

Curriculum Vitae

FIONA B. MARSHALL

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EDUCATION

- 1977 B.A. (Archaeology, honors), University of Reading, Berkshire, England
1978 M.A. (Anthropology), University of California, Berkeley
1986 Ph.D. (Anthropology), University of California, Berkeley

PROFESSIONAL RESEARCH INTERESTS

Human-animal relationships, domestication and the spread of food production, African archaeology, pastoralism, long-term herder influences on African landscapes, hunter-gatherer socio-economic variation, conservation and biodiversity of wild and domestic African ungulates

ACADEMIC APPOINTMENTS

- 1987-1994 Assistant Professor, Washington University in St Louis.
1994-2002 Associate Professor, Washington University in St Louis.
2002 Professor of Anthropology, Washington University in St Louis.
2006 Professor of African and African American Studies
Washington University in St. Louis
2015 James W. and Jean L. Davis Professor in Arts and Sciences,
Washington University in St. Louis

PROFESSIONAL ASSOCIATIONS

American Association for the Advancement of Science, American Academy of Arts and Sciences, International Council for Archaeozoology, National Academy of Sciences, Society for American Archaeology, Society of Africanist Archaeologists,

TEACHING

- 1986-Spring University of California, Berkeley
Faunal Analysis in Archaeology, with W. Clemens.
1987-present Washington University, St Louis.
Courses: Zooarchaeology Laboratory, Ancient Africa, Hunter-Gatherer Ethnoarchaeology, Pathways to Domestication, Hunter-gatherer Socio-economic Variation, Bones to Behavior: Research in the zooarchaeology laboratory and at the St. Louis zoo, Out of the Wild: Domestication and Socioeconomic Diversity in Africa, Humans and Animals

HONORS

- 2000 Special Recognition for excellence in mentoring, First Annual Outstanding Faculty Mentor Awards by the Graduate Student Senate of Arts and Sciences, Washington University in St Louis
- 2001 Outstanding Faculty Mentor Award, Second Annual Outstanding Faculty Mentor Awards by the Graduate Student Senate of Arts and Sciences Washington University in St Louis
- 2011 Fellow of the American Association for the Advancement of Science
- 2014 Outstanding Faculty Mentor Award. Graduate Student Senate, Washington University in St Louis
- 2017 Member, National Academy of Sciences
- 2018 The Washington University Alumni Association, Distinguished Faculty Award
- 2019 Arthur Holly Compton Award for Faculty Achievement, Washington University in St Louis
- 2020 Fellow of the American Academy of Arts and Sciences

FELLOWSHIPS, GRANTS, AWARDS

- 1977 Education Abroad Fellow from Reading University to U.C. Berkeley
- 1978 American Association of University Women Fellowship
- 1981 Boise Fund Award
- 1981 Leakey Foundation Award
- 1981 Field Research Grant, British Institute in Eastern Africa
- 1982 Lowie Fellowship, U.C. Berkeley
- 1988 The Leakey Foundation Foraging People's Fellowship for 1988/1989
- 1988 P.I. National Science Foundation award BSN-8805939 "Bone modification and site formation processes among Okiek hunter-gatherers of the western Mau Escarpment, Kenya" (\$54,394)
- 1990 Washington University Faculty Research Grant
- 1992 Washington University Faculty Research Grant
- 1993 Consultant to Getty Conservation Institution for GCI and Tanzanian Government's "Laetoli Project". Director of re-excavation, 1 month contract.
- 1993 P.I. National Science Foundation Dissertation Improvement award to Kennedy Mutundu. DBS-9313577 "Ethnoarchaeology among the Mukogodo of Kenya: Hunter-gatherer adaptations and transition to food production."
- 1995 Consultant to Getty Conservation Institution for GCI and Tanzanian Government's "Laetoli Project". Director of re-excavation, 3 month contract.
- 1996 Consultant to Getty Conservation Institution for GCI and Tanzanian Government's "Laetoli Project". Director of re-excavation, 9 week contract.
- 1997 P.I. National Science Foundation Dissertation Improvement award to

