

Background: Pathways (footpaths and roads) in forests are associated with edge effects, affecting forest structure and composition and associated wildlife. However, little is known about how edge effects along pathways may impact the dynamics of fruit production and their availability for frugivores.

Aim: We related pathway width as a proxy for edge effects to fruit production. Our underlying hypothesis was that pathway width would be positively related to fruit production.

Methods: We observed fruit production along three pathways of different widths – 2, 10 and 20 m wide – and in a control area of undisturbed forest in an Atlantic rain forest stand monthly over a 2-year period.

Results: The number of species and individuals-bearing fruit was higher along the wider pathways than along the narrowest pathway and in the control area. The amount of zoochorous fruits was higher in the control area than along pathways, and the widest pathway had higher non-zoochorous fruits production. Fruiting peaks occurred along pathways, while fruiting in the control area was aseasonal.

Conclusions: Pathway width is related to fruit type and its quantity and temporal availability. These effects extend towards the forest interior beyond 35 m. The presence of paths affects food resources for frugivores and thus can contribute to reconfiguring the spatio-temporal distribution of the fauna.

