

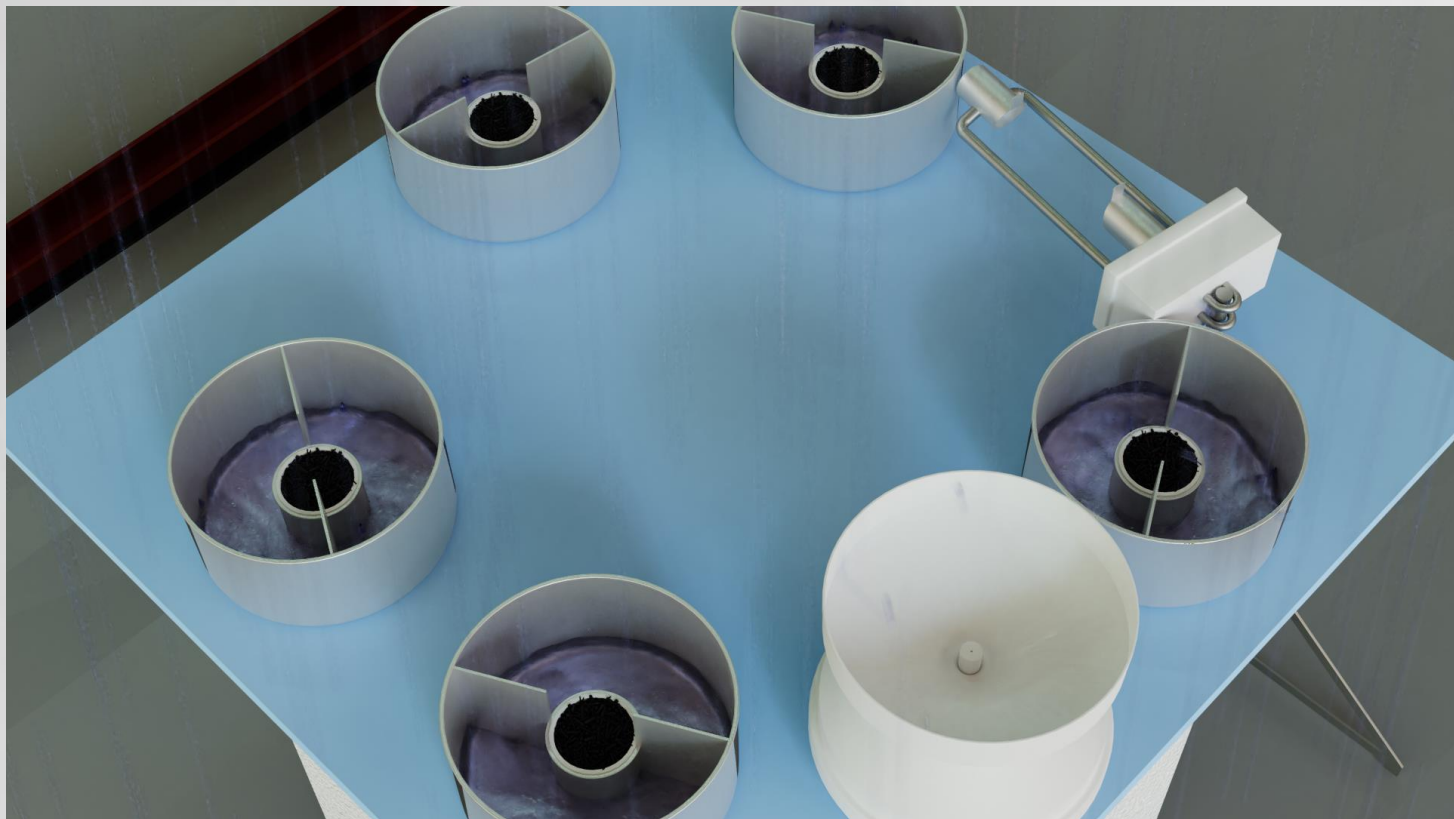
WILDFIRE ASH MOBILIZATION BY SPLASH UNDER SIMULATED RAINFALL IN CONTROLLED LABORATORY CONDITIONS

