SUPPLEMENT

Table S1. Settings used in the *wrMTrck* plug-in (Pederson 2011) for imageJ (Schneider et al. 2012) for zoospore velocity analysis.

Setting description	Value
minSize	3
maxSize	600
maxVelocity	20
maxAreaChange	25
minTrackLength	7
bendThreshold	2
binSize	0
saveResultsFile	unchecked
showPathLengths	checked
showLabels	checked
showPositions	checked
showPaths	unchecked
showSummary	checked
roundCoord	unchecked
smoothing	unchecked
plotBendTrack	unchecked
rawData	0
bendDetect	0
FPS	0
backSub	0
threshMode	Otsu
fontSize	16

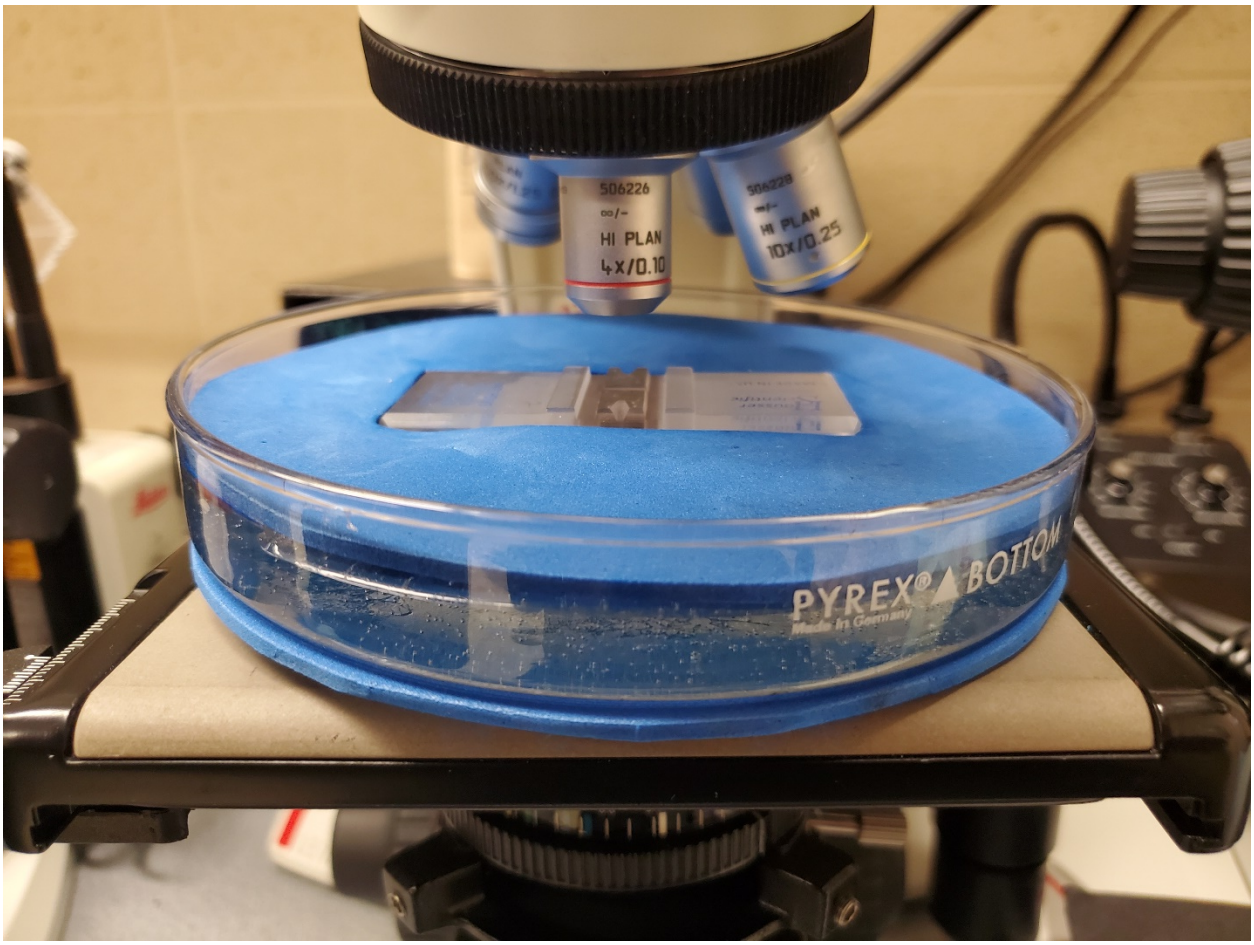

Figure S1. Setup to maintain sample temperature during video microscopy for zoospore velocity measurements. A hemacytometer is fitted into a foam cutout, placed on top of a 150-mm diameter glass Petri dish filled with gel wax. The purpose of the gel wax was to increase the thermal inertia of the hemacytometer, allowing for more consistent application of performance temperature treatments.

