

Cara Wall-Scheffler

Professor of Biology
Seattle Pacific University, Suite 205
3307 3rd Avenue West
Seattle, WA 98119-1997
United States
Email: cwallsch@spu.edu
Twitter: @WallScheffler

EDUCATION & TRAINING

- 2001-2005 **PhD, Department of Biological Anthropology, University of Cambridge**
GATES CAMBRIDGE SCHOLAR
Dissertation: *Coastal Ungulates: The Seasonal Use of Ibex and Barbary Sheep Among Mediterranean Hominins*
- 2000-2001 **MPhil, Department of Biological Anthropology, University of Cambridge**
Dissertation: *Seasonality Stress Among Iberian Neanderthals*
High Pass
- 1995-2000 **BA in Biology, Anthropology, and Literature, Seattle Pacific University**
Summa Cum Laude

PROFESSIONAL APPOINTMENTS

- 2019-Present **Chair, Department of Biology, Seattle Pacific University**
- 2017-Present **Professor of Biology, Seattle Pacific University**
- 2007-Present **Affiliate Faculty of Anthropology, University of Washington**
- 2012-2017 **Associate Professor of Biology, Seattle Pacific University**
- 2007-2012 **Assistant Professor of Biology, Seattle Pacific University**
- Evolutionary Mechanisms and Theory
- Into to Biological Anthropology
- Human Anatomy & Physiology
- Human Biological Diversity
- Environmental Physiology
- Women in Science
- 2004-2007 **Post-Doctoral Research Fellow, Department of Zoology, University of Wisconsin**
- with Prof Karen Steudel-Numbers
- 2002-2003 **Instructor, Department of Biological Anthropology, University of Cambridge**

AWARDS & GRANTS

- Submitted** *Principal Investigator, The evolution of women's endurance, Templeton Foundation*
- 2021** *Principal Investigator, Faculty Research Grant: The evolutionary story behind women's successes in endurance sport,*

- 2021** Co-Principal Investigator, Supporting Structures: Innovative Collaborations supporting Diversity in STEM, Templeton Foundation, Murdock Charitable Trust, and SCIO, *with D. Wood and S. Mayo*
- 2020** 2019-2020 Professor of the Year, Seattle Pacific University
- 2017** Principal Investigator, Faculty Research Grant: The evolutionary biology of the human pelvis: An integrative approach
- 2017** Women in Science Frameshifter Award, St Catherine University
- 2016** 2015-2016 Scholar of the Year, Seattle Pacific University
- 2016** Principal Investigator, Faculty Research Grant: A philosophical approach to human evolution
- 2015** Principal Investigator, Faculty Research Grant: A philosophical approach to human evolution
- 2014** Principal Investigator, SCIO via the Templeton Foundation: A philosophical approach to human evolution
- 2014** Principal Investigator, Faculty Research Grant: Why so small? Heterochrony in tooth development as evidence for a life history shift among Blakely deer
- 2013-14** Winner, Abigail Quigley McCarthy Center for Women Annual Research and Creative Work Award--Collaborative Work Category, *with M.J. Myers*
- 2013** Principal Investigator, Sexual dimorphism's role in the energetic and thermoregulatory variation of incline walking, MJ Murdock Charitable Trust
- 2013** Principal Investigator, Faculty Research Grant: How does pregnancy change the shape of women's pelves?
- 2013** Co-Principal Investigator, BioLogos Foundation: Equipping the Next Generation of Paleobiologists
- 2012** 2011-2012 Professor of the Year, Seattle Pacific University
- 2011** Principal Investigator, Faculty Research Grant: Interactive effects of locomotion and reproduction on women's energetics
- 2010** 2009-2010 Junior Faculty Service Award
- 2010** Collaborator/Consultant, 3M Collaborative Research Grant, St Catherine University: Where to Carry Kids: A Comparison of Women and Men During Walking
- 2010** 2009-2010 Teacher of the Year in Science and Technology, Seattle Pacific University
- 2009** Principal Investigator, Faculty Research Grant: Can we use faunal remains to assess seasonal shifts in climate? Blakely deer as test of climatic shifts in hard tissue remains
- 2009** Participant, Venice Summer School on Science and Religion via Templeton Foundation: Are Humans Just Another Unique Species?
- 2007** Principal Investigator, Research Start-Up Grants for New Science Faculty, MJ Murdock Charitable Trust
- 2007** Collaborator/Consultant, NIH: Belly mass in walking women: Effects of loads on kinematics and energetics, #G11HD039786
- 2003-2004** Principal Investigator, Gates Cambridge Trust: Coastal Ungulates: The Seasonal Use of Ibex and Barbary Sheep among Mediterranean Hominins
- 2003** Principal Investigator, Lundgren Research Fund: Subsistence Strategies of Mediterranean Hominins
- 2003** Principal Investigator, Travel Award, Gates Cambridge Trust: The Seasonality of Site Use of Gibraltar Neanderthals
- 2003** Principal Investigator, Travel Award, Department of Biological Anthropology, University of Cambridge: The Seasonality of Site Use of Gibraltar Neanderthals

2003	Principal Investigator, Tutorial Award, St Edmunds College: The Seasonality of Site Use of Gibraltar Neanderthals
2002-2003	Overseas Scholarship, St Edmunds College
2002	Principal Investigator, Research Bursary, St Edmunds College: Seasonality of Neanderthal Site Use
2001-2003	Principal Investigator, Gates Cambridge Trust, Appointment as Gates Cambridge Scholar: Seasonal Use of Sites by MIS 3 Neanderthals
2000-2001	Overseas Scholar Award, University of Cambridge

PUBLICATIONS

Peer-Reviewed Papers

- Selinger, J.C., Jackson, R.W., Hicks, J.L., **Wall-Scheffler, C.M.**, Chang, D., & Delp, S.L. (submitted). Running in the wild: Energetics explain ecological running speeds. *Nature*.
- Hora, M., Pontzer, H., **Wall-Scheffler, C.M.**, & Sladek, V. (2020). Dehydration was not a limit for persistence hunting in *Homo ergaster*. *Journal of Human Evolution* 138: 102682.
<https://www.sciencedirect.com/science/article/pii/S0047248419300077>
- Wall-Scheffler, C.M.** (2019). The seasonality of site use at Taforalt. In R.N.E. Barton, A. Bouzouggar, S.N. Colcutt, L. Humphrey (Eds.), *Cemeteries and Sedentism in the Later Stone Age of NW Africa: Excavations at Grotte Des Pigeons, Taforalt, Morocco*. Mainz: Schnell & Steiner, pp 309-312.
- Long, E.S., Courtney, K.L.*, Lippert, J.C.*, & **Wall-Scheffler, C.M.** (2019). Reduced body size of insular black-tailed deer is caused by slowed development. *Oecologia* 189(3): 675-685.
<https://link.springer.com/article/10.1007/s00442-019-04367-3>
- Bouterse, L.* & **Wall-Scheffler, C.M.** (2018). Children are not like other loads: A cross-cultural perspective on the influence of burdens and companionship on human walking. *PeerJ* 6: e5547.
<https://peerj.com/articles/5547/>
- Alcantara, R.* & **Wall-Scheffler, C.M.** (2017). Stroller running: Energetic and kinematic changes across pushing methods. *PLOS ONE* 12(7): e0180575.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0180575>
- Rathkey, J.* & **Wall-Scheffler, C.M.** (2017). Do people choose to run at their optimal running speed? *American Journal of Physical Anthropology* 163(1): 85-93.
<http://onlinelibrary.wiley.com/doi/10.1002/ajpa.23187/full>
- Wall-Scheffler, C.M.** & Myers, M.J. (2017). The biomechanical and energetic advantages of a mediolaterally wide pelvis in women. *The Anatomical Record* 300(4): 764-775.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/ar.23553>
- Wall-Scheffler, C.M.** (2015). Optimal movement speeds in human locomotion. *Integrative and Comparative Biology* 55(6): 1155-1165.
<https://academic.oup.com/icb/article/55/6/1155/2363610/Sex-Differences-in-Incline-Walking-among-Humans?searchresult=1>
- Wall-Scheffler, C.M.**, Wagnild, J.M.*, & Wagler, E.* (2015). Accounting for human footprint variation while performing a load-bearing task. *PLoS ONE* 10(3): e0118619.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118619>
- Wall-Scheffler, C.M.** (2014). The balance between burden carrying, variable terrain and thermoregulatory pressures in assessing morphological variation. In K. Carlson & D. Marchi (Eds), *Reconstructing Mobility: Environmental, Behavioral and Morphological Determinants*. New York: Springer Life Sciences, pp. 173-192.
<http://www.springer.com/gp/book/9781489974594>