- Elisabeth Hildebrand. "An ethnoarchaeological study of ensete cultivation and plant use among the Sheko of southwest Ethiopia".
- 1997 P.I. National Science Foundation Dissertation Improvement award to Francesca Alhaique. "Subsistence and mobility in the Late Upper Paleolithic: Fauna from the Fucino Basin, Italy."
- 1997 P.I. National Science Foundation Dissertation Improvement award to Chester Cain. "Animal exploitation at Aksum, the ancient Ethiopian capital."
- 1997 Washington University Faculty Research Grant.
- 1997/1998 Consultant to Getty Conservation Institution on Olduvai Exhibit, Olduvai Museum, Tanzania. Updating of original Leakey texts for exhibits.
- 1998 Wenner-Gren Regular Grant "Pathways to food production in Eastern Africa: Archaeological Survey in southern Eritrea."
- 1999 P.I. National Science Foundation Dissertation Improvement award to Ruth Shahack-Gross. "The identification of Pastoral Neolithic sites in East Africa: A geoarchaeological approach."
- 1999 P.I. National Science Foundation Dissertation Improvement award to Darla D. Dale. "An archaeological investigation of the Kansyore, a Middle Holocene (7000-4000 bp) hunter-gatherer group in Western Kenya."
- 2000 Wenner-Gren Regular Grant "Pathways to food production in Eastern Africa: New rock shelter data from excavations in northern and southwestern Ethiopia."
- 2000 Washington University Faculty Research Grant,
- 2002 Wenner-Gren Regular Grant "Pathways to food production in Eastern Africa: New dates and faunal data.
- 2002 Washington University Faculty Research Grant "Hunters and herders at Lukenya: Understanding pathways to food production in East Africa,"
- 2004 P.I. National Science Foundation award "Domestication of the Donkey: Aridity, Mobility and the Development of African Pastoral Societies 6000-2000 BP" BCS-0447369
- 2005 P.I. National Science Foundation Dissertation Improvement award to Lior Weissbrod. "Rodent Commensals of Maasai Settlements: ethnoarchaeology of Pastoral Mobility." BCS-0536507
- 2005 P.I. National Science Foundation Dissertation Improvement award to Christina Pugh. "Pithouses to Pueblos: Aggregation, Animals, and Sustainability."
- 2008 P.I. National Science Foundation award to Katherine M. Grillo "Pottery and Pastoralism in East Africa: Ethnographic and archaeological Perspectives." BCS-0752042
- 2009 P.I. National Science Foundation award to Helina S. Woldekiros. "Archaeology of the Afar salt caravan route of Northeastern Ethiopia."
- 2010 P.I. National Science Foundation award to Abigail Chipps Smith. "Subsistence and Specialization in the Inland Niger Delta, Mali".
- 2011 The International Center for Advanced Renewable Energy and Sustainability I-CARES Washington University

- 2014 P.I. National Science Foundation award to Steven Goldstein.
 “Economic organization in the Pastoral Neolithic: Archaeology of the Elmenteitan Obsidian Quarry, Kenya” (BCS-1439123).
- 2018 P.I. National Science Foundation award to Mica Jones.
 “Technological Response to Environmental Variation” (BCS-1821996).

FIELDWORK

- 1975-Summer National Museums of Kenya, Nairobi. Assistant faunal analyst to John Kimengitch.
- 1976-June University of Reading excavation at Roman Silchester under the direction of Michael Fulford.
- 1976-April Excavation of Crescent Island Causeway site, Lake Naivasha, Kenya with team from University of Mass., Boston under the direction of Charles Nelson.
- 1976-Summer National Museums of Kenya, Nairobi, analysis of Fauna from GaJi 4, a Neolithic site from N. E. Lake Turkana, Kenya (B.A. thesis).
- 1976-1977 Weekend Surveys and excavations of sites with Berkshire Archaeological Unit.
- 1977-June University of Reading excavation of a Bronze Age site at Aldermaston, Berkshire under the direction of Richard Bradley.
- 1978-Fall Koobi Fora Research Project, Kenya. Excavation and survey of Early Pleistocene sites under the direction of Glynn Isaac. Supervision of excavation of FxJj 64.
- 1980-Fall National Museums of Kenya, Nairobi. Research Assistant to Diane Gifford in Survey of Kenyan Neolithic faunal assemblages.
- 1981-1985 Co-director with Peter Robertshaw of British Institute in Eastern Africa, S.W. Kenya Project.
- 1982-Sept. Field Assistant for Kay Behrensmeyer, Amboseli Taphonomic Project.
- 1982-1985 National Museum of Kenya, Nairobi. Analyses of faunal assemblages from S.W. Kenyan sites; Ngamuriak, Sambo Ngige, Lemek North-East, Gogo Falls, and Engaruani.
- 1984-June Field Assistant for A. Vincent, Hadza hunter-gatherer ethnoarchaeological project, Lake Eyasi, Tanzania.
- 1987-May National Museum of Kenya, Nairobi. Preliminary examination of fauna from the Acheulian site of Lenagrut, Lake Magadi Basin, Kenya.
- 1987-June Exploratory ethnoarchaeological field trips with Corinne Kratz to the western Mau Escarpment and to the Mukugodo of Don Dol, Kenya.
- 1989-1990 Director, Western Mau Okiek Ethnoarchaeological Field Project, Kenya.

