Research Outcomes

Introduction

The main objective of the research presented was to investigate long-term Aboriginal culture change and continuity in a small but unique area of northeast Queensland's rainforest region. It is recognised that the relatively small amount of archaeological research conducted to date in the Wet Tropics Bioregion is an obvious shortcoming in an investigation of long-term change and continuity. Nevertheless, the research provides a valuable contribution to the discipline by furthering the knowledge of pre- and post-contact Aboriginal rainforest occupation in a previously unexplored part of Australia's Wet Tropics Bioregion. The present aim is to draw together the threads of evidence compiled from the analyses of the archaeological and historical datasets to explore long-term Aboriginal behavioural modifications and responses to change, including the effects of European arrival on traditional Aboriginal rainforest culture and society.

Pre-European Aboriginal rainforest use

Palaeoenvironmental research in the rainforest region has demonstrated that the period approximately between 8500 BP and 3500 BP witnessed a dramatic expansion of complex rainforest on the Tablelands, replacing the eucalypt woodlands that dominated the landscape during the late Pleistocene period (Haberle 2005). From this, it has been interpreted that early Aboriginal visits to Urumbal Pocket, approximately 8,000 years ago, and the rainforests on the Evelyn Tableland, coincided with changes in the climate and environment. Historical maps and documents demonstrate that at the time of European arrival, eucalypt pockets were present on the Tablelands within dense rainforest (e.g. Mjöberg 1913a). Observations by early European explorers and miners traversing the rainforest demonstrate that such pockets were used by Aboriginal rainforest people for prolonged periods during the wet season as campsites and places where large inter-tribal ceremonial gatherings took place (e.g. Coyyan 1918). Whether some of these open forest pockets like Urumbal Pocket are remnants of the eucalypt woodlands that dominated the region prior to 8,500 years ago and were maintained by Aboriginal people over a long time, is currently being investigated but appears likely. What has become clear from the analyses of the archaeological and historical records is that there is a long-term association between eucalypt pockets in rainforest and Aboriginal rainforest occupation and use.

The majority of the cultural materials excavated from the Urumbal Pocket open site represent approximately the last 1,500 years of Aboriginal activities at the site. Earlier use of the site (8000–1500 BP) is represented by much smaller quantities of cultural material. The lithics analysis demonstrated that the Urumbal Pocket occupants mostly worked good-quality white quartz, which is present throughout the deposit. This same pattern has been reported from other excavated sites in the rainforest region (Cosgrove et al. 2007; Horsfall 1987, 1996). The research has demonstrated that the use of bipolar technology on quartz and other raw materials continued through time, and that bipolar cores were sometimes used as scrapers in wood-working activities. The lithics analysis
also shows that the occupants used a variety of non-local lithic materials, some of which would have been available in the drier savannah region to the west, and others on the coast. The presence of these non-local raw materials has been interpreted as a sign of seasonal group mobility. It is most likely a reflection of Aboriginal rainforest people accessing raw materials (and other resources) from different environments within their own tribal country, as well as trading with neighbouring groups.

The identification and dating of toxic plant species at Urumbal Pocket indicates a minimum calibrated age of around 1500 BP for the processing of yellow walnuts (*Beilschmiedia bancroftii*). Nutshell fragments from deposits older than 1500 BP are characteristically smaller and lack any clear diagnostic features. However, their presence at Urumbal Pocket demonstrates that Aboriginal people were exploiting rainforest environments and bringing rainforest plant foods to the site before 1500 BP. Unidentified nutshell fragments recovered in association with stone artefacts and charcoal in layers radiocarbon dated to approximately 2,500 years old support this suggestion.

**Late Holocene change**

The archaeological record from Urumbal Pocket indicates a change in the way the site was used by Aboriginal people in the late Holocene period: from a relatively small-scale use of the site to a relatively sudden increase in occupation that peaked in the last 1,000 years. Major increases in cultural material are present in the deposit dated to within the last 1,000 years, including the appearance of incised slate grinding stones used to process toxic nuts. This archaeological evidence points to significant changes in the way Aboriginal people were exploiting the rainforest environment and its resources during the late Holocene. Plant remains peak in layers dated to between 800 BP and 400 BP, a time period associated with high stone artefact numbers and the presence of rich charcoal deposits. Based on this evidence, it has been interpreted that each visit to the site during the late Holocene period would have lasted a few days to allow for the processing of toxic nuts, assuming that the occupants used the same toxic nut processing techniques as historically recorded and that they did the whole processing cycle on site.

