

HECTOR C. MIRANDA, JR.

ADDRESS

Department of Biology, Texas Southern University, 3100 Cleburne Dr. Houston TX 77004
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EDUCATION

Ph.D., Biological Sciences, University of Cincinnati, 1997.

Dissertation: "Phylogenetic relationships among major owl lineages and biogeography of Philippine Scops-Owls (*Otus* and *Mimizuku*) based on mitochondrial DNA."

M.S., Zoology, University of the Philippines at Los Baños, 1987.

B.S., Biology, University of the Philippines at Los Baños, 1981.

ACADEMIC/PROFESSIONAL WORK EXPERIENCE

- Assistant Dean for Academic Affairs**, Thomas F. Freeman Honors College, Texas Southern University, Sept. 2018 - present.
- Professor of Biology**, Department of Biology, Texas Southern University. September 1, 2016 – present.
- **Interim Assistant Dean for Academic Affairs**, Thomas F. Freeman Honors College, Texas Southern University, Sept. 2013-2015.
- **Associate Professor of Biology**, Department of Biology, Texas Southern University (Tenured). Sep. 2011- present
- **Assistant Professor of Biology**, Department of Biology, Texas Southern University (Tenure-track), Sep. 2005- 2011. Develop internally and externally-funded research program. Publish and present research papers, and conduct other scholarly activities. Involvement in curricular development, advisement and recruitment of students. Participated in local, national and international professional associations, meetings, and workshops.
- **Visiting Assistant Professor in Evolutionary Biology**, Rollins College, Aug. 2004-July 2005. Taught undergraduate courses in Evolution, Conservation Biology, Bioinformatics, and Journal Club.
- **Postdoctoral Fellow**, Ron DeBry Lab, Department of Biological Sciences, University of Cincinnati. National Science Foundation (grant-DEB 0075306) supported project to investigate the phylogeny of rodents using nuclear genes. May 2002 –July 2004
- Associate Professor and Department Head**, University of the Philippines in Mindanao. Developed and revised the B.S. in Biology curriculum, introduced new courses for the department, advised undergraduate thesis students. Administered the department budget, academic programs, staff and faculty hiring and development, and research priorities. 1999-2002
- Science Director**, Philippine Eagle Foundation 1998-2002

- Designed the scientific research program for the conservation for the conservation of the Philippine Eagle (*Pithecophaga jefferyi*), one of the world's rarest, largest, and most endangered eagles.
- Supervised a team of Filipino and foreign volunteer biologists on field research.
- Represented the PEF during international and national conferences and meetings.
- Surveyed remote areas in Mindanao and Samar islands for population biology studies.
- Provided scientific guidance and assistance to the captive breeding, conservation education and community-based programs.
- Involved in retrieval, rehabilitation, and release of captured eagles.
- Developed, wrote project proposals and help secure funding for the project.

Children's Hospital Research Foundation, Cincinnati, OH 1997-1998

Research Assistant III, Division of Human Genetics

- Conducted basic molecular biology experiments such as DNA extraction, Polymerase Chain Reaction (PCR), Southern blotting, tissue culture, protein and enzyme assays, breeding, maintenance, and genotyping of both transgenic and knockout mice. Laboratory of Dr. Gregory Grabowski.

University of Michigan, Ann Arbor, MI 1997

Research Associate

- Investigated the genetic structure and evolutionary relationships among birds of prey. Laboratory of Dr. David Mindell.

University of Cincinnati, OH 1992-1997

Graduate Teaching Assistant

Cincinnati Museum of Natural History 1992-2000

Adjunct Associate Curator of Ornithology

- Conducted periodic preparation and archiving of voucher specimen.
- Field collection of voucher specimen and frozen tissue.
- Analysis of data.

Cincinnati Museum of Natural History and Philippine National History Museum Philippine Biodiversity Inventory John D. and Catherine T. MacArthur foundation grant to Robert S. Kennedy.

