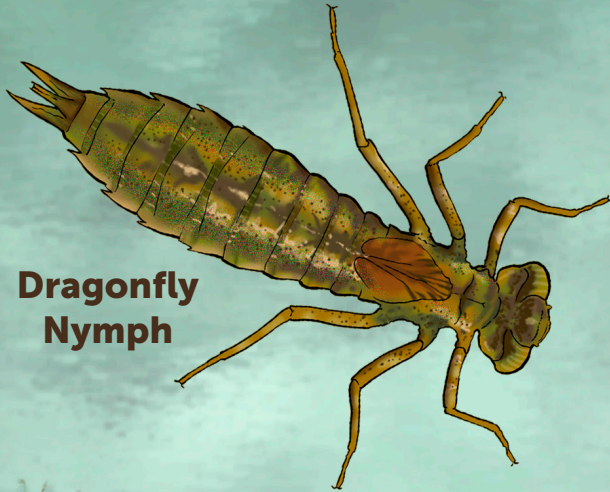
**Fishfly
Adult**

December 2023



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3 International Day for People with Disabilities	4	5 World Soil Day	6	7	8	9
10	11 International Mountain Day	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
New Year's Eve 31						

**Dragonfly
Nymph**



Dragonfly

Class: Insecta / Order: Odonata

Dragonflies are one of the fastest flying insects! As nymphs, dragonflies are dull in color to match the sediment and plants in their habitat; this helps them camouflage from their predators. Dragonflies can be identified by their long bodies and two narrow pairs of veined colored wings.



**Access more
resources!**

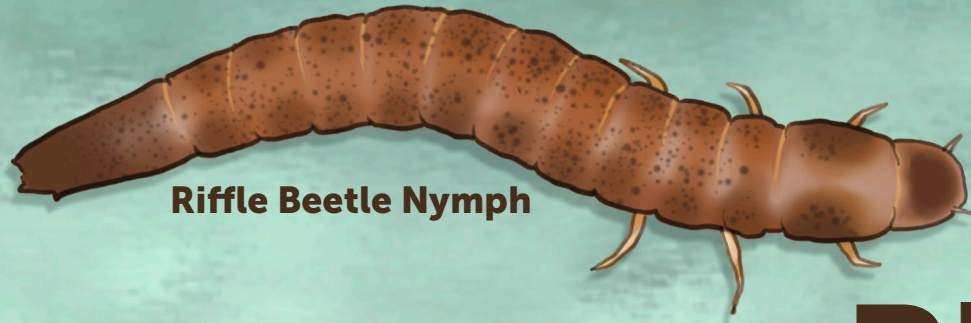


**Dragonfly
Adult**

January 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 New Year's Day	2	3	4 World Braille Day	5 National Bird Day	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24 International Day of Education	25	26	27
28	29	30	31 World Zebra Day			



Riffle Beetle Nymph

Riffle Beetle

Class: Insecta / Order: Coleoptera

This water beetle lives in the most exciting part of the river, the riffles! Riffles are special areas in streams where fast flowing water rushes over rocks and creates ripples and splashing. These tiny critters look like worms when they are larva and grow up to be small beetles. If you ever see an adult riffle beetle, it means the stream you found it in is clean and healthy.



