

**S5 File:** Results of background similarity tests assessing niche similarity between bluetongue virus and six vector species. The null hypothesis of niche similarity was rejected if the observed  $D$  or  $I$  values for the BTV and vector species in question fell the 5<sup>th</sup> percentile in the random-replicate distribution (i.e. 5% in table).

Species	Schoener's $D$				Hellinger's $I$			
	Observed	5%	95%	$P$ value	Observed	5%	95%	$P$ value
<i>Culicoides imicola</i>	0.585	0.466	0.863	$P > 0.05$	0.847	0.677	0.926	$P > 0.05$
<i>Culicoides insignis</i>	0.615	0.382	0.683	$P > 0.05$	0.873	0.514	0.944	$P > 0.05$
<i>Culicoides variipennis</i>	0.618	0.419	0.804	$P > 0.05$	0.872	0.615	0.966	$P > 0.05$
<i>Culicoides sonorensis</i>	0.696	0.429	0.717	$P > 0.05$	0.923	0.598	0.958	$P > 0.05$
<i>Culicoides brevitarsis</i>	0.708	0.322	0.942	$P > 0.05$	0.927	0.551	0.956	$P > 0.05$
<i>Culicoides occidentalis</i>	0.505	0.233	0.739	$P > 0.05$	0.805	0.366	0.821	$P > 0.05$