ROYAL CANADIAN AIR CADETS

PROFICIENCY LEVEL ONE

INSTRUCTIONAL GUIDE

SECTION 14

EO C190.07 – IDENTIFY HABITATS OF ANIMALS AND INSECTS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-801/PG-001, *Proficiency Level One Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Recce the area to locate habitats of animals and insects. It is recommended the route be flagged with flagging tape or visibly marked for the cadets before the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for this lesson as it is an interactive way to present the content.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have identified habitats of animals and insects.

IMPORTANCE

It is important for cadets to be able to identify animals and insects for food in a survival situation. After a few days the body needs nourishment which may be provided by the animals and insects in the surrounding area.

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Teaching point 1 **Conduct an activity to have the cadets identify habitats.**

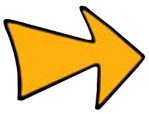
Time: 25 min Method: In-Class Activity

EDIBLE INSECTS

Insect Gatherings

Many insects are inactive during the heat of the day, although most emerge to collect moisture when it rains. Look for them in nooks and crannies of trees and behind the bark, in the tissue and seed pods of plants, in any moist shady spots and on the beds of pools of water and streams. The larvae and grubs of many insects are edible and easily found in rotten logs, underground, or under the bark of dead trees. Ants' and termites' nests are often immediately recognizable mounds. Snails can be found in fresh water, salt water and from deserts to alpine meadows. Slugs are simply snails without shells.

Insects provide ample amounts of protein, fats, carbohydrates, calcium and iron. Insects can be found throughout the world and they are easy to procure. Worms contain the highest class of protein with a large proportion of essential amino acids and are easily collected. Although a fair number of insects can be eaten raw, it is best to cook them to avoid ingesting unwanted parasites. Collect only living specimens. Avoid any that look sick or dead, have a bad smell or produce skin irritation or a rash when handled.



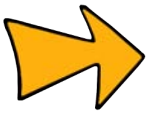
As a general rule, avoid insects that carry disease (eg, flies, mosquitoes, and ticks), poisonous insects (eg, centipedes and spiders), and insects that have fine hair, bright colours, and eight or more legs.

NUTRITION BREAKDOWN

Insect (per 100 g)	Protein (g)	Fats (g)	Carbohydrates (g)	Calcium (mg)	Iron (mg)
Crickets	12.9	5.5	5.1	75.8	9.5
Small grasshoppers	20.6	6.1	3.9	35.2	5.0
Giant water beetles	19.8	8.3	2.1	43.5	13.6
Red ants	13.9	3.5	2.9	47.8	5.7
Silkworm pupae	9.6	5.6	2.3	41.7	1.8
Termites	14.2	n / a	n / a	0.050	35.5
Weevils	6.7	n / a	n / a	0.186	13.1

Note. From Wilderness Survival. (p. 161), by G. Davenport, 2006, Mechanicsburg, PA: Stackpole Books. Copyright 2006 by

Figure 1 Nutritional Value



Insects that can be eaten are bees and wasps, hornets, beetle grubs, locusts, aquatic insects, snails, slugs and worms.

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ANIMALS

Many animals make their homes in burrows, usually on high ground away from water. Some, such as rabbits and ground squirrels, use little effort to conceal them, although one or two exits are hidden for use in an emergency. Rabbits' emergency holes are easily dug out; a piece of bramble or barbed wire can be pushed down the hole to hook the rabbit out.

Signs of feeding include:

- the way in which bark has been stripped from trees;
- the gnawed shells of nuts;
- partially eaten fruits;
- bitten off shoots;
- the remains of prey; and
- animals of carnivores or the destruction of nests.

Discarded fruits or nuts are often found when food is plentiful—an animal finds one piece not to its liking and drops it to try another. They not only reveal an animal's presence but suggest bait for traps.

A skilled eye can often identify the species of animal by the pattern left by tooth or beak marks on a nut, or the way in which a pine cone has been stripped to get at its seeds.

DROPPINGS

Droppings give one of the best indications of whether an animal is an herbivore or a carnivore. The size of the animal can be judged from their mass and quantity; dryness is an indication of how long since the droppings were passed. Old droppings are hard and odourless. Fresh are wet and still smelling. Flies draw attention to droppings.

Many mammal droppings have a strong scent. Animals that live on vegetation, such as cattle, deer and rabbits, produce roundish and strawy droppings. The droppings from a meat eater, like cats, are long and tapered. Break open a dropping to see if there are any clues to what the animals have been eating, then bait accordingly.

ROOTINGS

Some animals root up the ground in search of insects and tubers. If the earth is still crumbly and fresh, an animal is likely to have been active on the spot recently. Small scratches may be where a squirrel or other rodents have been digging for shoots.

Scents and Smells

Listen to the noises and register the smells. They are certain to include indications of the wildlife present and where one kind of animals exists there may be others.

TRACKS

Animal tracks consist of bent blades of grass, gnawed bone, broken seeds, the dragged body or tail, and the footprint of the animal.

All prints of an animal are not the same as they depend upon:

- the age of the animal,
- the movement of the animal—walking, running, bounding,
- the material it is walking on—sand, mud, clay, grass, or snow,

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- the season—some animals have extra fur on their paws in the winter, and
- the age of the tracks.

When a track is observed:

- Choose a well defined area of the track.
- Study the track to determine the direction of travel, the forefoot and hind foot pattern.
- Determine if there are any body rub points as a dragged tail, dragged foot, or dragged fur of the animal.
- Determine if the animal is running, hopping, walking, trotting, or just meandering.

ACTIVITY

Time: 15 min

OBJECTIVE

The objective of this activity is to have the cadets identify habitats of animals and insects.

RESOURCES

Nil.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Guide the cadets around various points on the trail / route, pointing out any signs of animal habitats.
2. Divide the cadets into groups of three and have them look for habitats of animals.
3. After 10 minutes, have the cadets return back to the instruction area.
4. Have the cadets discuss what animal(s) may live in the habitats they have found.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadets' participation in the activities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

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CLOSING STATEMENT

Being able to identify animals and insects becomes a very important skill in a survival situation. After a few days, the body needs nourishment which can be animals and insects found in the surrounding areas.

INSTRUCTOR NOTES / REMARKS

The directives outlined in CATO 11-08 *Environmental Protection and Stewardship* are to be adhered to during this training.

REFERENCES

C3-002 ISBN 0-00-653140-7 Wiseman, J. (1999). *The SAS survival handbook*. Hammersmith, London: HarperCollins Publishers.

C3-003 ISBN 1-896713-00-9 Tawrell, P. (1996). *Camping and wilderness survival: The ultimate outdoors book*. Green Valley, ON: Author.

C3-150 ISBN 978-0-8117-3292-5 Davenport, G. (2006). *Wilderness survival*. Mechanicsburg, PA: Stackpole Books.

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