

Gregory E. Blomquist

Associate Professor of Anthropology

Contact

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Personal Information

Date of Birth: May 25, 1978

Citizenship: USA

Family: Married to Rachel A. Blomquist née Newbury, 2 children

Education

2000–2007

PhD, Biological Anthropology

University of Illinois

Thesis: *Quantitative Genetics of Life History Microevolution in the Cayo Santiago rhesus macaques.*

Advisor: Steven R. Leigh

1996–2000

BA, *summa cum laude*

Ohio Wesleyan University

Majors: Biology, History

1992–1996

Commonwealth Diploma

Lafayette High School

Lexington, Kentucky

Full-Time Academic Appointments

2013–present
Associate Professor
Department of Anthropology, University of Missouri

2007–2013
Assistant Professor
Department of Anthropology, University of Missouri

2006–2007
Visiting Instructor
Department of Anthropology, University of Notre Dame

Other Academic Employment

2000–2001, 2006
Teaching Assistant
Department of Anthropology, University of Illinois

2003–2005
Statistics/GIS Consultant
College of Liberal Arts and Sciences, University of Illinois

2001–2003
Research Assistant
Dr. Stanley Ambrose, University of Illinois

2002
Research Assistant
Dr. Paul Garber, University of Illinois

Distinctions Honors, & Awards

2006 Student Prize; American Association of Anthropological Genetics

2001 Incomplete List of Teaching Assistants Ranked as Excellent; University of Illinois

1998–2000 Φ BK, Φ Σ , Φ A Θ ; Ohio Wesleyan University

Professional Memberships

2008–2010 American Society of Naturalists (ASN)

2004–present American Association of Biological Anthropologists (AABA, formerly AAPA)

2022–present American Association for the Advancement of Science (AAAS)

Languages

English first language

Spanish 5 years of classroom study (1991–1996)

Swedish semesters abroad in 1986 and 1993

Scholarships & Fellowships

2006 Graduate Fellowship University of Illinois \$9,808.50

1996–2000 Trustee Scholarship Ohio Wesleyan University ≈\$13,000 annually

Grants

2017-2018 Research Board, University of Missouri \$47,048
Genetics of Metabolic Syndrome in a Caribbean Village, Co-PI with Mark Flinn and Jerry Taylor

2011-2013 Research Council Grant, University of Missouri \$5,851.00 URC-11-054
Mother-infant conflict and genetic co-adaptation: lactation and growth in rhesus monkeys

2012 Faculty International Travel Grant, University of Missouri \$1,500
expenses for XXIV Congress of the International Primatological Society in Mexico

2005 Graduate College Dissertation Travel Grant, University of Illinois \$2,902.50
expenses for PhD thesis data collection in Puerto Rico

2001 Anthropology Department Travel Grant, University of Illinois \$1,500
expenses for paleoanthropology fieldwork in Kenya

Peer-Reviewed Publications

Hinde, K., Milligan, L.A., & Blomquist, G.E. (in press) The first diet: Mother's milk. In J.E. Lambert, M.A.H. Bryer, & J.M. Rothman (Eds.), *How Primates Eat: A Synthesis of Nutritional Ecology Across a Mammal Order*. Chicago: University of Chicago Press.

Cho, E.O., Cowgill, L.W., Middleton, K.M., Blomquist, G.E., Savoldi, F., Tsoi, J., & Bornstein, M.M. (2022) The influence of climate and population structure on East Asian skeletal morphology. *Journal of Human Evolution* 173: 103268. doi:10.1016/j.jhevol.2022.103268

Blomquist, G.E., Hinde, K. & Capitanio, J.P. (2022) Inheritance of hormonal stress response and temperament in infant rhesus macaques (*Macaca mulatta*): Nonadditive and sex-specific effects. *Behavioral Neuroscience* 136: 61-71. doi:10.1037/bne0000493

Keith, M.A, Flinn, M.V., Durbin, H.J., Rowan, T.R., Blomquist, G.E., Taylor, K.H., Taylor, J.F., & Decker, J.E. (2021). Genetic ancestry, admixture, and population structure in rural Dominica. *PLoS ONE* 16(11): e0258735. doi:10.1371/journal.pone.0258735

Munds, R.A., Titus, C.L., Moreira, L.A.A., Eggert, L.S., & Blomquist, G.E. (2021). Examining the molecular basis of coat color in a nocturnal primate family (Lorisidae). *Ecology & Evolution* 9: 4442-4459. doi:10.1002/ece3.7338

Blomquist, G.E. (2019). Adaptation, phylogeny, and covariance in milk macronutrient composition. *PeerJ* 7, e8085. doi:10.7717/peerj.8085

