Table S2. Candidate genes that failed to amplify in this study. Several genes were selected for their potential involvement in feeding habits. However, some of these genes were not pursued in our analysis because we were not able to successfully amplify them in all target species.

Gene	Symbol	GO ID	GO term	Category[1]	References
AlphaTrypsin	*Alphatry*	0006508	"Proteolysis"	d	[1] Ross et al. 2003
Attacin-A	*AttA*	0019731	"Antibacterial humoral response "	c	[2] Lemaitre et al. 1997
calcium-binding protein 1	*Cabp1*	0003756	"Protein disulfide isomerase activity"	b	[3] Ashburn et al. 1999
Cyp12a4	*Cyp12a4*	0055114	"Oxidation-reduction process"	b	[4] Bogwitz et al. 2005
Cyp4d14	*Cyp4d14*	0055114	"Oxidation-reduction process"	b	[5] FlyBase et al. 2004
Diptericin A	*DptA*	0009617	" Response to bacterium"	c	[6] Berkey et al. 2009
Hemolectin	*Hml*	0042060	"Wound healing"	c	[7] Lesch et al. 2007
neuropeptide F	*NPF*	0030536	"Larval feeding behavior"	a	[8] Wu et al. 2003
ovo	*ovo*	0008343	"Adult feeding behavior"	a	[9] Wong et al. 2009
painless	*pain*	0042048	"Olfactory behavior"	a	[10] Wang et al. 2011
scalloped	*sd*	0007423	"Sensory organ development"	a	[11] Srivastava & Bell. 2003
Serpin 55B	*Spn55B*	0045861	"Negative regulation of proteolysis"	d	[12] Han et al. 2000
shibire	*shi*	0030536	"Larval feeding behavior"	a	[13] Wu et al. 2005

[1] The selected genes can be classified in four categories: (a) genes involved in feeding preference; (b) genes involved in toxin metabolism that act in food detoxification; (c) genes involved in immune responses; and (d) genes involved in wound formation that allow larvae to move around the wound during feeding.

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