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POPULATION, PEOPLE AND PLACE: THE FITZROY VALLEY POPULATION PROJECT

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PREFACE

In 2006, as part of its Strategic Programs Tool Kit Initiative 3 (Measuring Progress), the Fitzroy Futures Forum identified a need for information that represented the interests and particular needs of the Fitzroy Valley population defined on a 'community of interest' basis. In response, the potential for developing a sub-regional baseline profile for the Aboriginal population resident within the Valley was explored by The Australian National University (ANU) in a series of meetings with key community and government personnel and organisations, including Wayne Carter and Rhonda Murphy (of the Western Australia Department of Indigenous Affairs), Bunuba Inc., Marra Worra Worra, Marninwarntikura Women's Resource Centre, Karrayili Adult Education Centre, the Kimberley Aboriginal Law and Culture Centre, Kurungal Inc., Fitzroy Crossing Police, and the Fitzroy Futures Forum.

It was proposed that the profile be constructed in two phases. The first would be a desktop exercise, collating information available in the public domain from administrative datasets to cover the labour force status, education and training status, income, welfare, housing and health status of the population, as well as indicators of interaction with the welfare justice system. For each of these categories, the aim would be to quantify the main current characteristics of the Fitzroy Valley Aboriginal population and establish a time series where possible in order to gauge trends. This phase has not formed part of the project reported on here.

The second phase, funded by a research grant from the Fitzroy Futures Forum under the auspices of MWRC, has involved the development of a population database of the resident Aboriginal population of the Valley, with some attention also to the wider Aboriginal 'service' population. The research for the construction of this database has been coordinated by Frances Morphy of the Centre for Aboriginal Economic Policy Research at ANU, with the assistance of Kathryn Thorburn as project manager and of Christine McPhee (of Ngalapita and Junjuwa) and June Davis (of Girriyoowa and Muludja) as advisers and assistants in the field. During the dry season months of 2009, a household survey was conducted throughout the (more than 40) communities of the Valley, from Jimbalakudunj and Yungngora in the west to Yiyili and its satellite communities in the east. The core team was assisted by over 40 community members who were trained to administer the survey in their own communities. The information—on name, age, sex and language group—for each individual was then loaded into an Excel spreadsheet for analysis. Information was also collected on other places, both inside and outside the Valley, that individuals and/or households visit on a regular basis, and on people who were considered regular visitors to or absent residents of each dwelling enumerated. Following the construction of the database the collated information was checked against available administrative datasets. In a follow-up field trip inconsistencies (such as conflicting information on dates of birth, 'missing persons' and possible cases of double counting) were checked with the local collectors and other knowledgeable individuals in the Valley.

Frances Morphy

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ABBREVIATIONS AND ACRONYMS

ABS	Australian Bureau of Statistics
ANU	The Australian National University
CAEPR	Centre for Aboriginal Economic Policy Research
ERP	Estimated resident population
NTER	Northern Territory Emergency Response
PES	Post-enumeration survey
UAM	United Aborigines Mission

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Frances Morphy

ABSTRACT

This paper reports on a survey of the Aboriginal population of the Fitzroy Valley in the Kimberley region of Western Australia, funded by the Fitzroy Futures Forum. The survey was designed to collect two different kinds of data. One aim was to carry out a comprehensive head count of the population and gather basic demographic information on age and sex. The second was to collect data that would begin to flesh out the picture of how that population lives as people. In proposing a categorisation of relationship to place that is more complex than the 'resident' versus 'visitor' distinction employed in the national census, the survey addresses the cultural factors that influence patterns of settlement and mobility, and the patterns of connection within and between the communities of the Valley. It is hoped that this data will be useful to the people of the Valley in their dialogue with government. Governments tend to view communities primarily as collections of bricks and mortar with 'populations' that require 'servicing' and 'infrastructure', whereas the social fabric of their communities is at least equally important to Fitzroy Valley people. This survey goes some way to making that social fabric visible, so that it, too, can feature in the ongoing dialogue.

Keywords: Indigenous demography, census, population change, Fitzroy Valley, Kimberley, anthropological demography, cultural circumstances

1. INTRODUCTION

In remote regions of Australia with significant Indigenous populations there has been an increasing demand for baseline population studies as an essential first step in the planning and delivery of services, infrastructure and economic development. This has occurred sometimes in relation to government activities and sometimes in relation to agreements between mining companies and the populations of the regions affected by their activities (see e.g. Taylor 2004a, 2004b, 2008; Taylor & Scambary 2005; Taylor, Bern & Senior 2000).

The reasons for this stem from the need for locally relevant information that is not captured by the broad brush of the census. What is needed is 'demography in situ' (see Taylor 2009: 121–2) that captures the unique features of particular regions, according to variables that are relevant to the lives of the people who live there. There is another concern, and that is the census undercount of Indigenous people in remote areas. For example, in 2005, the Tangentyere Council Research Unit, under the auspices of the Desert Knowledge Cooperative Research Centre produced a report on population and mobility in the town camps of Alice Springs. The research for this project stemmed from:

a concern ... with the ABS census counts of people living in town camps ... The council had long believed that the census counts were extremely low. The use of this 'official' population has affected the level of services for people in town camps, resources for Tangentyere Council, [and] the ability to lobby for services (Foster et al. 2005: 1).

In the Fitzroy Valley region, discussions about the advisability of conducting a baseline population study of the Valley's Aboriginal population arose in the context of planning by the Fitzroy Futures Forum for the future development of the region. There were several reasons for undertaking such a study. First, there was a general feeling in the Valley that the 2006 Census enumeration had resulted in a substantial undercount of the Valley's Aboriginal population,¹ and this feeling was reinforced by the Australian Bureau of Statistics' (ABS) own published conclusions regarding the adequacy of census coverage in many parts of Western Australia and remote areas more generally (ABS 2006). For the first time in 2006, the ABS extended their Post Enumeration Survey (PES) to include remote Indigenous localities, and as a result revealed an estimated undercount of 24 per cent for the Indigenous population of Western Australia as a whole. As Taylor and Biddle put it:

[I]n many parts of Australia, notably in Western Australia ... it needs to be understood that the undercounting of the Indigenous population in 2006 has reduced the census to the role of a large sample survey, with the key output being population rates rather than population levels (2008: 18).

At a local level, the Estimated Resident Population (ERP) of the Valley (i.e. the count adjusted upward according to the findings of the PES) is possibly not very different, as a notional head count, from the count obtained by the Fitzroy Valley Population Project. But the demographic characteristics (e.g. age and sex) of the 'heads' added as a result of the ERP are unknown, and can only be assigned on the basis of what is known

about the people who were actually counted. The greater the difference between the counted population and the estimated population becomes, the more hypothetical the data becomes. In the case of the Fitzroy Valley the difference between the population counted and the ERP was around 17 per cent.² While data of the quality collected in the census may be adequate for macro-level planning at the national or State level, it is not adequate for planning at the local level. Nor is it satisfactory as a baseline from which to measure change in the future.

The second reason concerns the Valley's self-definition as a region. The regional identity of the Valley is founded in a complex interaction of topography, culture, history and current administrative arrangements. These will be addressed in some detail in later sections of this report. The point to be made here is that the Valley's boundaries do not coincide neatly either with local government boundaries or with the various boundaries of the census geography. As with so many of the lines drawn on the map by the settler society, these boundaries bear no relation either to topography or to patterns of social interaction and economic activity on the ground. It is difficult to extract information that refers unambiguously to the Valley population from the census count and from available administrative datasets. Thus even if the population figures from the census were robust and reliable, there would still remain the problem of identifying precisely the set of data relating to the Valley population, as it defines itself—hence the qualification that the ABS's ERP for the Valley is possibly not (rather than definitely not) significantly different from the population identified by the Fitzroy Valley Population Project survey.

The first aim of the project, then, was to undertake a comprehensive survey of the dwellings in the communities identified as belonging to the Valley in order to establish the size of the population and its basic demographic characteristics (i.e. gender balance and age distribution). The second major aim was rather different, and this requires a short discussion of the nature of demographic categories and the culturally-based assumptions that underlie them.

The categories that frame the census questions relating to family and household structure derive from settler Australian conceptualisations of what is normal (Morphy 2006, 2007a, 2007b). The definition of the 'statistical family' that underlies the framing of the questions about relationships within the 'household' assumes that the nuclear family form is a natural building block, and that all other household formations are departures from that norm. In the output from the census, the complex extended family formations typical of many Indigenous co-residential units in many parts of the country are reconfigured as sets of lone parent or couple 'families'. A second assumption is that the 'household' is a bounded, dwelling-based unit, discrete and separate from other such units in the same community. A third assumption is that a person's relationship to the place where they are counted can be adequately captured by the simple opposition 'resident' versus 'visitor'.

A growing body of research is showing that none of these assumptions hold true for most Indigenous people living in remote areas of Australia, and that the imposition of these supposedly neutral categories obscures many important aspects of the social fabric of Indigenous communities, the factors that influence people to

live where they do, and the connections to other places and people that influence their patterns of mobility. Furthermore, the census categorisation of kinds of place in terms of varying degrees of 'remoteness' from urban centres inverts the value of local Indigenous categorisations of place. It completely obscures the reasons why people want to live where they do, and why they have in many cases struggled so determinedly to do so.

The imposition of these categories tends to reduce 'communities' to sets of bounded boxes ('dwellings' and static 'households'). The viability of communities is seen largely in terms of the ease or difficulty of service delivery, the presence or absence of infrastructure, and their distance from centres of the mainstream market economy. These categories offer no way of assessing social viability in terms that Indigenous peoples themselves might consider important.

Much has been written about the phenomenon of Indigenous mobility (for a valuable summary of the literature see Prout 2008), but little attention has been paid to the nature of the settlements that form the nodes in networks of mobility, except once again in terms of a simple opposition between 'resident' and 'service' populations. What is more, it has only been considered necessary to draw such a distinction when considering settlements that act as service centres for a surrounding region.

Taylor (2009) draws attention to a useful conceptual distinction between 'populations' and 'peoples', following Rowse (2008). Census data, and indeed most surveys that employ the standard categorisations of demographic analysis produce information about populations, but not about peoples. In Taylor's view, 'The demography of Indigenous populations is best suited to the provision of citizen rights. What it does not provide for are Indigenous interests in inherent and proprietary rights, in particular over land' (2009: 124). He calls for an 'ethnographically informed demography' to assist Indigenous peoples in managing the Indigenous estate. The thinking behind the design of the Fitzroy Valley population survey is that ethnographically-informed demographies of Indigenous peoples are also necessary to the planning of the provision of citizen rights, in cases where those peoples have ways of life and systems of value that diverge significantly from those of the 'mainstream'. They are also vital to the planning of regional development, since they reveal the population dynamics and the cultural patterns that can be harnessed in the cause of participatory development. For the moment these dynamics and patterns are poorly understood, and insofar as they are considered they are usually viewed negatively as 'barriers' to development.

Accordingly, the second aim of the project is to provide an overview of the nature and dynamics of settlement patterns in the Valley in terms of categorisations that are relevant to the lived reality of the Valley's Aboriginal peoples; in other words, to produce a picture that is culturally relevant. The results of the survey should therefore be seen as a baseline measure, a tool for planning, a way of making visible to government the social dynamics of the area, and a platform for further more detailed and focused research. The details of the model and methodology employed are the subject of the next section.

The decision not to include the non-Indigenous population of the Valley in this survey was taken for two main reasons. First, it was felt that the 2006 census count for the non-Indigenous population was probably

more complete than for the Aboriginal population. Secondly, the survey was designed to capture features of the Aboriginal population that are not shared with the non-Indigenous population. Including the non-Indigenous population would have added to the complexity of the task. Future population research in the Valley could well include a survey of the non-Indigenous population, which contains at least two groups with differing characteristics—long term residents of the Valley, mainly associated with the pastoral industry, and a more transient group who mainly live and work in Fitzroy Crossing.

2. PUTTING THE 'PEOPLE' INTO THE 'POPULATION': MODELLING INDIGENOUS POPULATION STRUCTURES AND SETTLEMENT PATTERNS

Indigenous social forms vary substantially across the continent, partly as a consequence of variability in the precolonial forms of Indigenous societies, but also as a consequence of different experiences of colonisation. Nevertheless, most forms of contemporary Aboriginal sociality share some general features in common that differentiate them sharply from settler Australian forms, and this in turn leads to distinctive patterns of settlement and mobility.³ The cultural geography of the Fitzroy Valley region was approached with a particular model in mind. This general model draws on the work of anthropologists and geographers who have been interested in the spatio-cultural geography and demography of Aboriginal Australia over the years (for a very comprehensive listing see Prout 2008; see also Morphy 2007b).

FEATURES OF ABORIGINAL FORMS OF SOCIALITY

Aboriginal populations are organised socio-spatially in kinship networks that have two layers of anchorage. First there are focal places that were eternally constituted in ancestral time, and/or have been produced through the process of colonisation in a particular region. Then there are core individuals who, by virtue of their position in their kin network and their place in the life cycle, are anchored, at some particular point in time, to those places. These three components of the system—place, kinship network, and kinship core—are interrelated yet also relatively autonomous subsystems.

This has proved to be a very resilient and adaptable system. Conditions may change in any one of the three subsystems, or in more than one, but the system, distinctively different from settler modes of 'settlement', adapts itself to changing circumstances. The three basic subsystems are continually reasserted: kin networks that are anchored in place by core individuals.

Connection to country. Even under the most extreme circumstances, links to particular places remain the foundation of personal and group identity. In many cases it is the spiritual identity with ancestral lands and waters—with country—that features most strongly. Throughout the pastoral zone that stretches from the Kimberley in the west to the Roper Valley in the east, such links to country have survived the turmoil of the pastoral frontier. In many cases the stations where people worked were on their own country, so that they

were able to maintain their connections to it. Living on and caring for one's own country is highly valued, and Aboriginal people have constantly taken advantage of opportunities that allow them to do so.

A kin-based social universe. Kinship was the basic structuring principle in precolonial Aboriginal social fields. The rules of kinship and marriage took many different forms across the country, but everywhere there were classificatory kinship systems that allowed everyone in a person's social universe to be classified as kin, and kin groupings of various kinds were the country-owning bodies. Many of these 'classical' systems were severely disrupted in the time of the colonial frontier (and after) by the decimation of populations through killings, disease and wholesale dispossession or removal, but the principle of the kin-based social universe has survived and kinship ties and the values attached to kinship continue as the basis of Aboriginal forms of sociality.

Core individuals and/or families. In every Aboriginal social field there are always some individuals who are closely associated with particular places, most often with settlements on their own country. They form the core around which communities are built. Core people are not themselves completely immobile, but their movements to places away from their home base tend to be temporary and for specific, time-limited purposes, such as accessing services, shopping, funerals of family members, and so on. Over a person's life-cycle there may be times when they are more likely to be mobile and times when they are likely to form part of the core.

MOBILITY

A great deal has been written about Aboriginal 'mobilities' (see Prout 2008). The kinds of mobility that are most salient for the Fitzroy Valley study are also widespread as patterns elsewhere.

Socially motivated mobility. Focal places are a constant in the landscape. The density of connection between focal places varies and is in principle measurable through charting the movements of individuals between them both in the short term and over their life cycle. The identity of the core individuals associated with a particular place may change over time; all things being equal, 'core-ness' tends to be correlated with increasing seniority. At any point in time, a proportion of a local population will be highly mobile, with young men being the most likely to be mobile. This mobility can function as a means to keep kinship networks strong, and to reaffirm people's kin ties with their wider family. It can also function as a 'spacing mechanism' in the avoidance or resolution of conflict.

Mobility motivated by access to services. In the contemporary world mobility is motivated both by values attaching to kinship and by the location of services. Typically provision of services is organised on a 'hub and spokes' model, with towns like Fitzroy Crossing functioning as regional hubs. Regional hubs, in turn, are satellites to larger centres with respect to the provision of more specialised services. Thus Fitzroy Crossing can be viewed as a satellite with respect to Derby and Broome.

Work-related mobility. Moving for work can take various forms. It can lead to temporary or sometimes permanent outmigration from a person's region of origin, or to a pattern of circular mobility between a region or community of origin and a place of work.

Seasonal mobility. This type of mobility is particularly relevant in areas where there is a pronounced wet season. In 'cattle country' areas such as the Fitzroy Valley seasonality has a marked influence on both residence and work patterns. Some communities are uninhabitable during the flood season, leading to a concentration of the population in other places. The dry season sees some dispersal of the population back out to such areas, and also movement associated with the mustering season.

The particular characteristics of people's mobility in the Fitzroy Valley are discussed in Section 7.

CHARACTERISTICS OF HOUSEHOLDS AND COMMUNITIES

While mobility and its characteristics have received quite a deal of attention, very little has been written about the resulting characteristics of the communities that people stay in or move between. Much more is known about household composition. The following general characteristics of Indigenous households and communities can be identified:

The people who live together in a single dwelling will nearly always be related to one another. It is very uncommon to find households where non-relatives are present. Households will often be large, and they will typically consist of members of an extended family, and they are often multi-generational in their composition.

The composition and size of households can vary substantially over time, and are liable to constant change. Households are likely to have a stable core of people who live in a particular dwelling over long periods of time, and a 'periphery' of related people who are sometimes there and sometimes elsewhere.

These characteristics hold true at the level of the community as well as the household. This is particularly the case for small communities. Most small communities consist of people who are all related. Every community will have a core of people who live there all or most of the time, and there will also be a number of other relatives who sometimes live there, or who come regularly to visit and stay from somewhere else. In large communities it is often possible to see subdivisions along lines of relatedness, with extended families living in clusters of contiguous dwellings. It is common for larger communities to be organised spatially so that people live on the 'side of town' that is closest to their own country, or to the outlying community that they identify with most strongly.

These characteristics hold true to some extent at the level of the region. Movement in and out of regions like the Fitzroy Valley is less marked than movement between communities within the region but, as with households and communities, the boundaries of regions are permeable or even overlapping. Kinship networks and the mobility associated with kinship cross cut notional 'regional' boundaries. Some people leave their regions for greater or smaller amounts of time for a variety of reasons; few leave permanently.

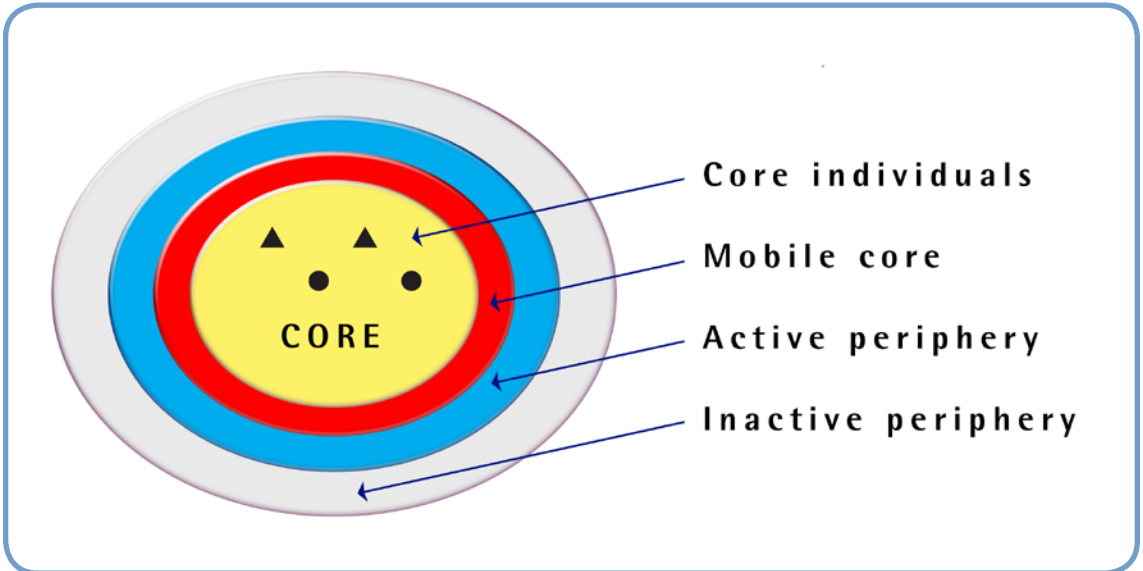
The demographic categories employed to frame questions in the census (and many other surveys) are not designed to capture the characteristics of Indigenous households, communities, or regions. They set up bounded containers (family, household, collection district and so on right up to the nation's boundaries), that are assumed to have fixed populations. Movement in and out tends to be described in terms of migration. A person can either be a resident (defined in terms of how long they have lived in a particular dwelling), or a visitor. There are no other categories available. But Indigenous sociality can only be adequately modelled in terms of anchored networks.

MODELLING RELATIONSHIP TO PLACE IN THE SURVEY

The Fitzroy Valley Population Project has tried to capture the kinds of settlement patterns that result from the way in which people of the Valley actually live their lives. There are no statements such as: 'community X has a resident population of 150'. The simple resident/visitor distinction is replaced by a continuum of kinds of relationship to place, at the household, community and regional level. Relationship to place is not defined in terms of bounded periods of time (as is the case with the term 'resident') but in terms of recurring patterns of stability or movement over time. The terms of this continuum are as follows:

1. *The stable core population.* The stable core at the household and community level consists of people who counted only one place as 'home', and who stayed there most of the time. At the regional level it consists of people who may or may not move around within the Valley, but who count the Valley region as home. The following kinds of absent people are counted as members of the Valley's stable core: children at boarding school or adults who are away studying or training, people who are in prison, people who have to live elsewhere because they are on dialysis (they would live in the Valley if it were possible for them to do so), and people who were away during the count for a specific temporary reason such as a funeral, or visiting relatives outside the Valley.
2. *The mobile core population.* At the household and community level, some people were counted as being 'at home' at more than one place; in other words they were 'double-counted'. Most of these people show a pattern of 'circular' mobility, that is they move regularly between two (or even three) places, all of which are equally home. Another group consists of people who move seasonally in response to work demands, particularly in the mustering season. Another, smaller group consists of people who moved from one place to another during the survey period and were counted in both places as being 'at home'. At the level of the region, there are some people who move in a circular way between a community that is within the region and one that is outside the region.
3. *The active periphery population.* This category includes three kinds of people. There were people who were present at the time of the count at a particular dwelling, but were considered to be on a temporary visit from somewhere else that was their home. Then there were people

Fig. 2.1. Layers of association to place



Source: The author.

who were not present at the time of the count, but who were nominated by those present as people who came to stay on a regular basis. Finally there were a few people who were never nominated as being 'at home' at any particular place, but did get nominated as people who sometimes came to stay at one (or more) places. The individuals in this last group are considered to be always 'on the move'. It is likely that a number of such people did not get counted because people forgot to mention them.

4. *The inactive periphery population.* These were mainly people who did not get counted during the survey, but who appeared in administrative datasets as having once been present in a community or in the Valley. Some of these were people with acknowledged ties to the community or to the Valley, and who had once lived there or been for a visit, but who for a variety of reasons were unlikely to return, or might only return very infrequently. However, there is always the potential for such people to move back to the Valley. The survey did not explicitly set out to capture people in this category.

Fig. 2.1 is a model of these layers of association to place. The category of people least likely to be adequately described in the simple opposition between 'resident' and 'visitor' are the people of the mobile core. In the census categorisations they will be assigned as residents at a single community and not counted as resident in any other place where they have connections as members of the mobile core.

