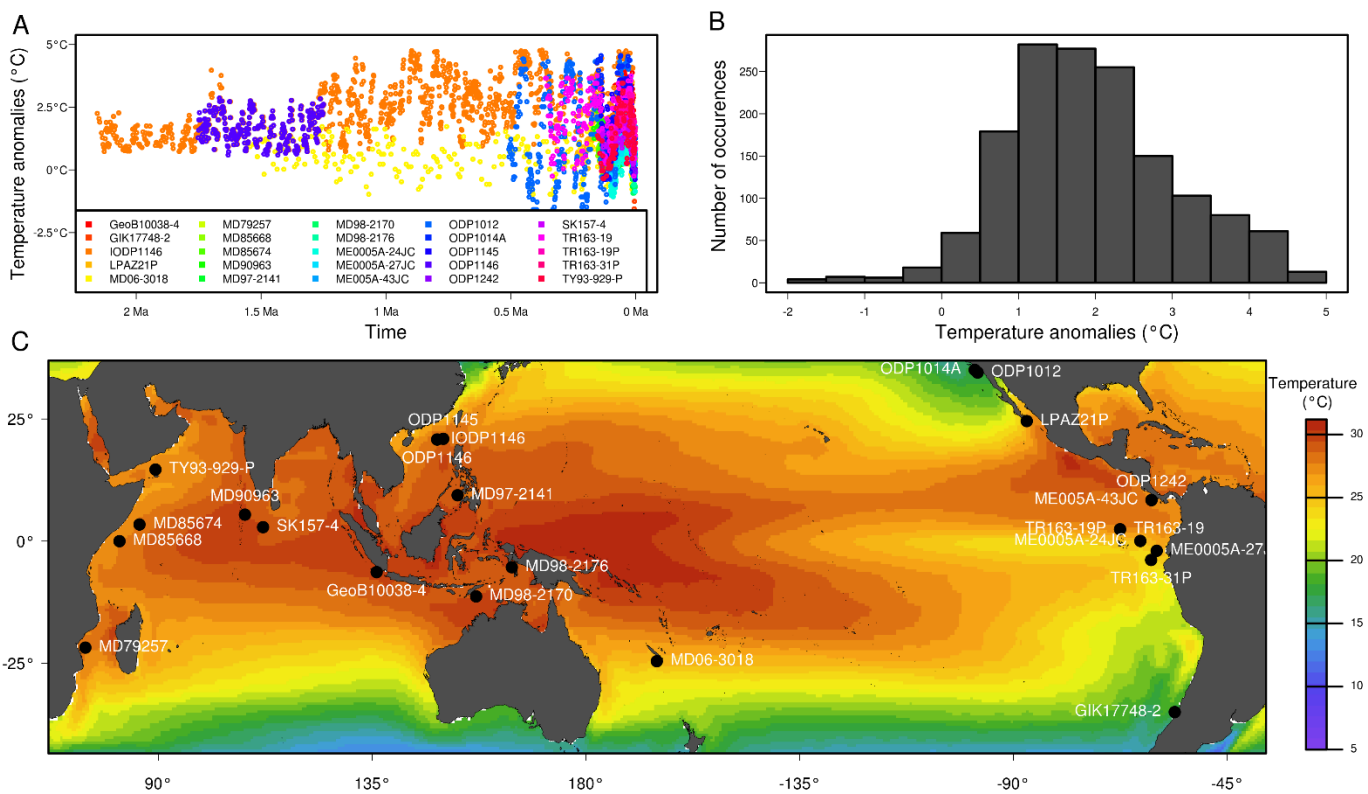