Keith, M.H, Blomquist, G.E., & Flinn, M.V. (2019) Anthropometric heritability and child growth in a Caribbean village: A quantitative genetic analysis of longitudinal height, weight, and body mass index in Bwa Mawego, Dominica. *American Journal of Physical Anthropology*, 170, 393–403. doi:10.1002/ajpa.23924

Blomquist, G.E. (2019). Unpacking the heritability of body mass index and other ratios. *American Journal of Human Biology*, 31, e23289. doi:10.1002/ajhb.23289

Munds, R.A., Titus, C.L., Eggert, L. S., & Blomquist, G. E. (2018). Using a multi-gene approach to infer the complicated phylogeny and evolutionary history of lorises (Order Primates: Family Lorisidae). *Molecular Phylogenetics & Evolution*, 127, 556–567. doi:10.1016/j.ympev.2018.05.025

Munds, R. A., Dunn, R. H., & Blomquist, G. E. (2018). Multivariate craniodental allometry of tarsiers. *International Journal of Primatology*, 39, 52–268. doi:10.1007/s10764-018-0034-x

Ahsan, M. H., & Blomquist, G. E. (2015). Modeling variation in early life mortality in the western lowland gorilla: Genetic, maternal, and other effects. *American Journal of Primatology*, 77, 666–678. doi:10.1002/ajp.22389

Blomquist, G. E., & Brent, L. J. N. (2014). Applying quantitative genetics methods to primate social behavior. *International Journal of Primatology*, 35, 108–128. doi:10.1007/s10764-013-9709-5

- Bailey, D. H., Walker, R. S., Blomquist, G., Hill, K. R., Hurtado, A. M., & Geary, D. C. (2013). Heritability and fitness correlates of personality in the Ache, a natural-fertility population in Paraguay. *PLoS ONE*, 8, e59325. doi:10.1371/journal.pone.0059325
- Blomquist, G. E. (2013). Maternal effects on offspring mortality in rhesus macaques (*Macaca mulatta*). *American Journal of Primatology*, 75, 238–251. doi:10.1002/ajp.22117
- Blomquist, G. E. (2013). Quantitative genetic perspectives on female macaque life histories: Heritability, plasticity, and trade-offs. In K. Klancy, K. Hinde, & J. Rutherford (Eds.), *Building Babies: Primate Development in Proximate and Ultimate Perspective* (pp. 495–480). New York: Springer. doi:10.1007/978-1-4614-4060-4
- Blomquist, G. E., & Williams, L. E. (2013). Quantitative genetics of costly neonatal sexual size dimorphism in squirrel monkeys (*Saimiri boliviensis*). *Journal of Evolutionary Biology*, 26, 756–765. doi:10.1111/jeb.12096
- Blomquist, G. E. (2012). Female age of first reproduction at Cayo Santiago: Heritability and shared environments. In Q. Wang (Ed.), *Bones, Genetics, and Behavior of Rhesus Macaques (Macaca mulatta): Cayo Santiago and Beyond* (pp. 195–208). New York: Springer. doi:10.1007/978-1-4614-1046-1
- Blomquist, G. E., & Turnquist, J. E. (2011). Selection on adult female body size in rhesus macaques. *Journal of Human Evolution*, 60, 677–683. doi:10.1016/j.jhevol.2010.05.010
- Blomquist, G. E., Sade, D. S., & Berard, J. D. (2011). Rank-related fitness differences and their demographic pathways in semi-free ranging rhesus macaques (*Macaca mulatta*). *International Journal of Primatology*, 31, 193–208. doi:10.1007/s10764-010-9461-z
- Blomquist, G. E. (2010). Heritability of individual fitness in female macaques. *Evolutionary Ecology*, 24, 657–669. doi:10.1007/s10682-009-9323-3
- Lawler, R. R., & Blomquist, G. E. (2010). Multivariate selection theory in primatology: An introduction. *Open Anthropology Journal*, 3, 206–229. doi:10.2174/1874912701003010206
- Blomquist, G. E. (2009). Environmental and genetic causes of maturational differences among rhesus macaque matrilineages. *Behavioral Ecology and Sociobiology*, 63(9), 1345–1352. doi:10.1007/s00265-009-0792-8
- Blomquist, G. E. (2009). Fitness-related patterns of genetic variation in rhesus macaques. *Genetica*, 135, 209–219. doi:10.1007/s10709-008-9270-x
- Blomquist, G. E. (2009). Methods of sequence heterochrony for describing modular developmental changes in human evolution. *American Journal of Physical Anthropology*, 138(2), 231–238. doi:10.1002/ajpa.20963
- Blomquist, G. E. (2009). Trade-off between age of first reproduction and survival in a female primate. *Biology Letters*, 5(3), 339–342. doi:10.1098/rsbl.2009.0009

