

## AU10 Alyawarra 1818-1979: User's Manual

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Prepared: 2005

Last Revised: September 2015

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*Note: This document is a work in progress that is subject to revision. For example, population size is reported as 1454 in some places and 1460 or 1461 in others. The discrepancy occurred because I discovered and added previously unlisted people after I did preliminary computations on the n=1454 population. Since adding 6 or 7 more people will make little difference in the conclusions drawn from the data, I have not yet recomputed all of the tables to include those few laggards. Also, preliminary frequency distributions appear in many of the tables on the following pages. Most of those numbers will require minor adjustments after I finish cleaning up the data.*

## **Introduction**

### **Objectives**

In this document, I refer frequently to two Alyawarra datasets. The AU01Alyawarra1971-72 dataset is based strictly on my field research with the Alyawarra speaking people of Central Australia in 1971-72. The AU10Alyawarra1818-1979 is a major expansion of the earlier dataset generated by adding data for more than 1000 previously unknown members of the population that were identified through archival research. Both datasets are available online in the Alyawarra Ethnographic Archive at <http://www.culturalsciences.info/> and in the KinSources Archive at <https://www.kinsources.net/>.

Here I provide a conceptual introduction to the AU10Alyawarra1818-1979 data file and the population to which it applies, outline the file structure and codes used here, and describe the procedures used to generate some of the attribute variables. By explaining these features, I hope to suggest or imply a great many ways in which you can use the AU10 dataset in pursuit of your own research with the Alyawarra, with Central Australian Aboriginal people in general, and with hunter-gatherer societies worldwide.

This project had its inception in my 1969 doctoral dissertation research proposal in which I set out to create a computer analyzable numerical database concerning social behavior of the Alyawarra speaking people of Central Australia living at MacDonald Downs Station in 1971-72, and make it available worldwide in an electronic format. Between 1969 and 1982, I did a great deal of work on the Alyawarra project, but in 1982 I burned out. Between 1982 and 2000, I did virtually nothing with the Alyawarra data except wait patiently for the technology to catch up with me. Between 2000 and the present, I have achieved my objective of making all of my Alyawarra material available on the Internet. The numerical database, all other materials I collected and produced during the fieldwork, and the published and unpublished results of the project including papers cited here are available online at the Alyawarra Ethnographic Archive (AEA) at <http://www.culturalsciences.info/>.

Using data from the National Archives of Australia and other sources, I have expanded the 1971-72 AEA numerical database to include a great deal of additional vital statistics (VS), genealogical data (GD) and census data (CD). The expanded dataset spans the period from 1818 until 1979, and encompasses virtually all relevant inhabited areas in the southeastern quarter of Australia's Northern Territory.

The expanded dataset places the small Alyawarra population at MacDonal Downs Station in 1972 into a much broader geographical and historical context. It deals as evenhandedly as possible with every known location where the Alyawarra resided within the region enclosed by the Queensland border on the east, the Plenty River on the south, the Stuart Highway on the west, and the Barkley Highway on the north. And it extends the coverage from a single point in time (1971-72) to a period of a century-and-a-half, from 1818 to 1979.

This version covers virtually the entire Alyawarra population including those residing in the northern part of Alyawarra territory that lay outside of the area in which I conducted my fieldwork. It thereby clarifies many known genealogical relationships that were severed in 1972 by my arbitrary placement of boundaries around the earlier dataset, and places the Alyawarra firmly in the context of longstanding patterns of inter-marriage with other linguistic groups in Central Australia. It deals in considerable detail with the entanglement of dialects, sections and subsections at the turbulent boundaries between groups, in conditions that may be viewed – on the basis of aesthetic as well as scientific considerations – both as shatter zones where things fall apart and as growth points where new possibilities emerge.

Between 1923 and 1979 the Alyawarra made the transition from living as traditional Central Australian hunter-gatherers to living in close proximity with Europeans colonizers who established homesteads, introduced alien technology and domestic animals, and in many ways imposed an alien way of life on them. Concurrently they began to abandon both their hunter-gatherer subsistence strategy and their traditional nomadic lifestyle. Despite the extraordinarily traumatic events that engulfed the Alyawarra and all other Central Australian Aboriginal populations during the 19<sup>th</sup> and 20<sup>th</sup> centuries (see below: Chronology of European Colonization), the Alyawarra population remained viable and the demographic processes that developed during pre-contact millennia continued, with modifications, into the contact period.

Because of the historical depth of the dataset, containing people born as early as 1818, it should be possible to use these data to look backward in time to a period more than half a century before Europeans began to homestead in Alyawarra territory. The Chalmers family established MacDonal Downs Station in 1923, the first permanent European settlement in that part of the Bunday – Sandover drainage basin. Some of the people who appear in this dataset were well over fifty years old when the Chalmers arrived and many of their marriages, dating from Aboriginal “early time” before European contact began, were still visible when census collectors

began to worked there in the 1950s. Hence the complexities that emerge here are seen not as consequences of “detrribalization”, but as artifacts from a vastly different period in Alyawarra history.

These data offer a challenging – perhaps daunting - opportunity to investigate genealogical relationships, demographic processes and large-scale mobility patterns in a kind of natural experiment in subsistence transformation and sedentarization under conditions analogous in some important ways to those at the cusp of the Neolithic. Seeing through and beyond the chaos generated by the colonizers will not be easy.

## Partial chronology of European colonial impacts on the Alyawarra

Table 1 is a brief chronological outline of major events in the history of contact between the Alyawarra who lived in their territory in the Sandover-Bundey River Basin during and before the 19<sup>th</sup> century, and Europeans who colonized Central Australia in the late-19<sup>th</sup> and early 20<sup>th</sup> centuries.

**Table 1.** Brief summary of European contacts with the Alyawarra.

| Date                                                                                       | Event                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Establishment of European settlements and homesteads in or near Alyawarra territory</b> |                                                                                                                                                                                                                 |
| 1872                                                                                       | Establish Alice Springs                                                                                                                                                                                         |
| 1877                                                                                       | Establish Hermannsburg Mission in Aranda territory about 320 km southwest of MacDonald Downs Station.                                                                                                           |
| 1923                                                                                       | Establish MacDonald Downs Station by the Chalmers family                                                                                                                                                        |
|                                                                                            | Establish Derry Downs Station                                                                                                                                                                                   |
|                                                                                            | Establish Utopia Downs - Kunoth family<br><a href="http://www.australianbiography.gov.au/kunothmonks/interview1.html">http://www.australianbiography.gov.au/kunothmonks/interview1.html</a> , film <i>Jedda</i> |
|                                                                                            | Establish Delney and Delmore Downs, and others – see Ford 1966                                                                                                                                                  |
|                                                                                            | Establish Lake Nash Station                                                                                                                                                                                     |
|                                                                                            | Establish Ammaroo, Ooratippra, Argadargada Stations along the Sandover River                                                                                                                                    |
|                                                                                            | Establish Elkedra Station and others along Elkedra Creek to the north                                                                                                                                           |
| 1950s                                                                                      | Establish Santa Theresa Mission in Aranda territory near Alice Springs                                                                                                                                          |
| 1956                                                                                       | Establish Warrabri Aboriginal Settlement, now known as Alekerenge, near a major dingo dreaming site at or just beyond the western margin of Alyawarra territory.                                                |
| <b>Government Actions and Policies</b>                                                     |                                                                                                                                                                                                                 |
| 1862                                                                                       | John McDouall Stuart crossed Australia from south to north, passing near but probably not through Alyawarra territory.                                                                                          |
| 1872                                                                                       | Construct the Overland Telegraph line that connected Adelaide, South Australia, with London, England, with telegraph stations nearest the Alyawarra in Alice Springs, Barrow Creek and Tennant Creek            |
|                                                                                            | Alcohol became available to Aboriginal people in Central Australia                                                                                                                                              |
| 1929                                                                                       | Construct the railroad from Adelaide to Alice Springs.                                                                                                                                                          |
|                                                                                            | Begin NTA Aboriginal Census                                                                                                                                                                                     |
|                                                                                            | Introduce government rations (flour, sugar and tea)                                                                                                                                                             |

|                            |                                                                                                                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | Introduce Royal Flying Doctor Service for emergency medical care – Aboriginal people often went to hospital not to get well, but to die                                                                                                                                                                                 |
|                            | Introduce scheduled visits by Nursing Sisters to monitor infant health                                                                                                                                                                                                                                                  |
|                            | Introduce government schools at a few places in Alyawarra territory                                                                                                                                                                                                                                                     |
| 1950s                      | Systematically remove some Aboriginal people (not Alyawarra) to missions, settlements, schools                                                                                                                                                                                                                          |
| 1976                       | Pass Aboriginal Land Rights Act                                                                                                                                                                                                                                                                                         |
| 2003                       | Extend railroad from Alice Springs to Darwin – a \$1.4 billion construction project by Halliburton Corporation / Kellogg Brown & Root.                                                                                                                                                                                  |
| <b>Scientific Research</b> |                                                                                                                                                                                                                                                                                                                         |
| 1900+/-                    | Spencer and Gillen (1899, 1927) conducted long term research with the Aranda in the Alice Springs area, and with other language groups surrounding the Aranda, including the Alyawarra to the northeast of Alice Springs.                                                                                               |
| 1930                       | Norman Tindale (1930) visited for two weeks with the Alyawarra at MacDonal Down and produced a journal, field notes and a 16mm film based on that expedition. On the web at <a href="http://www.samuseum.sa.gov.au/orig/tindale/macdonald_downs.htm">http://www.samuseum.sa.gov.au/orig/tindale/macdonald_downs.htm</a> |
| 1930                       | John Cleland (1930) briefly visited the Alyawarra at MacDonal Down and collected ethnographic and blood group data.                                                                                                                                                                                                     |
| 1966                       | Margaret Ford (1966) published <i>Beyond the Furthest Fences</i> .                                                                                                                                                                                                                                                      |
| 1966+                      | Colin Yallop (1977) conducted linguistic and ethnographic research with Alyawarra at Lake Nash.                                                                                                                                                                                                                         |
| 1971-72                    | Woodrow W. Denham (conducted ethnographic fieldwork with Alyawarra at MacDonal Down. On the web at <a href="http://www.culturalsciences.info/">http://www.culturalsciences.info/</a> . See especially: Denham, McDaniel, Atkins 1979; Denham and White 2005.                                                            |
| 1973-75                    | James F. O'Connell (1977) conducted archaeological fieldwork with Alyawarra at MacDonal Down.                                                                                                                                                                                                                           |
| Mid-70s                    | Diane Bell (1993) conducted ethnographic fieldwork with Alyawarra women at Warrabri Settlement.                                                                                                                                                                                                                         |
| 1977-78                    | Richard M. Moyle (1986) conducted ethnomusicological and genealogical research with the Alyawarra at Ammaroo Station.                                                                                                                                                                                                   |

## From sow's ear to silk purse

All of the data that I processed in this project reside in the public domain and are listed in detail under Source Codes below.

### Data Processing Sequence

The data processing sequence was straightforward even though the details were complex.

- I began with my 1971-72 Alyawarra data from MacDonal Down and Derry Down Stations, in which I already had a great deal of confidence.
- Using my genealogical diagrams and data tables as the basis for further work, I integrated Moyle's data from Ammaroo Station into those files.
- After reconciling the few discrepancies that I found in the MD-DD and Ammaroo datasets, I incorporated the genealogical data embedded in the NTA census reports.

- With all of the individuals identified by sex, Identification Number and European name, and incorporated into genealogical diagrams with preliminary parent and spouse ID#, and with Country codes included whenever possible, I made several more passes through the source documents to extract as much additional data as I could for each person, including: Documented Year of Birth, Documented Year of Death, one or two sets of Language and Section memberships, and Aboriginal names.
- With the Vital Statistics and Genealogical Data in place, I went through all of the NTA Census Reports once again, this time extracting direct and indirect statements concerning the physical location of each person at the time the NTA staff collected their census data, and recorded that information in the Census Data section of each record.
- With all of the data extracted to the best of my ability, including successive refinements to earlier approximations with each pass through the sources, I was ready to use the Vital Statistics, Genealogical Data and Census Data to estimate the many missing life dates required for processing the genealogical and census data in something like “real time”. In this step I used the procedures described under Ages elsewhere in this manual to estimate the most likely Year of Birth of each person for whom that information was missing. I attempted to estimate Year of Death to fill in the enormous amount of missing data for this variable, but all attempts failed. The dataset includes Documented Year of Death for 54 people and no Year of Death data for 1406 people.

