IN 1982, the Queensland subspecies of the black-footed rock-wallaby Petrogale lateralis purpureicollis was collected from “Ridgepole Waterhole” in the Musselbrook Resource Reserve near Lawn Hill National Park (Eldridge et al. 1993). In 1994 the range was further extended when P. l. purpureicollis was recorded from the Constance Ranges and the upper reaches of Stockyard and Elizabeth Creeks; around the town of Cloncurry and the following distances from the town: 85 km north west; 60 and 87 km west; 4, 23, 28 and 35 km south and 15 km east (Bell et al. 1995). Approaches by the Cannington Mining operation to the southwest of McKinley in October 1999 to confirm the presence of rock-wallabies on nearby Glenhorne Station established the presence of P. l. purpureicollis; a 75 km range extension to the south-east.

Despite these advances, the distributional limits of P. l. purpureicollis remained unclear (Eldridge 1997), especially to the west (Gibson 2000) and the south-east (Bee and Close 1993). Although rock-wallaby populations have been reported from around Winton and Aramac, no extant populations could be located during a searches in 1976 and 1984 (Bee and Close 1993; R.L. Close pers. comm.). Survey work on the newly acquired Bladensburg National Park near Winton in November 1994 indicated that a Petrogale population occurred at the “Man Hole” rockhole in 1974 (Cecil Barrie pers. comm.). This population is not present today. The unidentified Petrogale populations around Winton are of considerable interest, being approximately equidistant from the known ranges of three taxa (P. l. purpureicollis, P. assimilis, P. herberti) from the known ranges of three taxa (Eldridge et al. 2001) and further surveys were carried out during 2000 and 2001.

A colony of Petrogale was located in February 2000 at Mountain View Station adjoining Bladensburg National Park. An adult female was captured and this animal exhibited all the characteristic pelage markings of P. purpureicollis, such as the distinctive purple colouration over the face, head and neck; dark end of tail with dark brush and dark brown colouration on the inside of the legs (Eldridge and Close 1995). An ear biopsy was collected and subsequently genomic DNA was extracted following the method of Sunnucks and Hales (1996). As P. purpureicollis is known to have distinctive mitochondrial DNA (mtDNA) (Bee and Close 1993; Eldridge et al. 2001), a ~ 670 base pair (bp) fragment of the control region was amplified and sequenced as previously described (Browning et al. 2001). The control region sequence from the Winton Petrogale (575 bp) was then compared to homologous sequences from six specimens of P. purpureicollis sampled throughout the species range (GenBank accession numbers AF348696-698, AY057374-377), as well as sequences from P. lateralis, P. assimilis, P. herberti and P. penicillata (Browning et al. 1991; Eldridge et al. 2001). Phylogenetic analysis was conducted by two methods, maximum parsimony and neighbour-joining (Kimuru 2P distances) using PAUP* (Swofford 2000).

The mtDNA of the Winton Petrogale was found to consistently cluster within a strongly supported (100% bootstrap) monophyletic clade that otherwise contained only haplotypes from P. purpureicollis (Fig. 1). Sequence divergences within the P. purpureicollis clade (excluding the Winton animal) ranged from 1.8 - 5.9 % (average 3.9 ± 1.1), while an average of 14.7 ± 1.5 % (range 12.0 – 16.7) separated P. purpureicollis haplotypes from those of P. lateralis, P. assimilis, P. herberti and P. penicillata. The haplotype from the Winton Petrogale appeared
REFERENCES

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