Exponent®
Engineering & Scientific Consulting


# Jeremy Lomax, Ph.D.

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## Professional Profile

Dr. Lomax analyzes issues concerning the biomechanics of human injury, including interactions involving consumer products, motor vehicle collisions, and premises liability events.

Dr. Lomax has a thorough understanding of human anatomy and physiology as well as extensive experience with motion capture systems, electromyography (EMG), force plates, inertial motion units (IMUs), and material testing systems (MTS). Using these technologies, Dr. Lomax has worked to evaluate how biomechanical metrics can influence functional capabilities in the real world.

Before starting at Exponent, Dr. Lomax was a graduate research fellow for both the Howard Hughes Medical Institute and the National Science Foundation at Brown University. Dr Lomax's work focused on understanding vertebrate biomechanics as he employed and developed novel methods of three-dimensional (3D) and X-ray motion capture to study how muscles work to produce motion in both human and animal models.

## Academic Credentials & Professional Honors

Ph.D., Ecology Evolution and Organismal Biology, Brown University, 2022

M.S., Ecology Evolution and Organismal Biology, Brown University, 2019

B.S., Integrative Biology, University of South Florida, 2016

National Science Foundation Graduate Research Fellowship Program, 2018-2022

Howard Hughes Medical Institute Gilliam Fellowship for Advanced Study, 2018-2022

## Prior Experience

Research Fellow, Functional Morphology & Biomechanics Laboratory, Department of Ecology, Evolution, and Organismal Biology, Brown University, 2016-2022

Graduate Teaching Assistant, Human Anatomy for Medical Students, Warren Alpert Medical School, 2018-2019

## Professional Affiliations

Society for Integrative and Comparative Biology (member)

 

Sigma Xi Research Honor Society (member)

American Society of Biomechanics (member)

## Publications

Lomax, J.J., Martinson, T.F., Jimenez, Y.E., Brainerd, E.B. (2020). Bifunctional role of the sternohyoideus muscle during suction feeding in the striped surfperch, Embiotoca lateralis. Integrative Organismal Biology. 2(1)

Bekari KI, Lomax JJ, Farina SC. (2020). Relating Occlusal Offset to Diet in Piranhas and Pacus. University of Washington, FHL.

**Presentations**

Lomax, J.J., Brainerd, E.L. Double jointed biting of the Serrasalmid sp. Piaractus brachypomus. Podium presentation. Society for Integrative and Comparative Biology Annual Meeting. Washington, D.C.*, 2021

Capano, J. G., Kazcmarek, E. B., Lomax, J. J., Turner, M. L., Brainerd, E. L., Ryerson, W. G. Reticulated pythons roll their hemimandibles and splay their quadrates to engulf enormous prey. Society for Integrative and Comparative Biology: Annual Meeting, Washington, D.C. 2021

Lomax, J.J. Science from America's 'super predator': a story concerning fish teeth and the 13th. Podium presentation. Bates College. 2021

Lomax, J.J. Vegan Piranhas and how they work. Podium presentation. Associated Colleges of the Chicago Area (ACCA) Seminar Series. 2021

Lomax, J.J., Brainerd, E.L. Comparative skeletal kinematics of overbite shearing and compressive chewing in a pacu fish, Piaractus brachypomus". Podium presentation. Society for Integrative and Comparative Biology Annual Meeting, January 2020

Lomax, J.J. Why my mother calls me a Fish Dentist. Podium presentation. Howard Hughes Medical Institute Annual Conference. Janelia Campus, Ashburn, VA. 2019.

Lomax, J.J., Brainerd, E.L. Preliminary Investigation of the Skeletal Kinematics of Prey Processing in a Pacu Fish, Piaractus brachypomus. Poster presentation. Howard Hughes Medical Institute Annual Conference. Janelia Campus, Ashburn, VA. 2019.

## Peer Reviews

Integrative Organismal Biology