

# José Pacheco

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## Education

- Jan. 2002-  
Present      **Ph.D. Candidate, *All but Defense*, University of Texas at El Paso**  
Field of Study: Biological Sciences, Expected Graduation: Dec. 2006
- Dissertation Topic: Revision of the New World Thief Ants  
(Hymenoptera: Formicidae: *Solenopsis*): A Phylogenetic Study Based on  
Morphological Characters. Expected Defense: Fall 2006
- Dissertation Committee: Dr. William Mackay, Chair; Dr. Elizabeth Walsh  
(Biology); Dr. Carl Lieb (Biology); Dr. Joan Staniswalis (Math)
- Completed Coursework, Dec. 2004  
Passed Qualifying Exam in Ecology, Jan. 2004  
Passed Qualifying Exam in Evolution, June 2003
- Dec. 2001      **B.S., Biology with Honors; *Cum Laude*, University of Texas at El Paso**
- Aug. 1997  
-May 1998      **Undergraduate Studies, Regis University, Denver, Colorado**

## Professional Employment

### Graduate Research Experience

- Summer  
2005      **Ant collecting trip to Ecuador**  
Traveled the country visiting different habitat types where I  
implemented different ant collection techniques including using  
subterranean baits to acquire different species for later laboratory  
analysis.
- Fall 2004-  
Present      **Molecular Ecology Lab, *Research Assistant*,**  
University of Texas at El Paso  
Began research in molecular systematics of the ant genus *Solenopsis*.  
Working with PCR, Gene Clean, and Sequencing protocols, direction of  
Dr. Elizabeth Walsh.

- Summer 2004      **Ant collecting trip to Guatemala**  
 Traveled the country visiting different habitat types including rainforest, cloudforest, and desert where I implemented different ant collection techniques including the use of subterranean baits to acquire different species for later laboratory analysis.
- Summer 2004      **Animal Behavior Lab, Lab rotation, University of Texas at El Paso**  
 Reared and cared for Monarch Butterflies, *Danaus plexippus*, as well as their food host, milkweed plants. Also, assisted in a population genetic study of Monarch's using molecular techniques (AFLP's), direction of Dr. Sandra Perez.
- Summer 2004      **Desert Ecology Lab, Lab rotation, University of Texas at El Paso**  
 Assisted in a population survey of Whiptail Lizards (*Aspidoscelis*) using pitfall traps at Indio Mountain Research Station in Van Horn, Texas, direction of Dr. Jerry Johnson.
- Summer 2000      **Ecology Lab, Lab Assistant, University of Texas at El Paso**  
 Pinned and mounted insect specimens for identification, assisting in Biodiversity study of the genus *Solenopsis* (fire ants), direction of Dr. William Mackay.

### **Undergraduate Research Experience**

- Summer 2001      Special Problems course under the direction of Dr. Mackay on a Fire Ant Project during. Researched possible biological control of Red Imported Fire Ant, *Solenopsis invicta*, with the thief ant, *Solenopsis molesta*.

### **Teaching Experience**

- Oct. 2004      **Guest Lecturer, El Paso Community College (EPCC) Valle Verde Campus**  
 Lectured an Upper Division Invertebrate Zoology class of 15 students  
 Topic of Lecture: An Introduction into Myrmecology and the Importance of Ants
- Sept. 2004      **Guest Lecturer, Biology Department, UTEP**  
 Lectured an Upper Division Entomology class of 20 students  
 Topic of Lecture: An Overview of the Classification Hierarchy and an Introduction to Cladistic Analyses

- Jan. 2002-  
Present      **Assistant Instructor**, Biology Department, UTEP  
Developed and delivered weekly lectures, prepared experiments, assisted and graded students in Freshman Biology Labs. Lab preparation and delivered lectures for both Organismal Biology for Biology Majors (Course 1108; 14 classes) and Introductory Biology for Non-Majors (Course 1103; 6 classes)
- July 2003      **Guest Lecturer**, Biology Department, UTEP  
Lectured an Introductory Biology Class of 106 students  
Topic of Lecture: An Introduction to Cell Biology and the components of a Cell, as well as an Introduction into Taxonomic Nomenclature and the Classification Hierarchy
- Oct. 2002      **Instructor**, Conference for the Advancement of Science Teaching (CAST)—Delivered two, three hour seminars called *Soil is Alive!*; An instruction on how to study soil microarthropods

