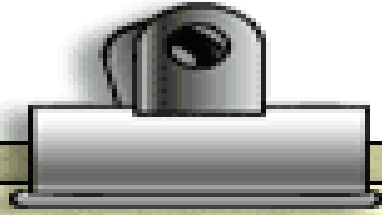


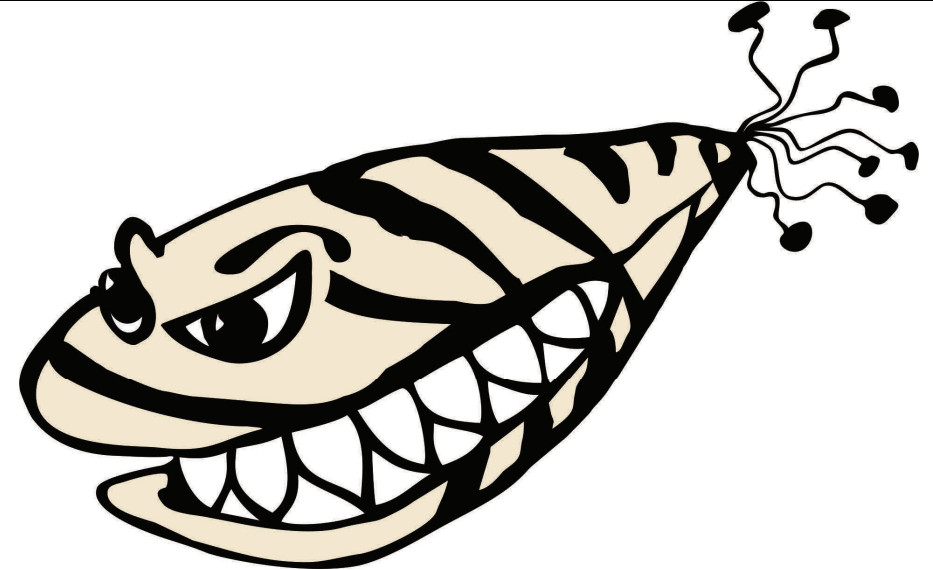
CHECKLIST TO STOP ZEB



- ✓ Tell your parents to clean, drain and dry your boat to prevent moving mussels and other aquatic invaders from one lake to another.
- ✓ Tell your parents and friends about invasive mussels
- ✓ Ask a parent or teacher to help you find out more information on the Internet. Create a poster or video to make other people aware of this unwanted invader.

**NOT
WANTED**

DEAD OR ALIVE



ZEBRA AND QUAGGA MUSSELS

**IF THEY ARRIVE TO THE OKANAGAN-SIMILKAMEEN,
IT WOULD COST US MORE THAN**

\$45,000,000

TO CONTROL THEM.

BUT THEY WILL NEVER GO AWAY.

Information and Layout:
Elissa Astorino and Lisa Scott
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Okanagan and Similkameen Invasive Species Society
Summerland, BC

Zeb Illustrations:

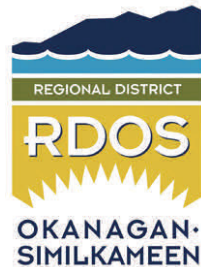
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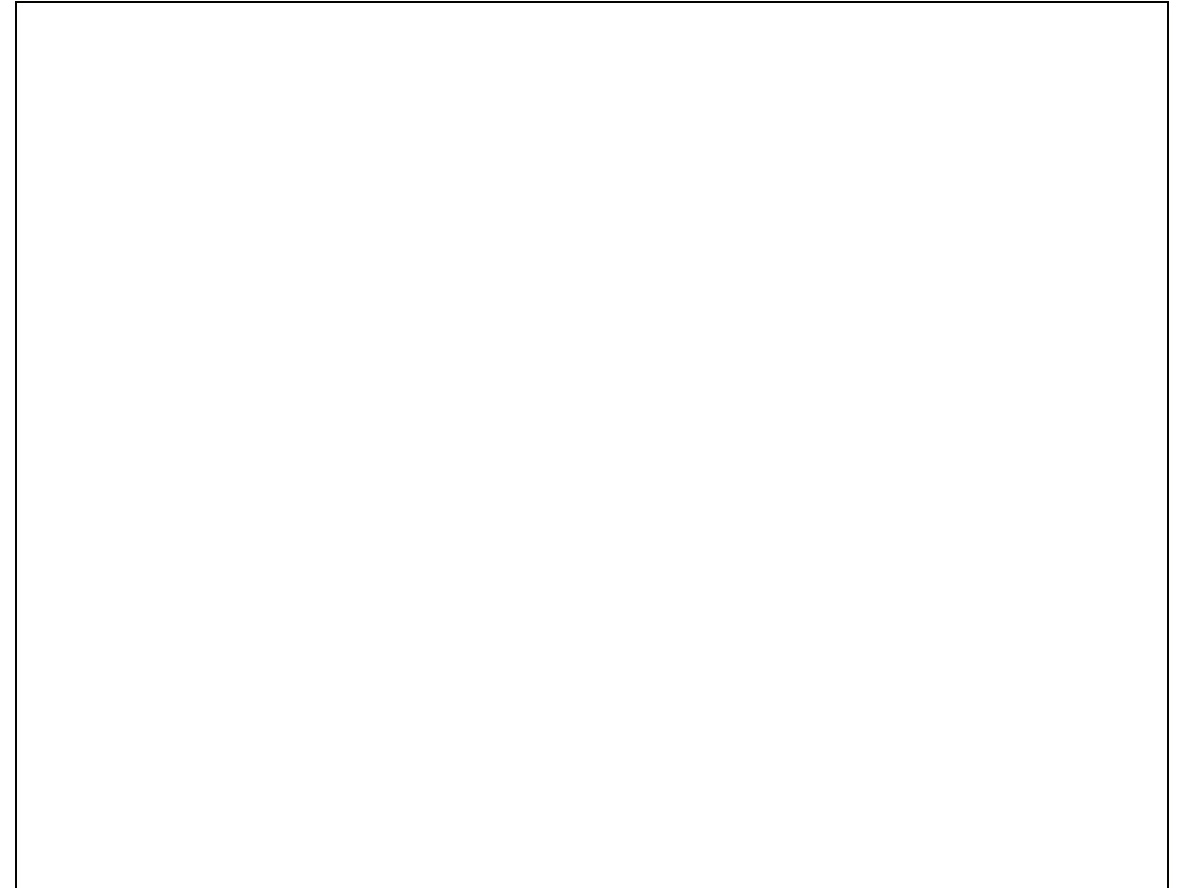
Okanagan and Similkameen Invasive Species Society
Regional District of Okanagan-Similkameen

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Okanagan Basin Water Board



DRAW A PICTURE OF YOUR FAVOURITE LAKE OR BEACH

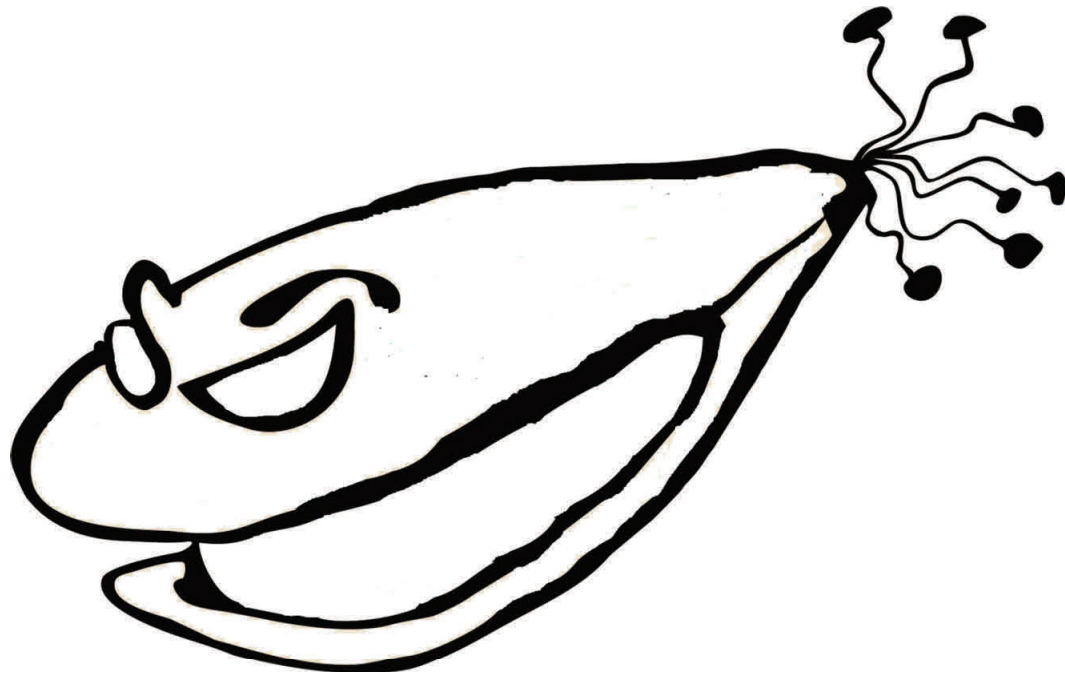


FOR MORE INFORMATION:

Okanagan and Similkameen Invasive Species Society
Phone: 250.404.0115
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Web: oasiss.ca



DESIGN YOUR OWN INVASIVE MUSSEL



What is the name of your mussel?

Where did your mussel come from and how did it get here?

MEET ZEB

Zeb is a Zebra Mussel. He is in the mollusk family, which means he is related to clams, snails and slugs.



He and his closely related cousin, Quagga Mussel, were accidentally brought to Canada's Great Lakes region in the 1980s. They came from Europe and Asia as stowaways in the ballast water of large ships. Since then, they have hitched rides on boats and trailers right across the United States. But they **DO NOT** live in BC and they are not wanted here. Zebra and Quagga Mussels are **INVASIVE**.

What are Invasive Mussels?

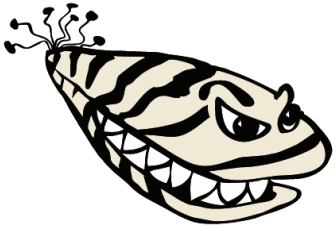
Non-native. Invasive mussels come from other places in the world (Zebra and Quagga Mussels were introduced from Eastern Europe and Asia).

Adult mussels have a pair of triangular shells connected by an elastic hinge. The outside of the shells are usually brown with stripes, which is how the Zebra Mussel got its name.

They are small mussels, growing to about 5cm maximum length. They have small threads that help them attach to anything that is in the water — a boat, anchor, rocks, docks or piers.

FILL IN THE BLANKS

1. ___ R_ _____ are mollusks that are unwanted in BC.
2. Invasive mussels arrived in Canada as stowaways in the ___ L _____ water of ships.
3. There are no natural _N _____ of invasive mussels in Canada that will help to control them.
4. Young mussels are smaller than a grain of sand and referred to as ___ G ____.
5. Zebra Mussels only live in ___ S_ water.
6. Zebra Mussels have small _H_ _____ that help them attach to anything that is in the water.
7. Invasive mussels are related to ___ M __, snails and slugs.



Can you decode the message?

A	B	C	D	E	F	G	H	I
1			4			7	8	

J	K	L	M	N	O	P	Q	R
10		12				16		

S	T	U	V	W	X	Y	Z
	20				24		

Use the hints above to figure out the secret message!

11 5 5 16 26 5 2 18 1 1 14 4 17 21 1 7 7 1

13 21 19 19 5 12 19 15 21 20 15 6 15 21 18

12 1 11 5 19

What do Invasive Mussels do?

Affect outdoor fun. When Zebra and Quagga Mussels die, their shells wash up on beaches and are very sharp. People can no longer walk on the sand in bare feet. They can also clog boat motors.

Unwanted. Invasive mussels are bullies and compete with some of our native fish for food. They also clog water intake pipes that collect our drinking water.

Lack natural enemies. There is nothing in BC that would eat invasive mussels and keep them under control. If they ever arrive, they are likely here to stay.

C A M P I N G O L H X F S H G
 H J S I E K A R I A M A S J P
 L A V U G S T R O B V I X O T
 Y N X T I I R L F I F H E O R
 E V I S A V N I L T N V K E R
 G S S U N O M D L A E A L D E
 K N N N U O B N I T N I I R T
 X Q I K B Z S A M A A O R A A
 H K C M R S O S G R B D Q I W
 D C C U M I P A T Z S B E N M
 C R A L J I N E A G G A U Q S
 D H Y E E S W R C N Z E E H F
 Y M B F B A B S A I D N I U U
 A L G A E E N Q W K E P D J U
 R K E L Z S K C O D S S R Z H

ALGAE
 CAMPING
 DRAIN
 HABITAT
 OASISS
 SAND
 SUN
 WATER

BEACH
 CLEAN
 DRY
 INVASIVE
 OKANAGAN
 SHIPS
 SWIMMING
 ZEBRA

BOAT
 DOCKS
 FISH
 MILFOIL
 QUAGGA
 SPECIES
 TRAILER



Quick Review

An **ADJECTIVE** describes something or somebody. Lumpy, soft, ugly, messy, and short are adjective.

