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We study the minimal drift p_d so that the one-per-site frog model on a d -ary tree is recurrent. We prove that $p_d \leq 1/3$ for all $d \geq 2$, an optimal universal upper bound for p_d . To do this, we compare the frog model with the one-per-site self-similar frog model and couple the later across trees of different degrees and different drift parameters. (Received August 19, 2019)