

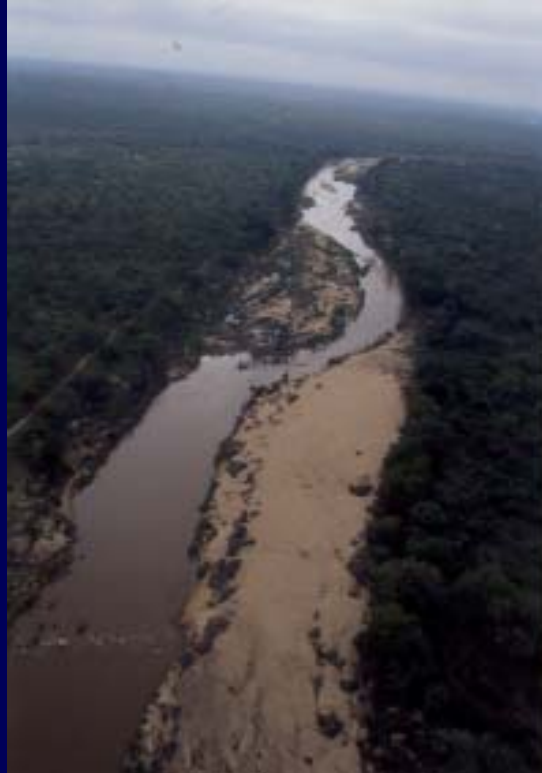
Multi-scaled heterogeneity of riparian patch mosaics in the Sabie River landscape

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