

Album Boxes  
1250 mult.  
(12 negs)

# Bug Catchers



## 4-H Entomology project

Name \_\_\_\_\_ Age \_\_\_\_\_ Club Year 19 \_\_\_\_\_

Address \_\_\_\_\_  
(R. F. D. or Street Address) (Post Office)

Community or School \_\_\_\_\_ County \_\_\_\_\_

Name of Club \_\_\_\_\_ Club No. \_\_\_\_\_

Club Leader \_\_\_\_\_  
(Address)

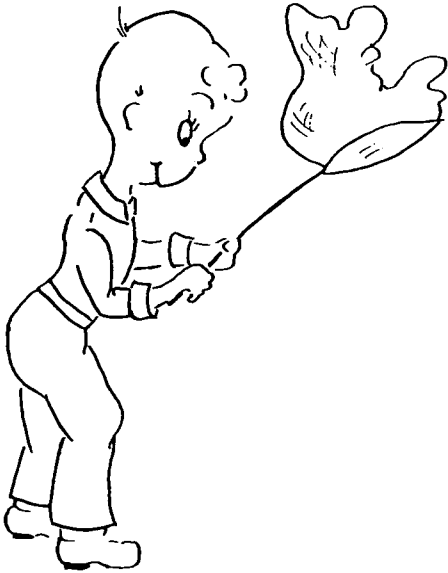
FEDERAL COOPERATIVE EXTENSION SERVICE / OREGON STATE COLLEGE / CORVALLIS

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# BUG CATCHERS

## 4-H Entomology | Project

### WHY Be A 4-H Bug Catcher

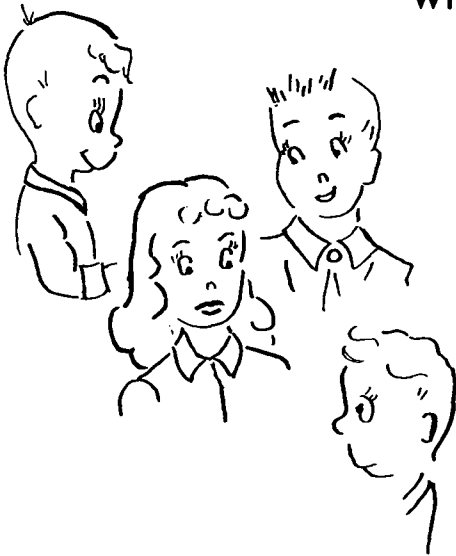


#### Purpose

This 4-H Entomology\* Project provides an opportunity for you:

1. To learn about insects.
2. To go on field trips.
3. To make a collection of insects.
4. To learn how to control certain harmful insects.
5. To belong to a 4-H Club with other boys and girls.
6. And to have a lot of fun while you are doing these things.

### WHO May Be A 4-H Bug Catcher



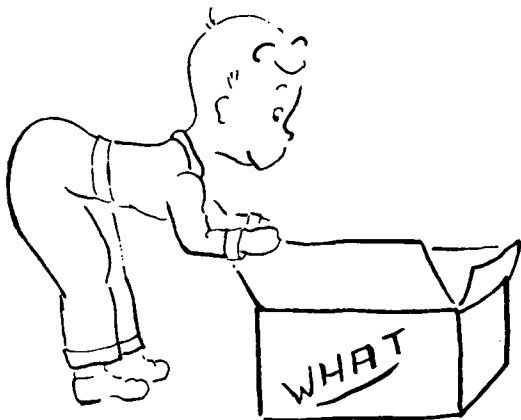
#### Membership

1. Any boy or girl who is:
  - a. Nine years old before January 1.
  - b. Interested in insects.
  - c. Willing to do the requirements listed under "WHAT" Does a 4-H Bug Catcher Do?
2. This project is for town or country, boys or girls.
3. No special equipment that cannot be easily made or obtained is needed.
4. This project may be repeated until you are twelve years old. If you take this project again, you can collect more insects, learn more about them, do more electives\* and make a better exhibit.

#### \*New Words

Entomology - the study of insects.

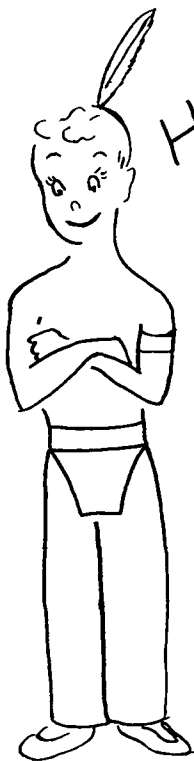
elective - something you choose to do because you want to.