I constructed genealogical diagrams specifically to serve as an intermediate step in converting the raw genealogical data to numerical data; i.e., raw data → annotated genealogical diagrams → final numerically coded genealogies. The diagrams simplified the process of detecting relationships and assigning codes to use in the numerical database, and their redundancy continues to make it easy to catch errors that are virtually invisible in the numerical database.

The method of successive approximations that I used to compile this file is roughly equivalent to the method used by the NTA census collectors as they revisited the Aboriginal camps over and over between the early 1950s and the mid-1970s, each time finding new bits of data, tiny fragments that helped to connect the dots in the emerging picture of Aboriginal life in Central Australia as the NTA saw it.

### **People Included and Omitted**

**WWD (Denham).** When I conducted my fieldwork with the Alyawarra in 1971-72, I included everyone I knew to have resided in the Aboriginal camps at MacDonald Downs and Derry Downs stations between the first and last days of my fieldwork. After the fieldwork ended, I deleted visitors and transients who arrived from points unknown, spent a few days or weeks in the camps at MD-DD, then moved on again to points unknown. I never became well acquainted with those people, I had very little confidence in the quality of the data I recorded for them, and I

did not photograph them or elicit kinship terms from them. Hence the Vital Statistics and Genealogical Data File for the fieldwork contains records for 264 people who satisfied the 30-day residency criterion, plus 113 records for deceased or unknown ancestors of those 264 living people.

**RMM (Moyle).** Moyle is less explicit about his criteria for inclusion. My processing of his data yielded 205 *Ahrunga-rindya* (members of Ahrunga Country) as of October 1979, plus 231 members of other known and unknown countries. I included all of them in this project. Because of the ways in which Moyle organized his diagrams, it is possible that I missed a few people whom I could have included, but I suspect that the number of such accidental omissions would be less than ten.

**NTA (Northern Territory Administration).** This huge mass of data recorded by NTA between 1956 and 1973 presented many problems of inclusion and exclusion. In my early passes back and forth through the reports I extracted data for people whom I could connect with other people already recorded in the data file, so I could expand upon known genealogies. In many subsequent passes, I extracted data for large families that I identified in my early passes but who were not represented in the data I previously extracted. As this recursive process continued, I extracted more and more people from smaller and smaller families who were attached directly – and increasingly indirectly – to people already in the file.

People living at Utopia Station and Warrabri Settlement were especially problematic. Since my work focuses on the Alyawarra, I recorded data for the Alyawarra themselves and for others who were known to be genealogically linked with the Alyawarra, but I systematically excluded members of other language groups who had no known genealogical ties to the Alyawarra. Thus my records for Warrabri Settlement contain resident Wailbri, Warramunga, Anmatjira and others who are genealogically related to the Alyawarra, but do not include a large number of non-Alyawarra who were defined as lying outside the scope of this project. Likewise my records for Utopia Station do not include a large number of resident Aranda for whom I could find no connections with the Alyawarra.

In addition to excluding unrelated non-Alyawarra who appeared in the NTA reports, I also excluded a few people who were labeled as Alyawarra but for whom no relational data was available. Most of them were very old widows or widowers with no known parents or spouses or children, or young unmarried men who appeared to be transients with no known parents or children. The NTA reports contained no data that I could use to cross-check anything about these people; hence, they added nothing except a small amount of bulk to the file. So I omitted about 20 of them.

Finally the NTA census reports for Utopia Station showed a peculiar switch in language group memberships in the late 1960s and early 1970s. A good many people who were recorded in earlier censuses as Alyawarra suddenly appeared in later censuses as Aranda. Since the Utopia mob was located physically close to the MacDonald Downs mob, and since many of the Alyawarra I knew from MacDonald Downs were directly related to people whose language group affiliations were switched from Alyawarra to Aranda, I am suspicious of what may have happened here. I do NOT think either the Aboriginal people or the census collectors made a mistake in earlier years and suddenly corrected it in later years. Nor do I believe that a good many Alyawarra families suddenly decided to change their language group affiliation to Aranda, thereby exploiting ambiguities built into group memberships. But I do think there is a reasonable chance that the NTA census collectors capitalized on those ambiguities for reasons that are not clear to me but that most likely were associated with the Aboriginal Land Rights Movements that was gaining strength at precisely the time of the switch. Ultimately Utopia Station reverted to the Alyawarra despite the switch that increased the apparent size of the Aranda population there, but I am confident that invisible conflicts between the Alyawarra and the Aranda over control of that property were in progress when the switch occurred. The fact that these people were classified first as Alyawarra and subsequently as Aranda played a significant role in my decision to include TWO language group affiliations and section/subsection affiliations for everyone in the dataset.

### **Relations between Alyawarra AU01 and AU10 datasets**

**AU01 Alyawarra 1971-72** is a dataset that is based exclusively on my fieldwork at MacDonald Downs and Derry Downs Stations. It contains 377 records in a discontinuous series of ID# in the 1-415 range.

**AU10 Alyawarra 1817-1979** is a much larger dataset that contains two distinct components. The first 377 records in AU10 pertain to the same 377 people in AU01; i.e., AU01 has been incorporated as a subset of AU10. The remaining 1084 records pertain to 1084 people whom I discovered in the RMM and NTA sources described above.

But there are complications.

When I processed the RMM and NTA sources, I discovered about 15 previously unknown people who were parents of members of the AU01 dataset. Within the AU10 dataset, I coded those people into the ID# range 422-439. Then I used those new numbers to correct the first 377 records in the AU10 dataset. For example, my field records contained a case in which I had coded two people as full siblings, but the archival records showed them to be half-siblings with the same father and different mothers. I edited the AU10 dataset by changing the ID# of one person's mother to that of the newly discovered woman, but leaving unchanged the ID# of the other person's mother.



Furthermore, when I processed the RMM and NTA sources, I discovered some previously unknown people who were spouses of members of the AU01 dataset. These were not special people who required special treatment, but were simply new additions to the rapidly growing AU10 dataset. I coded those people into the “default” ID# range 1001-2069. Then I returned to the first 377 records in the AU10 dataset and added their ID# as appropriate to the records of their previously known and coded spouses.

Thus the first 392 records in the AU10 dataset contain 377 records from AU01, plus 15 records for newly discovered parents from the RMM and NTA sources, plus new spouses from those sources inserted into the SP1,2,3,4 columns of the original field records. These records are fully integrated into the AU10 dataset to be processed as such with no problems.

### **Data discrepancies and their rarity**

To the best of my knowledge the Alyawarra with whom I worked in 1971-72 had no direct access to the published NTA Census data and as a nonliterate society in the 1970s would have been unable to read it if that had received copies. Likewise, I am confident that they did not analyze my numerical database before they gave their genealogical information to Moyle at Ammaroo. Nevertheless they were the source of the NTA data, my data, and Moyle's data and it has become clear beyond a shadow of a doubt that the Alyawarra gave exactly the same answers to all three of us. Despite major differences in data collection procedures used in these fundamentally different and wide-spaced projects, the number of discrepancies I have detected among the three datasets is astonishingly small, and all of them are trivial except for the confusion surrounding the multiplicity of section and subsection terms. I have added new data and found new relationships in my 1972 data based on the addition of new data to existing genealogies, but these changes are best seen as expansions of the early dataset, not as corrections of previous errors in that dataset.

The following are two representative discrepancies that I discovered that resulted in my making changes in my original 1971-72 dataset.

My 1972 records show one long-deceased woman (ID#325) who now appears to have been a pair of deceased full sisters who were married to the same man. But the only person in my dataset who might have revealed the discrepancy was a deceased daughter of the second member of the maternal sibling set. I was able to detect the problem only by examining Moyle's data in which two living children of the “other woman” make it possible to “see” the difference. Technically that is a discrepancy that could have been significant to the proper children of those women, but it has no impact at all on the structure and operation of descent, marriage and kin relations among these people. It is an interesting distinction but an inconsequential difference.

Likewise, I knew that #154 had a first husband before becoming the wife of #001 but I was unable to identify that previous husband. Now I have established that #386 is the same person as #154, and that #336, shown previously as the husband of #386, was in fact the second husband of #154. Another man, originally coded as #335 but otherwise virtually unknown to me, has emerged from the shadows as an important man at Utopia Station, who appears now to have been Mary's first husband by whom she had several children who were completely unknown to me in 1972.

I attribute the astonishing accuracy of the Alyawarra NOT to their possessing superhuman memories, but rather to their using an extraordinarily complex, highly redundant and marvelously effective society-wide and culture-wide data storage and retrieval system. Minimally it includes the patrilineal descent system based on "Country" memberships, section and subsection systems that simplify the reckoning of relationships, the unidirectional flow of women "through" the countries by marriage, the pervasive network of Dreaming relationships that tie people to each other and to all aspects of their habitat in ways that are self evident truths to them and virtually incomprehensible to the rest of us, and the all-encompassing system of kinship terms that serves as a meta-language in which people talk about how they talk about their relationships. As a socially and culturally distributed cognitive system, this multidimensional matrix of intersecting networks that organizes their intellectual world in PRACTICE – not as a theoretical abstraction, but as a guide to action - is so redundant that nothing slips out of place even in the midst of superficially chaotic turbulence where multiple languages/dialects and section/subsection systems overlap as they clearly do in the NTA data. Just as early Egyptians built enduring physical structures in the pyramids, early Aboriginal Australians built enduring intellectual structures in the Dreamtime.

### **AU10 Code book: file layout**

As a KinSources dataset, the AU10 data file has two blocks, Basic Information (block1 Variables 1-10) and Attributes (block2 Variables 11-99). Block1 contains the genealogical data that justifies the presence of the dataset in the KinSources repository and is largely self-explanatory. Block2 contains a wide range of attributes pertaining to age; language, section, subsection and Country membership; and 73 sets of Alyawarra census data collected between 1956 and 1979. Discussions of selected attributes and values follow Table 2.

**Table 2.** Basic information block (Variables 1-10)

| Variable # | Variable name | Values    |                                                                                                     |
|------------|---------------|-----------|-----------------------------------------------------------------------------------------------------|
| 1.         | Personal Id#  | 1 – 280   | ID numbers assigned by WWD during fieldwork in 1971-72 to living members of the research population |
|            |               | 301 – 439 | ID numbers assigned by WWD during fieldwork in 1971-72 to absent or deceased people                 |

|     |                |            |                                                                                                                                                                     |
|-----|----------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                | 1001 –2069 | ID numbers assigned by WWD in 2006 to living and dead people referenced in source documents by NTA and Moyle.                                                       |
| 2.  | European names |            | Personal names generally assigned by Europeans and used by NTA census officials to assist in record keeping. The KinSources data file does not display these names. |
| 3.  | Sex            |            | M = Male, F = Female, X = Unknown sex                                                                                                                               |
| 4.  | FatherID       |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 5.  | MotherID       |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 6.  | Spouse1ID      |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 7.  | Spouse2ID      |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 8.  | Spouse3ID      |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 9.  | Spouse4ID      |            | Personal Id# codes defined in Variable 1                                                                                                                            |
| 10. |                |            | NOTE: Var. 10 contains no data – reserved for possible additional spouse.                                                                                           |

