



WZAM³

ASSOCIATION
OF ZOOS &
AQUARIUMS

Knology



garibaygroup

Bibliography: WZAM3 Publications & Products

May 10, 2021

This bibliography features all publications from the third wave of the Why Zoos & Aquariums Matter (WZAM³) research initiative. This work was supported through the project titled STEM Matters: Investigating the Confluence of Visitor and Institutional Agendas (NSF award #DRK-1612729 and #DRK-1612699). The publications and products are organized by type. Within each category, publications are organized and chronologically, then alphabetically. A complete list of products from all WZAM research can be found at: <https://wzam.org/resources/>

Peer Review Papers

Dwyer, J.T., Fraser, J., Voiklis, J., & Thomas, U.G. (2020). Individual-Level Variability Among Trust Criteria Relevant to Zoos and Aquariums. *Zoo Biology*. 39(5), 297-303. <https://doi.org/10.1002/zoo.21562>

Fraser, J. (2017). Thinking about museum type. *Curator: The Museum Journal*. 60 (3), 263. <https://doi.org/10.1111/cura.12228>

Gupta, R., Fraser, J., Rank, S.J., Brucker, J., & Flinner, K. (2019). Multi-Site Case Studies about Zoo and Aquarium Visitors' Perceptions of the STEM Learning Ecology. *Visitor Studies*. 22 (2), 127-146. <https://doi.org/10.1080/10645578.2019.1661737>

Gupta, R., Voiklis, J., Rank, S. J., Dwyer, J. T., Fraser, J., Flinner, K., & Nock, K. (2020). Public Perceptions of the STEM Learning Ecology – Perspectives from a National Sample in the US. *International Journal of Science Education, Part B*. 10 (2), 112-126. <https://doi.org/10.1080/21548455.2020.1719291>

Heimlich, J.E., Meyer, J.R., & Timko, G. (In Prep). Learning over time: Knowledge accumulation from zoo and aquarium visits. *Adult Education Quarterly*.



Why Zoos & Aquariums Matter ~ Wave 3 | STEM Matters
An Independent Research to Practice Collaborative Research Project for the
Association of Zoos and Aquariums made possible through National Science Foundation
Grants #1612729 & #1612699

Bibliography: WZAM³ Publications & Products
(#NSF.022.184.12) is licensed under a Creative
Commons Attribution-NonCommercial-
NoDerivs 4.0 International License (CC BY-NC-
ND).

Heimlich, J.E., Timko, G., & Meyer, J.R. (In Prep). Memorable and meaningful visitor experiences at zoos and aquariums. *Curator: The Museum Journal*.

Rank, S. J., Voiklis, J., Gupta, R., Fraser, John R., and Flinner, K. (2018). Understanding Organizational Trust of Zoos and Aquariums. Kathleen P. Hunt (Ed.), *Understanding the Role of Trust and Credibility in Science Communication*. <https://doi.org/10.31274/sciencecommunication-181114-16>

Riedinger, K., & Storksdieck, M. (In Review). Application of the contextual model of learning and situated identity model in informal STEM learning research. In P. Patrick (Ed.), *Applying Learning Theories in Research Outside the Classroom*. Springer.

Spitzer, W., & Fraser, J. (2020) Advancing Community Science Literacy. *Journal of Museum Education*. 45(1), 5-15. <https://doi.org/10.1080/10598650.2020.1720403>

Timko, G. Nageotte, N., Heimlich, J.E., & Meyer, J.R. (In Prep). Influencing conservation readiness of zoo and aquarium visitors. *Conservation Biology*.

Voiklis, J., Flinner, K., Field, S., Gupta, R., Fraser, J, de la Torre Dwyer, J., Rank, S. J., Nock, K. (In Review). Seeing the Forest, Not the Trees – Crowdsourced Data Collection Methods for Sector-wide Research. *Visitor Studies*.

Books

Fraser, J. & Switzer, T. F. (2021). *The Social Value of Zoos*. University of Cambridge Press.