- 1993-Summer Archaeological Consultant and Field Director for re-excavation, 1995- Summer Getty Conservation Institute; GCI and Tanzanian Government's Laetoli Project
- 1995-June Exploratory talks about future research in Eritrea and training of Eritrean students with Minister of Culture and Education, Eritrea.
- 1996-Summer Archaeological Consultant and Field Director for re-excavation, Getty Conservation Institute; GCI and Tanzanian Government's Laetoli Project.
- 1998-Summer Archaeological reconnaissance in Eritrea: Tsorono, Mai Aini, and Addi Keyh in conjunction with Dr Stephen Brandt, University of Florida, and the National Museum of Eritrea
Zooarchaeological study of fauna from Laga Oda, Ethiopia, at the National Museum of Ethiopia, Addis Ababa, in conjunction with Mr Girma Hunde.
- 2000-Summer Zooarchaeological study of fauna from Temben Rock Shelters, Tigre at the National Museum of Ethiopia, Addis Ababa, in conjunction with Mr. Agazi Negash.
- 2002-Summer Zooarchaeological Study of Fauna from Kansyore sites, Lake Victoria at the National Museums of Kenya, in conjunction with Ms. Darla Dale.
- 2003 Summer Director of donkey domestication project: Morphological study of *Equus asinus* and *E. africanus* at the Field Museum, Chicago, Natural History Museum London and National Museums of Kenya.
- 2005-April Morphological study of ten First Dynasty donkeys from Abydos, Egypt, in conjunction with Ms. Stine Rossel.
- 2005-Summer Morphological study and collection of aDNA specimens, University of Rome, Verona National History Museum, Africa Museum, Tervuren. Shaft diaphysis study, Field Museum, Chicago.
- 2006-Summer Morphometric study of *Equus africanus* and *Equus asinus* Natural History Museums, Nairobi, Zurich, Basel, Bern, Munich. Ethnoarchaeological study, Kenya. Collection of *E.a.a.* historic DNA samples, NHM London, Munich.
- 2007-March Morphometric study of *Equus africanus* at the American Museum of Natural History
- 2007-Summer Morphometric study and collection of historic DNA samples, Powell-Cotton collection, Quex House, Kent, UK.
- 2008-Summer Wild Ass behavioral research at the St Louis Zoo, in collaboration with Dr S. Asa.
- 2009-summer Morphometric research on *E. africanus*, Genetics institute, Porto. Zooarchaeological research Jebel Gharbi Libya, University of Rome.
- 2010-Summer Wild Ass behavioral research at the St Louis Zoo, in collaboration with Dr S. Asa.

2011-Summer	Director Nutrient Hotspot Research and excavations at Ntuka, Kenya in collaboration with Dr S. Ambrose, Dr Purity Kiura.
2012-Summer	Wild Ass behavioral research at the St Louis Zoo, in collaboration with Dr S. Asa
2013-Summer	Wild Ass behavioral research at the St Louis Zoo, in collaboration with Dr S. Asa
2014 Summer	Collaborative research with Dr Y Hu, Archaeometry Department, University of Chinese Academy of Science, Beijing
2015 Summer	Zooarchaeological research discussions Chinese Academy of Social Sciences Beijing, Zhengzhou
2016 June	Kenya National Museum, Nairobi
2017 June	Excavations at Noomparrua, Loita Hills, Kenya co-directed with Dr Stanley Ambrose and Kenya National Museums team

PUBLICATIONS

- Isaac, G. Ll. , Harris, J.W.K. and F. **Marshall**. 1981 Small is Informative: The Application of the Study of Mini-Sites and Least Effort Criteria in the Interpretation of the Early Pleistocene Archaeological Record at Koobi Fora, Kenya. *X Congress International des Sciences Pre- et Protohistorique*, 1981 pp. 102-111. Reprinted (1991), in *The Archaeology of Human Origins: Papers by Glynn Isaac*, B. Isaac Ed. pp. 116-123, Cambridge: Cambridge University Press.
- Marshall, F.** and P. Robertshaw 1982 Preliminary Report on Archaeological Research in the Loita Mara Region, S.W. Kenya. *Azania* 17:173-180.
- Marshall, F.**, Stewart, K., and J. Bathelme. 1984 Early Domestic Stock at Dongodien in Northern Kenya. *Azania* 19:120-127.
- Marshall, F.** 1986 Implication of Bone Modification in a Neolithic Faunal Assemblage for the Study of Early Hominid Butchery and Subsistence Practices. *Journal of Human Evolution* 15:661-672.
- Marshall, F.** 1989 Rethinking the Role of *Bos indicus* in Sub-Saharan Africa. *Current Anthropology* 30:235-240.
- Marshall, F.** 1990 Origins of Specialised Pastoral Production in East Africa. *American Anthropologist* 92:873-894
- Marshall, F.** 1990 Cattle Herds and Caprine Flocks. In *Early Pastoralists of Southwestern Kenya*. By P. Robertshaw. Chapter 10, pp. 205-260 Nairobi: British Institute in Eastern Africa, Memoir 11.
- Robertshaw, P. and **F. Marshall** 1990 Ngamuriak (GuJf 6). In *Early Pastoralists of Southwestern Kenya*. By P. Robertshaw. Chapter 5, pp. 54-72 British Institute in Eastern Africa, Memoir 11.