**Table 3.** Attributes block (Variables 11-99)

|        |                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.    | <b><i>Personal Id# repeated for attributes block</i></b>                                                                 |  |                                                                                                                                                                                                                                                                                                                                                          |
| 12-14. | <b><i>Age</i></b>                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                          |
| 12.    | Doc YoB                                                                                                                  |  | Use Var. 11 to analyze records where YoB is stated in documents<br>1-2000 Documented YoB<br>< nnnn YoB is known to be earlier than the value displayed<br>> nnnn YoB is known to be later than the value displayed<br>9999 Unknown YoB                                                                                                                   |
| 13.    | Doc+Est YoB                                                                                                              |  | Use Var. 12 to analyze records containing either Documented YoB or Estimated YoB when YoB is not stated in the documents.<br>If Var. 11 has known documented YoB, copy its value to Var. 12<br>If Var. 11 has unknown YoB, enter estimated YoB in Var. 12<br>Procedures used to estimate YoB are described below under <i>Estimating Year of Birth</i> . |
| 14.    | Doc YoD                                                                                                                  |  | Use YoD as stated in documents<br>1-2000 Documented Year of Death<br>9999 Unknown YoD                                                                                                                                                                                                                                                                    |
| 15-20  | <b><i>Language, section and subsection memberships</i></b>                                                               |  |                                                                                                                                                                                                                                                                                                                                                          |
|        | These variables and their values are discussed in detail below under <i>Language, Section and Subsection Memberships</i> |  |                                                                                                                                                                                                                                                                                                                                                          |
| 15.    | Language1n                                                                                                               |  | 1 <sup>st</sup> Language, numeric code                                                                                                                                                                                                                                                                                                                   |
| 16.    | Language1a                                                                                                               |  | 1 <sup>st</sup> Language, alphabetic code                                                                                                                                                                                                                                                                                                                |
| 17.    | Section1n                                                                                                                |  | 1 <sup>st</sup> Section/subsection, numeric code                                                                                                                                                                                                                                                                                                         |
| 18.    | Section1a                                                                                                                |  | 1 <sup>st</sup> Section/subsection, alphabetic code                                                                                                                                                                                                                                                                                                      |
| 19     | Language2a                                                                                                               |  | 2 <sup>nd</sup> Language, alphabetic code only                                                                                                                                                                                                                                                                                                           |
| 20.    | Section2a                                                                                                                |  | 2 <sup>nd</sup> Section/subsection, alphabetic code only                                                                                                                                                                                                                                                                                                 |
| 21.    | <b><i>Country / Patriline</i></b>                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                          |
|        | This variable and its values are discussed in detail below under <i>Country / Patriline Codes</i> .                      |  |                                                                                                                                                                                                                                                                                                                                                          |
| 22.    | <b><i>Kinship terms</i></b>                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                          |

This variable indicates whether kinship terms are available online in AEDB File22.

0 This person did NOT contribute a set of kinship terms to File22

1 This person DID contribute a set of kinship terms to File22

### 23. *Aboriginal names*

Aboriginal names used by Aboriginal people and recorded unsystematically by NTA census officials to assist in record keeping. The KinSources data file does not display these names.

## 24 – 97. *Censuses*

### 24. *SRC (Source)*

The nature of the document that serves as the primary or most important source for the person to whom this record pertains. Supporting data may appear in other datasets as well. Options include:

WWD Woodrow W. Denham, 2010

RMM Richard M. Moyle, 1986

NTA Northern Territory Administration Census Reports, 1956-1973

### 25-97. *Census Data*

Each column corresponds to a single census (see location and source codes below)

Column header Date (YY/MM/DD), Location, Source

Cell entries in column Most precise location of person censused; for example:

MDD = station or town abbreviation

MDD1 = camp #1 at MDD Station

MDD1.31 = household #31 at camp#1 at MDD station

### 98-99. *Record identifiers*

98. File# All records are in File AU10 (self-explanatory)

99. Record# Values 1 through 1461 (self-explanatory)

## Discussion of selected attributes and values

### Age (Var. 12-14)

I have included two sets of data concerning Year of Birth (YoB): First is Documented YoB, i.e., YoB as stated in one of the source documents, including a DK (don't know) value for each person whose YoB was not stated in any source document. Second is Documented + Estimated YoB, i.e., a Documented YoB when available, with Estimated YoB inserted to replace the DK values. Documented YoB (omitting cases with DK values) yields a smaller but slightly more precise subset of cases; Documented + Estimated YoB yields a larger but slightly less precise subset.

Ages are of vital importance for analyzing these data to meet the objectives outlined above (and below), but the age data that is available is problematic in several important ways.

- In some cases birth and death dates are available in the raw data and are internally consistent between parents and children and among siblings. When the data as printed appears to be valid, I have accepted it.

- In some cases birth and death dates are available in the raw data but show internal inconsistencies ranging from few and trivial to numerous and profound. I have resolved most of them to a reasonable degree of accuracy on the basis of known descent and marriage relations, known birth orders and known birth and death dates for other close kin.
- In some cases Year of Birth is not available in the raw data. I have resolved many missing birth years to a reasonable degree of accuracy on the basis of known descent and marriage relations, known birth orders and known birth and death dates for other close kin.
- In most cases Year of Death is not known, and it is impossible to make reasonable estimates to replace these missing data.
- When dates are incorrect or missing and I have been unable to correct them or fill in the missing pieces, I have coded them as 9999, missing data.

In working with Aboriginal ages reaching far back into the 19<sup>th</sup> century, we must accept the fact that we are dealing to a large extent with age estimates. When the first literate Euro-Australians began to record relevant data about Aboriginal people in Central Australia, they had to deal with adults whose ages had never been recorded. They had a choice: ignore their ages because such data were impossible to collect precisely, or do their best with the information that was available (i.e., estimate ages to the best of their ability) and refine those figures by cross-checking within descent lines and sibling sets as they learned more about the Aboriginal people. Fortunately for us, they chose to estimate and refine. But the simple fact is that the ages of Aborigines born in or near Alyawarra Territory before the mid-20<sup>th</sup> century are known only as estimates regardless of how refined they may be.

My own age data from 1971-72 survived the tests posed by all of the NTA data. Elsewhere I have described my data collection and quality control methods in considerable detail (Denham and White 2005). By examining my own data in the context of the Moyle and NTA datasets, I was able to make a few corrections based on new knowledge about parents, siblings, spouses and offspring, but all were tiny adjustments best described as fine tuning. I remain confident that ages (Years of Birth) of the 264 living members of my 1972 dataset are good.

Moyle's genealogies for the Ahrunga do not contain any life dates. Birth and death dates were not important for his purposes, so he left them out. Nevertheless his genealogical diagrams contain a lot of valuable information about life dates anyway. The six-generation time depth of the his diagrams says a lot about the age order of sibling sets, especially when it is combined with my own age data for a great many of the people in his dataset. Similarly, even though he omitted dates he almost always ordered the members of sibling sets from oldest to youngest in his genealogical diagrams. By itself age order says nothing about Year of Birth, but my own age

data for many members of his sibling sets enables me to estimate ages of previously unknown members of those sibling sets with a very small margin of error.

The NTA reports present a cacophony of life dates that has become increasingly intelligible as I have worked my way back and forth through the reports from every conceivable direction. Some of the problems associated with missing and incorrect data in the NTA dataset are simply insoluble, but in a surprisingly large number of cases the complexity and redundancy built into the dataset makes it possible to refine the data that is present and pinpoint the data that is missing.

It appears that census collectors had broad and fairly complex duties. Sometimes they went into an Aboriginal community, checked to see who was at home at each residence, wrote down as little as possible to identify the people they found, and immediately left with just enough data to produce a list of who they saw and where they saw them. On the one hand such a report can be very valuable because it is simple and clean, with no confusing details and no attempt to go beyond the simplest observational “facts”. On the other hand, such a report adds little new information to aid our understanding of the Aboriginal community as a whole. It is a snapshot, with no age data, no genealogical data, no data on births or deaths or marriages, no new information on names or linguistic group memberships or section or subsection memberships – a valuable little snapshot, but nothing more.

But census collectors often went to a community looking for almost everything they could find that might have some bearing on Aboriginal demography and social organization. Census reports from MacDonald Downs, Lake Nash, Utopia, Warrabri, Elkedra and other locations contain detailed and extensive genealogies reaching far beyond the people living in each community (sometimes reaching as far east as central Queensland and as far north as Arnhem Land), detailed records of language group, section and subsection memberships, systematic collections of Aboriginal names in addition to European names, thoughtful analyses of sequences of marriages that sometimes are astonishingly complex, and so on. At first I thought they were making it up, but as I saw these same data being refined and clarified and expanded over and over, I became convinced that many of the census collectors did really amazing jobs given their sketchy training in so many different languages, kinship systems, marriage preferences, section/subsection terminologies and so on.

It is clear that the NTA census collectors used older data as the basis for collecting newer data. The double edged sword is obvious. If they made a mistake early on, it could be handed down as received wisdom in perpetuity. On the other hand, using the older data as a starting point enabled conscientious data collectors to build on and crosscheck all of their data so that their endeavor became cumulative and ultimately self-correcting. No doubt some age errors made in early years never were corrected, but it is clear that a great many early approximations became increasingly

refined as censuses of the same and related groups were conducted repeatedly, sometimes by the same census collectors who could check their own work, sometimes by different census collectors who brought different assumptions to the task. Some of the reports are sufficiently noisy to be useless, while others are remarkably complete, internally consistent, in agreement with reports from many other locations, and convincing in places where new data raises questions about old data.

The bottom line is that I must apologize to the NTA census takers whose *modus operandi* made me quite skeptical of their efforts when I saw them at work in 1971-72. Given the tremendous cultural and logistical constraints under which they worked, I am astonished by the extent to which their data quality conspicuously improved over the period from 1956 through 1973.

### Estimating Year of Birth (Var.12-13)

Estimated Years of Birth can be used by Pajek (Batagelj and Mrvar 1998) and other software to display genealogical relationships with something approximating normal birth orders.

I began by creating the scratch variable Doc+Est YoB (documented + estimated year of birth) and copying values from Doc YoB to the new variable. Then I entered Est YoB as values of the new variable thereby leaving the original Doc YoB uncontaminated by the Est YoB.

1. **Estimating Year of Birth (YoB) for parents of unknown ages with children of known ages.** This procedure yields estimates of parents' age based on mean sex-specific age differences between parents whose ages are unknown and children whose ages are known. The procedure yields two constants, one for males and one for females, to be added to the known ages of eldest children.

- Generate the constants:
  1. Select only cases where ID#<300 (MacDonald Downs – Derry Downs population in 1971-72) and ages of living parents and ages of their living children are available.
  2. Sort cases by (Fa x Mo x Doc YoB) to display sibling sets with members in descending age order
  3. On Mother's record
    - a) Insert FCh (Doc YoB of first or oldest known child)
    - b) Insert LCh (Doc YoB of last or youngest known child)
    - c) Insert LCen (last time this person appeared in an NTA census)
  4. On Father's record
    - a) Insert FCh (Doc YoB of first or oldest known child)
    - b) Insert LCh (Doc YoB of last or youngest known child)
    - c) Insert LCen (last time this person appeared in an NTA census)

5. Compute each parent-child age difference  $\Delta$  : FCh - YoB =  $\Delta$  age, and sort records by Parents' Sex.
6. Compute sex-specific and age-specific mean age differences between parents and their oldest known children. See results in Tables 4 and 5.

**Table 4.** Parent – oldest child mean age difference based on parent's Doc YoB

| Sex of parent | Parent – oldest child mean age difference |      | YOB<br>(Parent's<br>Year of Birth) | Parent – oldest child mean age difference |      | Sex of parent |
|---------------|-------------------------------------------|------|------------------------------------|-------------------------------------------|------|---------------|
| Male          | 39.1                                      | n=12 | 1880-1910                          | n=8                                       | 21.8 | Female        |
| Male          | 28.3                                      | n=17 | 1911-1930                          | n=18                                      | 21.6 | Female        |
| Male          | 26.1                                      | n=8  | 1931-1945                          | n=14                                      | 21.1 | Female        |
| Male          | 0                                         | n=0  | 1945-1953                          | n=12                                      | 17.0 | Female        |
| Male          | 31.3                                      | n=37 | All                                | n=52                                      | 20.4 | Female        |
|               | SD 9.5                                    |      |                                    | SD 5.5                                    |      |               |

**Table 5.** Parent – oldest child mean age difference based on FCh (oldest child's Doc YoB)

| Sex of parent | Parent – oldest child mean age difference |      | FCh<br>(Oldest Child's<br>Doc YoB) | Parent – oldest child mean age difference |      | Sex of parent |
|---------------|-------------------------------------------|------|------------------------------------|-------------------------------------------|------|---------------|
| Male          | 32.5                                      | n=2  | <1931                              | n=9                                       | 19.6 | Female        |
| Male          | 26.5                                      | n=6  | 1931-1940                          | n=5                                       | 18.0 | Female        |
| Male          | 35.0                                      | n=9  | 1941-1950                          | n=7                                       | 21.1 | Female        |
| Male          | 31.4                                      | n=10 | 1951-1960                          | n=13                                      | 20.5 | Female        |
| Male          | 29.6                                      | n=10 | 1961-1971                          | n=18                                      | 21.2 | Female        |
| Male          | 31.3                                      | n=37 | All                                | n=52                                      | 20.4 | Female        |
|               | SD 9.5                                    |      |                                    | SD 5.5                                    |      |               |

- Use the values for ALL to infer unknown ages of parents:
  1. Select only cases in which Documented Age = 9999 and Doc-Est YoB is blank.
  2. For each parent, list their children in ascending YoB order.
  3. If Mother, subtract 20 from Doc YoB of oldest child and insert as Est YoB of mother. In cases where the ages of living mothers are unknown (9999) but the ages of their living children are known, subtracting 20 from the oldest known child's YoB yields a reasonable estimate of the mother's YoB. This works because most women begin to reproduce in the narrow range between 15 and 25 years of age, apparently they have done that for at least the last half century, and we see the same picture by looking at it from the perspectives of both mothers and children.
  4. If Father, subtract 31 from YoB of oldest child and insert as Est YoB of father. Fathers' ages are much more problematic than Mothers' because of the high



variability in the onset of socially acknowledged male parenthood. Some men sire their earliest known children in their late 20s while others do not sire their first until they are in their 60s. Hence age of oldest child is a much weaker predictor of the age of the father than of the mother. The data does not reveal a systematic historical change; rather father - first child age differences in excess of 40 years appear in every age interval identified in these tables. Subtracting 31 from the oldest known child's YoB yields a plausible but considerably fuzzier estimate of father's age.