It was not always straightforward to assign people to a category on the basis of the information gathered, particularly if they were being counted in their absence. For example, a short trip away can sometimes turn into a more lengthy absence, or even lead to someone becoming part of the 'inactive periphery'. Also, people's mobility characteristics can change over time. For example, someone who at one stage of their life is moving around a lot may later settle into living more often in one place. Someone who is in the transition between two patterns must sometimes be assigned to one category or the other on an arbitrary basis. These kinds of 'boundary problems' are inevitable with any survey that takes place at a single point in time, since it simply constitutes a snapshot, capturing a moment in a dynamic life-long process.

Although it may sometimes be difficult to place an individual into one category or another at a particular point in time, these four categories reflect the nature of people's relationship to place much more closely than does the 'resident' versus 'visitor' distinction. They also lead to a picture of households and communities which is much closer to the reality. They reveal both the structure—of 'core' and 'periphery'—and the fact that households and communities fluctuate in size and in their composition.

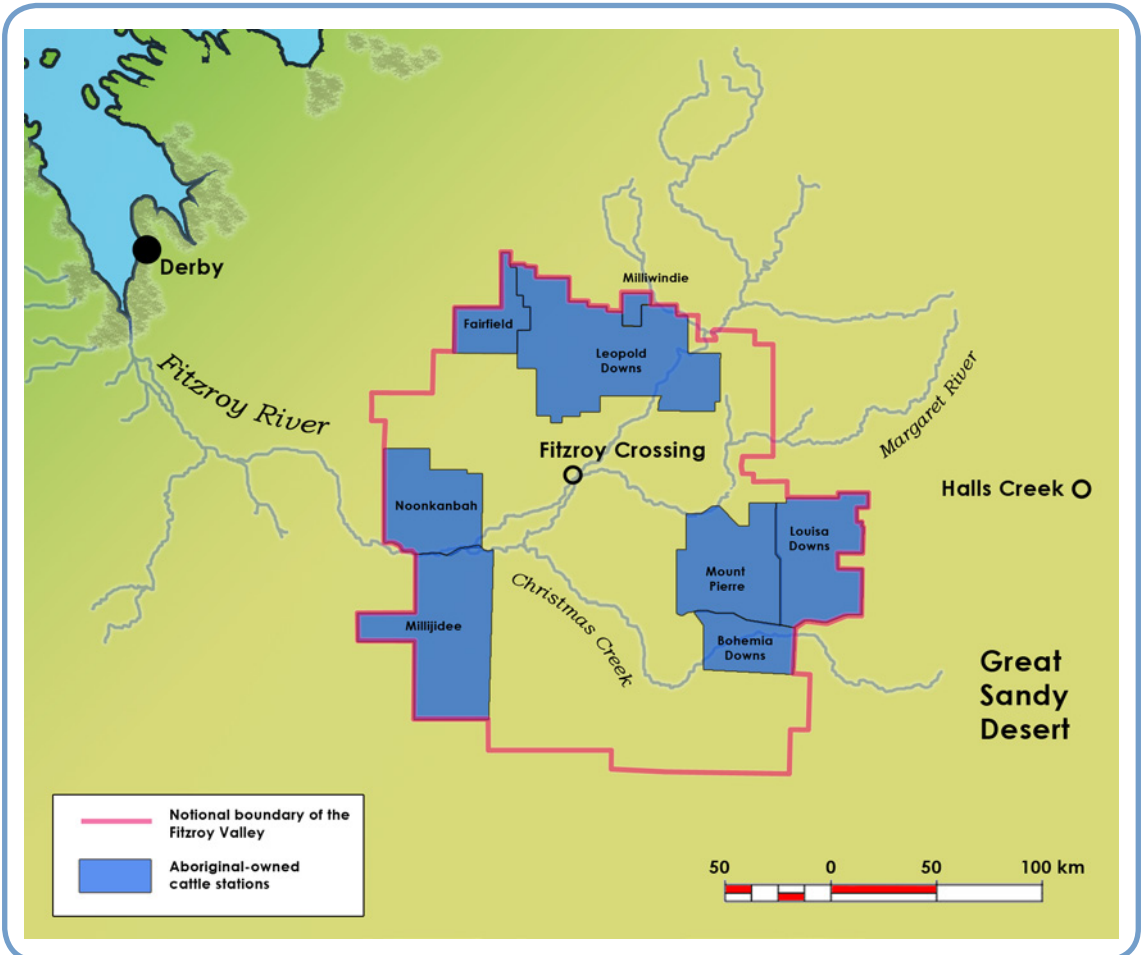
Although the survey reveals that some people who once lived in the Valley are now no longer there, it is not possible to draw conclusions from the data about migration, or about rates of migration, to and from the Valley. It was not part of the survey design to find out in any detail why people who were absent had moved, or whether their absence was due to 'migration' or to circular mobility. There were no questions relating to people's past history of residence. There were questions, however, relating to other places inside and outside the Valley that people regularly visited. These were designed to build up a broad picture of patterns of connection, both within the Valley and to places outside it—patterns that might translate into patterns of migration and circular mobility, and feed into the design of a possible later research project on mobility.

CULTURAL INFORMATION IN THE SURVEY

It was decided at the outset that the survey would not attempt to collect detailed genealogical information about the relationships of household members to each other. There two main reasons for this. It would have made for a much longer survey form and a more time-consuming interview, and the primary aim of the survey was to complete an accurate head count of the Valley's population. Secondly, detailed genealogical information for most Valley families has already been collected in the context of the various native title cases that have run or are still being run in the Valley, and it was felt that it would be an imposition on people to collect this kind of information yet again. At some later date it might be possible to correlate the available genealogical information with the results of the household survey, if that was considered to be a worthwhile project.

As noted before, the default assumption in the case of Aboriginal households is that everyone who lives together in a dwelling, and the great majority of the other people who come to stay for varying periods, will be related to each other. It is also a default assumption that, at least in the case of smaller communities, the basis for co-residence is kinship and some form of connection to country. At the level of the household, data

Map 3.1. The Fitzroy Valley: Notional boundary

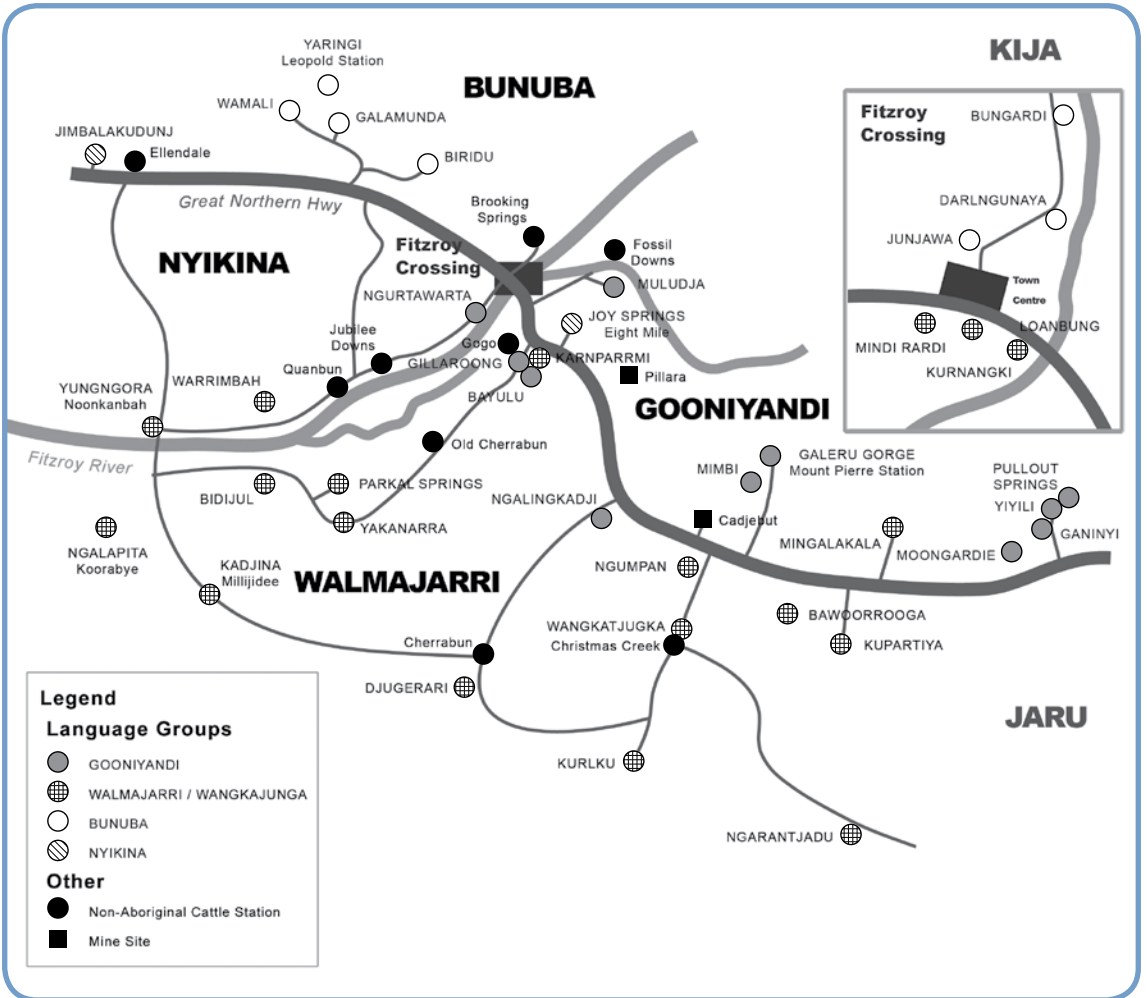


Source: Based on The Kimberley Pastoral and General Land Use Map, Kimberley Development Commission. Available at http://www.kdc.wa.gov.au/documents/other/land_use.pdf, accessed 2 April 2010.

was collected on other places that the members of the household sometimes went to, and their reasons for so doing. This information provides another layer of evidence about the nature and patterns of connections between communities, supplementing the data on the nature of individuals' connections to the places where they were counted.

The only explicitly cultural information that was collected with respect to individuals concerned a person's language group identity. It was decided to collect this information in order to compare the results with the Nindilingarri Cultural Health Services map, which colour-codes the communities of the Valley by their predominant language group (see Map 3.2). In the next section (Section 3) the discussion begins to focus on the Valley itself and on its unique characteristics as a region.

Map 3.2. The Fitzroy Valley: A cultural mapping



Source: Based on Nindilingarri Cultural Health Services map.

3. DEFINING THE FITZROY VALLEY

The Valley defines itself in terms of its constituent communities rather than on the basis of a bounded region. Since the outlying communities are all located on cattle stations, it seems most convenient to use the boundaries of the relevant outermost stations as the boundary of the Valley itself (see Map 3.1).

This map shows clearly how the Fitzroy River and its tributaries dominate the topography of the Valley. It also shows Fitzroy Crossing, the regional hub community, situated somewhat north-west of the geographic centre, and Halls Creek to the east. Some of the easternmost Fitzroy Valley communities are closer to Halls

Creek than they are to Fitzroy Crossing, and in terms of the geography of local government some of them are in the Shire of Halls Creek rather than the Shire of Derby.

A PRELIMINARY CULTURAL GEOGRAPHY

Map 3.2, which is based on a map produced by Nindilingarri Cultural Health Services, shows how the community portrays itself to itself.⁴ The original has been overlaid with the names of the four language groups (Nyikina, Bunuba, Walmajarri and Gooniyandi) whose ancestral estates fall within the Valley boundaries, and the two neighbouring language groups to the east (Kija and Jaru). The precise boundaries of the region (and of the language groups) are left unspecified. The map reveals a focus on the region as a set of communities, and a lack of emphasis on settler Australian boundaries (indeed it is a feature of the region that it has no precise boundaries).

The map differentiates predominantly non-Indigenous sites of settlement from Aboriginal communities, both outside and within the town of Fitzroy Crossing. The Valley is conceptualised as containing five 'language groups', and the Aboriginal communities of the Valley are characterised in terms of these groups. The four groups who hold the land of this area traditionally are Bunuba, Gooniyandi, Nyikina and Walmajarri. On the Map 3.2 legend, Nindilingarri has paired Walmajarri with Wangkatjunga, and their communities are not separated on the map. Wangkatjunga is the name for a group of people who came into region from the Great Sandy Desert, who today live predominantly at the community of Wangkatjungka. Walmajarri are also primarily a desert people, whose country extends up to the Fitzroy River. The languages of both these groups belong to the Pama-Nyungan language family—the large language family that covers almost the entire continent. Nyikina, Bunuba and Gooniyandi, the languages of the Valley peoples of the rivers and ranges to the north of the desert, are non-Pama-Nyungan languages, as are the other Kimberley languages.

The overlaying of the language group names shows that, despite the violent and disruptive pastoral history of the region (see e.g. Hawke & Gallagher 1989; Marshall 1989; Pedersen & Woorunmurra 1995), the integrity of the regional system at this broad level has survived remarkably intact. The predominant language group at each community is, in the majority of cases, the same as the traditional owning group. There are some interesting developments. If the characterisation of the communities is correct, it would seem that Walmajarri settlement has been established both on Nyikina country (over the Fitzroy River) and Gooniyandi country (east and north-east of Wangkatjungka). The Nyikina presence in the Valley seems to have been squeezed into the extreme north-west of the region.

This map reveals the area around Fitzroy Crossing itself to be a focal area in more than one sense. Although it is in Bunuba country, it is a place where the territories of all the four languages of the Valley come close together, suggesting that it may have been a significant area of interaction well before settler incursion. So Fitzroy Crossing is a regional hub in three, or possibly four, historically layered, senses. The area may have been a significant meeting place in the precolonial past. It first became a hub for Europe settlement of the area in the early 1890s with the establishment of a telegraph station, police station and wayside inn. In 1952

Table 3.1. Communities surveyed in the Fitzroy Valley Population Project, 2009

Community name	Community type
Bawoorooga	block on Bohemia Downs station
Bayulu	major community near Fitzroy Crossing; excision from Gogo station
Bidijul	block on Millijidee station
Biridu	block on Leopold Downs station
Bungardi	community included on town inset map, on excision from Brooking Springs station
Burawa	mixed Aboriginal/non-Aboriginal suburb of Fitzroy Crossing, near site of the former UAM Mission; on same ALTR as Junjuwa.
Darlungunaya	community to north-east of town site; above low level crossing
Djugerari	community on excision from Cherrabun station
Eight Mile	community on excision from Gogo station; also known as Joy Springs
Galamanda*	station community on Leopold Downs station
Ganinyi	station community on Louisa Downs station
Gillarong	community on excision from Gogo station
Gilly Sharpe	block on excision from Christmas Creek station
Girriyoowa	community on Louisa Downs station, close to Yiyili; also known as Pullout Springs
Gogo***	homestead area on Gogo station
Goolgardah	community very close to Yiyili, on Louisa Downs station
Guwardi Ngadu***	old people's home, close to Junjuwa
Jimbalakudunj	community on excision from Ellendale station
Junjuwa	major community in Fitzroy Crossing, north of Town Site
Kadjina	community on Millijidee station, south of Fitzroy River
Karnparrmi	community on excision from Gogo station; also known as Three Mile
Kupartiya	station community on Bohemia Downs station
Kurinjarn***	community on Louisa Downs station
Kurnangki	major community in Fitzroy Crossing, south of the highway and Town Site
Loanbun***	community in Fitzroy Crossing, south of the highway; also known as Parukupan
Mimbi	community on Mount Pierre station
Mindi Rardi	community in Fitzroy Crossing, south of the highway and Town Site; formerly Windmill Reserve
Moongardie	community on Louisa Downs station
Mount Pierre	station community on Mount Pierre station; also known as Galeru Gorge
Muludja	community on excision from Gogo station, close to the Margaret River and boundary with Fossil Downs station
Munmural	station community on Milliwindie station

Notes: *includes Yarangji; **includes Yurabi Road; ***not on Map 3.3.

Source: Fitzroy Valley Population Project database.

Continued

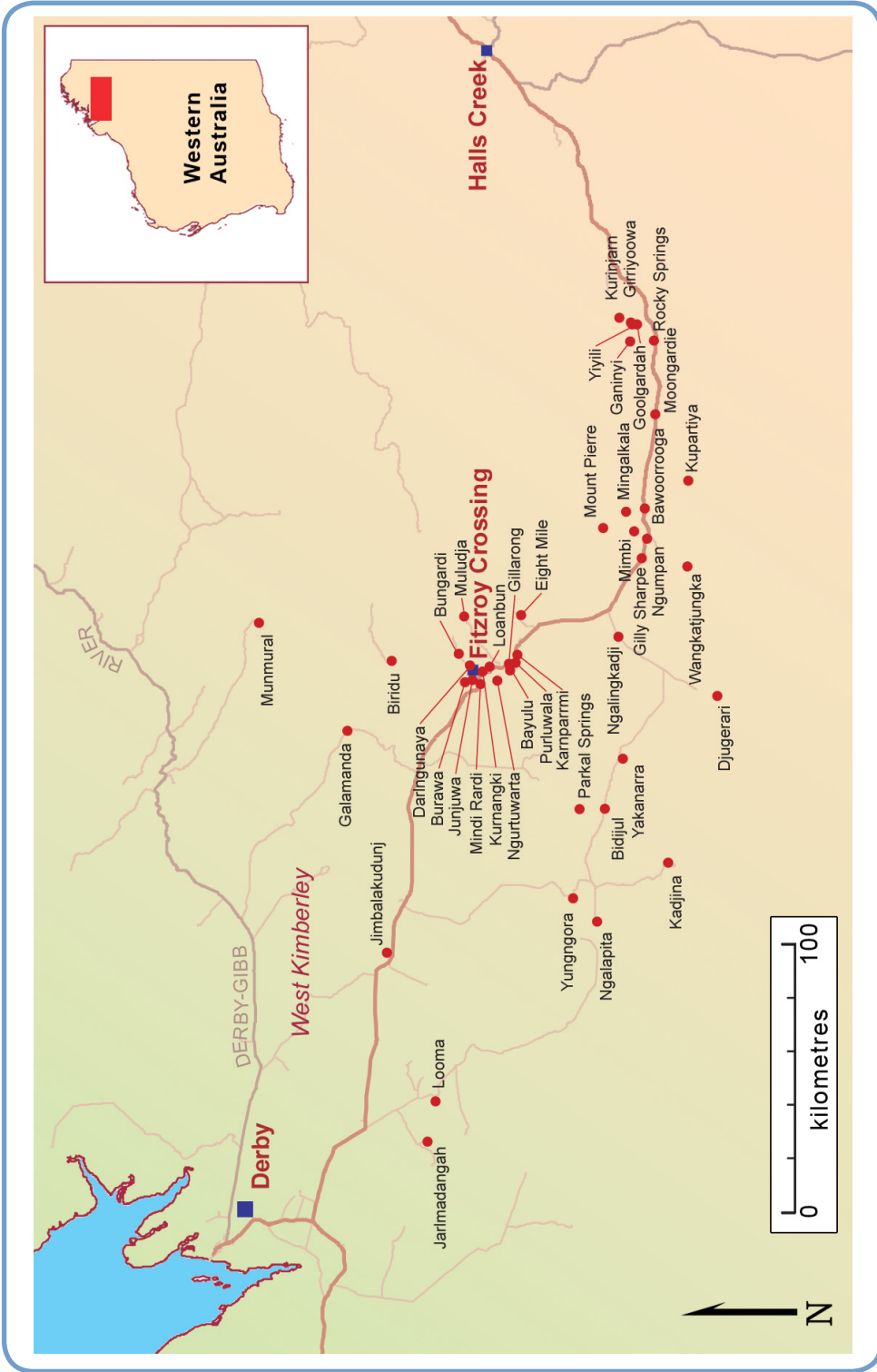
Table 3.1 (Continued). Communities surveyed in the Fitzroy Valley Population Project, 2009

Community name	Community type
Munmural	station community on Milliwindie station
Ngalapita	community on Millijidee station; also known as Koorabye
Ngalingkadji	community on excision from Gogo station
Ngumpan	community on excision from Christmas Creek station
Ngurtuwarta	community close to Fitzroy Crossing, on excision from Jubilee Downs station
Parkal Springs***	block on Millijidee station
Purluwala***	block on Gogo station close to Karnparmi
Rocky Springs	community on Louisa Downs station
Town Site**	Fitzroy Crossing open town area
Wangkatjungka	major community on excision from Christmas Creek station
Yakanarra	community on excision from Cherrabun station
Yiyili	hub community on Louisa Downs station
Yungngora	major station community on Noonkanbah station
Notes: *includes Yaranggi; **includes Yurabi Road; ***not on Map 3.3.	
Source: Fitzroy Valley Population Project database.	

the United Aborigines Mission established a mission site at Burawa (to the north of Junuwa—it is not shown on the map inset on Map 3.2), but Fitzroy Crossing remained a small settlement until the events following the introduction of equal wages in the pastoral industry in the late 1960s. When, as a result, people were forced off the Valley's cattle stations, they congregated in Fitzroy Crossing under conditions of extreme deprivation, in a shanty town of nearly 2,000 people. The response of the State government in the mid 1970s was to gazette Fitzroy Crossing as a town, and since then it has remained as the regional service hub following the gradual return of a majority of the population to the surrounding region.

Thus the region, as it defines itself today, is the product of a layered history. It is a cattle station landscape imposed on an underlying Aboriginal cultural and linguistic landscape. The contemporary Valley defines itself in terms of the country and the cattle stations that people were forced off, and the communities to which they then began to return, including, more recently, on cattle stations that they now own. The identity of the region has been further consolidated by the formation of Aboriginal organisations that service the communities of the Valley. They have varying roles, but in all cases are responsible for community housing and the administration of the local Community Development Employment Program (CDEP). Today these are the Kurungal Association, which administers a group of communities in the east of the region, the Yungngora association at the large community of Yungngora, and Marra Worra Worra, which has responsibility for all the remaining communities in the Valley, including those in the town itself.⁵

Map 3.3. The communities in the 2009 survey



Note: This map is adapted from an original produced by the Western Australia Department of Indigenous Affairs in 2009. The following surveyed communities have been added: Gogo station, Kurinjarr, Loanbun, Parkal Springs and Purluwala.

THE COMMUNITIES IN THE SURVEY

Map 3.2 shows two communities—Warrimbah and Wamali (Yiramalay)—that were not surveyed because there is no-one presently living there. Of the non-Aboriginal cattle stations only one homestead area was surveyed. This was Gogo, where one Aboriginal family lives. There are several communities that were surveyed that are not on the map: from west to east these are Munmural, Purluwala,⁶ Gilly Sharpe, Goolgardah, Kurinjarn and Rocky Springs. Within the town area, the map shows all the discrete Aboriginal communities, but does not indicate other areas, apart from the town site itself, where at least some Aboriginal people live. These include Burawa (Old Mission) and Yurabi Road.⁷

People who live out of town now live in one of three kinds of places: settlements that are on Aboriginal Lands Trust Reserves excised from non-Aboriginal pastoral leases; and station and outstation settlements on Aboriginal-owned pastoral leases. Outstations are often referred to as 'blocks'. The establishment of a block is negotiated between an individual or a family group and their relevant kin who have interests in the land, and signals the setting up of a new 'core' individual or family with respect to that place. The majority of settlements are permanently occupied; some are seasonally occupied, usually in the dry weather time. The 43 communities surveyed are listed in Table 3.1 and those outside of town are shown on Map 3.3.⁸

The fact that Map 3.2 is not 'up to date' reveals a certain indeterminacy about what counts as a community at any one point in time. Warrimbah and Wamali are places where houses were built but where communities have not established themselves in the long run. On the other hand, the existence of communities, particularly 'blocks', that are not named on the map points to the fact that new small communities are still being established, and that their status as 'communities' is not yet officially recognised. Several places that started out as blocks are now recognised as communities. Whether or not they have succeeded in acquiring similar housing and infrastructure to that of other communities seems to depend on when they were first set up.⁹

In Arthur's (1990) thesis, based on fieldwork undertaken during the 1980s, there is a complete listing of the communities that existed in the Valley at the time, a decade after people began the move back out of Fitzroy Crossing. In Table 3.1 the communities listed in bold are those identified by Arthur. It is immediately obvious that there are many more communities in existence today. In addition Arthur lists Windmill Reserve (now Mindi Rardi) in Fitzroy Crossing, which was temporarily uninhabited; Warrimbah, which at that point was being established as an outstation from Yungngora; and Luma Gorge, now the station settlement on Mount Pierre station.

