

### **Additional File 3- Degree of substitutional saturation**

<b>Symmetrical tree</b>	
Proportion of invariable sites	0.038
mean H <sup>1</sup>	0.33
Standard error	0.018
ISS <sup>2</sup>	0.173
ISSc <sup>3</sup>	0.756

  

<b>Asymmetrical tree</b>	
ISSc <sup>3</sup>	0.460

<sup>1</sup>Mean entropy for all sites

<sup>2</sup>entropy based index of substitutional saturation

<sup>3</sup>critical value for the index of substitutional saturation