### **Professional Societies**

- 2006      Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Local UTEP Chapter
- 2003      National Hispanic Environmental Council (NHEC)
- 2003      Environmental Science Advocates, UTEP
- 2002      Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
- 2001      Alumni Association, UTEP
- 2001      Sigma Xi Scientific Research Society

### **Grants, Awards, and Fellowships**

- 2006      Appointed to “The Chancellor’s List”
- 2005      Marquis Who’s Who in Science and Engineering
- 2005      Recipient of the Graduate School Research Grant (Mar. 2005): \$984
- 2005      Appointed to “The Chancellor’s List”

2004-05	Recipient of the Thelma E. Morris Scholarship for Pathobiology ( <u>two times</u> ): \$1000
2004	Recipient of the Alliance of Graduate Education and the Professoriate (AGEP) Fellowship: \$10,000
2002-2007	Recipient of the Cotton Memorial Scholarship ( <u>five times</u> ): \$9,000
2003	Recipient Graduate School Research Grant: \$990
2002	Appointed the “Top Graduate Student” in the Biology Department
2002	Recipient of the Texas Public Education Grant for summer school: \$400
1998-2001	Appointed to the Dean’s List ( <u>eight times</u> )
2001	Inducted into Alpha Chi Honor Society
2000	Inducted into Golden Key Honor Society
1997-1998	Recipient of the Regis Scholarship and Regis Grant: \$ 8,000

## Service

### **University Community Service**

Nov. 2004	Graduate Student Election Committee: Interviewed candidates for the position of Provost at the University of Texas at El Paso.
Sept. 2004	UTEP Graduate and Professional Education Day: AGEP Graduate Student Panel on “What I wish I’d Known about Graduate School.”

### **Student Service**

#### **Directed Undergraduate Research**

Aug. 2004-  
Present

Cristina Campbell is currently working on a revision of the ant genus *Xenomyrmex*.

Paul Lenhart is currently working on a revision of the ant genus *Dinoponera*.

Israel Del Toro is currently completing a revision of the ant genus *Liometopum*, the Velvety Tree Ant.

Tiffany Seljie redescribed a forgotten ant species, *Temnothorax striatulus*.

Carly Gonzalez-Graf is accomplishing a morphometric analysis of the ant genus *Crematogaster*, specializing on distinguishing between cryptic species with the use of statistical analyses.

Paloma Vargas assisted with the revision of the Genus *Solenopsis*, particular working on the *pygmaea* species complex.

### Presentations, Professional Meetings

Contributed at **National Meetings** (underline indicates student co-author;\* **presenter**)

- Apr. 2006      Research EXPO 2006 (University of Texas at El Paso)--A taxonomic revision of the ant Genus *Xenomyrmex* (Hymenoptera: Formicidae), Cristina Campbell, **José Pacheco**, William Mackay, The University of Texas at El Paso 79968, *Poster Presentation*.
- Apr. 2006      Southwestern Association of Naturalists (SWAN) Annual meeting (Colima Mexico)-- An analysis of the Biology, Taxonomy and Distribution of the Ant Genus *Liometopum* in Mexico (HYMENOPTERA: FORMICIDAE), Israel Del Toro, **José Pacheco**, William Mackay, The University of Texas at El Paso 79968, *Oral Presentation*.
- Oct. 2005      SACNAS National Conference (Denver, CO)--Identification and Morphometric Description of the Ant Genus *Liometopum*, Israel Del Toro, **José Pacheco**, William Mackay, and Dominic Lannutti, The University of Texas at El Paso 79968, *Poster Presentation*.
- Sept. 2005      Knowledge, Art, Research, Mentoring, Advancement (Karma) Annual Conference (El Paso, TX)--Revision of the South American Thief Ants (Hymenoptera: Formicidae: *Solenopsis*): A potential biological control agent for the red imported fire ant, **José Pacheco**, The University of Texas at El Paso 79968, *Oral Presentation*.