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Aim/Set-up

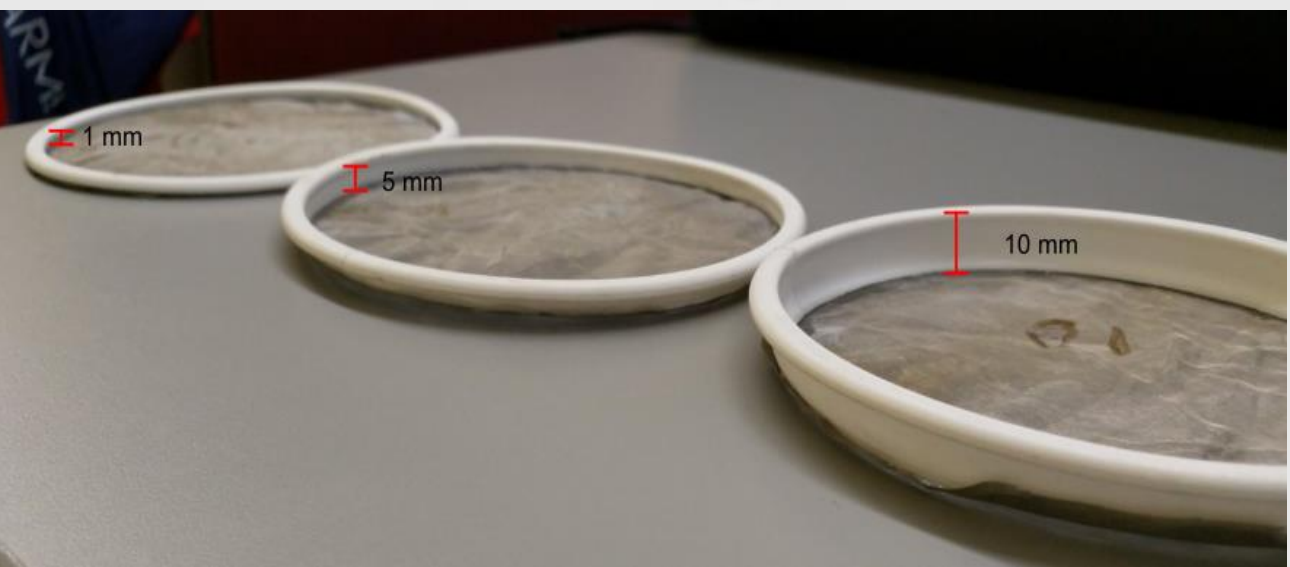
Rainfall Intensity



Ash Origin



Ash Depth

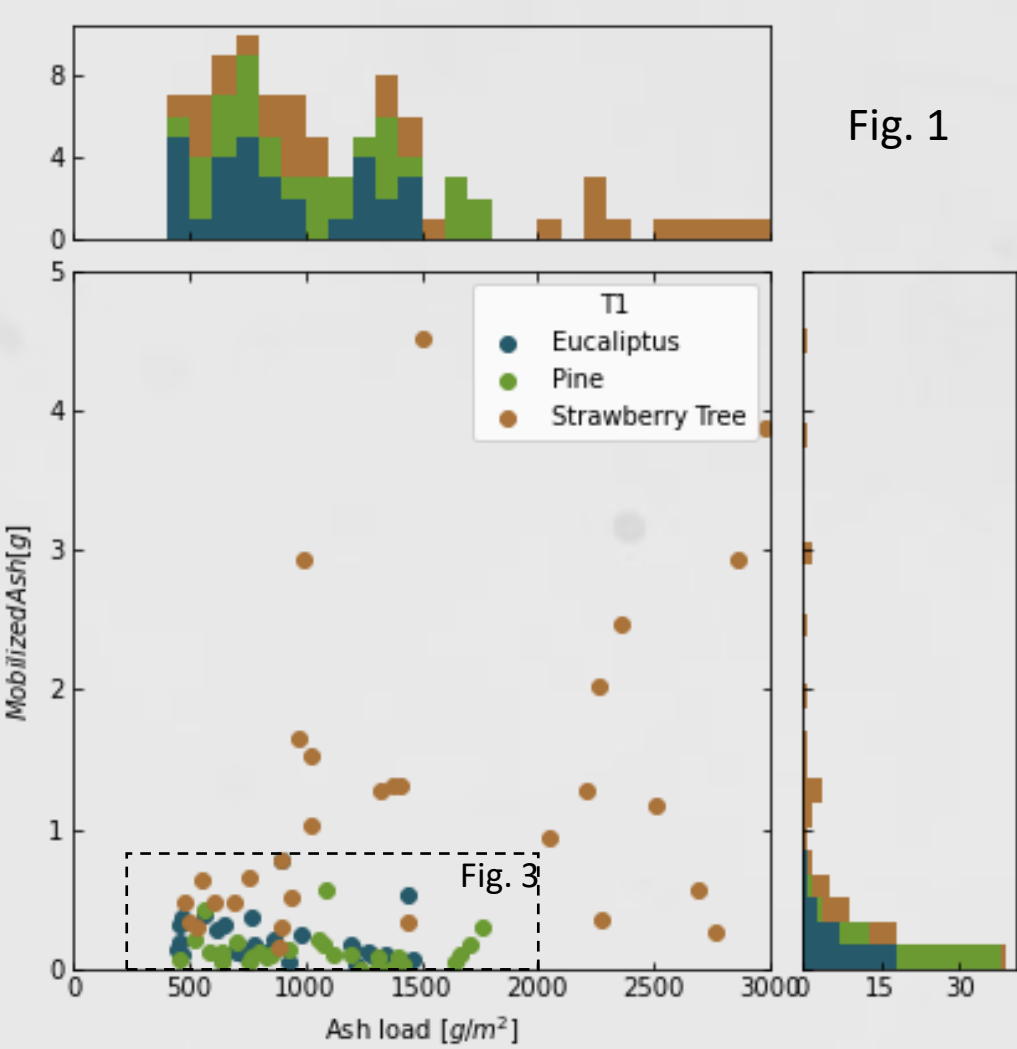


The present study concerns the first phase of wildfire ash erosion by water, using Morgan cups to quantify the splash erosion of wildfire ash by high-intensity simulated rainfall. More specifically, this study assessed the importance of the following factors in ash splash erosion:

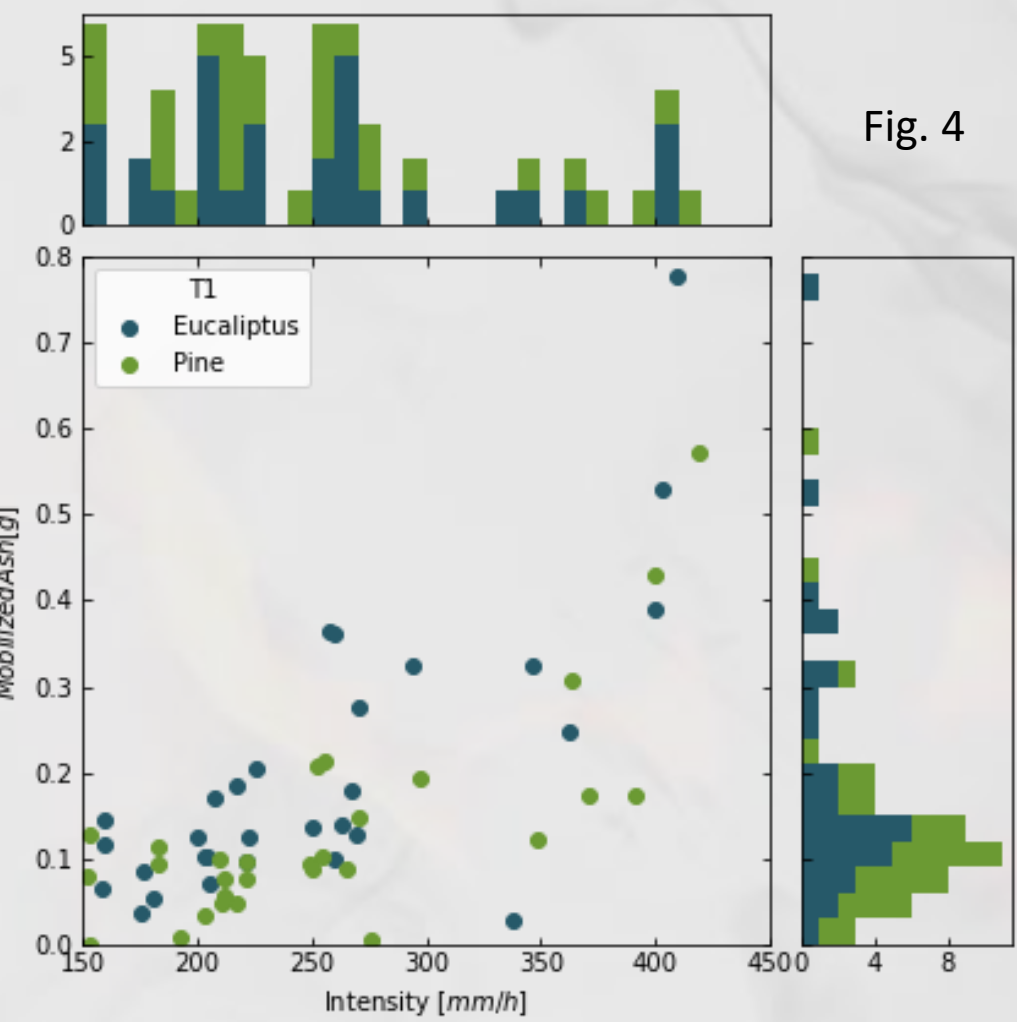
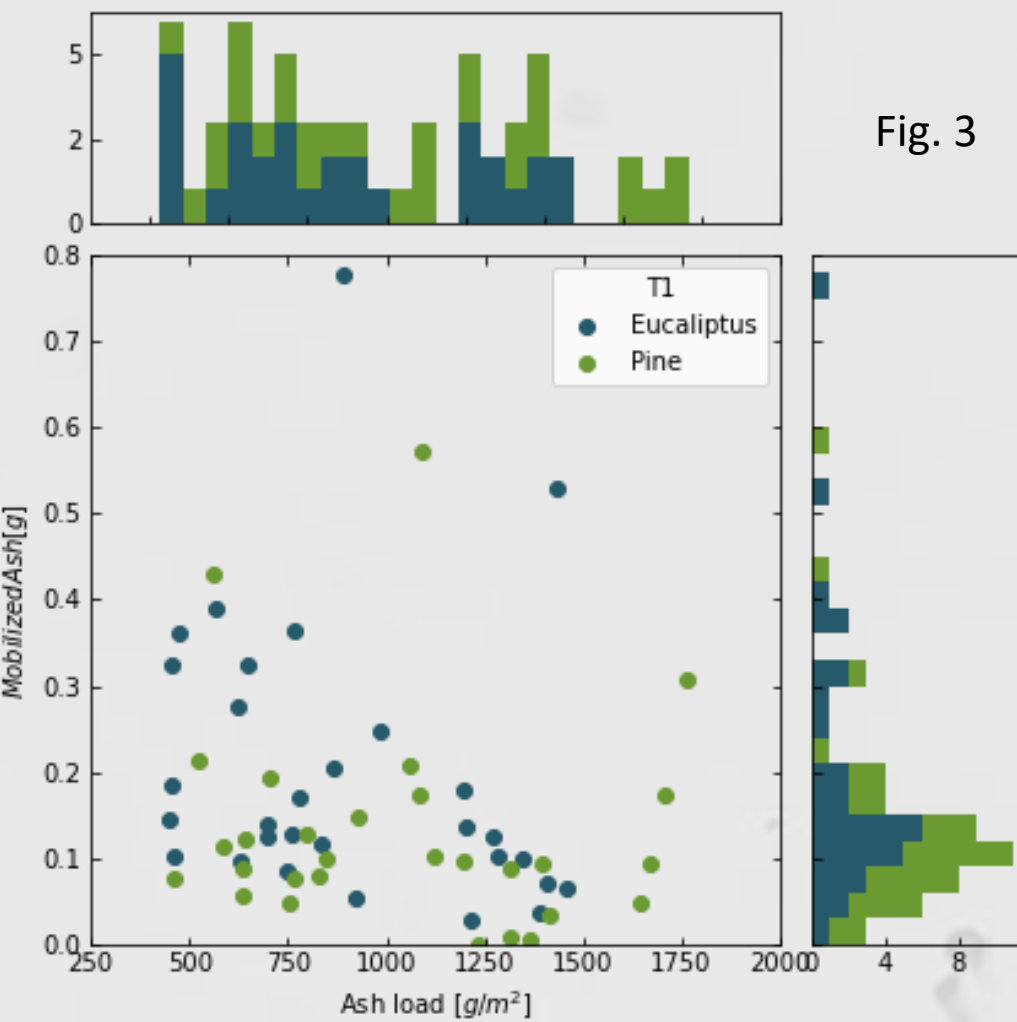
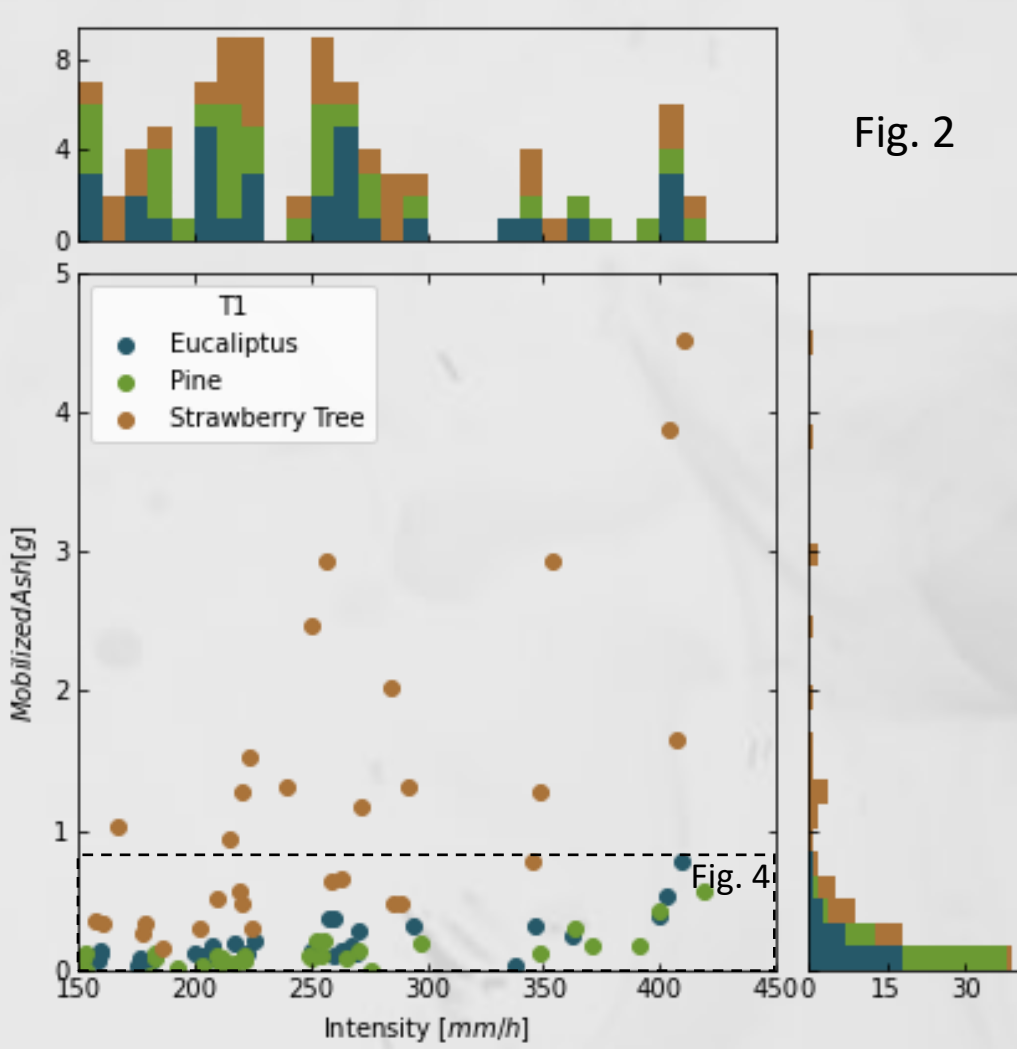
- (1) extreme rainfall intensities, ranging from 150 to 450 mm/h;
- (2) source of the ash, from recently burnt woodlands dominated by maritime Pinus pinaster, Eucalyptus globulus, and Arbutus unedo;
- (3) ash depth or load.

Results/Conclusions

Ash Load



Rainfall Intensity



Preliminary analysis of the obtained results suggested that splash erosion of wildfire ash:

- (1) varied strongly with the applied rainfall intensity, increasing in a linear manner with increasing intensity;
- (2) differed markedly with the dominant tree cover, being clearly lower for the pine and eucalypt stands than for the strawberry tree stands, possibly due to the differences in soil burn severity as indicated by blackish and whitish ashes, respectively;
- (3) depended noticeably on ash depth, decreasing clearly with increasing ash depth and, arguably, with a greater damping capacity.

