

GEORGE AMATO
DIRECTOR, CONSERVATION GENOMICS
AND AFFILIATED FACULTY
SACKLER INSTITUTE FOR COMPARATIVE GENOMICS

HIGHEST DEGREE EARNED

Ph.D.

AREA OF SPECIALIZATION

Conservation Genetics

EDUCATIONAL EXPERIENCE

Ph.D., M.S., M.Phil. Yale University, New Haven, CT 1993-94

B.S. University of Connecticut, Storrs, CT 1978

PREVIOUS EXPERIENCE IN DOCTORAL EDUCATION

FACULTY APPOINTMENTS

Adjunct Professor of Ecology, Evolution, and Environmental Biology,
Columbia University, 1995-present

Adjunct Professor of Biology, Fordham University, 1995-present

COURSES TAUGHT

Conservation Genetics. Yale Institute for Biospheric Studies. 2005

Conservation Genetics. Center for Environmental Research and Conservation, Columbia University, 2002-2007

Evolutionary Biology. Columbia University School of Journalism. 2009

Independent Research, Columbia University 2007-2016

GRADUATE ADVISEES

Mary Egan, Fordham University, 1999

Michael Russello, Columbia University, 2003

Evon Hekkala, Columbia University, 2003

Kari Schmidt, Columbia University, 2014

Anthony Caragiulo, Fordham University, 2012

Nicole Mihnovets, Columbia University, 2016

Natalia Rossi, Columbia University, 2016

Jen Tinsman, Columbia University, current

GRADUATE COMMITTEES

Howard Rosenbaum, Yale University

Yael Wyner, Yale University

Phaedra Dukakis, Yale University

Eugenia Narro, Columbia University

Carl Gaines, Fordham University

Christina Castellano, Fordham University

Sergios Kolokotronis, Columbia University

Linda Gormezano, City University of New York

Christopher Nagy, City University of New York

Minh Le, Columbia University
Sebastian Kvist, RGGG
Francine Kershaw, Columbia University
Mark Weckel, CUNY

RESEARCH GRANT SUPPORT

Alfred P. Sloan Foundation
Richard Lounsbery Foundation
Panthera Foundation
Disney Conservation Fund

RECENT ARTICLES IN REFEREED JOURNALS (2011-2017)

- Anco, C., S.O. Kolokotronis, P. Henschel, S.W. Cunningham, **G. Amato**, and E. Hekkala. 2017. Historical mitochondrial diversity in African leopards (*Panthera pardus*) revealed by archival museum specimens. Mitochondrial DNA Part A, DOI:10.1080/24701394.2017.1307973.
- DeSalle, R. and **G. Amato**. 2017. "Conservation Genetics, Precision Conservation, and De-extinction," Recreating the Wild: De-extinction, Technology, and the Ethics of Conservation, special report, Hastings Center Report 47, no. 4.
- Rosenfeld, J.A., D. Reeves, M.R. Brugler, A. Narechania, S. Simon, S.O. Kolokotronis, R. Durrett, J. Foose, K. Snianna, M.C. Schatz, J. Gandara, E. Afshinnekoo, E.T. Lam, A.R. Hastie, S. Chan, H. Cao, M. Saghbini, A. Kentsis, P.J. Planet, V. Kholodovych, R. Baker, R. DeSalle, L. Sorkin, M. Siddall, **G. Amato** (co-corresponding author), and C. Mason. 2016. Genome assembly, annotation, and geospatial urban phylogenomics of the bedbug (*Cimex lectularius*). Nature Communications 7(10164).
- Wultsch, C., A. Caragiulo, I. Dias-Freedman, H. Quigley, S. Rabinowitz, and **G. Amato**. 2016. Genetic diversity and population structure of Mesoamerican jaguars (*Panthera onca*): Implications for conservation and management. PLoS ONE 11(10): e0162377.doi:10.1371/journal.pone.0162377.
- Kolokotronis, S.O., J. Foose, J.A. Rosenfeld, M.R. Brugler, D. Reeves, J.B. Benoit, W. Booth, G. Robinson, M. Steffen, S.R. Palli, C. Schal, S. Richards, A. Narechania, R.H. Baker, L.N. Sorkin, **G. Amato**, C.E. Mason, M.E. Siddall, R. DeSalle, and Z. Sakas. 2016. The mitogenome of the bed bug *Cimex lectularius* (Hemiptera: Cimicidae). Mitochondrial DNA Part B, 1:1, 425-426, DOI: 10.1080/23802359,2016.1180268.
- Rossi-Lafferriere, N.A., R. Antelo, F. Alda, D. Martensson, F. Hailer, S. Castroviejo-Fisher, J. Ayarzagüena, J.R. Ginsberg, J. Castroviejo, I. Doadrio, C. Vila, and **G. Amato**. 2016. Multiple paternity in a reintroduced population of the Orinoco crocodile (*Crocodylus intermedius*) at El Frio Biological Station, Venezuela. PLoS ONE 11(3):e0150245.doi:10.1371/journal.pone.0150245.
- Karamanlidis, A.A., S. Gaughran, A. Aguilar, P. Dendrinos, D. Huber, R. Pires, J. Schultz, T. Skrbinek, and **G. Amato**. 2016. Shaping species conservation strategies

using mtDNA analysis: The case of the elusive Mediterranean monk seal (*Monachus monachus*). *Biological Conservation* 193(2016)71-79.