- Wagnild, J.* & **Wall-Scheffler, C.M.** (2013). Energetic consequences of human sociality: Walking speed choices among friendly dyads. *PLoS One* 8(10): e76576.
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0076576>
- Wall-Scheffler, C.M.** & Myers, M.J. (2013). Reproductive costs for everyone: How female frontal loads impact mobility. *Journal of Human Evolution* 64(5): 448-456.
<http://www.sciencedirect.com/science/article/pii/S0047248413000328>
- Wall-Scheffler, C.M.** (2012). Energetics, locomotion and female reproduction: Implications for human evolution. *Annual Review of Anthropology* 41: 71-85.
<http://www.annualreviews.org/doi/abs/10.1146/annurev-anthro-092611-145739>
- Wall-Scheffler, C.M.** (2012). The meaning of within population dimorphism for group mobility: Can men and women walk together? *Journal of Anthropology* 2012: 340493.
<http://www.hindawi.com/journals/janth/aip/340493/>
- Willcockson, M.* & **Wall-Scheffler, C.M.** (2012). Reconsidering the effects of respiratory constraints on the optimal running speed. *Medicine and Science in Sports and Exercise* 44(7): 1344-1350.
<http://dx.doi.org/10.1249/MSS.0b013e318248d907>
- Wall-Scheffler, C.M.**, Chumanov, E.S., Steudel-Numbers, K.L. & Heiderscheit, B.C. (2010). EMG activity across gait and incline: The impact of muscular activity on human morphology. *American Journal of Physical Anthropology* 143(4): 601-611.
<http://dx.doi.org/10.1002/ajpa.21356>
- Steudel-Numbers, K.L. & **Wall-Scheffler, C.M.** (2009). Optimal running speed and the evolution of hominin hunting strategies. *Journal of Human Evolution* 56: 355-360.
<http://dx.doi.org/10.1016/j.jhevol.2008.11.002>
- Chumanov, E.S., **Wall-Scheffler, C.M.**, & Heiderscheit, B.C. (2008). Gender differences in walking and running on level and inclined surfaces. *Clinical Biomechanics* 23(10): 1260-1268.
<http://dx.doi.org/10.1016/j.clinbiomech.2008.07.011>
- Wall-Scheffler, C.M.** & Foley, R.A. (2008). Digital Cementum Luminance Analysis (DCLA): A tool for the analysis of climatic and seasonal signals in dental cementum. *International Journal of Osteoarchaeology* 18 (1): 11-27. <http://dx.doi.org/10.1002/oa.918>
- Steudel-Numbers, K., Weaver, T., & **Wall-Scheffler, C.M.** (2007). The evolution of human running: Effects of changes in lower limb length on locomotor efficiency. *Journal of Human Evolution* 53(2): 191-196. <http://dx.doi.org/10.1016/j.jhevol.2007.04.001>
- Tilkens, M.J., **Wall-Scheffler, C.M.**, Weaver, T. & Steudel-Numbers, K. (2007). The effect of body proportions on thermoregulation: An experimental assessment of Allen's Rule. *Journal of Human Evolution* 53(3): 286-291. <http://dx.doi.org/10.1016/j.jhevol.2007.04.005>
- Wall-Scheffler, C.M.** (2007). Digital Cementum Luminance Analysis and the Huala Fteah hominins: How seasonality and season of use changed through time. *Archaeometry* 49(4): 815-826.
<http://www.blackwell-synergy.com/doi/abs/10.1111/j.1475-4754.2007.00342.x>
- Wall-Scheffler, C.M.**, Geiger, K.*, & Steudel-Numbers, K. (2007). Infant Carrying: The role of increased locomotory costs in early tool development. *American Journal of Physical Anthropology* 133(2): 841-846. <http://dx.doi.org/10.1002/ajpa.20603>
- Wall-Scheffler, C.M.**, Myers, M.J., & Steudel-Numbers, K. (2006). The application to bipeds of a geometric model of lower limb segment inertial properties. *Journal of Human Evolution* 51(3): 320-326.
<http://dx.doi.org/10.1016/j.jhevol.2006.04.001>

* Denotes Student Researcher

Wall, C.M. & Wall, Z.R. (2006). Research design in digital luminance analysis. *Journal of Archaeological Science* 33(8): 1152-1156. <http://dx.doi.org/10.1016/j.jas.2005.12.002>

Wall, C.M. (2005). The seasonality of site deposition of Gibraltar Neanderthals: Evidence from Gorham's and Vanguard Caves. *Journal of Iberian Archaeology* 7: 9-22.

Peer-Reviewed Book

Wall-Scheffler, C.M., Kurki, H., & Auerbach, B. (2020). *The Evolutionary Biology of the Human Pelvis: An Integrative Approach*. Cambridge: Cambridge University Press.

Book Reviews

Wall-Scheffler, C.M. (in press). Review of DeSilva, J. 2021. *First Steps: How Upright Walking Made Us Human*. *PaleoAnthropology*.

Papers in Preparation

Wall-Scheffler, C.M. (in prep). Does pregnancy really inhibit women's mobility? Insights from a longitudinal energetics study. For submission to *Proceedings of the Royal Society*.

Wall-Scheffler, C.M. (in prep). Baby carrying in all positions: Managing speed and cost over variable terrain. For submission to the *American Journal of Human Biology*.

Wall-Scheffler, C.M., Calton, J.*, & Ashton, C.* (in prep). Women's endurance performance does not decline with age. For submission to the *American Journal of Physical Anthropology*.

Wall-Scheffler, C.M. & Kurki, H. (in prep). Beyond sex and gender: Human pelvic morphology from an integrative context. For submission to *Evolutionary Anthropology*.

Wall-Scheffler, C.M., McCollor, K.*, & Morschek, T.* (in prep). Do women's walking advantages come from a lower center of mass? An assessment of loading carrying over unstable surfaces. For submission to the *Journal of Experimental Biology*.

Abstracts Published

2021

Wall-Scheffler, C.M. (2021). It's not just mass: Load position matters for speed and cost. *American Journal of Physical Anthropology Supplement* 72.

2020

Wall-Scheffler, C.M. & Kurki, K. (2020). Beyond sex and gender: Human pelvic morphology from an integrative context. *American Journal of Physical Anthropology Supplement* 70.

2019

Bonner-Harris, A.* & **Wall-Scheffler, C.M.** (2019). Human walking behavior. *American Journal of Physical Anthropology Supplement* 68: 24.

Cheyney Kane, H.* & **Wall-Scheffler, C.M.** (2019). The use of bouts during activity decreases women's core temperature more than men's. *American Journal of Physical Anthropology Supplement* 68: 40-1.

Wall-Scheffler, C.M. & Myers, M.J. (2019). No dilemma: A broad pelvis explains some of the advantages of women's gait. *American Journal of Physical Anthropology Supplement* 68: 260.

2018

Bonner-Harris, A.* & **Wall-Scheffler, C.M.** (2018). Taking rests changes the heart rates and core temperature of women and men during canoeing. *American Journal of Physical Anthropology Supplement* 66: 32.

- Cheyney Kane, H.* & **Wall-Scheffler, C.M.** (2018). The use of resting breaks changes blood perfusion during paddling bouts. *American Journal of Physical Anthropology Supplement* 66: 47-8.
- Kurki, K. & **Wall-Scheffler, C.M.** (2018) Location, Location, Location: Sexual dimorphism of the human pelvis has no universal pattern. *American Journal of Physical Anthropology Supplement* 66: 149.
- Sosanya, O.* & **Wall-Scheffler, C.M.** (2018). Baby carrying positions change walking speed. *American Journal of Physical Anthropology Supplement* 66: 261.
- Wall-Scheffler, C.M.** & Myers, M.J. (2018). Are there any sexually dimorphic measures that matter for locomotor effort? *American Journal of Physical Anthropology Supplement* 66: 295.

2017

- Gruss, L.T. & **Wall-Scheffler, C.M.** (2017). Sex differences in walking kinematics among modern humans. *American Journal of Physical Anthropology Supplement* 64: 203-4.

2016

- Myers, M.J. & **Wall-Scheffler, C.M.** (2016). Time to kick the treadmill habit? How self-selected walking speed and minimum cost of transport differ between treadmill and overground walking during load carrying. *American Journal of Physical Anthropology Supplement* 62: 239.
- Wall-Scheffler, C.M.** (2016). Human female pelvic dimensions are adapted for load carrying. *American Journal of Physical Anthropology Supplement* 62: 329.

2015

- Apple, E.D.*, Fish, K.J.*, Ouellette, Q.L.*, & **Wall-Scheffler, C.M.** (2015). Thermoregulation variation in women during different phases of the menstrual cycle. *American Journal of Physical Anthropology Supplement* 60: 70.
- Hové, C.M.* & **Wall-Scheffler, C.M.** (2015). Incline mobility and its effect on human sexual dimorphism. *AJPA Supplement* 60: 170.
- Myers, M.J., Steudel-Numbers, K.L., & **Wall-Scheffler, C.M.** (2015). Gross versus net metabolic rate: Which should be used when determining the speed of the minimum cost of transport for human walking? *AJPA Supplement* 60: 233.
- Pedersen, R.*, Barton, N., Turner, E. & **Wall-Scheffler, C.M.** (2015). Prehistoric use of *Ammotragus lervia* at Taforalt Cave, Morocco. *AJPA Supplement* 60: 249-50.
- Thetford, M.* & **Wall-Scheffler, C.M.** (2015). Do kinematics signal energetic optimality? *AJPA Supplement* 60: 303-304.
- Wall-Scheffler, C.M.** (2015). Costlier inside or outside? The costs of baby carrying from pregnancy to weaning. *AJPA Supplement* 60: 317.

