

Urban Vertebrate Pest Management - ENY 3228
Graduate Survey of Urban Vertebrate Pest Management - ENY5332
(Formerly ENY 5228)
Spring 2014

This is a companion course designed to complement ENY-3225, Principles of Urban Pest Management. It covers vertebrate pests and their control in the Urban Environment, principally structural and landscape pests. Much of the information is also applicable to nursery settings. (2 credits)

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Prerequisites: None, however ENY-3222, Biology and ID of Urban Pests, and ENY-3225, Principles of Urban Pest Management are recommended companion courses.

Student Learning Objectives

Students will be able to identify the common species of wildlife, commensal birds and rodents, and invasive vertebrate species that can cause nuisance situations in residential, suburban, commercial, and rural interface properties.

Students will learn some of the basic natural history of these common species, such as food habits, nesting/roosting /denning habits, characteristic home range size, and reproductive season.

They will be able to recognize the likely species causing identifiable types of damage using tracks, droppings, marks, structural damage, and other signs.

Students will be able to use or recommend legal control options (lethal and nonlethal) to manage the property or livestock damage caused by nuisance vertebrate species.

Topics to be covered:

Commensal rodents and their control.

- Lecture 1 Biology and Natural History of Exotic Commensal (*Rattus* and *Mus*) and Structure-invading Native Rodents.
- Lecture 2 Urban Scatology – Identification of animal droppings and sign.
- Lecture 3 Rodent IPM –
 - Rodent proofing / exclusion techniques.
 - Rodenticide and trapping methods.
 - Commercial rodent control.
 - Household/ Residential rodent control.

- Lecture 4 Rodenticides
- Lecture 5 Health risks associated with rodents

Structure roosting bats.

- Lecture 6 Biology and Natural History of structure roosting bats (Vespertilionidae and Molossidae).
- Lecture 7 Bats of Florida
- Lecture 8 Bat Exclusion techniques.
- Lecture 9 Health risks associated with Mammals.

Structure Roosting and Damaging Birds

- Lecture 10 Biology and ID of native and exotic structure nesting birds. Exotic pest birds – Pigeons, English sparrows, European Starlings. Native birds – Chimney swifts, swallows, Carolina wrens. Woodpeckers damaging structures. Vultures roosting on buildings. Parasites associated with birds – mites, pigeon flies, etc.
- Lecture 11 Exclusion techniques for birds. Avicide use for exotic bird control.

Videotape Pyrotechnics for bird management field demonstration at Ft. Lauderdale REC.

Structure Invading Wildlife

- Lecture 12 Reptiles and Amphibians in Structures.
- Lecture 13 Biology and natural history of Structure-invading Wildlife. Raccoons, Fox, Skunks, Opossums and Squirrels, . Exclusion techniques.

Landscape damaging wildlife.

- Lecture 14 Hole-diggers – moles, gophers, armadillos, raccoons, tortoises, etc. Armadillos and termites. Feral Swine damage to crops, landscapes, and native habitats.
- Lecture 15 Deer and Rabbits browsing foliage and woody fruit and ornamentals. Damage caused by exotic parrots. Grazing by peafowl and waterfowl.

Practical Identification Notebook – Identification of droppings, specimens, damage, and control methods and materials (labels and other pertinent literature). Because it is not feasible to have a practical ID exam for all our distant education students, each student will produce an Identification Notebook. If you take the pictures yourself with a card in the frame with identification, your name and ENY 3228 /5332, it is worth 1 point. If you do drawings that show useful characters, signs, and control methods, you will get 1 point for each drawing. If you use pictures from magazines or the Internet, they must have a complete citation and are only worth 0.5 points. Grades for the notebooks are based on the highest score for ENY 3228 or ENY5332. 90% of the top score is an A, 89-80% is a B, etc. Undergraduates will be judged against Undergraduates and Graduate students will be judged against their peers.

Think of the notebook as your personal field guide. You can take your own pictures (a preferred choice) or draw your own diagrams (a preferred choice) of tracks, damage, animals, and droppings. You can use pictures from the internet as long as they are cited fully as to the source. Figure titles are placed under each picture or drawing. I did not specify a number of entries because it depends on the quality rather than quantity. Twenty excellent species accounts are better than fifty incomplete or shoddy accounts. If your fellow students include 30-35 species accounts and you only do 10, your grade will reflect that. Two hours each week during the semester should allow you to produce a useful and educational personal field guide.

It is due on Friday, April 25, 2014

Vertebrate Pest Control Management Plan.

ENY 5332 Graduate students will deliver a management plan for a selected pest situation including, statement of the situation, a diagram of the site, a materials list, budget for labor and materials, timetable, and justification for your choice of control options and your rationale for rejecting other options. This latter point is perhaps the most important. It is due on Friday, April 25, 2014.