2. **Estimating Year of Birth (YoB) for grandparents of unknown ages with grandchildren of known ages.** This procedure yields estimates of grandparents' ages based on mean sex-specific age differences between parents whose ages are estimated and children whose ages are known. This procedure uses the estimated results from the previous procedure to generate estimates for people who are two generations removed from younger people with known ages. If Est YoB for parents generated by Procedure #1 are problematic, the Est YoB for grandparents generated by Procedure #2 are even more problematic. But in order to achieve a meaningful distribution of these people through time, we must take the chance and accept the risk.
  - The logic here is identical with that in Procedure #1 above, but since the sex-specific constants are available already, we can omit Part A.
  - The implementation is the same here as in Procedure #1.
    1. Select only cases in which Documented Age = 9999 and Doc+Est YoB is blank.
    2. For each person, list their children in ascending Doc+Est YoB order.
    3. If parent is female, subtract 20 from Est YoB of the oldest child and insert as Est YoB of grandmother.
    4. If parent is male, subtract 31 from Est YoB of the oldest child and insert as Est YoB of grandfather.
  
3. **Estimating Year of Birth (YoB) for children of unknown ages but known birth order when the mother's YoB = 1945 or later.** This procedure is approximately the opposite of the procedure used to estimate a mother's age when her oldest child's age is known. Specific ages are not available for children born after 1972.
  - There are no cases in the data file in which women <14 years old have had children.
  - Age differences between women born since 1944 and their oldest children
    1. Minimum = 14 years
    2. Mean = 17 years
    3. Maximum = 28 (for children born <1973)
  - Insert random values that correspond to this distribution

4. **Estimating Year of Birth (YoB) based on ages of siblings.** When the ages of some but not all members of a sibling set are known, estimating the ages of the unknown siblings is easier when birth order is known.
  - Sort cases by (Fa x Mo x Doc YoB) to display sibling sets with members in descending age order.
  - Fit the cases with missing YoB into the Doc+EstYoB series. There seem to be very few “far outliers” in the “good” data, so clustering the cases seems to be the best approach.
  - Check the record for the mother of the siblings and minimally adjust the estimated children’s ages if needed.

I have attempted to make highly conservative estimates of Est YoB. If we can use better procedures for estimating YoB, please tell me how to do it.

### **Year of Death (Var.14)**

Discussing deceased people with the Alyawarra and members of other Central Australian groups is highly problematic. To do so makes them sad, is disrespectful of the dead, and is forbidden.

I was aware of the prohibition before I began my fieldwork and never violated it, partly out of respect for local sensibilities, partly for fear of irreparably damaging my rapport with the Alyawarra (see Denham and White 2005 concerning the methods I used for dealing with this problem when reconstructing genealogies.) Whenever I accidentally got too close to discussing a deceased person, the invariable verbal response was “been finished”, meaning “that person is dead”, accompanied by a wave of the hand that meant “stay away from that one.”

NTA census collectors avoided the problem as carefully as I did, but in a few cases worked around it, deliberately or accidentally, apparently by obtaining supplementary data from European cattle station managers or similar outsiders.

Moyle’s genealogies contain fragments of data concerning a smattering of deceased children born in the 1970s and several deceased ancestors whose existence was crucial for establishing the genealogical integrity of Ahrunga Country. He does not indicate whether he obtained these data from the Alyawarra or from European sources.

The bottom line is that only 54 documented Years of Death (Doc YoD) are available in the sources (NTA = 49; WWD = 5; RMM = 0). Either I provided the documentation during my fieldwork in 1971-72 because I was present in the camps at MacDonald Downs when the deaths occurred, or NTA provided the documentation in its census reports by explicitly stating that a person who was a known member of the population was known to have died since the last census.

There is enough circumstantial evidence concerning Years of Birth that defensible estimates can substitute for missing data in that field. Such is not true concerning missing Years of Death. Most people simply disappeared. Perhaps they died, perhaps they moved to Alice Springs or to other parts of the Northern Territory or to Queensland, perhaps they simply hid whenever the census collectors came around - there are clear examples of such people in the dataset.

The absence of YoD is a serious limitation but that is the nature of the real world and the data. We can do our best with what we have, or throw up our hands in despair and give up. I am not prepared to give up.

Table 6 provides a brief summary of the age data.

**Table 6.** Summary of age data.

| <b>Count</b> | <b>Description</b>                                                                     |
|--------------|----------------------------------------------------------------------------------------|
| 1454         | Total population size                                                                  |
| 750          | Total number of males                                                                  |
| 696          | Total number of females                                                                |
| 8            | Total number of unknown sex                                                            |
|              |                                                                                        |
| 1078         | Total number with documented YoBirth                                                   |
| 312          | Total number with estimated YoB (latest plausible Year of Birth)                       |
| 64           | Total number with completely unknown YoB                                               |
|              |                                                                                        |
| 54           | Total number with documented YoDeath                                                   |
| 1400         | Total number with unknown YoD                                                          |
|              |                                                                                        |
| 1818 c.e.    | Earliest Doc-Est YoB in the dataset                                                    |
| 169          | Total number with Doc-Est YoB <1900 (11.6%)                                            |
| 330          | Total number with Doc-Est YoB <1923 (i.e., born before MD Station homesteaded) (22.7%) |

## **Language, Section and Subsection Memberships (Var. 15 - 20)**

The NTA data contains what at first sight appears to be enormous confusion concerning Language Group Memberships and Section / Subsection Memberships. However, upon closer examination the confusion partially resolves itself in several ways.

Language group membership and section/subsection membership are linked to each other, since the section or subsection to which a person belongs depends, at least in part, on that person's

language group membership. In other words, each language group has its own set of terms for section or subsection memberships. Yet there is considerable overlap and commonality in terms used by the various language groups. For example, “kamara” or a close cognate is used as a section or subsection term in almost every language group in the dataset; “ngwariya” and “mbitjana”, or close cognates, are common but far from ubiquitous; “nabida” or “ngarBiida” appears to be diagnostic of the Wailbri and Loritja.

But the situation is more complex. Marriages between members of two language groups yield offspring whose section or subsection memberships may be ambiguous, which is especially challenging when one parent belongs to a language group that uses section terms and the other belongs to a language group that uses subsection terms. Or people who belong to one language group may live at a location where members of other language groups are more numerous, and translate their own section or subsection memberships into terms ordinarily used by the numerically dominant group. Or census collectors may misunderstand what they hear in one dialect and record a person's section membership in a term appropriate for a subsection membership in a different dialect. And so on. There seems to be a nearly infinite number of ways to generate confusion in these domains.

In order to avoid arbitrarily imposing one set of group membership terms on people to whom more sets are applicable, I made provisions for recording two sets. In a few cases three sets would have been even better but I limited myself to two.

- Variables 15 (Lang1n) and 16 (Lang1a) contain numeric (n) and alphabetic (a) codes for the **first language** (Lang1) group membership
- Variables 17 (Sct1n) and 18 (Sct1a) contain numeric (n) and alphabetic (a) codes for the **first section/subsection** (Sct1) membership
- Variables 19 (Lang2) and 20 (Sct2) contain alphabetic codes only for **second language and second section/subsection** membership if a second pair is available.

Generally speaking, if a person was classified as Alyawarra in some reports and as a member of another language group elsewhere, I used Variables 15-18 for the Alyawarra terms, and Variables 19-20 for the non-Alyawarra terms. Consider these examples:

- ID#1, usually residing at MacDonal Downs Station, always appears in the records as a member of the Alyawarra language group and Kamara section. Consequently for #1, Var. 15-16 are ALY and Var. 17-18 are Kamara. There are no entries in Var. 19 and 20 for there are no competing categorizations for him.
- ID# 335, usually residing at Utopia Station, was classified in earlier census reports as Alyawarra + Kamara, but in later reports as Aranda + Mbitjana. Hence for #335, Var.

15-16 are ALY and Var. 17-18 are Kamara, while Var. 19 and Var. 20) are ARN and Mbitja.

## Language Group Codes (Var. 15, 16, 19)

Table 7 lists the Australian Aboriginal language groups represented in the dataset.

- Col 1 contains numeric codes used in the data file.
- Col 2 contains 3-character abbreviations used in the data file.
- Col 3 contains the language codes adopted by the library of the AIATSIS.
- Col 4 lists the language names in alphabetical order with alternative spellings and pronunciations.
- Col 5 shows the number of people in each language group in the data file under Lang1
- Col 6 shows the number of people in each language group in the data file under Lang2
- Col 7 contains row totals for Col 6+7

**Table 7.** Aboriginal language groups represented in the dataset.

| 1                                  |            | 2                                    |                                               | 3              | 4              | 5           | 6    | 7 |
|------------------------------------|------------|--------------------------------------|-----------------------------------------------|----------------|----------------|-------------|------|---|
| Internal Language Codes            |            | AIATSIS Language Group Code          | AIATSIS Language Name and Alternate Spellings | Cases in LANG1 | Cases in LANG2 | Total Cases |      |   |
| Numeric                            | Alphabetic |                                      |                                               |                |                |             |      |   |
| 1                                  | ALY        | C14                                  | Alyawarre / Alyawarra                         | 944            | 176            | 1120        |      |   |
| 2                                  | ANM        | C8.1                                 | Anmatjera                                     | 5              | 1              | 6           |      |   |
| 3                                  | ARN        | C08                                  | Arrente / Aranda (Eastern and Northern)       | 137            | 93             | 230         |      |   |
| 4                                  | KTT        | C13                                  | Kaititja / Kaiditch                           | 31             | 3              | 34          |      |   |
| 5                                  | LOR        | C7                                   | Luritja/Kukatja?                              | 0              | 1              | 1           |      |   |
| 6                                  | WAG        | C16                                  | Wagaya / Wagai / Wagait / Wogeye              | 10             | 2              | 12          |      |   |
| 7                                  | WAL        | C15<br>C02                           | Walpiri/Wailbri/<br>Ngalia                    | 29             | 7              | 36          |      |   |
| 8                                  | WAR        | C18                                  | Warramunga                                    | 3              | 4              | 7           |      |   |
| 9                                  | YAN        | N153                                 | Yanula                                        | 4              | 0              | 4           |      |   |
| 10                                 | MXD        | 998                                  | Mixed (WWD2010)                               | 24             | 0              | 24          |      |   |
| Subtotal of known language groups: |            |                                      |                                               | 1188           | 287            | 1475        |      |   |
| 99                                 | DK         | Subtotal of unknown language groups: |                                               | 266            | 1167           | 1433        |      |   |
|                                    |            |                                      |                                               | Total          | 1454           | 1454        | 2908 |   |

## Section and Subsection Codes (Var. 17, 18, 20)

To see the extraordinary kaleidoscopic structural relationships embedded in section and subsection terms as recorded in the NTA data, you must extract them from the demographic, genealogical and kinship patterns that infuse the numerical data.