Ornithologist

- Led a team of naturalists from the US and the Philippine National Museum Conducting systematic surveys of vertebrates, preparation of voucher specimen, preparation of tissue samples for genetic studies, and documenting many aspects of Philippine natural history.
- Conducted inventories of vertebrates along altitudinal gradients in Zambales, Mt. Madja-as in Panay, Mt. Apo in Mindanao, Mt. Halcon in Mindoro island, St. Paul's National Park in Palawan, Tawi-Tawi of the Sulu Archipelago, Batan islands, and Olango island in Cebu.

University of the Philippines at Los Baños
Assistant Professor in Biology

1988-1991

Philippine Eagle Conservation Program, World Wildlife Fund 1981-1983
Research Biologist

- Was a part of an international team organized to study the endangered Philippine Eagle.
- Conducted population surveys in the rainforests of Luzon, Leyte and Mindanao.
- Nest-site studies, food habits, courtship and breeding behavior, juvenile Development.
- Evaluated prey species density and diversity.
- Developed educational programs for conservation of the eagles and the rainforest.

PEER-REVIEWED PUBLICATIONS

Pineda, L., B. Caballero, T. McSweeney, D. M. Brooks, and **H. C. Miranda, Jr.**

Complete mitochondrial genome sequence of the Malay peacock-pheasant.
Conservation Genetics Resources. Submitted.

Miranda, H. C., Jr. M. J. Veluz, and R. S. Kennedy. In memoriam: Pedro C. Gonzales, 1936- 2019. *Philippine Journal of Systematic Biology*. *In press*.

Quach, T., D. Brooks, and **H. C. Miranda, Jr.** Complete mitochondrial genome sequence of Palawan Peacock-Pheasant *Polyplectron napoleonis* (Galliformes, Phasianidae). *Mitochondrial DNA*. *In press*. Posted online on June 27, 2014. (doi:10.3109/19401736.2014.928870). PMID: 24971623

Brooks, D. and **H. C. Miranda, Jr.** Secondary contact of two historically distinct populations of Palawan peacock pheasants (*Polyplectron napoleonis*). *Forktail*. *In press*.

Omeire, D., S. Abdin, D. Brooks, and **H. C. Miranda, Jr.** Complete mitochondrial genome sequence of Germain's Peacock-Pheasant *Polyplectron germaini* (Aves, Galliformes, Phasianidae). *Mitochondrial DNA*. Posted online on January 27, 2014. (doi:10.3109/19401736.2013.830292). PMID: 24460165

Miranda, H. C., Jr., D. Brooks and R. S. Kennedy. 2011. Phylogeny and taxonomic review of Philippine scops-owls (Strigidae): parallel diversification of highland and lowland clades. *The Wilson Journal of Ornithology* 123:441-453.

Miranda, H. C., Jr. 2010. The Philippine Eagle. *In* Tingay, R. and T. Katzner (eds.). *The Eagle Watchers*. Cornell University Press.