In terms of the distribution of population, and also of services and infrastructure, the Valley can be seen as a series of hubs and spokes—hub communities are connected to a series of surrounding satellite communities that look to the hub for the provision of certain services. Fitzroy Crossing serves as the regional hub for the Valley. It contains the region's only hospital (and related services), and the headquarters of local government and many local and regional organisations. For the communities surrounding Yiyili at the far eastern end of the Valley, Halls Creek also functions as a regional hub, and in this respect the boundary of the Valley overlaps with that of the region to its east.

Map 3.3, which is to scale, gives a better impression than Map 3.2 of the clustering of communities in the Valley. Settlement is densest in the area immediately surrounding Fitzroy Crossing itself, and along the bitumen highway (Highway 1) that bisects the Valley. However the other factors at work, both cultural and historical, are not revealed by a map such as 3.3. The question of settlement formation, and of the patterned links between communities, will be addressed in more detail in Sections 6 and 7 which discuss what the survey data tell us about the cultural demography of the people(s) of the Valley. In the next sections (3 and 4), however, the Valley is viewed first as a 'population'.

4. THE VALLEY AS A 'POPULATION'

Before presenting the results of the analysis, it is necessary to say something about data quality. In practice it was not possible to interview every individual in the population. In most cases, the interviewers relied on getting information from whoever was present at a dwelling at the time of their visit, and sometimes they had to rely on their own knowledge of some dwellings, in cases where they were unable to find anyone from the dwelling to interview. Indeed employing people with a good knowledge of the community as the interviewers was an essential part of the methodology. In such situations there is a danger that certain categories of people will be 'forgotten' and that there will be gaps in the data. Those likely to be forgotten include children, especially babies, and people who are not 'core' individuals.

With the methodology employed, where people were encouraged to list absent core and active peripheral members of the household, there was also a distinct possibility that some people would be double, or even triple-counted (that is, counted in more than one place). The fact that people move around, combined with the fact that the count took place over a three-month period, was also a source of potential double-counting. To complicate matters, some people are known by more than one name, so some instances of double counting were not immediately apparent. The methodology nevertheless deliberately encouraged double counting, because it provided data on that individual's status as 'core' or 'peripheral' in the communities where they were counted, and taken overall the 'double-count' data yielded information on patterns of connection between communities.¹⁰

In order to ensure that coverage was as complete as possible, the preliminary results of the survey were checked against all available administrative datasets, and a list of 'missing persons' was drawn up.¹¹ This list was taken back to the original interviewers (where possible), or to other people with good knowledge of a particular community. This cross-checking process revealed that:

- a) some people had indeed been missed. In a few cases, it was found that entire dwellings had inadvertently been missed;
- b) some people had indeed been double-counted, sometimes under different names in different places;

- c) some people who had been out of the Valley at the time of the count had been missed (in particular people who were in prison, and people of the 'active periphery');
- d) quite a large number of people who appeared on the administrative lists were no longer in the Valley;
- e) a fair number of people who were counted in the course of the survey were not on any administrative list.

In addition, a list of people with the same dates of birth was drawn up (i.e. pairs of individuals of the same gender and with the same date of birth) and checked with the relevant interviewers. Some were revealed as instances of double counting, and some as sets of twins, but the majority of cases involved two different people who happened to share a birthday.

It is still likely that some people with connections to the Valley were missed in the course of the survey. This would apply particularly to people of the 'active periphery' who do not appear in any administrative dataset, who did not happen to be in the Valley at the time of the survey, and whom people forgot to mention in the household survey. These are likely to be people who have kinship and/or ceremonial connections to people and/or places in the Valley, but who are only in the Valley occasionally, for example to attend a funeral. It is not possible at this stage to estimate the size of this 'undercount'.

It proved very difficult to collect date of birth information for many people. Where the interviewer and/or interviewee did not know someone's date of birth they were encouraged to estimate it. Nevertheless, at the end of the first phase of the survey there were still many people listed with no date of birth or age information. Once again, the administrative datasets were used as a check. The cross-checking process revealed that:

- a) some people had conflicting dates of birth, for example the date of birth given in the survey was not the same as the date of birth in the health records, or the date of birth in the health records did not match up with that in the school records or the CDEP records. In such cases an arbitrary decision was made to place most reliance on the date given by the individual concerned or by a relative, and more reliance was placed on health data than on school data or CDEP lists;
- b) in cases where a date of birth was available from the records to be matched against an estimated age, it turned out that people were rather good at estimating age. In most cases, with adults up to about the age of 55, estimates were within two years of the person's recorded date of birth. With children estimates were usually within a year of the child's recorded date of birth. With people over the age of 55 or so, there was a tendency to over-estimate their age, but it is also the case that for many older people, any 'officially' recorded date of birth is also a guesstimate.¹² In cases where older individuals felt certain of their own age, the age recorded in administrative datasets was often an underestimate by comparison.

Table 4.1. Fitzroy Valley population by residential status, 2009

Residential status	Number
Stable core	2,679
Mobile core	94
Total core population	2,773
Active periphery	163
Inactive periphery	342
Status unknown	287
Grand total	3,565

Source: Fitzroy Valley Population Project database.

Table 4.2. Fitzroy Valley population: Those present and absent during the count, 2009

Residential status	Number present	Number absent	Total
Stable core	2,527	152	2,679
Mobile core	55	39	94
Active periphery	59	104	163
Total present/absent	2,641	295	2,936

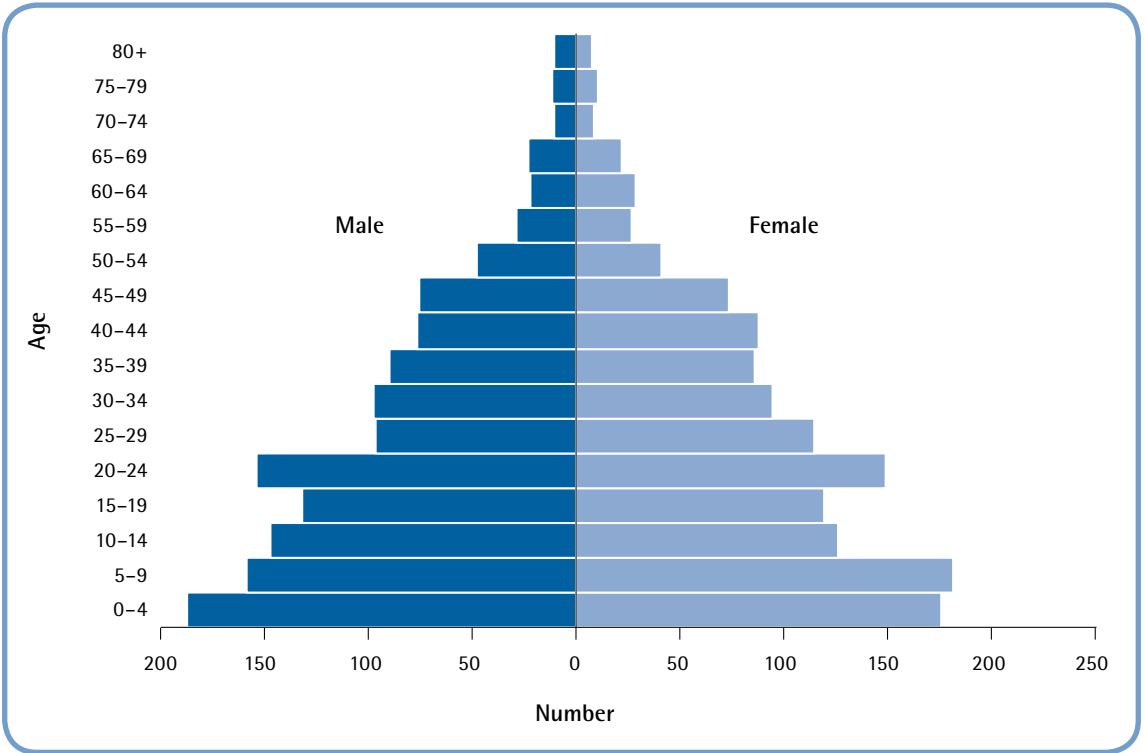
Source: Fitzroy Valley Population Project database.

The administrative datasets had no record of 186 people who were counted in the survey. In such cases the age for the person remains an estimate (and is recorded as such on the database), or, in a residue of cases (40), remains unknown. People whose age is unknown are included in the overall population counts, but are of necessity excluded from the analysis where age is a variable.

THE SIZE OF THE VALLEY'S ABORIGINAL POPULATION

Table 4.1 presents the raw population figures for the Valley, by residential status. The table includes every Aboriginal person who was counted in the survey or who appeared in one of the available administrative datasets. It also includes those few non-Aboriginal people who live in predominantly Aboriginal households. The 'status unknown' category consists of people who appeared in administrative datasets whose status was

Fig. 4.1. Fitzroy Valley core population by sex and 5-year age group, 2009



Source: Fitzroy Valley Population Project database.

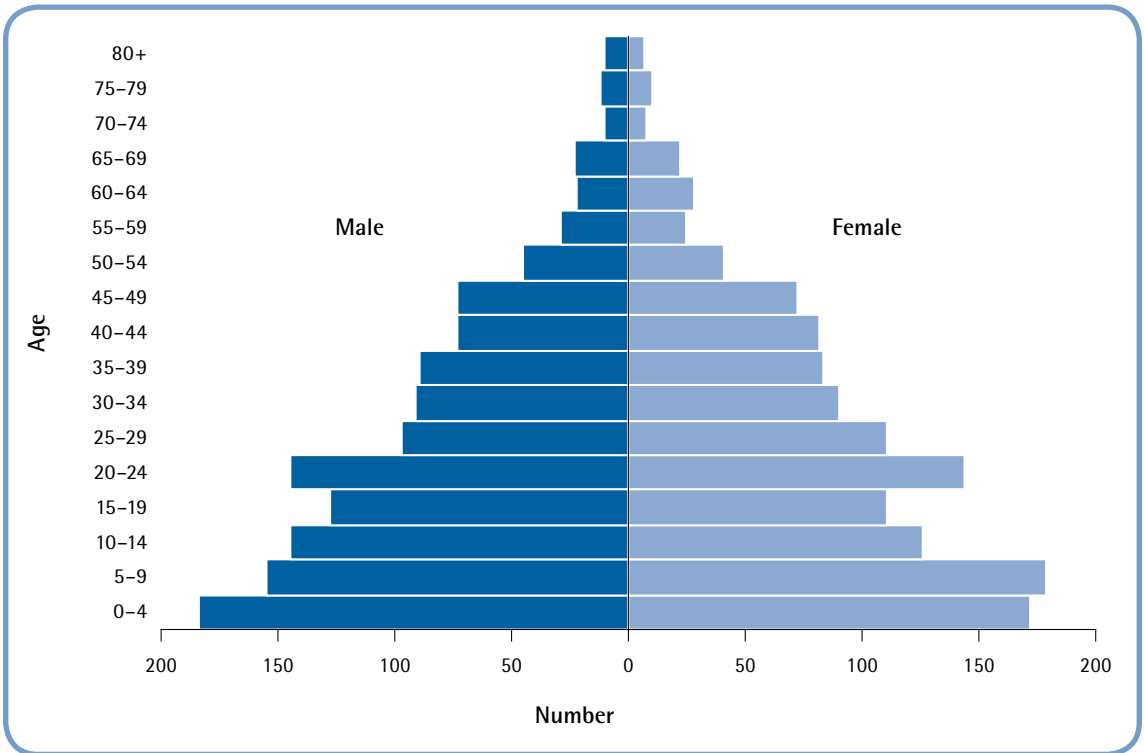
not discovered. It is most likely that they belong in the ‘inactive periphery’, but a few may belong in one of the other categories. It is also possible that some of them (those from the health database) are non-Indigenous.

Table 4.2 shows the numbers of people in the first three categories (stable core, mobile core and active periphery) who were present in or absent from the Valley during the count.

Taken together, these two tables reveal that there is a pool of just under 3,000 people who are likely to be in the Valley at any one point in time—that is core people and the people of the active periphery. Of these, just over 2,600 were actually in the Valley at the time of the count, in March to June 2009. The percentages of those present from each category is unsurprising. Of the stable core of the population, 94.4 per cent were in the Valley and only 5.6 per cent were away. Of the mobile core of the population, 41.4 per cent were present and 58.6 per cent were absent. Of the active periphery, 36.2 per cent were present and 63.8 per cent were absent.

In 1986, Arthur (1990) counted 1,551 Aboriginal residents in the Valley, along with 104 people who would be classified here either as ‘mobile core’ or ‘active periphery’. Arthur did not use the methodology or the categories that are being used here, so it is only possible to extrapolate an approximate rate of population

Fig. 4.2. Fitzroy Valley stable core population by sex and 5-year age group, 2009



Source: Fitzroy Valley Population Project database.

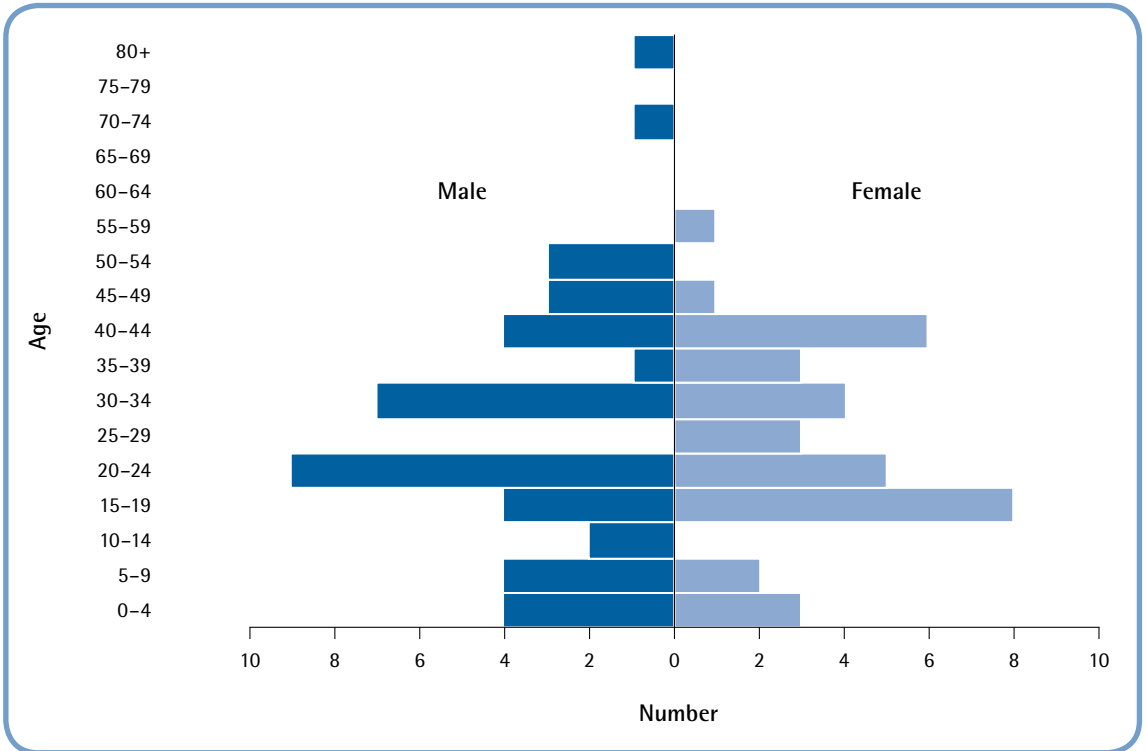
growth from 1986 to the present. The number of Aboriginal people present in the Valley in 1986 was 1,655, and in 2009 it was 2,641. Using these numbers as proxies for the resident population at each point in time, they represent an average annual growth rate of 2.05 per cent between 1986 and 2009.

AGE AND SEX CHARACTERISTICS OF THE VALLEY’S CORE POPULATION AND ACTIVE PERIPHERY

As noted above, it was not possible to get date of birth information or even age estimates for the entire population. We have information for 2646 out of the total of 2,679 stable core members of the population (i.e. for 99% of the stable core), for 79 out of the mobile core population of 94 (i.e. for 84% of the mobile core) and for 142 out of the 163 people who comprise the active periphery (i.e. for 87% of the active periphery). As a result, while the age and sex characteristics of the stable core are reliably represented in the data (subject to the qualifications about the general reliability of age data), this is less true for the mobile core and active periphery.

In Figures 4.1 to 4.4, which exclude people with no known age, the population pyramid for the entire core population is shown first, and then the stable core is differentiated from the mobile core for comparison.

Fig. 4.3. Fitzroy Valley mobile core population by sex and 5-year age group, 2009

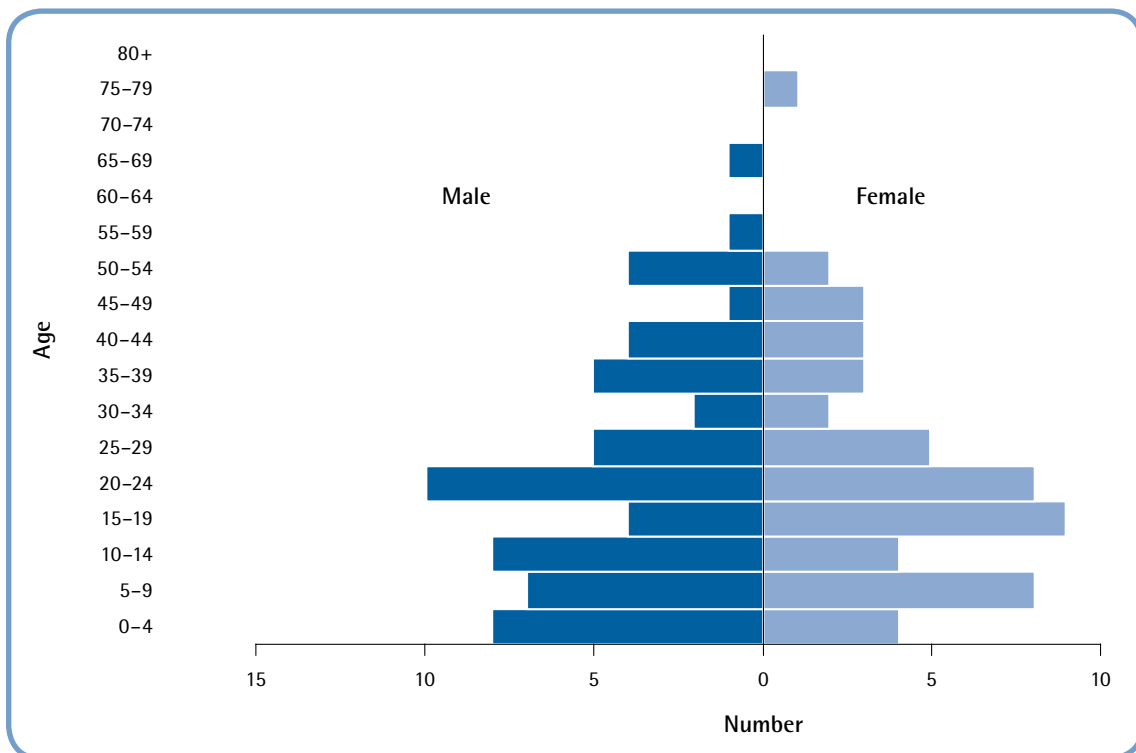


Source: Fitzroy Valley Population Project database.

Finally these two subpopulations are compared with the active periphery. The age pyramid for the core population resembles that for most Indigenous Australian subpopulations, and that of the Indigenous population as a whole. The Aboriginal population of the Valley is very young, with a mean age of 25.6 years. The relatively broad base of the pyramid is indicative of a population with high fertility, and the relatively high numbers of women of child-bearing age, together with the even larger cohorts beneath them, suggests that potentially population growth for the foreseeable future will be high. The rapid taper with advancing age is indicative of high adult mortality, although compared with many Aboriginal populations there are relatively large numbers of people in the oldest age-groups. Many population pyramids for Indigenous populations put all people aged over 64 into a '65+' category, or at best everyone over 74 into a '75+' category because there are so few people surviving to those ages. In the Valley there are sufficient numbers of people aged over 75 to make it worth differentiating by 5-year age group until the age of 79.

The asymmetry of the pyramid for the core population (Fig. 4.1) in the three five-year age groups 10–14, 15–19 and 20–24, with lower than expected numbers in the first two, and higher than expected numbers in the 20–24 age group has no immediately obvious explanation. It may be the result of inaccuracies in the estimations of the ages of people in those age cohorts (and also in the 25–29 age cohort). There is no

Fig. 4.4. Fitzroy Valley active periphery population by sex and 5-year age group, 2009



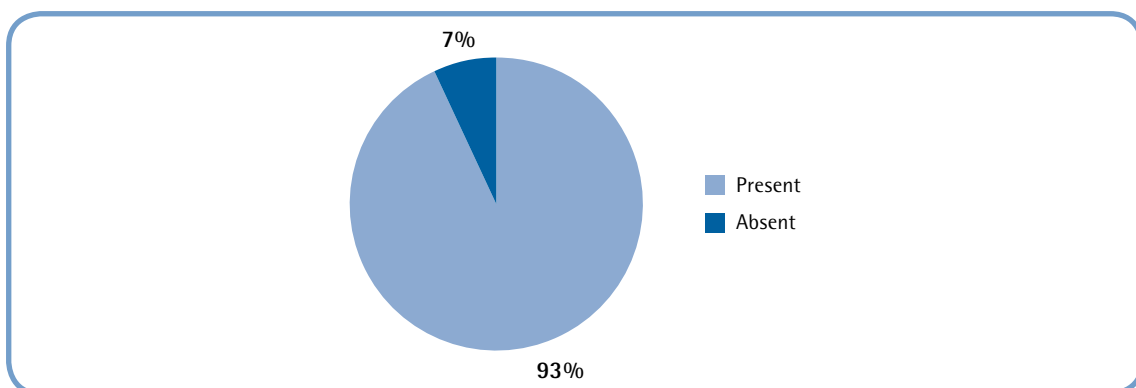
Source: Fitzroy Valley Population Project database.

evidence of out migration of people in their twenties—if anything the size of the 20–24 age cohort indicates possible in-migration in that cohort. The relative lack of female children in the 0–4 age cohort, compared to male children of the same age, is also not immediately explicable, although in general, males slightly outnumber females in all age cohorts except the 60–64 group.

