

## **Supporting Information for**

## Plants cultivated for ecosystem restoration can evolve towards a domestication syndrome

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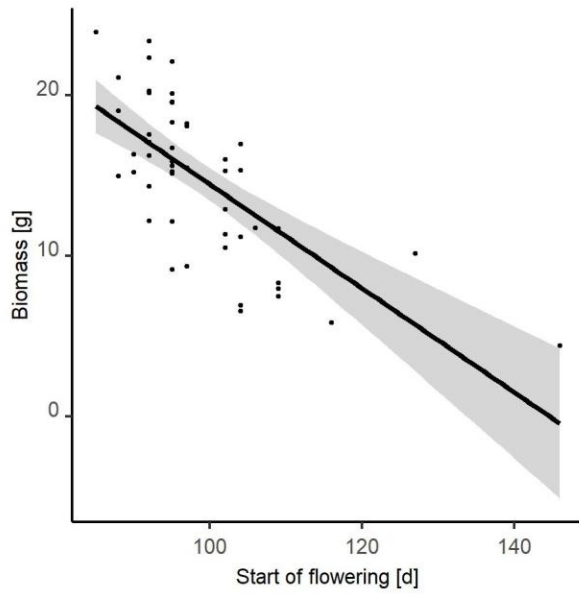
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**Fig. S1.** The relationship between flowering time and biomass in *Lychnis floss-cuculi*, as estimated from a linear model. The relationship is significant at  $P < 0.01$ .

**Table S1.** Results of statistical models testing for changes of mean and of coefficient of variation in biomass, height, number of flowers and start of flowering across cultivated generations (see Figure 2 in the main text). P-values < 0.05 are in bold.

Parameter	Mode	Estimate	Std.Error	P	Conditional R <sup>2</sup>	NumDf	DenDf	F
Biomass [g]	Mean	0.07	0.021	<b>0.001</b>	0.007	1559	10.55	16.29
Height [cm]	Mean	0.052	0.021	<b>0.015</b>	0.004	1587	5.92	5.92
Number of flowers	Mean	0.064	0.027	<b>0.019</b>	0.006	918	5.55	5.55
Start of flowering [d]	Mean	-0.049	0.027	0.069	0.003	948	3.31	3.31
Biomass [g]	Variation	-0.015	0.007	<b>0.029</b>	0.392	72.89	4.93	4.93
Height [cm]	Variation	0.023	0.012	0.065	0.733	67.08	3.52	3.52
Number of flowers	Variation	-0.044	0.017	<b>0.010</b>	0.412	50.57	7.12	7.12
Start of flowering [d]	Variation	-0.007	0.003	<b>0.010</b>	0.531	40.12	7.40	7.40

**Table S2.** Results of models testing for changes in biomass, height, number of flowers and seed shattering within individual cultivation lineages. The “data range [F0]” was calculated as four-times standard deviation of the respective parameter in the F0. The last column shows the change per generation expressed as % of the data range among the plants from the wild collection (F0). Seed shattering is expressed as the odds of number of flowers that still had seeds at the end of harvest versus flowers that lost the seeds. P-values  $\leq 0.05$  are in bold.