The pristine purity often imputed to Aboriginal section and subsection terms when admired as intellectual constructs within isolated systems of descent, marriage and kinship is nowhere to be found in this dataset. Rather, the dataset deals with the messiness of the real world. Hence it explores the incredible complexity of multiple section and subsection terminologies and logics in use simultaneously, partly in parallel with each other but much more importantly in a world where multiple overlapping and sometimes incompatible systems become severely entangled. While exploring the dataset manually, I made every effort to disentangle several of the systems whose structures and contents faded in and out of focus as I looked at them from multiple perspectives. In the end I gave up.

The sound and logic of these terms are intensely entwined with many aspects of life among Central Australian Aboriginal people.

Aboriginal languages and dialects shape the four-or-eight term vocabularies embedded in each system. At least two sets of systems (one a 4-section system, the other an 8-subsection system) that are clearly distinct from each other dominate the dataset, and each of those subsets is comprised of several variations on a common theme in terms of both pronunciation and logic. In addition to those two major themes-and-variations, there are several other poorly represented systems whose contours are more difficult to apprehend, in part because they may be anomalous, in part because they have assimilated with other systems.

The English language dialects of the census takers who recorded these usages over a period of decades distorted Aboriginal pronunciations in a multitude of unknowable ways. Distinguishing between variations in Aboriginal speech and a completely different set of variations in European hearing is challenging. And making changes in European spellings of Australian Aboriginal words in search of “standard” forms has become a cottage industry among anthropologists and linguists.

Even if we naively assume that any one section or subsection system in isolation truly displays the kind of elegance that appears in monographs and textbooks, we must forsake the search for it when we begin to explore a world in which marriages most often occur within dialect groups, but also have tied those groups together at remarkably high frequencies for at least a century; about 22% of the 114 marriages in the AU01 dataset are between members of two different language groups (Denham 2013). As Doug White argued eloquently in a recent paper on Alyawarra kinship, the overlaps and collisions between similar but different systems are best thought of not as areas of “contamination” and “breakdown” – shatter zones – but rather as growth points where such systems evolve most rapidly. And in this dataset we see a large array of “natural experiments” unfolding before us.

To see the myriad patterns, like galaxies spinning in the night sky, we must examine the section and subsection systems in the context provided by the dataset as a whole. Consider the differences between language groups within and between which marriages have occurred for generations. Consider the skewed relations built into the descent systems, paying special attention to the twisted, helical generations induced by the fact that Aboriginal women generally reproduce between the ages of 15 and 50, while Aboriginal men generally reproduce much later, between the ages of 30 and 80. Notice the high frequency of multiple simultaneous and sequential marriages each of which may require “adjustments” and “fine tuning” to keep one section or subsection system operating locally at the risk of destabilizing the larger family of systems that may become “desynchronized” globally.

Analyzing section and subsection systems of the Alyawarra, Eastern Aranda, Northern Aranda, Anmatjera, Kaiditch, Walpiri, Warramunga and Wagaya at a place where they overlap was not the objective of this project. Initially I saw these topics as problems I needed to solve so I could go on about my business without stumbling over them. But that rush to judgment was a mistake.

Table 8 summarizes the section terms that I extracted from the NTA files and used to prepare the AU10 data file.

- Col. 1 shows 6-character abbreviations of the terms, listed in alphabetical order.
- Col. 2 contains one of several quasi-phonetic spellings of each term as used by various NTA census collectors.
- Col. 3-5 shows the frequency of occurrence of each term in primary (Var. 17-18) and secondary (Var. 20) usages.

**Table 8.** Summary of primary and secondary section term usage.

| 1       | 2                            | 3                  | 4               | 5           |
|---------|------------------------------|--------------------|-----------------|-------------|
| Code    | Quasi-phonetic NTA Spellings | Cases in Var 17-18 | Cases in Var 20 | Total Cases |
| BANGAT  | Bangata                      | 2                  | 1               | 3           |
| BANGRN  | Bangarinji                   | 1                  | 0               | 1           |
| BULA    | Bula                         | 71                 | 1               | 72          |
| BUNGAT  | Bungata                      | 0                  | 1               | 1           |
| BURLA   | Burla                        | 149                | 2               | 151         |
| CHOO LU | Choolum                      | 18                 | 0               | 18          |
| JABADA  | Jabada                       | 1                  | 1               | 2           |
| JABALD  | Jabaldjari                   | 13                 | 3               | 16          |
| JABALI  | Jabali                       | 2                  | 0               | 2           |
| JABANA  | Jabananga                    | 5                  | 3               | 8           |
| JABANG  | Jabangadi                    | 10                 | 2               | 12          |
| JABIAR  | Jabiard                      | 1                  | 3               | 4           |
| JABURU  | Jaburula                     | 3                  | 6               | 9           |
| JAGADA  | Jagadai                      | 4                  | 0               | 4           |
| JAGAMA  | Jagamara                     | 3                  | 7               | 10          |

|        |                         |     |    |     |
|--------|-------------------------|-----|----|-----|
| JAKAMA | Jakamara                | 9   | 0  | 9   |
| JAKARA | Jakara                  | 4   | 13 | 17  |
| JAMBUL | Jambulga                | 1   | 1  | 2   |
| JANAMA | Janama                  | 4   | 3  | 7   |
| JANGAL | Jangala                 | 15  | 0  | 15  |
| JANIMA | Janima                  | 1   | 0  | 1   |
| JUBULA | Jubula                  | 1   | 0  | 1   |
| JUGADA | Jugadai                 | 4   | 6  | 10  |
| JUGEDI | Jugedi                  | 6   | 0  | 6   |
| JULAMA | Julama                  | 2   | 1  | 3   |
| JUNGAR | Jungarai                | 1   | 11 | 12  |
| KABORD | Kabordi                 | 1   | 0  | 1   |
| KAMARA | Kamara                  | 199 | 7  | 206 |
| MBITJA | Mbitjana<br>Mbitjaguda  | 31  | 28 | 59  |
| NABABG | Nababgardai             | 0   | 1  | 1   |
| NABALD | Nabaldjari              | 14  | 1  | 15  |
| NABANA | Nabananga               | 5   | 1  | 6   |
| NABANG | Nabangadi               | 10  | 2  | 12  |
| NABARD | Nabarda                 | 2   | 3  | 5   |
| NABARU | Nabarula                | 3   | 0  | 3   |
| NABIDA | Nabida                  | 13  | 1  | 14  |
| NABURU | Naburula                | 4   | 3  | 7   |
| NAGAMA | Nagamara                | 8   | 2  | 10  |
| NAGARA | Nagara                  | 1   | 0  | 1   |
| NALARD | Nalarda                 | 0   | 1  | 1   |
| NALYER | Nalyeri                 | 0   | 1  | 1   |
| NAMBAJ | Nambajimba<br>Nambajiri | 1   | 0  | 1   |
| NAMBAL | Nambala                 | 0   | 4  | 4   |
| NAMBIA | Nambiard                | 1   | 3  | 4   |
| NAMBID | Nambidjimba             | 1   | 0  | 1   |
| NAMBUL | Nambula                 | 3   | 3  | 6   |
| NAMINA | Namina                  | 0   | 1  | 1   |
| NANGAL | Nangala                 | 25  | 1  | 26  |
| NANGAR | Nangarai                | 0   | 6  | 6   |
| NGALA  | Ngala                   | 27  | 21 | 48  |
| NGAMIN | Ngamina                 | 2   | 0  | 2   |
| NGULYA | Ngulyara                | 1   | 1  | 2   |
| NGWARI | Ngwariya                | 241 | 3  | 244 |
| NUNGAR | Nungarai                | 2   | 6  | 8   |
| NURALA | Nuralama                | 5   | 0  | 5   |
| PANANG | Pananga                 | 0   | 10 | 10  |
| PANANK | Pananka                 | 8   | 15 | 23  |
| PANGAD | Pangada                 | 2   | 2  | 4   |
| PANGAR | Pangarda                | 0   | 1  | 1   |
| PANGAT | Pangata                 | 0   | 2  | 2   |
| PANUNG | Panunga                 | 2   | 0  | 2   |
| PITJAR | Pitjara                 | 233 | 10 | 243 |
| PULTAR | Pultara                 | 5   | 26 | 31  |



|          |            |      |      |      |
|----------|------------|------|------|------|
| PURULA   | Purula     | 21   | 51   | 72   |
| WADJAL   | Wadjala    | 0    | 1    | 1    |
| WADJUL   | Wadjulla   | 6    | 1    | 7    |
| Subtotal |            | 1208 | 284  | 1492 |
| DK       | Don't Know | 246  | 1170 | 1416 |
| Total    |            | 1454 | 1454 | 2908 |

Table 9 is a rotated version of Table 8. It shows the frequency distribution of section and subsection terms resorted in order of decreasing frequency of occurrence. The frequency distribution begins with a high concentration of 4-term Alyawarra section names, followed by Aranda terms (4-term sections and 8-term subsections), then by Kaiditch and Warramunga terms (8-term subsections), then by a large collection of terms beginning with ja- and na- that are associated with 16-term sex-specific subsection systems among the Wailbri, Loritja and Anmatjira.

Numeric codes 1-4 denote Alyawarra section terms in the same sequence that I used in the AU01 database; code 8 applies to other section and subsection terms, and code 9 applies to cases in which no section or subsection term is known.

**Table 9.** xxxxx

| Codes |         | Quasi-phonetic<br>NTA Spellings | Cases in<br>SECT1 | Cases in<br>SECT2 | Total<br>Cases |
|-------|---------|---------------------------------|-------------------|-------------------|----------------|
| #     | Alpha   |                                 |                   |                   |                |
| 4     | NGWARI  | Ngwariya                        | 241               | 3                 | 244            |
| 2     | PITJAR  | Pitjara                         | 233               | 10                | 243            |
| 1     | KAMARA  | Kamara                          | 199               | 7                 | 206            |
| 3     | BURLA   | Burla                           | 149               | 2                 | 151            |
| 3     | BULA    | Bula                            | 71                | 1                 | 72             |
|       |         |                                 |                   |                   |                |
| 8     | PURULA  | Purula                          | 21                | 51                | 72             |
| 8     | MBITJA  | Mbitjana<br>Mbitjaguda          | 31                | 28                | 59             |
| 8     | NGALA   | Ngala                           | 27                | 21                | 48             |
| 8     | PULTAR  | Pultara                         | 5                 | 26                | 31             |
| 8     | NANGAL  | Nangala                         | 25                | 1                 | 26             |
| 8     | PANANK  | Pananka                         | 8                 | 15                | 23             |
| 8     | CHOO LU | Choolum                         | 18                | 0                 | 18             |
| 8     | JAKARA  | Jakara                          | 4                 | 13                | 17             |
| 8     | JABALD  | Jabaldjari                      | 13                | 3                 | 16             |
| 8     | JANGAL  | Jangala                         | 15                | 0                 | 15             |
| 8     | NABALD  | Nabaldjari                      | 14                | 1                 | 15             |
| 8     | NABIDA  | Nabida                          | 13                | 1                 | 14             |
| 8     | JABANG  | Jabangadi                       | 10                | 2                 | 12             |
| 8     | JUNGAR  | Jungarai                        | 1                 | 11                | 12             |
| 8     | NABANG  | Nabangadi                       | 10                | 2                 | 12             |
| 8     | JAGAMA  | Jagamara                        | 3                 | 7                 | 10             |