- Robertshaw, P. and **F. Marshall** 1990 Other Excavations in the Lemek Valley. In *Early Pastoralists of Southwestern Kenya*. By P. Robertshaw. Chapter 6, pp. 73-79. British Institute in Eastern Africa, Memoir 11.
- Robertshaw, P., Pilgram, T., Siiriainen, A. and **F. Marshall** 1990 Archaeological Surveys and Prehistoric Settlement Patterns. In *Early Pastoralists of Southwestern Kenya*. By P. Robertshaw. Chapter 4, pp. 36-51 British Institute in Eastern Africa, Memoir 11.
- Marshall, F.** and Pilgram, T. 1991 Meat vs. Within-Bone Nutrients: Another Look at the Meaning of Body Part Representation in Archaeological Sites. *Journal of Archaeological Science* 18:149-163.
- Marshall, F.** 1991 Besides Bones: A Zooarchaeological Perspective on the Need for Archaeobotanical Research on the Origins of Food Production in East Africa. In *Origins and Development of Agriculture in East Africa*. R. E. Leakey and L. J. Slikkerveer Eds. Studies in Technology and Social Change, No. 19, pp.17-24. Ames: Iowa State University.
- Marshall, F.** 1993 Food-Sharing and the Faunal Record. From *Bones to Behavior: Ethnoarchaeological and Experimental Contributions to the Interpretation of Faunal Remains* J. Hudson, Ed. Chapter 13, pp. 228-246. Center for Archaeological Investigations Occasional Paper 21, Southern Illinois University, Carbondale.
- Marshall, F.** and Pilgram, T. 1993 The Relationship between MNI and NISP for Interpretation of Body Part Profiles from Archaeological Sites. *American Antiquity* 58:261-269.
- Marshall, F.** 1994 Okiek Food-Sharing and Body Part Representation in Faunal Assemblages. *Journal of Archaeological Science*. 21:65-77
- Marshall, F.** 1994 Archaeological Perspectives on East African Pastoralism. *African Pastoralist Systems* E. Fratkin, J. Galvin and E. Roth Eds. Chapter 2, pp. 17-44. Lynn Rienner: Boulder, Colorado.
- Pilgram, T and **F. Marshall**. 1995 Bone Counts and Statisticians: Reply to Ringrose. *Journal of Archaeological Science* 22:93-97.
- Marshall, F.** and Steward, K. 1995 Hunting, Fishing, and Herding Pastoralists of Western Kenya: the Fauna from Gogo Falls. *Zooarchaeologia* VII:7-27.
- Rose, L.M. and **F. Marshall**. 1996 Meat Eating, Hominid Sociality and Home Bases Revisited. *Current Anthropology* 37:307-338.
- Feibel, C.S., Agnew, N., Latimer, B., Demas, M., **Marshall, F.**, Waane, S.A.C., and P.

- Schmid. 1996 A New Look at the Laetoli Hominid Footprints - A Preliminary Report on the Conservation and Scientific Restudy. *Evolutionary Anthropology* 4:149-154.
- Marshall, F.** 1997 FxJj 64 In G. Ll. and B. Isaac, Eds. *The Plio-Pleistocene Archaeology of Koobi Fora, Kenya*, pp.220-223. Oxford University Press: Oxford.
- Marshall, F.** 1998. Early Food Production in Africa. *The Review of Archaeology*. Special Issue: The Transition to Agriculture in the Old World, O. Bar-Yosef Ed., 19:47-58.
- Marshall, F.** and K. Mutundu. 1999. The Role of Zooarchaeology in Archaeological Interpretation: A survey of the African Literature from Later Archaeological Periods, c. 20,000 bp-Present. *Zooarchaeologia* X: 83-106.
- Marshall, F.** 2000. The Origins and Spread of Domestic Animals in East Africa. In *The Origins and Development of African Livestock: Archaeology, Genetics, Linguistics and Ethnography*. K.C McDonald and R.M. Blench Eds. Chapter 10, pp. 191-221. London: University College London Press.
- Marshall, F.** 2001. Agriculture and Use of Wild and Weedy Greens by the *Piik Ap Oom Okiek* of Kenya. *Economic Botany* 55:32-46.
- Marshall, F.** and L. Hildebrand. 2002. Cattle before Crops: the Origins and Spread of Food Production in Africa. *Journal of World Prehistory* 16: 99-143.
- Shahack-Gross, R., **Marshall, F.** and S. Weiner. 2003. Geo-Ethnoarchaeology of Pastoral Sites: The Identification of Livestock Enclosures in Abandoned Maasai Settlements. *The Journal of Archaeological Science* 30:439-459.
- Dale, D., **Marshall F.** and T. Pilgram. 2004. Delayed-Return Hunter-Gatherers in Africa? Historic Perspectives from the Okiek and Archaeological Perspectives from the Kansyore. In *Hunters and Gatherers in Theory and Archaeology*. G. Crothers Ed. Chapter 15, pp. 340-375. Center for Archaeological Investigations Occasional Paper 31, Southern Illinois University, Carbondale.
- Shahack-Gross, R., **Fiona Marshall**, Kathleen Ryan, and Steve Weiner. 2004. Reconstruction of Spatial Organization in abandoned Maasai Settlements: Implications for Site Structure in the Pastoral Neolithic of Kenya. *Journal of Archaeological Science* 31:1395-1411.
- Marshall, F.** 2007. African Pastoral Perspectives on Domestication of the Donkey: A First Synthesis. In *Rethinking Agriculture: Archaeological and Ethnoarchaeological Perspectives*. Chapter 18, pp 371 – 407. T.P. Denham and L. Vrydaghs Eds. One World Archaeology Series. Left Coast Press Press, Walnut Creek, CA.
- *Rossel, S., ***F. Marshall**, J. Peters, T. Pilgram, M. D. Adams and D.

