

1145-92-2342

**Punit Gandhi\*** (`gandhi.138@mbi.osu`), Mathematical Biosciences Institute, Ohio State University, 374 Jennings Hall, 1735 Neil Ave, Columbus, OH 43210, and **Sara Bonetti, Sarah Iams, Amilcare Porporato** and **Mary Silber**. *Water transport in models of dryland vegetation patterns*. Preliminary report.

Many dryland ecosystems exhibit bands of vegetation growth alternating with bare soil on very gently sloped terrain. The vegetation bands are typically tens of meters thick with spacing on the order of a hundred meters, and form a regular striped pattern that can occupy tens of square kilometers on the landscape. Such patterns have been qualitatively reproduced by reaction-advection-diffusion systems that model various interactions between the plants and their water-limited environment. I will discuss aspects of the surface/subsurface water dynamics. Capturing these hydrological processes on appropriate timescales may allow us to better utilize observational data as we work to identify the dominant mechanisms underlying the formation of dryland vegetation patterns and understand how environmental factors influence pattern characteristics. (Received September 25, 2018)