2014

- Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (2014). The humor gender gap: How gender and humor interact to influence social behavior. *American Journal of Physical Anthropology Suppl* 58: 145-6.
- Jones, C.*, Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (2014). How travel time influences sexual dimorphism. *American Journal of Physical Anthropology Suppl* 58: 153.
- Myers, M.J., Lovstad, M.R.*, Kennedy, A.P.*, & **Wall-Scheffler, C.M.** (2014). Thermoregulatory and mobility consequences for reproductive age women carrying loads in an indigenous pack basket. *American Journal of Physical Anthropology Suppl* 58: 192.
- Wagnild, J.* & **Wall-Scheffler, C.M.** (2014). Tough terrain: The effects of incline walking on the human cost of transport curve. *American Journal of Physical Anthropology Suppl* 58: 263-4.
- Wall-Scheffler, C.M.** & Myers, M. (2014). The balance between body size and task in assessing the meaning of pelvic width for human locomotion. *American Journal of Physical Anthropology Suppl* 58: 264.

2013

- Wagnild, J.* & **Wall-Scheffler, C.M.** (2013). Costly courtship: the energetic burden of walking together. *AJPA Suppl* 56: 281.
- Wall-Scheffler, C.M.** (2013). Does pregnancy really inhibit women's mobility? Insights from a longitudinal energetics study. *AJPA Suppl* 56: 282-283.

2012

- Myers, M.J., Fasnacht, A.A.*, **Wall-Scheffler, C.M.** (2012). Sex differences in the stride frequency of walking while carrying a toddler manikin. *MSSE* 44:5 Supplement.
- Wall-Scheffler, C.M.** & Myers, M. (2012). Is female morphology selected for economy and male morphology selected for efficiency? Evidence from studies on humans. *AJPA Suppl* 54: 296.

2011

- Kjosness, K.* & **Wall-Scheffler, C.M.** (2011). Responding to chronic stress: longitudinal perspectives on metabolism. *AJPA Suppl* 52: 188.
- Myers, M., Myhre, A.*, Kpanquoi, M.*, Stearns, L.*, Boeff, K.*, & **Wall-Scheffler, C.M.** (2011). Self-selected walking speeds: Do females and males carrying children choose differently? *AJPA Suppl* 52: 222.
- Wall-Scheffler, C.M.** & Steudel-Numbers, K. (2011.). The meaning of within population dimorphism for group mobility. *AJPA Suppl* 52: 303-4.
- Willcockson, M.* & **Wall-Scheffler, C.M.** (2011). Entertaining entrainment: reconsidering the effects of respiratory constraints on the optimal running speed. *AJPA Suppl* 52: 311-2.

2010

- Myers, M.J., Boeff, K.A.*, & **Wall-Scheffler, C.M.** (2010). Effect of age, walking speed and frontal loads on step width and its variability. *Society of Integrative and Comparative Biology*. <http://www.sicb.org/meetings/2010/SICB2010-Posters.pdf>
- Myers, M.J., Ketter, M.*, Heithoff, A.*, Boeff, K.A.*, Steudel-Numbers, K., & **Wall-Scheffler, C.M.** (2010). Was heat retention important in determining *Homo* infant limb proportions? *AJPA Suppl* 50: 174-175. <http://www.sicb.org/meetings/2010/SICB2010-Posters.pdf>
- Wall-Scheffler, C.M.** (2010). Evolutionary tradeoffs: How thermoregulation and the cost of mobility impact morphology. *AJPA Suppl* 50: 238. <http://www.sicb.org/meetings/2010/SICB2010-Posters.pdf>

2009

- Block, L.M.*, Chumanov, E.S., Steudel-Numbers, K.L. & **Wall-Scheffler, C.M.** (2009). How sexual dimorphism and kinematics interact to impact cost over variable terrain. *AJPA Suppl* 48: 134.
- Gruss, L.T., **Wall-Scheffler, C.M.**, & Malik, N.* (2009). Infant carrying in humans: Interactions between morphometric and gait parameters. *AJPA Suppl* 48: 211.
- Myers, M.J., Hayes, C.M.*, Hokanson, A.L.*, McCafferty, J.A.*, Meissner, S.M.*, & **Wall-Scheffler, C.M.** (2009). Belly loads influence minimum cost of transport and speed it occurs in walking women. *MSSE Supplement* 41:5.
- Myers, M.J., Hokanson, A.L.*, Myhre, A.L.*, Mascioli, M.D.*, McCafferty, J.A.*, & **Wall-Scheffler, C.M.** (2009). Grandmothers and mothers on the move: How age and frontal loads affect biomechanics and energetic. *AJPA Suppl* 48: 302-303.
- Myhre, A.L.*, **Wall-Scheffler, C.M.**, and Myers, M.J. (2009). Belly loads influence arm and lower limb movements in walking women. *Minnesota Academy of Science, Undergraduate Symposium*.
- Omodt, J.R., Hokanson, A.L.*, **Wall-Scheffler, C.M.**, & Myers, M.J. (2009). Associations between core strength, walking speed, and age in women. *MSSE Supplement* 41:5.
- Steudel-Numbers, K.L., Weaver, T.D., & **Wall-Scheffler, C.M.** (2009). Just how inefficient is human running? *AJPA Suppl* 48: 384.

Wall-Scheffler, C.M. & Myers, M.J. (2009). Reproductive costs for everyone: How female frontal loads impact mobility. *AJPA Suppl* 48: 414.

2008

McCafferty, J.*, Hayes, C.*, Hokanson, A.*, Meissner, S.*, Myers, M.J., (Advisor), and **Wall-Scheffler, C.M.** (Advisor). (2008). Abdominal loads and the cost of walking in women. Minnesota Academy of Science, Undergraduate Symposium. *Journal of the Minnesota Academy of Science* 71:20. Available online at http://www.journal.mnmas.org/Vol_71_Abstracts.pdf

Meissner, S.*, Hokanson, A.*, Hayes, C.*, McCafferty, J.*, **Wall-Scheffler, C.M.**, (Advisor), and Myers, M.J. (Advisor). (2008). Speed of minimum cost of walking: age and load-related differences in women. Minnesota Academy of Science, Undergraduate Symposium. *Journal of the Minnesota Academy of Science* 71: 20-21.

http://www.journal.mnmas.org/Vol_71_Abstracts.pdf

Myers, M.J. & **Wall-Scheffler, C.M.** (2008). Grandmothers getting it done: Somatic durability in walking tasks. *AJPA Suppl* 46: 160.

Studel-Numbers, K.L. & **Wall-Scheffler, C.M.** (2008) There is an optimal speed of human running: Implications for the evolution of hominin hunting strategies. *AJPA Suppl* 46: 201.

Wall-Scheffler, C.M. & Myers, M.J. (2008) Working harder and taking longer: How frontal loads can impact female reproductive costs. *AJPA Suppl* 46: 217.

2007

Chumanov, E.S., **Wall-Scheffler, C.M.**, and Heiderscheit, B.C. (2007). Do anatomical measures explain gender differences in hip and pelvis motion during gait? World Confederation of Physical Therapy Conference. Available online at

<http://www.wcpt.org/abstracts2007/WCPT2007.html>

Studel-Numbers, K.L. and **Wall-Scheffler, C.M.** (2007). Is there an optimal speed of human running? *PaleoAnthropology*.

http://www.paleoanthro.org/pdfs/Paleo%20Abstracts%202007_meetings%20version.pdf

Myers, M.J. and **Wall-Scheffler, C.M.** (2007). Role of load carrying in the evolution of increased body size. *AJPA Suppl* 44: 176.

Studel-Numbers, K., **Wall-Scheffler, C.M.**, Myers, M.J., and Weaver, T.D. (2007). The energetic cost of human running: factors affecting its variability. *AJPA Suppl* 44: 225.

Wall-Scheffler, C.M., Geiger, K.*, and Studel-Numbers, K. (2007). The role of infant carrying costs on early tool development. *AJPA Suppl* 44: 242-3.

Chumanov, E.S., **Wall-Scheffler, C.M.**, Thelen, D.G., and Heiderscheit, B.C. (2007). Gender differences in hip and pelvis motion as a function of gait, speed and incline. American Physical Therapy Association.

http://www.apta.org/AM/Template.cfm?Section=Combined_Sections_Meeting_CSM_&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=154&ContentID=33936

2006

Myers, M.J., **Wall-Scheffler, C.M.**, Weaver, T.D., and Studel-Numbers, K.L. (2006). Complex effect of limb length on cost of transport of running humans. *Society of Integrative and Comparative Biology*.