When we ask for a **PLACE**, we mean any sort of place : a country or city (Canada, Penticton) or a room (bathroom, kitchen).

An **ADVERB** tells how something is done. It modifies a verb and usually ends in "ly." Modestly, stupidly, greedily, and carefully are adverbs.

An **EXCLAMATION** or **SILLY WORD** is any sort of funny sound, gasp, grunt, or outcry, like Wow!, Ouch!, Ick!, and Gadzooks!.

A **NOUN** is the name of a person, place, or thing. Sidewalk, umbrella, toy, bathtub, and nose are nouns.

When we ask for a **PLURAL**, it means more than one. For example, door pluralized is doors.

A **VERB** is an action word. Run, pitch, jump, and swim are verbs. Put the verbs in past tense if the directions say **PAST TENSE**. Ran, pitched, jumped, and swam are verbs in the past tense.

When we ask for specific words like a **NUMBER**, a **COLOR**, an **ANIMAL**, or a **PART OF THE BODY**, we mean a word that is one of those things, like seven, green, dog, or mouth.

Zeb the Zebra Mussel's Crazy Vacation

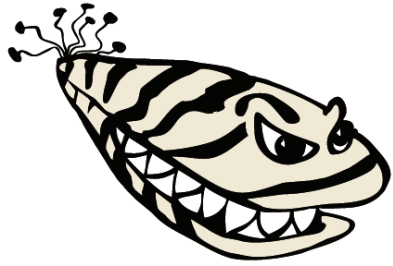


One day, Zeb the Zebra mussel and his friends decided to go

on vacation to _____ (place). They _____ (verb) onto a boat and hitched a ride to some _____ (adjective) lakes. Along the way, they stopped at _____ (noun) Lake. The water was so _____ (adjective) _____ (adjective), some of Zeb's friends decided to stay. Zeb and the rest of his friends _____ (verb) onto a new boat to get a ride to _____ (place) Lake. It was _____ (adjective)! The water was so full of _____ (adjective) food and _____ (adjective) plants that Zeb's friends decided to stay. After _____ (adverb) jumping on another boat, Zeb finally made it to _____ (place) Lake, but soon realized his friends were all at other lakes!

Freaky and Funky Facts:

- A female Zebra Mussel can produce up to 1,000,000 eggs in one year!
- The tiny eggs quickly develop into free-swimming larvae called veligers (VEL-i-jers). Veligers are smaller than a grain of sand.
- When Zebra Mussels are first born they are so small that 12,000 can fit on a pencil eraser.
- At 3 - 4 weeks, the veligers' shells weigh enough to cause them to sink. They must find something to attach to or they will die.
- Zebra Mussels can filter about 1 litre of water each day.
- Zebra Mussels can live without food for ONE year.



Unscramble these words and then use your answers to solve the puzzles on the next page

- Zebra mussels are freshwater mollusks, originally from PEORUE _____ (Hint: It's a Continent)
- Zebra mussels first came to Canada in ballast water from PSISH _____ (2 across)
- Zebra mussels attach themselves to boats, native mollusks, CODKS _____ (3), and other structures in lakes
- They are also known to GLOC _____ (4) water pipes which can affect our drinking water
- Zebra mussels are filter feeders and can consume large amounts of food, leaving our native HIFS _____ (5) with nothing to eat
- Zebra mussel shells have PASHR _____ (2 down) edges which can cut your feet
- Zebra mussels have not yet appeared in the KANAOANG (6)
- You can help prevent the spread of Zebra mussels by properly LAENGICN _____ (7), draining and drying boats, water toys and equipment after you leave the lake.

A	D	Q	L	K	C	W	U	F	T	W
H	O	C	G	D	P	F	O	X	V	Q
Y	C	L	E	A	N	I	N	G	Y	P
I	K	O	U	X	B	S	U	J	S	E
R	S	G	R	E	S	H	A	R	P	R
I	N	H	O	K	A	N	A	G	A	N
S	H	I	P	S	G	M	F	K	D	O
Z	A	M	E	J	S	T	L	N	C	B