In Fig. 4.2, the 'mobile core' has been removed from consideration. At first glance, a comparison with Fig. 4.1 reveals little difference. However, the age pyramid of the 'mobile core' given in Fig. 4.3 suggests that circular mobility is most characteristic of people in their late teens and early twenties, and that it is still evident up until people reach their mid-fifties, with marked differences according to gender. Middle aged men are more likely to be members of the mobile core than are middle aged women, and people over the age of 55 are basically absent from this group. The children of the mobile core, who as a proportion of their cohort are not as large as the proportions of teenagers and young adults are of their cohorts, are most probably moving with their parents or other mobile core adults from their extended family.

The survey was not designed as a study of mobility, so these results raise more questions (for future research) than they answer. Also, the active periphery contains a relatively small number of people compared to the

Fig. 4.5. Percentage of core population present and absent during the Fitzroy Valley count, 2009



Source: Fitzroy Valley Population Project database.

stable core. However, a consideration of the age structure of the 'active periphery' shown in Fig. 4.4 reinforces the impression that mobility is least characteristic of people over the age of 55 and, as a proportion of their cohort, the very young. It is at its greatest in the cohorts of the teenage years and early adulthood, and tapers off with age. Males in the age range 50–54 are once again more mobile than their female counterparts (but this pattern is reversed in the 45–49 age group).

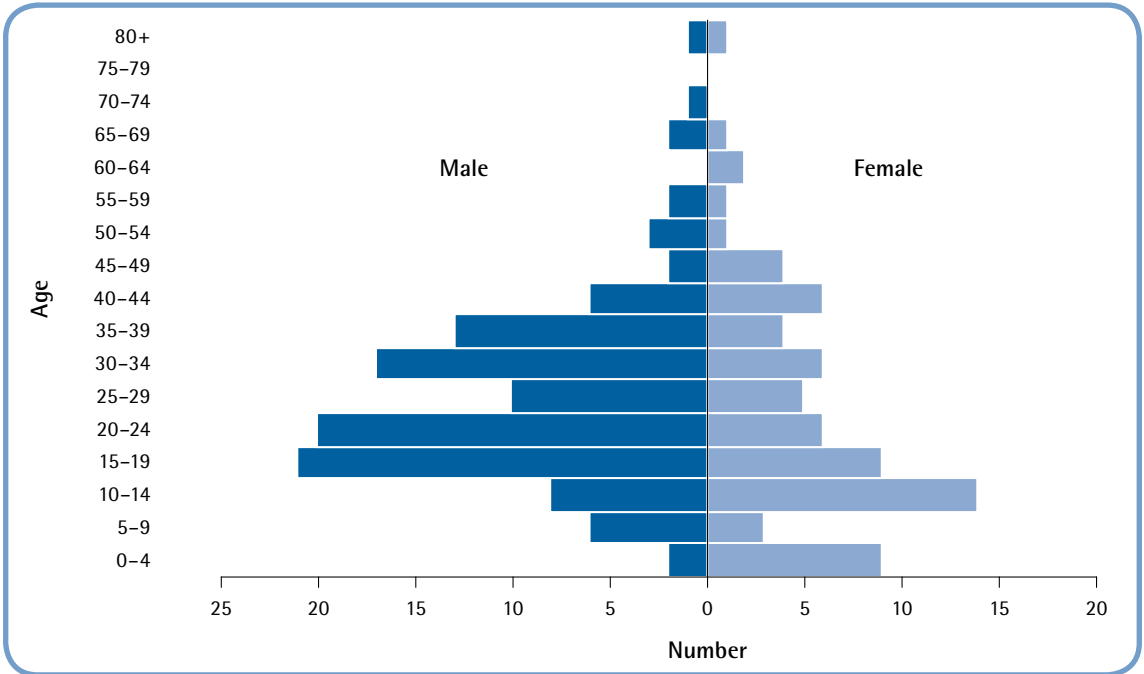
THE CORE: REASONS FOR PRESENCE IN AND ABSENCE FROM THE VALLEY

Other features of mobility can be gleaned from a consideration of core people who were absent from the Valley during the count and the reason for their absence. Fig. 4.5 shows that only 7 per cent of the core population was reported to be away from the Valley during the count. Fig. 4.6 shows the age and gender distribution of the absent core.

The relative lack of mobility of core members of the population over the age of 55 is again reinforced by this pattern. The most 'mobile' sectors of the population seem once again to be people in their teens and early twenties, but an analysis of why people were away reveals that reasons for absence vary depending on the age cohort. Figure 4.7, which includes data for people whose age is unknown, shows the reasons why people were absent.

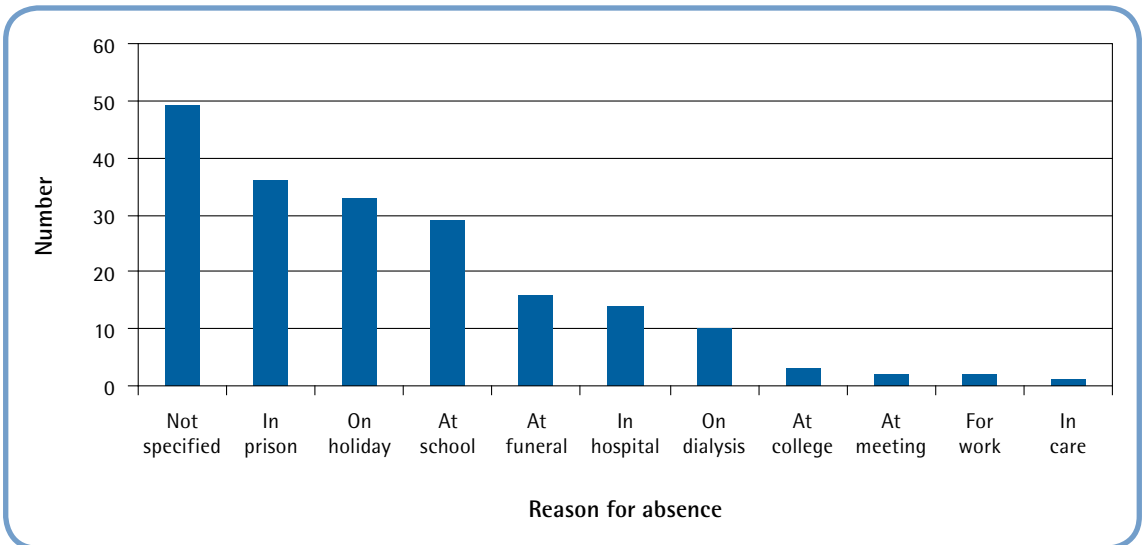
The largest category is 'not specified'.¹³ Nearly all of these people were members of the mobile core. The whereabouts of 10 of them was unknown. Of the rest, 11 were in Halls Creek, seven were in Derby and six in Broome. The remainder were scattered further afield in other parts of Western Australia, with one in Perth, and one each in 'central Australia' and the 'Northern Territory'. It is likely that many of these people were away visiting family.

Fig. 4.6. Absent core population by sex and 5-year age group, Fitzroy Valley, 2009



Source: Fitzroy Valley Population Project database.

Fig. 4.7. Reasons for absence from the Valley



Source: Fitzroy Valley Population Project database.

The next largest category comprised those in prison, most often in Broome, but also in Perth, Geraldton and Wyndham. This group was overwhelmingly male, and most were people in their twenties and thirties. The group of people who were 'on holiday', visiting relatives elsewhere, were mixed in age and gender. They had gone to a wide variety of places, predominantly in Western Australia and the Northern Territory. All but three of those away at school were in their teens, ranging from 13 to 19 years of age. Those at boarding school were in several different places including Broome (7), Perth (5), Esperance (3), Coolgardie (3) and even Darwin (2). Those away at funerals were predominantly adults in their thirties with accompanying children, and they were in places as various as Looma, Broome, Yuendumu and Kununurra. The categories 'in hospital' and 'on dialysis' include people who had accompanied sick relatives to hospital in distant places. Nine people were actually away in hospital, seven of them in Perth and the others closer to home in Broome. Their ages ranged from one child under 10 years old to one person in their eighties, but most were in their thirties. There were nine dialysis patients, either in Perth or Broome. The youngest of these was in their early thirties and the oldest in their seventies, with most being in their sixties. It is notable how very few people were said to be away either pursuing further studies or an apprenticeship (3), or because their work took them elsewhere (2).

The data examined so far on those absent from the Valley reveal that the people of the Valley have networks of connection that stretch to Perth and into the Northern Territory, but that the density of connection is greater within the Kimberley and adjacent regions of the Great Sandy Desert, in an area encompassed by Broome, Derby, Kununurra, Halls Creek, the communities of the Canning Stock Route, and Balgo.

The data also reveal that a significant group of people who might otherwise be expected to belong to the resident stable core—that is, people on dialysis—are forced by circumstances to reside in distant places. Two-thirds of the 'absent core' in the 50–74 age group (Fig. 4.6) are people who are on dialysis. So far as rates of imprisonment are concerned, the data reveal that 6.6 per cent of the men of the Valley in the 20–40 year age cohort are in prison. Finally, of the children and young people in the 13–19 year age cohort, 10 per cent were at school outside the Valley, mostly at boarding school.

Further research on these three groups of individuals would be valuable for regional policy and planning. For the dialysis patients, a cost-benefit analysis might reveal that the costs of treatment in hospitals outside the region outweigh the potential costs and benefits of providing full treatment facilities (and the staffing to manage them) in the hospital at Fitzroy Crossing. The benefits of returning a significant number of absent senior core members of the community to their homes and families should be taken into account. An analysis of the reasons for the incarceration of those who are in prison might reveal that many are there for relatively trivial offences relating to motor vehicles or failure to pay fines, and might prompt some readjustment in the operation of the criminal justice system. Finally, a longitudinal study of people who have previously attended and are now attending boarding school would throw light on many interesting questions: what proportion of this group completes their secondary education at boarding school, whether attendance at boarding school leads to better employment outcomes, whether it leads to migration out of the Valley, and whether it leads to a widening of individuals' social networks.¹⁴

In the next section (Section 5), the internal structure of the Valley's population is examined in more detail, in terms of the characteristics of the core populations of the communities. In Section 6, the discussion turns to the cultural patterns that the survey data reveal, with a consideration of the data on people's language group identity.

5. THE VALLEY COMMUNITIES: POPULATION CHARACTERISTICS

This section will focus on the different kinds of communities in the Valley, and their population characteristics. There are several kinds of factors, apart from cultural factors, underlying differences between communities. These include physical access (closeness to the bitumen highway, and location in relation to flooding), and location in relation to Fitzroy Crossing, other communities in the Valley, and their function in relation to the pastoral economy. For ease of reference the Valley will be divided in the following way:

1. Fitzroy Crossing: Town Site, Junjuwa, Darlanguaya, Burawa/Old Mission, Guwardi, Mindi Rardi, Kurnangki and Loanbun. These are places in the town proper.
2. The 'outer suburbs': Bungardi,¹⁵ Ngurtuwarta, Bayulu, Gillarong, Karnparrmi, Purluwarla, Gogo, Muludja and Eight Mile. These communities are all within a 30 kilometre radius of Fitzroy Crossing. In some respects Bayulu functions as a second hub for all these communities except Bungardi and Ngurtuwarta. All these communities, again with the exception of Bungardi and Ngurtuwarta, are on Gogo station.
3. The west and south: Jimbalakudunj, Yungngora, Ngalapita, Kadjina, Parkal Springs, Bidijul, Yakanarra, Djugerari. Yungngora functions as a hub for many of these communities, particularly those of the 'west'. All except Jimbalakudunj and Yungngora are south of the Fitzroy River, and all except Jimbalakudunj are located on either Noonkanbah station (Aboriginal-owned) or Cherrabun station.
4. The north: Yaranggi/Galamanda, Munmural and Biridu. The first three of these communities are on the Aboriginal-owned station of Leopold Downs. Yaranggi and Galamanda are considered together. Munmural is on the neighbouring Aboriginal-owned cattle station of Milliewindie.
5. The 'middle east': Ngalingkadji, Ngumpan, Gilly Sharpe, Wangkatjungka, Bawoorooga, Kupartiya, Mingalkala, Mimbi and Mount Pierre. Wangkatjungka functions as a hub for many of these communities, and is the headquarters of the Kurungal Association. The communities are located on Christmas Creek Station and on the Aboriginal-owned stations of Bohemia Downs and Mount Pierre.

6. The 'far east': Moongardie, Ganinyi, Yiyili, Goolgardah, Girriyoowa, Rocky Springs and Kurinjarn. Yiyili functions as a hub for these communities, all of which are located on the Aboriginal-owned station of Louisa Downs.

In the data presented on community populations in this section, only the core dry season populations (stable and mobile) are considered. It could be argued that this is the population (in addition to those who come in for the wet season) that needs to be taken into account when planning for services and infrastructure. But it should be borne in mind, when considering the figures given below, that at any one point in time a community may be host to members of its 'active periphery' in addition to most of its core population. At times such as a funeral this might be a large number of people.

It was noted above that the Valley taken as a whole has a mobile core amounting to 7 per cent of its total core population. The communities in the Valley have larger mobile cores as a percentage of their total core—on average 20 per cent of a community's core is mobile. This points to a greater density of kin networks within the Valley, compared to kinship links that transcend the Valley.

The data on the active periphery are more variable in quality from community to community than the data on core membership, and cannot be used to derive reliable and consistent head counts for the active periphery of each community. They will be used in a later publication that focuses on patterns of connection between the communities of the Valley.

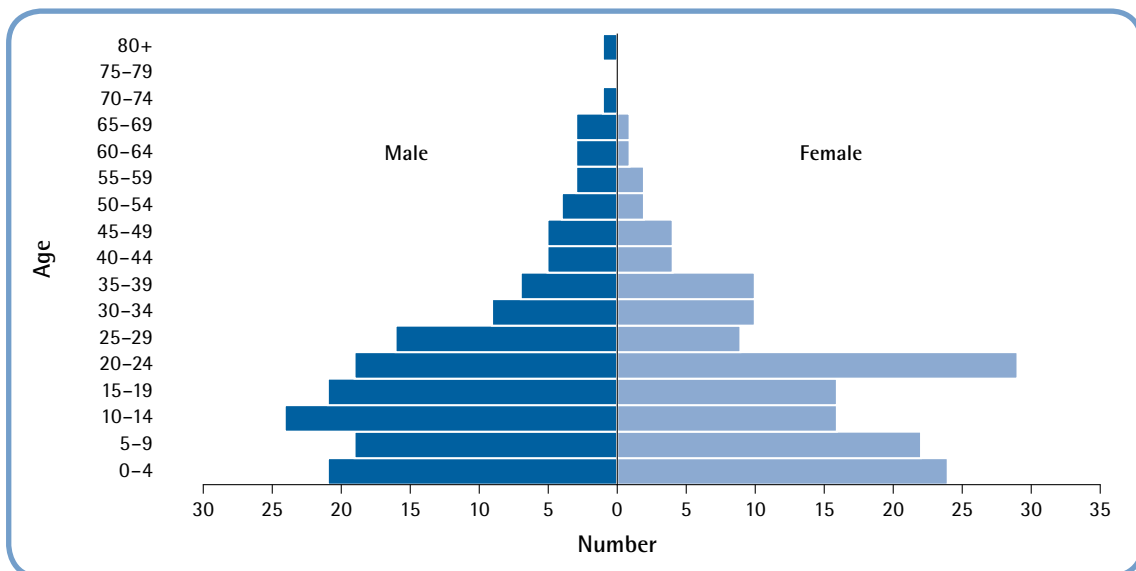
No count was undertaken during the wet season, so that we only have indicative numbers for the wet season populations of the Valley communities. It is likely, too, that these vary from year to year depending on the severity of flooding. The data collected from households on where they most often went to if they had to leave during the wet season, are of sufficient quality to indicate which 'host' communities are likely to be most under pressure of numbers. Since movement during the wet season is culturally patterned, it will be discussed in Section 7.

In the list above, certain communities emerge as sub-regional hubs: Yungngora, Bayulu, Wangakatjungka and Yiyili. These communities will be discussed first, and a discussion of their 'satellite' communities will follow. The final part of this section will discuss the internal structure of the regional hub of Fitzroy Crossing.

THE SUB-REGIONAL HUB COMMUNITIES

The sub-regional hub communities share certain characteristics in common. All except Yiyili are communities with more than 160 core members. All are occupied all the year round. All have a range of services that their satellite communities lack, although the range varies from place to place. They are all places where people from surrounding communities sometimes congregate at times when their home communities are cut off by floodwaters or because they have no weatherproof dwellings, so that the size of their populations can fluctuate dramatically from season to season.

Fig. 5.1. Yungngora core population by sex and 5-year age group, 2009



Source: Fitzroy Valley Population Project database.

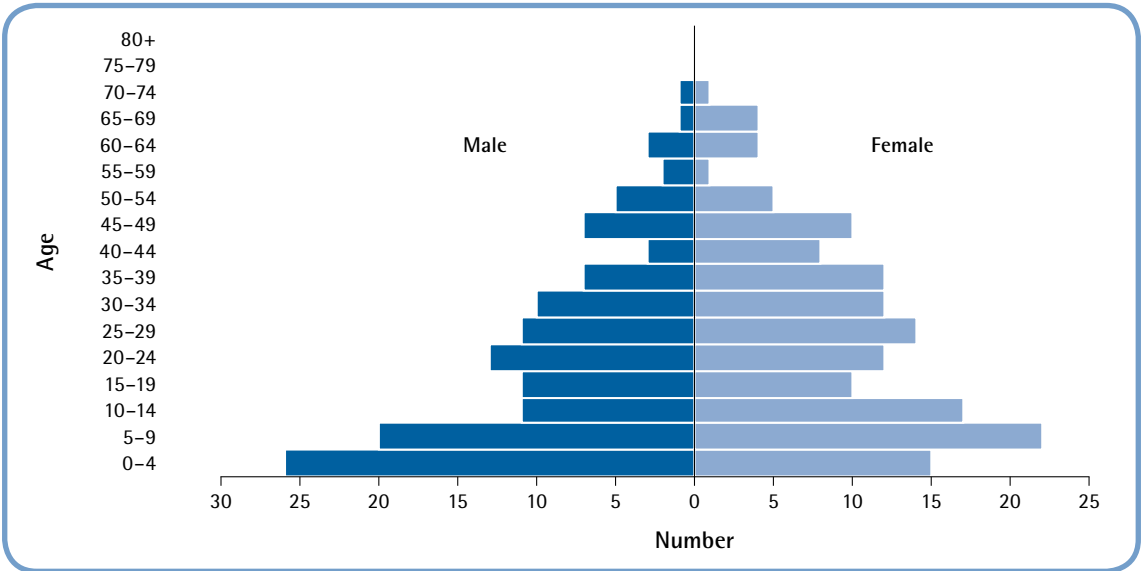
Yungngora

Yungngora is the largest community in the Valley.¹⁶ It is situated near the northern bank of the Fitzroy River, some 70 kilometres by dirt road off the main bitumen highway. It is sometimes cut off from the highway during the wet season. Most of its satellite communities are to the south of the river, and the low-level crossing near Yungngora is impassible when the river is in flood. It functions as the headquarters of the Aboriginal-owned station of Noonkanbah, and of the Yungngora Association.

Yungngora has a core population of 315 people, with 45 of those (14%) being classified as 'mobile core' (lower than the average for the Valley's communities as a whole). The communities with which most of the mobile core population are associated are the neighbouring or satellite communities of Jimbalakudunj (10), Looma (6) (across the regional 'border'), Ngalapita (4), Kadjina (3) and Bidijul (1), and the town communities of Town Site (4), Mindi Rardi (2) and Kurnangki (2). Seven are associated with more distant communities in the Valley: Ngalingkadji (2), Ganinyi (2), Muludja (2) and Bungardi (1). The remaining five people are mobile between Yungngora and places outside the immediate region: Broome (2), Halls Creek (2), Kununurra (1) and Willuna (1).

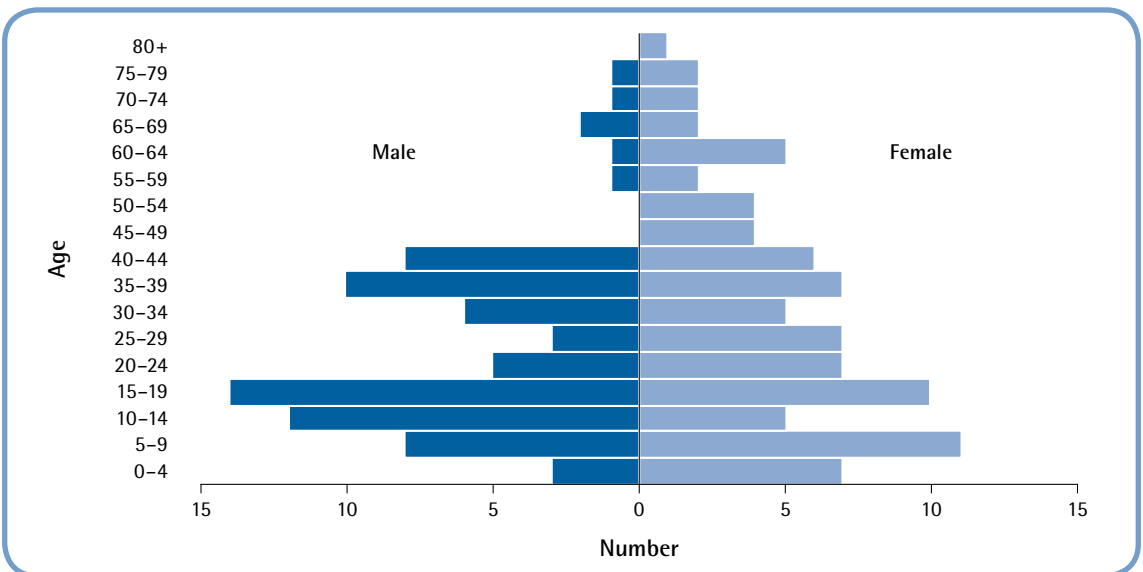
The Yungngora core population pyramid (Fig. 5.1) shows fewer than expected children up to the age of 14, when compared to the core population of the Valley as a whole (Fig. 4.1). Missing date of birth information is not the explanation for the difference, since for this community the data on age is complete for the core population. There is also a pronounced 'bulge' in the 20-24 year old cohort, especially with regard to women. A similar, although less pronounced bulge occurs in the Valley population as a whole. The mean age of the Yungngora population is 22, lower than the Valley's mean age.

Fig. 5.2. Bayulu core population by sex and 5-year age group, 2009



Source: Fitzroy Valley Population Project database.

Fig. 5.3. Wangkatjunga core population by sex and 5-year age group, 2009



Source: Fitzroy Valley Population Project database.

Bayulu

Bayulu is situated 20 kilometres south east of Fitzroy Crossing, on the other side of the Fitzroy River and close to the main highway. Together with its satellite communities, it functions, in many respects, as a second 'town centre'.¹⁷ Its close satellite communities are Gillarong, Karnparmi and Purluwarla, and two middle-sized communities on the other side of the highway, Muludja and Eight Mile might also be considered its satellites for some purposes. All these communities, including Bayulu itself, are within the boundaries of Gogo station.

Bayulu has a core population of 271 people, of whom 61 (23%) are classified as 'mobile core', a figure close to the average for the Valley communities as a whole. Of these 24 are associated with Bidijul, a block to the west on Millijeedee station. In the list above, Bidijul has been included in the satellite group for Yungngora which administers its CDEP program. However, in terms of its social connections Bidijul should really be considered a satellite of Bayulu.¹⁸ There are a few people who count somewhere in Fitzroy Crossing as their second base, five at the Town Site and two at Junjuwa. Most of the rest have connections to communities in the east of the Valley, with a cluster at the communities of Mount Pierre (5) and Mimbi (7), the two communities on Mount Pierre station. Only one person is considered to have core connections outside the Valley, at Mowanjum.