Species	Producer	Region	Trait	Estimate	Std.Error	P	R <sup>2</sup>	NumDf	DenDf	F	Data range [F0]	% Effect size/Data range
<i>Achillea millefolium</i>	P2		Biomass [g]	0.335	0.394	0.399	0.014	1	51	0.723	16.288	2.059
<i>Anthoxanthum odoratum</i>	P2		Biomass [g]	0.222	0.730	0.763	0.002	1	52	0.092	14.518	1.527
<i>Centaurea scabiosa</i>	P2		Biomass [g]	0.243	0.419	0.564	0.005	1	66	0.336	14.786	1.644
<i>Crepis biennis</i>	P2		Biomass [g]	-0.866	0.983	0.385	0.023	1	33	0.775	24.410	3.546
<i>Cynosurus cristatus</i>	P2		Biomass [g]	0.862	0.499	0.090	0.054	1	52	2.984	11.446	7.528
<i>Dianthus carthusianorum</i>	P2		Biomass [g]	0.634	0.298	<b>0.036</b>	0.054	1	80	4.538	16.366	3.876
<i>Galium verum</i>	P2		Biomass [g]	-0.557	0.449	0.220	0.029	1	52	1.541	9.121	6.106
<i>Leucanthemum ircutianum</i>	P2		Biomass [g]	-0.286	0.348	0.414	0.010	1	70	0.675	23.244	1.231
<i>Lotus corniculatus</i>	P2		Biomass [g]	5.339	5.391	0.330	0.032	1	30	0.980	63.957	8.347
<i>Lychnis flos-cuculi</i>	P2		Biomass [g]	3.494	0.697	<b>&lt;0.001</b>	0.339	1	49	25.119	16.669	20.960
<i>Salvia pratensis</i>	P2		Biomass [g]	-0.082	0.370	0.826	0.001	1	41	0.049	7.219	1.135
<i>Silene vulgaris</i>	P2		Biomass [g]	-0.023	0.454	0.959	0.000	1	69	0.003	12.588	0.185
<i>Veronica teucrium</i>	P2		Biomass [g]	0.745	0.439	0.096	0.055	1	50	2.885	7.843	9.499
<i>Trifolium pratense</i>	P1		Biomass [g]	0.018	0.324	0.955	0.000	1	70	0.003	12.332	0.150
<i>Centaurea jacea</i>	P1		Biomass [g]	1.571	0.721	<b>0.033</b>	0.065	1	68	4.755	33.055	4.754
<i>Lotus corniculatus</i>	P1		Biomass [g]	4.065	1.624	<b>0.015</b>	0.086	1	67	6.264	49.873	8.150
<i>Silene dioica</i>	P1		Biomass [g]	1.013	0.718	0.164	0.031	1	62	1.987	22.080	4.586
<i>Silene vulgaris</i>	P1		Biomass [g]	0.023	0.423	0.956	0.000	1	69	0.003	20.599	0.114
<i>Achillea millefolium</i>	P1		Biomass [g]	1.082	0.892	0.231	0.028	1	51	1.472	19.486	5.551
<i>Crepis biennis</i>	P1		Biomass [g]	1.358	0.554	<b>0.017</b>	0.081	1	68	6.014	13.550	10.023
<i>Rumex acetosa</i>	P1	R6	Biomass [g]	-0.266	1.041	0.799	0.001	1	51	0.065	24.810	1.073
<i>Leucanthemum ircutianum</i>	P1		Biomass [g]	0.349	0.489	0.478	0.007	1	69	0.509	23.575	1.479

