ROYAL CANADIAN ARMY CADETS

GOLD STAR

INSTRUCTIONAL GUIDE

SECTION 6

EO C424.03 – EMPLOY CATTAILS

Total Time: 60 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-704/PG-001, *Gold Star 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.

The cadets will be required to choose one way to employ cattails in TP 3. Some methods will require preparation prior to conducting the lesson (eg, leaves picked and dried for weaving / making cordage, food) and some ways will require resources (eg, fires will require tinder, kindling, fuel, matches, fire safety equipment). Where required, limit or make the initial preparations for the way(s) the cadets will employ cattails. In the case of basket weaving, the cadets could select leaves to use during this lesson and construct the basket on their own time or collect leaves a day before the activity to let them dry.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TPs 1 and 2 as it introduces the cadet to the many possible ways that cattails may be employed.

A practical activity was chosen for TP 3 as it is an interactive way for the cadets to employ cattails in a safe and controlled environment.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have employed cattails.

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IMPORTANCE

It is important for cadets to know how to employ cattails as they are abundant throughout North America and have numerous uses. In a survival situation, knowing how to employ cattails could prove to be extremely beneficial. They can be eaten, woven, used for insulation, burnt, and used to treat common ailments.

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Teaching point 1 **Identify a cattail and its environment.**

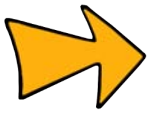
Time: 5 min Method: Interactive Lecture

A cattail (from the genus typha) is a tall, straight plant with sword-like leaves, topped with a cylindrical, sausage-like head. As a cattail matures, it turns from green to brown. In the spring, two green flower heads form at the top of the stalk—the male above and the female below. The sausage-like head is actually the female flower. The male flower grows above the female and disappears once fertilization has been completed.

A cattail can be found in marshes, ditches, wetlands, swamps and stagnant water (fresh or salt) throughout North America. When growing in thick settlements, they can grow up to nine feet tall.



The main parts of a cattail are described in Figure 3.



Finding cattails is a sure sign of nearby water. Military survival specialist and author Tom Squier once found them completely out of their environment, in a dry, sandy pine forest. A short search revealed an open manhole from an abandoned storm sewer system, full of water.



Note. From "Roger Troy Peterson Institute of Natural History: Electronic Naturalist", Cattails, Copyright 2009 by John Wiessinger. Retrieved March 24, 2009, from http://www.enaturalist.org/units/308/img/Cattailyg1.jpg

Figure 1 Cattail with Distinct Male and Female Flowers

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Note. From "Ontario Wildflowers", Ontario Wildflowers. Retrieved March 25, 2009, from http://www.wildflowersofontario.ca/cattail.jpg

Figure 2 Head of a Cattail



In Figure 3, the parts of a cattail are as follows:

- 1 = the female flower,
- 2 = the stem,
- 3 = a leaf, and
- 4 = rootstock.

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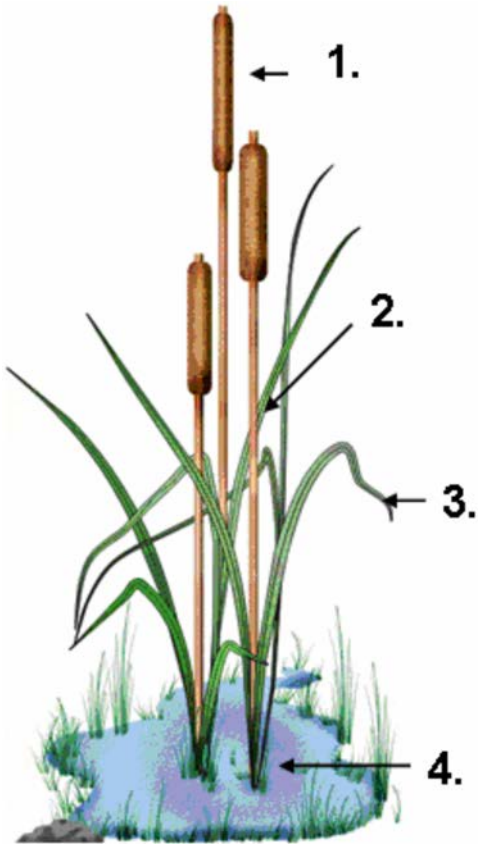

Note. From "Pymatuning Cottages" by J. Weigel and K. Danessa. Retrieved March 25, 2009, from http://www.pymatuningcottages.com/NewFiles/cat-tail.gif

Figure 3 Cattail

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. Describe a cattail.

Q2. Where are cattails found?

Q3. How tall can a cattail grow?

ANTICIPATED ANSWERS:

A1. A cattail (from the genus typha) is a tall, straight plant with sword-like leaves, topped with a cylindrical, sausage-like head.

A2. A cattail can be found in marshes, ditches, wetlands, swamps and stagnant water (fresh or briny) throughout North America.

A3. When growing in thick settlements, they can grow up to nine feet tall.

