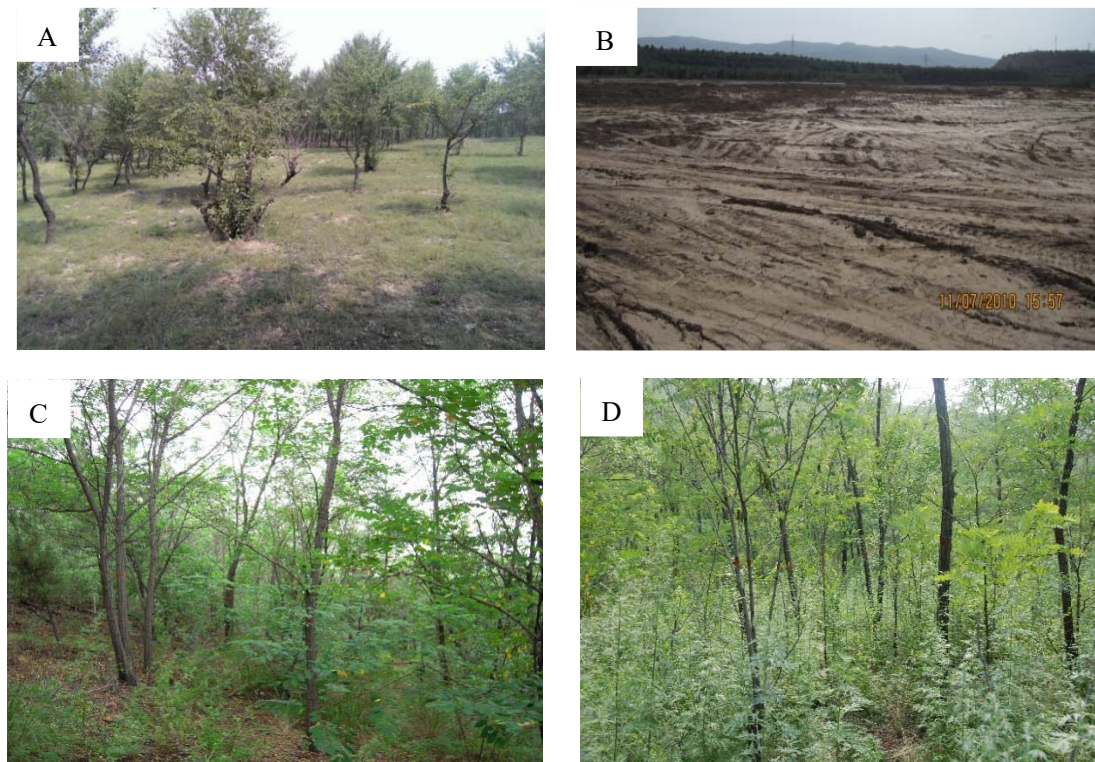


Supporting information

Figure S1-S7

Table S1-S2



A: Original vegetation; B: Damaged vegetation; C: Site I; D: Site II

Figure S1 Vegetation types before and after restoration

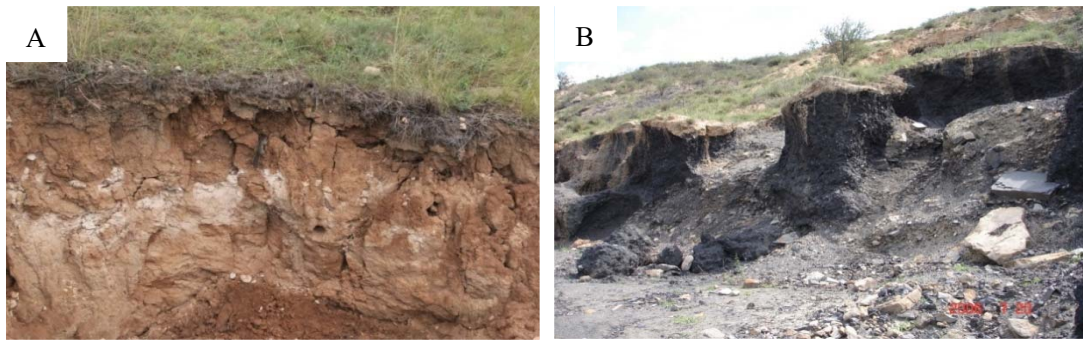
Table S1. Number of species surviving in the sample site