Species	Producer	Region	Trait	Estimate	Std.Error	P	R <sup>2</sup>	NumDf	DenDf	F	Data range [F0]	% Effect size/Data range
<i>Ranunculus acris</i>	P1		Biomass [g]	-0.677	0.301	<b>0.027</b>	0.068	1	70	5.072	13.744	4.925
<i>Rumex acetosa</i>	P1	R16	Biomass [g]	0.175	0.550	0.751	0.002	1	51	0.101	10.892	1.609
<i>Centaurea scabiosa</i>	P1		Biomass [g]	-0.593	1.147	0.608	0.007	1	39	0.268	22.073	2.688
<i>Leontodon hispidus</i>	P1		Biomass [g]	1.430	0.487	<b>0.005</b>	0.142	1	52	8.622	13.117	10.902
<i>Leontodon hispidus</i>	P2		Biomass [g]	-0.197	0.568	0.730	0.002	1	51	0.120	11.902	1.657
<i>Achillea millefolium</i>	P2		Height [cm]	-0.143	0.396	0.719	0.003	1	52	0.131	17.368	0.824
<i>Anthoxanthum odoratum</i>	P2		Height [cm]	1.111	0.663	0.100	0.051	1	52	2.810	17.476	6.358
<i>Centaurea scabiosa</i>	P2		Height [cm]	1.912	1.154	0.102	0.041	1	65	2.746	24.514	7.800
<i>Crepis biennis</i>	P2		Height [cm]	3.052	1.441	<b>0.039</b>	0.081	1	51	4.483	15.954	19.128
<i>Cynosurus cristatus</i>	P2		Height [cm]	0.972	0.589	0.105	0.050	1	52	2.725	13.088	7.428
<i>Dianthus carthusianorum</i>	P2		Height [cm]	0.322	0.587	0.585	0.004	1	80	0.301	24.162	1.332
<i>Galium verum</i>	P2		Height [cm]	0.326	0.966	0.737	0.002	1	51	0.114	19.229	1.697
<i>Leucanthemum ircutianum</i>	P2		Height [cm]	0.325	0.177	0.070	0.046	1	70	3.381	11.606	2.804
<i>Lotus corniculatus</i>	P2		Height [cm]	7.433	1.456	<b>&lt;0.001</b>	0.457	1	31	26.053	13.213	56.257
<i>Lychnis flos-cuculi</i>	P2		Height [cm]	0.899	0.702	0.206	0.031	1	52	1.640	18.187	4.945
<i>Salvia pratensis</i>	P2		Height [cm]	-2.697	1.850	0.153	0.049	1	41	2.125	21.831	12.355
<i>Silene vulgaris</i>	P2		Height [cm]	0.056	0.762	0.942	0.000	1	70	0.005	29.452	0.189
<i>Veronica teucrium</i>	P2		Height [cm]	0.389	0.613	0.529	0.008	1	50	0.402	11.052	3.519
<i>Trifolium pratense</i>	P1		Height [cm]	0.178	1.214	0.884	0.000	1	69	0.022	41.037	0.435
<i>Centaurea jacea</i>	P1		Height [cm]	1.936	1.089	0.080	0.044	1	69	3.164	44.405	4.361
<i>Lotus corniculatus</i>	P1		Height [cm]	1.222	0.538	<b>0.026</b>	0.071	1	67	5.150	14.829	8.239
<i>Silene dioica</i>	P1		Height [cm]	1.606	1.286	0.217	0.025	1	62	1.559	42.895	3.743
<i>Silene vulgaris</i>	P1		Height [cm]	-0.733	0.728	0.317	0.014	1	70	1.015	30.539	2.401
<i>Achillea millefolium</i>	P1		Height [cm]	-0.139	0.623	0.825	0.001	1	52	0.050	13.917	0.998
<i>Crepis biennis</i>	P1		Height [cm]	0.228	0.373	0.543	0.005	1	70	0.373	12.333	1.847
<i>Rumex acetosa</i>	P1	R6	Height [cm]	0.083	0.925	0.929	0.000	1	52	0.008	24.462	0.341

Species	Producer	Region	Trait	Estimate	Std.Error	P	R <sup>2</sup>	NumDf	DenDf	F	Data range [F0]	% Effect size/Data range
<i>Leucanthemum ircutianum</i>	P1		Height [cm]	-0.320	0.304	0.295	0.016	1	69	1.111	11.355	2.818
<i>Ranunculus acris</i>	P1		Height [cm]	-0.206	0.736	0.781	0.001	1	70	0.078	25.940	0.792
<i>Rumex acetosa</i>	P1	R16	Height [cm]	-0.611	0.772	0.432	0.012	1	52	0.627	19.084	3.202
<i>Centaurea scabiosa</i>	P1		Height [cm]	-6.097	5.067	0.236	0.036	1	39	1.448	119.952	5.083
<i>Leontodon hispidus</i>	P1		Height [cm]	0.278	1.231	0.822	0.001	1	52	0.051	40.613	0.684
<i>Leontodon hispidus</i>	P2		Height [cm]	0.611	1.118	0.587	0.006	1	51	0.299	27.585	2.215
<i>Achillea millefolium</i>	P2		Number of flowers	33.408	16.877	0.058	0.123	1	28	3.918	292.366	11.427
<i>Dianthus carthusianorum</i>	P2		Number of flowers	4.001	4.222	0.346	0.011	1	79	0.898	282.422	1.417
<i>Lotus corniculatus</i>	P2		Number of flowers	149.656	86.758	0.094	0.088	1	31	2.976	903.324	16.567
<i>Lychnis flos-cuculi</i>	P2		Number of flowers	60.407	16.783	<b>0.001</b>	0.216	1	47	12.955	362.413	16.668
<i>Silene vulgaris</i>	P2		Number of flowers	-24.639	9.055	<b>0.008</b>	0.096	1	70	7.404	294.509	8.366
<i>Trifolium pratense</i>	P1		Number of flowers	1.265	1.527	0.412	0.015	1	44	0.686	42.748	2.958
<i>Centaurea jacea</i>	P1		Number of flowers	1.501	1.241	0.230	0.021	1	69	1.464	65.313	2.298
<i>Lotus corniculatus</i>	P1		Number of flowers	70.114	24.904	<b>0.006</b>	0.106	1	67	7.926	512.341	13.685
<i>Silene dioica</i>	P1		Number of flowers	5.987	17.071	0.727	0.002	1	62	0.123	662.398	0.904
<i>Silene vulgaris</i>	P1		Number of flowers	1.622	7.896	0.838	0.001	1	70	0.042	378.739	0.428
<i>Achillea millefolium</i>	P1		Number of flowers	-5.588	36.155	0.878	0.001	1	42	0.024	749.722	0.745
<i>Leucanthemum ircutianum</i>	P1		Number of flowers	-0.589	0.969	0.545	0.006	1	58	0.370	33.398	1.764
<i>Ranunculus acris</i>	P1		Number of flowers	-0.811	4.150	0.846	0.001	1	70	0.038	192.151	0.422
<i>Leontodon hispidus</i>	P1		Number of flowers	7.278	1.652	<b>&lt;0.001</b>	0.272	1	52	19.409	40.828	17.825
<i>Leontodon hispidus</i>	P2		Number of flowers	-0.667	1.597	0.678	0.003	1	51	0.174	31.820	2.095
<i>Achillea millefolium</i>	P2		Start of flowering [d]	-1.070	0.734	0.156	0.071	1	28	2.124	40.100	2.668
<i>Dianthus carthusianorum</i>	P2		Start of flowering [d]	-0.303	0.652	0.643	0.003	1	79	0.216	49.440	0.613
<i>Lotus corniculatus</i>	P2		Start of flowering [d]	0.022	3.092	0.994	0.000	1	31	0.000	38.779	0.057
<i>Lychnis flos-cuculi</i>	P2		Start of flowering [d]	-6.918	1.556	<b>&lt;0.001</b>	0.292	1	48	19.755	53.342	12.969
<i>Silene vulgaris</i>	P2		Start of flowering [d]	0.833	0.579	0.154	0.029	1	70	2.074	22.512	3.702

