Cooperation with country

A/Prof. Philip Zylstra

What makes a forest flammable?

Fire Research and Modelling Environment

PLOS ONE

RESEARCH ARTICLE

Biophysical Mechanistic Modelling Quantifies the Effects of Plant Traits on Fire Severity: Species, Not Surface Fuel Loads, Determine Flame Dimensions in Eucalypt Forests

Philip Zylstra[1☯*], Ross A. Bradstock[1☯], Michael Bedward[1‡], Trent D. Penman[2‡], Michael D. Doherty[3‡], Rodney O. Weber[4], A. Malcolm Gill[3], Geoffrey J. Cary[3]

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APPLICATION

Methods in Ecology and Evolution BRITISH ECOLOGICAL SOCIETY

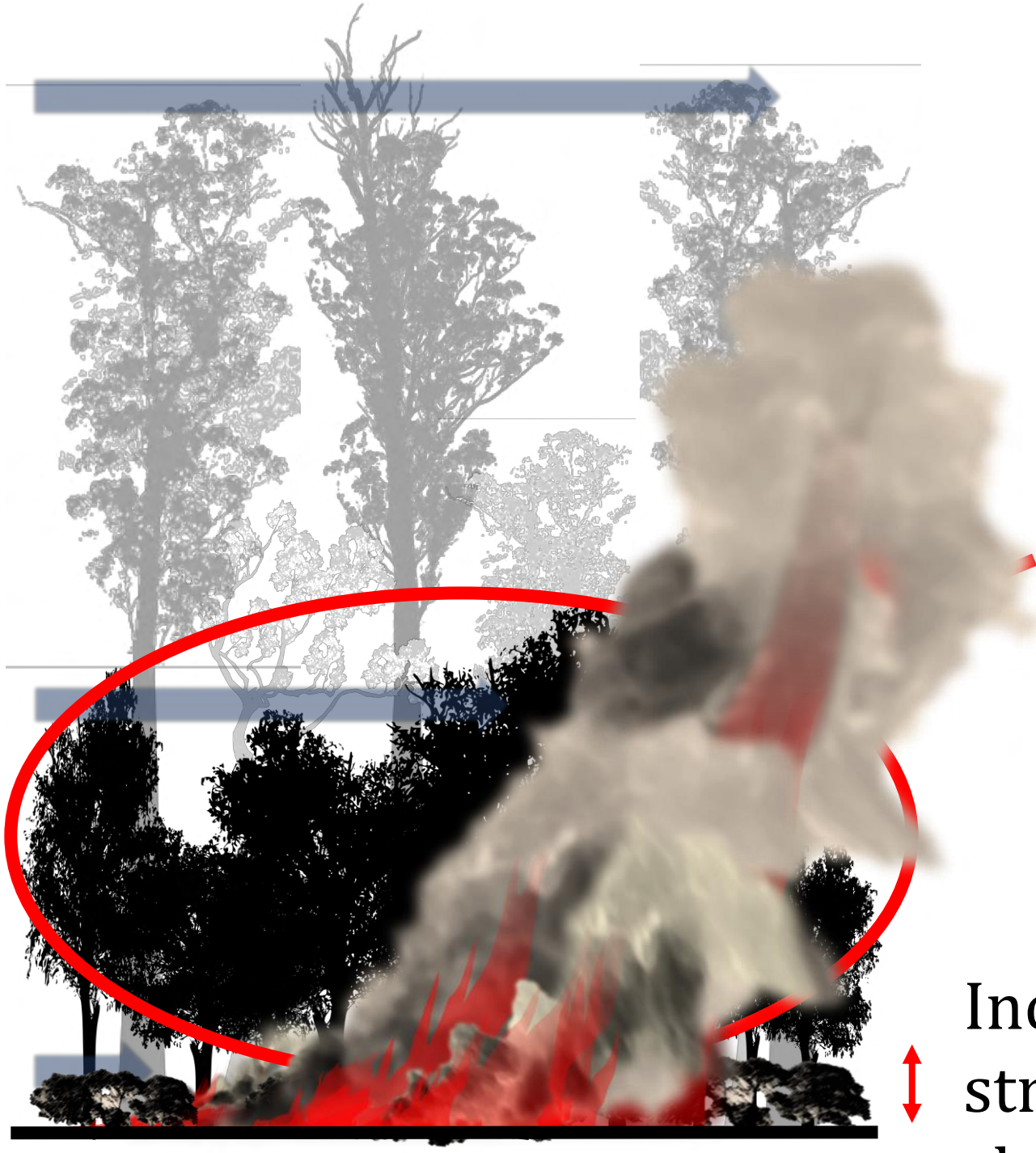
Linking fire behaviour and its ecological effects to plant traits, using FRaME in R

