Camera Trap Density Estimators: Methods Old and New

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Camera traps are a cost-effective and non-invasive method for collecting data on wildlife species. Recently, camera trap data has been used to estimate abundances in unmarked animal populations. In this talk, I summarize some of the different camera trap density estimators already in existence and introduce a novel method that uses dynamic processes to estimate landscape-scale abundances. I show how dynamic models may be used to incorporate movement across a landscape and how they may be applied to camera trap data. I compare this new model with four previously developed density estimators by fitting them to individual-based simulations using Bayesian methods. Note that these results are preliminary and future work will show where each of these methods are appropriate given the type of data available.