- Mihnovets, A.N., J. Schultz, J. Haugstetter, C. Wultsch, C.L. Littnan, and **G. Amato**. A novel microsatellite multiplex assay for the endangered Hawaiian monk seal (*Neomonachus schauinslandi*). 2016. *Conservation Genetics Resources* DOI 10.1007/s12686-016-0525-z.
- DeCandia, A., S. Gaughran, A. Caragiulo, and **G. Amato**. 2016. A novel molecular method for noninvasive sex identification of order *Carnivora*. *Conservation Genetics Resources*.
- Hekkala, S.G. Platt, J.B. Thorbjarnarson, T.R. Rainwater, M. Tessler, S. Cunningham, C. Twomey, and **G. Amato**. 2015. Integrating molecular, phenotypic, and environmental data to elucidate patterns of crocodile hybridization in Belize. *Royal Society Open Science*. 2:150409. DOI:10.1098/ros.
- Montanari, S. and **G. Amato**. 2015. Discrimination factors of carbon and nitrogen stable isotopes from diet to hair and scat in captive tigers (*Panthera tigris*) and snow leopards (*Unica unica*). *Rapid Communications in Mass Spectrometry*. 29, 1062-1068.
- Fedrizzi, N, M.L.J. Stiassny, J.T. Boehm, E.R. Dougherty, **G. Amato**, and M. Mendez. 2015. Population genetic structure of the dwarf seahorse (*Hippocampus zosterae*) in Florida. *PloS ONE* 10(7): e0132308. doi:10.1371/journal.pone.0132308.
- Caragiulo, A., Y. Kang, S. Rabinowitz, I. Dias-Freedman, S. Loss, X.W. Zhou, W.D. Bao, and **G. Amato**. 2015. Presence of the endangered Amur tiger *Panthera tigris altaica* in Jilin Province, China, detected using non-invasive genetic techniques. *Oryx*. DOI:http://dx.doi.org/10.1017/S0030605314000817.
- Naro-Maciel, E., B.N. Reid, S.E. Alter, **G. Amato**, K.A. Bjorndal, A.B. Bolten, M. Martin, C.J. Nairn, B. Shamblin, and O. Pineda-Catalan. 2014. From refugia to rookeries: Phylogeography of Atlantic green turtles. *Journal of Experimental Marine Biology and Ecology*. 461(306-316).
- Naro-Maciel, E., S.J. Gaughran, N.F. Putman, **G. Amato**, F. Arengo, P.H. Dutton, K.W. McFadden, E.C. Vintinner, and E.J. Sterling. 2014. Predicting connectivity of green turtles at Palmyra Atoll, Central Pacific: A focus on mtDNA and dispersal modeling. *Journal of the Royal Society*.
- Le, M., T.V. Nguyen, H.T. Duong, H. M. Nguyen, L.D. Dinh, D. Tuoc, H.D. Nguyen, and **G. Amato**. 2014. Discovery of Roosevelt's Barking Deer (*Muntiacus rooseveltorum*) in Vietnam. *Conservation Genetics*.
- Amaral, A.R., G. Lovewell, M.M. Coelho, **G. Amato**, and H.C. Rosenbaum. 2014. Hybrid speciation in a marine mammal: The Clymene dolphin (*Stenella clymene*). *PLoS ONE* DOI:10.1371/journal.pone.0083645.

