Term Information

Effective Term	Summer 2013

General Information

Course Bulletin Listing/Subject Area	Evol, Ecology & Organismal Bio
Fiscal Unit/Academic Org	Evolution, Ecology & Org Bio - D0390
College/Academic Group	Arts and Sciences
Level/Career	Graduate
Course Number/Catalog	7891
Course Title	Medical-Veterinary Acarology
Transcript Abbreviation	Med-Vet Acarol
Course Description	The mites associated with humans, domestic animals, and wildlife, stressing their ecology and behavior in relation to transmisson of viral, rickettsial, bacterial, and protozoan diseases.
Semester Credit Hours/Units	Fixed: 4

Offering Information

Length Of Course	12 Week (May + Summer)
Flexibly Scheduled Course	Always
Does any section of this course have a distance education component?	No
Grading Basis	Letter Grade
Repeatable	Yes
Allow Multiple Enrollments in Term	No
Max Credit Hours/Units Allowed	8
Max Completions Allowed	2
Course Components	Workshop
Grade Roster Component	Workshop
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites	Permission of instructor
Exclusions	

Cross-Listings

Cross-Listings	

Subject/CIP Code

Subject/CIP Code	26.0701
Subsidy Level	Doctoral Course
Intended Rank	Masters, Doctoral, Professional

Quarters to Semesters

Quarters to Semesters	Modified or re-envisioned course that includes substantial parts of the content and learning goals of one or more quarter courses
List the current courses by number and title that are to be subsumed into proposed course	ENT 870

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Identify mites associated with vertebrates
- Understand the types of direct and/or indirect (through vectorial abilities) damage caused by vertebrate associated mites
- Know the internal anatomy of ticks in context of disease transmission
- Understand the epidemiology and control of dust mites
- Know the basic ecology and biology of vertebrate associated mites

Content Topic List

- Quick identification of vertebrate associated mites to major group, and know how to move on from that to more specific identification
- Know which mite taxa to expect in which habitats and where on- or off-host to find specific mite taxa or instars
- Figure out which mite taxon may be involved in what type of damage / disease
- Basic elements of tick internal anatomy, including salivary and coxal glands and digestive tract morphology
- Discussion of risks associated with dust mites and practical ways to control them

Attachments

- EEOB 7891 MedVet syllabus.docx

(Syllabus. Owner: Lanno,Roman P.)

Comments

- This course is part of the Summer Acarology Program that was part of the Entomology curriculum but has been transferred to EEOB since Dr. Hans Klompen in now in EEOB. Will be offered as a two-week workshop, Lecture – 3.5 h/day/12 days; Lab – 6.5 h/day/12 days.

  I'm forced to select at least one course length, none of which is appropriate for this course. I selected May+summer since that's when it will be offered. *(by Lanno,Roman P. on 01/17/2013 01:57 PM)*
- Please provide a sample syllabus. The combination of 14, 7, 3.5 wk and flexibly scheduled seems excessive. Please justify. *(by Hadad,Christopher Martin on 01/10/2013 10:47 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Lanno,Roman P.	01/09/2013 03:40 PM	Submitted for Approval
Approved	Lanno,Roman P.	01/09/2013 03:49 PM	Unit Approval
Revision Requested	Hadad,Christopher Martin	01/10/2013 10:47 PM	College Approval
Submitted	Lanno,Roman P.	01/17/2013 01:57 PM	Submitted for Approval
Approved	Lanno,Roman P.	01/17/2013 02:01 PM	Unit Approval
Approved	Hadad,Christopher Martin	01/18/2013 05:20 PM	College Approval
Pending Approval	Nolen,Dawn Jenkins,Mary Ellen Bigler Vankeerbergen,Bernadette Chantal Hogle,Danielle Nicole Hanlin,Deborah Kay	01/18/2013 05:20 PM	ASCCAO Approval

EEOB 7891
MEDICAL VETERINARY ACAROLOGY
CREDIT HOURS: 4

NATURE OF PROGRAM AND FUNDING:

Medical Veterinary Acarology is part of the Acarology Summer Program, which has been in continued existence since 1951. The program offers highly intensive 1-3 week courses aimed at teaching mite taxonomy and systematics with an emphasis on learning to identify the various groups of mites. Medical Veterinary Acarology aims at mites of agricultutral importance, including ticks and dust mites, while other courses concentrate on acarines with importance in agriculture (Agricultural Acarology; EEOB 7890), and in soil and litter habitats (Soil Acarology; EEOB 7892). The three advanced level courses at the program are team taught by guest lecturers recognized as specialists in their fields, under supervision of OSU graduate faculty. Participants include professionals, postdocs, and graduate students coming from all over the world (foreign enrollment about 25%).

The summer program is designed to be largely funded by course fees paid by non-OSU participants (salary for OSU faculty during the Summer Program is not paid by the program). This covers basic materials and travel fees for the various lecturers. No new OSU funding is requested.

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INSTRUCTIONAL STAFF:

Co-organizers and lecturers:

Hans Klompen	klompen.1@osu.edu	614 292 7180
Glen Needham	needham.1@osu.edu	

Guest lecturers (for 2012, composition varies over time)

Lorenza Beati	Georgia Southern University & U.S. National Tick Collection, Statesboro, GA
Ashley Dowling	University of Arkansas, Fayetteville, AR
Daryll Kelley	Ohio State University
Barry OConnor	University of Michigan, Ann Arbor, MI
Cal Welbourn	Florida State Collection of Arthropods, Gainesville, FL

GRA

MEETING TIMES: MTWRF 8:30am - 8:00pm, Sa 8:30am - 5pm, Su 1:00pm - 8:00pm

FORMAT: : Three 1-1.5 hr lectures/day (morning, afternoon, evening), morning and afternoon lectures followed by 2-3 hr lab periods. Saturday evening and Sunday morning: no classes. Starting on Monday, continuing for 12 days ending on Friday (5:00pm). Courses continue through any holidays (e.g. July 4th).