- Blanga-Kanfi, S., **H. Miranda**, O. Penn, T. Pupko, R. W. DeBry, and D. Huchon. 2009. Rodent phylogeny revised: Analysis of six nuclear genes from all major rodent clades. *BMC Evolutionary Biology*.9:71.
- Kennedy, R. S. and **H. C. Miranda, Jr.** 2008. Family Rhabdornithidae (Rhabdornis). Pp. 188-195. In: del Hoyo, J. Elliott, A. and Christie. Eds. *Handbook of the Birds of the World*. Vol 13. Penduline-tits to Shrikes. Lynx Ediciones, Barcelona, Spain.
- Sodhi, N. S., D. Astuti, A. C. Diesmos, P. Ericson, N. Fernandopulle, S. Kotagama, E. Kudavidanage, H. C. Lim, B. Lee, S. Lim, Y. Lin, D. Lohman, W. Meckvichai, **H. Miranda**, + 11 others. 2007. Barcoding Indo-Malayan Birds. *The Raffles Bulletin of Zoology*. 55:397-398.
- Miranda, H. C., Jr.** and J. Ibañez. 2006. A modified bal-chatri to trap Great Philippine Eagles for radio-telemetry. *Journal of Raptor Research* 40:235-237.
- Ibañez, J. , **H. C. Miranda Jr.** G. Ibañez, D. S. Afan and R. S. Kennedy. 2003. Notes on the breeding behavior of a pair of Philippines Eagles at Mt. Sinaka, Mindanao. *Wilson Bulletin*. 333-336.
- Bueser, G. L., K. Bueser, D. S. Afan, D. I. Salvador, J. W. Grier, R. S. Kennedy and **H. C. Miranda, Jr.** 2003. Nesting density and distribution of Philippine Eagles in Mindanao: What do we know after 100 years? *Ibis*.145:130-135.
- Miranda, H. C. Jr.,** R. S. Kennedy, R.V. Sison, P. C. Gonzales, amd M. F. Ebreo. 2001. New records of birds from the island of Panay, Philippines. *Bulletin of the British Ornithological Club*. 120:267-280.
- Tadena, D. O., D. I. Salvador, **H. C. Miranda**, and A. M. Aya-ay. 2001. Captive breeding by natural pairing, incubation and chick-rearing methods for Philippine Eagles. *Sylvatrop* 10: 45-58.
- Miranda, H. C. Jr.,** D. I. Salvador, J. Ibañez, and G. Ibañez. 2000. Summary of the Philippine Eagle breeding success, 1978-1998. *Journal of Raptor Research*. 34:37-41.
- Kennedy, R. S., P. Gonzales, E. Dickinson, **H. C. Miranda, Jr.** and T. Fisher. 2000. A Guide to the Birds of the Philippines. Oxford University Press, Oxford UK.
- Miranda, H. C., Jr.,** D. P. Mindell. and R. S. Kennedy. 1998. The molecular phylogeography of Philippine Scops-Owls and implications to ornithology. *Sylvatrop* 8:12-26.
- Afan, D. S., J. C. Ibanez, G.L. Bueser, K. Gatil, G. B. Ibanez and **H. C. Miranda, Jr.** Notes on movement and behavior of a post-fledging Philippine Eagle at Mt. Sinaka, Mindanao island. *Sylvatrop* 10 (1&2) 52-69.

- Kennedy, R. S. and **H. C. Miranda, Jr.** 1998. In memoriam: Dioscoro S. Rabor, 1911-1966. *Auk* 115: 204-205.
- Miranda, H. C., Jr.**, R. S. Kennedy and D. P. Mindell. 1997. The phylogenetic placement of *Mimizuku gurneyi* (Aves: Strigidae) inferred from mitochondrial DNA. *Auk* 114:315-323.
- R. S. Kennedy, P. D. Gonzales, and **H. C. Miranda, Jr.** 1997. A new sunbird *Aethopyga* sp. From Mindanao, Philippines. *Auk* 114:1-10.
- Mindell, D. P., M. D. Sorenson, C. J. Huddleston, **H. Miranda, Jr.**, A. Knight, S. J. Sawchuck, and T. Yuri. 1997. Phylogenetic relationships among and within select avian orders based on mitochondrial DNA. Pp. 211-245 in D. P. Mindell, (ed). Avian Molecular Evolution and Systematics. Academic Press, New York.
- Balete, D. S. **H. C. Miranda, Jr.**, L. R. Heaney, and J. F. Rieger. 1992. Diversity and conservation of Philippine land vertebrates: an annotated bibliography. *Silliman Journal* 36:129-149.

ABSTRACTS/INVITED PRESENTATIONS

- **Hector Miranda, Jr.**, Tommy Quach, Benjamin Caballero, and Daniel Brooks. Mitogenomic phylogeography of the *Polyplectron* of Southeast Asia. VI North American Ornithological Congress. Washington DC. August 16-21.
- Speaker, "Bioinformatics, phylogenetics and parallel computing. High Performance Computing Workshop. Texas Southern University, August 19, 2013
- Avian evolution. Armand Bayou Nature Center, Pasadena, TX. May 9, 2013.
- Tierra Spencer, Olufisayo Jejelowo and **Hector C. Miranda, Jr.** Molecular identification and phylogenetic systematics of *Aspergillus* and related fungi based on ITS gene. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- **Hector C. Miranda, Jr.*** and Olufisayo Jejelowo. Astrobiology, molecular phylogenetics, and evolutionary studies at Texas Southern University. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- Cherita Thomas*, **Hector C. Miranda, Jr.**, and Olufisayo Jejelowo. Importance of social networking and website in CBER outreach. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.