- O'Connor. 2008 Domestication of the Donkey: New Data on Timing, Processes and Indicators. *PNAS* 105:3715-3720. * co-first authors.
- Alhaique, F. and **F. Marshall** 2009 Preliminary Report on the Jebel Gharbi Fauna from Site SJ-00-56 (2000 and 2002 Excavations). *Africa* LXIV 3-4:498-507
- Marshall, F.** and L. Weissbrod 2009 The Consequences of Women's Use of Donkeys for Pastoral Flexibility: Maasai Ethnoarchaeology *In Tracking down the past. Ethnohistory meets archaeozoology*. G. Grupe, G. McGlynn and J. Peters., eds. Pp. 59-79. Documenta Archaeobiologiae no 7. Rahden/Westf. Germany: Marie Leidorf GmbH.
- Kimura, B., **F. Marshall**, S. Chen, S. Rosenbom, P.D. Moehlman, N. Tuross, R. Sabin, J. Peters, B. Barich H. Yohannes, F. Kebede, R. Teclai, R., A. Beja-Pereira, and C. Mulligan. 2010. Ancient DNA from Nubian and Somali Wild Ass provides Insights into African Wild Ass Phylogeny and Donkey Domestication. *Proceedings of the Royal Society B*. 278(1702):50-57
- Marshall, F.** and L. Weissbrod 2011. Domestication Processes and Morphological Change: Through the Lens of the Donkey and African Pastoralism. *Current Anthropology* 52(S4): S397-S413.
- Marshall, F.**, Grillo, K. and L. Arco 2011. Prehistoric Pastoralists and Social Responses to Climatic Risk in East Africa. In *Sustainable Lifeways: Cultural Persistence in an Ever-changing Environment*. N. Miller, K. Moore and K. Ryan eds. Chapter Two. Pp. 38-73. University of Pennsylvania Museum of Archaeology and Anthropology Series, Penn Press, Philadelphia.
- Asa, C., **Marshall, F.** and M. Fischer 2012. Affiliative and Aggressive Behaviour in a Group of Female Somali Wild Ass (*Equus africanus somalicus*). *Zoo Biology* 31(1):87-97.
- Marshall, F.** and C. Asa 2013. African A Study of Wild Ass Behavior Provides Insights into Conservation Issues, Domestication processes and Archaeological Interpretation. *Journal of Archaeological Method and Theory* 20(3):479-494.
- Shackleford, L., **Marshall, F.** and J. Peters 2013 Identification Donkey Domestication Through Changes in Cross-Sectional Geometry of Long Bones. *Journal of Archaeological Science* 40(12):4170-4179.
- Hu, Y., S. Hu, W. Wang, X. Wu, **F. * Marshall**, X. Chen, L. Hou and C. Wang 2013 Earliest evidence for commensal processes of cat domestication. *PNAS* 111(1):116-120. doi:10.1073/pnas.1311439110 (corresponding author)
- Marshall, F.** 2014 Asses/Donkeys: Domestication. In *Encyclopedia of Global Archaeology*, edited by Claire Smith, pp. 552-555. Springer, New York.

- Marshall, F.** and J. M. Capriles 2014. Animal Domestication and Pastoralism: socioenvironmental contexts. In *Encyclopedia of Global Archaeology*, edited by Claire Smith, pp. 249-258. Springer, New York.
- Hu, Y. and **F. Marshall** 2014 Reply to Bar-Oz et al.: Commensalism and mutualism as early incentives for cat domestication. *PNAS* 111(10) E877. doi:10.1073/pnas.1401179111
- Marshall F.B.**, Dobney, K., Denham T and J.M. Capriles 2014 Evaluating the roles of directed breeding and gene flow in animal domestication. *PNAS* 111(17) 6153-6158. doi/10.1073/pnas.1312984110
- Larson, G, Piperno, D.R. Allaby R.G., Purugganan, M.D., Andersson L., Arroyo-Kalin, M., Barton, L., Vigueira, C.C., Denham T., Dobney, K., Doust A.N., Gepts P., Gilbert M.T.P., Gremillion K.J., Leilani, L., Lukens L., **Marshall F.B.**, Olsen, K.M., Pires J.C. Richerson P.J., Rubio de Casas R., Sanjur O.I., Thomas M.G. and D.Q. Fuller. 2014 Current perspectives and the future of domestication studies. *PNAS* 111(17) 6139-6146. doi: 10.1073/pnas.1323964111
- Chritz, K.L., **Marshall F.**, Esperanza Zagal, M, Kirewa, F. and T. E. Cerling 2015 Environments and trypanosomiasis risks for early herders in the later Holocene of the Lake Victoria basin, Kenya. *PNAS* 112(12)3674-3679 Doi/10.1073/pnas.1423953112
- Chritz, K. and **F. Marshall** 2015. Safe Passage South. As the East African climate changed in the last millennium BC, herders found a tsetse free pathway to new pastures. *Natural History* 125 (5):22-27.
- Weissbrod, L., **Marshall F.B.**, Valla, F.R., Khalaily, H. Bar-Oz, G., Auffray, J.-C., Vigne, J.-D., Cucchi, T. 2017. Origins of house mice in ecological niches created by settled hunter-gatherers in the Levant 15,000 y ago. *PNAS* 114:4099-4104.
- Weissbrod, L., **Marshall F.B.**, Valla, F.R., Khalaily, H. Bar-Oz, G., Auffray, J.-C., Vigne, J.-D., Cucchi, T. 2017. Reply to Dekel et al.: Preagricultural commensal niches for the house mouse and origins of human sedentism. *PNAS* doi/10.1073/pnas.1706914114
- Jones, M., Brandt, S. and **F. Marshall** 2017. Hunter-gatherer reliance on inselbergs, big game, and dwarf antelope at the Rifle Range Site, southern Somalia ~20,000-5,000 BP. *Quaternary International* 471:55-65. doi.org/10.1016/j.quaint.2017.09.030
- Reid, R. E. B., Lalk, E., **Marshall F.** and X. Liu 2018. Carbon and nitrogen isotope variability in the seeds of African millet species: *Pennisetum glaucum* and *Elusine coracana*. *Rapid communications in Mass Spectrometry* 32:1693-1702.
- Marshall F.**, Reid R. E. B., Goldstein S., Storozum M., Wreschnig A., Hu L., Kiura P., Shahack Gross R. and S. H. Ambrose 2018 Ancient herders enriched and restructured African grasslands. *Nature* 561(7723):387-390. doi: 10.1038/s41586-018-0456-9