<http://www.sicb.org/meetings/2007/schedule/abstractdetails.php?id=922>

Tilkens, M.J., **Wall, C.M.**, Weaver, T. and Studel-Numbers, K. (2006). The effect of body proportions on thermoregulation: An experimental approach. *AJPA Suppl* 42: 177.

Wall-Scheffler, C.M. (2006). Lateral excursion of the pelvis and the effect of leg-length. *AJPA Suppl* 42: 184.

<2005

Wall, C.M. (2005). Cementum Luminance Analysis (CLA): A new approach to dental cementum studies. *AJPA Suppl* 40: 217.

Foley, R.A., Lahr, M.M., and **Wall, C.M.** (2001). Evolutionary geography of Late Pleistocene hominins: The ecology of multiple dispersals. In C. Finlayson (Ed.), *Neanderthals and Modern Humans in Late Pleistocene Eurasia*. Gibraltar: Gibraltar Museum Press, pp.21-25.

<http://www.gib.gi/museum/p300.htm#Evolutionary%20geography>

PRESENTATIONS

2021

Chilczuk, S.*, Nelson, K.*, Ruther, R.,* & Wall-Scheffler, C.M. (April 2021). Women's role as hunters: Evidence from around the world. Annual Meeting of the American Association of Physical Anthropology, Virtual Meeting.

Wall-Scheffler, C.M. (April 2021). It's not just mass: Load position matters for speed and cost. Annual Meeting of the American Association of Physical Anthropology, Virtual Meeting.

Wall-Scheffler, C.M. (August 2021). Reassessment of the Endurance Running Hypothesis in light of optimal running speeds. Keynote lecture, Annual meeting of the American Society of Biomechanics, Virtual Meeting.

2020

Wall-Scheffler, C.M. (December 2020). No dilemma: A (medio-laterally) broad pelvis explains some of the advantages of women's gait. Invited lecture to the International Womxn in Biomechanics, Virtual Meeting.

https://www.youtube.com/watch?v=PfvNZOEMSWM&t=26s&ab_channel=Int%27WomxninBiomechanicsIWB

Wall-Scheffler, C.M. (July 2020). Does evolutionary anthropology show that humans are distinctive? Invited lecture to the Faraday Institute, Cambridge, UK.

https://www.youtube.com/watch?v=H5usxZPWuXQ&t=49s&ab_channel=FaradayInstitute

Jenney, M.*, Calton, J.*, **Wall-Scheffler, C.M.** (April 15, 2020). The sexual division of foraging labor: Women in hunter gatherer societies. Annual Meeting of the American Association of Physical Anthropology, Los Angeles, CA, USA. *COVID Cancelled*

Wall-Scheffler, C.M. & Kurki, K. (April 16, 2020). Beyond sex and gender: Human pelvic morphology from an integrative context. Annual Meeting of the American Association of Physical Anthropology, Los Angeles, CA, USA. *COVID Cancelled*

2019

Cheyney Kane, H.*, Bonner-Harris, Z.*, & **Wall-Scheffler, C.M.** (November 2019). The use of resting breaks changes blood perfusion during paddling bouts. The Annual MCRS Conference, Vancouver, WA, USA.

Duerre, A.*, Giraud, F.*, Nichols, A.*, & **Wall-Scheffler, C.M.** (November 2019). Effect of load carrying, vigilance, and social context on pedestrian walking speed. The Annual MCRS Conference, Vancouver, WA, USA.

Wall-Scheffler, C.M. (August 2019). Women evolved to walk. International Society of Biomechanics, Calgary, AB, USA

Ashton, C. & **Wall-Scheffler, C.M.** (May 2019). Endurance and aging: Measuring gender differences in ultramarathoners. Erickson Undergraduate Research Conference, Seattle, WA, USA.

[§]Cheyney Kane, H. & **Wall-Scheffler, C.M.** (May 2019). The use of bouts during activity decreases women's core temperature more than men's. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Hemenway, J., Kim, U., Long, E.S. & **Wall-Scheffler, C.M.** (May 2019). Survivorship of Columbian black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Erickson Undergraduate Research Conference, Seattle, WA, USA.

- [§]Hubble, M., Bunge, E., & **Wall-Scheffler, C.M.** (May 2019). Baby steps: Child carrying strategies of urban individuals. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- [§]Kano, C., San Roman, I., Long, E.S. & **Wall-Scheffler, C.M.** (May 2019). Survivorship of male harvested Columbian black-tailed deer (*Odocoileus hemionus columbianus*) on Blakeley Island, WA. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Krumm, K. & **Wall-Scheffler, C.M.** (May 2019). Superwomen: Sexual dimorphism in energy expenditure during exercise. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Bonner-Harris, A.* & **Wall-Scheffler, C.M.** (March 2019). Human walking behavior. American Association of Physical Anthropology Annual Meeting, Cleveland, OH, USA.
- Cheyney Kane, H.* & **Wall-Scheffler, C.M.** (March 2019). The use of bouts during activity decreases women's core temperature more than men's. American Association of Physical Anthropology Annual Meeting, Cleveland, OH, USA.
- Wall-Scheffler, C.M. & Myers, M.J. (March 2019). No dilemma: A broad pelvis explains some of the advantages of women's gait. American Association of Physical Anthropology Annual Meeting, Cleveland, OH, USA.

2018

- Cheyney Kane, H.*, Bonner-Harris, A.*, & **Wall-Scheffler, CM.** (November 2018). The use of resting breaks changes blood perfusion during paddling bouts. The Annual MCRS Conference, Vancouver, WA, USA.
- Bonner-Harris, A.*, Lee, N.*, Stohler, E.*, & **Wall-Scheffler, CM.** (May 2018). Human walking behavior at crosswalks. University of Washington Undergraduate Research Conference, Seattle, WA, USA.
- Bonner-Harris, A.* & **Wall-Scheffler, CM.** (May 2018). Human walking behavior at crosswalks. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Shim, R.* & **Wall-Scheffler, CM.** (May 2018). Human walking behavior. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Sosanya, O.* & **Wall-Scheffler, CM.** (May 2018). Baby carrying positions change walking speed. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- [§]Bonner-Harris, A.* & **Wall-Scheffler, CM.** (April 2018). Taking rests changes the heart rates and core temperature of women and men during canoeing. American Association of Physical Anthropology Annual Meeting, Austin, TX, USA.
- [§]Cheyney Kane, H.* & **Wall-Scheffler, CM.** (April 2018). The use of resting breaks changes blood perfusion during paddling bouts. American Association of Physical Anthropology Annual Meeting, Austin, TX, USA.
- Kurki, K. & **Wall-Scheffler, CM.** (April 2018) Location, Location, Location: Sexual dimorphism of the human pelvis has no universal pattern. American Association of Physical Anthropology Annual Meeting, Austin, TX, USA.
- [§]Sosanya, O.* & **Wall-Scheffler, CM.** (April 2018). Baby carrying positions change walking speed. American Association of Physical Anthropology Annual Meeting, Austin, TX, USA.
- Wall-Scheffler, C.M.** & Myers, M.J. (April 2018). Are there any sexually dimorphic measures that matter for locomotor effort? American Association of Physical Anthropology Annual Meeting, Austin, TX, USA.

2017

- Bonner-Harris, A.*, Dang, N.*, Green, A.* & **Wall-Scheffler, CM.** (November 2017). Human walking behavior at crosswalks. Murdock Undergraduate Research Conference, Spokane, WA, USA.
- Cheyney Kane, H.* & **Wall-Scheffler, CM.** (November 2017). Blood perfusion is a measure of physiological effort. Murdock Undergraduate Research Conference, Spokane, WA, USA.
- Sosanya, O.* & **Wall-Scheffler, CM.** (November 2017). Baby carrying positions change walking speed. Murdock Undergraduate Research Conference, Spokane, WA, USA.

- Bouterse, L.* & **Wall-Scheffler, C.M.** (May 2017). Costs of group locomotion: A cross-cultural examination of effects on walking speed of group composition and loading. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Courtney, K.*, Hildebrand, T.*, Long, E.S., & **Wall-Scheffler, C.M.** (May 2017). The island rule and developmental heterochrony in black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, Washington USA. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Shrader, A.*, Boot, E.* & **Wall-Scheffler, C.M.** (May 2017). Effects of training on optimal running speed. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Wall-Scheffler, C.M.** (May 2017). The role of female pelvic width on walking economy and speed: Shifting paradigms on sexual dimorphism. Frameshifter Award Lecture, St Catherine University, Minneapolis, MN, USA.
- Gruss, L.T. & **Wall-Scheffler, C.M.** (April 2017). Sex differences in walking kinematics among modern humans. American Association of Physical Anthropology Annual Meeting, New Orleans, LA, USA.
- Wall-Scheffler, C.M.**, Kurki, H., Auerbach, B. (March 2017). Human pelvic morphology from an integrative context. Paleoanthropology Society Annual Meeting, Vancouver, BC, Canada.
- Wall-Scheffler, C.M.** (February 2017). The role of female pelvic width on walking economy and speed: Benefits with few tradeoffs. Annual Darwin Day Lecture, University of Wisconsin-Madison, USA.
- Wall-Scheffler, C.M.** (February 2017). Reassessment of the Endurance Running Hypothesis in light of optimal running speeds. World Anthropology Day Lecture, University of Wisconsin-Madison, USA.