- Olufisayo Jejelowo*, Jason Rosenzweig, Ayodotun Sodipe, **Hector Miranda**, Shishir Shishodia, Govindarajan Ramesh, James Briggs, George Fox, Claudette Ligons, Marguerite Butler. URC Microbial 1: Student space flight experiment on NASA Space Shuttle Atlantis. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- Olufisayo Jejelowo*, Jason Rosenzweig, Ayodotun Sodipe, **Hector Miranda**, Shishir Shishodia, Govindarajan Ramesh, James Briggs, George Fox, Claudette Ligons, Marguerite Butler. Year One of the Center for Bionanotechnology and Environmental Research. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- Shaunte Abdin*, Olufisayo Jejelowo, and **Hector C. Miranda, Jr.** A phylogenetic study of *Aspergillus* and other related fungi based on mitochondrial cytochrome oxidase 1 gene. 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- Tiarra Spencer*, Olufisayo Jejelowo and **Hector C. Miranda, Jr.** Molecular identification and phylogenetic systematics of *Aspergillus* and related fungi based on ITS gene. . 113th Annual Meeting of Texas Academy of Sciences, Tarleton State University, Stephenville, TX. March 4-6, 2010.
- **Hector C. Miranda, Jr.***, “Molecular phylogenetics and evolution: The intersection of biology, computer science and mathematics.” COST Research Week Symposium. April 3, 2009.
- **Hector C. Miranda, Jr.***, “Rodent phylogeny based on six nuclear genes.” TSU Research Week. Texas Southern University. March 31, 2009.
- Leighan Pollard and **Hector C. Miranda, Jr.**, “Molecular phylogeography of Southeast Asian perching birds (Passeriformes) based on COI barcode. Texas Academy of Science Annual Meeting, Junction Texas. March 6, 2009
- Poster co-author, Rates and patterns of mitochondrial COI change in *Aspergillus* and other fungi.” S. Abdin, O. Jejelowo, A. Sodipe, and **H. Miranda, Jr.** Texas Academy of Science Annual Meeting, Junction Texas. March 6, 2009
- **Speaker**, “Of mice and birds: The phylogenetic perspective to biodiversity.” Institute of Biology, College of Science, University of the Philippines. April 18, 2008.
- **Speaker**, 17th Annual Philippine Biodiversity Symposium. Wildlife Conservation Society of the Philippines. Leyte, Philippines, April 14-16, 2008.
- **Speaker**, “ Human evolution: What genes and rocks tell us.” Darwin Day 2008,

February 9, 2008, Rice University, Houston.

- **Speaker**, “The history of evolutionary thinking,” Darwin Day 2007. Humanist of Houston.
- **Symposium Speaker**, Symposium on Systematics, Genetic Diversity and Conservation of Raptors. IV North American Ornithological Conference. Veracruz, Mexico, Oct. 3-7, 2006.
- **Symposium Speaker**, On the population biology and status of the Philippine Eagle (*Pithecophaga jefferyi*). 4th Eurasian Raptor Congress, Seville, Spain, 25 September 2001
- **Speaker**, World Conference on Birds of Prey and Owls, Eilat, Israel, 2 April 2000
- **Poster presentation**. 1st Asian Raptor Research and Conservation Conference, Osaka, Japan, 15 December 1998.
- **Speaker and Chair of the Owl Systematics Session**, American Ornithologist Union, 115th Meeting, St. Paul, Minnesota, 13 August 1997.
- **Member, Organizing Committee and Poster Presentation**, American Ornithologist Union, 113th Meeting, Cincinnati, 15-19 August 1995.