## Does A 4-H Bug Catcher Do

### Requirements

1. Undertake the control of one insect (page 5).
2. Make a collection of insects (page 6).
3. Do five or more of the "Electives" on pages 8 and 9.
4. Complete this project book and write a story of your 4-H Club Work (page 12).
5. Make an exhibit (page 10).
6. Turn in your completed project book to your 4-H Club leader or county club agent at the end of the club year, by October 31.



HOW

## To Be A Good 4-H Bug Catcher

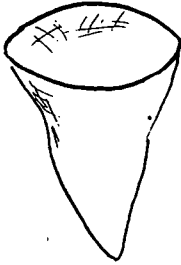
### Instructions

1. Join a 4-H Entomology Club, if possible.
2. Attend club meetings regularly. Be on time.
3. Do your work promptly and neatly.
4. Use a pencil to fill out this project book.
5. Use your insect manual. It will tell you many things.
6. Discuss this project with your father and mother. Ask them to help you.
7. Always do your share, and a little more.
8. Be courteous to your fellow club members, your club leader, your parents and others.
9. Always do your best.

## Equipment and Materials

(See pages 7 to 10 in your Insect Manual)

### Net

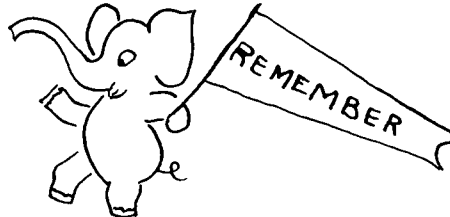
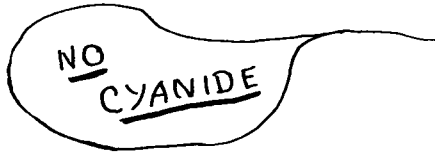


You will find complete instructions for making a net on page 7 of your Insect Manual.

### Killing Jar



Page 8 in your Insect Manual will show you how to make a killing jar---- but Club members should not use cyanide to make their killing jars. Instead, we recommend they use carbon tetrachloride or chloroform. Place a thin layer (about 1/2 inch) of shredded rubber or a foam rubber pad in the bottom of the jar. Saturate this with carbon tetrachloride or chloroform then cover with a cardboard disc or tightly crumpled paper or cellulose cotton. You can get shredded rubber from places where tires are recapped. Alka-Seltzer bottles make good killing jars for small insects. Use a larger jar for butterflies.



### Mounting



All insects exhibited should be correctly mounted. The locality where the insect was collected, the date collected and the collector's name should be recorded in the project book. This should be recorded on page 6, "Record of Ten Required Insects Collected."

Generally the collection data\* are placed on a small label with the insect as shown and explained on page 9 of your 4-H Club Insect Manual. We suggest you use numbers on the small labels. For example if your order Orthoptera is represented by a grasshopper, write "1" on a small label to agree with No. 1 on page 6 of the project book.

Mounting pins are available from your county extension agent (4-H).

#### \*New Words

data - information.

Insect



Control

Each "Bug Catcher" shall undertake the control of one insect.

1. Name of insect to be controlled \_\_\_\_\_
2. What does the insect eat? \_\_\_\_\_
3. How is this insect harmful? \_\_\_\_\_
4. At what stage in the life cycle is the insect harmful? \_\_\_\_\_
5. What type of mouthparts does the insect have? \_\_\_\_\_  
                   chewing \_\_\_\_\_                   sucking \_\_\_\_\_
6. At what stage in life cycle was control directed? egg \_\_\_\_\_ larva \_\_\_\_\_  
                   pupa \_\_\_\_\_                   adult \_\_\_\_\_                   nymph \_\_\_\_\_
7. Tell briefly what you did to control this insect and what the results were.

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Date \_\_\_\_\_

Parent's or leader's signature \_\_\_\_\_

## Collecting Insects

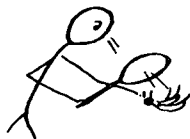
Each "Bug Catcher" must catch, mount, \* identify, \* and record 10 insects.



Catch



Mount



Identify



Record




At least one specimen\* must be from each of 10 different orders\*--of insects. Seven of the ten must be of the orders listed below. The other three may be of your choice. Record additional insects caught on page 7.

### Record of Ten Required Insects Collected

Order	Spec. no.	Common name (if known)	Date caught	Locality
<b>ORTHOPTERA</b> (grass-hoppers and others) 1.				
<b>HEMIPTERA</b> (true bugs) 2.				
<b>HOMOPTERA</b> (scales, aphids, leafhoppers, and cicades) 3.				
<b>COLEOPTERA</b> (beetles) 4.				