|   |          |                         |      |      |      |
|---|----------|-------------------------|------|------|------|
| 8 | JUGADA   | Jugadai                 | 4    | 6    | 10   |
| 8 | NAGAMA   | Nagamara                | 8    | 2    | 10   |
| 8 | PANANG   | Pananga                 | 0    | 10   | 10   |
| 8 | JABURU   | Jaburula                | 3    | 6    | 9    |
| 8 | JAKAMA   | Jakamara                | 9    | 0    | 9    |
| 8 | JABANA   | Jabananga               | 5    | 3    | 8    |
| 8 | NUNGAR   | Nungarai                | 2    | 6    | 8    |
| 8 | JANAMA   | Janama                  | 4    | 3    | 7    |
| 8 | NABURU   | Naburula                | 4    | 3    | 7    |
| 8 | WADJUL   | Wadjulla                | 6    | 1    | 7    |
| 8 | JUGEDI   | Jugedi                  | 6    | 0    | 6    |
| 8 | NABANA   | Nabananga               | 5    | 1    | 6    |
| 8 | NAMBUL   | Nambula                 | 3    | 3    | 6    |
| 8 | NANGAR   | Nangarai                | 0    | 6    | 6    |
| 8 | NABARD   | Nabarda                 | 2    | 3    | 5    |
| 8 | NURALA   | Nuralama                | 5    | 0    | 5    |
| 8 | JABIAR   | Jabiard                 | 1    | 3    | 4    |
| 8 | JAGADA   | Jagadai                 | 4    | 0    | 4    |
| 8 | NAMBAL   | Nambala                 | 0    | 4    | 4    |
| 8 | NAMBIA   | Nambiard                | 1    | 3    | 4    |
| 8 | PANGAD   | Pangada                 | 2    | 2    | 4    |
| 8 | BANGAT   | Bangata                 | 2    | 1    | 3    |
| 8 | JULAMA   | Julama                  | 2    | 1    | 3    |
| 8 | NABARU   | Nabarula                | 3    | 0    | 3    |
| 8 | JABADA   | Jabada                  | 1    | 1    | 2    |
| 8 | JABALI   | Jabali                  | 2    | 0    | 2    |
| 8 | JAMBUL   | Jambulga                | 1    | 1    | 2    |
| 8 | NGAMIN   | Ngamina                 | 2    | 0    | 2    |
| 8 | NGULYA   | Ngulyara                | 1    | 1    | 2    |
| 8 | PANGAT   | Pangata                 | 0    | 2    | 2    |
| 8 | PANUNG   | Panunga                 | 2    | 0    | 2    |
| 8 | BANGRN   | Bangarinji              | 1    | 0    | 1    |
| 8 | BUNGAT   | Bungata                 | 0    | 1    | 1    |
| 8 | JANIMA   | Janima                  | 1    | 0    | 1    |
| 8 | JUBULA   | Jubula                  | 1    | 0    | 1    |
| 8 | KABORD   | Kabordi                 | 1    | 0    | 1    |
| 8 | NABABG   | Nababgardi              | 0    | 1    | 1    |
| 8 | NAGARA   | Nagara                  | 1    | 0    | 1    |
| 8 | NALARD   | Nalarda                 | 0    | 1    | 1    |
| 8 | NALYER   | Nalyeri                 | 0    | 1    | 1    |
| 8 | NAMBAJ   | Nambajimba<br>Nambajiri | 1    | 0    | 1    |
| 8 | NAMBID   | Nambidjimba             | 1    | 0    | 1    |
| 8 | NAMINA   | Namina                  | 0    | 1    | 1    |
| 8 | PANGAR   | Pangarda                | 0    | 1    | 1    |
| 8 | WADJAL   | Wadjala                 | 0    | 1    | 1    |
|   | Subtotal |                         | 1208 | 284  | 1492 |
| 9 | DK       | Don't Know              | 246  | 1170 | 1416 |
|   | Total    |                         | 1454 | 1454 | 2908 |

In Table 10, I have matched the NTA terms with the terms and models from von Brandenstein (1984) in an attempt to make some preliminary sense of the section and subsection data. I have serious reservations about the validity of von Brandenstein's material, but at least it is wide-ranging, systematic and internally consistent. Here I deal with equivalences between NTA terms on the one hand, and dialects / models that appear in von Brandenstein (1984:25-28,43,71) on the other. Specifically, parts a) – f) of this table correspond to one or more of von Brandenstein's models. Blank spaces in Columns 1 and 2 mean that the NTA dataset contains no examples of the terms listed in Column 3. In Column 4, "y." means young, i.e., before puberty, before initiation. Note that some widely used terms (e.g. Kamara) have multiple spellings in Column 2, and that the same basic term (e.g. Kamara) may have multiple spellings (and presumably multiple pronunciations) in Column 3.

Table 10. xxxxx

| 1. Code | 2. NTA Spellings | 3. Brandenstein's Spellings | 5. Sex |
|---------|------------------|-----------------------------|--------|
|---------|------------------|-----------------------------|--------|

| a. Aranda Southern / Eastern<br>(sections, Karierra type) |         |           |     |
|-----------------------------------------------------------|---------|-----------|-----|
| KAMARA                                                    | Kamara  | Karmarra  | ♂+♀ |
| PULTAR                                                    | Pultara | Paltarra  | ♂+♀ |
| PANANK                                                    | Pananka | Pannangga | ♂+♀ |
| BULA                                                      | Bula    | Purula    | ♂+♀ |

| b. Alyawarra<br>(sections, add Choolum of unknown meaning) |          |            |     |
|------------------------------------------------------------|----------|------------|-----|
| KAMARA                                                     | Kamara   | Kermarra   | ♂+♀ |
| PITJAR                                                     | Pitjara  | Pidtjarra  | ♂+♀ |
| NGWARI                                                     | Ngwariya | Kngwarrija | ♂+♀ |
| BURLA                                                      | Burla    | Puula      | ♂+♀ |
| CHOO LU                                                    | Choolum  | DK         | ♂+♀ |

| c. Aranda Northern 1.7<br>(subsections, Centralian prototype) |          |          |     |
|---------------------------------------------------------------|----------|----------|-----|
| KAMARA                                                        | Kamara   | Kamara   | ♂+♀ |
| PULTAR                                                        | Pultara  | Paltara  | ♂+♀ |
|                                                               |          |          |     |
| PANANK                                                        | Pananka  | Pananga  | ♂+♀ |
| PURULA                                                        | Purula   | Purula   | ♂+♀ |
|                                                               |          |          |     |
| MBITJA                                                        | Mbitjana | Mbitjana | ♂+♀ |

|                  |                     |          |     |
|------------------|---------------------|----------|-----|
| BANGAR<br>PANGAD | Bangarda<br>Pangada | Pangata  | ♂+♀ |
|                  |                     |          |     |
| NGWARI           | Ngwariya            | Ngwariya | ♂+♀ |
| NGALA            | Ngala               | Ngala    | ♂+♀ |

|                                                                                                |                             |                                     |                     |
|------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|---------------------|
| <b>d. Kaiditch 1.8 and Warramunga 1.9</b><br>(subsections, add wadjala = y. ♀ and jakara y. ♂) |                             |                                     |                     |
| KAMARA<br>JAKARA<br>WAIGAL                                                                     | Kamara<br>Jakara<br>Waigala | Kamara<br>tjaKa (rma) ra<br>Wadjala | ♂+♀<br>y. ♂<br>y. ♀ |
| KABORD                                                                                         | Kabordi                     | Kabidji                             | ♂+♀                 |
|                                                                                                |                             |                                     |                     |
| PANANK                                                                                         | Pananka                     | Pananga                             | ♂+♀                 |
| PURULA                                                                                         | Purula                      | Purula                              | ♂+♀                 |
|                                                                                                |                             | tjamBitjana                         | ♂+♀                 |
| PANGAD                                                                                         | Pangada                     | Pangarda                            | ♂+♀                 |
|                                                                                                |                             |                                     |                     |
| NGWARI                                                                                         | Ngwariya                    | Ngwariya                            | ♂+♀                 |
| NGALA                                                                                          | Ngala                       | Ngala                               | ♂+♀                 |

|                                                                                         |                                            |                                                    |                        |
|-----------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------|------------------------|
| <b>e. Walbri 1.41 and Loritja 1.5</b><br>(subsections, add markers for sex: na=♂, ja=♀) |                                            |                                                    |                        |
| JAGAMA<br>JAKARA<br>NAGAMA<br>WADJUL                                                    | Tagamara<br>Jakara<br>Nagamara<br>Wadjulla | taKamara<br>tjaKa (rma) ra<br>naKamara<br>Wadjalla | ♂<br>y. ♂<br>♀<br>y. ♀ |
| JABALD<br>NABALD                                                                        | Jabaldjari<br>Nabaldjari                   | jaPaltjari<br>naPaltjari                           | ♂<br>♀                 |
| JABANA<br>NABANA                                                                        | Jabananga<br>Nabananga                     | tjaPananga<br>naPananga                            | ♂<br>♀                 |
| JABURU<br>JUBURU<br>JUBULA<br>NABARU                                                    | Jaburula<br>Juburula<br>Jubula<br>Nabarula | jaPurula<br>jaPurula<br>jaPurula<br>naPurula       | ♂<br>♂<br>♂<br>♀       |
| TAMBID                                                                                  | Tambidjimba                                | tjaMbidjimba<br>namBidjimba                        | ♂<br>♀                 |
| JABANG<br>NGAMBA<br>NABANG                                                              | Jabangadi<br>Ngambardi<br>Nabangadi        | tjaPangardi<br>naPangardi<br>naPangardi            | ♂<br>♀<br>♀            |
| JUNGAR<br>JUGADA<br>NUNGAR                                                              | Jungarai<br>Jugadai<br>Nungarai            | juNgarai<br>juNgarai<br>nuNgarai                   | ♂<br>♂<br>♀            |
| JANGAL<br>NANGAL<br>NUNGAL                                                              | Jangala<br>Nangala<br>Nungala              | jaNgala<br>naNgala<br>naNgala                      | ♂<br>♀<br>♀            |

|        |        |           |     |
|--------|--------|-----------|-----|
| NABIDA | Nabida | ngarBiida | y.♀ |
|--------|--------|-----------|-----|

|                                                                                      |                        |                                         |                   |
|--------------------------------------------------------------------------------------|------------------------|-----------------------------------------|-------------------|
| <b>f. Anmatjira 1.6</b><br>(subsections; special terms applied only to young people) |                        |                                         |                   |
| JAGAMA<br>WADJUL                                                                     | Tagamara<br>Wadjulla   | tjaKamara<br>Wadilla                    | y.♂<br>y.♀        |
| JABALY<br>JABALD                                                                     | Jabalya<br>Jabaldjari  | tjaPalya<br>ngamPaljiri                 | y.♂<br>y.♀        |
| JANAMA                                                                               | Janama                 | tjaPanama<br>ngamPanama                 | y.♂<br>y.♀        |
| PURULA<br>NURALA                                                                     | Purula<br>Nuralama     | tjaPurulama<br>tjaPurulama<br>ngamPurla | y.♂<br>y.♂<br>y.♀ |
| JAMBUL                                                                               | Jambulga               | tjaKambulka<br>ngamKambidja             | y.♂<br>y.♀        |
| JABANG<br>NGAMBA                                                                     | Jabangadi<br>Ngambardi | tjaPangardi<br>ngamPangardi             | y.♂<br>y.♀        |
|                                                                                      |                        | tjaKungaradja<br>ngamPurgulu            | y.♂<br>y.♀        |
|                                                                                      |                        | tjangKangali<br>namKangala              | y.♂<br>y.♀        |

|                                                                         |          |    |
|-------------------------------------------------------------------------|----------|----|
| <b>g. NTA Terms with unresolved equivalences in Brandenstein (1984)</b> |          |    |
| JABADA                                                                  | Jabada   | DK |
| JANIMA                                                                  | Janima   | DK |
| JULAMA                                                                  | Julama   | DK |
| JUNDAG                                                                  | Jundaga  | DK |
| NAGARA                                                                  | Nagara   | DK |
| NALYER                                                                  | Nalyeri  | DK |
| NAMINA                                                                  | Namina   | DK |
| NGAMIN                                                                  | Ngamina  | DK |
| NGULYA                                                                  | Ngulyara | DK |
| NULYAR                                                                  | Nulyara  | DK |

Establishing equivalences for subsection terms to use in place of Code 8 in Table 9, col. 1, will be an enormously challenging task.

Table 11 shows the frequency distribution of the four section terms often used by people who identify themselves as Alyawarra, and the terms used most frequently in the NTA data. Von Brandenstein (1984) reports that one pair of these terms, Kamara and Ngwariya, are used not only by Alyawarra, but also by Aranda, Kaiditch and Waramunga.

