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Joseph Rusinko* (rusinko@hws.edu), **Yu Cai** and **Allison Doherty**. *Taxon Selection using Quartets*.

We examine quartet based phylogenetic tree species reconstruction under the coalescent model. We show that species tree reconstruction can be modestly improved by weighting quartets using a function that quantifies the confidence we might have that the quartet came from the true species tree. As an outgrowth of this analysis, we identify a data-driven process for evaluating which taxa are appropriate to consider in your phylogenetic analysis. (Received January 22, 2018)