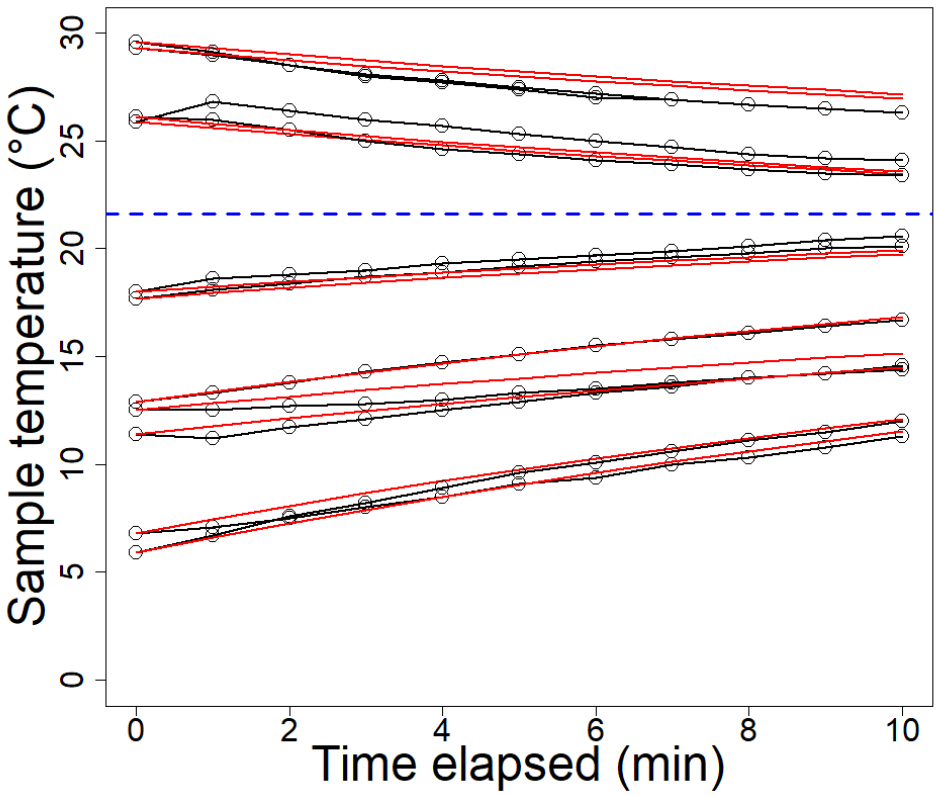

Figure S2. Time series temperature data for dummy samples (20 µL water) placed on hemacytometers fitted into gel wax dishes as shown in Fig. S1. The black circles and lines represent temperatures observed for individual hemacytometers (n = 10), and red curves represent the predictions of the fitted model describing Newton's law of cooling. The blue line shows room temperature (21.6 °C). We used the fitted model to adjust performance temperature estimates for the zoospore velocity trials to account for temperature equilibration to room temperature by the time of video microscopy. During zoospore velocity trials all videos were obtained within 7 minutes of removing hemacytometers (and gel wax) from their performance incubators.