REVIEWER

- Losos, J. B. K. A. Mason, S. R. Singer.2007. Biology, 8th edition. McGraw Hill
- Raven, P. R., J. B. Losos, J. B. K. A. Mason, S. R. Singer.2010. Biology, 9th edition. McGraw Hill
- National Science Foundation *Ad hoc* Reviewer, 2010
- National Science Foundation Review Panelist for Climate Change and Education 2010, Arlington, VA

PROFESSIONAL ORGANIZATIONS

- American Ornithologist’s Union, 1985, 1995-2003, 2005-present
- Society for Systematic Biology, 1995-1996, 2005-present
- Society for Conservation Biology, 1986-1991
- Cooper Ornithological Society, 1998-2003
- Wilson Ornithological Society, 1998-2003
- Association of Field Ornithologists, Inc. 1998-2003
- The Raptor Research Foundation, 1998-2003
- Conservation International Philippines, Mindanao Coordinator, 2000-2002
- Member, Philippine Eagle Working Group, 1998-present
- Member, Science Committee of the Philippine Eagle Foundation, 2004-present

- Board Member, Wildlife Conservation Society of the Philippines, 1998-2002
- American Association for the Advancement of Science, 2005-2006

FELLOWSHIPS, SCHOLARSHIPS and AWARDS

- Awardee. COST Dean Leadership Awardee, 2011
- Awardee. COST Dean Leadership Awardee, 2010
- The Archibald Granville Bush Award for Excellent Standard in Academic Pursuits, Rollins College, 2005
- Nominee, Best New Faculty Award, Rollins College, 2005
- International Publications Award, University of the Philippines, 2000
- University Graduate Scholarship, University of Cincinnati, 1992-1997
- Visiting Scientist Fellow, Field Museum of Natural History, Chicago, Illinois, 1991
- Exchange Fellow, British Council Higher Education Exchange Program, University College Cardiff, Wales, United Kingdom, 1988.

FUNDED RESEARCH/TRAVEL GRANTS

- Co-I. “Rates and patterns of microbial evolution in space stations” under NASA University Research Center - Center for Bionanotechnology and Environmental Health (C-BER) Thrust II: Space Microbiology, 2008-2014, \$5 M over 5 years. under the direction of Dr. Olufisayo Jejelowo.
- Texas Southern University Seed Grant, 2005, \$8,000.00
- Texas Southern University Seed Grant, 2007, \$38,000.00
- Texas Southern University Seed Grant, 2009, \$15,000.00
- Graduate School Research Enhancement Support, 2007, \$2000.00
- Peregrine Fund grant, with Dr. David P. Mindell of the University of Michigan, \$8,000.00, 1997.
- Marcia Brady Tucker Travel Award, 115th American Ornithologist’s Union, University of Minnesota, St. Paul. 1997, \$250.00
- Wiemen/Wendel Summer Fellowships Award, University of Cincinnati, Summer, 1995 and Summer, 1996
- National Wildlife Federation (NWF) grant through the Haribon Foundation to study the biology and ecology of the Philippine Falconet, \$5,000.00, yr 1990.

TEACHING EXPERIENCE

Texas Southern University, Texas

Sep. 2005-present

- **Biology 332 : Bioinformatics** (Fall 2012. Fall 2013)
- **Biology 434: Evolutionary Biology** (Summer of 2010)
- **Biology 131: General Biology** (Fall 2005, Summer I and II 2006, Fall 2006, Summer I and II 2007, Fall 2007, Summer I 2009, Fall 2009)
- **Biology 132: General Biology** (Spring 2006, Summer I and II 2006, Spring 2007, Summer I and II 2007, Winter 2008, Summer I 2008, Winter 2009, Summer II 2009)

- **Biology 341: Organismic Biology** (Fall 2005, Spring 2006, Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2009)
- **Biology 341L: Organismic Biology Laboratory** (Fall 2005, Spring 2006, Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2009)
- **Biology 439: Principles of Biology** (Fall 2005, Summer 2006, Fall 2006, Summer 2010)
- **Biology 401: Undergraduate Research** (Fall 2006, 1 credit unit)
- **Biology 712: Biosynthetic Mechanisms** (Fall 2007, Winter 2008, Fall 2008)

Rollins College, Florida

Aug. 2004-May 2005

- **Sustaining Biodiversity** (non-majors, lecture and lab, Fall 2004)
- **Journal Club** (2 credit units, Fall 2004, seniors)
- **Evolution** (4 credit units, Spring 2005)
- **Bioinformatics** (6 credit units, Spring 2005)
- **Freshman Biology** (2 credit units, lab, Spring 2005)