Kevin Rogers and Diba Rikhotso

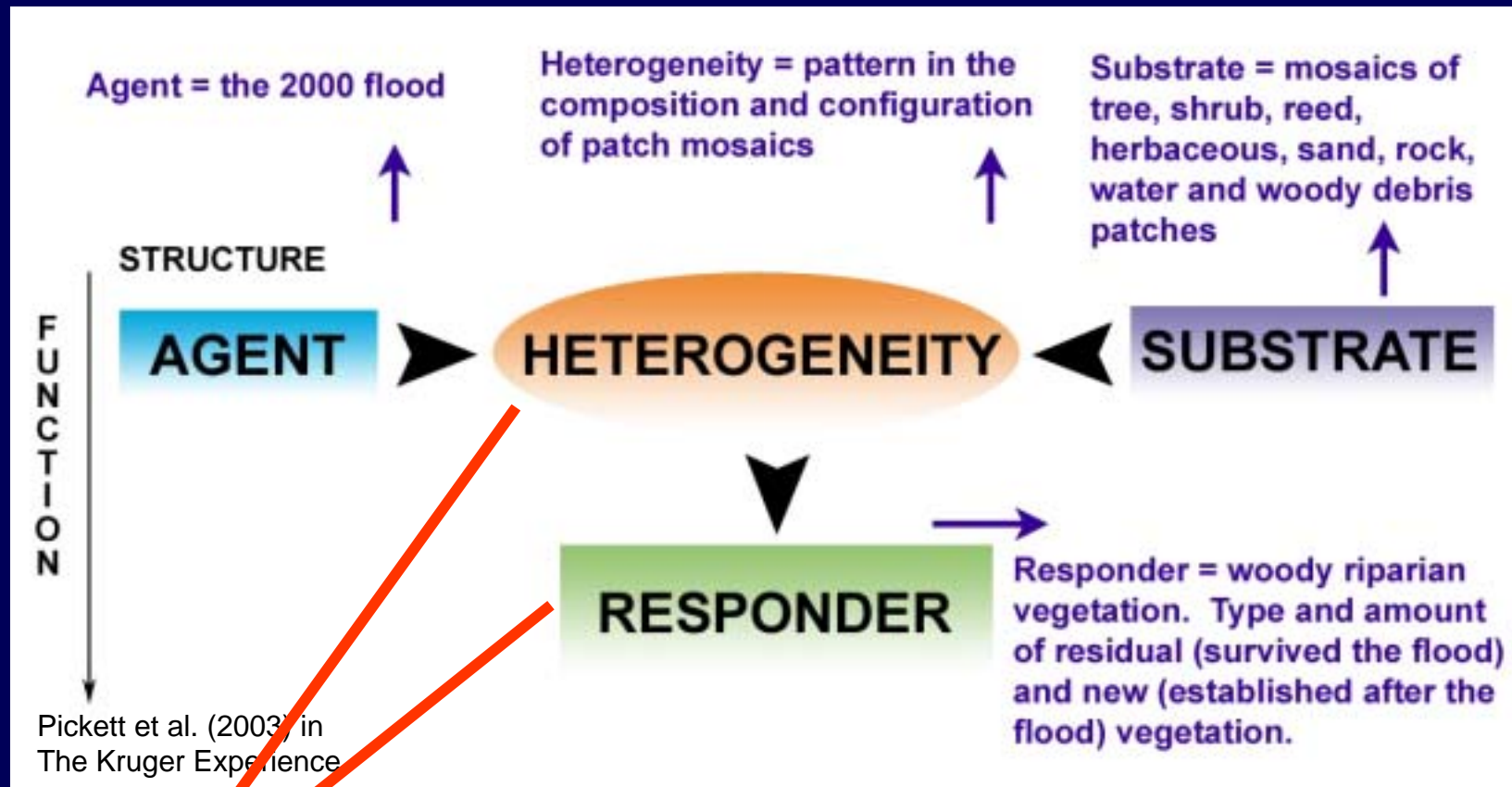
Centre for Water in the Environment
University of the Witwatersrand

