

Cheryl Lohr, Ricky Van Dongen, Bart Huntley, Lesley Gibson & Keith Morris –
“Vegetation change on the Montebello islands before and after rodent
eradications and native fauna reintroductions”

The Montebello archipelago consists of approximately 150 islands; 80km from the north-west coast of W.A. Before 1912 the islands had a diverse terrestrial fauna. By 1952 several species were locally extinct. Between 1950 and 1992 the islands were a prohibited site following atomic weapons testing. In 1992 the islands became a priority for restoration. Between 1996 and 2011 rodents and cats were eradicated, and 5 mammal and 2 bird species were translocated to the islands. Despite changes to the fauna assemblage, limited monitoring of the broader terrestrial ecosystem has occurred. We used 20 dry-season Landsat images from 1988 to 2013 to assess change in vegetation density over time. The imagery was converted to a cover index and

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processed using CSIRO software “Veg Trend”. Preliminary analysis of data averaged across the 25-year period suggests that 1433ha out of 1818ha (78.8%) have increased in vegetation cover by up to 30%, 358ha (19.7%) have remained stable and 27ha (1.5%) have declined in vegetation cover. Time-series analysis completed in Brodgar 2.7.1 suggests a flex-point in the data with relatively stable values prior to 1996, and increasing vegetation cover following the initial rodent baiting. Field work to ground-truth imagery will occur in September 2013.