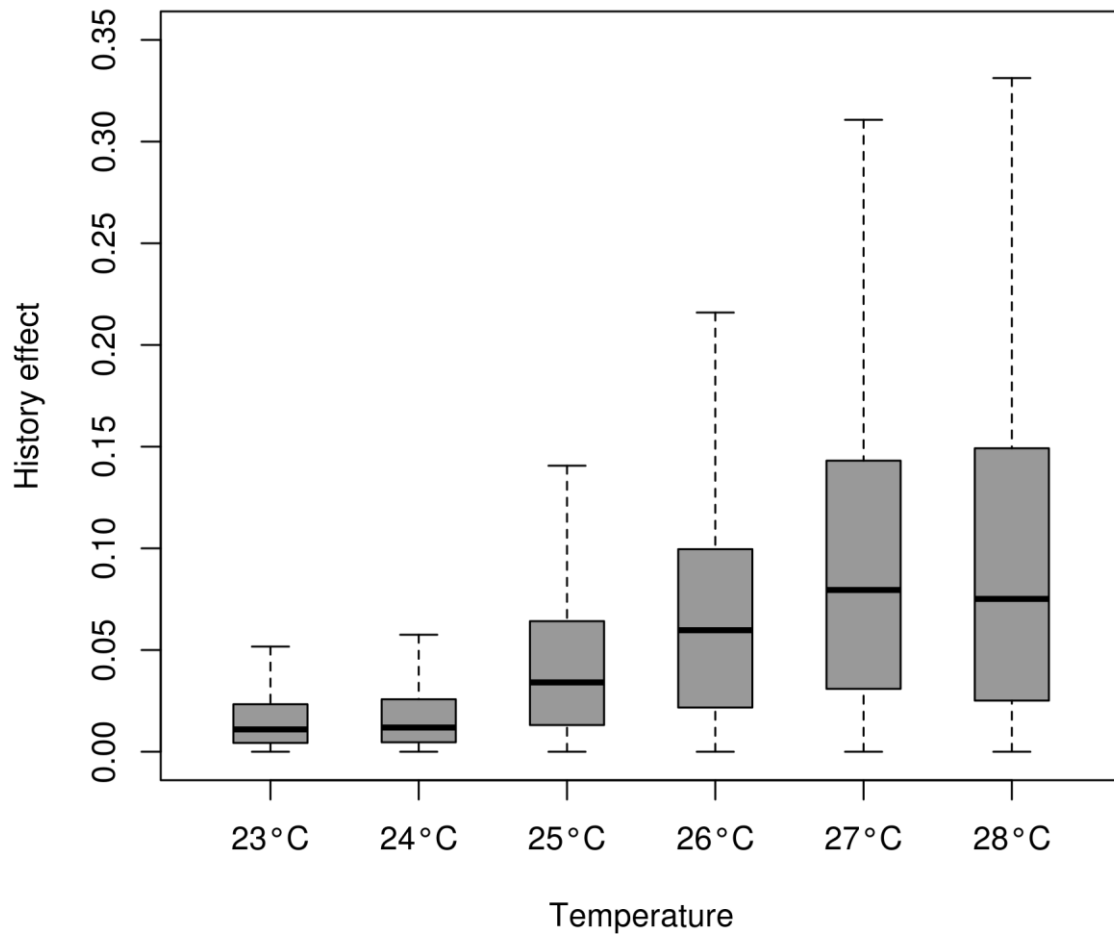


