Full mitogenomes in the critically endangered kākāpō reveal major post-glacial and anthropogenic effects on neutral genetic diversity

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Table S1. Sampling location, date and museum information for the 39 historical kākāpō specimens used in this study.

<table>
<thead>
<tr>
<th>Museum</th>
<th>Museum no.</th>
<th>Locality</th>
<th>Region</th>
<th>Collection date</th>
<th>Lab code</th>
<th>Used in this study</th>
<th>Used infr gene + Sql (EPA)</th>
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<td>Goulden Downs, Nelson</td>
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<td>Tuoho Valley, Fiordland</td>
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<td>NML111</td>
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<td>1941</td>
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<td>NML115</td>
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Table S2. Log Marginal Likelihood for the three models of constant size, Bayesian Skyline and Bayesian Skyride and Bayes factor values for the preferred model (i.e. Bayesian Skyline) relative to the other models. The log Bayes Factor corresponds to the difference between the preferred model and the alternative model.

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<th>Model</th>
<th>Stepping-stone Sampling</th>
<th>Path Sampling</th>
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<td>Log Bayes Factor</td>
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<tr>
<td>Constant</td>
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<td>Skyline</td>
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<td>Skyride</td>
<td>-23886.02</td>
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Table S3. Prior and posteriors distribution of parameters for a general model of ‘postglacial expansion and recent bottleneck’. Timing of events corresponds to number of generations and assuming a generation time of 25 years for kākāpō [47].

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Prior</th>
<th>Posterior mode</th>
<th>5% HPD</th>
<th>95% HPD</th>
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<td>$N_e$-modern</td>
<td>Uniform (10-500)</td>
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<td>12.2</td>
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<td>Uniform (10^2-6x10^6)</td>
<td>4.97x10^6</td>
<td>2.53x10^5</td>
<td>4.97x10^5</td>
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<td>$N_e$-pre-glaciation</td>
<td>Uniform (10^3-6x10^6)</td>
<td>1.07x10^6</td>
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<tr>
<td>t-bottleneck</td>
<td>Uniform (1-50)</td>
<td>4.76</td>
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<td>t-post-glaciation</td>
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<td>588</td>
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<td>$\mu$ rate</td>
<td>Uniform (10^-5-10^-7)</td>
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<td>1.61x10^-8</td>
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</table>

Conditions: $N_{e-pre-human} > N_{e-pre-glaciation}$