

**Table S9 Correlation analysis between differentially methylated region and local SNP in *Populus tomentosa* and *Populus simonii*.**

Species	Comparison	Context	Type	DMR	Interacting SNP in LD
<i>Populus tomentosa</i>	Southern vs. Northwestern	CG	Hypo in Northwestern	0	/
			Hyper in Northwestern	1	12
		CHG	Hypo in Northwestern	0	/
			Hyper in Northwestern	1	4
		CHH	Hypo in Northwestern	0	/
			Hyper in Northwestern	0	1
	Southern vs. Northeastern	CG	Hypo in Northeastern	0	/
			Hyper in Northeastern	2	70
		CHG	Hypo in Northeastern	0	/
			Hyper in Northeastern	1	4
		CHH	Hypo in Northeastern	0	/
			Hyper in Northeastern	2	0
Northwestern vs. Northeastern	CG	Hypo in Northeastern	0	/	
		Hyper in Northeastern	0	/	
	CHG	Hypo in Northeastern	0	/	
		Hyper in Northeastern	0	/	
	CHH	Hypo in Northeastern	0	/	
		Hyper in Northeastern	1	1	
<i>Populus simonii</i>	Southern vs. Northwestern	CG	Hypo in Northwestern	0	/
			Hyper in Northwestern	0	/
		CHG	Hypo in Northwestern	0	/
			Hyper in Northwestern	0	/
		CHH	Hypo in Northwestern	0	/
			Hyper in Northwestern	0	/

		Hyper in Northwestern	0	/
Southern vs. Northeastern	CG	Hypo in Northeastern	0	/
		Hyper in Northeastern	1	2
	CHG	Hypo in Northeastern	0	/
		Hyper in Northeastern	0	/
	CHH	Hypo in Northeastern	0	/
		Hyper in Northeastern	0	/
Northwestern vs. Northeastern	CG	Hypo in Northeastern	0	/
		Hyper in Northeastern	0	/
	CHG	Hypo in Northeastern	0	/
		Hyper in Northeastern	0	/
	CHH	Hypo in Northeastern	0	/
		Hyper in Northeastern	0	/