Table 11. xxxxx

| <b>Patrimoiety P1</b> | <b>Count</b> |       | <b>Patrimoiety P2</b> | <b>Count</b> |       |
|-----------------------|--------------|-------|-----------------------|--------------|-------|
| Kamara                | 206          |       | Pitjara               | 243          |       |
| Burla/Bula            | 223          |       | Ngwariya              | 244          |       |
| Total                 | 429          | 46.8% | Total                 | 487          | 53.2% |
| <b>Matrimoiety M1</b> | <b>Count</b> |       | <b>Matrimoiety M2</b> | <b>Count</b> |       |
| Kamara                | 206          |       | Pitjara               | 243          |       |
| Ngwariya              | 244          |       | Burla/Bula            | 223          |       |
| Total                 | 450          | 49.1% | Total                 | 466          | 50.9% |

Alyawarra society can be conceptualized in terms of unnamed Patrimoieties (P1-P2 Father-Son descent lines, as the Alyawarra do it) or unnamed Matrimoieties (M1-M2 Mother-Daughter descent lines, that may be more useful for demographic analysis). The relative sizes of the “sides” are more nearly balanced when the society is conceptualized as matrimoieties (.491 / .509) than when it is conceptualized as patrimoieties (.468 / .532).

Note that Kamara and Ngwariya, the terms in unnamed Matrimoiety M1, are the pair used most widely, by Alyawarra (sections), Aranda (sections and subsections), and Kaiditch and Warramunga (subsections).

Detailed analysis of individual section and subsection systems, and interactions between and among them, must wait.

### **Country / Patriline Codes (Var. 21)**

In my fieldwork in 1971-72, I recorded 85 “countries” or country-like patrilineal descent groups even though a lot of them had no living representatives in the research population. But the NTA material does not include Country and Dreaming data.

The Expanded AEA VS-GD-CD Dataset contains two major “types” of patrilineal descent groups.

- Those with code values <100 are the ones I recorded in 1971-72, including Country 38 Ahrunga discussed in detail below. These descent groups have Aboriginal names.
- Those with code values >100 are based on new data from the NTA censuses. They have quasi-European names assigned by NTA or sometimes by me to serve as mnemonic devices only.

Since country identifications are missing from the NTA dataset, I have resorted to using what appear to be multigenerational extended families based directly on genealogical relationships

that are detectable in the data. In many cases, I have been able to link the NTA data directly to my own country codes with no ambiguity, so that is what I have done. But in cases where I can find no link with my own codes (and groups), I have labeled the family groups with European names found – often in multiple versions - in the NTA data, put them in alphabetical order (more-or-less), and numbered them upward from 101. No doubt this tactic results in some failures to join two or more patrilineal groups that are separated by a “missing link”, but better to err by too much splitting than by too much lumping.

**Table 12.** Countries (patrilineal descent groups) listed in order of Country Code. (In prep)

| Country Code | Name          | Sections<br>P1=K+B<br>P2=P+N | Total Cases |
|--------------|---------------|------------------------------|-------------|
| 2            | Gwarlagwarla  | P2                           | 1           |
| 3            | Rabunja       | P2                           | 5           |
| 14           | Dereba-Oturba | P2                           | 2           |
| 15           | Andarungunya  | P1                           | 55          |
| 26           | Ajilgura      | P1                           | 10          |
| 29           | Adnangura     | P2                           | 21          |
| 30           | Albura        | P1                           | 46          |
| 31           | Ngwalilanima  | P2                           | 25          |
| 33           | Arungarbunga  | P2                           | 1           |
| 37           | Aradarnga     | P1                           | 11          |
| 38           | Ahrunga       | P2                           | 205         |
| 41           | Ngudunga      | P1                           | 29          |
| 42           | Dargada       | P2                           | 21          |
| 43           | Tsili         | P2                           | 36          |
| 44           | Adnungarba    | P1                           | 64          |
| 52           | Yiribmarna    | P1                           | 1           |
| 58           | Yerolja       | P1                           | 83          |
| 61           | Abmoara       | P2                           | 19          |
| 62           | Rada          | P2                           | 7           |
| 70           | Adnorga       | P1                           | 7           |
| 72           | Agerda        | P1                           | 2           |
| 73           | Warthara      | P2                           | 11          |
| 81           | Otibaturba    | P2                           | 14          |
| 82           | Ilbula        | P1                           | 1           |
| 83           | Oraua         | P1                           | 1           |
| 84           | Djabagurda    | P2                           | 2           |
| 85           | Arabra        | P2                           | 1           |
| 101          | Age           | P2                           | 7           |
| 102          | AvonBob       | P1                           | 12          |
| 103          | DK            | N/A                          | 0           |
| 104          | Beasley       | P1                           | 29          |
| 105          | Butcher       | P1                           | 24          |
| 106          | Cadney        | P1                           | 7           |
| 107          | Chubitty      | Subsect                      | 3           |

|     |                       |         |     |
|-----|-----------------------|---------|-----|
| 108 | Dick                  | Subject | 5   |
| 109 | Edwards               | Subject | 5   |
| 110 | Murphy                | Subject | 5   |
| 111 | Florrie               | P2      | 8   |
| 112 | Holmes                | P1      | 25  |
| 113 | Martin                | No data | 3   |
| 114 | Mick                  | Subject | 2   |
| 115 | Kurindi Bill          | Subject | 9   |
| 116 | Lame George           | No data | 10  |
| 117 | Lame Tom              | Subject | 8   |
| 118 | Lippert               | P2      | 8   |
| 119 | Long Archie           | P2      | 7   |
| 120 | Pryce                 | P1      | 13  |
| 121 | Long Paddy<br>Utopia  | P2      | 12  |
| 122 | Mad Alec              | Subject | 4   |
| 123 | Mahoney               | P1      | 7   |
| 124 | Major                 | P1      | 9   |
| 125 | Old Fred<br>Angulaga  | Subject | 19  |
| 126 | Nugget                | P2      | 7   |
| 127 | Old Charlie<br>Sixbox | P1      | 5   |
| 128 | Old Fred              | Subject | 15  |
| 129 | Old Sam               | P2      | 15  |
| 130 | Paddy + Ivy           | Subject | 9   |
| 131 | Philomac              | P2      | 32  |
| 132 | Pound                 | P2      | 19  |
| 133 | Quartpot              | P1      | 12  |
| 134 | Campbell              | P1      | 15  |
| 135 | Woodman               | P1      | 6   |
| 136 | Wagai                 | P1      | 15  |
| 137 | Darky                 | P1      | 16  |
| 138 | Thompson              | Subject | 16  |
| 139 | Long George           | Unclear | 5   |
| 140 | Pompey                | P1      | 10  |
| 141 | Old George<br>Panunga | P2      | 15  |
| 142 | Teague                | P2      | 8   |
| 143 | George                | P2      | 3   |
| 144 | Wauchope Jack         | Subject | 4   |
| 145 | Stirling              | Subject | 13  |
| 146 | DK                    | N/A     | 0   |
| 147 | Barney                | Subject | 3   |
| 148 | Fred #1               | N/A     | 0   |
| 149 | Molly                 | N/A     | 0   |
| 999 | Don't Know            |         | 287 |



Among the descent groups with codes >100, most groups are based on clear and coherent genealogical relationships. But in a few cases I have used a single name as a cover term for two or more small descent groups that share some feature that serves as a mnemonic that will enable me (and you) to find them even though their genealogical connections are unknown. For example, the term Wagai / Wagaiya / Wagaya / Wagait seems to refer in every case to members of the language group now known by the AIATSIS name Wagaya. Even though these few nuclear families seem not to be genealogically interconnected, I labeled all of them as Wagai and “packaged” them together in genealogical diagram C136 Wagai. I did the same with two small families named Darky (C137 Darky) even though I know of no genealogical relations between them.

**Table 13.** Countries (patrilineal descent groups) listed in order of decreasing frequency of occurrence in the data file.

| Country Code | Name               | Total Cases |
|--------------|--------------------|-------------|
| 999          | Don't Know         | 287         |
| 38           | Ahrunga            | 205         |
| 58           | Yerolja            | 83          |
| 44           | Adnungarba         | 64          |
| 15           | Andarungunya       | 55          |
| 30           | Albura             | 46          |
| 43           | Tsili              | 36          |
| 131          | Philomac           | 32          |
| 41           | Ngudunga           | 29          |
| 104          | Beasley            | 29          |
| 31           | Ngwalilanima       | 25          |
| 112          | Holmes             | 25          |
| 105          | Butcher            | 24          |
| 29           | Adnangura          | 21          |
| 42           | Dargada            | 21          |
| 61           | Abmoara            | 19          |
| 125          | Old Fred Angulaga  | 19          |
| 132          | Pound              | 19          |
| 137          | Darky              | 16          |
| 138          | Thompson           | 16          |
| 128          | Old Fred           | 15          |
| 129          | Old Sam            | 15          |
| 134          | Campbell           | 15          |
| 136          | Wagai              | 15          |
| 141          | Old George Panunga | 15          |
| 81           | Otibaturba         | 14          |
| 120          | Pryce              | 13          |
| 145          | Stirling           | 13          |
| 102          | AvonBob            | 12          |
| 121          | Long Paddy Utopia  | 12          |

|     |                    |    |
|-----|--------------------|----|
| 133 | Quartpot           | 12 |
| 37  | Aradarnga          | 11 |
| 73  | Warthara           | 11 |
| 26  | Ajilgura           | 10 |
| 116 | Lame George        | 10 |
| 140 | Pompey             | 10 |
| 115 | Kurindi Bill       | 9  |
| 124 | Major              | 9  |
| 130 | Paddy + Ivy        | 9  |
| 111 | Florrie            | 8  |
| 117 | Lame Tom           | 8  |
| 118 | Lippert            | 8  |
| 142 | Teague             | 8  |
| 62  | Rada               | 7  |
| 70  | Adnorga            | 7  |
| 101 | Age                | 7  |
| 106 | Cadney             | 7  |
| 119 | Long Archie        | 7  |
| 123 | Mahoney            | 7  |
| 126 | Nugget             | 7  |
| 135 | Woodman            | 6  |
| 3   | Rabunja            | 5  |
| 108 | Dick               | 5  |
| 109 | Edwards            | 5  |
| 110 | Murphy             | 5  |
| 127 | Old Charlie Sixbox | 5  |
| 139 | Long George        | 5  |
| 122 | Mad Alec           | 4  |
| 144 | Wauchope Jack      | 4  |
| 107 | Chubitty           | 3  |
| 113 | Martin             | 3  |
| 143 | George             | 3  |
| 147 | Barney             | 3  |
| 14  | Dereba-Oturba      | 2  |
| 72  | Agerda             | 2  |
| 84  | Djabagurda         | 2  |
| 114 | Mick               | 2  |
| 2   | Gwarlagwarla       | 1  |
| 33  | Arungarbunga       | 1  |
| 52  | Yiribmarna         | 1  |
| 82  | Ilbula             | 1  |
| 83  | Oraua              | 1  |
| 85  | Arabra             | 1  |
| 103 | DK                 | 0  |
| 146 | DK                 | 0  |
| 148 | Fred #1            | 0  |
| 149 | Molly              | 0  |

Country 38 Ahrunga is a P2 country all of whose members are either Pityara or Ngwariya, while Country 44 is a P1 country all of whose members are either Kamara or Burla. The members of each Country belong to one or the other of the two sections in their own moiety. One of the basic rules of a moiety/section system is that a person in P1 or M1 must marry a person of the opposite sex in P2 or M2 respectively, and *vice versa*. It follows of course that, at least in terms of moiety and section memberships, members of two countries in opposite moieties can intermarry, Kamara men with Pitjara women and *vice versa*, Burla men with Ngwariya women and *vice versa*.

We can sort the data file by Country Code and look at section memberships of people in each Country. By eliminating countries whose section terms are different from those of the Alyawarra, as well as one country whose terms reveal confusion that suggests a “wrong” marriage, it is possible to assign tentative moiety memberships to many people for whom section terms are missing. If we sort on the Section variable, and count the people in each patrimoiety, we find that P1 has 515 members and P2 has 512 members. Ideally the two would be about the same size, as they are in Table 11.

Moyle (1986) presents his genealogical data for Country 38 Ahrunga in two forms. First he shows what he calls Ahrunga patrilineal (two of them with no known descent connections between them). This diagram includes *Ahrunga-rindyia* (people who belong to Ahrunga country strictly by virtue of patrilineal descent), plus a good many Ahrunga men's wives who are not necessary and are somewhat distracting in these two diagrams. Depending upon exactly who you count, these diagrams contain symbols for about 200 *Ahrunga-rindyia*.