Stand age/year	Site	<i>R</i> (plant/hm ²)	<i>P</i> (plant/hm ²)	Site	<i>R</i> (plant/hm ²)	<i>U</i> (plant/hm ²)	<i>A</i> (plant/hm ²)
0	I	2000	240	II	3300	3300	3300
17		1130	184		1789	1063	417
22		1012	270		1362	1266	513
27		1090	187		1079	3306	268

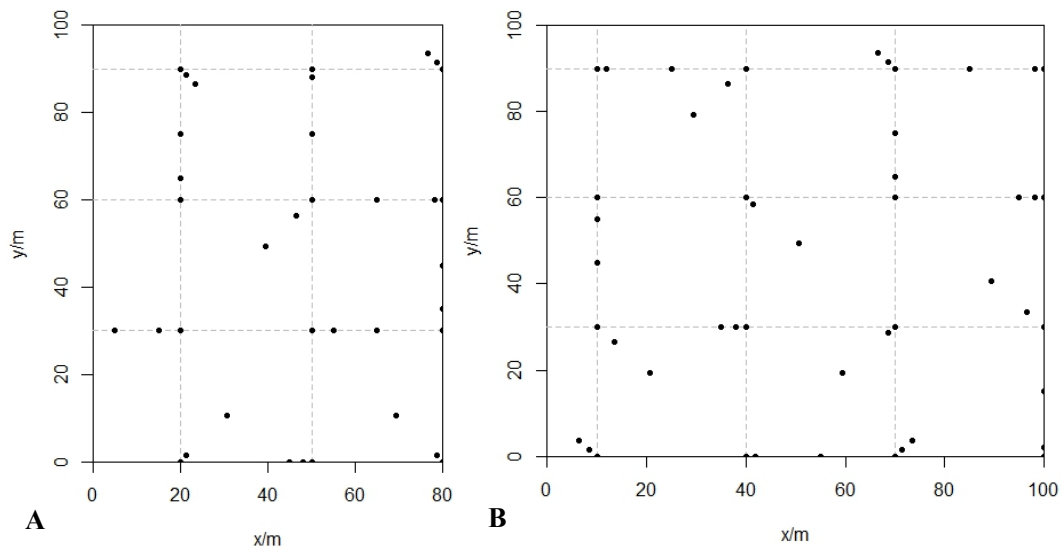
R indicate *R. pseudoacacia*, *P* indicate *P. tabuliformis*, *U* indicate *U. pumila*, *A* indicate *A. altissima*

Table S2. Summary of restoration patterns by sample site

Site	Restore Mode	Site Type	Average altitude/m	Restoration of the initial planting program
I	<i>R. pseudoacacia</i> – <i>P. tabuliformis</i>	Slope	1355	Interplant in rows spaced 2 m apart, with acacia plants spaced 1 m apart and oleander plants spaced 5 m apart.
II	<i>R. pseudoacacia</i> – <i>U. pumila</i> – <i>A. altissima</i>	Platform	1380	The three species were planted in alternate rows with a spacing of 1m × 1m.



A: Original soil; B: Damaged soil
Figure S2 Soil comparison before and after mining



A: Site I; B: Site II
Figure S3 The spatial distribution of soil samples in the site



Figure S4 Correlation between several species' survival rates and several parameters in various stand ages (Site I). The correlation coefficient for a stand age of 17 years is represented by red, the correlation coefficient for a stand age of 22 years is represented by green, and the correlation coefficient for a stand age of 27 years is represented by blue. ** and * indicate statistically significant correlations at the 0.01 and 0.05 levels, respectively, the absence of * indicates irrelevance. pH; SOM (g/kg); TN (g/kg); AP (mg/kg); AK (mg/kg). *R* indicate *R. pseudoacacia*, *P* indicate *P. tabuliformis*. *M* indicate *Margalef's index*, *D* indicate *Simpson's index*, *H'* indicate *Shannon-Wiener index*.

