Table S1: neural parameter values. All segments are identical. Values given in larval units (seg = resting segment length, segmass = mass of a single segment boundary, nondim = dimensionless/nondimensional).

symbol	description	value
θ_{SN}	sensory neuron threshold	$1/100$ seg s^{-1}
θ_{IN}	interneuron threshold	$1/2$ (nondim.)
θ_{MN}	motor neuron threshold	$1/2$ (nondim.)
$w_{\mathrm{SN}\to\mathrm{MN}}$	sensory neuron $\to$ motor neuron synaptic weight	1 (nondim.)
$w_{\mathrm{MN}\to\mathrm{MF}}$	motor neuron $\to$ muscle fibre synaptic weight	1 (nondim.)
$w_{\mathrm{SN}\to\mathrm{IN}}$	sensory neuron $\to$ interneuron synaptic weight	1 (nondim.)
$w_{\mathrm{IN}\to\mathrm{MN}}$	interneuron $\to$ motor neuron synaptic weight	-2 (nondim.)
$w_{\mathrm{IN}\to\mathrm{IN}}$	interneuron $\to$ interneuron synaptic weight	-2 (nondim.)