**Access more
resources!**

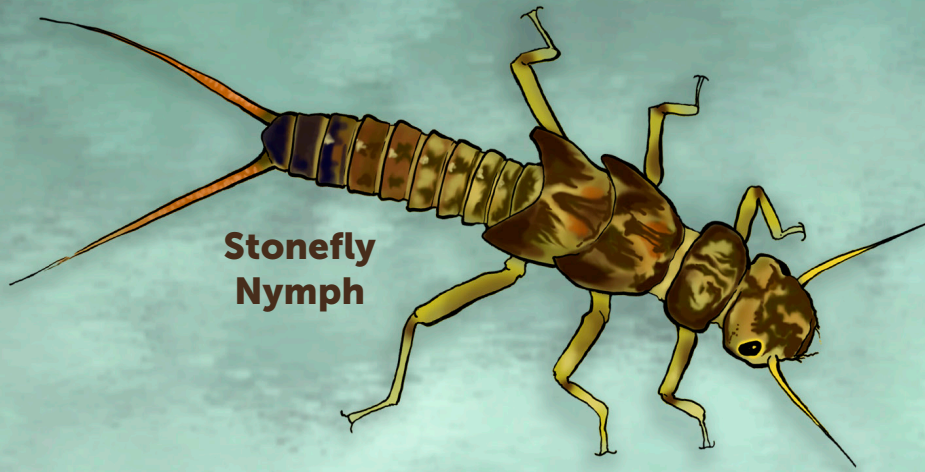


**Riffle Beetle
Adult**

February 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				Black History Month	World Wetlands Day	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
International Day of Women & Girls in Science						
18	19	20	21	22	23	24
World Whale Day		World Day of Social Justice		National California Day		
25	26	27	28	29		
		International Polar Bear Day				



**Stonefly
Nymph**

Stonefly

Class: Insecta / Order: Plecoptera

With their flattened body shape, stoneflies are well-suited for a life in swift water. To avoid being swept away in fast currents, stonefly nymphs cling tightly to... well... stones! The nymphs are highly sensitive to pollution and need water with lots of oxygen. At all stages of their life cycle, they are a very important part of aquatic food webs.



**Access more
resources!**

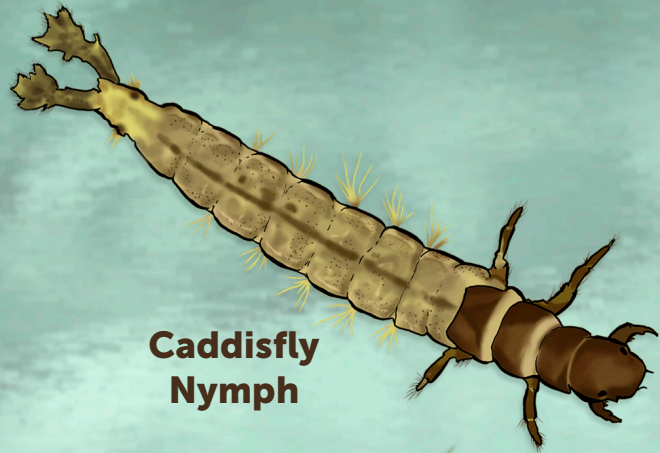


**Stonefly
Adult**

March 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 Greek-American Heritage Month & Irish-American Heritage Month	2
3 World Wildlife Day	4	5	6	7	8	9
10	11	12 Plant a Flower Day	13	14 International Day of Action for Rivers	15	16
17	18	19	20	21 International Day of Forests	22 World Water Day	23
24	25	26	27	28	29	30
31						



Caddisfly Nymph



Caddisfly Larvae with protective case

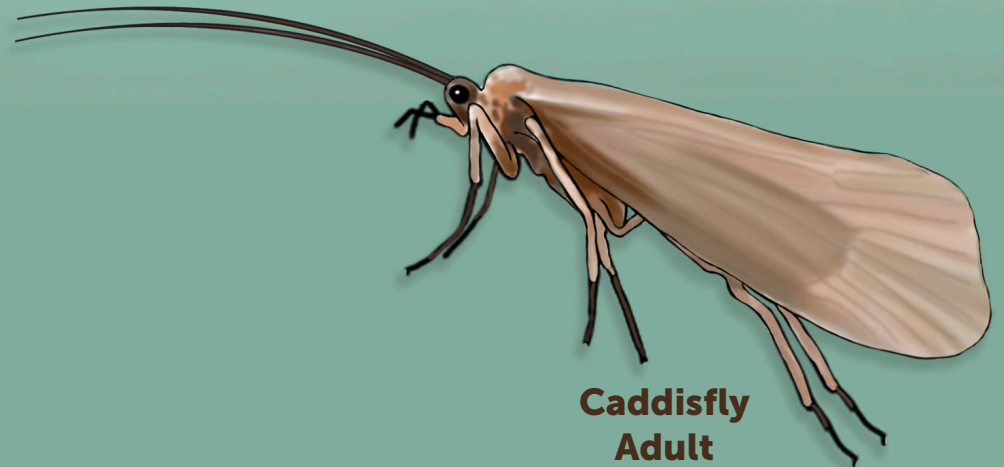
Caddisfly

Class: Insecta / Order: Trichoptera

Caddisfly larvae sometimes look like sticks crawling along the streambed. That's because many caddisfly larvae build a protective case around themselves using sand grains, pebbles, sticks, or whatever bits of debris they can find, glued together with silk they produce. The larvae help clean water by feeding on plant and animal debris. Adult caddisflies look like moths and may only live for a few weeks.



