1116-60-1700 **Louigi Addario-Berry*** (louigi.addario@mcgill.ca), Montreal, Quebec H3A2K6, Canada.
Most trees are short and fat.

Let T be any Galton-Watson tree. Write vol(T) for the volume of T (the number of nodes), ht(T) for the height of T (the greatest distance of any node from the root) and wid(T) for the width of T (the greatest number of nodes at any level). We study the relation between vol(T), ht(T) and wid(T).

In the case when the offspring distribution $p = (p_i, i \geq 0)$ has mean one and finite variance, both ht(T) and wid(T) are typically of order $vol(T)^{1/2}$, and have sub-Gaussian upper tails on this scale (A-B, Devroye and Janson, 2013). Heuristically, as the tail of the offspring distribution becomes heavier, the tree T becomes "shorter and bushier". We prove a collection of theorems which can be viewed as justifying this heuristic. In particular, we show that the random variable ht(T)/wid(T) always has sub-exponential tails, and the random variable ht(T)/vol}$(T)^{1/2}$ always has sub-Gaussian tails.

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