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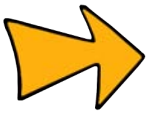
Teaching point 2 **Identify ways to employ cattails.**

Time: 15 min Method: Interactive Lecture

COOKING



Cattails have many delicious and edible parts. It is not an acquired taste, as with many wild edible plants, and will usually please fussy eaters. No matter what time of the year, there is always something edible and nutritious. It is one plant that, when found, can be depended on in a survival situation.

Edible parts of a cattail differ depending on the time of year.

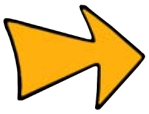
Cattails have so many edible parts that they could be considered a wilderness supermarket.

The rootstock and stem of a cattail are edible raw or boiled. The plant can be pulled up by grasping it at the base. The leaves will disconnect easily from the rootstock. Once the green leaves are pulled back, there will be a white core. This soft core is commonly referred to as "Cossack's asparagus." It is similar to a mild cucumber-like vegetable. For those who like soft vegetables, the rootstock / stem can be boiled for 15 minutes.

Rootstalks are an excellent source of starch. They can be crushed, dissolved in cold water and made into flour after draining and drying. Once thoroughly dried, this flour can be stored and used the same way as store-bought flour.

The pollen from a mature male flower can be gathered from the yellow spikes. It can then be laid in the sun to dry and mixed with water to make dough, which can be baked or cooked. It can also be mixed half-and-half with flour and used as a thickener for foods such as stew or gravy.

Green male flower heads can be husked, boiled and eaten much the same as corn.



Cattail can be used in numerous recipes, which can be found through search engines on the Internet. Some recipes that can be found include:

- cattail pollen pancakes,
- cattail pollen biscuits, and
- cattail wild rice pilaf.

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Note. From "Heatlhlines", Alaskan Flower Essences—Cattail Pollen. Retrieved March 25, 2009, from http://www.healthlines.co.uk/FLOWER_ESSENCES/Alaskan_Essences/Alas_Images1/Cattail_Pollen.jpg

Figure 4 Cattail Pollen

WEAVING

Leaves of the cattail can be collected (when green) and woven into mats for flooring or walls. They can also be woven to make baskets.

The stems can be bundled and tied together to form thick sleeping mats.



Note. From "North House Folk School", 2009, Basketry Courses, Copyright 2009 by North House Folk School. Retrieved March 25, 2009, from http://www.northhousefolkschool.com/images/Basketry/CattailBasket-035.jpg

Figure 5 Cattail Basket

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Cattails should only be woven when they are green—usually in the late summer or early fall.

To prepare cattails for weaving:

(1) Wear waterproof boots and heavy gloves.

(2) Use a long, sharp knife to cut the cattail at the base. Get a large bundle as they will shrink to about a quarter of their original size when dried.

(3) Dry the leaves under shade, out of direct sunlight. They could also be laid out on something flat. Air should be able to circulate, so they may need to be flipped occasionally.

In most weaving there are two important elements—the warp and the weft (as illustrated in Figure 6). The warp consists of all the vertical strands and the weft consists of all the horizontal strands. The warp and the weft are interwoven at right angles to each other. To weave a basket with cattails:

(1) Lay the leaves on a flat surface.

(2) Tightly weave the weft leaves in and out of the warp leaves.

(3) Once the bottom of the basket has been formed, bend the sides upward and continue tightly weaving in the leaves.

(4) If an extension is needed, overlap a leaf 5–8 cm (2–3 inches) into the leaf that requires an extension and continue weaving.

(5) Once the final weft has been woven, there should be about 5 cm (2 inches) of warp leaves sticking up (if there is more, cut the excess off).

(6) Bend the warp leaves inward and tuck them tightly between the second or third last weft. The leaves may need to be soaked in order for them to bend.

Note. This type of basket is commonly referred to as a plaited basket.

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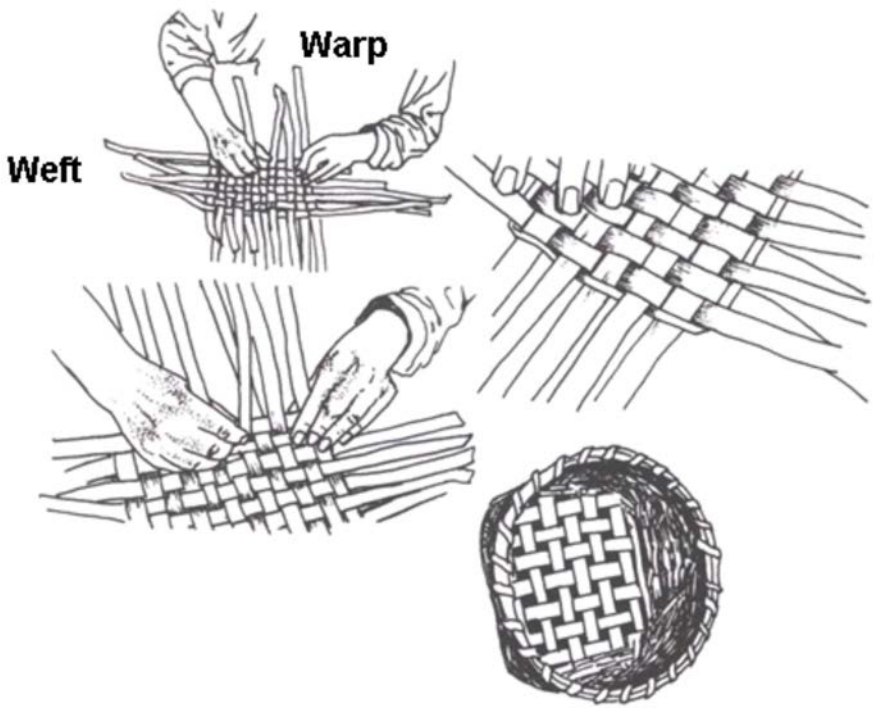