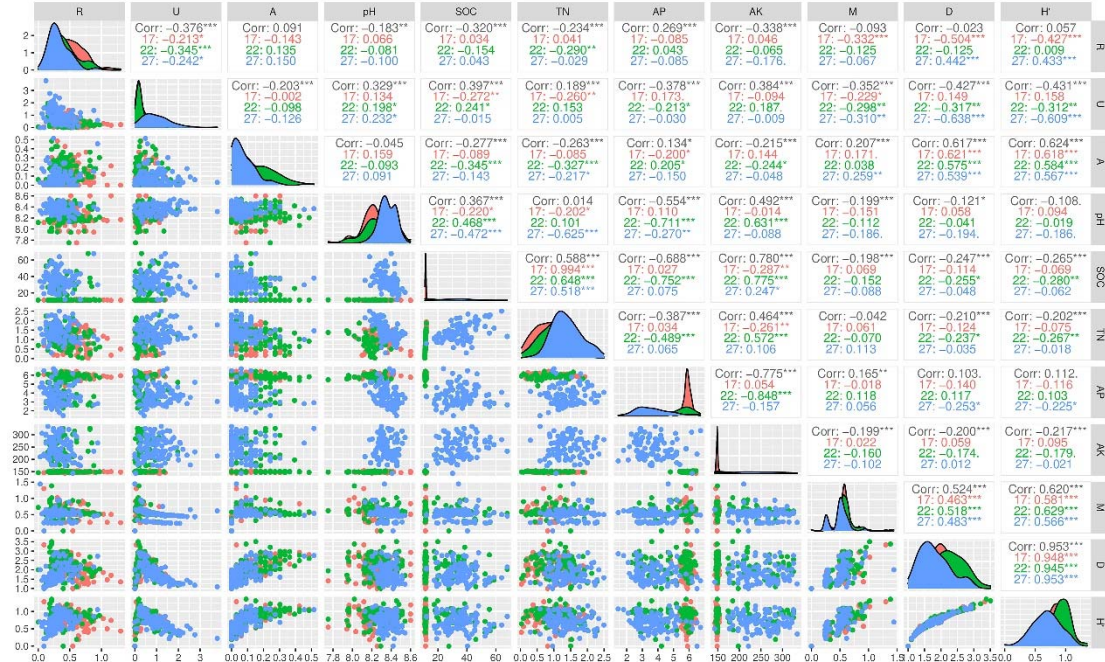


Figure S5 Correlation between several species' survival rates and several parameters in various stand ages (Site I). The correlation coefficient for a stand age of 17 years is represented by red, the correlation coefficient for a stand age of 22 years is represented by green, and the correlation coefficient for a stand age of 27 years is represented by blue. ** and * indicate statistically significant correlations at the 0.01 and 0.05 levels, respectively, the absence of * indicates irrelevance. pH; SOM (g/kg); TN (g/kg); AP (mg/kg); AK (mg/kg). *R* indicate *R. pseudoacacia*, *P* indicate *P. tabuliformis*. *M* indicate *Margalef's index*, *D* indicate *Simpson's index*, *H'* indicate *Shannon-Wiener index*.

