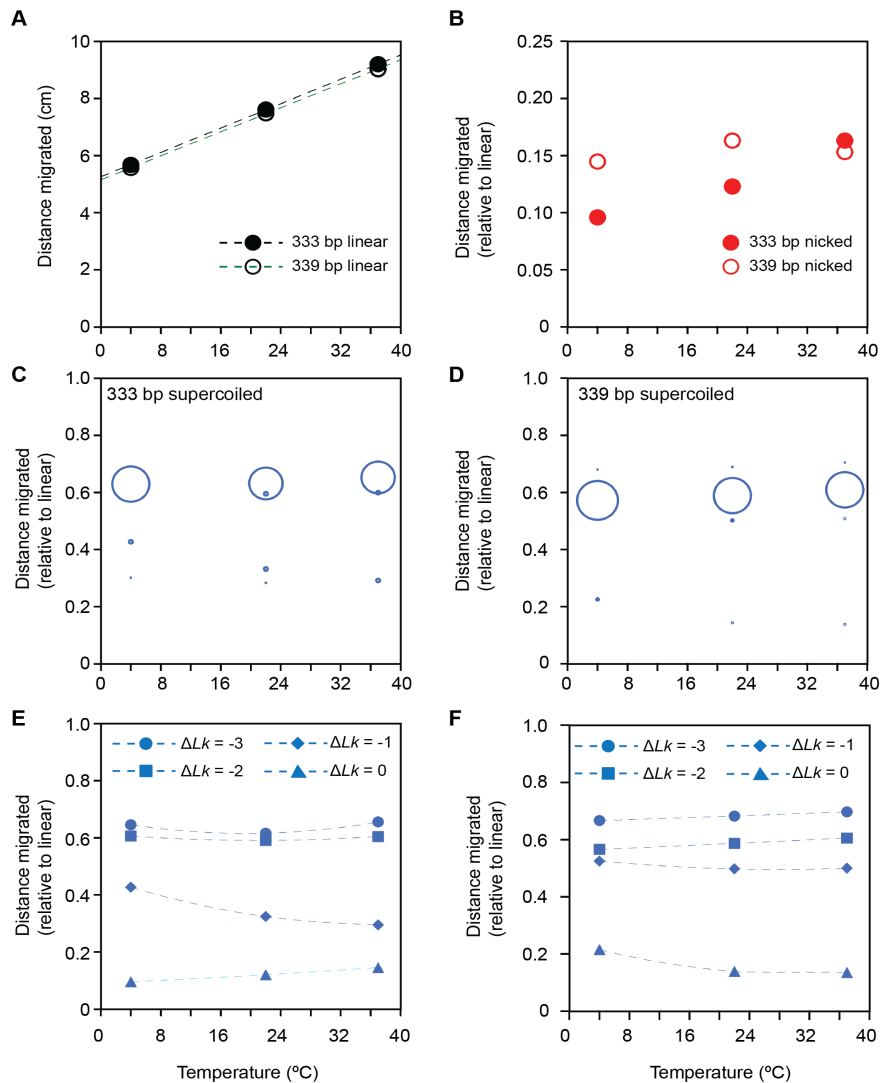
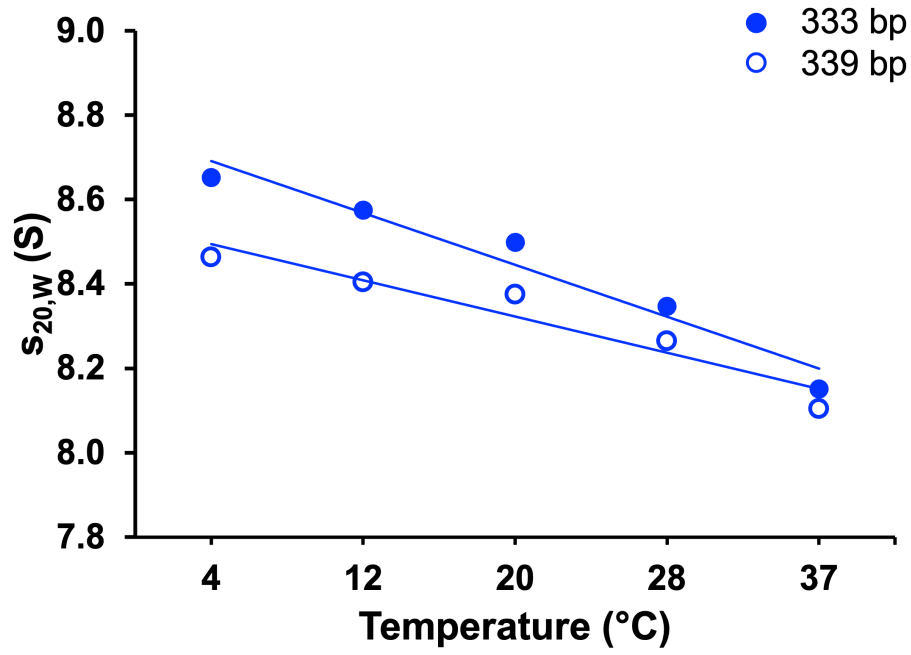


Supplementary Figure 1. Gel electrophoresis at (A) 4 °C and (B) 37 °C. Samples loaded were the same as for Figure 2. Mr: 100 bp DNA ladder (linear DNA, lengths in bp as indicated). 333 and 339 bp minicircle topoisomer markers (ΔLk as indicated) were also loaded. Negatively supercoiled, linear, and nicked 333 bp and 339 bp DNA samples were analyzed (Sc: supercoiled, Ln: linear, Nc: nicked).



Supplementary Figure 2. Comparison of electrophoretic migration at different temperatures. Distances migrated and band volumes were measured using image analysis software. **(A)** Distances migrated by linear samples as a function of temperature. **(B)** Relative migration of nicked samples at different temperatures. Distances migrated were measured and normalized by comparison to the linear samples. **(C)** Relative migration of supercoiled 333 bp samples at different temperatures. Each band from the gel is plotted separately. In the cases where the peaks for two bands overlapped they were plotted as a single datapoint. The size of the data point represents the relative fraction of the total DNA in the sample. **(D)** Relative migration of supercoiled 339 bp samples at different temperatures. Analyzes as for the 333 bp supercoiled samples. **(E)** Relative migration of 333 bp topoisomer markers at different temperatures. **(F)** Relative migration of 339 bp topoisomer markers at different temperatures.



Supplementary Figure 3. The weighted average sedimentation coefficients of the supercoiled minicircle DNA of 333 bp (filled circles) or 339 bp (open circles) length as a function of temperature.