



Reconstructing locomotion: Lessons from the joints of living animals

Armita Manafzadeh, Friday, September 18, 2020

3:00 – 4:00 PM, Zoom Virtual meeting room

Presentation: Figuring out how extinct animals actually moved when they roamed the Earth is a serious challenge for paleontologists. This is because when animals fossilize, only their bones are preserved, and the other tissues that make up their bodies decay and are lost. So when paleontologists try to reconstruct locomotion, they have to figure out how an animal's hips, knees, and ankles moved based only on the shapes of its bones -- they don't have direct information about any of the other "soft tissues" that would have surrounded its joints in life, like cartilage, muscles, tendons, and ligaments. How can we better limit our estimations of how much the joints of extinct animals were capable of moving? And even if we learn how to better predict how their joints *could* move, how do we then figure out how they actually *did* move while an animal was walking? In this talk, I'll cover how 3-D studies of joint function in living animals like birds and alligators have changed and are actively changing our perspectives on reconstructing locomotion.

About the speaker: Armita Manafzadeh is a PhD Candidate in the Department of Ecology and Evolutionary Biology at Brown University. Before coming to Brown, she earned her BA in Integrative Biology at UC Berkeley in 2016. Armita is interested in dynamic arthrology -- the study of joints in motion -- and her research questions pull inspiration from paleontology, development, evolution, and pathology.



Seminar information: This seminar will be held virtually via Zoom. To log into the seminar please use the following web link:

<https://fresnostate.zoom.us/j/93828128141?pwd=K2NuaEExTGpLVWM0N2lvWnpETHMyQT09>

Passcode: 542050