

**Supplementary Table 2.** Statistics of the transcriptome assembly

	Number of paired-end reads* <sup>1</sup>			Transcriptome assembly* <sup>2</sup>		
	Library 1	Library 2	Library 3	N50	No. contig* <sup>3</sup>	Total base
<i>Pseudotriconympha grassii</i>	23,169,867	20,874,582	30,215,345	1,175	39,825	35,619,360
<i>Holomastigotoides hartmanni</i>	25,488,617	26,149,361	28,319,743	837	108,262	76,841,851
<i>Holomastigotoides minor</i>	28,291,610	49,604,672	27,702,408	1,018	70,088	58,009,961
<i>Cononympha leidyi</i>	40,348,124	28,828,635	33,194,456	1,213	51,266	47,901,578

\*<sup>1</sup> The number of paired-reads after removal of adapter and quality filtering.

\*<sup>2</sup> These statistics are calculated after removal of contamination

\*<sup>3</sup> Contigs longer than  $\geq 300$ bp are shown