- Marshall, F.** 2018 The Land of Milk and Honey: Interactions among ancient East African herding and hunter-gatherer societies. Ed Nuria Sanz, pp. 100-111. In *The Origin and Evolution of Food Production and its Impact on Consumption Patterns*. UNESCO, Mexico City.
<http://unesdoc.unesco.org/images/0026/002643/264379m.pdf>
- Pérez-Pardal, L., Sánchez-Gracia A, Traoré A, Ferraz J, Álvarez I, Fernández I, Costa V, Chen S, Tapio M, Cantet R, Patel A, Meadow R, **Marshall F**, Beja Pereira A, and F Goyache 2018 Legacies of domestication, trade and herder mobility shape extant male zebu cattle diversity in South Asia and Africa. *Scientific Reports* 8:8027.
 doi/ [10.1038/s41598-018-36444-7](https://doi.org/10.1038/s41598-018-36444-7)
- Reid, R. E. B., Jones, M., Brandt, S., Bunn, H. and **F. Marshall**. 2019 Oxygen isotope analyses of ungulate tooth enamel confirm low seasonality of rainfall contributed to the African Humid Period in Somalia. *Palaeogeography, Palaeoclimatology, Palaeoecology* 534.
doi.org/10.1016/j.paleo.2019.109272
- Hu, S., Hu Y., Yang, J., Yang M., Wei, P., Hou, Y. and **F. Marshall**. 2020 From pack animals to polo: Donkeys from the ninth century Tang Tomb of an elite lady in Xi'an, China. *Antiquity* doi.org/10.15184/aqy.2020.6
- Grillo, K.M., J. Dunne, **F. Marshall**, M.E. Prendergast, E. Casanova, A.O. Gidna, A. Janzen, Karega-Munene, J. Keute, A.Z.P. Mabulla, P. Robertshaw, T. Gillard, C. Walton-Doyle, H.L. Whelton, K. Ryan, R. Evershed. 2020 Molecular and isotopic evidence for milk, meat and plants in prehistoric eastern African herder food systems. *Proceedings of the National Academy of Sciences of the U.S.A.* doi/10.1073/pnas.1920309117

SELECTED MEETINGS AND INVITED LECTURES

- 2010 Animals of pastoralists and ancient kings: domestication of the donkey. Department of Cross-Cultural studies, University of Copenhagen. September 14, 2010.
- 2011 with Cheri Asa. African wild ass behavior, domestication and conservation. Fryxell Symposium in honor of R. Lee Lyman. Society of American Archaeology 76th Annual meeting, March 30-April 3, Sacramento, CA.
- 2011 Domestication as an Evolutionary Phenomenon: Expanding the Synthesis. NESCent Catalysis Meeting, April 8-11, 2011. National Evolutionary Synthesis Center, Durham, NC.
- 2012 The Neolithic in Africa: Alive and Kicking? Society of American Archaeology 77th Annual meeting, April 18-22 2012. Memphis TN
- 2012 with Birgitta Kimura and Connie Mulligan. Ancient DNA and Donkey Domestication Society of Africanist Archaeologists 2012 Biennial Meeting June 20-23, Toronto, Canada.

- 2012 with Cheryl Asa, Karen Bauman, Fraser Babbs and Martha Fischer. A long-term investigation of social and sexual behavior of endangered Somali wild asses (*Equus africanus somalicus*) and Grevy's zebras (*E. greyi*). International Wild Equid Conference, 18-22 Sept. 2012 Vienna, Austria.
- 2014 Donkey Domestication: Mobility and Resilience. Archaeometry Department, University of the National Academy of Sciences, Beijing, June 17, 2014.
- 2014 Animal Domestication. Archaeometry Department, University of the National Academy of Sciences, Beijing, June 22, 2014.
- 2014 Animal Domestication: New Perspectives. San Diego Museum of Natural History, San Diego. June 27, 2014.
- 2014 Insights into conservation issues: mobility and the beginnings of food production in Africa. August 21, 2014, International Expert Meeting on the Nomination Process of Tehuacán-Cuicatlán to the UNESCO World Heritage List The transition from hunter-gatherers to farming societies. The origins of food production and the World Heritage Convention. UNESCO, Puebla, Mexico
- 2014 Nutrient Hotspots and the role of ancient herders in the creation of African savannas. Archaeology Program Seminar Series, Co-sponsored with Harvard University Center for the Environment. Harvard University. 15 October, Boston.
- 2014 Resilience and Mobility: Donkeys, Domestication and People. Second Annual Donkey Welfare Symposium, Veterinary School, University of California, Davis. November 7, Davis.
- 2015 Animals made us human: Social and ecological perspectives on domestication. The Skomp Distinguished Lecture Series, Department of Anthropology, University of Indiana, 3 March 2015, Bloomington.
- 2015 with Stanley Ambrose and Steven Goldstein. Nutrient Hotspots and Pastoral Legacies in East African Savannas. April 19, 2015, Society for American Archaeology 80th Annual meeting, Meeting April 15-19, San Francisco
- 2015 Workshop on osteological identification of *Equus asinus*. Zooarchaeology laboratory Chinese Academy of Social Sciences, July 17, Beijing.
- 2016 Donkey and Cat Domestication: Perspectives from the Margins. "Animals: Cultural Identifiers in Ancient Societies? Archaeobio Center Conference, Ludwig Maximillians University, Munich, Germany, April 5, 2016.
- 2016 Nutrient Hotspots and Pastoral Landscapes in Southern Kenya. Society of Africanist Archaeologists 23 Biennial Meeting, Toulouse, France, 28 June 2016.