Blomquist, G. E., Kowalewski, M. M., & Leigh, S. R. (2009). Demographic and morphological perspectives on life history evolution and conservation of New World monkeys. In P. A. Garber, A. Estrada, J. C. Bicca-Marques, E. W. Heymann, & K. B. Strier (Eds.), *South American Primates: Comparative Perspectives in the Study of Behavior, Ecology, and Conservation* (pp. 117–138). New York: Springer. doi:10.1007/978-0-387-78705-3_5

Garber, P. A., Sallanave, A., Blomquist, G. E., & Anzenberger, G. (2009). A comparative study of the kinematics of trunk-to-trunk leaping in *Callimico goeldii*, *Callithrix jacchus* and *Cebuella pygmaea*. In L. C. Davis, S. M. Ford, & L. Porter (Eds.), *The Smallest Anthropoids: The Marmoset/Callimico Radiation* (pp. 259–277). New York: Springer. doi:10.1007/978-1-4419-0293-1_14

Blomquist, G. E. (2007). Population regulation and the life history studies of LaMont Cole. *History and Philosophy of the Life Sciences*, 29(4), 495–516.

Leigh, S. R., & Blomquist, G. E. (2007). Life history. In C. Campbell, A. Fuentes, K. C. MacKinnon, M. Panger, & S. Bearder (Eds.), *Primates in Perspective* (pp. 396–407). New York: Oxford University Press. Chapter 25 in updated 2nd edition published in 2011

Garber, P. A., Blomquist, G. E., & G., A. (2005). Kinematic analysis of trunk-to-trunk leaping in Goeldi's monkey *Callimico goeldii*. *International Journal of Primatology*, 26, 223–240. doi:10.1007/s10764-005-0732-z

Published Abstracts & Invited Presentations

Cho, E. O., Blomquist, G. E., & Cowgill, L. W. (2022) The impact of precipitation and humidity on East Asian skeletal variation. *American Journal of Biological Anthropology* 177 (S73), 31. doi:10.1002/ajpa.24514. AABA poster

Cho, E. O., Blomquist, G. E., Cowgill, L. W., & Middleton, K. M. (2021) The influence of climate and population structure on East Asian skeletal morphology. *American Journal of Physical Anthropology* 174 (S71), 18. doi:10.1002/ajpa.24262. AAPA poster

Keith, M.H., Durbin, H. J., Rowan, T. N., Blomquist, G. E., Flinn, M. V., Taylor, J. F., & Decker, J. E. (2020) Genetic ancestry and demographic history of a rural Caribbean village. *American Journal of Physical Anthropology* 171 (S69), 138. doi:10.1002/ajpa.24023. AAPA poster

Cho, E. O., Blomquist, G. E., & Cowgill, L. W. (2018). Multivariate selection on human size and shape in East Asia. *American Journal of Physical Anthropology* 165 (S66), 48. doi:10.1002/ajpa.23489. AAPA poster

Munds, R. A., & Blomquist, G. E. (2017). Multivariate craniodental allometry in tarsiers (*Tarsius*): a small-bodied, cryptic, insular primate. *American Journal of Physical Anthropology*, 162(S64), 295. doi:10.1002/ajpa.23210. Poster in AAPA session, Anthropology of Islands.

Blomquist, G. E., & Williams, L. E. (2016). Phenotypic and genetic ontogenetic integration of squirrel monkey (*Saimiri boliviensis*) age-specific body mass. *American Journal of Physical Anthropology*

ogy, 159(S62), 97. doi:10.1002/ajpa.22955. AAPA poster.

Milligan, L. M., & Blomquist, G. E. (2013). When to wean: A life history perspective on duration of lactation in humans and nonhuman primates. Presentation at AAA session, Mothers, milks, and meaning: Innovations in studying lactation, infant feeding, and developmental ecology in humans and nonhuman primates.

Blomquist, G. E. (2012). Cooking up quantitative genetic statistics in primate populations: Favorite ingredients and recipes. Presentation at XXIV IPS symposium, Inside the black box: The genetic basis of primate behaviour.

Blomquist, G. E. (2012). Genetic models and primate examples of plasticity in life history traits. Presentation at XXIV IPS symposium, The role of phenotypic plasticity in the expression of primate life history traits.

Blomquist, G. E., Hinde, K. J., & Milligan, L. A. (2012). Diet predicts milk composition in primates. *American Journal of Physical Anthropology*, 147(S54), 101. doi:10.1002/ajpa.22033. AAPA poster.