Fraser, J. Heimlich, J. & Riedinger, K. (Eds.) (forthcoming), *Zoos and Aquariums in the Public Mind*. Springer Nature. *

* Chapters either full or partially support by this grant funding:

1. An Integrated Approach to Museum Learning Research
John Fraser, Joe E. Heimlich, Kelly Riedinger and Uduak Thomas
3. Visitors and Conservation: Seeking Behavior
Joe E. Heimlich & Nicole M. Ardoin
4. Understanding the Visitor
Kathayoon Khalil, Joe E. Heimlich, Stacy Graison, Vicki M. Searles, Dave Bader and Nancy Hotchkiss
5. What is the STEM Learning Ecology and where do Zoos and Aquariums fit in it? Insights from National Studies of the Public's Engagement with Science, Technology, Engineering, and Math
Rupanwita Gupta, John Voiklis, Joseph de la Torre Dwyer, Kate Flinner, John Fraser and Uduak Grace Thomas

7. Zoo and Aquarium Visitors' Wildlife Values and Ethics Orientations
Heather Lerner, John Fraser, John Voiklis, Carol D. Saunders, C. D., and Ron Meyers
8. Believing zoos and aquariums as conservation informants
John Voiklis, Rupanwita Gupta, Shelley J. Rank, Joseph de la Torre Dwyer, John Fraser and Uduak G. Thomas
9. Visitor behavior and talk at zoos and aquariums: Tracking visitor groups with GoPro Cameras
Kelly Riedinger and Martin Storksdieck
11. The AZA Social Science Research Agenda 2020: How the Social Sciences Can Help People and Wildlife Thrive Together
Joy Kubarek, Jackie Ogden, Amy Rutherford, Shelly Grow and Vicki Searles

Trainings

Sickler, J., Rutherford, A. (2021). *WZAM3 Virtual Course*. Association of Zoos & Aquariums Online Learning Platform.
<http://www.elearning.aza.org/free-e-learning>

Technical Reports

1. Dwyer, J.T., Fraser, J. & Thomas, U.G. (2019). *Advisory report on favorability & admissions prices at zoos and aquariums*. Knology Publication #NSF.022.184.09. New Knowledge Organization Ltd.
2. Field, S., Dwyer, J.T., Gupta, R., Voiklis, J., Fraser, J., Flinner, K., Nock, K., Barchas-Lichtenstein, J., & Rank, S.J. (2019). Public Discourse about Zoos & Aquariums: Crowdsourced Survey Results. Knology Publication #NSF.022.184.08. Knology.
3. Fraser, J. & Gupta, R. (2020). Public Trust of Zoos & Aquariums: Results from WZAM3. Knology Publication #NSF.022.184.10. Knology.
4. Gupta, R., Rank, S., Fraser, J. (2018). National Surveys Overview: Focusing on Perceptions of Zoos & Aquariums. NewKnowledge Publication #NSF.022.184.01. New Knowledge Organization Ltd.
5. Gupta, R., Fraser, J. Brucker, J.L, Rank, S., Flinner, K. (2018). STEM Learning Ecology Workshops. NewKnowledge Publication #NSF.022.184.04. New Knowledge Organization Ltd.
6. Gupta, R., Voiklis, J., Rank, S., Dwyer, J.T., Fraser, J., & Flinner, K. (2019). STEM Learning Ecology: Survey Results. NewKnowledge Publication #NSF.022.184.07. New Knowledge Organization Ltd.
7. Heimlich, J.E., Wojton, M.A., Meyer, J., Timko, G., Mony, P., & Nall, R. (2021). Method and Instrumentation: COSI's Center for Research and Evaluation's WZAM3 Studies. <https://www.informalscience.org/wzam3-method-and-instrumentation>
8. Knology, Center for Research & Evaluation at COSI, Center for STEM Research at Oregon State University. (2020). Results of WZAM3 To Date. Knology Publication # #NSF.022.184.11. Knology.
9. Rank, S., Gupta, R., Fraser, J. (2018). Situating WZAM 3: An Overview of Previous Studies. NewKnowledge Publication #NSF.022.184.02. New Knowledge Organization Ltd.

10. Rank, S., Voiklis, J., Gupta, R., Flinner, K., Fraser, J., & Brucker, J.L. (2018). Developing an Instrument for Public Perceptions of Zoos and Aquariums. NewKnowledge Publication #NSF.022.184.03. New Knowledge Organization Ltd.
11. Voiklis, J., Field, S., Gupta, R., Rank, S.J., Fraser, J., Flinner, K., Nock, K., & Dwyer, J.T. (2019). Public Discourse about Zoos & Aquariums: Crowdsourced Survey Results Appendix. Knology Publication #NSF.022.184.08-A. Knology.