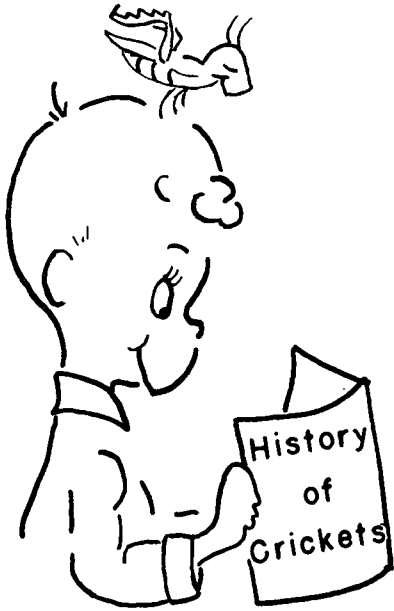
**\*New words**

- mount - to prepare for display
- specimen - an individual or a sample (one insect)
- order - a group of similar (insects)
- identify - to tell the kind

Order	Spec. no.	Common name (if known)	Date caught	Locality
<b>LEPIDOPTERA</b> (butterflies and moths) 				
<b>DIPTERA</b> (flies) 				
<b>HYMENOPTERA</b> (wasps, bees and others) 				
8.				
9.				
10.				

Choose three of these orders to complete your 10 orders:

- |   |   |
|---|---|
| <b>NEUROPTERA</b> (lacewings, others)<br><b>PLECOPTERA</b> (stonefly)<br><b>ODONATA</b> (dragonflies, damsel flies)<br><b>EPHEMERIDA</b> (mayflies)<br><b>DERMAPTERA</b> (earwigs)<br><b>SIPHANOPTERA</b> (fleas) | <b>ANOPLURA</b> (hog lice)<br><b>MALLOPHAGA</b> (bird lice)<br><b>ISOPTERA</b> (termites)<br><b>THYSANURA</b> (silverfish)<br><b>COLLEMBOLA</b> (springtails) |
|---|---|



### Elective

"BUG CATCHERS" are required to do five of these. You will want to do as many more as you can. You may think of other things you would like to do. Add them to your list.

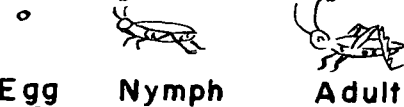
(Have your parent or leader sign opposite each elective you have satisfactorily completed.)

          Date                          Signature          

1. Tell three different ways insects are different from other animals.
2. Name five important parts of an insect.
3. Tell your club about some insect, how to identify it and how it lives.
4. Make a killing jar.
5. Have a meeting of your club at your home.
6. Lead your club in a song, yell or game.
7. Help plan a field trip.
8. Learn the life history of an insect with a complete metamorphosis. \*



9. Learn the life history of an insect with an incomplete metamorphosis.



10. Make an insect net.

\*New Word

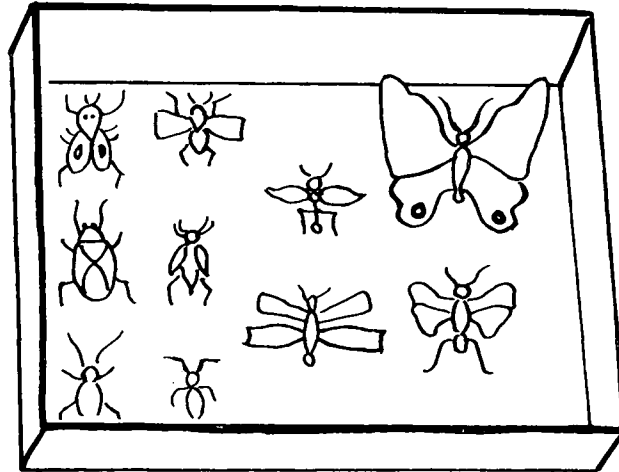
metamorphosis - change of form.



Electives (continued)

	<u>Date</u>	<u>Signature</u>
11. Help prepare an exhibit to put in a store window or show at some meeting.	_____	_____
12. Name five harmful insects and tell what damage they do.	_____	_____
13. Name three beneficial insects and tell what good they do.	_____	_____
14. Lead your club in the pledge of allegiance and the 4-H Club pledge.	_____	_____
15. _____ _____ _____	_____	_____
16. _____ _____ _____	_____	_____
17. _____ _____ _____	_____	_____
18. _____ _____ _____	_____	_____
19. _____ _____ _____	_____	_____
20. _____ _____ _____	_____	_____

Exhibit



Each "4-H Bug Catcher" shall make an exhibit at a community, city, or county fair and you may have your exhibit selected to go to the state fair.

Your exhibit will include this completed record book with your 4-H story and the ten required insects representing ten different orders, properly mounted and identified.