Blomquist, G. E. (2011). Infant genetics and maternal variance for survivorship of rhesus macaque *Macaca mulatta* offspring. *American Journal of Primatology*, 73(S1), 80. doi:10.1002/ajp.20978. Presentation in 2011 ASP Interdisciplinary Symposium.

Waller, K., Blomquist, G. E., & Holland, T. (2011). An intra-cemetery craniometric assessment of biological variation and post-marital residence in the Missouri Late Mississippian. *American Journal of Physical Anthropology*, 144(S52), 303. doi:10.1002/ajpa.21502. AAPA poster.

Westphal, D. R., & Blomquist, G. E. (2011). Population history at the microscale: Craniometrics of Cayo Santiago macaques. *American Journal of Physical Anthropology*, 144(S52), 311. doi:10.1002/ajpa.21502. AAPA poster.

Blomquist, G. E. (2010). Sub-adult survival and the "invisible fraction": The contribution of juveniles to the heritability of fitness in female macaques. *American Journal of Physical Anthropology*, 141(S50), 69. doi:10.1002/ajpa.21276. Presentation at AAPA Juvenile Primates symposium.

Blomquist, G. E. (2009). Female age of first reproduction at Cayo Santiago: Heritability and shared environments. *American Journal of Physical Anthropology*, 138(S48), 94. doi:10.1002/ajpa.21030. Presentation at AAPA Cayo Santiago 70th anniversary symposium.

Kowalewski, M. M., Blomquist, G. E., & Urbani, B. (2009). The effects of travel costs on group size: A phylogenetic approach. *American Journal of Physical Anthropology*, 138(S48), 169. doi:10.1002/ajpa.21030. AAPA poster.

Blomquist, G. E. (2008). Genetic variation for life history and morphology in the cayo santiago female rhesus macaques *Macaca mulatta*. *American Journal of Physical Anthropology*, 135(S46), 70. doi:10.1002/ajpa.20806. AAPA poster, also presented at 2006 Midwest Primate Interest Group.

Blomquist, G. E. (2006). Quantitative genetics of female rhesus macaque age-specific reproductive output: Evidence for trade-offs and their implications. *American Journal of Physical Anthro-*

pology, 129(S42), 66. doi:10.1002/ajpa.20419. AAPA presentation, winner of AAAG student prize.

Garber, P. A., Sallenave, A., Blomquist, G. E., & Anzenberger, G. (2005). A comparative study of the kinematics of leaping in *Callimico goeldii* and *Callithrix jacchus*. *American Journal of Physical Anthropology*, 126(S40), 105. doi:10.1002/ajpa.20217. AAPA poster.

Garber, P. A., Blomquist, G. E., & Anzenberger, G. (2004). Kinematic analysis of trunk-to-trunk leaping in goeldi's monkey *Callimico goeldii*. *American Journal of Physical Anthropology*, 123(S38), 98. doi:10.1002/ajpa.60007. AAPA presentation.

Blomquist, G. E., Kowalewski, M. M., & Leigh, S. R. (2003). A phylogenetic approach to quantifying the relationship between age of first reproduction and longevity in primates. *American Journal of Physical Anthropology*, 120(S36), 68. doi:10.1002/ajpa.10247. AAPA poster.

Blumenfeld, J. A., Kowalewski, M. M., & Blomquist, G. E. (2003). Correlated evolution in the hominid midface: Neandertals in a comparative context. *American Journal of Physical Anthropology*, 120(S36), 69. doi:10.1002/ajpa.10247. AAPA poster, and 2003 Canadian Association of Physical Anthropologists.

Kowalewski, M. M., Blomquist, G. E., & Leigh, S. R. (2003). Life history and folivory in primates: The importance of juveniles. *American Journal of Physical Anthropology*, 120(S36), 132. doi:10.1002/ajpa.10249. AAPA poster.

Occasional Reviewer

Journals

American Journal of Physical Biological Anthropology

American Journal of Human Biology

Journal of Human Evolution

American Journal of Primatology

International Journal of Primatology

Journal of Medical Primatology

Journal of Animal Ecology

PLoS ONE

Primates

Human Nature

Evolutionary Biology

Granting Agencies

NSF, Biological Anthropology

Leakey Foundation

Graduate Students

MA

Darice Westphal, 2009–2011

PhD

Rachel Munds, 2011–2018

Monica (Ahsan) Keith, 2012–2020

Regularly Offered Courses

Undergraduate

Introduction to Biological Anthropology

Primate Anatomy & Evolution

Human Biology & Life History

Upper-Level or Graduate

Human Biological Variation

Human Evolutionary Genetics

Graduate Seminar (topics vary)

References

Available upon request

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