ENY 3228 Undergraduate students will deliver a management plan for a selected pest situation including, statement of the situation, a diagram of the site, a materials list, and timetable. Due April 25, 2014 at Ft. Lauderdale, FL

Open-book Final Examination

You will receive the Open-book Final Examination on Friday, March 14, 2013 via e-mail. It must be turned in by 5:00 pm, Friday, April 25, 2014 to Dr. Kern at the Ft. Lauderdale Research & Education Center, 3205 College Ave., Davie, FL 33314, e-mailed to whk@ufl.edu, or FAXED to 954-475-4125.

These are the performance expectations for a take-home, open-book examination. All questions are to be answered fully and completely. Outside resources are expected to be used and citations given in order to fully answer each question. Since a dictionary is allowed, misspelled terms and names are not acceptable. Properly labeled drawings often are very helpful; you may not copy figures or tables directly from the WEB, class presentations, or scanned from the text. If you find figures or tables that help you answer questions **you must re-draw them**. Budget one to four hours per question for research and writing. No question should require more than six hours.

Suggested Text Books:

Corrigan, Robert. 2002. Rodent Control: A practical guide for the pest management professional. PCT

Additional references will be drawn from the Prevention and Control of Wildlife Damage Manual produced by the Cooperative Extension Service of the University of Nebraska, the Great Plains Agricultural Council, and the USDA.

This publication is available on the web at
<http://wildlifedamage.unl.edu/handbook/handbook/> .

Additional Resources:

Adams, Clark E. and Kieran J. Lindsey. 2009. Urban Wildlife Management, Second Edition. CRC Press. 432 pp. ISBN-10: 1439804605
ISBN-13: 978-1439804605

Conover, Michael R. 2001. Resolving Human-Wildlife Conflicts: The Science of Wildlife Damage Management. CRC Press. 440 pp. ISBN-10: 156670538X
ISBN-13: 978-1566705387

Vantassel, S. M. 2012. The Wildlife Damage Inspection Handbook; A guide to identifying vertebrate damage to structures, landscapes, and livestock. 3rd Edition. Wildlife Control Consultant, Lincoln, Nebraska. 180 pp. ISBN 978-0-9668582-5-9.

Grade Determination:

There are three requirements; ID Notebook, a Management Plan, and Final Exam.

Practical Identification Notebook of local pest or nuisance species
35 %

Urban Vertebrate Pest Control Management Plan
15 %

Open-book Final Examination Due in Ft. Lauderdale on April 26, 2013. 50 %

Grading scale:

A = 93-100 %	A- = 90-92 %	B+ = 87-89 %	B = 83-86 %
B- = 80-82 %	C+ = 77-79 %	C = 73-76 %	C- = 70-72 %
D+ = 67-69 %	D = 63-66 %	D- = 60-62 %	E < 60 %

Academic Honesty: As a result of completing the registration form at the University of Florida, every student has signed the following statement: I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.

We, the members of the University of Florida, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

Plagiarism

Plagiarism is a serious problem in academia today, especially with the ease of obtaining information from the World Wide Web. Plagiarism is defined as representing the words or ideas of another person as one's own, without attribution to the source. All words and ideas must be attributed to a source unless they are considered common knowledge (i.e., widely known by many people and found in many different sources). There are many kinds of plagiarism, as you will read on the Guide to Plagiarism website referenced below.

Plagiarism is unethical, unacceptable in science, and prohibited by the UF Student Honor Code (<http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php>). The consequences for plagiarism while at the University of Florida range from receiving a grade of zero for the plagiarized assignment or a failing grade for the course, to, for repeated offenses, expulsion from the university. Plagiarism after graduate training calls into question one's scientific integrity and can lead to banning of publication in journals and the loss of jobs/careers.

In some countries, it is an acceptable practice to write in a manner that faculty members at the University of Florida consider to be plagiarism. Students studying in our university and with plans to publish their research in the English language need to know what plagiarism is and how to avoid it.

Students who plagiarize will be caught and consequences will be applied. Many faculty in our department check all written assignments using an anti-plagiarism software called Turnitin® (<http://www.at.ufl.edu/~turnitin/about.html>).

For further information and examples of plagiarism, I strongly suggest that you please read the George Smathers' Library Guide to Plagiarism at http://www.uflib.ufl.edu/msl/services/tutorials/plagiarism/student_intro.html

Please understand that our purpose in bringing to your attention the matter of plagiarism is to help train you to be ethical scientists, not to impugn your character.

Copyrighted Materials and Software Use: All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are against University policies and rules, disciplinary action will be taken, as appropriate.

Accommodations for Students with Disabilities: Students requesting classroom accommodation must first register with the Dean of Students' Office. The Dean of Students will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

UF Counseling Services: Resources are available on campus for students having personal problems or lacking clear career and academic goals that interfere with their academic performance. These resources include:

1. University Counseling Center, 302 Peabody Hall, (352) 392-1575, personal and career counseling
2. Student Mental Health, Student Health Care Center, (352) 392-1171, personal counseling.
3. Sexual Assault Recovery Services, Student Health Care Center, (352) 392-1161, sexual counseling.
4. Career Resource Center, Reitz Union, (352) 392-1601, career development assistance and counseling.