2016

- Wall-Scheffler, C.M.** (July 2016). What is human 'uniqueness'? Invited lecture to the Faraday Institute, Cambridge, UK.
- Alcantara, R.* & **Wall-Scheffler, C.M.** (June 2016). The energetic cost of stroller running. Annual Meeting of the American College of Sports Medicine, Boston, MA, USA.
- Benjamin, G.* & **Wall-Scheffler, C.M.** (May 2016). *Human locomotion: examining energy costs and human behavior associated with load carrying*. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Davies, K.* & **Wall-Scheffler, C.M.** (May 2016). *Sexual dimorphism in human gait efficiency: An EMG analysis*. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Erickson, P.* & **Wall-Scheffler, C.M.** (May 2016). *Thermoregulation variation between humans while walking stairs*. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- †Lippert, J.*, McMillen, B.*, Hildebrand, T.*, Courtney, K.*, Long, E.S., & **Wall-Scheffler, C.M.** (May 2016). *Blakely Island deer, developmental heterochrony and the Island Rule*. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Wall, R.W. & **Wall-Scheffler, C.M.** (May 4, 2016). Human evolution in New Creation. Paul T. Walls Lecture of Wesleyan Scripture and Theology, Seattle, WA, USA.
- Myers, M.J. & **Wall-Scheffler, C.M.** (April 2016). Time to kick the treadmill habit? How self-selected walking speed and minimum cost of transport differ between treadmill and overground walking during load carrying. Annual Meeting of the American Association of Physical Anthropology, Atlanta, GA, USA.
- Wall-Scheffler, C.M.** (April 2016). Human female pelvic dimensions are adapted for load carrying. Annual Meeting of the American Association of Physical Anthropology, Atlanta, GA, USA.
- Alcantara, R.* & **Wall-Scheffler, C.M.** (January 2016). Push it, push it real good: The energetic cost of stroller running. Annual Meeting of the Society of Integrative and Comparative Biology, Portland, OR, USA.

2015

- Alcantara, R.* & **Wall-Scheffler, C.M.** (November 2015). The energetic cost of stroller running. Murdock Undergraduate Research Conference, Vancouver, WA, USA.

- Wall-Scheffler, C.M.** (September 2015). Energetic effects in women: assessing bi-directional interactions with menstrual phase cycle. Annual Meeting of the Society of Psychophysiological Research, Seattle, WA, USA.
- †Apple, E.D.*, Ouellette, Q.L.*, & **Wall-Scheffler, C.M.** (May 2015). Thermoregulation variation in women during different phases of the menstrual cycle. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Arnold, L.*, Pedersen, R.*, Long, E.S., & **Wall-Scheffler, C.M.** (May 2015). Heterochrony in tooth development show a life history shift among Blakely deer. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Thetford, M.* & **Wall-Scheffler, C.M.** (May 2015). Do kinematics signal energetic optimality? Erickson Undergraduate Research Conference, Seattle, WA, USA.
- §Apple, E.D.*, Fish, K.J.*, §Ouellette, Q.L.*, & **Wall-Scheffler, C.M.** (March 2015). Thermoregulation variation in women during different phases of the menstrual cycle. Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA.
- Hové, C.M.* & **Wall-Scheffler, C.M.** (March 2015). Incline mobility and its effect on human sexual dimorphism. Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA.
- Pedersen, R.*, Barton, N., Turner, E. & **Wall-Scheffler, C.M.** (March 2015). Prehistoric use of *Ammotragus lervia* at Taforalt Cave, Morocco. Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA.
- Myers, M.J., Steudel-Numbers, K.L., & **Wall-Scheffler, C.M.** (March 2015). Gross versus net metabolic rate: Which should be used when determining the speed of the minimum cost of transport for human walking? Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA.
- §Thetford, M.* & **Wall-Scheffler, C.M.** (March 2015). Do kinematics signal energetic optimality? Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA.
- Wall-Scheffler, C.M.** (March 2015). Costlier inside or outside? The costs of baby carrying from pregnancy to weaning. Annual Meeting of the American Association of Physical Anthropology, St Louis, MO, USA. Invited Symposium.
- Wall-Scheffler, C.M.** (January 2015). Optimal movement speeds in human locomotion. Invited Symposium: Towards a general framework for predicting animal movement speeds in nature. Annual Meeting of the Society of Integrative and Comparative Biology, West Palm Beach, Florida, USA. Invited Symposium.

2014

- Wall-Scheffler, C.M.** (July 2014). Human sexual dimorphism from the perspective of mobility strategies. Invited lecture to Department of Anatomy, Otago University, Dunedin, NZ.
- Wall-Scheffler, C.M.** (July 2014). What does human evolution look like? Some evidence for how people became ‘modern’. Invited lecture to the Faraday Institute, Cambridge, UK.
- Wall-Scheffler, C.M.** (June 2014). What makes us human? Some evidence on becoming “human”. Invited lecture to Calvin College, Grand Rapids, MI, USA.
- †Apple, E.D.*, Fish, K.J.*, Ouellette, Q.L.*, & **Wall-Scheffler, C.M.** (May 2014). Thermoregulation variation in women during different phases of the menstrual cycle. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Arnold, L.*, §Pedersen, R.*, Long, E. & **Wall-Scheffler, C.M.** (May 2014). Age structure and survivorship of black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Erickson Undergraduate Research Conference, Seattle, WA, USA.

- Herrman, J.*, Spargo, D.*, Long, E. & **Wall-Scheffler, C.M.** (May 2014). Does heterochrony explain the small size of black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA? Erickson Undergraduate Research Conference, Seattle, WA, USA.
- ^{†§}Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (May 2014). The humor gender gap: How gender and humor interact to influence social behavior. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Kurita, M.* & **Wall-Scheffler, C.M.** (mentor) (May 2014). The evolution of modern human bipedalism: A biomechanical argument for an arboreal ancestor. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Nieman, C.* & **Wall-Scheffler, C.M.** (mentor) (May 2014). Are male rescuers more likely to save your life? Gender disparity in effective chest compression delivery during cardiopulmonary resuscitation. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- [§]Pedersen, R.*, [§]Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (May 2014). How travel time influences sexual dimorphism. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Wall-Scheffler, C.M.** (April 2014). The role of female pelvic width on walking economy and speed: Benefits with few tradeoffs. Invited Symposium: The Obstetrical Dilemma in the Human Pelvis: Constraints, Compromises and Complications. Annual Meeting of the American Association of Anatomists, San Diego, CA, USA.
- [§]Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (April 2014). The humor gender gap: How gender and humor interact to influence social behavior. Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.
- Jones, C.*, [§]Pedersen, R.*, [§]Hové, C.M.*, Wagnild, J.M.*, & **Wall-Scheffler, C.M.** (April 2014). How travel time influences sexual dimorphism. Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.
- Myers, M.J., Lovstad, M.R.*, Kennedy, A.P.*, & **Wall-Scheffler, C.M.** (April 2014). Thermoregulatory and mobility consequences for reproductive age women carrying loads in an indigenous pack basket. Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.
- Wagnild, J.* & **Wall-Scheffler, C.M.** (April 2014). How do the phases of the menstrual cycle influence core temperature changes during activity? Undergraduate Symposium, Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.
- Wagnild, J.* & **Wall-Scheffler, C.M.** (April 2014). Tough terrain: The effects of incline walking on the human cost of transport curve. Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.
- Wall-Scheffler, C.M.** & Myers, M. (April 2014). The balance between body size and task in assessing the meaning of pelvic width for human locomotion. Annual Meeting of the American Association of Physical Anthropology, Calgary, AB, Canada.

2013

- Wall-Scheffler, C.M.** (November 14, 2013). Hominin subsistence strategies: Access to resources in the context of mobility, morphology and reproduction. Invited Lecture to University of Washington PaleoLunch Lecture Series.
- Wall-Scheffler, C.M.** (October 7, 2013). The meaning of human sexual dimorphism for mobility patterns. Invited Speaker at the University of Victoria Anthropology Colloquium Series.
- Wall-Scheffler, C.M.** (July 2013). What does human evolution look like? Some evidence for how people became 'modern'. Invited Lecture to the Faraday Institute, Cambridge, UK.

Wall-Scheffler, C.M. & Myers, M.J. (July 2013). The meaning of sexual dimorphism of locomotor morphology. Invited Symposium at the International Conference of Vertebrate Morphology, Barcelona, Spain.