- 2016 The Origin and Evolution of Food Production and its Impact on Consumption Patterns. UNESCO-CIMVESTAV Conference, Mexico City 13-15 October 2016.
- 2019 Whose Donkey? Domestication and variability. April 13, 2019, Society for American Archaeology 84th Annual meeting, Meeting April 10-14, Albuquerque, NM.
- 2019 Food security, mobility and ancient East African herders. Food Security in Flux Workshop. Max Planck Institute for the Science of Human History, Jena, Germany, May 2-3, 2019.
- 2019 Ancient herders enriched and restructured African grasslands. Distinguished lecture Max Planck Institute for the Science of Human History, Jena, Germany, May 3, 2019.
- 2020 Re-evaluating the Origins and Trajectories of Domestication. Santa Fe Institute Working Group, March 9-11, 2020.

MEDIA RELEASES ABOUT RESEARCH (SELETED)

Hu, et al. 2013 Earliest evidence for commensal processes of cat domestication. PNAS 111(1)116-120. doi:10.1073/pnas.1311439110
529 news outlets, broadcast 7, print/online news 437.

How Ancient Cattle Herders Avoided Sleeping Sickness - The New York Times. Global Health. March 23, 2015
<https://www.nytimes.com/.../how-ancient-cattle-herders-avoided-sleeping-sickness.html>

Where's the Love for Donkeys? - The New York Times, October 31, 2016
<https://www.nytimes.com/2016/11/01/science/donkeys.html>

Weissbrod, L. et al. 2017. Origins of house mice in ecological niches created by settled hunter-gatherers in the Levant 15,000 y ago. PNAS Doi/10.1073/pnas.1619137114
30 news outlets, Science Magazine, National Geographic, New Scientists, Scientific American, Washington Post

Marshall F, Reid R. E. B., Goldstein S., Storozum M., Wreschnig A. et al. 2018 Ancient herders enriched and restructured African grasslands. *Nature* 561(7723):387-390. doi: 10.1038/s41586-018-0456-9
>30 news outlets, Science Magazine, National Geographic, New Scientist, Scientific American, Washington Post

Hu, S., Hu Y., Yang, J., Yang M., Wei, P., Hou, Y. and **F. Marshall**. 2020 From pack animals to polo: Donkeys from the ninth century Tang Tomb of an elite lady in Xi'an, China. *Antiquity* doi.org/10.15184/aqy.2020.6
>20 News outlets, Science Magazine, National Geographic, Washington post, Newsweek, the Times, broadcast 1, print/online news 28

PROFESSIONAL SERVICE: SELECTED

Member External Review Team for Department of Archaeology, University of Calgary, 2007
 Reviewer School for Advanced Research: Resident Scholars Program 2011/2012
 Nominator for the MacArthur Fellows Program 2011
 Fulbright East Africa Review Panel, Chicago 2014
 Member External Review Team for Graduate Program, Department of Anthropology,
 University of Texas, Austin 2014
 Editorial Board, Azania: African Journal of Archaeology 2008-present
 Tenure reviews: average 4 per year

REVIEWER

Journals: African Archaeology, African Archaeological Review, Azania, Antiquity
 Current Anthropology, Nature, PNAS, Science, World Archaeology
 Grants : EU: Austrian National, Swiss National, Belgian National
 National Science Foundation, USA, National Research Council, Canada. Fulbright Program.