The age information for the core population of Bayulu is complete, subject to the already mentioned provisos about the overall accuracy of date of birth data. The population pyramid for Bayulu's core population is shown in Fig. 5.2.

In general, the population profile for Bayulu resembles the population profile for the Valley as a whole, although proportionally the Bayulu pyramid is not as wide at the base. However, the mean age of the population is a little lower, at 24. This is due to lower numbers than might be expected in some of the adult age cohorts (particularly the 40–44 and 55–59 cohorts, and people aged over 74).¹⁹ There is a marked asymmetry between males and females in the 0–4 age cohort, for which there is no obvious explanation.

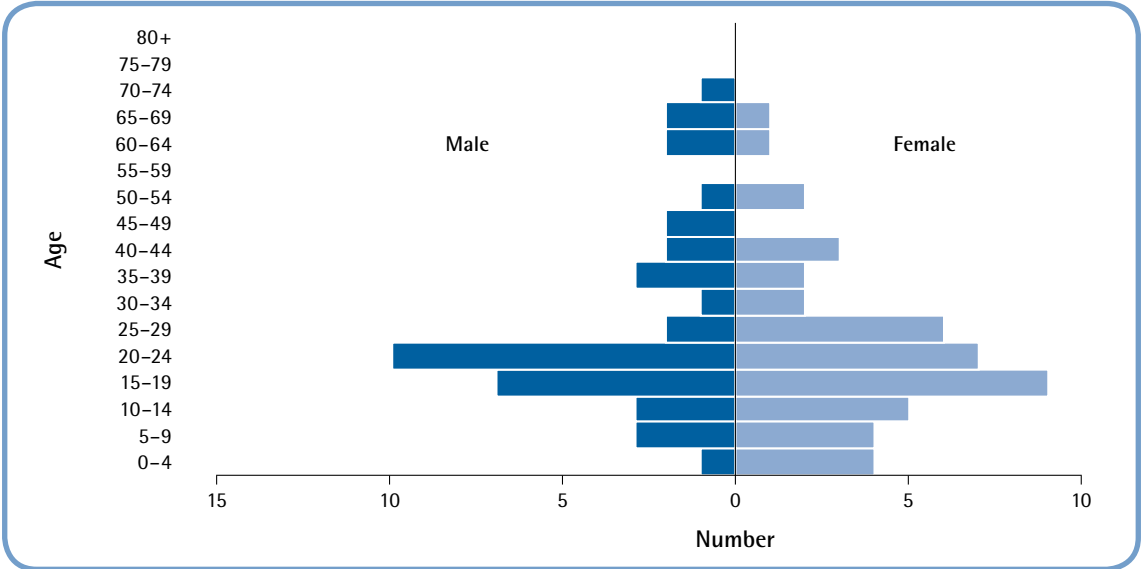
Wangkatjungka

Wangkatjungka is currently the base for the Kurungal Association, which services the communities of Wangkatjungka, Kupartiya and Ngumpan. Other communities in the general sub-region (Ngalingkadji, Gilly Sharpe, Mingalkala, Mimbi, Mount Pierre and Bawoorooga) are serviced from Fitzroy Crossing by Marra Worra Worra. Wangkatjungka is the only community in the sub-region that has a store.

The core population of Wangkatjungka is 169. The mobile core comprises 12 people (7% of the total core). The mobile core is too small for patterns of connection to emerge clearly. Only two are said to have core connections outside the Valley, one in Broome and one in 'Queensland'.

Fig. 5.3 shows the age and sex pyramid for Wangkatjungka's core population. The pyramid shows a population that diverges quite markedly from the Valley taken as a whole. There are comparatively few young children, and also comparatively few people in the 20–24 and 30–34 age cohorts. By contrast, the cohorts over the age of 60 are generally over-represented. Not surprisingly, the mean age of the population is well above that

Fig. 5.4. Yiyili core population by sex and 5-year age group, 2009



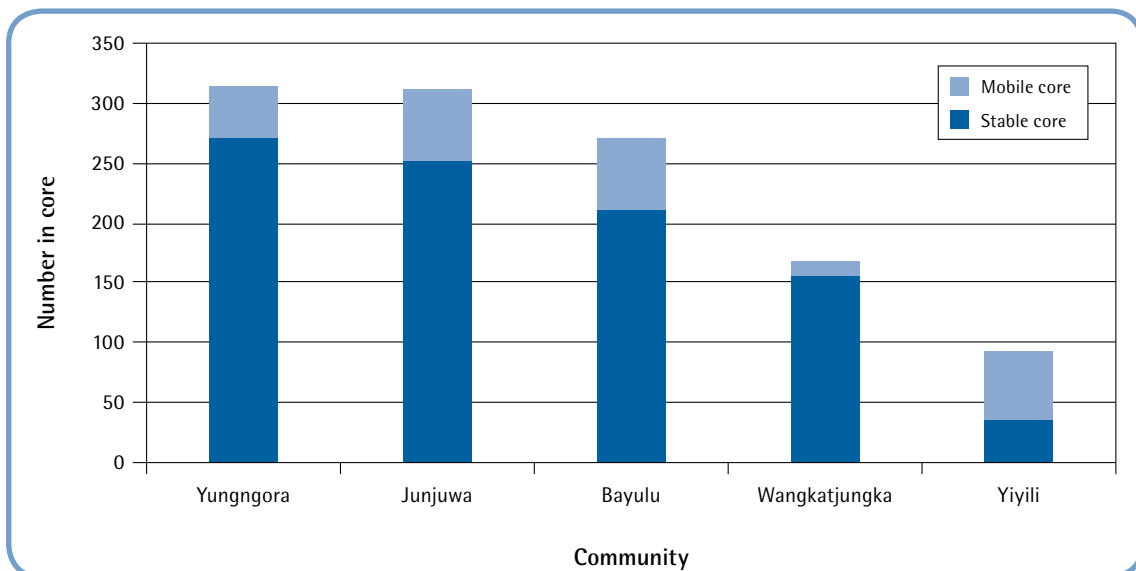
Source: Fitzroy Valley Population Project database.

of the Valley as a whole, at 30 years. The small size of the mobile core, compared with that of the average for the Valley communities as a whole, is almost certainly a reflection of the relative age of the population.

Yiyili

Yiyili and its satellite communities of Moongardie, Ganinyi, Goolgardah, Girriyoowa, Kurinjarn and Rocky Springs are all on the Aboriginal-owned station of Louisa Downs. They are all very close to one another. As a group they are closer geographically to Halls Creek than they are to Fitzroy Crossing. They are serviced from Fitzroy Crossing by Marra Worra Worra, but in terms of their health services they are attached to Halls Creek. Yiyili has many of the features of a hub community when compared to its satellites—it has a store, office, school and arts centre. But it differs from the other sub-regional hub communities in being relatively small, with 94 core members. Only 36 of these are counted as stable core members. The mobile core numbers 58 people, that is 62 per cent of the total core. This is well above the average for the communities of the Valley as a whole. Overwhelmingly, these people of the mobile core are associated with the satellite communities of Goolgardah (15), Kurinjarn (9) and Rocky Springs (21). Goolgardah is so close to Yiyili that it could be considered physically part of the main settlement, but the people associated with Goolgardah wish it to have a separate identity. They have no accommodation that is suitable for wet season conditions; nor does Rocky Springs. These three satellites are occupied only in the dry season, and are inaccessible or uninhabitable during the wet.

Fig. 5.5. The hub communities of Fitzroy Valley: Size and composition of core population, 2009



Source: Fitzroy Valley Population Project database.

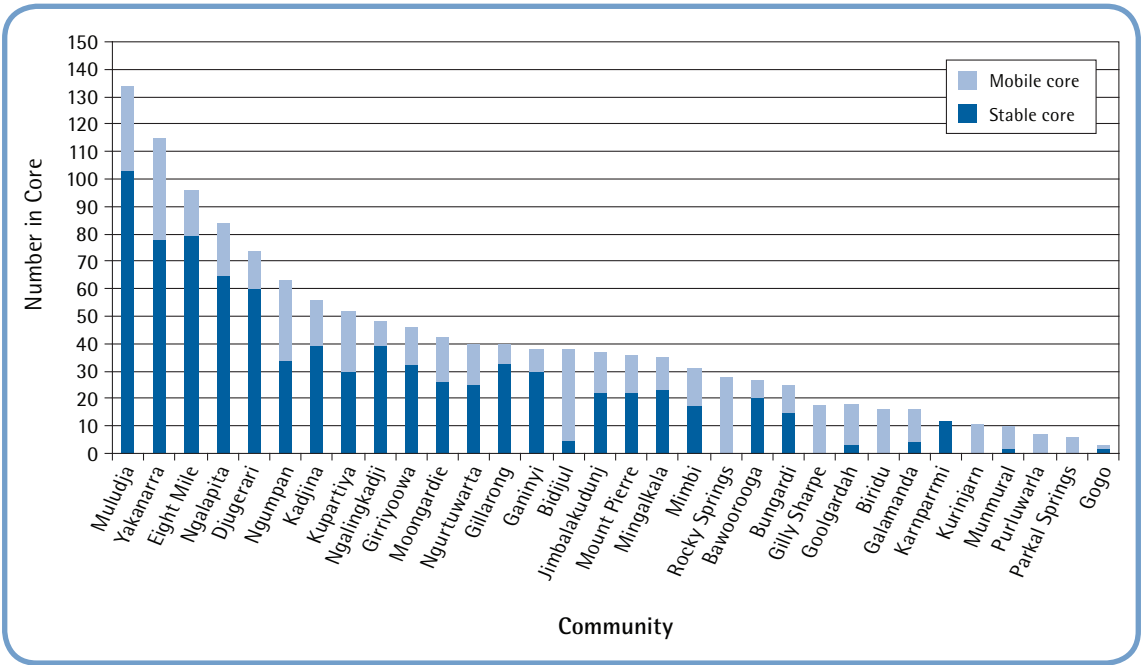
Thus the relationship between Yiyili and these satellite communities is rather different from anything else found in the Valley. Compared with the other sub-regional hubs, with their larger stable core populations and proportionally smaller mobile cores, Yiyili has become more of a service centre and wet-season base. Yiyili seems once to have been a larger community that is in the process of forming a series of satellite communities. According to Arthur (1990: 41), it was founded in the early 1980s by a group who split off from the Louisa Downs station community. In the 1980s it acquired the infrastructure and services (school, power, water, store) of an established hub community, and at some point later the nearby communities at Moongardie and Girriyoowa were established. Goolgardah, Rocky Springs and Kurinjarn represent the latest stage in a gradual process of dispersal from the hub settlement.

Fig. 5.4 shows the population pyramid for the Yiyili core. As in Wangkatjungka, the youngest age cohorts (0–9, but also 10–14) are proportionally small compared with the Valley population profile, and once again the 15–24 age cohort is relatively large. However, because of the relative lack of people in some of the adult cohorts, the mean age of the population is 26, marginally older than the average for the Valley as a whole.

The sub-regional hubs: some preliminary conclusions

The four sub-regional hubs are rather different from one another, but they share one characteristic. All have fewer children under 10, as a proportion of the population than does the Valley as a whole. In contrast, all except Bayulu have noticeable ‘bulges’ in either the 15–19 aged cohort, or the 20–24 aged cohort, or in both. Yungngora and Bayulu, the two bigger communities, show age distributions more like that of the population

Fig. 5.6. The non-hub Fitzroy Valley communities: Size and composition of core population, 2009



Source: Fitzroy Valley Population Project database.

as a whole, and the somewhat aberrant population pyramids for Yiyili and Wangkatjungka may be in part a function of the size of their populations.

Fig. 5.5 shows the comparative sizes of these communities (and also of Junjuwa, which also functions in some respects as a hub community), and differentiates the stable from the mobile core in each case. Yungngora, Junjuwa and Bayulu are of comparable size, and have comparable proportions of stable to mobile core. In contrast, of the two smaller hub communities, Wangkatjungka has a relatively older population and a relatively large stable core, and Yiyili has a relatively small stable core population.

THE VALLEY'S NON-HUB COMMUNITIES

Population profiles of every community will be available to their members as an outcome of the Fitzroy Valley Population Project, and it is not intended to detail all those profiles here. Fig. 5.6 shows the communities that are satellites to one of the bigger hub communities (including Fitzroy Crossing itself). It shows the size of the core membership of each community, differentiating the mobile from the stable core. It is immediately apparent that the size of communities varies considerably, as does the proportion of the stable core to the mobile core.

It is notable that all the communities with under 40 core members (with the exception of Ganinyi) have come into existence since Arthur's survey of the mid 1980s (Arthur 1990), and that all the communities with more than 55 core members (with the exception of Yakanarra) were already in existence at the time of Arthur's survey. This suggests a pattern of settlement whereby, over time, as communities grow to a certain size, family groups begin to split off to form their own, smaller communities. Some, like Bawoorrooga, Bungardi, Jimbalakudunj, Mount Pierre, Mimbi and Mingalkala for example, have become permanently occupied communities with their own stable cores, and the members of the stable core outnumber the members of the mobile core. Others, such as Rocky Springs, Gilly Sharpe, Bidijul and Kurinjarn have no stable core, or only a very small one. Instead, the members of the community constitute a mobile core that also lives some of the time at one (or more) of the older, permanent communities. The dynamics of these processes will be considered in more detail in later sections.

FITZROY CROSSING AND ITS COMMUNITIES

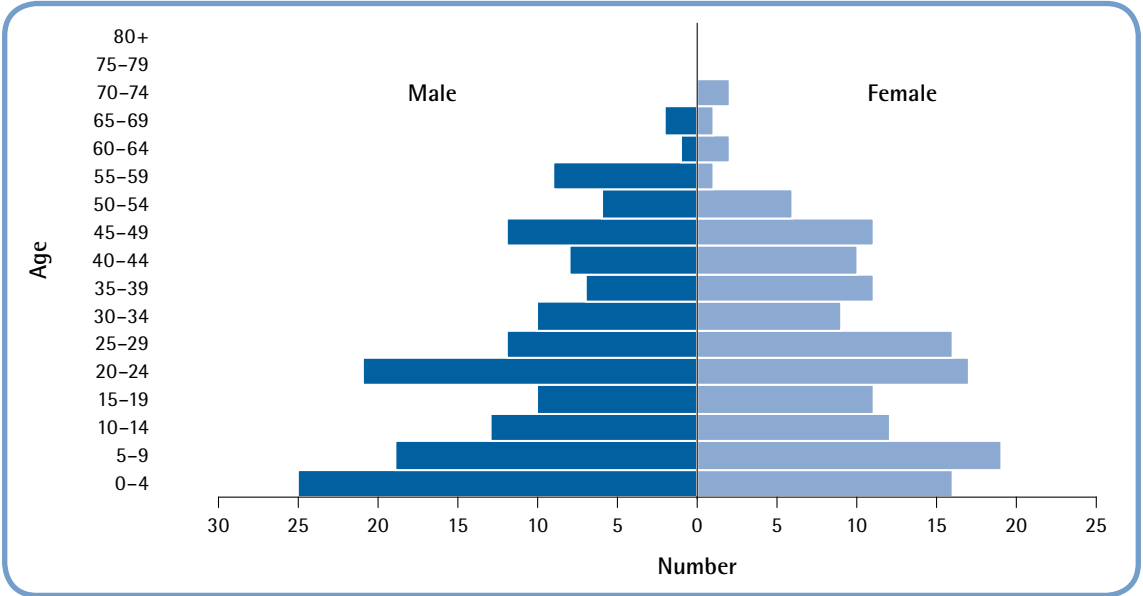
Within the town boundaries of Fitzroy Crossing there are six discrete Aboriginal communities. In order of the size of their core populations they are: Junjuwa, Kurnangki, Mindi Rardi, Loanbun, DarlNgunaya and Bungardi. The other concentrations of Aboriginal people are found in the Town Site itself and in the Burawa/Old Mission area. The majority of the non-Indigenous population of the town also lives in these latter two areas. Although Bungardi is within the area of the town plan, it is the same distance from the town centre as Ngurtuwarta, and is thus one of the 'outer suburb' communities. It is not discussed here.

Junjuwa

Junjuwa, situated to the north of Fitzroy Crossing's Town Site, shares many characteristics with the sub-regional hubs outside of town. First there is its size, at 312 core members, which is comparable with Yunggora. Of these, 60 (19%) form the mobile core (close to the average for the Valley's communities as a whole). The largest group in the mobile core is that associated with Biridu (18 people). Three people are associated with Munmural on Milliewindie station, and two with Galamanda/Yaranggi on Leopold Downs station. That is, 21 out of the mobile core of 60 are associated with places on the cattle stations owned by members of the Bunuba language group.

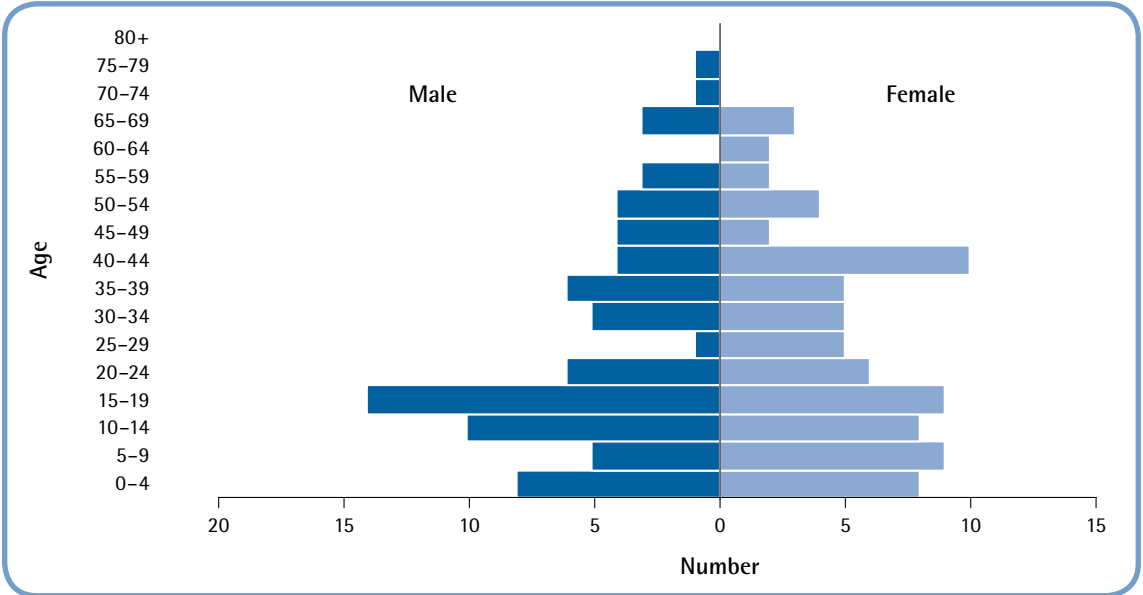
Thus Junjuwa functions as a town base for people associated with Leopold Downs station, who are mostly out on the station in the dry season, or moving back and forth between Junuwa and the station. A further four are associated with the community of Bungardi, to the north of town. There is a small amount of circular mobility between the various town communities. Two people also live sometimes at the Town Site, three at DarlNgunaya, and one each at Mindi Rardi and Loanbun. Seven people live alternately between Junjuwa and somewhere outside of the Valley, in Hall's Creek (3), Broome (2), Derby (1) and Mt Newman (1). The remainder of the mobile core are associated other communities scattered about the Valley, from Yiyili in the east (3) to Ngalapita in the west (4).

Fig. 5.7. Junjuwa core population by sex and 5-year age-group, 2009



Source: Fitzroy Valley Population Project database.

Fig. 5.8. Kurnangki core population by sex and 5-year age-group, 2009



Source: Fitzroy Valley Population Project database.

Junjuwa's population pyramid is shown in Fig. 5.7. Compared to the population pyramid of the Valley as a whole, children (0–9) and youth (10–19) are somewhat under-represented, and the 20–24 age cohort is over-represented. In this it resembles some of the other large communities already described. However at Junjuwa some of the older adult cohorts are over-represented, so that the mean age for Junjuwa is 26 years, marginally older than for the Valley as a whole.

Kurnangki

Kurnangki community is south of the townsite, and separated from it by the main highway. It is situated between Mindi Rardi to the west and Loanbun to the east. Kurnangki's core population is 154, and of these 51 (33%) form the mobile core. This is well above the average for the Valley's communities as a whole. Kurnangki is very much a town base for certain outlying communities, as shown by the data on the mobile core's connection to other places in the Valley. Most prominent are Mingalkala (15), followed by Ngumpan (11), Gilly Sharpe (6), Jimbalakudunj (5), Ngalingkadji (3) and Ngurtuwarta (3). With the exception of Jimbalakudunj and Ngurtuwarta, all these communities are in the eastern part of the Valley. There is some evidence for circular mobility within the town itself, with three people being counted as mobile core members in both Kurnangki and Mindi Rardi. The mobile core also shows far-flung connections outside the Valley, from Broome (1), Pandanus Park (2), Derby (1) and Halls Creek (2) to Balgo (1) and even the 'Northern Territory' (1) and 'Central Australia' (1).

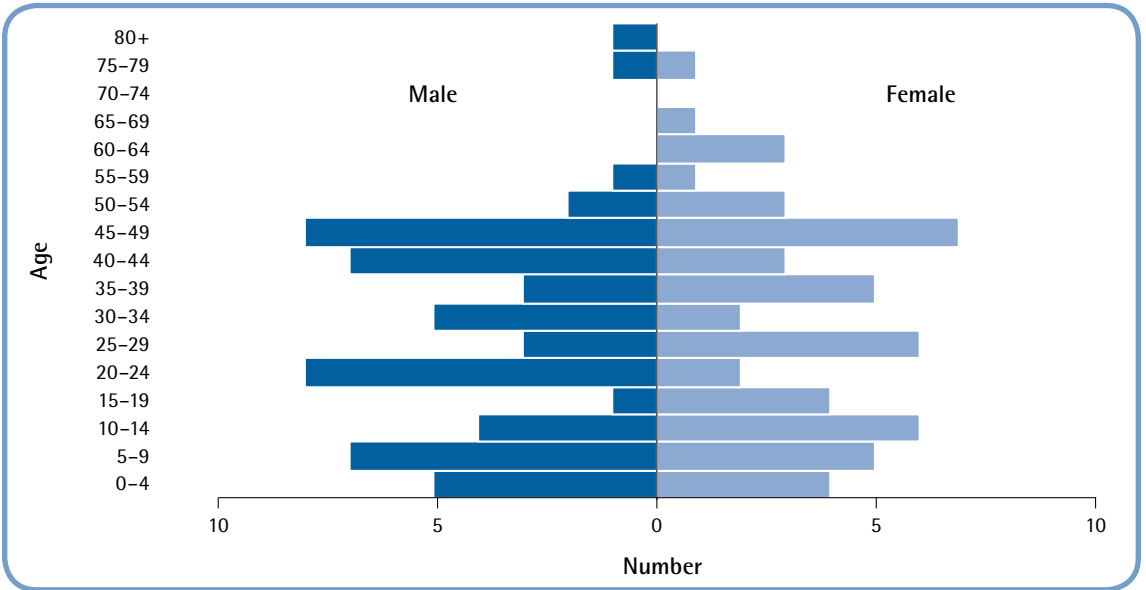
Fig. 5.8 shows the population pyramid for Kurnangki. Once again, the under-representation of the youngest age cohorts is clearly evident. The male 15–19 cohort is over-represented, as is the cohort of women aged 40–44. The mean age for the community is 27 years. The mobile core of the Kurnangki population consists primarily of men in their early twenties and late forties, and women in their thirties.

