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The importance of hydrochory in structuring riparian vegetation: examples from two UK rivers

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Although the importance of hydrochory for vegetation dispersal and establishment within riparian zones has been recognised, this process remains little understood, particularly in relation to habitat diversity, other dispersal mechanisms and the hydrogeomorphological processes operating. This paper addresses this research gap and presents the results of two complimentary studies, which considered propagule dispersal and deposition along two reaches of two contrasting river systems within the UK.

The first study was conducted along a reach of the River Frome with well established riparian vegetation. Atmospheric input, river transport and riverbank deposition of propagules were investigated in relation to the hydrological regime and the vegetation composition of the riparian vegetation. The findings from this study were compared to a study on a newly cut river channel on the River Cole, West Midlands, which had a non-vegetated riparian margin. The colonisation of the riparian vegetation was considered alongside atmospheric input, the seed bank and propagule deposition following overbank flow.

Both of these studies showed that atmospheric propagule input was characterised by few propagules of low diversity. The floristic composition of the riparian vegetation at both sites was most similar to propagule deposition on the riverbanks, which was very closely related to the river's hydrological regime and seasonal patterns of seed release. In particular, winter flooding was very important for introducing new species

and propagules to the sites. These findings show that hydrochory is potentially very important for promoting habitat diversity and highlights the important role of connectivity in riverine ecosystems.