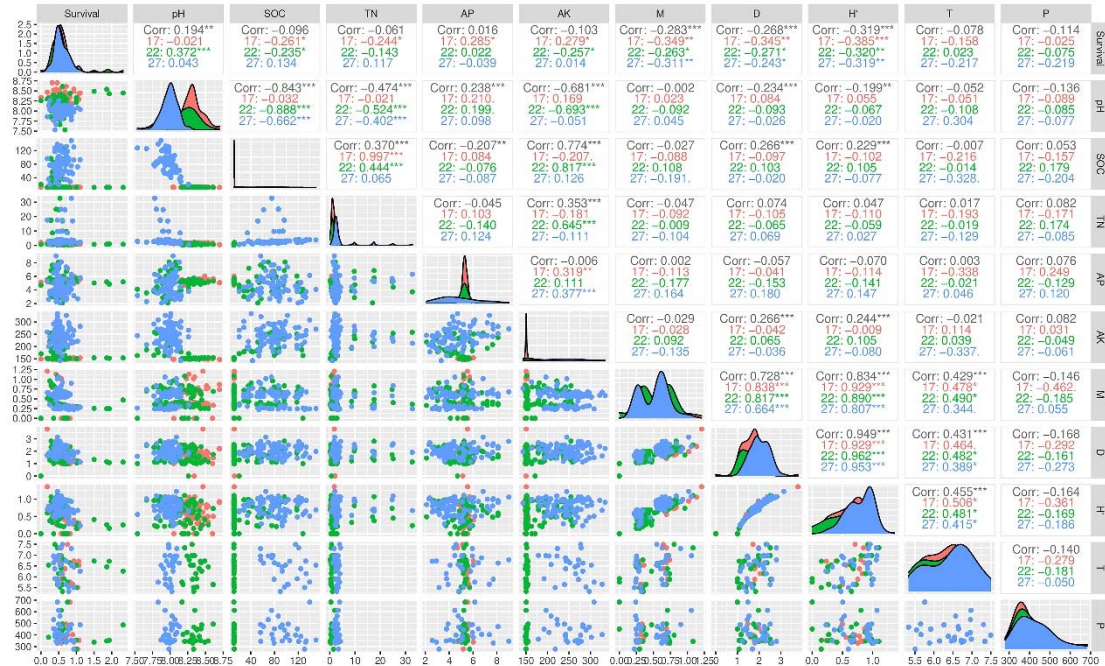


Figure S6 Correlation between total survival rate and several parameters in various stand ages (Site II). The correlation coefficient for a stand age of 17 years is represented by red, the correlation coefficient for a stand age of 22 years is represented by green, and the correlation coefficient for a stand age of 27 years is represented by blue. ** and * indicate statistically significant correlations at the 0.01 and 0.05 levels, respectively, the absence of * indicates irrelevance. *P* indicate Precipitation (mm); *T* indicate Temperature (°C); pH; SOM (g/kg); TN (g/kg); AP (mg/kg); AK (mg/kg). *M* indicate *Margalef's index*, *D* indicate *Simpson's index*, *H'* indicate *Shannon-Wiener index*.

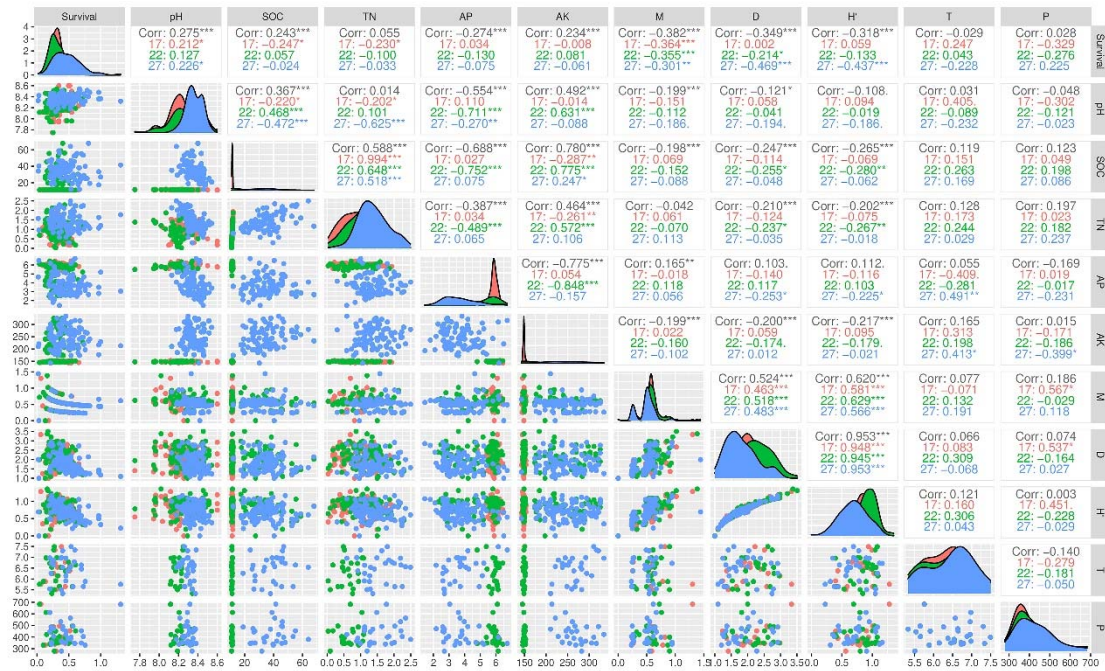


Figure S7 Correlation between total survival rate and several parameters in various stand ages (Site II). The correlation coefficient for a stand age of 17 years is represented by red, the correlation coefficient for a stand age of 22 years is represented by green, and the correlation coefficient for a stand age of 27 years is represented by blue. ** and * indicate statistically significant correlations at the 0.01 and 0.05 levels, respectively, the absence of * indicates irrelevance. P indicate Precipitation (mm); T indicate Temperature (°C); pH; SOM (g/kg); TN (g/kg); AP (mg/kg); AK (mg/kg). *M* indicate *Margalef's index*, *D* indicate *Simpson's index*, *H'* indicate *Shannon-Wiener index*.