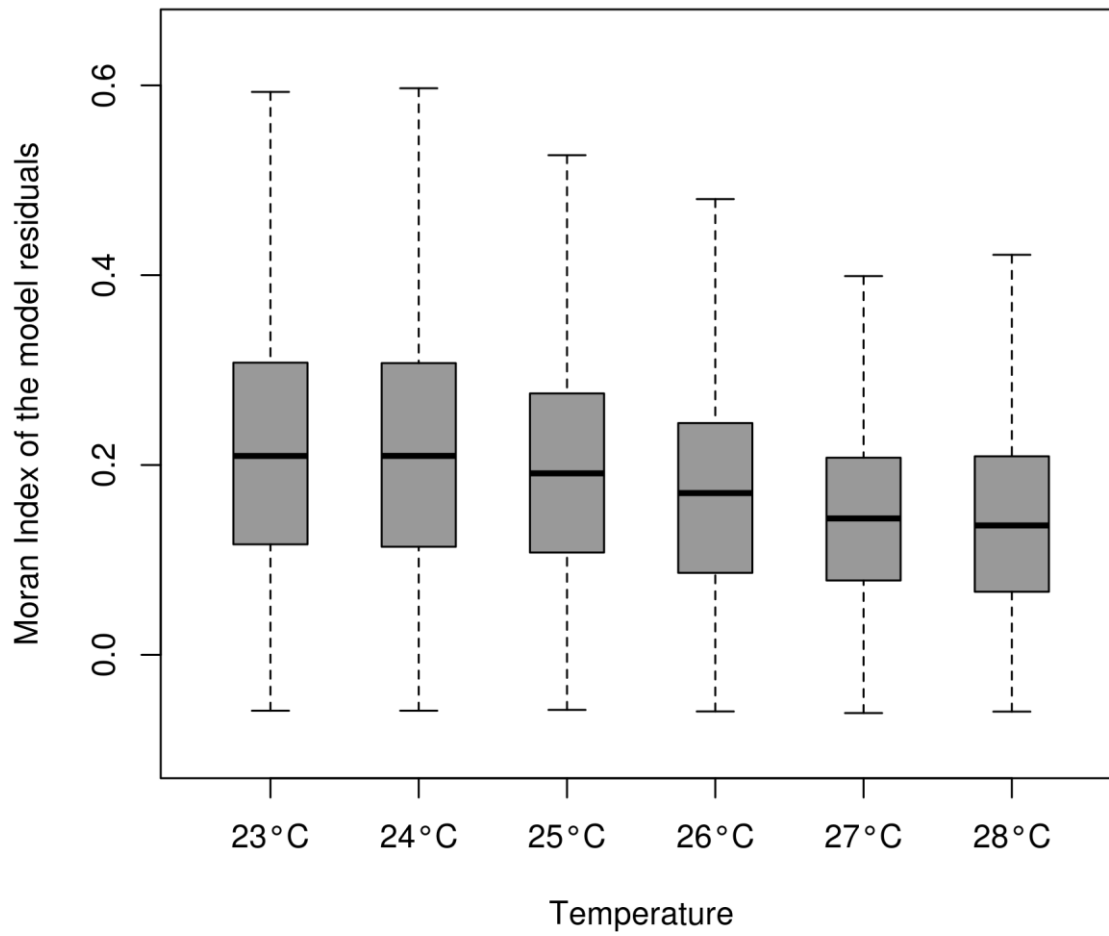
## Supplementary materials



**Figure S1.** A. Temporal distribution of the sediment cores used to reconstruct the sea surface temperature across the Indo-Pacific Ocean. Note that in this graph positive anomalies correspond to temperatures colder than the present period. B. Histogram of the computed temperature anomalies, representing the difference between the pre-warming temperature map and the past SSTs reconstructed from the cores. C. Spatial distribution of the sediment cores used to reconstruct the variation of sea surface temperature across the Indo-Pacific Ocean. The map background represent the sea surface temperature for the pre-warming period, when the effect of anthropic climate changes were less marked (1948-1958).



**Figure S3.** Boxplots of the variance explained independently by the historical variable computed using the different lower temperature thresholds from 23 to 28°C.



**Figure S4.** Boxplots of the Moran index of the model residuals computed using the different lower temperature thresholds from 23 to 28°C.

<b>Core ID</b>	<b>Publication</b>
<b>GeoB 10038-4</b>	Mohtadi et al. 2010
<b>GIK 17748-2</b>	Kim et al. 2003
<b>IODP1146</b>	Herbert et al. 2010
<b>LPAZ 21P</b>	Herbert et al. 2001
<b>MD06-3018</b>	Russon et al. 2010
<b>MD79257</b>	Bard et al. 1997
<b>MD85668</b>	Bard et al. 1997
<b>MD85674</b>	Bard et al. 1997
<b>MD90963</b>	Bard et al. 1997
<b>MD97-2141</b>	Rosenthal et al. 2003
<b>MD98-2170</b>	Stott et al. 2007
<b>MD98-2176</b>	Stott et al. 2007
<b>ME0005A-24JC</b>	Dubois et al. 2011
<b>ME0005A-27JC</b>	Dubois et al. 2011
<b>ME005A-43JC</b>	Benway et al. 2006
<b>ODP1012</b>	Herbert et al. 2001
<b>ODP1014A</b>	Yamamoto et al. 2007
<b>ODP1145</b>	Oppo et al. 2005
<b>ODP1146</b>	Cleaveland et al. 2007
<b>ODP1242</b>	Benway et al. 2006
<b>SK 157/4</b>	Saraswat et al. 2005
<b>TR163-19</b>	Lea 2004
<b>TR163-19P</b>	Dubois et al. 2011
<b>TR163-31P</b>	Dubois et al. 2011
<b>TY93-929/P</b>	Bard et al. 1997

**Table S1.** Identity of the sediment cores considered in the study and associated references.