A cigar box or other box of similar size and shape will be satisfactory. A separate sheet to place in the bottom of your exhibit box is provided with this project book. Pin your insects in the correct sections. (A piece of fibreboard in the bottom of your box will make it easier to fasten your insects.) Or you may fasten the sheet to the underside of the lid and identify each insect with the correct number.

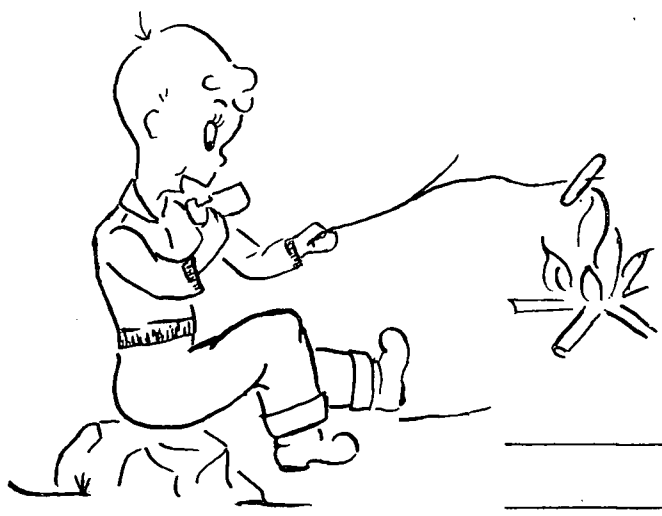
Be sure to fill out the next page completely before you put it in your box.

BASIS FOR SCORING EXHIBIT

Ten ( <u>only</u> ) mounted insects representing ten orders, including the seven required orders -----	50
Condition of mounted insects	20
Correctly identified and labeled	20
Neatness of exhibit	10
Record book -----	50
Collection record	10
Record of electives done	10
Insect control record	10
Story of field trips	10
4-H Club Story	10

### My Story of Field Trips

(Give a brief account of things you saw and did on each of your field trips).



Trip 1 Date \_\_\_\_\_

Locality \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Trip 2 Date \_\_\_\_\_ Locality \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Trip 3 Date \_\_\_\_\_ Locality \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Trip 4 Date \_\_\_\_\_ Locality \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Trip 5 Date \_\_\_\_\_ Locality \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### My 4-H Club Story

Your story is a required part of your record book. In writing your story tell about things that happened in your Club Work that are not already in this book. You might tell about your Club and some of the things you did or learned. You may want to write a few lines about things when they happen -- diary form.

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Pictures and Clippings

## Oregon 4-H Entomology Projects

### Bug Catchers: 4-H Entomology I (for boys and girls 9 to 11 years)

- \* collect at least one insect from 10 different orders
- \* undertake the control of one insect
- \* do five or more electives

### Know Your Bugs: 4-H Entomology II

- \* collect 25 or more insects representing at least 12 different orders
- \* make a life history mount of an insect
- \* do ten or more electives
- \* undertake the control of an insect

### Insect Life: 4-H Entomology III

- \* collect at least 50 species of insects of economic importance
- \* conduct a life history study of at least one insect
- \* prepare mounts of plant material showing 10 types of insect injury
- \* control study of one insect pest
- \* conduct a survey on the time of emergence or degree of infestation of an insect pest

### Junior Entomologist: 4-H Entomology IV (for boys and girls 14 years and older)

- \* collect at least 25 species in each of two groups of insects such as moths and butterflies, aquatic insects, parasites and predators, and Oregon economic pests
- \* take part in a public demonstration and write a report for a project book
- \* prepare a list of 10 important insect pests of Oregon
- \* do at least 3 special activities
- \* draw and label insect parts
- \* make an insect survey
- \* do at least 3 elective projects

### 4-H CLUB PLEDGE

I Pledge --

MY HEAD to clearer thinking,  
 MY HEART to greater loyalty,  
 MY HANDS to larger service, and  
 MY HEALTH to better living, for  
 My club, my community, and my  
 country.

4-H CLUB MOTTO

TO MAKE THE BEST BETTER

# RECORD OF MY 4-H ACTIVITIES

Date record started \_\_\_\_\_

No. of meetings my club held \_\_\_\_\_ No. I attended \_\_\_\_\_

Club office I held \_\_\_\_\_

Tours or camps I attended \_\_\_\_\_

\_\_\_\_\_

Demonstrations I gave \_\_\_\_\_

\_\_\_\_\_

Contests I entered \_\_\_\_\_

\_\_\_\_\_

Exhibits I made \_\_\_\_\_

\_\_\_\_\_

## Parent's Statement

Please tell briefly how 4-H Club Work has helped your son or daughter

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Parent's signature \_\_\_\_\_

## Leader's Statement

\_\_\_\_\_ has satisfactorily completed the requirements

(Club member's name)

of this project.

Leader's signature \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_