Mindi Rardi

Mindi Rardi is located on the south west edge of town, south of the main highway. It has a core population of 109, with a mobile core of 19 (17%), which is somewhat under the average for the Valley's communities as a whole. Of the mobile core, nine are mobile within the town itself, being also counted in the mobile core at Kurnangki (3), Loanbun (2), the Guwardi Ngadu old people's home (2), Junjuwa (1) and Town Site (1). No clear pattern of association emerges with respect to the rest of the mobile core. One person is said to be mobile between Mindi Rardi and Jigalong, and details are not known for four of the remaining people. There is a slight bias towards communities of the west and south west (Yungngora 2, Yakanara 1), but also some connection to Kupartiya (1) and Moongardie (1).

Fig. 5.9 shows the population pyramid for Mindi Rardi. Yet again the younger age groups, this time up until the age of 19, are under-represented. Men and women in their late forties and men in their early forties are over-represented, and older men (except the very old) are almost absent. The mean age of the population is 31 years, one of the oldest in the Valley.

Fig. 5.9. Mindi Rardi core population by sex and 5-year age-group, 2009



Source: Fitzroy Valley Population Project database.

Loanbun

Loanbun is a small community near the river, on the south east edge of town, south of the highway. Of its core population of 41, 13 (32%) are mobile (well above the average for the Valley’s communities as a whole). Four are mobile within the town area (Mindi Rardi 2, Town Site 1, Junjuwa 1). The rest of the mobile core population have connections to communities in the far east of the Valley (Mount Pierre 2, Yiyili 3) and beyond (Halls Creek 4).

A population pyramid for a community of this size is not very revealing. The mean age of the population is 24.5, younger than that for the Valley as a whole. There are no residents over the age of 59, and males outnumber females, especially in the age cohorts up to the age of 19.

DarIngunaya

The small community of DarIngunaya is separated from the rest of town by a creek crossing that is sometimes impassible during the wet season. It is located to the north east of the Town Site near the low-level crossing of the Fitzroy River and the site of the former hospital and post office. DarIngunaya has a total core population of 35, and mobile core of 14 (40%). This is very high compared to the average for the Valley’s communities as a whole. Of the mobile core, eight are mobile within the town area (Burawa 4, Junjuwa 3, Town Site 1). One works at Mt Newman when not at DarIngunaya, and one at Munmural (mustering on Milliewindee station). The alternative location for the final four was not given.

As with Loanbun, the community is too small for a population pyramid to be revealing. The mean age of the community is 35. There are very few small children. Indeed the only age groups present in any numbers are men in their thirties and early forties.

Burawa

Burawa is an 'open' area of town north of Junjuwa, near the original site of the Fitzroy Crossing UAM mission. There are a total of 50 people living in this area in households that are predominantly Aboriginal households. Of these 10 (20%) are classified as mobile core (right on the average for the Valley's communities as a whole). Of these, four are mobile between Burawa and DarlNgunaya, and one is mobile between Burawa and Kurnangki. Four have connections to Yakanarra, and also form part of its mobile core. The final person is pursuing further education in Sydney.

Burawa has a more youthful population profile than DarlNgunaya, with a mean age of 21, well below the Valley average. A large proportion of the population is under 14 years of age, and many of those are in the 0-4 age cohort. If DarlNgunaya and Burawa are compared, they both appear to be communities where at least three generations are represented. The former looks like a community with older families, where the youngest people are not children, but teenagers and young adults who have not as yet begun families of their own, and the oldest generation is represented by two people over 70 years of age. The latter looks like a community of young families, where the youngest generation are very young children and the oldest generation is in its fifties and sixties.

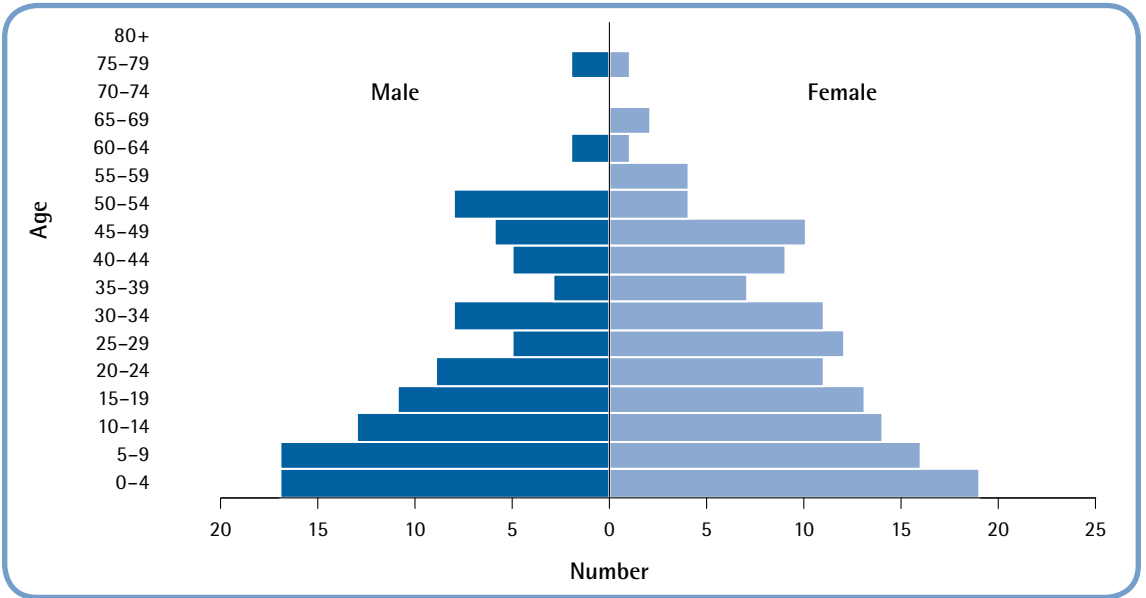
Town Site

The Town Site area contains the largest concentration of people in the town, apart from Junjuwa.²⁰ It contains an area of public housing predominantly occupied by Aboriginal people from the Valley. In the rest of the Town Site, non-Aboriginal people predominate, but some houses are occupied by Indigenous people, both from the Valley and from further afield. The 'non-local' Indigenous people are mainly in Fitzroy Crossing because of their work.

The Indigenous core population of the Town Site area comprises 241 people, of whom 48 (20%) constitute the mobile core (right on the average for the Valley's communities as a whole).²¹ Five of the mobile core move within the town area (DarlNgunaya 1, Junjuwa 2, Loanbun 1, Mindi Rardi 1), and five are mobile to places outside the Valley (Broome 2, Cairns 1, the Pilbara, for work 1, Yalgoo 1).²² The rest include nine people who move between Bayulu and the Town Site, and 14 people from Eight Mile who would prefer to live there permanently but sometimes move to town because of pressure on housing at Eight Mile. The remainder are associated with a variety of communities around the Valley.

Fig. 5.10 shows the population pyramid for the Indigenous population of the Town Site. The mean age of the population is 24.8, a little younger than the Valley as a whole. Alone of all the big communities except Bayulu, the number of children in the 0-14 age cohorts approaches what might be expected from a comparison with the figures for the Valley population as a whole. Compared to the Valley as a whole there

Fig. 5.10. Town Site core population by sex and five-year age group, 2009



Source: Fitzroy Valley Population Project database.

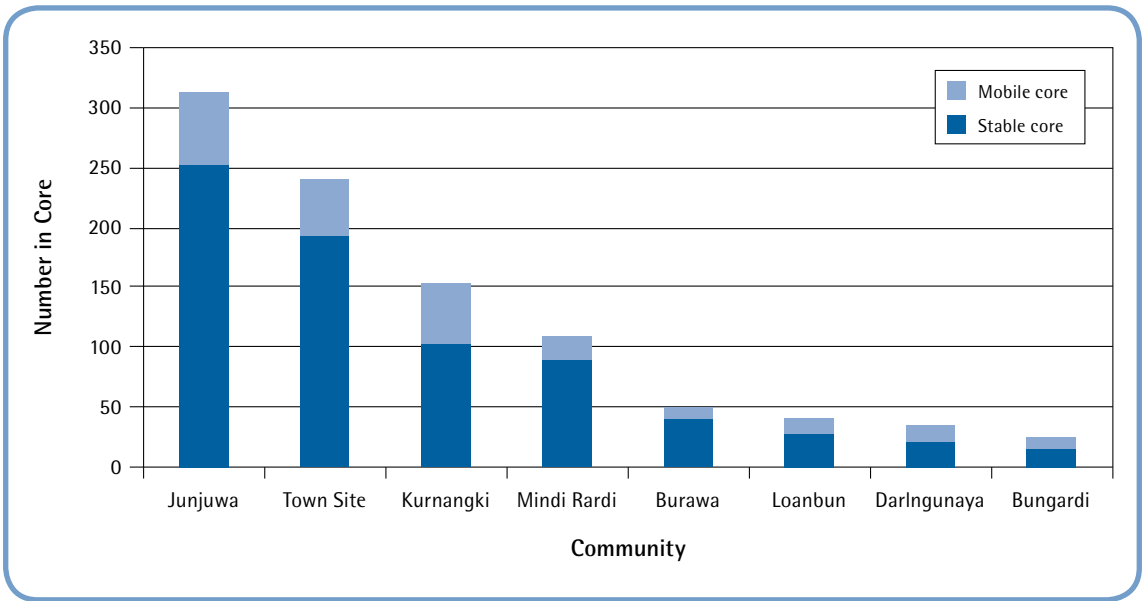
are proportionally fewer than might be expected in the cohort aged 20-39, and proportionally more in the 40-49 age cohort.

If Guwardi Ngadu were to be included in the Town Site pyramid (the mean age of its 19 residents is 78 years), the oldest age groups would be disproportionately large. Residents of Guwardi were originally core members of several communities both inside and outside of town, and one is originally from outside the Valley.

The town communities: some preliminary conclusions

Taking the town communities (including Bungardi) as a whole, the core population is 967, with a mobile core of 225 people. The mobile core thus comprises 23 per cent of the population, which is slightly above the average for the Valley's communities as a whole. However, each community in town has a distinct profile. There is evidence of only marginal amounts of movement between them, in terms of the information collected on the mobile core. They vary a great deal in size, and in the compositions of their populations, although most have fewer children living there than might be expected from the population structure of the Valley as a whole. The four smaller communities (Fig. 5.11) appear to be rather like those small communities outside the town with established stable cores (see Fig. 5.6; Burawa is included in both graphs since it is an 'outer suburb' that is also included in the Fitzroy Crossing Town Plan). Further research would almost certainly show that the majority of these small communities are extended family settlements, where there are close kin connections between the members of different households as well as within households.

Fig. 5.11. The Fitzroy Crossing communities: Size and composition of core population, 2009



Source: Fitzroy Valley Population Project database.

Of the larger town communities, Mindi Rardi (like Wangkatjungka) has a relatively old population and a relatively small mobile core population, as a proportion of the whole.

POPULATION CHARACTERISTICS OF THE VALLEY COMMUNITIES: SOME CONCLUSIONS

The population data presented in this section can alert us to differences between different kinds of community, in terms of their relative size, the age-structures of their populations, and the degree of mobility in and out, at least as measured by the composition of their core populations. But on their own these data tell us very little about the reasons that lie behind these differences. These other reasons are the subject of the next sections.

6. THE VALLEY COMMUNITIES: A CULTURALLY PATTERNED LANDSCAPE

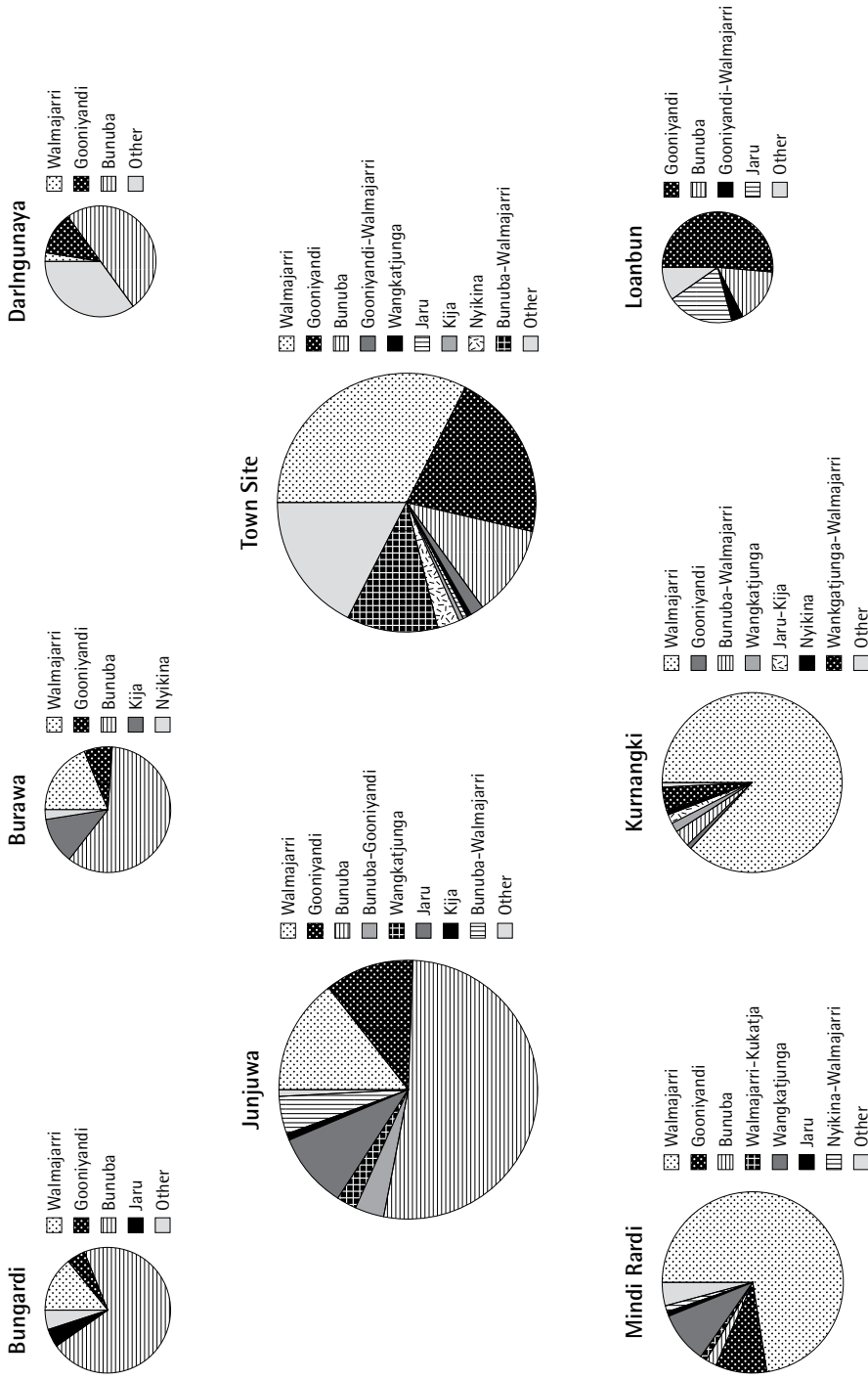
This section begins to examine the cultural factors that influence the composition and location of the Valley communities, drawing on the data on language group identity collected in the survey. On the Nindilingarri map (Map 3.2), we have seen how each community in the Valley is assigned a language group identity. Before comparing this mapping with the patterns that emerge from the survey data, it is necessary first to ask what precisely a 'language group' is, and how people identify themselves with respect to language. The names of the language groups refer to the languages that were spoken by the peoples whose traditional countries lie within the Valley (with the exception of Wangkatjunga). Although all of these languages are still known and spoken by the oldest generations in the Valley, they are not the everyday languages in which people communicate with one another most of the time. That role is played by Fitzroy Valley Kriol, the lingua franca of the region (see McGregor 2004 for a comprehensive overview of Kimberley languages past and present).

It is important to note that the question on language that was asked in the survey is not the same as the question asked in the 2006 census about language use. The form of the census question was: 'Does the person speak an Aboriginal or Torres Strait Islander language at home?' Thorburn (Morphy et al. 2007: 164) has discussed the difficulties that people had with this question: 'this is because belonging to a language group has become a marker of political identity, to an extent, particularly in terms of traditional ownership of country'. The question, was also sometimes interpreted as 'meaning "Can you speak language, and if so, which one?"... In any case, answers to this question were not consistent across interviewers, and some tended to write down "Kriol", the most accurate answer for the majority there'. In training the interviewers for the 2009 Project survey reported here, it was emphasised that the question was about a person's identity rather than about language use. As a result, only a handful of people responded with the answer 'Kriol'.

Language group identity, then, does not primarily concern the language that most people speak most of the time. From the patterns that emerged in the survey data there seem to be several aspects to language group identity.²³ The first is ancestry. People identify with the language group(s) of the people from whom they are descended. There is a bias among adults towards identification with the language of their father's side, but many people put themselves down as having two or even three language identities, with mother's and mother's mother's language group also serving as a source of identity. For children, there was often a bias towards the language group of their mother.

A statement about language identity is also a statement about one's relationship to the country to which that language belongs. This became clear in the survey data with some people who were counted in more than one place. Their language identity sometimes varied according to the place where they were counted. At a place that belonged to their father's language group they tended to be counted as belonging to that language group, and at a place which belonged to their mother's language group they tended to be identified with that group. There is another kind of relationship to place that can play a part in a person's identity. If someone spent much of their childhood in the country of a group that was not their own, they sometimes gave the language group of that country as part of their language identity.

Fig. 6.1. Language group identity in the town communities, Fitzroy Crossing, 2009



Source: Fitzroy Valley Population Project database.

In the analysis below, the data on people's first and (if mentioned) second language group identification are used. The description of patterns across the Valley returns for convenience to the divisions set out in Section 5: Fitzroy Crossing itself, the 'outer suburbs', the 'west and south', the 'north', the 'middle east' and the 'far east'. However, Bungardi is included here with the town communities rather than in the outer suburbs, since it is included in the Fitzroy Crossing Town Plan.

The Fitzroy Crossing communities

Fig. 6.1 shows the distribution of language groups in each of communities in Fitzroy Crossing. The communities are organised roughly in geographical relationship to one another (Junjuwa should be to the north of the Town Site).

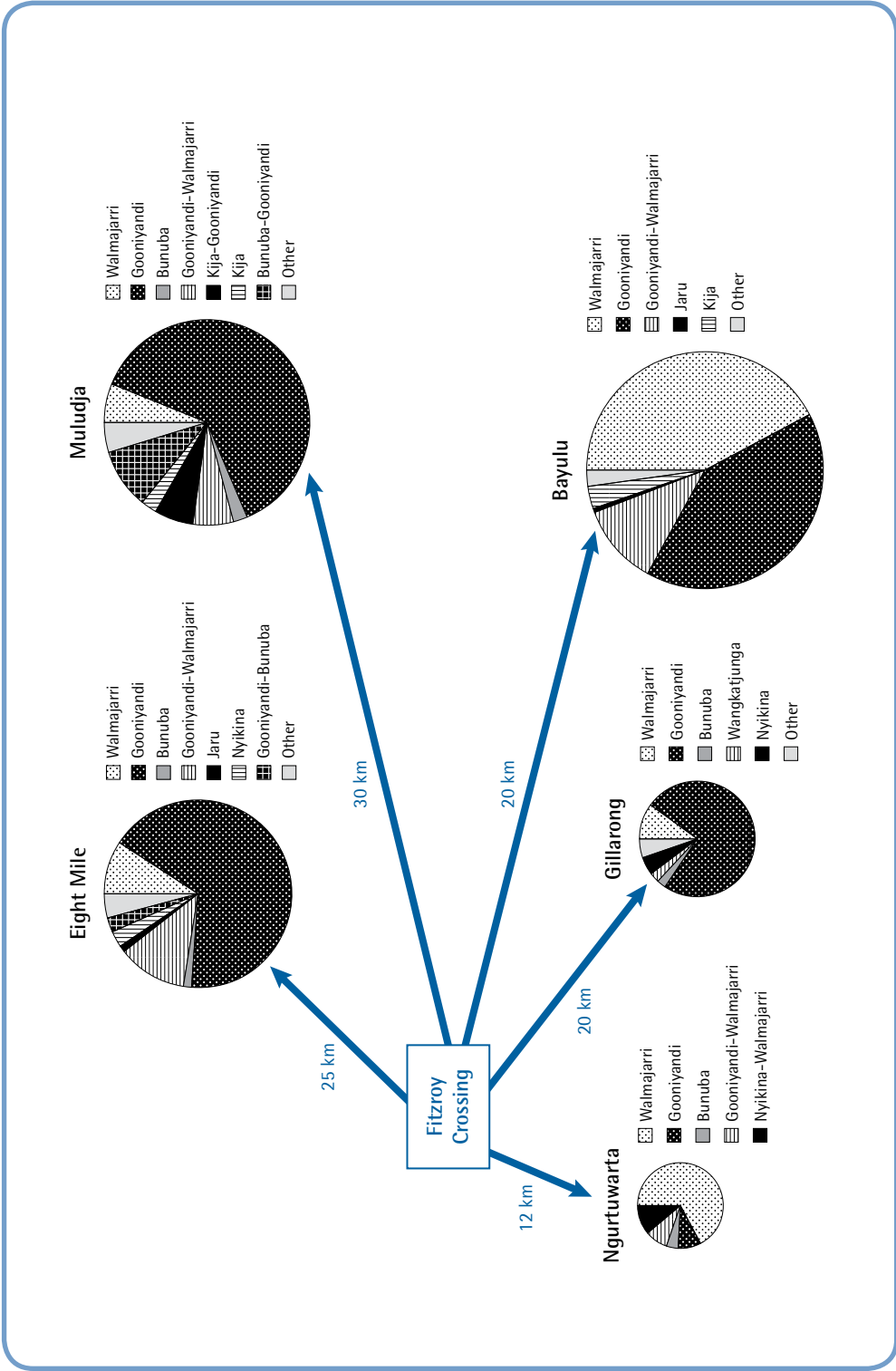
Although there is ample evidence of kin networks that encompass more than one language group, the pattern remains clear. Bunuba predominate in the communities to the north of the Town Site, and to some extent in the Town Site itself. Walmajarri are present everywhere except Loanbun, but predominate in the two communities to the south of the Town Centre—and on the opposite side of the main highway. Gooniyandi are present everywhere, but only predominate at Loanbun, to the south-east of the Town Site. Wangkatjunga hardly figure at all except at Mindi Rardi. Nyikina presence is minimal and is confined to the Town Site.

A comparison with Map 3.2 shows that people are tending to live in the part of town that is closest to their own country, along with their relatives from other language groups. In effect, the town looks like the Valley in microcosm. Bunuba, of course, are on their own country, but they are concentrated in the part of town that lies closest to the rest of the Bunuba estate, to the north and north-west of town. The Town Site itself is quite heterogeneous, a meeting place of all. The significant 'Other' category includes Indigenous people from other parts of Australia who are working in a variety of government and non-government agencies in the town, and a few non-Indigenous people who are living in predominantly Indigenous households. Some language groups from outside the Valley have a presence in some communities, notably Kija and Jaru, languages from the Halls Creek area.