Species	Producer	Region	Trait	Estimate	Std.Error	P	R <sup>2</sup>	NumDf	DenDf	F	Data range [F0]	% Effect size/Data range
<i>Trifolium pratense</i>	P1		Start of flowering [d]	0.539	1.070	0.616	0.004	1	69	0.254	40.357	1.335
<i>Centaurea jacea</i>	P1		Start of flowering [d]	-0.352	0.545	0.520	0.006	1	68	0.418	21.866	1.610
<i>Lotus corniculatus</i>	P1		Start of flowering [d]	0.537	0.589	0.365	0.012	1	67	0.832	18.280	2.939
<i>Silene dioica</i>	P1		Start of flowering [d]	-0.483	1.012	0.635	0.004	1	62	0.228	46.016	1.050
<i>Silene vulgaris</i>	P1		Start of flowering [d]	-0.333	0.504	0.511	0.006	1	70	0.437	15.591	2.138
<i>Achillea millefolium</i>	P1		Start of flowering [d]	2.020	1.175	0.093	0.066	1	42	2.956	21.085	9.582
<i>Leucanthemum ircutianum</i>	P1		Start of flowering [d]	-3.282	0.788	<b>&lt;0.001</b>	0.227	1	59	17.367	27.087	12.117
<i>Ranunculus acris</i>	P1		Start of flowering [d]	-0.117	0.918	0.899	0.000	1	70	0.016	41.637	0.280
<i>Leontodon hispidus</i>	P1		Start of flowering [d]	-3.306	1.820	0.075	0.060	1	52	3.298	37.835	8.737
<i>Leontodon hispidus</i>	P2		Start of flowering [d]	0.667	1.184	0.576	0.006	1	52	0.317	22.702	2.937
<i>Lotus corniculatus</i>	P2		Seed shattering	0.972	1.323	0.920	NA	1	33	0.01	7.686	12.649
<i>Silene vulgaris</i>	P2		Seed shattering	1.091	1.063	0.162	NA	1	70	2	1.302	83.789
<i>Centaurea jacea</i>	P1		Seed shattering	1.363	1.141	<b>&lt;0.001</b>	NA	1	68	5.630	3.072	44.375
<i>Lotus corniculatus</i>	P1		Seed shattering	0.939	1.102	0.520	NA	1	67	0.418	2.907	32.313
<i>Silene vulgaris</i>	P1		Seed shattering	0.924	1.076	0.287	NA	1	70	1.152	10.768	8.584