

## Appendix S1. Differentiating between seeds

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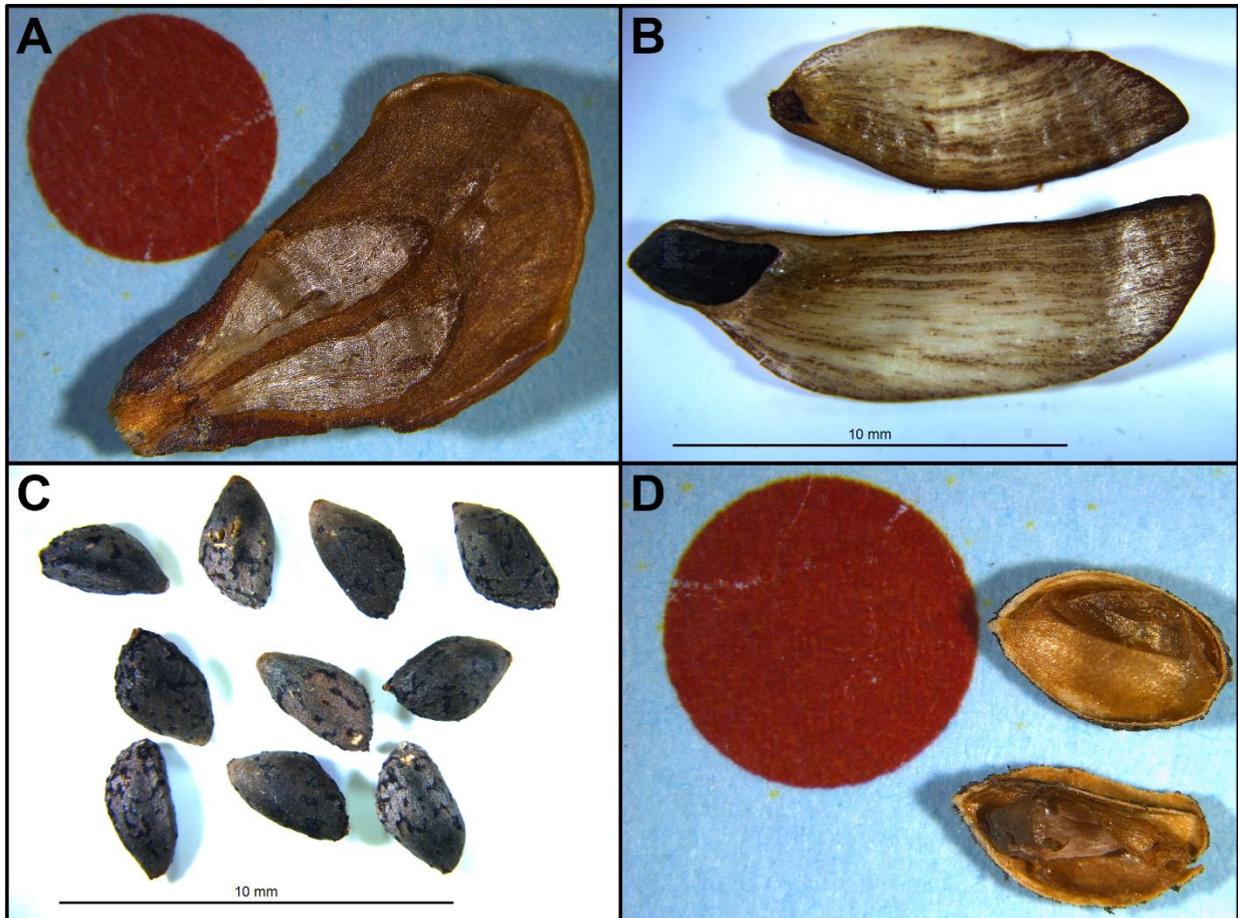


Figure S1. Close up photos of *Pinus contorta* seed and cone scale in Aotearoa New Zealand. A) A sterile cone scale showing that each scale produces two samaras, next to the 5mm red reference circle. B) A rudimentary, non-viable seed (above), and a filled, fully developed seed below. C) An assortment of seeds detached from their wings, displaying the mottling often associated with *Pinus contorta latifolia*. D) An unfilled, non-viable seed, next to a 5mm red reference circle. Photos taken by Andrew Vautrin.