Wagnild, J.* & **Wall-Scheffler, C.M.** (May 2013). The influences of climate and mobility on the length of the human lower limb. Erickson Undergraduate Research Conference, Seattle, WA, USA.

[§]Wagnild, J.* & **Wall-Scheffler, C.M.** (April 2013). Costly courtship: the energetic burden of walking together. Annual Meeting of the American Association of Physical Anthropology, Knoxville, TN USA. (Main event and Undergraduate Symposium).

Wall-Scheffler, C.M. (April 2013). Does pregnancy really inhibit women's mobility? Insights from a longitudinal energetics study. Annual Meeting of the American Association of Physical Anthropology, Knoxville, TN USA.

2012

Wall-Scheffler, C.M. (July 2012). What does human evolution look like? Some evidence for how people became 'modern'. Invited Lecture to St Edmund's College, Cambridge, UK.

Calvin, C., Rush, A., Long, E.S., **Wall-Scheffler, C.M.** (May 2012). Determining population structure in an island population of *Odocoileus hemionus columbianus* (black-tailed deer) using polarized light microscopy and annual growth layers of dental cementum to estimate age at death. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Dunn, C. & **Wall-Scheffler, C.M.** (May 2012). Mind your Ps and Qs: Teaching Hardy-Weinberg to Undergraduates. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Myers, M.J., Fasnacht, A.A.*, & **Wall-Scheffler, C.M.** (May 2012). Sex differences in the stride frequency of walking while carrying a toddler manikin. Annual Meeting of the American College of Sports Medicine, San Francisco, CA USA.

Spence, P.*, Rathkey, J.*, & **Wall-Scheffler, C.M.** (May 2012). Do people choose to run at their optimal running speed? Erickson Undergraduate Research Conference, Seattle, WA, USA.

[†]Wagler, E.*, Moore, D.*, & **Wall-Scheffler, C.M.** (May 2012). Fancy footprints and loaded locomotion: Accounting for human footprint variation while performing a load-bearing task. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Wagnild, J.* & **Wall-Scheffler, C.M.** (May 2012). Costly courtship: The energetic burden of walking together. Erickson Undergraduate Research Conference, Seattle, WA, USA.

[‡]Rathkey, J.*, Chumanov, E., & **Wall-Scheffler, C.M.** (April 2012). A spring in your step: The spring-mass model and the energetic cost of running. Undergraduate Symposium, Annual Meeting of the American Association of Physical Anthropology, Portland, OR USA.

[§]Sallstrom, J.*, Synder, K.*, & **Wall-Scheffler, C.M.** (April 2012). Baby on the hip: How do urban individuals carry infants? Undergraduate Symposium, Annual Meeting of the American Association of Physical Anthropology, Portland, OR USA.

[§]Spence, P.*, Rathkey, J.*, & **Wall-Scheffler, C.M.** (April 2012). Do people choose to run at their optimal running speed? Undergraduate Symposium, Annual Meeting of the American Association of Physical Anthropology, Portland, OR USA.

[§]Wagler, E.*, Moore, D.*, & **Wall-Scheffler, C.M.** (April 2012). Fancy footprints and loaded locomotion: Accounting for human footprint variation while performing a load-bearing task. Undergraduate

[†] Student Award Recipient

[‡] Student Financial Prize Recipient

Symposium, Annual Meeting of the American Association of Physical Anthropology, Portland, OR USA.

[§]Wagnild, J.* & **Wall-Scheffler, C.M.** (April 2012). Costly courtship: The energetic burden of walking together. Undergraduate Symposium, Annual Meeting of the American Association of Physical Anthropology, Portland, OR USA.

Wall-Scheffler, C.M. & Myers, M.J. (April 2012). Is female morphology selected for economy and male morphology selected for efficiency? Evidence from studies on humans. Invited symposium at the annual meeting of the American Association of Physical Anthropology, Portland, OR USA.

2011

Rathkey, J.*, Chumanov, E.S. & **Wall-Scheffler, C.M.** (November 2011). The spring-mass model and the energetic cost of running. Murdock Undergraduate Research Conference, Seattle, WA, USA.

Sallstrom, J.* & **Wall-Scheffler, C.M.** (November 2011). Energetically efficient child carrying strategies amongst Seattle dyads. Murdock Undergraduate Research Conference, Seattle, WA, USA.

Wagnild, J.* & **Wall-Scheffler, C.M.** (November 2011). Group impact on walking speed. Murdock Undergraduate Research Conference, Seattle, WA, USA

[†]Rathkey, J.* & **Wall-Scheffler, C.M.** (May 2011). The impact of gait parameters on the metabolic cost of transport in humans during running. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Wilson, Z.*, Long, E. & **Wall-Scheffler, C.M.** (May 2011). Estimation of population structure of black-tailed deer using cementum annuli and polarizing light microscopy. Erickson Undergraduate Research Conference, Seattle, WA, USA.

Kjosness, K.* & **Wall-Scheffler, C.M.** (April 2011). Responding to chronic stress: longitudinal perspectives on metabolism. Annual meeting of the American Association of Physical Anthropology, Minneapolis, MN, USA. (Main event and Undergraduate Symposium)

Myers, M., Myhre, A.*, Kpanquoi, M.*, Stearns, L.*, Boeff, K.*, & **Wall-Scheffler, C.M.** (April 2011). Self-selected walking speeds: Do females and males carrying children choose differently? Annual meeting of the American Association of Physical Anthropology, Minneapolis, MN, USA. (Main event and Undergraduate Symposium)

Myhre, A.*, Kpanquoi, M.*, Stearns, L.* (advisors MJ Myers, **CM Wall-Scheffler**). (April 2011). Where to carry kids? A comparison of women and men during walking. National Conference on Undergraduate Research, Ithaca College, Ithaca, NY.

Omodt, J.R.*, Hokanson, A.L.*, **Wall-Scheffler, C.M.**, & Myers, M.J. (April 2011). Associations between core strength, walking speed, and age in women. Research & Practice in Gerontology, Minneapolis, MN, USA.

Wall-Scheffler, C.M. & Steudel-Numbers, K. (April 2011). The meaning of within population dimorphism for group mobility. Annual meeting of the American Association of Physical Anthropology, Minneapolis, MN, USA.

Willcockson, M.* & **Wall-Scheffler, C.M.** (April 2011). Entertaining entrainment: reconsidering the effects of respiratory constraints on the optimal running speed. Annual meeting of the American Association of Physical Anthropology, Minneapolis, MN, USA. (Main event and Undergraduate Symposium)

Kpanquoi M.*, Myhre, A.*, Stearns, L.*, & Boeff, K.* (advisors MJ Myers, **CM Wall-Scheffler**) (February 2011). Differences in Walking Speed and Strength in Women and Men Carrying Children. Private College Scholars at the Capitol Day, Minnesota State Capitol.

2010

- Wall-Scheffler, C.M.** (July 2010). What does human evolution look like? Some evidence for how people became ‘modern’. Invited Lecture to the Faraday Institute, Cambridge, UK.
- Wall-Scheffler, C.M.** (June 2010). Hominin subsistence strategies: Access to resources in the context of mobility, morphology and reproduction. Invited Lecture to Max Planck Institute for Human Evolution, Leipzig, Germany.
- Kjosness, K.* & **Wall-Scheffler, C.M.** (May 2010). Stress is costly: Physiological changes across a 10-week quarter. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Tewell, K.*, Long, E., & **Wall-Scheffler, C.M.** (May 2010). Poisonous pedigree: Hybrid viability as an indicator for population divergence in *Dendrobates auratus*. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Wendlandt, C.*, Campbell, D., Long, E., **Wall-Scheffler, C.M.** (May 2010). Genetic and environmental contributions to water-use efficiency and plant growth in *Ipomopsis* hybrid zones. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- †Willcockson, M.* & **Wall-Scheffler, C.M.** (May 2010). Entertaining entrainment: Explaining the energetic cost of running in humans. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Wilson, Z.*, Long, E., & **Wall-Scheffler, C.M.** (May 2010). Population structure of *Odocoileus hemionus columbianus*: Using annual growth layers of dental cementum to estimate age at death. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Myers, M.J. & **Wall-Scheffler, C.M.** (May 2010). Out on a Limb: The Life and Work of Dr Karen Steudel. Invited presentation to the Department of Zoology, University of Wisconsin, Madison WI, USA
- Myers, M.J., Ketter, M.*, Heithoff, A.*, Boeff, K.A.*, Steudel-Numbers, K., & **Wall-Scheffler, C.M.** (April 2010). Was heat retention important in determining *Homo* infant limb proportions? Annual meeting of the American Association of Physical Anthropology, Albuquerque, NM, USA.
- Wall-Scheffler, C.M.** (April 2010). Evolutionary tradeoffs: How thermoregulation and the cost of mobility impact morphology. Annual meeting of the American Association of Physical Anthropology, Albuquerque, NM, USA
- Wall-Scheffler, C.M.** (February 2010). Some evidence: What the fossils, archaeology and genes tell us about becoming human. Gordon College Annual Crum Lecture, Boston, MA, USA.
- Myers, M.J., Boeff, K.A.*, & **Wall-Scheffler, C.M.** (January 2010). Effect of age, walking speed, and frontal load on step width and its variability. Annual Meeting of the Society of Integrative and Comparative Biology, Seattle, WA, USA.

