

Species: *Rhamnus cathartica* L.

Assessor: Dr R. Gargiulo

Methodology: Neaves, L. A Framework for Maximising the Capture of Genetic Diversity in Sampling for ex situ Conservation. *Preprints*. 2019, 2019120176 (doi:10.20944/preprints201912.0176.v1)

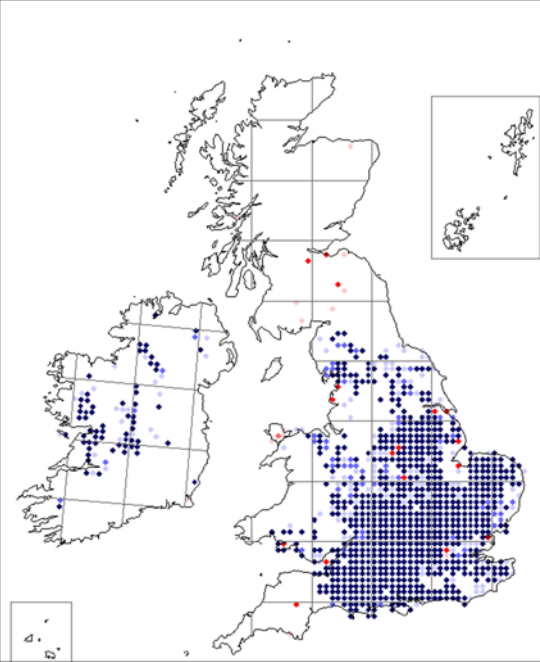
Recommendations:		Confidence
<b>Sampling</b>	<b>Moderate risk of sampling limited diversity:</b> Risk is related to the absence of genetic information about British populations and to the evidence of decline. Populations from the native range should be sampled	Moderate agreement/ Moderate evidence
<b>Donor selection (risk of mixing)</b>	<b>Low risk of mixing:</b> Gene flow is effective throughout the range, but more information is required.	Moderate agreement/ Moderate evidence
<b>Knowledge gaps</b>	Occurrence of adaptive variation and genetic diversity of UK populations. Limits of the native range.	

**Information:**

**Taxonomy** -

**Hybridisation** -

Life history traits/ Attributes		Organisation of diversity	Negative outcomes of mixing	Strength of evidence
<i>Dispersal ability</i>	Effective Seeds dispersed by birds Pollen vector: insects	Higher diversity/ Lower differentiation	Lower vulnerability	Robust evidence
<i>Mode of reproduction</i>	Obligate outcrossing	Higher diversity/ Lower differentiation	Higher vulnerability	Robust evidence
<i>Longevity</i>	Perennial	Higher diversity/ Lower differentiation	Lower vulnerability	Robust evidence
<i>First reproduction</i>	4-11 years old <sup>1</sup>	-	-	Robust evidence
<i>Reproductive output</i>	-	-	-	-
<i>Ploidy</i>	Diploid (2n=24)	-	-	Robust evidence

<i>Range/ Fragmentation</i>	Moderately fragmented. Widely naturalised outside its native range.	Higher diversity/ Lower differentiation	Lower vulnerability	Moderate evidence
				
<p>Map source:  <a href="https://www.brc.ac.uk/plantatlas/plant/rhamnus-cathartica">https://www.brc.ac.uk/plantatlas/plant/rhamnus-cathartica</a></p>				
<i>Ecological amplitude</i>	No information about adaptive variation in the UK, but there is evidence for adaptation to a wide range of conditions.	-	-	Limited evidence
<i>Genetic diversity</i>	No information is available about UK populations.	-	-	-
<i>Demography</i>	Declining	Higher diversity	-	Limited evidence
<b>References</b>	<sup>1</sup> Knight KS, Kurylo JS, Endress AG, Stewart JR, Reich PB. 2007. Ecology and ecosystem impacts of common buckthorn ( <i>Rhamnus cathartica</i> ): a review. <i>Biological Invasions</i> . <b>9</b> : 925–937 Godwin H. 1943. <i>Rhamnus cathartica</i> L. <i>Journal of Ecology</i> . <b>31</b> : 69-76.			