Note. From Tom Brown's Field Guide: Living With the Earth, p. 90, by T. Brown & B. Morgan, New York, NY: The Berkley Publishing Group. Copyright 1984 by Tom Brown, Jr.

Figure 6 Basket Weaving

Teaching point 3

Method: Interactive Lecture

MAKING CORDAGE

Cattail leaves can be used to make cordage. The leaves need to be cut and dried. Once dried, the leaves are split into strips, then dampened and twisted or braided into cordage.



Further information on the process for making cordage can be found in EO M424.04 (Weave Cordage).

INSULATING

Cattails can have fuzzy seeds on the outside or inside, which provide great insulation. Once the insulation has been removed from the cattail head, it can be stuffed into clothing to act as insulation in cold weather. It can also be used to make blankets, sleeping bags or pillows.

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Note. From Camping and Wilderness Survival: The Ultimate Outdoors Book (2nd ed.), (p. 331), by P. Tawrell, 2006, Lebanon, NH: Author. Copyright 2006 by Leonard Paul Tawrell.

Figure 7 Insulation Outside a Cattail—Seed Head



Note. From Bioimages, Plant Features: Fruit and Seed Dispersal, Copyright 2002 by Steve Baskauf. Retrieved March 25, 2009, from http://www.cas.vanderbilt.edu/bioimages/t/wtyla--frinfruct17156.jpg

Figure 8 Insulation Inside a Cattail

BURNING

A cattail head dipped in oil or animal fat can be used as a torch.

The fuzzy seeds from the inside / outside of a cattail can be used as tinder to start a fire.

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Note. From Camping and Wilderness Survival: The Ultimate Outdoors Book (2nd ed.), (p. 437), by P. Tawrell, 2006, Lebanon, NH: Author. Copyright 2006 by Leonard Paul Tawrell.

Figure 9 Cattail Torch

TREATING COMMON AILMENTS

Ripe cattail flowers can be mashed and used to soothe cuts and burns.

There is a sticky juice between the leaves that makes a great styptic, antiseptic and anesthetic. It will even numb an aching tooth if rubbed on the gums.

Two to three teaspoons of rootstock flour can be added to one cup of hot water to make an effective remedy to control diarrhea. The usual dosage is two cups a day.

The root contains a pasty starch that has a soothing effect on poison ivy and burns.

Boiled leaves make good external skin wash for rashes and skin irritations.

Pollen can help control bleeding when placed directly on a cut. It can also help relieve pain and can be used as a hair conditioner.

CONFIRMATION OF TEACHING POINT 2

QUESTIONS:

Q1. What parts of a cattail can be eaten?

Q2. How can a cattail insulate?

Q3. What part of a cattail makes a great styptic, antiseptic and anesthetic?

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ANTICIPATED ANSWERS:

A1. The rootstock, stem, pollen, flower head and seeds can all be eaten.

A2. The fuzzy seeds can be stuffed into clothing to act as insulation in cold weather. It can also be used to make blankets, sleeping bags or pillows.

A3. The sticky juice between the leaves.

Teaching point 3 **Have the cadets, in groups of no more than three, employ cattails.**

Time: 30 min Method: Practical Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets, in groups of no more than three, employ cattails by:

- cooking;
- weaving;
- making cordage;
- insulating;
- burning; or
- treating common ailments.

RESOURCES

- Cattails,
- Survival knife, and
- Resources will vary, as per selection.

ACTIVITY LAYOUT

- Select an area where cattails can be found.
- If fires will be used, the area must conform to fire safety regulations.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of no more than three.
2. Have the groups select a way to employ cattails.



Where basket weaving is selected, the cadets will have to collect leaves either before or during this lesson. If the leaves are being selected during this lesson, have the cadets bring their basket to the following week's parade night.

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3. Have the groups employ cattails.
4. Once completed, have the groups share their results with the other groups.

SAFETY

- Fire safety equipment shall be present if fires are being lit.
- Enforce boundaries for the activity.

CONFIRMATION OF TEACHING POINT 3

The cadets' participation in the activity will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

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

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

Cattails are abundant throughout North America and have numerous important uses. Knowing what can be done with a cattail, as well as how to do it could be extremely beneficial if ever in a survival situation.

INSTRUCTOR NOTES / REMARKS

Select an area where cattails can be found.

Permission may need to be granted before employing cattails.

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