Access more resources!



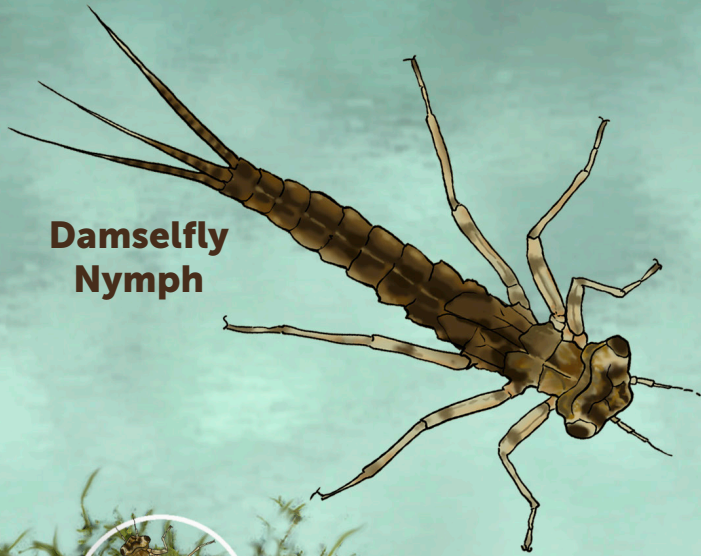
Caddisfly Adult



April 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Arab-American Heritage Month	2	3	4	5	6
7	8	9	10	11	12	13 International Plant Appreciation Day
14	15	16	17 World Bat Day	18	19	20
21 World Fish Migration Day	22 Earth Day	23	24	25	26	27
28	29 Arbor Day	30				



**Damselfly
Nymph**



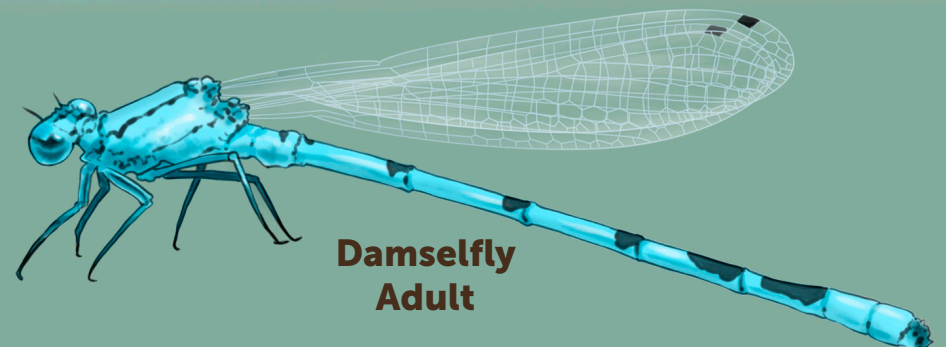
Damselfly

Class: Insecta / Order: Odonata

Most of a damselfly's life is spent as a nymph in the water of streams, lakes, and ponds. Some species live for about a year underwater before becoming adults. The nymphs breathe through their three long gills that look like tails. They molt repeatedly until they undergo metamorphosis and become flying insects. To avoid mistaking them for dragonflies, notice that damselflies are more slender and hold their wings together behind their back.