GOALS AND OBJECTIVES: Primarily, students will learn to identify mites associated with vertebrates In addition students will gain a good understanding of the basic ecology and

biology of vertebrate associated mites, gaining the ability to predict what mites can be found in given habitats. Students will understand the types of direct and indirect (through vectorial capacities) damage caused by vertebrate associated mites, allowing them to analyze what mite taxon may be involved in what type of damage / disease. Students will know the basic anatomy of ticks including implications for disease transmission. Finally students will understand, and be able to coherently discuss, epidemiology and control of house dust mites.

GRADING AND EXAMS: Based on participation, results of quizzes during the week, and results for a comprehensive final exam (optional for non-OSU participants). Total 150 points, 5 unscheduled quizzes (10 points each), final exam (60 points), participation 40 points. Quizzes and the final exam will consist of unknown specimens (requiring identification to family and/or instar), with one or more follow-up questions. The exam will be scheduled about a week after the workshop. Final letter grades will be assigned according to OSU norm (A: 93-100%, A-: 90-92.9 %, B+: 87-89.9 %, etc.).

COURSE MATERIALS: Specific references (for different subsections of the course) will be provided. This includes most taxonomic keys used (printed) and pdf's of supporting material. All this is part of the course pack.

General references (not required, available in classroom):

Coons, L. B. & Alberti, G. (1998) *Chelicerata Arthropoda. Volume 8B.* (Vol. 8). Microscopic anatomy of invertebrates, New York, NY: John Wiley & Sons, Inc.

Gerson, U., Smiley, R. L. & Ochoa, R. (2003) *Mites (Acari) for pest control*. Oxford: Blackwell Science, pp. xv, 539 pp.

Krantz, G. W. & Walter, D. E. (2009) A manual of acarology. *In*. Texas Tech University Press, Lubbock, TX.

Walter, D. E. & Proctor, H. C. (1999) *Mites: Ecology, Evolution and Behaviour*. New York: CABI Publishing, p. 322.

ABSENCE POLICY: The tight schedule of these workshops does not leave time for make-up quizzes etc. Cases will be handled on an individual basis.

RESOURCES AND EXPECTATIONS: Students are encouraged to ask questions during lecture and lab, as well as outside of class. Resources, including outlines of PowerPoint lecture presentations will be posted on EEOB Media. Nearly all the specimen and literature resources of the OSU Acarology Collection will be available. Bringing your own material for examination / identification is encouraged, although the expectation is to work primarily with material provided. Microscope equipment provided and specimens used are valuable. Those abusing equipment or specimens will be removed from the course.

DISABILITIES STATEMENT: In accordance with University policy and the Americans with Disability Act, academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that the student take the initiative to bring such needs to the instructor's attention, as the instructor is not legally

permitted to inquire about such particular needs of students. Students who may require special assistance in emergency evaluations should contact the instructor as to the most appropriate procedures to follow in such situations. Contact Disability Support Services at 292-3307 for additional services.

Students are expected to adhere to the Code of Student Conduct (http://studentaffairs.osu.edu/resource_csc.asp). According to University policy, your instructors are obligated to report any instance of academic misconduct, and the potential consequences include loss of credit for an assignment or exam and a failing grade for the course.

STATEMENT OF DIVERSITY: The instructors of this course are committed to promoting a welcoming climate for all students. For more information on diversity see the OSU website (http://www.osu.edu/diversity/). The instructors welcome suggestions, questions, and comments. Any exchange of ideas will be conducted with confidentiality, safety, and respect as guiding principles.

OUTLINE OF THE COURSE (specific topics for lectures may vary depending on the lecturers involved, and the composition and interests of the participants)

Mesostigmata (guest lecturer Dowling)

Covers Mesostigmata of Med-Vet importance (mostly Dermanyssidae, Macronyssidae, Laelapidae)

Lectures & Labs 1-4.

Astigmata, including feather mites (guest lecturer OConnor)

Briefly covers non-psoroptid taxa of Med-Vet importance (Acaridae, Glycyphagidae, Hypoderatidae), concentrating on Psoroptidia (Sarcoptoidea and feather mites)

Lectures & Labs 5-9.

House dust mites (Needham)

Lecture & Lab 10-11.

Non-Parasitengone Trombidiformes (Klompen)

Briefly covers Anystidae, Ereynetidae, Pterygosomatidae, Tetranychidae of Med-Vet importance, concentrating on the Cheyletoid families (Cheyletidae, Myobiidae, Syringophilidae, Harpirhynchidae, Psorergatidae, Cloacaridae, Demodicidae)

Lectures & Labs 12, 16-19

Parasitengona, mostly chiggers (guest lecturer Welbourn, Kelley), and chigger borne diseases

Lectures & Labs 13-15.

Ixodida.

Lectures on tick ecology, physiology, vector capability, collecting methods, and evolution are interspersed with the systematics / identification lectures. Special attention is paid to epidemiology of Lyme disease, Ehrlichiosis, and the Rocky Mountain Spotted fever group (guest lecturer Beati; Needham, Klompen).

Systematics

Lectures & Labs 20-28	Ixodidae, postlarval instars
Lectures & Labs 29-30	Argasidae, postlarval instars
Lectures & Labs 31	Ixodidae, larvae
Lecture & Lab 32	Argasidae, larvae

Lecture & Lab 33 identification of unknowns

Quizzes are randomized. Final taken after workshop by arrangement with organizers.