2009

- Wall-Scheffler, C.M.** (November 2009). Closing gaps in the fossil record? The recent lessons of *Ardipithecus* and the emergence of human bipedality. Exploring Darwin and Evolutionary Theory in the 21st Century, Seattle Pacific University, Seattle, WA, USA.
- Wall-Scheffler, C.M.** (November 2009). The role of gait in selection for human locomotory morphology. Invited Lecturer to SPU’s Department of Biology Capstone Lecture Series, Seattle, WA, USA.
- Kjosness, K.M.* & **Wall-Scheffler, C.M.** (October 2009). What is the cost of academic pressure? How perceived stress increases metabolism. Murdock Charitable Trust Undergraduate Research Conference, Spokane, WA, USA.

- Adams, J.J.*, Kramer, P.A., & **Wall-Scheffler, C.M.** (May 2009). Foot arch morphology variation among humans and energetic cost to running and walking. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Kjosness, K.M.* & **Wall-Scheffler, C.M.** (May 2009). Impact of stress on metabolic cost. Erickson Undergraduate Research Conference, Seattle, WA, USA.
- Myers, M.J., Hayes, C.M.*, Hokanson, A.L.*, McCafferty, J.A.*, Meissner, S.M.*, & **Wall-Scheffler, C.M.** (May 2009). Belly loads influence minimum cost of transport and speed it occurs in walking women. Annual Meeting of the American College of Sports Medicine, Seattle, WA, USA.
- Omodt, J.R.*, Hokanson, A.L.*, **Wall-Scheffler, C.M.**, & Myers, M.J. (May 2009). Associations between core strength, walking speed, and age in women. Annual Meeting of the American College of Sports Medicine, Seattle, WA, USA.
- Wall-Scheffler, C.M.** (May 2009). Are Humans simply *Another Unique Species*? Peer-reviewed presentation at the Venice Summer School on Science & Religion, Venice, Italy.
- Myhre, A.L.*, **Wall-Scheffler, C.M.**, and Myers, M.J. (April 17 2009). Belly loads influence arm and lower limb movements in walking women. Minnesota Academy of Science, Undergraduate Symposium.
- Block, L.M.*, Chumanov, E.S., Steudel-Numbers, K.L. & **Wall-Scheffler, C.M.** (April 2009). How sexual dimorphism and kinematics interact to impact cost over variable terrain. Annual meeting of the American Association of Physical Anthropology, Chicago, IL, USA.
- Gruss, L.T., **Wall-Scheffler, C.M.**, & Malik, N.* (April 2009). Infant carrying in humans: Interactions between morphometric and gait parameters. Invited symposium at the annual meeting of the American Association of Physical Anthropology, Chicago, IL, USA.
- Myers, M.J., Hokanson, A.L.*, Myhre, A.L.*, Mascioli, M.D.*, McCafferty, J.A.*, & **Wall-Scheffler, C.M.** (April 2009). Grandmothers and mothers on the move: How age and frontal loads affect biomechanics and energetic. Invited symposium at the annual meeting of the American Association of Physical Anthropology, Chicago, IL, USA.
- Steudel-Numbers, K.L., Weaver, T.D., & **Wall-Scheffler, C.M.** (April 2009). Just how inefficient is human running? Annual meeting of the American Association of Physical Anthropology, Chicago, IL, USA.
- Wall-Scheffler, C.M.** & Myers, M.J. (April 2009). Reproductive costs for everyone: How female frontal loads impact mobility. Invited symposium at the annual meeting of the American Association of Physical Anthropology, Chicago, IL, USA.
- Wall-Scheffler, C.M.** (January 2009). Methods, Mothers and Mobility: How do we understand energetics and human evolution? Invited Lecturer to SPU's Department of Biology Capstone Lecture Series, Seattle, WA, USA.

2008

- Gonzalez, M.*, Knoth, J.*, & **Wall-Scheffler, C.M.** (November 2008). Optimal cost of walking and running over ground. Murdock Charitable Trust Undergraduate Research Conference, Tacoma, WA, USA.
- Wall-Scheffler, C.M.** (September 2008). Methods, Mothers and Mobility: How do we understand energetics and hominin evolution? Invited Lecturer to Simon Fraser University.
- Cachorro, A.M. & **Wall-Scheffler, C.M.** (July 2008). Cuando la energía importa: estrategias reproductivas en Evolución Humana. Invited Lecturer to Centro Nacional de Investigación sobre la Evolución Humana, Atapuerca, Spain.
- McCafferty, J.*, Hayes, C.*, Hokanson, A.*, Meissner, S.*, Myers, M.J., (Advisor), and **Wall-Scheffler, C.M.** (Advisor). (April 2008). Abdominal loads and the cost of walking in women. Minnesota Academy of Science, Undergraduate Symposium.

- Meissner, S.*, Hokanson, A.*, Hayes, C.*, McCafferty, J.*, **Wall-Scheffler, C.M.**, (Advisor), and Myers, M.J. (Advisor). (April 2008). Speed of minimum cost of walking: age and load-related differences in women. Minnesota Academy of Science, Undergraduate Symposium.
- Myers, M.J. & **Wall-Scheffler, C.M.** (April 2008). Grandmothers getting it done: Somatic durability in walking tasks. Annual Meeting of the American Association of Physical Anthropologists, Columbus, OH, USA.
- Stuedel-Numbers, K.L. & **Wall-Scheffler, C.M.** (April 2008) There is an optimal speed of human running: Implications for the evolution of hominin hunting strategies. Annual Meeting of the American Association of Physical Anthropologists, Columbus, OH, USA.
- Wall-Scheffler, C.M.** & Myers, M.J. (April 2008) Working harder and taking longer: How frontal loads can impact female reproductive costs. Annual Meeting of the American Association of Physical Anthropologists, Columbus, OH, USA.
- Chumanov, E.S., **Wall-Scheffler, C.M.**, and Heiderscheit, B.C. (February 2008). Gender differences in joint coupling variability during walking and running. Annual Conference of the American Physical Therapy Association, Nashville, TN, USA.
- Wall-Scheffler, C.M.** (February 2008). Methods, Mothers and Mobility: How do we understand energetics and hominin evolution? Invited Lecturer to University of Oregon's Institute for Cognitive and Decision Sciences Lecture Series.

2007

- Wall-Scheffler, C.M.** (November 2007). Influence of infant carrying costs on mobility strategies and tool development. Invited Speaker to the 2nd International Seminar Cátedra Atapuerca, Burgos, Spain.
- Chumanov, E.S., **Wall-Scheffler, C.M.**, and Heiderscheit, B.C. (June 2007) Do anatomical measures explain gender differences in hip and pelvis motion during gait? World Physical Therapy Conference, Vancouver, BC, Canada.
- Myers, M.J. and **Wall-Scheffler, C.M.** (March 2007). Role of load carrying in the evolution of increased body size. Annual Meeting of the American Association of Physical Anthropologists, Philadelphia, PA, USA.
- Stuedel-Numbers, K., **Wall-Scheffler, C.M.**, Myers, M.J., and Weaver, T.D. (March 2007). The energetic cost of human running: factors affecting its variability. Annual Meeting of the American Association of Physical Anthropologists, Philadelphia, PA, USA.
- Wall-Scheffler, C.M.**, Geiger, K.*, and Stuedel-Numbers, K. (March 2007). The role of infant carrying costs on early tool development. Annual Meeting of the American Association of Physical Anthropologists, Philadelphia, PA, USA.
- Stuedel-Numbers, K.L. and **Wall-Scheffler, C.M.** (March 2007). Is there an optimal speed of human running? Annual Meeting of the Paleoanthropology Society, Philadelphia, PA, USA.
- Wall-Scheffler, C.M.** (March 2007). Costs of Being Hominin: Interactions and Innovations. Invited presentation to the Department of Zoology, University of Wisconsin, Madison WI, USA.
- Chumanov, E.S., **Wall-Scheffler, C.M.**, Thelen, D.G., and Heiderscheit, B.C. (February 2007). Gender differences in hip and pelvis motion as a function of gait, speed and incline. Annual Conference of the American Physical Therapy Association, Boston, MA, USA.
- Myers, M.J., **Wall-Scheffler, C.M.**, Weaver, T.D., and Stuedel-Numbers, K.L. (January 2007). Complex effect of limb length on cost of transport of running humans. Annual Conference of the Society of Integrative and Comparative Biology, Phoenix AZ, USA.