**Access more
resources!**

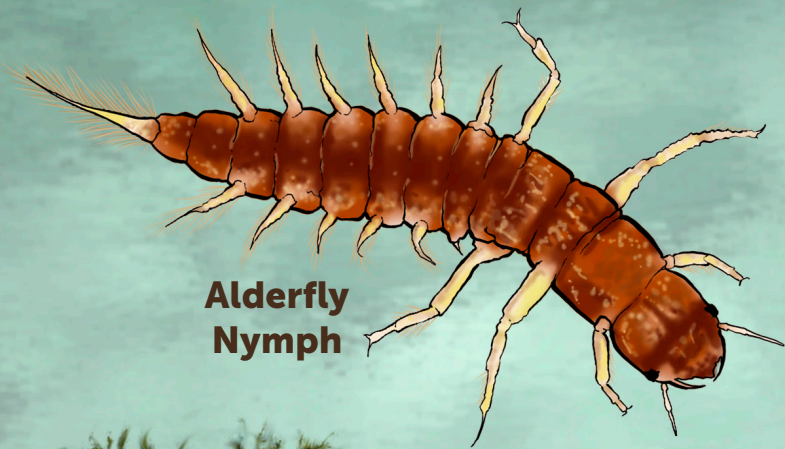


**Damselfly
Adult**

May 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Haitian, Indian, Jewish-American, and South Asian American Heritage Month	2	3	4
5	6	7	8	9	10	11 World Migratory Bird Day
12	13	14	15	16	17	18
19	20 Endangered Species Day	21	22 International Day for Biological Diversity	23	24	25
26	27	28	29	30 Water a Flower Day	31	



**Alderfly
Nymph**

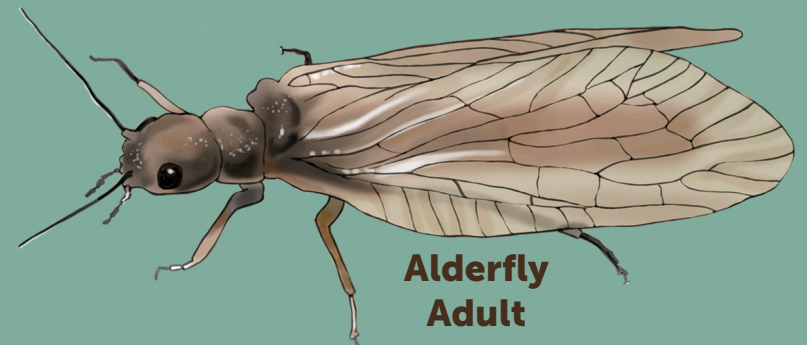
Alderfly

Class: Insecta / Oder: Megaloptera

You can find alderfly nymphs living in muddy streams and calm ponds. The nymphs are hungry predators armed with big pinching jaws that they use to munch on other insects. Some alderflies stay underwater up to two years. But when they finally grow up, they become sluggish flying insects, only live a few days, and generally don't eat.



**Access more
resources!**



**Alderfly
Adult**



June 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 National Caribbean American Heritage Month
2	3 World Bicycle Day	4	5 World Environment Day	6	7	8 World Oceans Day
9	10	11	12	13	14	15 Global Wind Day
16	17	18	19	20	21	22 World Rainforest Day
23	24	25	26	27	28	29
30						



**Dobsonfly
Nymph**

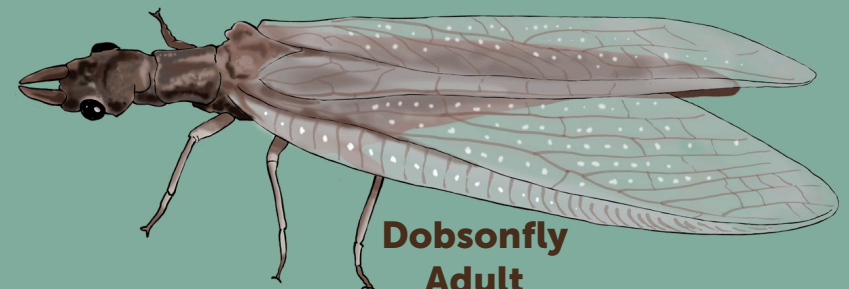
Dobsonfly

Class: Insecta / Oder: Megaloptera

Dobsonfly nymphs are called hellgrammites, and they are one of the largest aquatic insects in North America. Dobsonflies spend most of their life underwater living in the swiftest sections of streams and rivers. To avoid being swept away by fast currents and stay hidden from predators, they anchor themselves and hide under rocks. Trout love to eat them, which is why they are sometimes sold as fish bait!



**Access more
resources!**



**Dobsonfly
Adult**

July 2024



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14 National 'Be Nice to Bugs' Day	15	16 World Snake Day	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

We appreciate those who contributed to this resource for teachers across California.



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