Philip Zylstra

Overstorey shelter

Reduces wind speed acting on the flame, reducing fire severity

More fuel = bigger flames



These plants now reduce fire severity

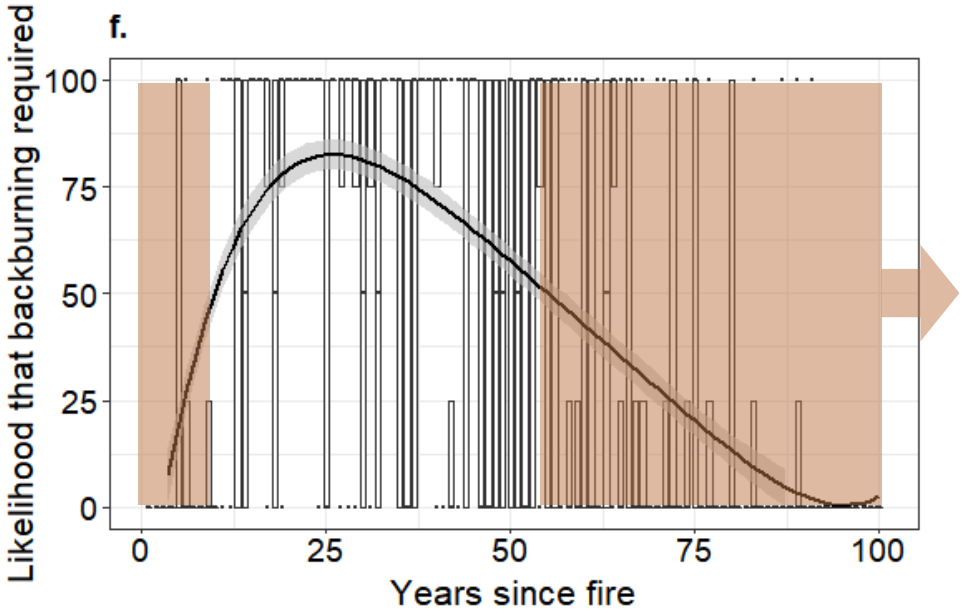
Increasing the gap between strata turns fuel into overstorey

Ecological controls

Zylstra P. J., Bradshaw S. D. & Lindenmayer D. B. (2022) Self-thinning forest understoreys reduce wildfire risk, even in a warming climate. *Environ. Res. Lett.* **17** , 044022.

Zylstra P. J., Wardell-Johnson G. W., Falster D. S., Howe M., McQuoid N. & Neville S. (****) Mechanisms by which growth and succession limit the impact of fire in a south-western Australian forested ecosystem. In Review

