

A. J. R. Reel  
12/09/04

This report is required by law (7 USC 2143) Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150

Set reverse side for additional information

Interagency Report Control No. 0180 BOA-AN  
T. THOMPSON

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE  <b>ANNUAL REPORT OF RESEARCH FACILITY</b> (TYPE OR PRINT)	1. REGISTRATION NO. 84-F-0001	FORM APPROVED OMB NO. 0578-0036
	2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA includes Zip Code) USDA, APHIS, WS, NWRC 4101 LAPORTE AVE. FT. COLLINS, CO 80521	
3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation or held for these purposes. Attach additional sheets if necessary.)  FACILITY LOCATIONS (Street)		

**COPY FOR YOUR INFORMATION**

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used	E. Number of animals upon which teaching experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in those animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO OF ANIMALS (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits	24	34	0	0	34
9. Non-human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
Goats	21	23	0	0	23
13 Other Animals					
Coyotes	28	77	16	35	128
Norway Rats	0	7	0	0	7
Deer Mice	18	24	0	0	24

- ASSURANCE STATEMENTS**
- 1) Professionally acceptable standards governing the care, treatment, and use of animals including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility
  - 2) Each principal investigator has considered alternatives to painful procedures.
  - 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report, in addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
  - 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

<b>CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL</b> (Chief Executive Officer or Legally Responsible Institutional Official) I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).		
SIGNATURE OF CEO OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF CEO OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED
		10/29/04

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE  <b>CONTINUATION SHEET FOR ANNUAL REPORT                  OF RESEARCH FACILITY                  (TYPE OR PRINT)</b>	1. REGISTRATION NO. <p style="text-align: center; font-size: 1.2em;">84-F-0001</p>	FORM APPROVED OMB NO. 0578-0036
2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA include Zip Code) <p style="text-align: center;">                     USDA, APHIS, WS, NWRC                      4101 LAPORTE AVE.                      FT. COLLINS, CO 80521                 </p>		

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REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations  12. & OR 13. Other (List by species)	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in those animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO OF ANIMALS (Cols. C - D + E)
Ground Squirrels	0	30	0	0	30
Fox Squirrels	0	13	0	0	13
Skunks	0	33	0	0	33
Raccoons	0	67	0	0	67
Mountain Beaver	19	32	0	5	37
Stream Beaver	19	22	0	0	22
White Tail Deer	13	15	0	0	15
Black Tail Deer	90	57	0	0	57
Voles	60	0	0	0	0
Porcupine	3	0	0	0	0
Pocket Gophers	5	0	0	0	0
Mongoose	0	6	0	0	6

**ASSURANCE STATEMENTS**

- 1) Professionally acceptable standards governing the care, treatment, and use of animals including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

<b>CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL</b> (Chief Executive Officer or Legally Responsible Institutional Official) I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).		
SIGNATURE OF CEO OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF CEO OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED
		10/28/04

## Column E Explanation

1. Registration Number:
2. Number of animals used in this study: 35
3. Species (common name) of animals used in study: *Canis latrans* (coyote)
4. Explain procedure producing pain and/or distress:

Animals were fed or gavaged with suspensions containing mixtures of caffeine and theobromine to evaluate the potential of these substances as selective predacides. Dose vs. Response (percent mortality) curves for three mixtures (13:1 (theo:caf), 5:1 (theo:caf), 100% theo) are being constructed from the toxicity testing data.

5. Provide justification why pain or distress could not be relieved. State method or means used to determine that pain and/or distress relief would interfere with test results:

QA-1064 "Development of a Natural, Safe and Effective Plant Based Predator Toxicant" was designed to evaluate the potential of methylxanthines (theobromine, caffeine) as a selective predator toxicant. With experimental toxicants, it is difficult to predict pain or distress experienced by the animals dosed. Administration of other substances (analgesics, etc.) prior to symptoms of intoxication might confound the pharmacological action of the methylxanthine test substances and lead to erroneous conclusions and ideally would be avoided until necessary. Although listed as a Category E study, the protocol permitted the attending veterinarian to administer analgesics, anesthetics and/or euthanasia in instances where the animals were determined to be in pain or distress.

6. What, if any federal regulations require this procedure?

Agency: none      CFR: none

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NOV - 4 2004

Column E explanation for QA 1118

Registration Number: 84-F-0001

Number of animals used: 5

Species (common name): Mountain Beaver

Several attempts have been made to reduce damage by decreasing mountain beaver (*Aplodontia rufa*) populations through the use of conibear-traps. This type of lethal control is becoming politically less popular, as indicated by the passage of Initiative 713 in 2000 (RCW 77.15 section 3) which banned the use of all body gripping traps in the state of Washington. Therefore, alternative tools to conibear traps for reducing mountain beaver populations may be desirable. At present there are no toxicant registered for use to control mountain beaver. A previous study (QA- 885) showed that chlorophacinone was the only underground bait that was 100% effective and readily consumed by mountain beaver. LiphaTech currently holds a chlorophacinone label in the form of paraffinized pellets. These pellets are delivered in bags to prevent weather damage. Another recent study (QA 1072) conducted in the Olympia Field Station habitat pens, showed that mountain beaver cached bags. Using LiphaTech's delivery system might reduce primary hazards as mountain beaver can cache baits inside their nests.

Ten mountain beaver served as subjects. Animals were given a minimum of 2-4 weeks to adapt to pen and burrow system. After adaptation period was over, the bait was placed in a trash can (76 l) in each of the pens. Each container has a 10cm diameter hole at the bottom to allow access and to mimic the rodent's natural burrow system. Five of the animals received a 12 oz bag of 0.005% chlorophacinone, while the other 5 animals were used as control and given no bait only bags with plain oats. Bait formulation for each treatment was presented as paraffinized pellets. The status of animals was monitored at 2-hour intervals for the first 6 hours, then again every 24 hour for the next 28 days. As administering sedatives or analgesics could affect the toxicity of the chlorophacinone baits, no drugs were administered until acute toxicity was imminent. Animals were frequently monitored to minimize any potential suffering until the completion of the study. Any animal that demonstrated severe symptoms (e.g., convulsions, comatose) of poisoning were euthanatized immediately.

This is a preliminary study to determine if the LiphaTech product might be applicable to a field application. EPA regulations require that for final registration of a product that 70% efficacy with death as an end point be demonstrated. Since this data will support registration we therefore followed EPA regulations with a few modifications to account for a different species ( Standard rat anticoagulant place pack dry bait laboratory methods, Guideline #1.217).

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October 25, 2004

NWRC, FY 2004  
Aphis Form 7023, attch #1

Locations where animals in this report were used and/or housed:

USDA, APHIS, WS, NWRC  
4101 LaPorte Avenue  
Fort Collins, CO 80521

USDA, APHIS, WS, NWRC  
Olympia Field Station  
9730-B Lathrop Industrial Drive SW  
Olympia, WA 98512

USDA, APHIS, WS, NWRC  
Logan Field Station  
4200 S 600 E  
Cache County Road  
Millville, UT 84326

USDA, APHIS, WS, NWRC  
Hawaii Field Station  
PO Box 10880  
Hilo, HI 96721

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United States Department of Agriculture  
Animal and Plant Health Inspection Service

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