

Supplementary Material

New populations of the black-flanked rock-wallaby (*Petrogale lateralis*) from the Little Sandy Desert and Murchison, Western Australia

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Table S1: Details of primers used in this study.

| Gene Region | Primer identification | Primer Sequence (5'- 3') | Publication |
|-------------|-----------------------|---|-------------------------------|
| 16S | Mam16S | Forward: CGGTTGGGGTGACCTCGGA Reverse: GCTGTTATCCCTAGGGTAACT | Taylor (1996) |
| CytB | Wallaby1 | Forward: GACACCCTAACAGCCTTCTCATCAG Reverse: CGGTAGCTCCTCAGAATGATATTT | Haouchar <i>et al.</i> (2013) |
| CytB | Wallaby2 | Forward: AAATATCATTCTGAGGAGCTACCG Reverse: GAGAAGTTGTCTGGGTCGCC | Haouchar <i>et al.</i> (2013) |
| CytB | Wallaby3 | Forward: GGCGACCCAGACAACCTTCTC Reverse: GGCTGTAAGGATTCAGAATAGGAT | Haouchar <i>et al.</i> (2013) |
| CR | DL1 | Forward: CCACAACACATCAACTYATTTG Reverse: TTCATTTTATGTATTACTAGAAATTATGTA | Haouchar <i>et al.</i> (2013) |
| CR | DL2 | Forward: CCACAACACATCAACTYATTTG Reverse: ATTCATTTTATGTATTACTAGAAATTATGTA | Haouchar <i>et al.</i> (2013) |

Table S2: Sample description, location, mitochondrial genes amplified and species assignment of scat collected from two locations in Western Australia. The PCR amplification success and species assignment are described for each sample and primer set. * Indicates the GenBank reference for the CytB and CR sequences generated by Haouchar *et al.* (2013) from museum specimen M5233 and this study. ❖ Indicates the blast match of the scat DNA sequences with the NCBI nucleotide database. ★ Indicates the nucleotide match of the scat samples with *Petrogale lateralis lateralis* reference samples from the Western Australian Museum (M5233 and M50268).

| Sample description and location collected | Species assignment CytB (W1) 227bp | Species assignment CytB (W2) 334bp | Species assignment CytB (W3) 211bp | Species assignment CR (WDL1) 157bp | Species assignment CR (WDL2) 275bp | Species assignment Mam16S 91bp |
|--|--|---|--|--|---|---|
| Scat: AWFS-12-253 ; Desert Queen Baths, WA; 51K, 423271E, 7515150N | Failed to amplify | Failed to amplify | ❖100% <i>Petrogale l. lateralis</i> JN898804 ★100% <i>Petrogale l. lateralis</i> M5233 ★99% <i>Petrogale l. lateralis</i> M50268 | Failed to amplify | Failed to amplify | ❖100% <i>Homo sapiens</i> |
| Scat: AWFS-12-273 ; Desert Queen Baths, WA; 51K, 423911E, 7515365N | Failed to amplify | Failed to amplify | Failed to amplify | Failed to amplify | Failed to amplify | ★100% <i>Petrogale l. lateralis</i> M50268 ★98.8% <i>Petrogale l. lateralis</i> M5233 ❖95.5% <i>Macropus giganteus</i> LK995454 |
| Scat: AWFS-12-274 ; Desert Queen Baths, WA; 51K, 423911E, 7515365N | ❖99.6% <i>Petrogale l. lateralis</i> JQ042130 ★99.6% <i>Petrogale l. lateralis</i> M5233 ★99.6% <i>Petrogale l. lateralis</i> M50268 | Failed to amplify | Failed to amplify | ★100% <i>Petrogale l. lateralis</i> M50268 ❖98.7% <i>Petrogale l. lateralis</i> AF348678 ★97.4% <i>Petrogale l. lateralis</i> M5233 | Failed to amplify | ❖100% <i>Homo sapiens</i> |
| Scat: AWFS-12-275 ; Desert Queen Baths, WA; 51K, 423911E, 7515365N | Failed to amplify | ★100% <i>Petrogale l. lateralis</i> M5233 ❖99.7% <i>Petrogale l. lateralis</i> JQ042127 ★99.7% <i>Petrogale l. lateralis</i> M50268 | Failed to amplify | Failed to amplify | Failed to amplify | ❖100% <i>Homo sapiens</i> |
| Scat: WF15-01-1 ; Barr Smith Range, WA; 51J, 247522E, 6984286N | Failed to amplify | Failed to amplify | Failed to amplify | ❖98.7% <i>Petrogale l. lateralis</i> AF348679 ★98.7% <i>Petrogale l. lateralis</i> M50268 ★97.4% <i>Petrogale l. lateralis</i> M5233 | Failed to amplify | ★100% <i>Petrogale l. lateralis</i> M50268 ★97.8% <i>Petrogale l. lateralis</i> M5233 ❖95.5% <i>Macropus giganteus</i> LK995454 |
| Bone: <i>Petrogale l. lateralis</i> ; Accession No., M5233 (*JN898804 and *JN898805); Depuch Island, WA | ★100% <i>Petrogale l. lateralis</i> M50268 | ★99.7% <i>Petrogale l. lateralis</i> M50268 | ★99.1% <i>Petrogale l. lateralis</i> M50268 | ❖98% <i>Petrogale l. lateralis</i> AF348679 ★97.4% <i>Petrogale l. lateralis</i> M50268 | ❖91.5% <i>Petrogale l. MacDonnell ranges</i> race AF348694 ★97.4% <i>Petrogale l. lateralis</i> M50268 | ★100% <i>Petrogale l. lateralis</i> M50268 ❖94.5% <i>Macropus giganteus</i> LK995454 |
| Tissue: <i>Petrogale l. lateralis</i> ; Accession No., M50268 ; WA | ❖100% <i>Petrogale l. lateralis</i> JN898804 | ❖99.7% <i>Petrogale l. lateralis</i> JN898804 | ❖99.1% <i>Petrogale l. lateralis</i> JN898804 | ❖98.7% <i>Petrogale l. lateralis</i> AF348678 ★97.4% <i>Petrogale l. lateralis</i> M5233 | ★97.4% <i>Petrogale l. lateralis</i> M5233 ❖92% <i>Petrogale l. lateralis</i> AF348694 | ★100% <i>Petrogale l. lateralis</i> M5233 ❖96% <i>Macropus giganteus</i> LK995454 |