The apparent intensified use of Urumbal Pocket in the late Holocene period is a pattern that is seen in archaeological sites investigated across the rainforest region (Brayshaw 1990; Cosgrove et al. 2007; Horsfall 1987). This change in the way people used the rainforest region in the late Holocene period has been linked to climatic instability, with the onset of ENSO events around 5,000 years ago (Cosgrove et al. 2007; Ferrier and Cosgrove 2012; T urney and Hobbs 2006). It has been postulated that with extended periods of environmental pressure, Aboriginal people living on or near the fringe of the rainforest were undertaking, perhaps out of necessity, journeys into the rainforest more frequently, to access predictable resources like rainforest tree nuts. This interpretation is supported in the archaeological record of two other archaeological sites investigated in the study area: *Murubun* and Goddard Creek (Cosgrove et al. 2007). The archaeological record from all three sites suggest a change from the exploitation of a semi-dry landscape bordering the rainforest region to the west, to a more intensified use of rainforest resources in the late Holocene.

The archaeological record from Urumbal Pocket confirms that plant food species, identified from the historical literature and recorded in oral history testimonies as food staples, were an important and consistent component of the Aboriginal rainforest diet for what appears to be at least a 1,000-year period. Analyses of the historical sources suggest that at the time of Aboriginal–European contact on the Evelyn Tableland in the early 1880s, a variety of rainforest tree nuts provided a reliable staple food source during the wet season. The historical records show that rainforest tree nuts provided the means for large inter-tribal ceremonial gatherings to be held during the wet season, when large quantities were consumed (Coyyan 1918). Thus the late Holocene strategy of exploiting rainforest tree nuts may have played a significant role in the development of the unique and complex Aboriginal rainforest culture observed and documented at first contact.
A culture in transition—vanishing and enduring traditions

Analysis of the archaeological record from the Boignjul open site, located in a small saddle inside rainforest, demonstrated that pre-European Aboriginal rainforest occupation also took place in smaller rainforest clearings. Such clearings were described by some of the early European explorers, who often referred to them as ‘bora-grounds’, i.e. locations where ceremonial gatherings or ‘corroborees’ took place (e.g. Jack 1922). The archaeological investigations at Boignjul showed that pre-European use of the site occurred during short-lived visits. Perhaps it was a location where rainforest foods would have been collected as indicated by the surrounding rainforest vegetation or, as Maisie Barlow suggested, a place where men carried out their ceremonies away from women and children. From the combined archaeological and historical evidence, it is argued that these types of rainforest sites were most likely part of a network of tracks connecting clearings inside and on the edges of the rainforest.

The archaeological and documentary records show that glass and metal quickly replaced quartz and other stone materials as these European items gradually became more easily attainable (Coyyan 1915). The archaeological evidence from each of the three sites investigated shows that bipolar technology continued to be used in the early contact period. However, it became more or less redundant with the adoption of bottle glass as a preferred raw material later in the contact period. This may reflect changes in pre-European Aboriginal rainforest traditions related to the production of bipolar cores, or simply that glass was preferred over stone, and bipolar technology became redundant as a result. In 1913, Mjöberg documented that grinding stones and nut-cracking stones were still being used in the processing of toxic walnuts at Cedar Creek. This shows that Jirrbal people continued to use some task-specific stone tools, perhaps because the function they played was superior, or they were preferred to any European items available to them. Analyses of glass fragments from the surface at Boignjul also demonstrated that traditional stone artefact technologies (except bipolar technology) were being applied to glass in the contact period.

Loos (1982) has suggested that traditional campsites in remote rainforest areas on the Atherton-Evelyn Tablelands would have provided a refuge for Aboriginal people in the early contact period, as a way of escaping conflict with the native police troopers and the fast encroachment of Europeans on traditional Aboriginal lands. Historical documents describing traditional Aboriginal rainforest campsites on the Tablelands in the early contact period demonstrate that European items, including European foods such as corn, as well as more durable materials such as iron axes and metal files, were commonly lying around the camps (Coyyan 1915; Loos 1982). The observation of European materials in remote rainforest locations on the upper Tully River, as well as in other remote areas of the rainforest region, adds further support to this suggestion (Cosgrove 1999; Horsfall 1987). The archaeological investigations at Boignjul showed that the site may have functioned as a refuge for Aboriginal people in the early contact period. Flaked bottle bases, a bipolar core on glass, two metal files and sundry metal fragments that cannot be dated may be the remains of early contact period site use. Whether Boignjul and the surrounding rainforest functioned as a rainforest refuge zone in the early contact period cannot be conclusively confirmed from the archaeological record, but local historical documents show that the rainforest environment in the study area provided safety from Europeans. Communications between police constables and Aboriginal rainforest people reveal that as a result of prolonged periods of rainforest confinement, people were starving and forced to steal food from European settlers. New government legislation in the early twentieth century resolved this ‘food problem’. This resulted in Jirrbal people taking up residence in allocated campsites on the fringe of European settlements, such as at Cedar Creek, where they were provided with European foods. In terms of understanding pre-European Aboriginal rainforest occupation, one significant observation gleaned from the historical documents is that rainforest confinement could not be
sustained by Aboriginal rainforest people over any longer periods of time. This, in turn, supports the suggestion that seasonal mobility and continued access to a variety of rainforest and non-rainforest resources were vital components of Aboriginal rainforest occupation.

