

Electronic supplementary material #1:

1 *Novel host plant leads to the loss of sexual dimorphism in a sexually-selected male*
2 *weapon*

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The data in tables S1 and S2 was used to carry out the principal components analysis featured in figure 3.

Table S1. Person's correlation coefficient (r) matrix for all measured traits; includes both sexes and treatments together. PW, pronotum width; HL, head length; BL, beak length; HFA, hind femur area; HTA, hind tibia area; FFL, front femur length. All pairwise correlations are statistically significant. $N = 169$.

	PW	HL	BL	HFA	HTA	FFL
PW	1					
HL	0.739	1				
BL	0.724	0.613	1			
HFA	0.710	0.523	0.348	1		
HTA	0.825	0.636	0.562	0.852	1	
FFL	0.897	0.727	0.707	0.811	0.882	1

Table S2. Factor loadings by trait for the Principal Component analysis. Principal component 1 (PC1) explained 75.89% of the variance in the data with an eigenvalue of 4.554. Principal component 2 (PC 2) explained 12.49% of the variance in the data with an eigenvalue of 0.749.

Trait	Component	
	PC 1	PC 2
PW	0.642	0.693
HL	0.416	0.742
BL	0.166	0.928
HFA	0.959	0.168
HTA	0.854	0.428
FFL	0.745	0.618