

## Evolution: Evidence of Evolution & Hardy Weinberg Equilibrium

<p>3<sup>rd</sup> Canadian ed. - Whiskey jack on cover (pages below are for the hard copy; e-text – should be chapter 21)</p>	<p>2019 UBC custom ed. – Frog on cover</p>	<p>2014-2018 UBC custom ed. – Steller's Jay on cover</p>
<p><b>Chapter 22: Evolution by Natural Selection</b> Introduction 22.1 The Evolution of Evolutionary Thought: 22.2 The Pattern of Evolution: Have Species Changed, and Are They Related</p>	<p><b>Evolution by Natural Selection (pp 245-254)</b> Introduction Section 1 – The Evolution of Evolutionary Thought Section 2 – The Pattern of Evolution: Have Species Changed, and Are They Related?</p>	<p><b>Chapter 24: Evolution by Natural Selection</b> Introduction 24.1 The Evolution of Evolutionary Thoughts 24.2 The Pattern of Evolution: Have Species Changed through Time?</p>
<p><b>Chapter 22: Evolutionary Processes</b> Introduction 23.2 Analyzing Change in Allele Frequencies: The Hardy-Weinberg Principle</p>	<p><b>Evolutionary Processes (pp 269-275: Evolution by Natural Selection)</b> Introduction Section 1 – Analyzing Change in Allele Frequencies: The Hardy-Weinberg Principle</p>	<p><b>Chapter 25: Evolutionary Processes</b> Introduction 25.1 Analyzing Change in Allele Frequencies: The Hardy-Weinberg Principle</p>
<p>After finishing the readings, you should be able to:</p> <ul style="list-style-type: none"> <li>▪ Provide evidence for evolution: (1) that species change through time; (2) evidence of descent from a common ancestor and (3) the evidence that all organisms are descendants of a universal common ancestor (LUCA).</li> <li>• Calculate observed genotype frequencies and allele frequencies in a population.</li> <li>• Calculate predicted genotype frequencies and alleles frequencies in a population, if the population is in HWE for that gene.</li> <li>• How to test whether allele frequencies are in HWE for a particular gene.</li> <li>• Provide an explanation for why a gene is or is not in HWE for a population (i.e. by referring to one or more of the evolutionary mechanisms).</li> <li>• Explain the assumptions of the HWE Principle.</li> </ul>		