Despite Cedar Creek being described as ‘an Aboriginal semi-sedentary settlement the size of a small village’ (Mjöberg 1913a), and a location remembered as a pre- and post-contact campsite and ceremonial ground (L. Wood, pers. comm., 2004), archaeological surveys and excavations produced little archaeological evidence attesting to the scale of Aboriginal activity that took place there. Only a small number of stone and glass artefacts were found, and may be compared to the stone and glass technologies identified at Urumbal Pocket and Boignjul. The archaeological investigations at Cedar Creek pocket highlight the issue of site preservation in the rainforest region; in particular, the extent to which European settlement has impacted upon traditional Aboriginal campsites and ceremonial grounds that were once located in the eucalypt pockets within the rainforest environment. Analyses of the historical evidence associated with Aboriginal occupation at the Cedar Creek site, however, provides important historical information on Aboriginal rainforest settlement patterns during the transitional contact period. Eric Mjöberg documented that the people he observed living in traditional huts along South Cedar Creek at the edge of the rainforest in 1913 still used some of their organic traditional material culture items and had retained the tradition of toxic nut processing. Mjöberg's diary entries from 1913, oral history testimonies and newspaper clippings from around the same time, also show that the Jirrbal people of Cedar Creek and the upper Tully River were, at least to some extent, allowed to hunt and forage in the rainforest and adjacent woodlands, and to host and attend ceremonial gatherings in neighbouring countries. Thus, some Jirrbal people stayed in their traditional country and continued to occupy traditional campsites during the transitional contact period.

Mjöberg documented some of the traditional material cultural items that were no longer used by the Cedar Creek people, including most traditional stone implements described by Coyyan on the upper Tully River in the 1880s. Mjöberg predominantly collected the organic component of pre-European material culture and, in his published travel account of 1918, suggested that many traditional organic material culture items were still used by the Jirrbal people in 1913. However, the analysis of his diary shows that some of the material culture items in his collection were purchased from European settlers near townships like Ravenshoe, and that Europeans provided him with information about their traditional use. Material culture items no longer made and/or used by the Jirrbal people were sometimes commissioned by Mjöberg, and on a number of occasions his young Aboriginal male guides made him reproductions (Mjöberg 1913a). During his rainforest journeys, he sometimes encountered groups of Jirrbal people who were allowed to live in their traditional campsites whilst working for the new European landowners. Some of the young boys and men worked and lived with the land surveyors and loggers in undisturbed rainforest, whilst the old people lived in allocated campsites at the town’s edge. The combined evidence points to continuities in some aspects of traditional Jirrbal culture, society and rainforest occupation. At the same time, Jirrbal people were modifying their behaviours and adapting to the many changes brought about by European settlement.

An escape from everyday life

Analyses of the historical evidence shows that later in the post-contact period, i.e. the 1930s, Jirrbal people who resided and worked in and around Ravenshoe (Cedar Creek), sometimes undertook weekend visits to traditional rainforest campsites south of Ravenshoe and travelled down to the coast along traditional rainforest tracks during the extended Christmas break (M. Barlow, pers. comm., 2004). During these rainforest visits, some of the traditional activities carried out included the construction of thatched mijas, the gathering and cooking of traditional foods such as rainforest tree nuts, and participating in ceremonial gatherings (M. Barlow, pers. comm., 2004).
Thus for the *Jirrbal* people, the rainforests south of Cedar Creek and along the upper Tully River became a refuge from everyday life in the post-contact period. The archaeological record from *Boignjul* supports the historical record in that traditional activities were carried out at campsites away from town and farm camps in the rainforest south of Ravenshoe. The archaeological record suggests that these occasional visits to traditional rainforest sites stopped sometime in the 1940s, which is supported by the historical evidence. From this time, logging activities expanded into these previously undisturbed rainforest areas. These activities, combined with the employment of Aboriginal people as young as 12, who were sent away from their traditional land and families, ended the traditional life ways *Jirrbal* people had transformed after contact.