- Apr. 2005 Southwestern Association of Naturalists (SWAN) Annual meeting (Huntsville, TX)-- The Ant Genus *Liometopum* of the Southwest (HYMENOPTERA: FORMICIDAE), Israel Del Toro, **José Pacheco**, William Mackay, Department of Biological Sciences, The University of Texas at El Paso 79968, *Poster Presentation*.
- Apr. 2005 SWAN Annual meeting (Huntsville, TX)-- INTRODUCTION TO THE *PYGMAEA* SPECIES COMPLEX (GENUS *SOLENOPSIS*) IN THE SOUTHWEST, P. Vargas, **J. Pacheco**, W.P. Mackay, Department of Biological Sciences, The University of Texas at El Paso, El Paso, TX 79968, *Poster Presentation*.
- Apr. 2005 SWAN Annual meeting (Huntsville, TX)-- Morphometric Analysis of *Crematogaster depilis* and *Crematogaster larreae*, Carly Gonzalez-Graf, Cynthia Morgan, **José Pacheco**, Elizabeth Walsh, and William Mackay, University of Texas @ El Paso, 500 W. University Ave, El Paso, TX 79968, *Poster Presentation*.
- Apr. 2005 SWAN Annual meeting (Huntsville, TX)-- THE THIEF ANTS (GENUS *SOLENOPSIS*) OF THE *MOLESTA* SPECIES COMPLEX IN THE SOUTHWEST (HYMENOPTERA: FORMICIDAE), **José Pacheco**, William Mackay, Paloma Vargas, Israel Del Toro and Isidra Moreno, University of Texas at El Paso 79968, *Oral Presentation*.
- Mar. 2005 Weeks, R. *et al.* March 22-24, 2005. Proceedings of the Annual Red Imported Fire Ant Conference. Gulfport, MS. Hosted by: USDA, APHIS, PPQ, CPHST Soil Inhabiting Pest Section.  
<http://www.cphst.org/sections/SIPS>
- Mar. 2005 2005 Red Imported Fire Ant National Conference (RIFA)-- Revision Of the South American Thief Ants of the genus *Solenopsis* (Hymenoptera: Formicidae): A potential biological control agent for the red imported fire ant, **José Pacheco**, William Mackay, Elizabeth Walsh, Paloma Vargas, Israel Del Toro and Isidra Moreno, Department of Biological Sciences, The University of Texas at El Paso 79968, *Poster Presentation*.
- Oct. 2004 SACNAS National Conference (Austin, TX)—A Revision and Biogeography of the New World *Solenopsis*, **José Pacheco** and William Mackay, Department of Biological Sciences, The University of Texas at El Paso 79968, *Oral Presentation*.

- Oct. 2004 6th Symposium on the Natural Resources of the Chihuahuan Desert at Ross State University, Alpine, TX—The Diversity and Biogeography of New World Thief Ants (Hymenoptera: Formicidae), **José Pacheco**, William Mackay, and Isidra Moreno, Department of Biological Sciences, The University of Texas at El Paso 79968, *Oral Presentation*.
- Apr. 2004 Research Expo, UTEP—Thief Ants of the New World: An Introduction to species complexes of the genus *Solenopsis*, **José Pacheco**, William Mackay, and Isidra Moreno, Department of Biological Sciences, The University of Texas at El Paso 79968, *Poster Presentation*.
- Apr. 2004 SWAN Annual Meeting (San Antonio, TX)—Thief Ants of the New World: An Introduction to species complexes of the genus *Solenopsis*, **José Pacheco**, William Mackay, and Isidra Moreno, Department of Biological Sciences, The University of Texas at El Paso 79968, *Oral Presentation*.
- Oct. 2003 SACNAS National Conference (Albuquerque, NM)—Thief Ants of the New World: An Introduction to species complexes of the genus *Solenopsis*, **José Pacheco**, William Mackay, and Isidra Moreno, Department of Biological Sciences, The University of Texas at El Paso 79968, *Poster Presentation*.
- Apr. 2003 National Hispanic Sustainable Energy & Environmental Conference
- Oct. 2002 SACNAS National Conference (Anaheim, CA)—Proposal of Methods to Determine the Effectiveness of Thief Ants as a Biological Control on Fire Ants, **José Pacheco**, Department of Biological Sciences, The University of Texas at El Paso 79968, *Poster Presentation*.