- Mendez, M., T.J. Jefferson, S.O. Kolokotronis, M. Krutzen, G.J. Parra, T. Collins, G. Minton, R. Baldwin, P. Berggren, A. Sarnblad, O.A. Amir, V.M. Peddemors, L. Karczmarski, A. Guissamulo, B. Smith, D. Sutaria, **G. Amato**, and H.C. Rosenbaum. 2013. Integrating multiple lined of evidence to better understand the evolutionary divergence of humpback dolphins along their entire distribution range: a new dolphin species in Australian waters? 2013. *Molecular Ecology*. Doi:10.1111/mec.12535.
- Le, M., B.N. Reid, W. McCord, E. Naro-Maciel, C. Raxworthy, **G. Amato**, and A. Georges. 2013. Resolving the phylogenetic history of the short-necked turtles, genera *Elseya* and *Myuchelys* (*Testudines: Chelidae*) from Australia and New Guinea. *Molecular Phylogenetics and Evolution*. 68(2)251-258.
- Caragiulo, A., I. Dias-Freedman, J.A. Clark, S. Rabinowitz, and **G. Amato**. 2013. Mitochondrial DNA sequence variation and phylogeography of Neotropic pumas (*Puma concolor*). *Mitochondrial DNA*. DOI:10.3109/194017326.2013.800486.
- **G. Amato** and R. DeSalle. 2012. Assessing biodiversity funding during the sixth extinction. *BioEssays*. 34: 658-660.
- Naro-Maciel, E., A.C.V. Bondioli, M. Martin, A. Almeida, C. Baptitotte, C. Belline, M. A. Marcovaldi, A.J.B. Santos, and **G. Amato**. 2012. The interplay of homing and dispersal in green turtles: A focus on the Southwestern Atlantic. *Journal of Heredity*. Doi:10.1093/jherd/ess068.
- Doukakis, P., E.K. Pikitch, A. Rothschild, R. DeSalle, **G. Amato** and S.O. Kolokotronis. 2012. Testing the effectiveness of an international trade agreement: marketplace forensics and CITES caviar trade regulation. *PLoS ONE* 7(7):e40907.doi:10.1371/journal.pone.0040907.
- Smith, K.M., S.J. Anthony, W.M. Switzer, J.H. Epstein, T. Seimon, H. Jia, M.D. Sanchez, T.T. Huynh, G. G. Galland, DVM, MS, S.E. Shapiro, J.M. Sleeman, D. McAloose, M. Stuchin, **G. Amato**, S.O. Kolokotronis, W.I. Lipkin, W.B. Karesh, P. Daszak, and N. Marano. 2012. Zoonotic Viruses Associated with Illegally Imported Wildlife Products. *PLoS ONE*, 7(1):e29505.doi:10.1371/journal.pone.0029505.
- McCartney-Melstad, E., T. Waller, P.A. Micucci, M. Barros, J. Draque, **G. Amato**, M.Mendez. 2012. Population structure and gene flow of the yellow anaconda (*Eunectes notaeus*) in Northern Argentina. *PLoS ONE*. 7(5):e37473.doi:10.1371/journal.pone.0037473.
- Alter, S.E., H.C. Rosenbaum, L.D. Postma, P. Whitridge, C. Gaines, D. Weber, M.G. Egan, M. Lindsey, **G. Amato**, L. Dueck, R.L. Brownell, M.P. Heide-Jorgensen, K.L. Laidre, A. Caccone, and B.L. Hancock. 2012. Gene flow on ice: the role of sea ice and whaling in shaping Holarctic genetic diversity and population differentiation in bowhead whales (*Balaena mysticetus*). *Ecology and Evolution*, 2(11)2895-2911.
- Pineda-Catalan, O., M. Mendez, A. Gleizer, C. Garcia-Davila, A.A. Aguirre, M. Pinedo-Vasquez, and **G. Amato**. 2012. Conservation genetics of harvested river

turtles, *Podocnemis expansa* and *Podocnemis unifilis*, in the Peruvian Amazon: All roads lead to Iquitos. *Mitochondrial DNA*. 23(3)230-238.

- Meredith, R.W., E. Hekkala, **G. Amato** and J. Gatesy. 2011. A phylogenetic hypothesis for *Crocodylus* (*Crocodylia*) based on mitochondrial DNA: Evidence for a trans-Atlantic voyage from Africa to the New World. *Molecular Phylogenetics and Evolution*, doi:10.1016/j.ympev.2011.03.026.
- Reid, B.N., W.P. McCord, J.B. Iverson, A. Georges, T. Bergman, **G. Amato**, R. DeSalle and E. Naro-Maciel. 2011. Comparing and combining distance-based and character-based approaches for barcoding turtles. *Molecular Ecology Resources*, doi:10.1111/j.1755-0998.2011.03032.x.
- Hekkala, E., M.H. Shirley, **G. Amato**, J.D. Austin, S. Charter, J. Thorbjarnarson, K.A. Vliet, M.L. Houck, R. DeSalle and M.J. Blum. 2011. An ancient icon reveals new mysteries: Mummy DNA resurrects a cryptic species within the Nile crocodile. *Molecular Ecology*, doi:10.1111/j.1365-294X.2011.05245.x.
- Doukakis, P., R. Hanner, M. Shivji, C. Bartholomew, D. Chapman, E. Wong and **G. Amato**. 2011. Applying genetic techniques to study remote shark fisheries in northeastern Madagascar. *Mitochondrial DNA*.2011; Early Online:1-6.
- Redford, K.H., **G. Amato**, J. Baillie, P. Beldomenico, E.L. Bennett, N. Clum, R. Cook, G. Fonseca, S. Hedges, F. Launay, S. Lieberman, G.M. Mace, A. Murayama, A. Putnam, J.G. Robinson, H. Rosenbaum, E.W. Sanderson, S.N. Stuart, P. Thomas and J. Thorbjarnarson. 2011. What does it mean to successfully conserve a (Vertebrate) species? *BioScience*. 61(1) 39-48.