**Supporting information**

OSR aphid mummy collection. Sampling location and size.

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| --- | --- | --- | --- | --- | --- |
| Sampling location | Range | Sampling site denomination | GPS coordinates | Number of mummies | Sample size (n) |
| New Zealand  | Invaded range | Temuka | 44°13’02.34’’S 171°13’33.01’’ E | 10 | 50 |
| Race Course Hill | 43°26’07.58’’ S172°04’27.61’’ E | 10 |
| Makikihi | 44°40’05.48’’ S171°07’16.29’’ E | 10 |
| Lincoln | 43°38’47.93’’S 172°27’16.01’’E | 10 |
| Ashley Dene | 43°39’15.65’’S 172°19’1.70’’ E | 10 |
| United Kingdom | Native range | 1 | 51°48’35.78’’ N 0°22’4.08’’ W | 9 | 49 |
| 4 | 51°48’51.71’’ N 0°22’36.30’’ W | 10 |
| 5 | 51°47’12.77’’ N 0°26’4.17’’ W | 10 |
| 7 | 51°50’24.44’’ N 0°19’8.32’’ W | 10 |
| 14 | 51°50’32.28’’ N 0°19’2.25’’ W | 10 |

Amplification success of mummies’ DNA extracts by high-throughput 454-pyrosequensing and Illumina sequencing.

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| --- | --- | --- | --- | --- |
| NGS method | DNA extracts (sampling location) | Number of samples submitted | Number of samples successfully amplified | Total amplification success rate |
| 454-Pyrosequencing | NZ | 50 | 45 | 92% |
| UK | 50 | 47 |
| Illumina Miseq | NZ | 50 | 50 | 100% |
| UK | 49 | 49 |