Understanding heterogeneity at multiple scales

Deciphering the arrangement and function of heterogeneity at multiple spatial and temporal scales in the landscape remains a fundamental challenge in environmental science



Scales of heterogeneity and riparian response in the Sabie River

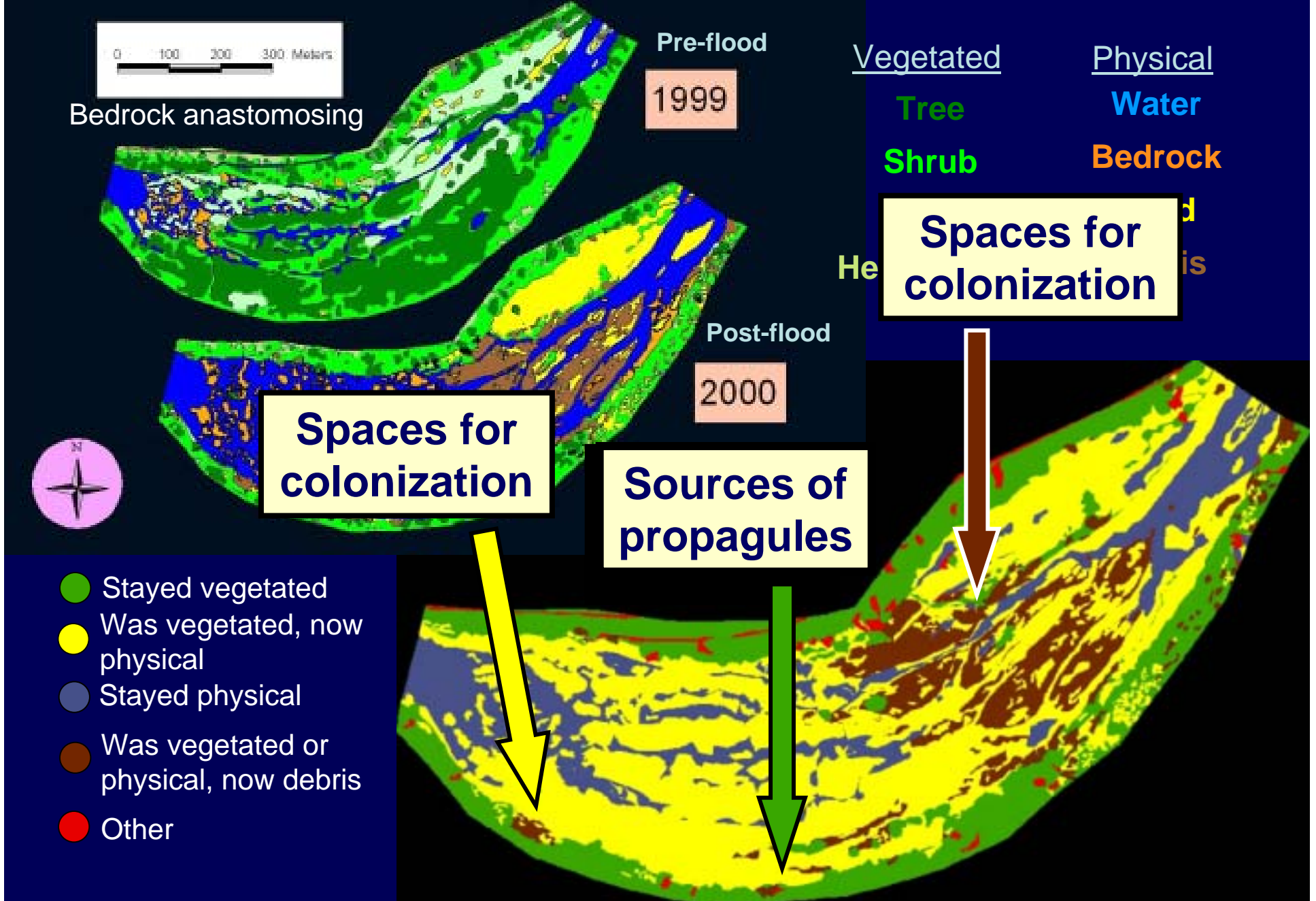


ZONE – Upper, Mid, Lower sections of river in a downstream direction

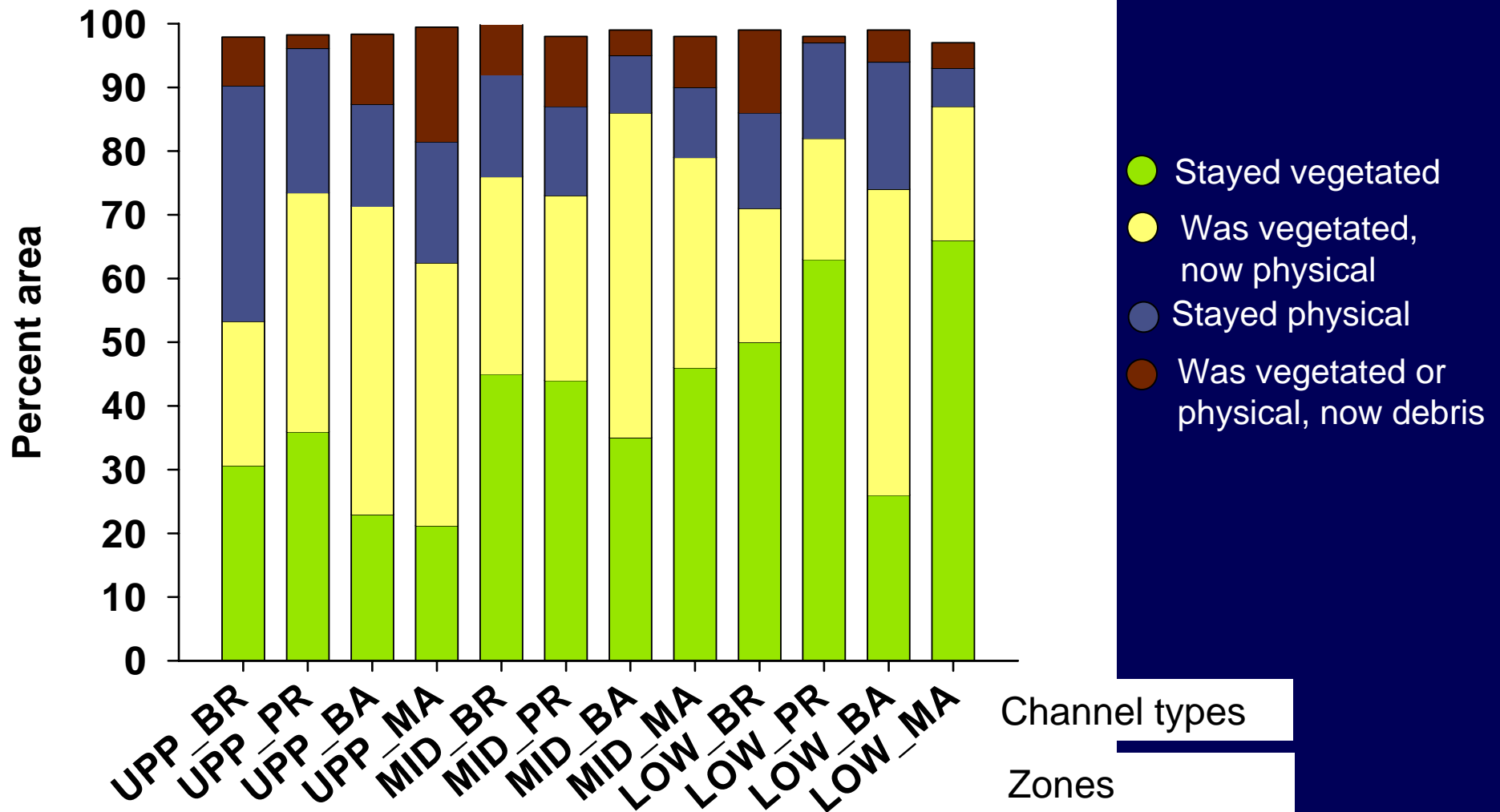
CHANNEL TYPE – Braided, Bedrock Anast., Mixed Anast. & Pool-rapid