The 'outer suburbs'

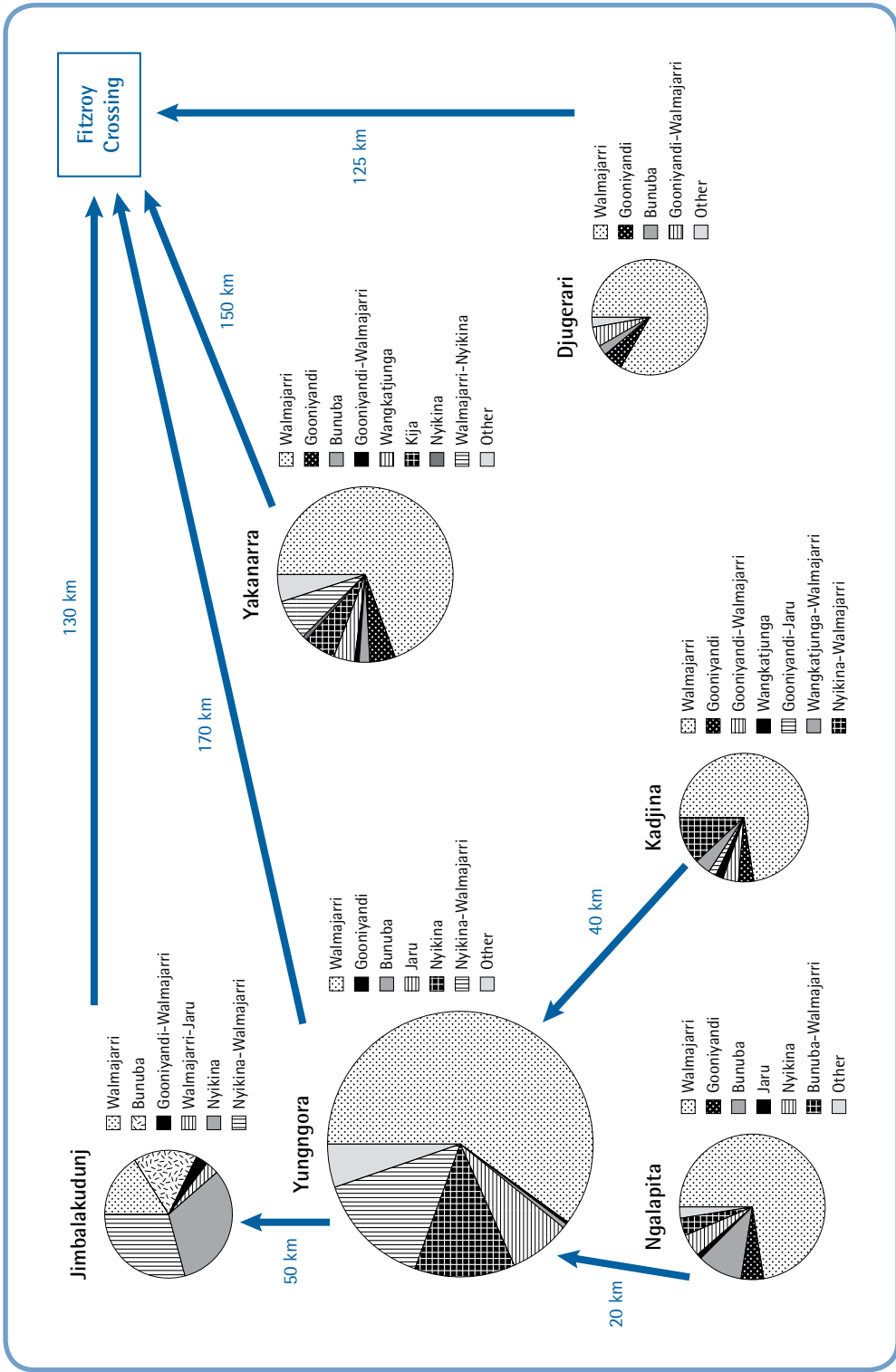
Fig. 6.2 shows the distribution of language groups within the 'outer suburbs' (for reasons of space the very small communities at Gogo station, Purluwala and Karnparmi are not shown). All of these communities, with the exception of of Ngurtuwarta, are to the east of town. In these 'eastern suburbs', the Gooniyandi language group predominates everywhere with the exception of the large community of Bayulu, where people of the Walmajarri language group occur in almost equal numbers. The south western community of Ngurtuwarta is predominantly Walmajarri. Once again, a comparison of these communities with Map 3.2 reveals a connection between the location of the community and the predominating language group. In the case of Walmajarri, their main 'outer suburban' bases, Bayulu and Ngurtuwarta, are on the side of town that

Fig. 6.2. Language group identity in the 'outer suburbs', Fitzroy Crossing, 2009



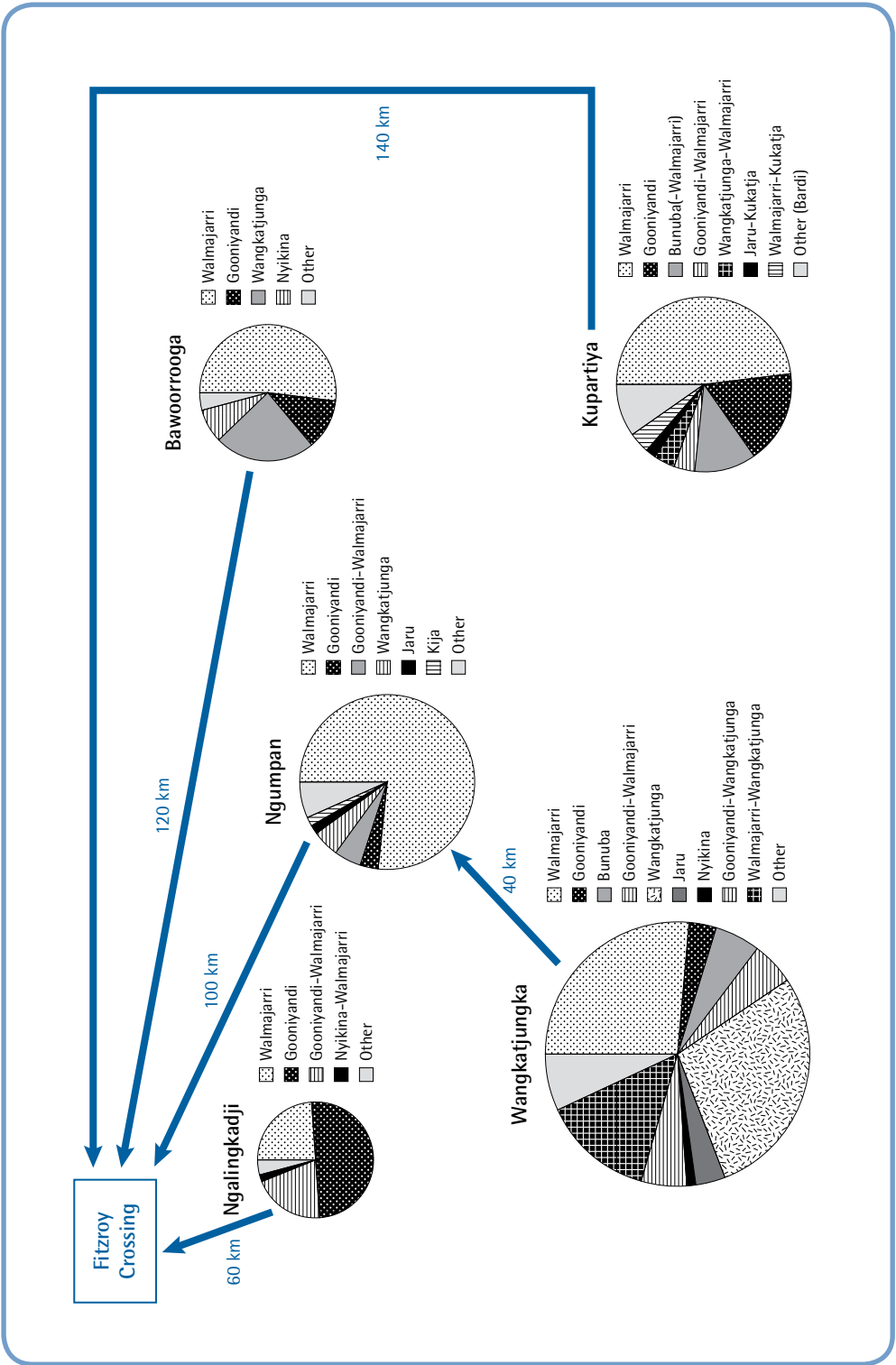
Source: Fitzroy Valley Population Project database.

Fig. 6.3. Language group identity in the communities of the south and west, Fitzroy Valley, 2009



Source: Fitzroy Valley Population Project database.

Fig. 6.4. Language group identity in the communities of the 'middle east', south of the highway, Fitzroy Valley, 2009



Source: Fitzroy Valley Population Project database.

is closest to their own country. Kija people are present in small numbers in the more eastern communities of Eight Mile, Muludja and Bayulu. Nyikina are present in small numbers in the more western communities of Ngurtuwarta, Gillarong and also Eight Mile.

So far, it would appear that the Valley's view of itself as expressed in Map 3.2 is based on a sense of who is the majority population in each community, with the exception of Bayulu and Ngurtuwarta. Bayulu is probably characterised as Gooniyandi because it is unambiguously on Gooniyandi country near its border with Bunuba country, and it is also a major settlement, in terms of numbers, for the Gooniyandi language group. In many respects, as noted earlier, it should be viewed as a Gooniyandi (and Walmajarri) suburb of Fitzroy Crossing, since it is very close—only 20 kilometres from the town centre along the main highway. The predominantly Walmajarri identity of Ngurtuwarta follows the logic of geography, since it is on the other side of the river from Gillarong and Bayulu, towards the Walmajarri side. However, it is basically in the border zone between these two language groups, and may be that it is always a mixed community and that Gooniyandi predominated there at the time that the Nindilingarri map was drawn up.

The west and south

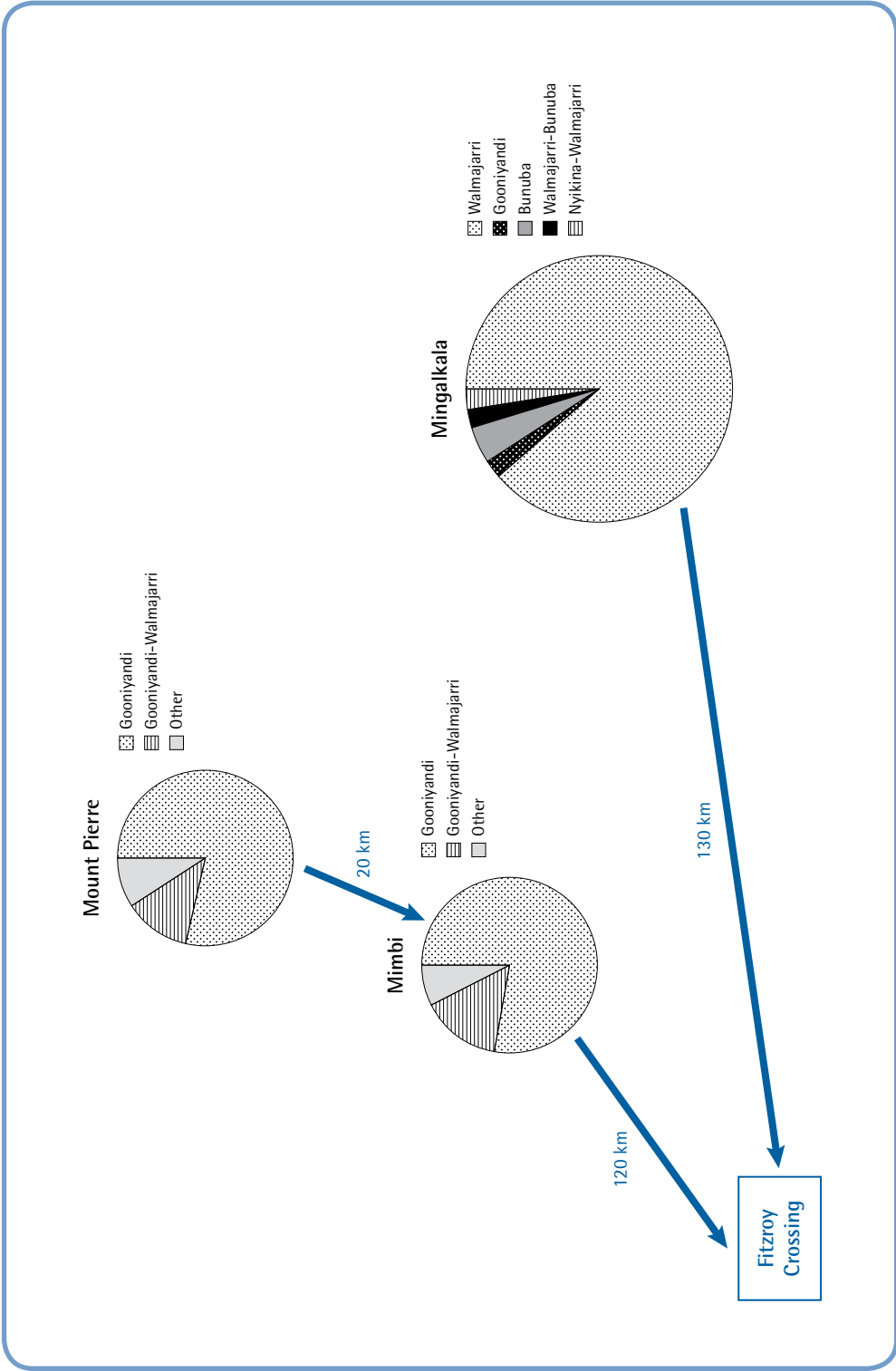
Fig. 6.3 shows the distribution of language groups in the communities to the south and west of Fitzroy Crossing (excluding, for reasons of space, the small communities of Bidijul and Parkal Springs). By and large the data concurs with the Valley's sense, as shown on Map 3.2, that this is the predominantly Walmajarri zone of the Valley. Both Yungngora and Jimbalakudunj could be described as mixed Walmajarri–Nyikina communities, with Yungngora more predominantly Walmajarri and Jimbalakudunj more predominantly Nyikina.

Although the community map puts Wangkatjunga and Walmajarri together, there is little sign of a Wangkatjunga presence in this part of the Valley. There is a small presence only at Kadjina and Yakanarra. Map 3.2 seems to put them together as the people of the south of the Valley (with connections to the desert). It would appear, however, that these two groups have rather different distributions in the Valley. The presence of small numbers of Bunuba and Gooniyandi people in this part of the Valley, and even Jaru at Yungngora, again indicates a degree of kin connection across language group boundaries which does not, however, obscure the predominant patterns of distribution.

The 'middle east'

Fig. 6.4 shows the communities in this group that lie south of the main highway (with the exception of Gilly Sharpe), and Fig. 6.5 shows those to the north of the highway. The communities to the south of the highway (Fig. 6.4) are in what is traditionally Gooniyandi country, but there is considerable Walmajarri presence. On Map 3.2, most of these communities are designated as Walmajarri–Wangkatjunga, and this is certainly true of the large community of Wangkatjungka, where the majority of those identifying as Wangkatjunga live. To a lesser extent it is true also of three of the smaller communities of Bawoorrooga, Ngumpan and Kupartiya. Gooniyandi are also present, but it is only at Ngalingkadji, designated as Gooniyandi on map 3.2, that they

Fig. 6.5. Language group identity in the communities of the 'middle east', north of the highway, Fitzroy Valley, 2009



Source: Fitzroy Valley Population Project database.

form the majority of the population (if people who identify themselves as both Gooniyandi and Walmajarri are included).

Of the three communities to the north of the highway shown in Fig. 6.5, there is one Walmajarri outlier (Mingalkala), but at Mimbi and Mount Pierre, Gooniyandi are beginning to predominate. This is reflected in the identifications of communities on Map 3.2.

The 'far east'

The communities shown in Fig. 6.6 are the group associated with Louisa Downs station (Rocky Springs and Kurinjarn are not shown for reasons of space, and because the people associated with them are also mostly part of Yiyili's mobile core). They are closer to Halls Creek than to Fitzroy Crossing. There is still some Walmajarri presence, especially at Moongardie, but it is clear that Gooniyandi is the predominant language group identity in the easternmost part of the Valley, beginning at the Mount Pierre communities of Mimbi and Mount Pierre shown in Fig. 6.5. This is reflected in the way these communities are represented on Map 3.2.

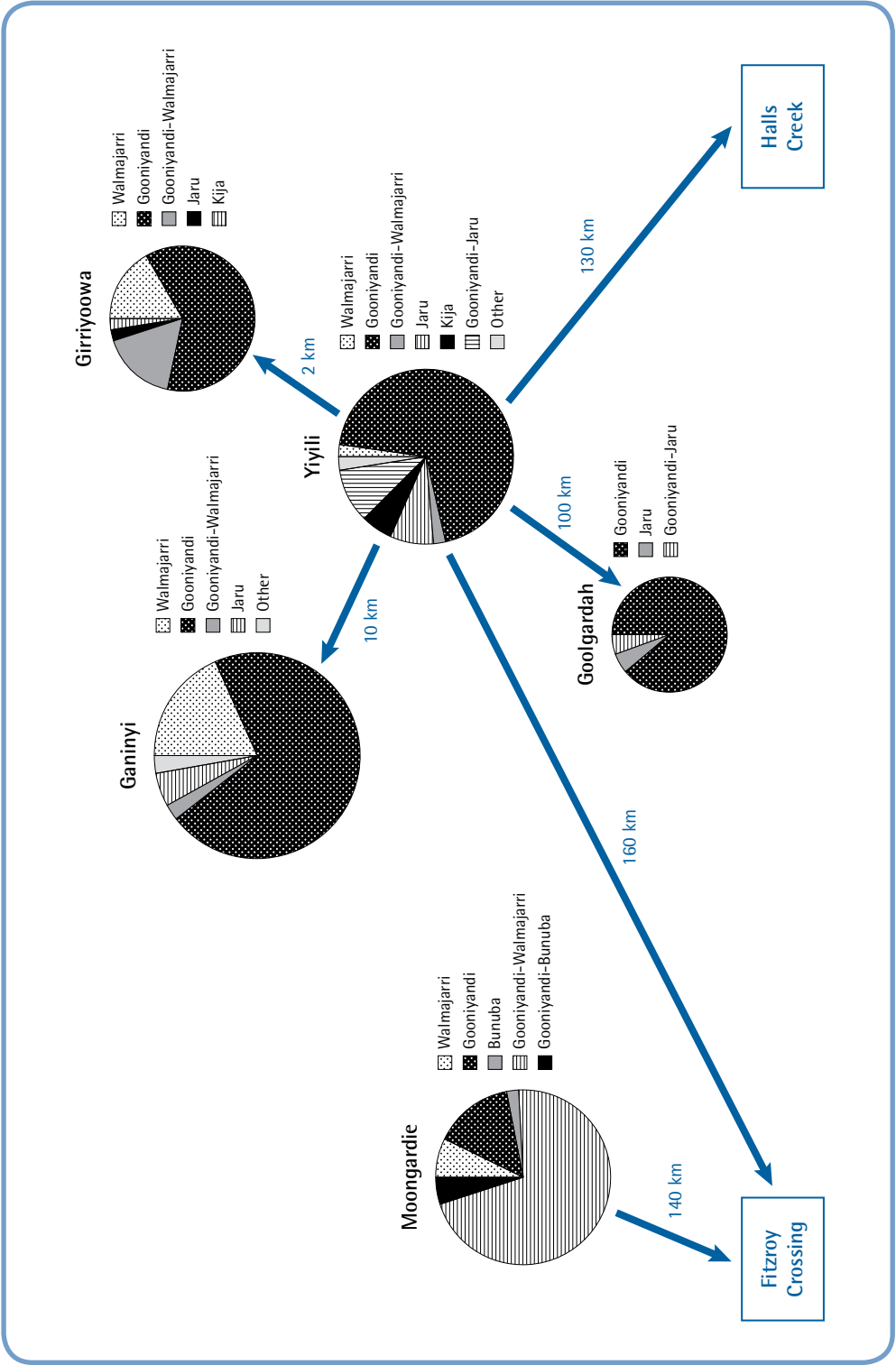
In the easternmost communities clustered around Yiyili there are noticeable numbers of people from the Jaru language group, whose traditional country lies to the east of Gooniyandi country. This parallels the situation at the western side of the Valley, where Nyikina features in the language identities of the communities of Yungngora and Jimbalakudunj. These distribution patterns reflect the fact that the boundaries around the Valley, as a region, are slightly fuzzy. The communities on its peripheries are clearly connected by culture and language group to the peoples in the neighbouring regions to the west and east.

THE LANGUAGE GROUP IDENTITY DATA: SOME CONCLUSIONS

The data from the survey is in broad agreement with the Valley's own characterisation of itself in map 3.2. The Walmajarri outnumber the other language groups and are found in numbers everywhere, but they are most concentrated in communities on their own country, or close to their own country. Because of contemporary settlement patterns the Nyikina, although their country extends eastwards towards Fitzroy Crossing, appear as a marginal western group, similar to the Jaru and to a lesser extent the Kija who feature in the easternmost communities. Of the three large groups—Bunuba, Gooniyandi and Walmajarri—the people whose distribution is most concentrated are the Bunuba, the majority of whom live in Fitzroy Crossing itself, in 'suburbs' in Bunuba country, or on the communities on the Bunuba-owned cattle stations of Leopold Downs and Milliewindie.²⁴ Wangkatjunga people, whose country lies to the south and south east of the Valley, are concentrated in Wangkatjunga in the south east and a few nearby communities. Gooniyandi predominate in the eastern part of their traditional country and are present in numbers in most of the communities on their own country.

This rather generalised picture does not address the details of the socio-spatial dynamics underlying settlement patterns. At some later stage, the Valley communities might consider the possibility of combining the data from the present survey with the very detailed information on kinship relationships contained in

Fig. 6.6. Language identity in the communities of the 'far east', Fitzroy Valley, 2009



Source: Fitzroy Valley Population Project database.

the connection reports of the Valley's native title claims to produce a more detailed picture. Density of kinship networks at levels below that of language group identity is one of the factors influencing where people live and therefore the composition of the Valley's communities. Indirect evidence of this comes from the variations between communities in the presence of members of other, non-predominating, groups. This indicates differential patterns of marriage alliance at the level of the extended families within the broader language groupings.

7. THE PEOPLE OF THE VALLEY: PATTERNS OF MOVEMENT AND CONNECTION

Mobility is the final topic to be considered, for two reasons. First, although the question of mobility preoccupies both researchers and policy makers, putting mobility first is putting the cart before the horse. At any one point in time the majority of the population is 'at home' in a particular place, and mobility is only one of the factors that influences the size and composition of communities. Second, this population study was not designed as a study of mobility, and the data do not support anything but a very broad-brush picture of mobility. However, an understanding of different kinds of mobility within the Fitzroy Valley, and to and from the Valley is necessary for a complete picture of the Valley communities, including their differences from and connections to one another.

KINDS OF MOBILITY IN THE FITZROY VALLEY REGION

Mobility in the Fitzroy region is a complex phenomenon because it is driven by a range of factors and happens at a range of time-scales. Some types of mobility are highly predictable, while others are contingent on unpredictable events.