Conference Papers & Presentations

1. Bonebrake, V., Riedinger, K., & Storksdieck, M. (2019). Collecting demographic and behavioral data through stationary and hat-mounted cameras [Poster Session]. 2019 annual conference of the Visitor Studies Association in Detroit, MI.
2. Bradshaw, L., Fraser, J., Rank, S., Heimlich, J., Wojton, M.A., Riedinger, K., Storksdieck, M., & Canzoneri, N. (2017). STEM Matters: Investigating the Confluence of Visitor and Institutional Agendas [Conference Session]. 2017 annual conference of Association of Zoos and Aquariums. Indianapolis, IN.
3. Heimlich, J.E. & Riedinger, K. (2019). STEM Matters Update [Conference Session]. AZA Annual meeting 2019. New Orleans, LA.
4. Heimlich, J.E., Riedinger, K. & Gupta, R. (2019). WZAM3: Findings on the confluence of visitor and institutional agendas [Conference Session]. 2019 North American Association for Environmental Education Annual Conference. Lexington, KY.
5. Heimlich, J., Storksdieck, M., Riedinger, K., Wotjon, M., Rank, S., Gupta, R., Voiklis, J., & Fraser, J. (2018). Investigating the confluence of visitor and institutional conservation learning agendas [Conference Session]. 2018 annual conference of North American Association for Environmental Education in Spokane, WA.
6. Rank, S., Heimlich, J., Reidinger, K., and Wojton, M. (2018). Why Zoos & Aquariums Matter: STEM Matters [Conference Session]. 2018 Mid-Year meeting of the Association of Zoos and Aquariums. Jacksonville, FL.
7. Riedinger, K. (2018). Entry characteristics and decision-making behaviors of zoo and aquarium visitors [Conference Session]. 2018 annual conference of the Visitor Studies Association. Chicago, IL.
8. Riedinger, K., Bonebrake, V., & Storksdieck, M. (2019). Reframing Conversations Through Signage: Using Video to Capture Visitor Talk at Exhibits [Poster Session]. 2019 annual conference of the Visitor Studies Association in Detroit, MI.
9. Riedinger, K., Storksdieck, M., & Canzoneri, N. (2018). Investigating the Confluence of Visitor and Institutional Agendas [Conference Session]. 2018 annual conference of NARST. Atlanta, GA.
10. Rutherford, A., Fraser, J., Heimlich, J., Riedinger, K., Fifer, C., Carlin-Morgan, K., & Mileham, M. (2020). Social Science Research Collaboration: Advance the field and your Organization [Conference Session]. 2020 annual conference of the Association of Zoos and Aquariums Virtual Conference.
11. Storksdieck, M., Riedinger, K., Heimlich, J., Wotjon, M., Rank, S., Gupta, R., Voiklis, J., & Fraser, J. (2018). Bring, do, take: Useful tools for practitioners [Conference Session]. 2018 annual conference of North American Association for Environmental Education. Spokane, WA.
12. Storksdieck, M., Voiklis, J., Riedinger, K., Heimlich, J., & Semper, R. (2018). Aligning your agendas with those of your visitors: Lessons learned from zoos and aquariums [Conference Session]. 2018 annual conference of Association of Science-Technology Centers in Hartford, CT.

Other Products

1. Fraser, J., Heimlich, J. & Storksdieck, M., (2019). WZAM3: Why zoos and aquariums matter wave 3. CAISE (Ed.), 2019 NSF AISL PI Meeting. (online resource). Center for the Advancement of Informal Science Education.
2. New Knowledge Organization Ltd. (2018). Introduction to STEM Matters/WZAM3. *Connect*, Mar, p. 14.
3. New Knowledge Organization Ltd. (2019). Word Matters in Zoos and Aquariums. *Connect*, Feb, p. 14.
4. New Knowledge Organization Ltd. (2019). Research Update: A Matter of Trust. *Connect*, Mar, p. 16.
5. Rank, S.J., Voiklis, J., & Fraser, J. (2019). Trust Matters. Conservation Education Committee Newsletter. 12(2). p. 10.
6. Riedinger, K. (2019). A webinar series with Why Zoos and Aquariums Matter [Blog Post]. Retrieved from:
<https://www.informalscience.org/news-views/webinar-series-why-zoos-and-aquariums-matter>