2006

- Wall-Scheffler, C.M.** (October 2006). The role of load carrying on early tool development and changes in body size. Invited presentation to the Evolutionary Anthropology Research Group, University of Durham, UK.
- Pulkrabek, J.K., Chumanov, E.S., **Wall-Scheffler, C.M.**, and Heiderscheit, B.C. (April 2006). Hip muscle activity and pelvic motion during level and incline gait. Meeting for the Wisconsin Physical Therapy Association, Wisconsin Dells WI, USA.
- Wall-Scheffler, C.M.** (March 2006). Lateral excursion of the pelvis and the effect of leg-length: Why did Australopithecines retain short legs? Annual Meeting of the American Association of Physical Anthropologists, Anchorage AK, USA.
- Tilkens, M.J., **Wall-Scheffler, C.M.**, Weaver, T. and Steudel-Numbers, K. (March 2006). The effect of body proportions on thermoregulation: An experimental assessment of Allen's Rule. Annual Meeting of the American Association of Physical Anthropologists, Anchorage AK, USA.

2005

- Wall-Scheffler, C.M.** (November 2005). Aspects of Human Evolution. Invited presentation to the Department of Biology, College of St Catherine, St Paul MI, USA.
- Wall, C.M.** (April 2005). Cementum Luminance Analysis (CLA): A new approach to dental cementum studies. Annual Meeting of the American Association of Physical Anthropologists, Milwaukee WI, USA.
- Wall, C.M.** (March 2005). Prey Use and the Mediterranean Palaeolithic: New Ways to Assess Seasonality in the Archaeological Record. Invited presentation to the Department of Anthropology, University of Wisconsin, Madison WI, USA.

<2004

- Wall, C.M.** (November 2002). In Pursuit of the Ibex: Seasonality Stress Among Gibraltar Neanderthals. Invited presentation to the Leverhulme Centre for Human Evolutionary Studies, University of Cambridge, UK.
- Wall, C.M.** (October 2001). Seasonality Stress Among Iberian Neanderthals. Invited presentation to the Department of Biological Anthropology, University of Cambridge, UK.
- Foley, R.A., Lahr, M.M., and **Wall, C.M.** (August 2001). Evolutionary geography of Late Pleistocene hominins: The ecology of multiple dispersals. Invited presentation at Calpe 2001: Neanderthals and Modern Humans in Late Pleistocene Eurasia; Ecology and Biogeography, Gibraltar.
- Fitch, C. & **Wall, C.M.** (May 2000). It is all in your 'genes'. Or is it? Invited presentation at Ethics, Values and Personhood in the 21st Century; Personhood Under the Microscope: Information From Neuroscience and Genetics, Seattle Pacific University, Seattle WA, USA.

MEDIA

2020: Contributor to *101 Great Big Questions Children Ask*, by Elizabeth Henderson and Stephanie Bryant, published by Lion Hudson.

Biomechanics on our mind (BOOM):

<https://soundcloud.com/biomechanics-on-our-minds/episode-27-these-women-were-made-for-walking-cara-wall-scheffler>

Featured sections in books by Dean Falk (*Forthcoming*) and Cody Cassidy (*Who Ate the First Oyster*)

2018: Children are not like other loads:

<https://www.nytimes.com/2018/09/19/well/move/faster-slower-how-we-walk-depends-on-who-we-walk-with-and-where-we-live.html>

Also featured in a **BBC World interview** available outside of the US and UK.

The pelvis varies more than expected due to selection:

<https://www.the-scientist.com/news-opinion/human-birth-canal-varies-more-widely-than-previously-thought--64996>

2017: Revisiting the obstetrical dilemma:

<https://www.theatlantic.com/health/archive/2017/12/why-is-giving-birth-so-hard/547340/>

Do pushing strategies make a difference in caloric cost?

<https://www.nytimes.com/2017/08/24/magazine/how-to-run-with-a-jogging-stroller.html>

<http://komonews.com/news/healthworks/how-to-burn-the-most-calories-with-a-jogging-stroller>

2016: What is the energetic cost of running with strollers?

<https://www.insidescience.org/news/running-baby-researchers-calculate-extra-effort-needed-push-stroller>

2016: Blog post, The Future of Human Evolution, Prosblogian

2015: Response, SPU magazine, What is the Value of a University Education? *Op-Ed*

2014: Response, SPU magazine, Interview by Jeffrey Overstreet

2013: Selected Press for *Men and Women Walking Together*:

Top 100 News Stories of 2013, <http://www.bbc.co.uk/news/blogs-magazine-monitor-25298982>

<http://www.latimes.com/science/sciencenow/la-sci-sn-walk-this-way-20131023,0,6403052.story>

<http://www.usatoday.com/story/news/nation/2013/10/24/women-men-walking-study/3179369/>

<http://healthland.time.com/2013/10/23/men-walk-slower-when-theyre-in-love/>

Response, SPU magazine, Hannah Notess

Response, SPU magazine, Why do I Hypothesize? *Op-Ed*

2012: Interview, Professor of the Year, Response, SPU magazine

Editorial, Response, SPU magazine

2010: Response, SPU magazine, Hannah Notess

American Statesman, Brom Hoban,

<http://www.austin360.com/recreation/slower-running-pace-can-be-less-than-optimal-209436.html>

2009: KOMO AM 1000, Lifebeat, Kristin Hanes

KING 5, Health, Jean Enersen

Response, SPU magazine, Tracy Norlen

Science Daily, News,

<http://www.sciencedaily.com/releases/2009/03/090319142411.htm>

MEMBERSHIPS

- 2007-present **Member, Am. Association for the Advancement of Science (AAAS)**
- 2005-present **Member, Paleoanthropology Society**
- 2002-present **Member, American Association for Physical Anthropology (AAPA)**
- 2001-present **Fellow, Cambridge Overseas Society**

ONGOING SERVICE

- 2020-present Program Committee, AAPA
- 2019-present **Chair**, Department of Biology, Seattle Pacific University
- 2010-present **Chair**, AAPA Undergraduate Research Symposium
- 2009-present **Chair**, Seattle Pacific University IRB
- 2008-present Member, AAPA Committee on Diversity

Manuscript Review:

American Journal of Human Biology; American Journal of Physical Anthropology; BMS Neurology; Comparative Biochemistry & Physiology; Current Anthropology; Journal of Archaeological Science; Journal of Anatomy; Journal of Experimental Biology; Journal of Human Evolution; PaleoAnthropology; PLoS One; Proceedings of the Royal Society B; International Journal of Women's Health; Perception and Motor Skills

Book Review: Cambridge University Press; Oxford University Press; McGraw Hill

External Examiner: Department of Anthropology, University of Victoria

Grant Review: Leakey Foundation, NSERC, NSF, Templeton Foundation

Previous Service

- 2018-2021 SPU Faculty Status Committee
- 2014-2020 Associate Editor, Journal of Human Evolution
- 2019-2020 Member, Provost Search Committee, SPU
- 2018 Symposium Organizer of 'Causes, Context, and Consequences of Human Sexual Dimorphism' American Association of Physical Anthropology, Austin, TX
- 2014-2016 SPU Faculty Status Committee
- 2015 Mentor, Physical Anthropology's Women's Mentoring Network
- 2012-2014 Program Committee, American Association of Physical Anthropology
- 2014 Symposium Organizer of 'Beyond the Obstetric Dilemma: How New Studies of the Pelvis are Redefining our Approach to Hominin Evolution', American Association of Physical Anthropology meeting, Calgary, CA.
- 2010-2012 Member, Steering Committee, Physical Anthropologists' Women's Mentoring Network
- 2009-2010 Planning Committee, Darwin Symposium, Seattle Pacific University
- 2008-2009 Committee Member, Seattle Pacific University IRB
- 2008 Chair & Moderator, Session on the Science and Theology of Evolution, Annual Conference of the Wesleyan Theological Society
- 2007-2009 Guest Editor, *PaleoAnthropology*, series on energetic studies in hominin evolution
- 2007 Symposium Organizer of 'Energetic Studies in Hominin Evolution', Paleoanthropology Society Meeting
- 2005-2006 Presenter for Expanding Your Horizons: Career Exploration in Science, Engineering, and Math for young women

LABORATORY and OSTEOLOGICAL EXPERIENCE

- VO₂ data collection, lab and portable systems
- Telemetry-based body temperature systems
- Kinematics data collection with 2-D and 3-D motion analysis systems
- Electromyography
- Dental thin sectioning
- Polarizing microscopy
- Identification and classification of human and ungulate remains from North America, Europe, and Africa

STUDY of MUSEUM and DEPARTMENTAL COLLECTIONS

National Institute of Archaeological Sciences and Heritage (INSAP), Rabat, Morocco

Natural History Museum, London, England

Gibraltar Museum, Gibraltar, Gibraltar

Museum of Archaeology and Anthropology, Cambridge, England

Department of Archaeology, University of Cambridge, England

Department of Anthropology, University of Washington

Department of Anthropology, University of Wisconsin-Madison