Table S3: Details of GenBank accessioned references samples used in this study for comparative purposes (see Table S2).

| GenBank Accession No. | Species | Gene | Sample Identification and Location | Publication |
|-----------------------|--|------|------------------------------------|------------------------|
| JQ042130 | <i>Petrogale l. West Kimberley race</i> | CytB | S1256, Erskine Range, WA | Potter et al. (2012) |
| JN898804 | <i>Petrogale l. lateralis</i> | CytB | M5233, Depuch Island, WA | Haouchar et al. (2013) |
| JQ042127 | <i>Petrogale l. lateralis</i> | CytB | S972, Wheatbelt region, WA | Potter et al. (2012). |
| AF348678 | <i>Petrogale l. lateralis</i> | CR | S972, Wheatbelt region, WA | Eldridge et al. (2001) |
| AF348679 | <i>Petrogale l. lateralis</i> | CR | S1161, Barrow Island, WA | Eldridge et al. (2001) |
| JN898805 | <i>Petrogale l. lateralis</i> | CR | M5233, Depuch Island, WA | Haouchar et al. (2013) |
| AF348694 | <i>Petrogale l. MacDonnell Ranges race</i> | CR | S1490, Sentinel Hill, SA | Browning et al. (2001) |
| JQ042134 | <i>Petrogale rothschildi</i> | CytB | CM15324, Rosemary Island, WA | Potter et al. (2012) |

References:

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- Eldridge, M.D.B., Wilson, A.C.C., Metcalfe, C.J., Dollin, A.E., Bell, J.N., Johnson, P.M., Johnston, P.G., Close, R.L. (2001) Taxonomy of rock-wallabies, *Petrogale* (Marsupialia: Macropodidae). III. Molecular data confirms the species status of the purple-necked rock-wallaby *Petrogale purpureicollis* Le Souef 1924. *Australian Journal of Zoology* **49**, 323-343.
- Haouchar, D., Haile, J., Spencer, P.B.S., and Bunce, M. (2013) The identity of the Depuch Island rock-wallaby revealed through ancient DNA. *Australian Mammology* **35**, 101-106.
- Potter, S., Cooper, S.J., Metcalfe, C.J., Taggart, D.A., Eldridge, M.D. (2012) Phylogenetic relationships of rock-wallabies, *Petrogale* (Marsupialia: Macropodidae) and their biogeographic history within Australia. *Molecular Phylogenetics and Evolution* **62** (2), 640-652.