ELEVATION – 1m elevation intervals in a vertical direction in the channel

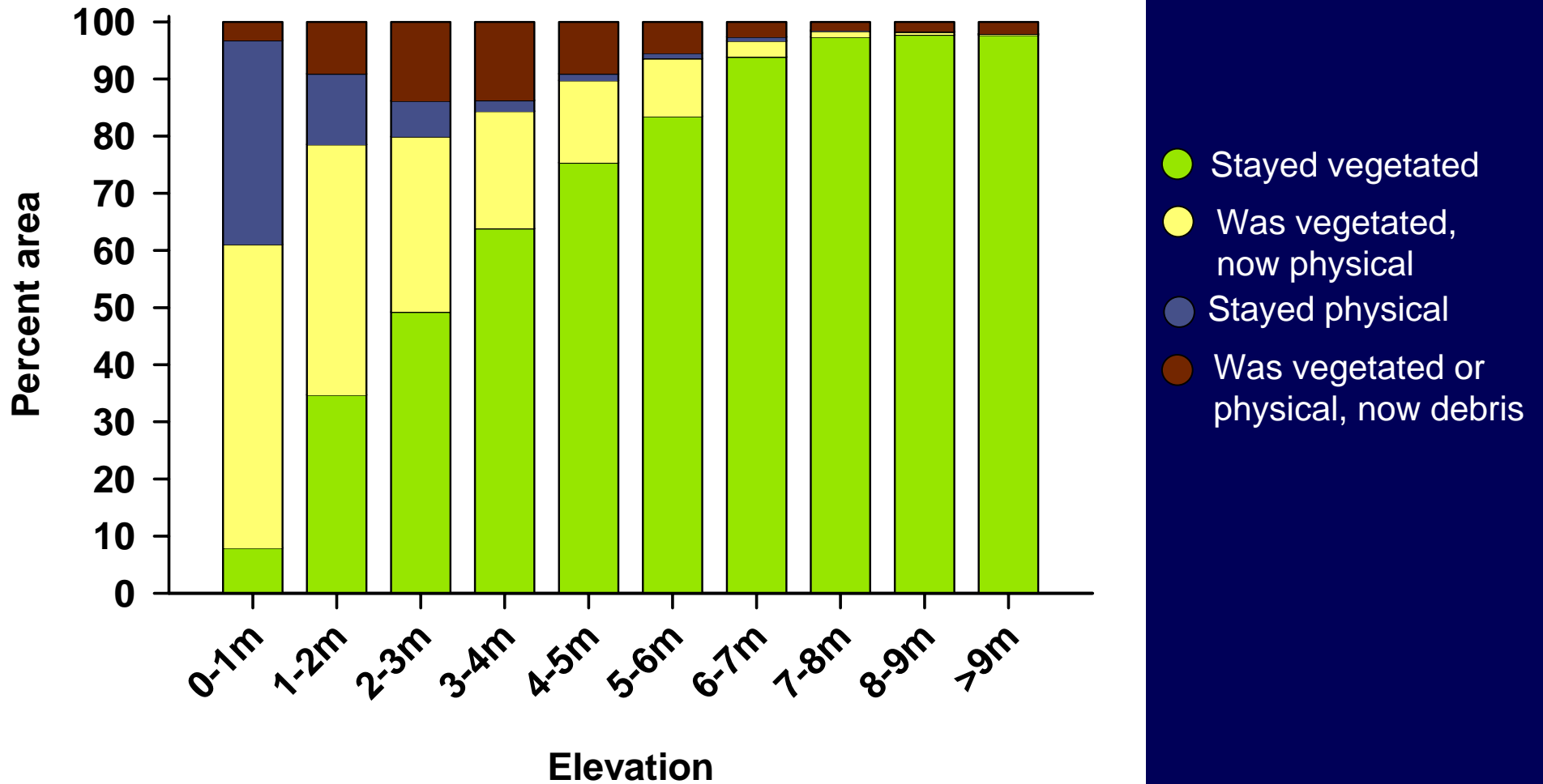
Patch mosaics

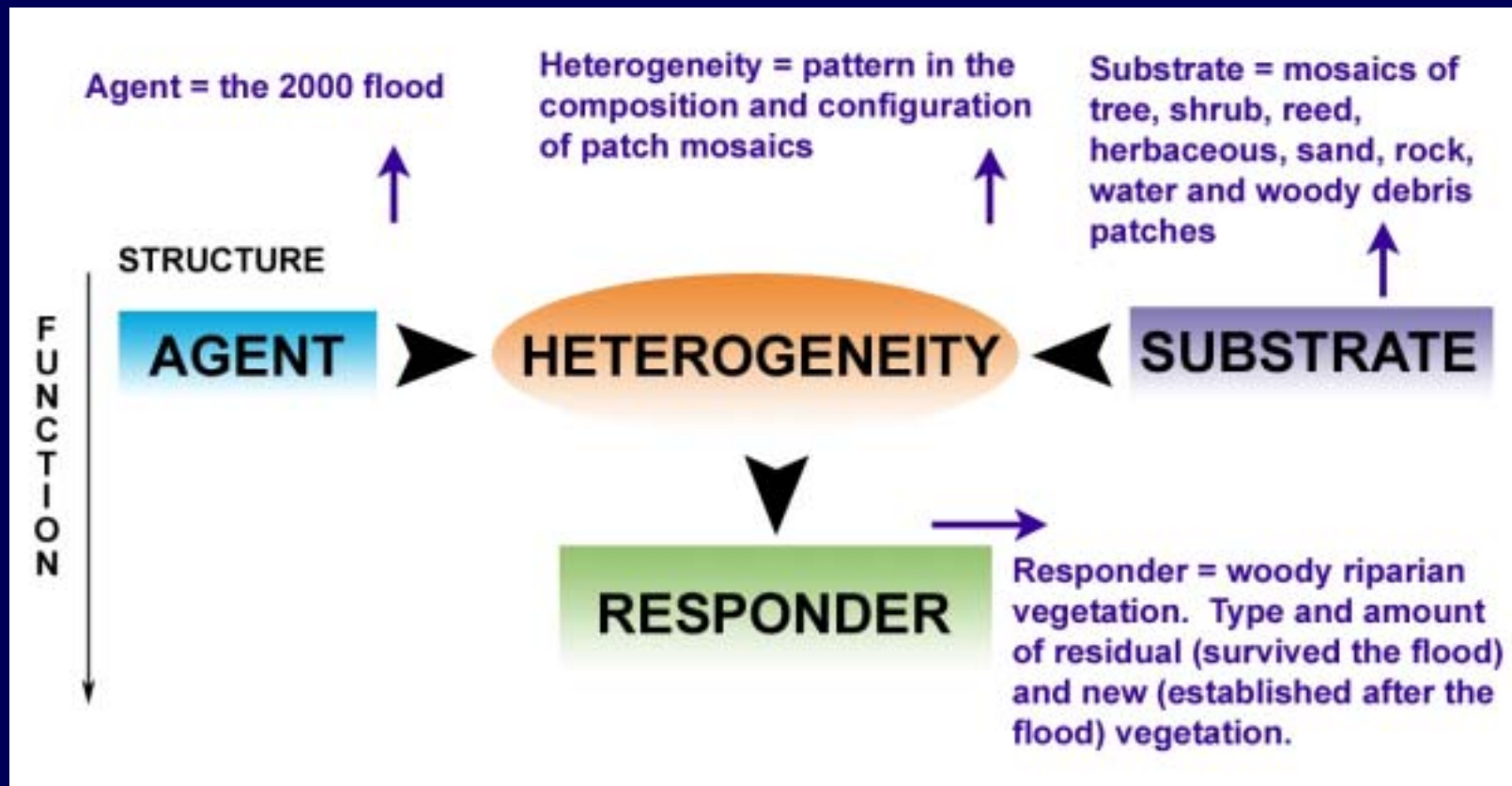


Patch areas – zone and channel type scales



Patch areas – elevation scale



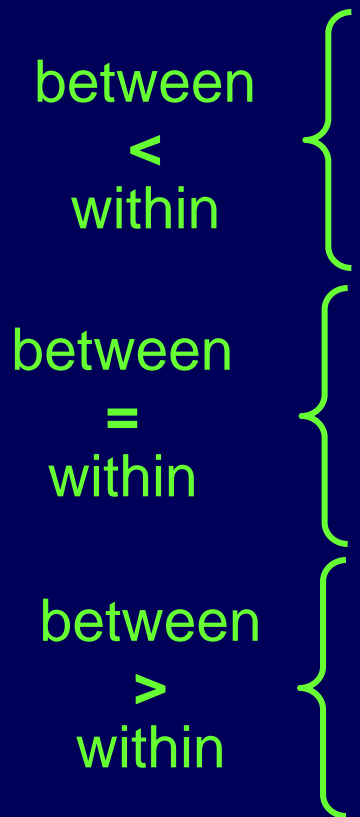


How is riparian vegetation distributed among patches at different scales?

