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**Mackenzie Simper\*** ([mackenzie.simper@utah.edu](mailto:mackenzie.simper@utah.edu)), **Tom Alberts** ([alberts@math.utah.edu](mailto:alberts@math.utah.edu))  
and **Ga Yeong Lee**. *Bak-Sneppen backwards*.

The Bak-Sneppen model is a Markov chain which serves as a simplified model of evolution in a population of spatially interacting species. We study the backwards Markov chain for the Bak-Sneppen model, and derive its corresponding reversibility equations. We show that, in contrast to the forwards Markov chain, the dynamics of the backwards chain explicitly involve the stationary distribution of the model, and from this we derive a functional equation that the stationary distribution must satisfy. We use this functional equation to derive differential equations for the stationary distribution of Bak-Sneppen models in which all but one or all but two of the fitnesses are replaced at each step. (Received February 13, 2016)