Predictable short-term mobility. This survey took place before the fire on 8 July 2009 that destroyed Fitzroy Crossing's shopping centre, containing the supermarket and the post office. On Thursdays and Fridays, it was completely predictable that this area of town would be buzzing with activity, as people from outlying communities came in to do their weekly shopping or to collect their mail, pensions or other welfare transfer monies.²⁵ Some would stay on in town for the weekend, especially during the footy season, since the Valley's team competition took place on the town oval. This type of movement was not captured in the survey.

Semi-predictable seasonal movement. Wet-season flooding of the Fitzroy River and its tributaries both limits movement and compels some people to move from outlying communities into Fitzroy Crossing or another large community for most of the duration of the wet. Lack of weatherproof housing in some communities is also a factor. For some communities this is a largely predictable annual occurrence; for others it is contingent on the severity of flooding in any particular year. The survey collected data on movement during the wet season, and on where people were most likely to go if they left their home community. In the dry season, people tend to return to their home bases, and there is also dispersal of some family groups to

more far-flung, small, outstation or 'block' locations (including the small desert outstations that were not visited during the survey).

Semi-predictable, work-related, seasonal movement. The local pastoral industry on both Aboriginal and non-Aboriginal owned cattle stations is a significant driver of seasonal mobility. A number of people work as station hands during the mustering season. Some of these are people who live in Fitzroy Crossing most of the rest of the time. Some communities on Aboriginal-owned cattle stations are primarily station communities, and they may take on extra hands from their available pool of relatives living in or near the Valley during this time. The members of some communities undertake contracts for mustering, fencing and related activities, and this sometimes entails mobility away from their home base. There are also cases of people who move to town, or close to town because of employment (or move out of the region for the same reason).

Less predictable mobility, contingent on kin-based sociality. This type of mobility is driven by the kin-based nature of the social universe. The most common reasons for leaving a home community to 'stop' elsewhere, for varying periods of time, include attending funerals or other ceremonies and going to have a holiday with kin in another community. Although such movement is often contingent on other events, it is not random. It is highly patterned by kinship networks. The data on the active peripheries of communities yields some information on these patterns. So too does the information collected on places where people said they sometimes went to stay. These data will not be discussed in this report, but will be addressed in a later publication.

Less predictable mobility, connected to the individual's life-cycle. The data show that people are more likely to be part of the stable core in their later years, and most likely to be mobile between places in their late teens and early twenties. But since the survey has no longitudinal component, the data only comprise a snapshot of this kind of mobility at one point in time.

Different kinds of mobility have different implications for the future of regional development. Given the climate, topography and economy of the Valley, it is safe to say that seasonal factors are unavoidable, and will always play a major role. Newer industries such as tourism are just as susceptible to seasonality as the pastoral industry. Both communities and government agencies need to plan with this in mind. This section concludes with a general discussion of seasonal mobility.

MOBILITY RELATED TO THE WET SEASON

Only one of the larger outlying communities, Ngalapita, undertakes wholesale evacuation during the wet season. Like many other communities it is cut off from the main highway and thus from Fitzroy Crossing, but in addition its airstrip is four kilometres from the community and cannot be reached for long periods during the wet. Only two or three of the older men stay out in the community for the duration. Nearly everyone else goes into town, substantially increasing the wet season populations of Junjuwa and Kurnangki, where people have relatives. Five households comprising a total of 27 people said they moved to Junjuwa during the wet, and four households comprising a total of 36 people said that they moved to Kurnangki. Two

small households said that they went to Bayulu, and one household of five people said that they went to Yunggnora.

In every other community that is cut off during the wet season, there are at least a few people who move into town or into Bayulu so that they are within reach of the hospital. There are also some communities, such as Muludja, where flooding occasionally forces a temporary evacuation into town. The regularity and predictability of these occurrences suggest that some attention needs to be paid to the provision of temporary wet season accommodation in Junjuwa, Kurnangki and Bayulu.

Finally there are some outlying communities where there is, quite simply, no accommodation that is suitable for the wet season. These include the communities of Rocky Springs, Goolgardah and Kurinjarn. As noted earlier, the majority of the people from these communities spend the wet at Yiyili.

MOBILITY RELATED TO DRY SEASON ECONOMIC ACTIVITY

Until recently, work-related mobility occurred mainly in relation to activities in the pastoral industry surrounding the mustering season. Increasingly, however, small tourism ventures are beginning to exert a similar effect. It is interesting to note that on Aboriginal-owned stations that contain sites with tourism potential, or that are close to such sites, different communities on those stations have begun to differentiate their roles. On Leopold Downs, the Galamanda-Yaranggi community is primarily involved in the cattle industry, while Biridu is concentrating on tourism. On Mount Pierre station, Mount Pierre (Galeru Gorge) is the station community, while Mimbi focuses on tourism. On Louisa Downs, Ganinyi is primarily concerned with station activities while Yiyili, in addition to being the service hub for the communities on the station, has a tourist attraction in the form of its art centre.

The small permanent station communities tend to have augmented populations during the dry season, with relatives from Valley communities or even from outside the Valley coming for seasonal work. The larger communities, such as Yunggnora, tend to draw their seasonal station labour from their own populations. Mustering or related contracts on Valley stations sometimes result in the temporary movement of whole communities for the duration of the contract. Mingalkala, for example, was empty during parts of the 2009 dry season for this reason. Communities with tourism ventures may be permanently occupied (Mimbi and Burawa) or seasonally occupied (Biridu).

CONCLUSION: MOBILITY AND THE TRAJECTORY OF VALLEY SETTLEMENT PATTERNS

At various points in this report, it has been suggested that the present pattern of settlement in the Valley has resulted from a process whereby, as communities grow in size, a tendency to fission emerges. Extended family groups split off from the larger communities to form new, smaller settlements. The dynamics of this process could be the subject of another research project; the survey data can only hint at its outlines. The underlying drivers for such a process of fission are complex. They are partly to be found in the system

of kin-based values, to which many people become increasingly committed as they approach core status. All things being equal, core individuals prefer to live in small communities consisting of members of their extended family, where a kin-based system of governance functions effectively. For such core individuals and the communities that they build around themselves, circular mobility and mobility motivated by kin-based sociality are the means by which connections to their wider kin networks and to other communities both inside and outside Fitzroy Crossing are maintained.

The placement of new small settlements is also significant. In Section 6 it was shown that maintaining connection to country appears to be a pervasive underlying motivating factor. There are constraints on expansion into new areas, the most evident of which is the distribution of ownership of cattle stations in the Valley. The proliferation of settlement on Aboriginal-owned stations, and the lack of settlement on certain of the other stations of the Valley is no coincidence. On the Aboriginal-owned cattle stations the emerging pattern is one of economic engagement both with the pastoral industry and with the more recent tourist industry. The growth of ranger programs and land management activities will add to this emerging economic base. Here, mobility functions to distribute the population seasonally as workers are required.

There are, of course, some factors pulling in the opposite direction. Many people, at particular periods in their life cycle, or for particular reasons, prefer either a mobile lifestyle or to live in one of the larger communities, or in Fitzroy Crossing itself. Reasons include access to amenities or services not available in the smaller places, and, for younger people, the company of their peer group. The availability of work in Fitzroy Crossing influences a certain sector of the population to base themselves primarily in town or at Bayulu. But those who are from the Valley also maintain connections to their country and their kin on communities through their mobility practices.

It might be argued that these patterns are undergoing a generational shift, that today's mobile and town-based young people are on a new trajectory, so that they will not make the same transition to 'core' status that their elders have done. Only time will tell, but there are some contra-indications, even in a snapshot such as the data gathered in this survey. There is no evidence that, as a cohort, people in their teens and twenties are more town based than other age cohorts, or that they are leaving the Valley in large numbers. As a cohort, children under 10 years old are generally under-represented in large communities, including all the large town communities except for the Town Site itself. This suggests that people of child-bearing age are implementing a preference for raising children on country in the smaller communities, in the midst of their extended family. Many things would have to change to completely overturn this resilient and adaptable social system, and the values that underpin it.

8. CONCLUSION: A SUMMARY OF THE MAIN FINDINGS

This conclusion is intended as an executive summary of the findings and recommendations presented in the main body of this report. Recommendations for further research are in italics.

REASONS FOR UNDERTAKING THE PROJECT

There were three main reasons for undertaking this research project at the behest of the Fitzroy Futures Forum:

In response to the acknowledged undercount of Western Australia's remote Indigenous population in the 2006 National Census, to achieve an accurate and complete count of the Valley's Aboriginal population, according to the basic demographic characteristics of age and sex.

To provide a baseline population for the Valley as it defines itself. Because the boundaries of this region do not coincide with those of local government, or of the census geography, it is difficult to extract data from the census and from administrative datasets that refer unambiguously to the Valley population.

To provide an overview of the nature and dynamics of settlement patterns in the Valley in terms of categorisations that are culturally relevant to the Valley's Aboriginal people—that is, to put the 'people' into the 'population'.

The results of the survey should be seen, therefore, as a baseline measure, a tool for planning, a way of making visible the social dynamics driving settlement patterns, and a platform for more detailed and focused research projects.

METHODOLOGY AND CONCEPTS

As with the census, the basic data collection was via a survey of dwellings. However, social categorisations employed in the census do not allow for the description of any social unit above the level of the dwelling. Aboriginal settlement patterns and patterns of mobility in regions like the Fitzroy Valley are structured by kinship networks that are anchored in place by core individuals. The following general characteristics of households and communities can be identified:

- People who live together in a dwelling will nearly always be related to one another.
- The composition and size of households can vary substantially through time, and are liable to frequent change.
- These characteristics also hold true at the level of the community, particularly in the case of small communities.

The census categorisation of relationship to place, which allows only for the possibility of 'resident' or 'visitor', is inadequate as a tool for understanding the ways in which Aboriginal people relate to place and move between places. The following layers of association to place are revealed by the survey data:

The stable core population, which consists at the community level of people who counted only one place as home and who stayed there most of the time. At the regional level it consists of people who may be residentially mobile within the Valley, but for whom the region is their home region.

The mobile core population, which consists of people who were counted as having more than one home community. Reasons for 'circular' mobility between communities include family attachments and responsibilities, and seasonal factors. This is the category that is least adequately captured by census categorisations.

The active periphery population, which consists of people who are regular visitors to a community but who are considered to have their home elsewhere, either in another Valley community or outside the Valley. Some very mobile individuals are classified as active periphery everywhere that they are mentioned. Again, the census categories 'resident' and 'visitor' are inadequate to capture the nature of these people's relationship to place; the category 'homeless' is also inaccurate.

The inactive periphery population consists of people who were not counted in the survey, but who appear in administrative datasets. Some had acknowledged ties to the Valley, but were considered unlikely to return.

It was noted that on commonly-used maps of the Valley, such as that produced by Nindilingarri Cultural Health Services, the Valley communities are colour-coded according to language group identity. The survey gathered information on people's language group identity in order to compare the results with the Nindilingarri map.

THE DEFINITION OF THE VALLEY

Essentially, the survey accepted the Valley's self-definition in terms of the set of communities that it was said to contain. It is notable that no two maps contain exactly the same set of communities; some show places that are not currently inhabited; some do not show the most recently established communities. A handful of seasonally occupied small desert communities were not surveyed, and information on the people with connection to them is not complete. Most are mobile core residents of other communities within the Valley. Although it does not appear on any map of the Valley, the community at Munmural on Milliwindie station was included when it became clear that people from the Valley formed a proportion of its mobile core during the mustering season.

THE VALLEY AS A POPULATION

The Valley was found to have a total core population of 2,773 people, of whom 2,679 formed the stable core. The active periphery of the Valley was counted at 163 people. This is probably an undercount, since absent members of the active periphery are more likely to be forgotten by those present at the count than are absent members of the core. Taking these three categories together—stable and mobile core, and active periphery—there is a pool of just under 3,000 people who are likely to be in the Valley at any point in time. Of these, just over 2,600 were actually present during the count.

As with other Indigenous regional populations, the Fitzroy Valley population is young, with evidence of high fertility, but also of high mortality among adults from about the age of 40 onwards. The population is likely to continue growing substantially, building on an estimated average growth rate, between 1986 and 2009, of just over 2 per cent per annum.

By comparison with the core population as a whole, the age structure of mobile core suggests that circular mobility is most characteristic of people in their late teens and early twenties. People over the age of 55 are hardly represented in the Valley's mobile core population. The age structure of the Valley's active periphery population reinforces this picture.

Notable reasons for the absence of core individuals from the Valley included imprisonment (particularly among adult males), boarding school, and hospitalisation, including people who are more or less permanently absent because they are dialysis patients. Very few people were recorded as being absent because of work or in pursuit of training or further education.

Recommendation: The three main categories of 'absentees' could usefully be the subject of more focused and detailed research.

POPULATION CHARACTERISTICS OF THE VALLEY COMMUNITIES

Only the characteristics of the stable and mobile cores of communities were considered in detail. On average the composition of the core population of each community was 80 per cent stable core and 20 per cent mobile core.

The relationship between communities in the Valley can be described in terms of a 'hub and spokes' or 'hub and satellites' model. Fitzroy Crossing is the regional hub, and certain communities within the town function as hubs with respect to different areas of the Valley. In addition there are several sub-regional hubs with their own smaller sets of satellite communities. These are, from west to east, Yungngora, Bayulu, Wangkatjungka and Yiyili.

These hub communities (including those communities in Fitzroy Crossing that function as hubs, notably Junjuwa and Kurnangki) share two characteristics: all have fewer children under 10 as a proportion of their population than does the Valley as a whole, and all except Bayulu have a notable 'bulge' in either the

15-19 age cohort, or the 20-24 age cohort, or both. This is suggestive of lifestyle choices, in which families are preferring to raise small children in the smaller communities, and teenagers and/or young adults are preferring to live in more sizeable communities where they have a peer group.

Recommendation: These 'lifestyle preferences' could be the topic of further research.

All communities (except one) with under 40 core members have come into existence since the mid 1980s, and all communities (except one) with over core 55 members were already in existence in the mid 1980s. This suggests a pattern of progressive dispersal over time, with family groups splitting off to form new small communities as the large communities reach a certain size. Many of these small settlements have become permanently occupied communities with their own stable cores, while others are seasonally occupied.

The separate communities within the town of Fitzroy Crossing are less similar to one another than they are to other communities of similar size elsewhere in the Valley. Nor is there much evidence of movement between the town communities. Although they have been separated as a 'town' group for the purposes of description, it would probably be more revealing to consider them as discrete communities. The four smaller communities resemble the small satellite communities of the Valley, whereas the larger ones resemble the sub-regional hub communities. The Town Site area, with its mixed population, is rather different in character from any of the other communities in the Valley, including the other 'town' communities.

CULTURAL CHARACTERISTICS OF THE VALLEY COMMUNITIES

Settlement in the Fitzroy Valley, and also in the communities within Fitzroy Crossing, is strongly patterned by language group identity. Of the major language groups:

Bunuba are concentrated on their own country in the town hub community of Junjuwa, the smaller town communities to the north of the town site, and on the small communities on Leopold Downs station.

Gooniyandi are concentrated on their own country at the hub community of Bayulu, and in the communities of the eastern part of the Valley, particularly north of the highway and in the 'far east'.

Nyikina are concentrated in the westernmost part of the Valley, at Yungngora and Jimbalakudunj, and have clear connections to communities further west, particularly Looma.

Walmajarri is the largest group in the Valley, and Walmajarri people are found in numbers everywhere. They predominate in the communities on their own country and at the town communities of Kurnangki and Mindi Rardi. They are also present in numbers in communities on Gooniyandi country in the 'middle east' of the Valley, particularly south of the highway and at Bayulu.

Members of these four language groups are the traditional owners of the Valley region. The final group, Wangkatjunga, are people of the Great Sandy Desert. They are largely living at Wangkatjungka and nearby communities—that is, in the area of the Valley closest to their traditional country.

The Nindilingarri map (3.2) conflates Walmajarri and Wangkatjunga in its assignment of language group identity to communities. In most other respects, however, it is clearly based on a sense of which language group forms the majority population in each community.

Recommendation: The details of the socio-spatial dynamics of settlement patterns could be a subject of future research, in which these broad-brush survey data are collated with the much more detailed information on kinship networks that has been collected in the context of the Valley's native title claims.

PATTERNS OF MOVEMENT AND CONNECTION

Population mobility in the Fitzroy Valley is patterned by both socio-cultural and environmental factors, and happens at a range of timescales. The following types of mobility are evident:

Predictable short-term mobility as a result of the need to access goods and services in the hub communities. This type of mobility was not captured by the survey.

Semi-predictable seasonal movement as a result of flooding or the unsuitability of housing in some communities for wet season conditions. Such movement results in the concentration of the population into the larger and/or more accessible communities during the wet, and the dispersal of the population into the smaller more remote communities in the dry season. Movement of particular families or individuals is patterned by kin connections.

Semi-predictable, work-related movement due to the seasonal nature of work in the pastoral and tourist industries, and also, increasingly in land management activities. Movement of particular families or individuals is once again patterned by kinship connections. Since the dry season is the peak work season in all these sectors, this is an additional factor in the dry season dispersal of the population.

Less predictable mobility, related to the system of kin-based sociality, commonly in response to contingent events such as funerals, family disagreements, the need to fulfil family obligations or simply the desire for a 'holiday'. Such mobility is also highly patterned by kin connections.

Less predictable mobility dependent on individual life-cycles where the emerging pattern shows individual mobility to be highest in cohorts of people in their late teens and early adulthood, and lowest in late adulthood.

Population mobility and settlement patterns within the Valley can be seen in part as an adaptive contemporary response to the topography and climate of the Valley, and the consequent structure of the Valley's economy. The kin-based nature of the social universe facilitates and patterns mobility, and motivates the location

and structure of Valley settlements. These factors need to be taken into account in considering the future development of the Valley. Attempts to recentralise the Valley population into a few, larger communities would result in constraints on adaptive mobility. It would also run counter to the pattern of settlement that has been established over the last few decades and to the system of social value that underpins this pattern.

NOTES

1. The term 'Indigenous' is used when referring generally to the Aboriginal and Torres Strait Islander population as a whole. The presence of Torres Strait Islanders in the Fitzroy Valley is negligible, so the term 'Aboriginal' will be used when referring to the peoples of the Valley.
2. We cannot know precisely what percentage of the Fitzroy Valley's population was not counted, because the ERP undercount estimates are released only at the level of the Shires. However the ERP for Derby Shire was 17% higher than the census and this can be used as a rough guide. The difficulty of comparing the census count with the Population Project count is compounded by the fact that the former took place in 2006 and the latter in 2009. So comparing the two requires yet another calculation involving an estimated rate of population growth for the period 2006–09.
3. The term 'settler' is used rather than 'Euro-Australian' because many people who came to Australia during the colonial period were not of European origin. This is certainly true of the Kimberley region.
4. The coding by language group has since been reproduced in a more recent map of the Valley communities produced by Karrayili Adult Education Centre. The Karrayili map, updated in August 2007, includes Gilly Sharpe, Rocky Springs, and several small desert outstations that are not included on the Nindilingarri map (Map 3.2).
5. Some of the town communities were previously serviced by Bunuba Inc., see Thorburn (2007: 74).
6. Purluwala is located between Bayulu and Karnparmi. It is named after a place in the desert to the south that features as an outstation on some local maps.
7. In 2006, the ABS had two different enumeration strategies for the predominantly Indigenous and the predominantly non-Indigenous parts of town. For a detailed analysis of the resulting problems and confusions see Thorburn (2007).
8. There are several small outstations in the desert to the south of the Valley that appear on some maps of the region. These are Yari Yari, Djilimbardi, Kurlku, Purluwala, Ngarantjadu and Jilji Bore. These places were not visited, and the information gathered on them is very incomplete. They have not been included in this study. None are occupied in the wet season. Arthur mentions Kurlku as 'an outstation group from Bayulu and Junjuwa' (1990: 39), and Ngarantjadu as an outstation from Wangkatjungka (1990: 40).
9. Some quite long-established blocks have never been allocated permanent housing. For example, Bawoorooga, which has been in existence for at least a decade and has a core population of 27 people (and a large active periphery), has no permanent dwellings. The people there live in a series of dongas and sheds that they have acquired or built for themselves.
10. This employment of double counting as a deliberate data collection strategy is one of the most obvious points of difference from the methodology employed in the national census, where every attempt is made to avoid it. Since the census is an exercise that is national in scope, it is impossible for the ABS to check systematically for instances of double-counting. Moreover the census is only concerned with obtaining data that allows a binary classification into 'residents' and 'visitors', so the information that double-counting reveals is not considered relevant.
11. Information on names and dates of birth was made available from the following administrative datasets: the Fitzroy Crossing Communicare database, Marra Worra Worra's tenant and CDEP lists, and some data on the school-age population.

12. The giveaway is a birth date of 1 January, or, more commonly in the Valley, 1 July. It is generally the oldest generations who have these estimated dates of birth, that were conferred upon them by station managers at the request of government following the 1967 referendum (Joe Ross, pers. comm. 9 March 2010) or more recently the health system. Guwardi Ngadu old people's home in Fitzroy Crossing holds an annual First of July birthday party for the residents.
13. The survey did not explicitly investigate the reasons for absence, except in relation to prison, boarding school and dialysis treatment. It throws no light on the effects of the Fitzroy Crossing alcohol restrictions, which in any case were implemented before the survey took place, so that no comparative baseline is available. For information on the effects of the alcohol restrictions see Kinnane et al. 2009, and also Prout & Yap 2010.
14. No systematic data was collected on these questions. However, it was observed that some people were married to individuals from far outside the Valley, and that in many cases these couples had first met at boarding school. This in turn has led to an extension of the kinship networks of the individuals concerned, with consequences for their patterns of movement into and out of the Valley.
15. Bungardi, although counted as an 'outer suburb' here, is considered part of the town in terms of town planning boundaries.
16. Yungngora is bigger than any of the 'town' communities. Junjuwa, the largest of the town communities, is about the same size as Yungngora.
17. To draw an analogy with Canberra, Fitzroy Crossing could be seen as the CBD, and its associated communities as the inner suburbs, while Bayulu would be the equivalent of Woden or Belconnen, with the outer eastern suburbs as its satellite communities.
18. The same considerations apply to Parkal Springs, whose core members are mobile between Yungngora, Bayulu and Parkal Springs.
19. Four of the elderly residents of Guwardi Ngadu, the old people's home in Fitzroy Crossing, are originally from Bayulu.
20. The semi-rural properties on Yurabi Road are included in the Town Site figures.
21. Non-Indigenous people who live in predominantly Indigenous households are included in this total.
22. There were four people who are known to have moved from one dwelling to another in the Town Site area during the course of the survey. They have been counted as part of the stable core for the Town Site.
23. The question of language and group identity is a highly complex one, and this survey was not intended as an exercise in sociolinguistics. The survey data is nevertheless indicative of the importance of language identity in patterning settlement and connections between people and places in the Valley.
24. The language identity of these small communities of the 'north' has not been mapped.
25. In fact, it became clear quite early on that there was no point in attempting to survey certain communities at the end of the week, because hardly anyone would be there. On the other hand, on Thursdays and Fridays the shopping centre was the best place to go to find people who had otherwise proved elusive. One entire community was, in fact, surveyed outside the Fitzroy Crossing supermarket rather than in their home community.

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