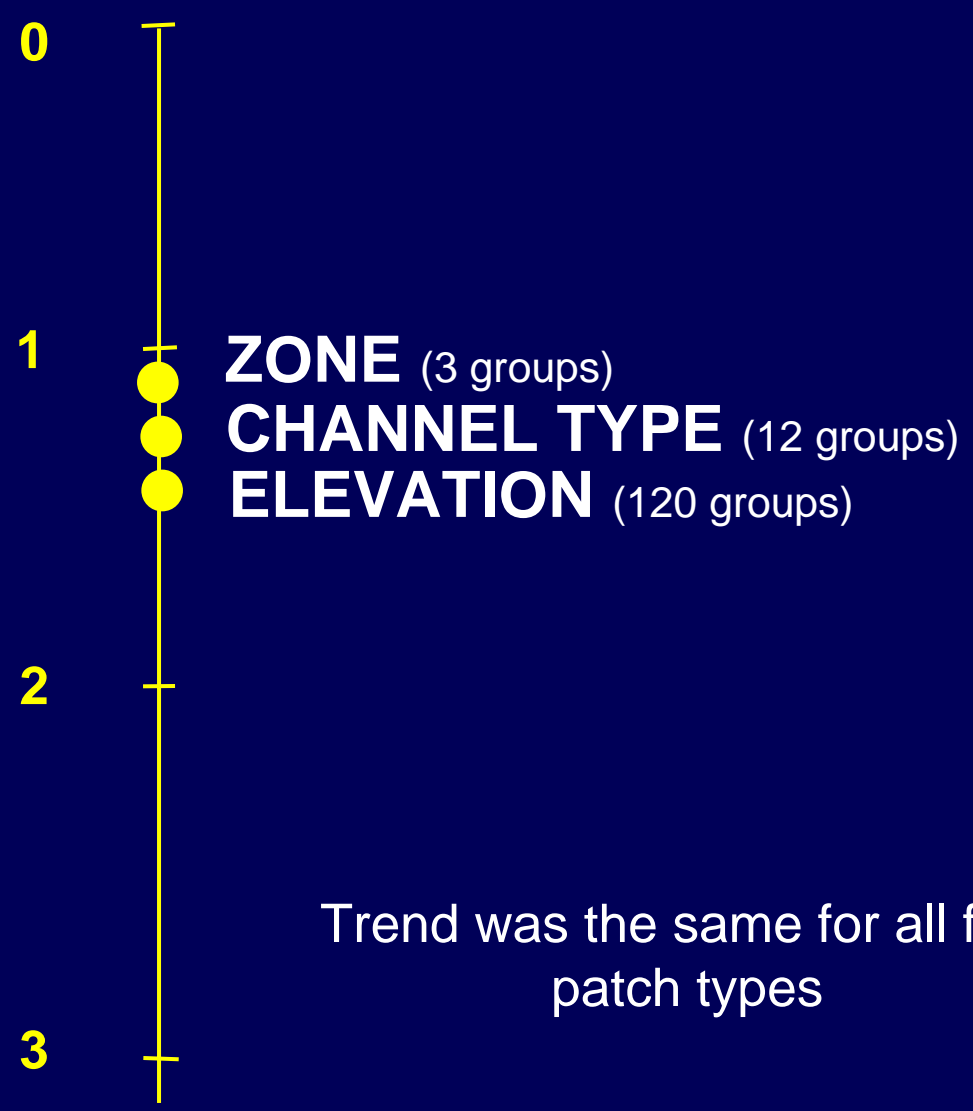
	Zone	Channel type	Elevation
Mosaic heterogeneity	✗	✗	✓
Riparian vegetation	✗	✗	✓

