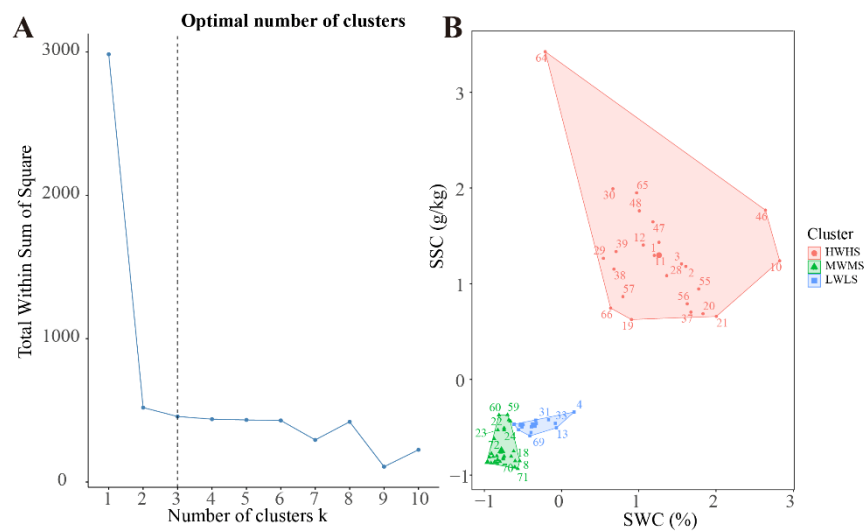
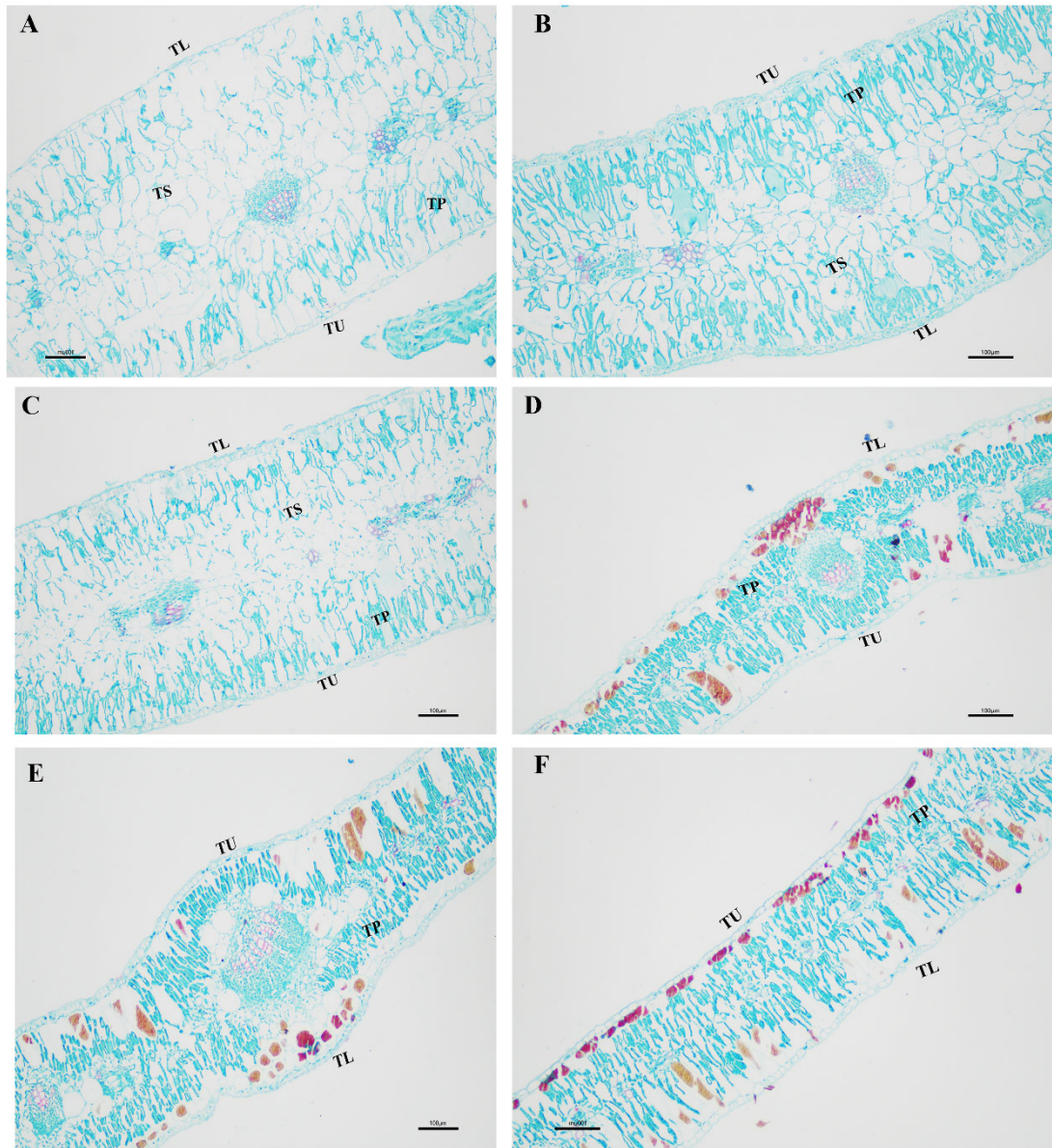