**Conclusion**

The archaeological record from the Urumbal Pocket open site on the upper Tully River suggests a major change in the ways Aboriginal people used this location sometime in the last 1,000 to 1,500 years; perhaps from a life spent mostly on the rainforest fringe, to a more permanent life in the rainforest region. This change in the way Aboriginal people used the rainforest environment and its resources in the late Holocene period has been interpreted as a long-term outcome of extended periods of regional climatic instability. The lithics analyses showed that no stone artefacts typical of the so-called Australian small tool tradition were recovered from the three sites investigated. Nor have they been recorded from archaeological sites investigated elsewhere in the rainforest region. It appears that the significant changes evident in Aboriginal societies outside of the rainforest region did not necessarily influence the life ways of Aboriginal rainforest people, at least none that appear in the archaeological record. The research provides further evidence of variability in Australian Aboriginal societies during the mid- to late Holocene period. It highlights the importance of archaeological investigations and explanations at a regional scale, and that changes within particular sites or regions are viewed as largely independent.

The research has demonstrated that late Holocene Aboriginal rainforest settlement patterns and group mobility on the Evelyn Tableland was dependent on subsistence adaptation and resource distribution, but that other factors played a role in facilitating and maintaining what was a predominantly rainforest existence. The association between people and eucalypt pockets is significant in terms of understanding long-term Aboriginal rainforest occupation, including during the contact period. Their presence in the rainforest facilitated the pre-European development of large ‘villages’ that were used by Aboriginal people during the wet season, and later as a more permanent base in the contact period. Furthermore, the maintenance of tracks through the rainforest connecting smaller clearings allowed people to take journeys into the rainforest, to collect food and other items, and preserve social network systems. The metamorphic artefacts excavated from Urumbal Pocket may be evidence for the late Holocene development of interactions between groups occupying different areas of the rainforest region. Analyses of the historical evidence showed that *Jirrbal* culture and society on the Evelyn Tableland underwent many transformations in the transitional contact period, to accommodate the new and dominant European culture imposed upon them. However, the combined archaeological and historical evidence from traditional campsites that continued to be used in the contact period, demonstrates that *Jirrbal* rainforest culture and society transformed rather than ceased in the contact period; *Jirrbal* people continued to adapt to changes brought about by European settlement throughout the contact period.

The combined evidence, therefore, suggests that the complex nature of Aboriginal rainforest occupation first documented by Europeans in the region relied on seasonal mobility connected to food resource availability, combined with long-term maintenance of eucalypt pockets, tracks and smaller clearings within the rainforest. Although speculative, the common occurrence of cycad plants (*Cycas* spp.) in areas adjacent to the rainforest region may point to prior knowledge in toxic food processing techniques. Future archaeological research on sites located along the rainforest
fringe, and on the specific source locations of stone raw materials, may provide further evidence on the long-term use of two proximate but very different environments. Investigation into the notion of Aboriginal rainforest people developing some type of domi-culture, as suggested by Hynes and Chase (1982) on Cape York, might also lead to an improved understanding of Aboriginal rainforest food plant regimes, and the ways in which the rainforest environment was used and managed by Aboriginal rainforest people in the past.

A long-term approach to the archaeology of contact has only been applied in a handful of studies in Australia (e.g. Clarke 1994; Colley 2000; Williamson 1998). These studies have demonstrated that the application of a temporal and interdisciplinary framework can produce useful new perspectives in the interpretation of archaeological records. Applying this archaeological framework in investigations of long-term Aboriginal culture change and continuity also highlights the dynamic nature of Aboriginal culture and society, and the adaptive and flexible nature of Aboriginal people, before and after European arrival. The research presented supports previous findings. Analyses of archaeological data, which has allowed access to the products of actual human behaviour at open sites, combined with the historical data, have shown that change and continuity can be traced through time in cultural trajectories identified from archaeological records in north Queensland’s tropical rainforest region. The task now is to clarify local and regional sequences, patterns and developments through fine-grained analyses of archaeological sites and material culture records, and continue to construct longitudinal histories of Aboriginal Australia.