### **Additional Training**

- Mar. 2006 Attended the Howard/UTEP (HUTEP) Alliance Annual Retreat at Cloudcroft, New Mexico. Sponsored by AGEF. Participated in seminars and lectures discussing topics on stress and graduate school, how to make the class dynamic and assess student learning, and opportunities beyond graduate school and what exactly is a Post Doc.
- Sept. 2005 Attended a Grant Writing Seminar Sponsored by the Graduate School at UTEP.

- Aug. 2005 Attended the Institute on Preparing for Postdoctoral Experiences in STEM, Sponsored by Howard University and UTEP, AGEP, & The National Postdoctoral Association at Washington, D.C.
- Jun. 2005 Attended the Preparing Future Faculty (PFF) STEM Summer Institute, Sponsored by Howard University and The University of Texas at El Paso at El Paso, Texas.
- Feb. 2005 Attended a Media Training Seminar at UTEP.
- Aug. 2004 Attended the Institute on Preparing for Postdoctoral Experiences in STEM, Sponsored by Howard University and UTEP, AGEP, & The National Postdoctoral Association at Washington, D.C.
- Aug. 2004 The Ant Course, La Selva Biological Research Station, Costa Rica Attended and Graduated from the “Ant Course;” an Ant Workshop where Myrmecologists from around the world gave classes on collection techniques, identification, specimen mounting and preservation.
- Jun. 2004 Attended Preparing Future Faculty (PFF) STEM Summer Institute Sponsored by Howard University and the University of Texas at El Paso at Washington, D.C.

## Publications

**Pacheco, J.;** Mackay, W. P.; Del Toro, I. 2006. A new thief ant species in the genus *Solenopsis* (Hymenoptera: Formicidae). *Myrmecological Notes*. Submitted.

Selje, T.; Mackay, W.P.; **Pacheco, J.;** Negrete, S. and Gove, A. 2005. The Rediscovery of *Temnothorax striatulus* (Stitz) (Hymenoptera: Formicidae). *Sociobiology*. Submitted.

**Pacheco, J.A.;** Mackay, W.; Morgan, Cynthia. 2004. A New Species of *Gnamptogenys* Roger of the *sulcata* Group (Hymenoptera: Formicidae) from Bolivia. *Proceedings of the Entomological Society of Washington* 106(2): 434-437

Morgan, Cynthia; Mackay, W.; **Pacheco, J.A.** 2003. A New *Gnamptogenys* of the *striatula* Group from Bolivia (Hymenoptera: Formicidae). *Sociobiology* Vol. 42, No. 3, p553-558

## **Skills**

Bilingual—write, read, and speak English and Spanish;  
Human relations—able to work in groups and communicate well.

### *Computer Software*

Proficient in Microsoft Office Applications, Netscape and various internet browsers, IBM and Apple Computers, Scanners, Adobe PhotoShop, Paintshop Pro, Word Perfect, and Windows.

### *Field Equipment*

Skilled at insect capture techniques including usage of pitfall traps, subterranean traps, nets, psychrometer, anemometer, compass, global positioning systems, auger, and ambient and soil temperature reading equipment. Skilled at preserving and maintaining insect specimens especially ants.

### *Lab Equipment*

Worked on DNA amplification techniques and Amplified Fragment Length Polymorphisms. Began research in molecular systematics of the ant genus *Solenopsis* through mtDNA sequencing. Working with PCR, Gene Clean, and Sequencing protocols. Successful in DNA extraction and amplification.

### *Ant Identification*

Identified *Solenopsis* as well as other ant species received from Bolivia, Colombia, Ecuador, Mexico, Argentina, Paraguay, Uruguay, Guatemala, Costa Rica, and the U.S.A.

## **Future Goals**

Attaining my Doctoral Degree, Pursuing a Post-Doc, Wish to become a University Professor.

## **References**

Doctoral Advisor:  
William Mackay, Ph.D.  
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