Supplementary information



Supplementary Figure S1. K-means clustering results of soil water and salt of *N. sibirica* and *A. sparsifolia* crown. **(A)** The optimal K value; **(B)** K-means clustering results of soil water and salt. SWC, soil water content; SSC, soil salinity content



Supplementary Figure S2. The leaf slice dissected structure of *N. sibirica* and *A. sparsifolia* under different plots. (A) Leaf slice dissected structure of *N. sibirica* under HWHS; (B) Leaf slice dissected structure of *N. sibirica* under MWMS; (C) Leaf slice dissected structure of *N. sibirica* under LWLS; (D) Leaf slice dissected structure of *A. sparsifolia* under HWHS; (E) Leaf slice dissected structure of *A. sparsifolia* under MWMS; (F) Leaf slice dissected structure of *A. sparsifolia* under LWLS; TU, thickness of upper epidermis; TL, thickness of lower epidermis; TP, thickness of palisade tissue; TS, thickness of sponge tissue. Bars, 100 μm.

Table S1 Photosynthetic gas exchange parameters of *N.sibirica* and *A.sparsifolia* under different water and salt plots

Species	Plots	P_n ($\mu\text{mol m}^{-2}\text{s}^{-1}$)	G_s ($\text{mmol m}^{-2}\text{s}^{-1}$)	Tr ($\text{mmol m}^{-2}\text{s}^{-1}$)	C_i ($\mu\text{mol mol}^{-1}$)
NS	HWHS	8.99±3.03 ^A	0.14±0.04 ^A	2.27±1.52 ^B	294.87±19.26 ^A
	MWMS	9.52±2.36 ^A	0.16±0.00 ^{AB}	3.65±2.37 ^A	183.72±70.10 ^B
	LWLS	6.31±2.81 ^B	0.01±0.12 ^B	4.38±3.07 ^A	298.23±67.55 ^A
AS	HWHS	2.02±0.50 ^B	0.04±0.02 ^A	1.72±0.69 ^{AB}	289.10±33.81 ^A
	MWMS	3.61±0.85 ^A	0.02±0.01 ^B	1.27±0.53 ^B	149.40±41.50 ^B
	LWLS	7.50±4.39 ^A	0.05±0.03 ^A	2.77±1.55 ^A	140.65±40.30 ^B

Note: NS represents *N. sibirica*; AS represents *A. sparsifolia*; Different capital letters (A, B) indicate significant differences at the 0.05 ($P < 0.05$) level among different plots.