University of the Philippines in Mindanao

Jan 1999-May 2002

- **Systematic Zoology** (3 hr lab, 2 hr lecture)
- **Introduction to Molecular Biology** (2 hr lecture)
- **Evolutionary Biology** (3 hr lecture)
- **General Biology** (3 hr lecture)
- **Ecology** (3 hr lecture)
- **Animal Ecology** (3 hr lecture, 3 hr lab)
- **Genetics** (3 hr lecture)

University of Cincinnati

1992-1997

- **Freshman Biology for majors** (as Graduate Teaching Assistant)

University of the Philippines at Los Baños

1985-1991

- **Ornithology** (6 hr lab and 2 hr lecture)
- **Wildlife Ecology** (3 hr lecture)
- **Comparative Anatomy of Vertebrates** (6 hr laboratory)
- **Conservation Biology in the Tropics** (3 hr lecture)
- **Freshman Biology** (3 hr lab)

TSU Committee Memberships and Positions

- Member, Faculty Search Committee for the Department of Biology, 2010
- Chair, COST Website and Instructional Computation Committee, 2009-2011
- Member, Grievance Committee, Biology Department, 2009
- Member, COST Committee on WebSite, 2007-2009
- Member, Biology Department Chair Search Committee, 2007
- Member, TSU Graduate School, 2006-present

Past Graduate Students

- Thao Nguyen. M.S. in Biology. Thesis – Effects of various 2.0 Gy proton radiation levels on mouse mitochondrial genome after 24 hrs.
- Samrawit Yeshitla. M.S. in Biology. Thesis – Effects of proton radiation on mouse mitochondrial genome
- Nissi Abrahan. M.S. in Biology. (Beginning Fall 2010) . Thesis - fungal phylogenetics
- Tiarra Spencer, M.S. in Biology (Fall, 2009 – present). Thesis project- “Phylogeny of *Aspergillus* based on the *Internally Transcribed Spacer (ITS)*” NASA URC CBER –graduated 2011
- Leighan Pollard, M.S. 2009. current. Thesis – “Phylogeography of Philippine Passeriformes based on mitochondrial *cytochrome oxidase I* barcode.” NASA URC CBER – supported graduate student.
- Shaunte Abdin, M. S. 2010. current. Thesis project – “Phylogeny of *Aspergillus* and other fungi based on *cytochrome oxidase I*.” Currently a staff of the Office of Student Affairs, COST and a Visiting Instructor at Lee College.
- Stephen Hayes, M.S. 2010 (pending). Thesis project – “Phylogeny of Asian hornbills (Bucerotidae) based on the mitochondrial *cytochrome b* DNA sequences.” Currently a Doctor of Dentistry student at Howard University.

Department Committee Membership

- Curriculum Committee
- Recruitment Committee
- Library/Acquisition Committee
- Research and Graduate Studies Committee
- Student Development Committee
- Ph.D. Program Committee

Department of Biology Committee Membership (current)

- Chair, Biology Faculty (Assistant Professor) Search Committee, 2013 (on-going)
- Chair, Biology Faculty (Assistant Professor) Search Committee, 2011
- Member, Biology Faculty (Assistant Professor) Search Committee, 2011
- Member, Biology Faculty (Assistant Professor) Search Committee, 2010
- Member, Curriculum Committee
- Member, Recruitment Committee
- Member, Library Acquisition Committee
- Member, Committee for Research and Graduate Studies
- Member, Student Development Committee
- Member. Ph.D. Program Committee

College Committee Membership

- Chair, COST Website and Instructional Computing Committee, 2009-2011
- Member, Standing Committee on Faculty Development, 2006-2009
- Member, Committee on Facilities, Planning and Enhancement, 2006-2009

University Committee Membership

- University General Education Subcommittee Meeting, 2012- present
- University Faculty Manual Committee 2012 – present
- University Curriculum Committee, 2012 – present

Texas State Committee Membership

- Science Committee, Endangered Species Act.