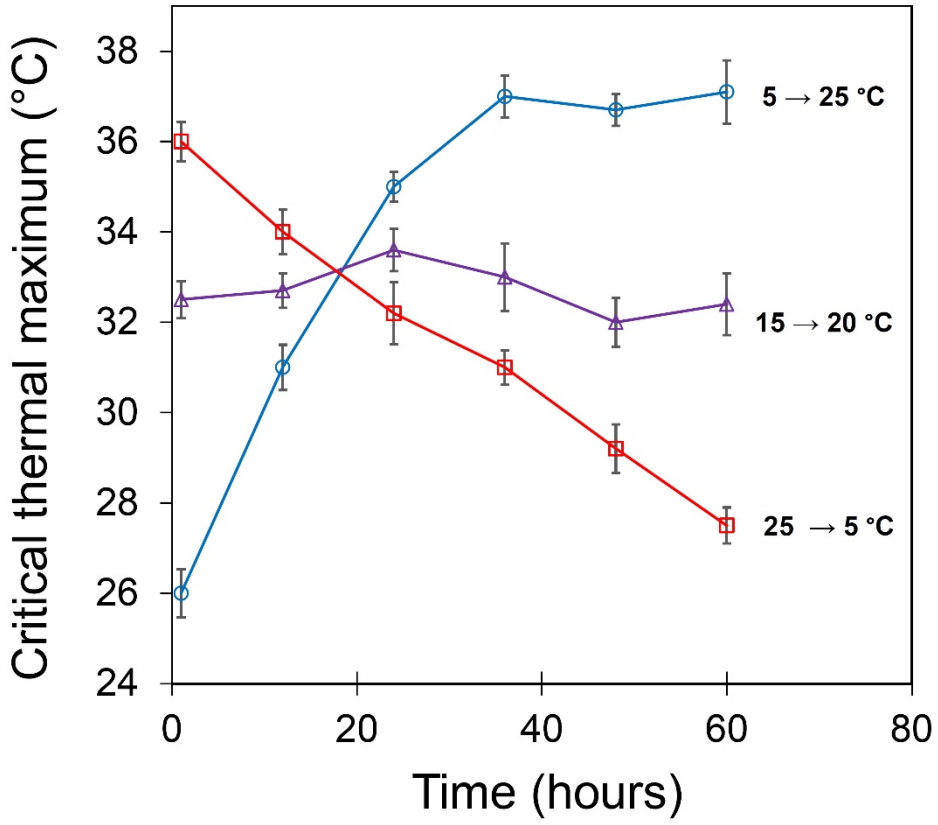

Figure S3. Hypothetical critical thermal maximum (CT_{max}) data representing typical patterns observed in published acclimation time experiments (Hutchison 1961, Brattstrom & Lawrence 1962, Brattstrom 1970). As defined in our analysis, this graph would represent three "measurements" of thermal acclimation time for one or more amphibian species. Acclimation time was defined as the minimum number of hours it took from the time of the temperature shift (time 0) until CT_{max} stabilized at some new equilibrium. Equilibrium was considered stabilized at a given time point if the standard deviation for that datapoint overlapped with that of the next datapoint, or if the range for that datapoint overlapped with the mean of the next datapoint. Error bars representing ranges of observed CT_{max} values were included in approximately half of the analyzed figures. If error bars were not provided, we made our best judgement of acclimation time based on the available data. The blue line represents an increase in CT_{max} following an increase in acclimation temperature (from 5 to 25 °C). This curve would have generated an acclimation time estimate of 36 hours. The purple line represents no observed acclimation because there was no change in approximate CT_{max} post-temperature shift. The red line represents a decrease in CT_{max} following a decrease in acclimation temperature (from 25 to 5 °C), where the change in CT_{max} had not stabilized by the end of the experiment. In this case, the acclimation time would be considered "greater than 60 hours". In all published sources, each point on the graph represented the average of more than one individual animal, but sample sizes were not always provided.

LITERATURE CITED

Brattstrom BH (1970) Thermal acclimation in Australian amphibians. Comp Biochem Physiol 35:69–103.

Brattstrom BH, Lawrence P (1962) The Rate of Thermal Acclimation in Anuran Amphibians. Physiol Zool 35:148–156.

Hutchison VH (1961) Critical thermal maxima in salamanders. Physiol Zool 34:92–125.

Pederson JS (2011) wrMTrck.

Schneider CA, Rasband WS, Eliceiri KW (2012) NIH Image to ImageJ: 25 years of image analysis. Nat Methods 9:671–675.