Community composition

Group Dissimilarity

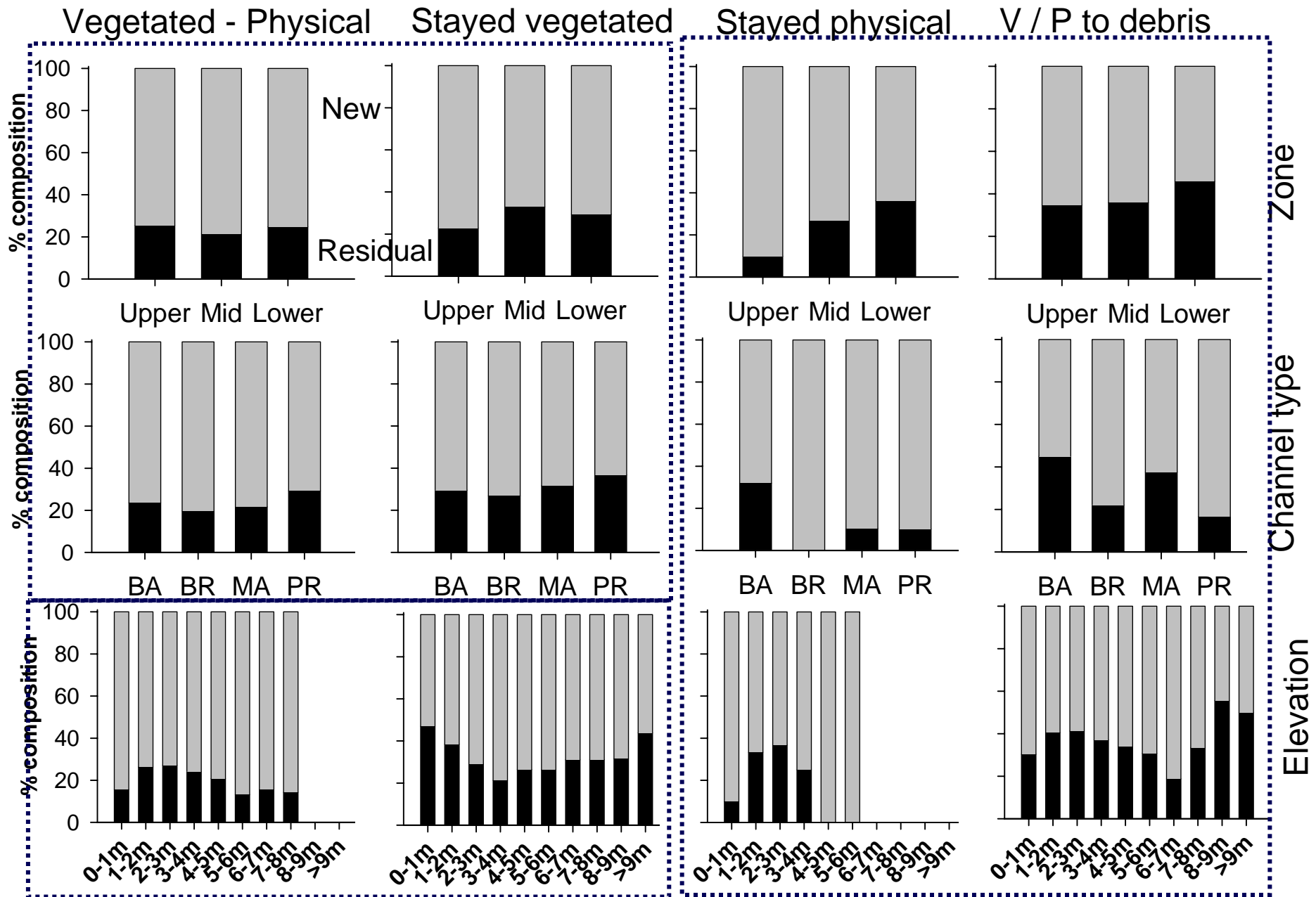


All patches
B/W Statistic



Trend was the same for all four patch types

New and residual vegetation proportions



	Zone	Channel type	Elevation
Mosaic heterogeneity	✗	✗	✓
Riparian vegetation	✗	✗	✓
	New/Residual proportion (debris patches)		Community composition New/Residual proportion (SV & VP patches)


 Climate, flow and sediment regimes

Vegetation dynamics
 

