



'Social distancing' of trees ensures biodiversity in tropical forests, finds study

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The saying goes that the Apple doesn't fall far from the tree. But based on a new study on a forest in Panama, that may be far from the truth for tropical trees that practice a kind of "social distancing" to ensure biodiversity.

In the [study published in the journal Science](#), researchers combined computational modelling with data collected over a 30-year period and found that adult trees in a Panamanian forest were three times as distant from other adults of the same species than would be expected.

The study was collected from a forest research plot located on Barro Colorado Island in the Panama Canal, which according to the University of Texas at Austin, has been studied for the past 100 years. That is where the researchers found that the distance between adult trees of the same species is much higher than their seeds usually travel. The only theoretical explanation for this is that it is something that would prevent young trees from establishing near their parents.

The computational models revealed that each tree species is much more negatively affected by other members of its own species than by other species. "Birds of a feather flock together" is another old adage that these trees do not seem to follow. This is because individual specimens of the same species are affected by the same "enemies" like fungus and insects. These pathogens create room for other species to establish around every tree, meaning that the forest becomes more diverse. One species cannot dominate.

In a way, trees are protected from the pathogens carried by other members of their own species with what we might call [social distancing](#).

As we go through another mass extinction, largely triggered by human action, this study could help bridge the gap between contrasting theories on how forests are shaped. It could also provide critical tools to learn how tropical forests and the trees in them change through time.

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