The role of intraspecific trait variation in functional diversity and productivity under warming in the tundra

Xiaoyi Wang, Mats P. Björkman, Anne D. Bjorkman

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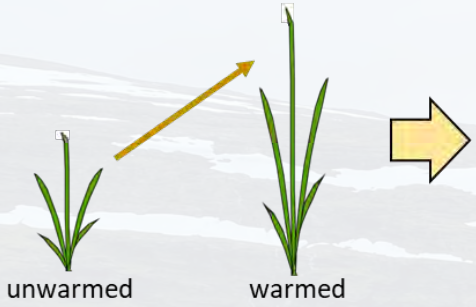
Intraspecific trait variability (ITV) enables plants to respond to climate change.

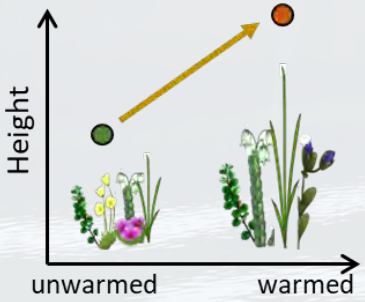
To what extent does ITV contribute to the variation in functional diversity under warming? How does ITV modulate warming effects on ecosystem function?

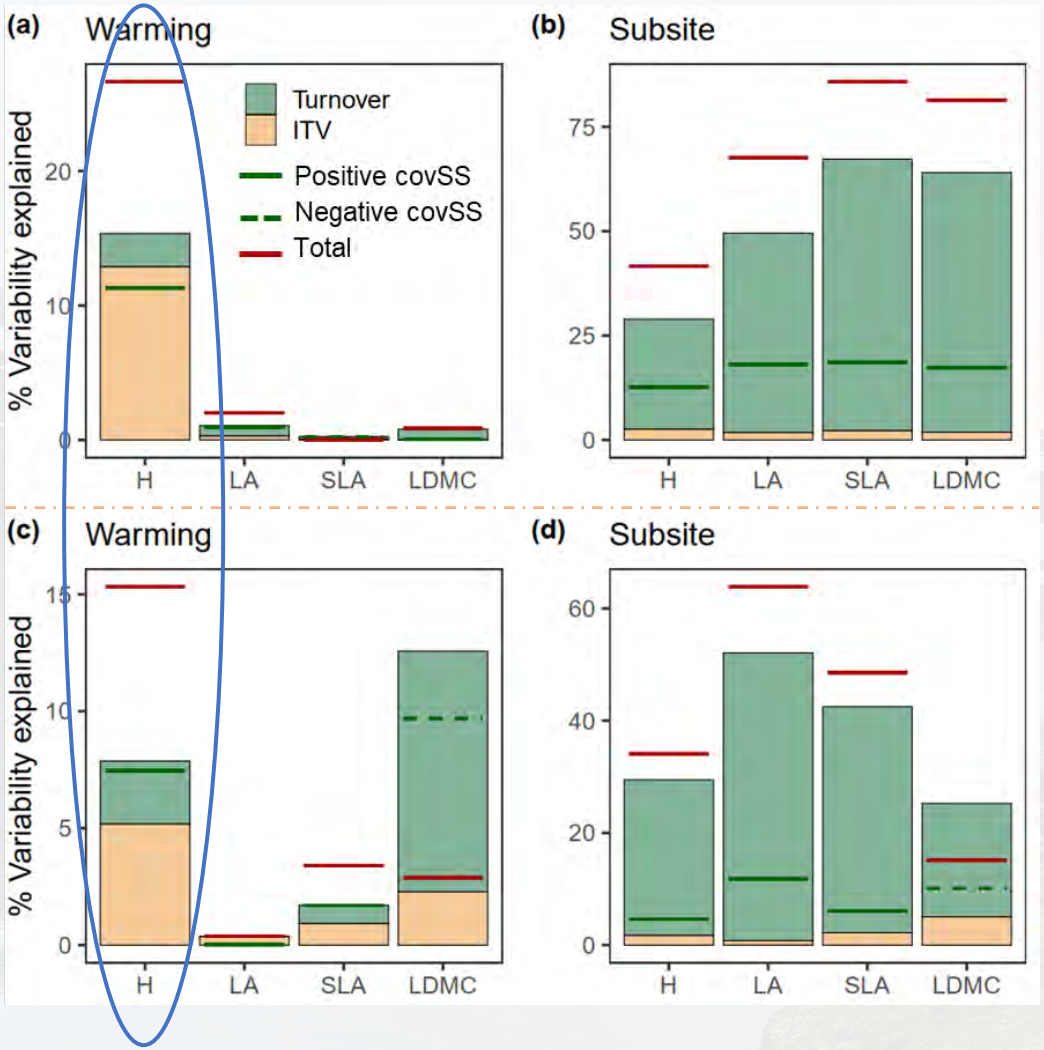
- ITV matters in the responses of CWM and FD caused by warming
- Species composition matters in the variation in CWM and FD between community types

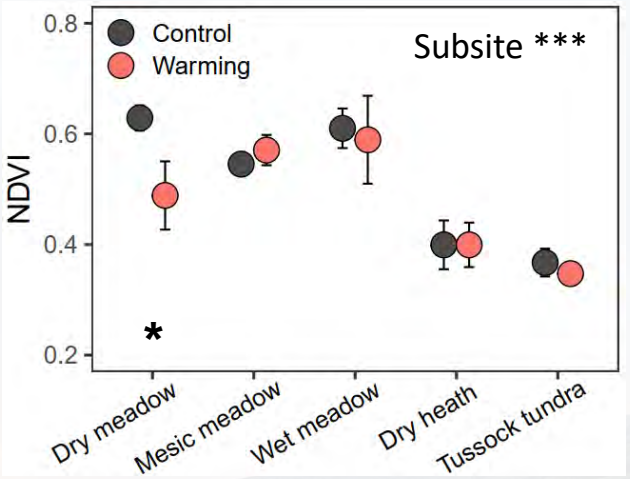
Variation in CWM



Variation in FD







Model	Variable	R^2	R^2adj	Estimate	t value
With ITV	(Intercept)	0.83	0.70	0.000	0.000
	CWM_Hveg			1.400	**2.639***
	CWM_LDMC			-0.404	-2.072
	FD_Hveg			-1.994	**-3.567***
	FD_SLA			0.591	**2.642***
Without ITV	(Intercept)	0.27	-0.31	0.000	0.000
	CWM_Hveg			-0.391	-0.214
	CWM_LDMC			-0.359	-0.833
	FD_Hveg			0.055	0.031
	FD_SLA			0.128	0.235

- ITV improved the proportion of explained variation of NDVI in the dry meadow