Ecological cooperation



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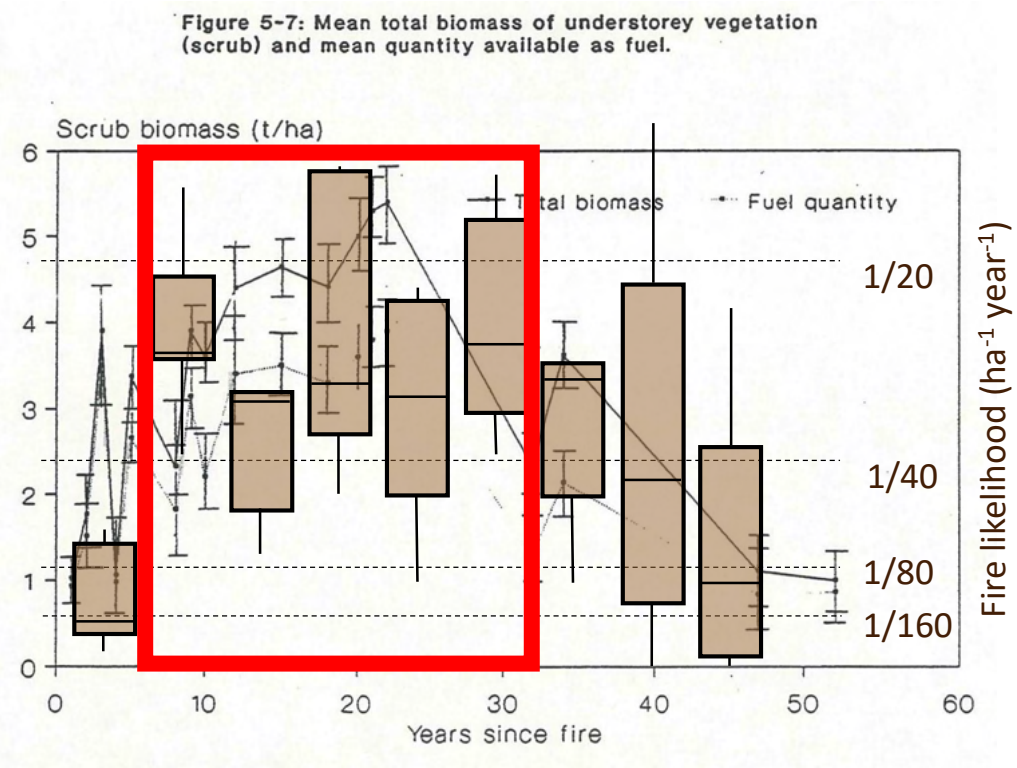
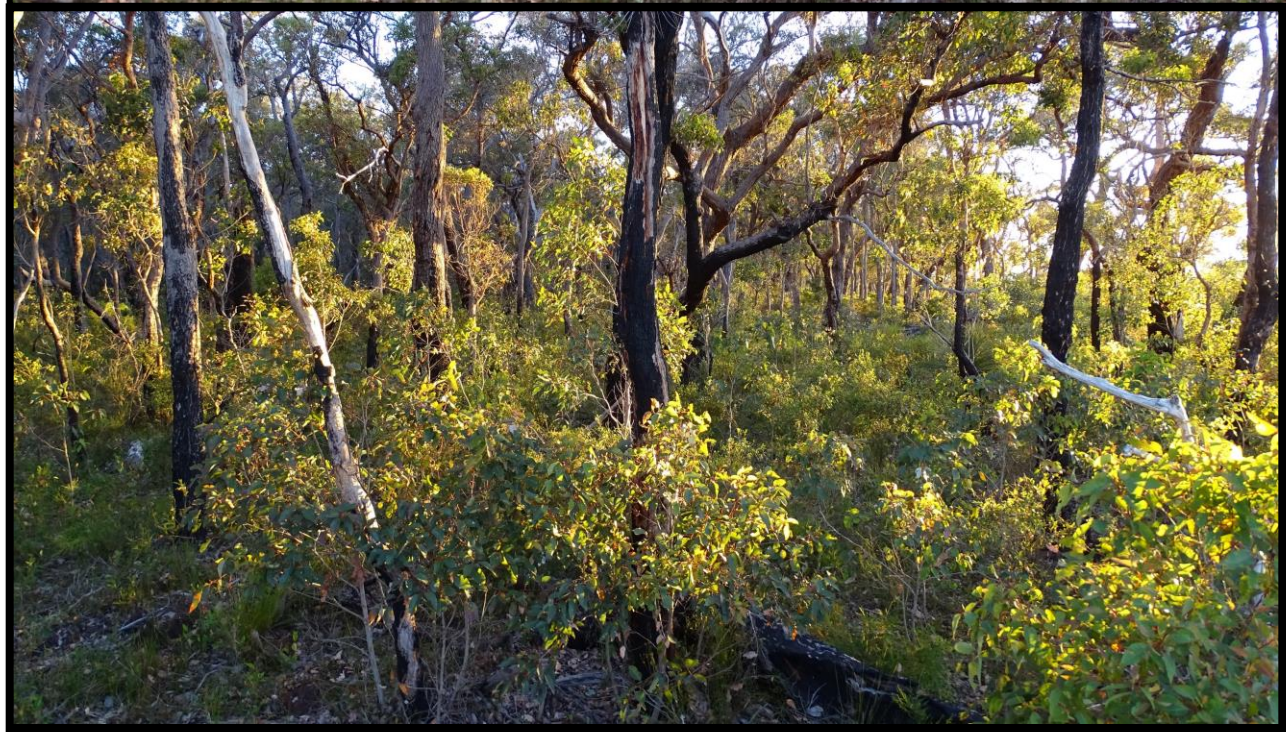
The experiment





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Zylstra P. J., Bradshaw S. D. & Lindenmayer D. B. (2022) Self-thinning forest understoreys reduce wildfire risk, even in a warming climate. *Environ. Res. Lett.* **17** , 044022.