UNIVERSITY SERVICE: SELECTED

2003-2006 Member of Arts and Sciences Promotion and Tenure Committee
 2004-2006 Member of Arts and Sciences Graduate Education Task Force
 2006-Spring Acting Chair, Department of Anthropology
 2006-2008 Arts and Sciences Review Committee on Faculty Personnel Procedures, Chair 08
 2009-2010 Member Curriculum Implementation Committee, Arts and Sciences
 2011-Fall Member Political Science Search Committee
 2008 Member Dean's Academic Planning Committee, Arts and Sciences
 2011 Speaker, Board of Trustees Family Program
 2014 External member Evolution search committee, Department of Biology
 2015-Fall Member Advisory Committee for selection of Faculty Achievement Awards
 2015-Fall Member Arts and Sciences Awards Selection Committee
 2015-2017 Member of Arts and Sciences Promotion and Tenure Committee
 2017 Speaker Beyond Brookings
 2019 Member Arts and Sciences Awards Selection Committee

COMMUNITY SERVICE: SELECTED

Guest lecture, CHRC Retreat, Department of Pediatrics Washington University, October 2002.
 Program Chair Archaeology, African Studies Association Annual Meetings, Boston 2003.
 Guest lecture, Zoo Keepers Association of America, St Louis Zoo, "Are zoo animals wild or tame? Zooarchaeological perspectives on domestication" November 2005.
 Guest lecture, Washington University in St Louis Science on Tap, "Donkeys From the Land of the Dead: The Skeletons of Abydos" October 31, 2007.
 Convener of Friday Archaeology Speakers Series 2004-present
 Annual lecture on the Washington University and St Louis Zoo collaborative study on the behavior of African wild asses and Grevy's zebra for interns at the Saint Louis Zoo
 Guest lecture, "Domestication of the Donkey" Professors Emeritus Washington University in St Louis, May 2016.

DISSERTATION COMMITTEES, CHAIR

Kennedy Mutundu, 1998. "Ethnohistoric Archaeology of the Mukogodo of North-Central Kenya: Contemporary Hunter-Gatherer Subsistence and the Transition to Pastoralism in Secondary Settings." Dean Social Sciences, Mt Kenya University, Nairobi, Kenya.

Lucretia Kelly, 2000. "Social Implications of Faunal Provisioning for the Cahokia Site: Initial Mississippian, Lohmann Phase. Independent researcher.

Chester Cain, 2000. "Animals at Axum: Initial Zooarchaeological Research in the Later Prehistory of the Northern Ethiopian Highlands." Training Administrator, Quality Systems and Compliance, Pfizer.

Ruth Shahack-Gross, 2002. "Taphonomy of Abandoned Maasai Settlements in Southern Kenya with Special Reference to Livestock Enclosures: Implications for the Spread of Pastoralism in East Africa." Professor, Chair Department of Maritime Civilizations, University of Haifa, Israel, Director, Laboratory for Sedimentary Archaeology.

Elisabeth Hildebrand, 2003. "Enset, Yams and Honey: Ethnoarchaeological Approaches to Early Horticulture in Southwest Ethiopia." Associate Professor, Department of Anthropology, Stony Brook University, New York.

Darla Dale, 2007. "An Archaeological Investigation of the Kansyore, Later Stone Age Hunter-gatherers in East Africa." Assistant Dean, Washington University, Saint Louis. Retired.

Lior Weissbrod, 2010. "The Small Animals of Maasai Settlements: Ethnoarchaeological Investigations of the Commensalism Model." Postdoctoral Fellow, Zinman Institute of Archaeology, Haifa University, Israel.

Jose Capriles Flores, 2011. "The Economic Organization of Early Camelid Pastoralism in the Andean Highlands of Bolivia." Co-chair with Dr. Browman. Assistant Professor, Department of Anthropology, Pennsylvania State University.

Katherine M. Grillo, 2012. "The materiality of mobile pastoralism: Ethnoarchaeological Perspectives from Samburu, Kenya. Assistant Professor, Department of Anthropology, University of Florida.

Helena Woldekiros 2014 "The Afar Caravan Route: Insights into Aksumite (50 BCE-CE 900) Trade and Exchange from the Low Deserts to the North Ethiopian Plateau. Assistant Professor, Washington University in St Louis.

Abigail Chipps Stone 2015 "Urban Herders: An Archaeological and Isotopic Investigation into the Roles of Mobility and Subsistence Specialization in an Iron Age Urban Center in Mali." Assistant Professor, University of Northern Illinois.

Diana Fridberg 2015 “Case Studies in Ancient Maya Human-Animal Relations: El Perú, La Corona, and Commensal Mammals.” Specialist Co-Chair, Senior Chair Dr. Friedel. Registrar National Aquarium Baltimore.

Steven Goldstein 2017 “The technological and socio-economic organization of the Elmenteitan early herders in southern Kenya (3000-1200 BP). Research Group Leader, Archaeology of Food Security and Sustainability Group, Department of Archaeology. Max Planck, Jenna, Germany.

Mica Jones 2020 “Variability Among Later Stone Age Hunter-gatherers in Eastern Africa.” Washington University in St Louis.

DISSERTATION COMMITTEES, COMMITTEE MEMBER 2007-2017

A=archaeology, C=cultural, P=physical anthropology, B Biology

Quin Zhen 2017 (A)

Michael Storozum 2017 (A)

BrieAnna Langley 2016 (A)

Paula Doumani, 2014 (A)

Amy Conley, 2013 (B)

Catrina Adams, 2009 (A)

1987-2006 Thirty six dissertation committees

Natalie Mueller 2016 (A)

Clarissa Cagnato 2015 (A)

Lynne Munrone Dunn, 2015 (A)

Mercedes Gutierrez, 2011 (P)

Benjamin Carter, 2007 (A)

CURRENT DOCTORAL STUDENTS, PRINCIPLE ADVISOR

Ximena Lemoine, Lorraine Hu, Co-advisor Zhengwei Zhang