Second he shows what he calls Ahrunga genealogies (again two of them). Here he includes *Ahrunga-rindyia*, plus spouses of *Ahrunga-rindyia* who by definition are not *Ahrunga-rindyia*, plus children of female *Ahrunga-rindyia* who also by definition are not *Ahrunga-rindyia*. In some cases the diagrams also contain kin of non-*Ahrunga-rindyia*, plus considerable redundancy to clarify complex relations. All things considered, Moyle's Ahrunga genealogies contain symbols for about 530 people, many of whom are represented more than once and a majority of whom are not *Ahrunga-rindyia*.

My processing of Moyle's data yielded 205 *Ahrunga-rindyia* as of October 1979, plus 231 members of other known and unknown countries. The total of 205 *Ahrunga-rindyia* makes this Country by far the largest in the dataset, but much smaller than it appears to be upon first looking at Moyle's genealogies. Data for people in Moyle's genealogies who are not *Ahrunga-rindyia* have been integrated into the Expanded AEA VS-GD-CD Dataset as members of their own Countries.

## Names (Var. 2, 22)

European names were assigned to Aboriginal people by Europeans in order to facilitate European record keeping, but also as a way of maintaining communications with Aboriginal people whose own naming systems were radically different from European systems and included a requirement that the use of names be “suspended” for extended periods whenever someone died (this is NOT a good place to explore the complexities of Alyawarra naming.) The result was that the Alyawarra used their own traditional naming systems in traditional contexts, and used European names freely but somewhat unreliably in European contexts.

European names in Variable 2 were used most consistently by station managers, NTA census collectors, and other Europeans who interacted with the Aboriginal people. They were highly variable in census records, but with practice they generally become intelligible.

Aboriginal names in Variable 22 were recorded unsystematically by NTA census collectors, but in some cases with considerable regularity. I extracted them from the records because they sometimes serve as one more clue to establishing identities.

I have suppressed European and Aboriginal names from this document and from the KinSources data file. Both sets of names are available from AIATSIS, Canberra, ACT. If you really must use the European names, do so with great caution. They may *look* like European names, but they certainly don't *behave* like European names.

## Source Codes (Var. 24)

This is a summary list of the data sources used in this project. A detailed list of the NTA documents appears under Census Report Descriptions in the following section of the Code Book.

- NTA is the primary source for all data not included in RMM and WWD (below).
- RMM. Moyle (1986) is the primary source for data from Ahrunga and related countries in 1979.
- WWD. Denham (2010) is the primary source for MacDonal Down and Derry Downs in 1972.

**Northern Territory Administration (NTA) documents, available from the Australian National Archive, Canberra, Australia.** Paul M. Mackett of Brisbane, Queensland, Australia, graciously provided copies of these records to me.

- **NTA-ROW.** Northern Territory Administration, Register of Wards, Northeast Alice Springs District, 1957-62. Raw data sheets and edited Registers.
  - ROW 1st Edition 1957
  - ROW Supplement A 1961
  - ROW Supplement B 1962

- **NTA-PR.** Aboriginal Population Records, Northeast Alice Springs District, 1957 – 1973. These records contain genealogies and vital statistics derived from NTA Identification of Persons Field Notes. Parents, siblings, spouses, children and other relatives are identified for many of the Aboriginal people. NTA Welfare census staff refined the records repeatedly over a period of thirty years.
- **NT-HC.** Aboriginal Census Household Composition Sheets, 1971. These census records include detailed enumeration of the people living in each residence in each Aboriginal camp at the time of each census visit.
- **NTA-PPMIR.** Pastoral Property Maintenance and Inspection Reports 1965-67. These reports were generated by pastoral leaseholders concerning people who lived on their properties, typically receiving government subsidies.

**RMM. Moyle, Richard** (1986) *Alyawarra Music*. AIATSIS, Canberra, ACT, Australia, pp. 26-29 This source contains detailed, annotated genealogical diagrams for members of Ahrunga Country centered at Ammaroo Station, Northern Territory, Australia. Based on fieldwork conducted with the Alyawarra in 1977-78.

**WWD. Denham, Woodrow W.** (2010) *Alyawarra Ethnographic Archive*, Numerical Data Files. This document contains vital statistics, genealogies and censuses for 264 living and 113 deceased people at MacDonald Downs and Derry Downs Stations, Northern Territory, Australia. Based on fieldwork conducted with the Alyawarra in 1971-72.

### Census Reports (Var. 25-97)

This section contains two detailed lists of the specific census documents I used in preparing this dataset. The lists appear in Table 14 sorted by location in chronological order, and in Table 15 sorted in strict chronological order. The Source Type codes are defined and cited in full under Source Codes (Var. 24) above.

|           |                                                                                                                                 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------|
| NTA-ROW   | Register of Wards, 1957, 1961, 1962                                                                                             |
| NTA-PR    | Aboriginal Population Records, 1957-1973                                                                                        |
| NTA-HC    | Aboriginal Census Household Composition Sheets, 1971                                                                            |
| NTA-PPMIR | Pastoral Property Maintenance and Inspection Reports, 1965-67<br>(reporting procedures necessarily yielded incomplete censuses) |
| RMM       | Richard M. Moyle, <i>Alyawarra Music</i>                                                                                        |
| WWD       | Woodrow W Denham, <i>Alyawarra Ethnographic Archive</i>                                                                         |

The information in Tables 14 and 15 is used in two ways in the dataset.

**VS-GD Sources.** The Source Type is used by itself to indicate the nature of the *primary* source from which I extracted vital statistics and genealogical data: viz., NTA, RMM or WWD. One of these three-letter codes appears in the final column of the VS-GD segment of each data record. Because information on vital statistics and genealogical relations for each person typically is scattered throughout several documents, it is impossible to provide more precise details with a reasonable investment of space and time.

**Census Sources and Codes.** The header of each column of census data specifies Location + Date + Source of the census report for that column. The physical locations of specific individuals may be different from the location cited for the census report since the reports contain a great deal of data about people who were residing at other locations at the time the census data were collected. Some census reports contain very specific Residence Codes that designate the structures where individuals reside within one of the Aboriginal camps at MacDonald Downs Station. I include Camp and Residence Codes whenever they are available.

Some of the census reports that pertain to the Alyawarra do not contain any usable information, while others contain potentially useful information but it is so garbled as to be useless. In both situations I have indented the names of the locations to indicate that I did not use the reports. Also I omitted the report listed in red because it embodies an unsuccessful attempt to reconstruct the population of a camp in which a dog killed a child, hence dispersed the population. The reconstruction apparently is based on a faulty assumption that the people who reside together in a specific camp necessarily remain together when the camp is abandoned and reestablished elsewhere. The reconstruction is a virtually perfect duplication of the situation that prevailed when the census collector visited the new camps several months after the death occurred, hence probably is inaccurate in unknowable ways.

Tables 14 and 15 contain identifying information for all NTA census reports in my possession from the period 1956-1973 containing any references to the Alyawarra language group.

In cells in Column 6 that contain two numbers (e.g., 242+424), the first number shows how many Aboriginal *people* were present at MacDonald Downs Station as a whole at the time of the census, while the second shows the total number of data points for combined camp and residence occupancy. For example, if the census showed 10 people living at MacDonald and I was able to record the camp and the residence in which each of them resided, the data in Column 6 would reflect 10 people at MacDonald Downs, plus the same 10 people in camps, plus the same 10 people in residences. So the entry in Column 6 would be "10+20". I discuss this matter in more detail below under Census Location and residence Codes.

**Table 14.** NTA Census Reports sorted by Location and Census Code. Columns 6-7 contain a tabulation of the contents of the reports summarized by Location.

\* Location **bold** and left justified = data OK, report used

\* Location **gray** and right justified = report not used due to no usable data or too many errors

\* Location **red and right justified** = report not used due to child killed by dogs (see text)

| 1                                 | 2             | 3                 | 4                      | 5                          | 6            | 7           |
|-----------------------------------|---------------|-------------------|------------------------|----------------------------|--------------|-------------|
| Location*                         | Location Code | Date              | Source Type            | Census Code YYMMDD:Loc:Src | # Per Report | # Per Site  |
| <b>NTA Register of Wards 1956</b> | <b>R56</b>    | <b>1955-56</b>    | <b>NTA master list</b> | <b>56.01.01:R56:NTA</b>    | <b>269</b>   | <b>269</b>  |
| Aileron                           | ALR           | 3.5.1963          | NTA-PR                 | 63.05.03:ALR:NTA           | 0            | 0           |
| Alcoota                           | ALC           | 3.6.1961          | NTA-PR                 | 61.06.03:ALC:NTA           | 0            |             |
| Alcoota                           | ALC           | 10.7.1967         | NTA-PR                 | 67.07.10:ALC:NTA           | 0            |             |
| Alcoota                           | ALC           | 15.10.1969        | NTA-PR                 | 69.10.15:ALC:NTA           | 0            | 0           |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>10.11.1963</b> | <b>NTA-PR</b>          | <b>63.10.11:AMR:NTA</b>    | <b>15</b>    |             |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>29.6.1966</b>  | <b>NTA-PR</b>          | <b>66.06.29:AMR:NTA</b>    | <b>7</b>     |             |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>4.10.1967</b>  | <b>NTA-PR</b>          | <b>67.10.04:AMR:NTA</b>    | <b>19</b>    |             |
| Ammaroo                           | AMR           | 1.1.1969          | NTA-PR                 | 69.01.01:AMR:NTA           | 0            |             |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>23.5.1970</b>  | <b>NTA-PR</b>          | <b>70.05.23:AMR:NTA</b>    | <b>75</b>    |             |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>31.12.1970</b> | <b>NTA-PR</b>          | <b>70.12.31:AMR:NTA</b>    | <b>20</b>    |             |
| Ammaroo                           | AMR           | 1.1.1971          | NTA-HC                 | 71.01.01:AMR:NTA           | 0            |             |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>13.10.79</b>   | <b>RMM</b>             | <b>79.10.13:AMR:RMM</b>    | <b>427</b>   | <b>561</b>  |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>10.10.1963</b> | <b>NTA-PR</b>          | <b>63.10.10:ARG:NTA</b>    | <b>8</b>     |             |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>6.3.1965</b>   | <b>NTA-PR</b>          | <b>65.03.06:ARG:NTA</b>    | <b>26</b>    |             |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>5.10.1967</b>  | <b>NTA-PR</b>          | <b>67.10.06:ARG:NTA</b>    | <b>12</b>    | <b>46</b>   |
| Barrow Creek                      | BCK           | 12.5.1964         | NTA-PR                 | 64.05.12:BCK:NTA           | 0            | 0           |
| <b>Derry Downs</b>                | <b>DDN</b>    | <b>14.3.1970</b>  | <b>NTA-PR</b>          | <b>70.03.14:DDN:NTA</b>    | <b>30</b>    |             |
| <b>Derry Downs</b>                | <b>DDN</b>    | <b>22.5.1970</b>  | <b>NTA-PR</b>          | <b>70.05.22:DDN:NTA</b>    | <b>27</b>    |             |
| <b>Derry Downs</b>                | <b>DDN</b>    | <b>1.1.1971</b>   | <b>NTA-HC</b>          | <b>71.01.01:DDN:NTA</b>    | <b>34</b>    | <b>91</b>   |
| <b>Elkedra</b>                    | <b>ELK</b>    | <b>16.3.1960</b>  | <b>NTA-PR</b>          | <b>60.03.16:ELK:NTA</b>    | <b>51</b>    |             |
| Jervois Mine                      | JVM           | 9.4.1965          | NTA-PR                 | 65.09.04:JVM:NTA           | 0            | 0           |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>11.7.1958</b>  | <b>NTA-PR</b>          | <b>58.07.11:LKN:NTA</b>    | <b>92</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>20.6.1961</b>  | <b>NTA-PR</b>          | <b>61.06.20:LKN:NTA</b>    | <b>94</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>6.6.1963</b>   | <b>NTA-PR</b>          | <b>63.06.06:LKN:NTA</b>    | <b>95</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>9.5.1964</b>   | <b>NTA-PR</b>          | <b>64.09.05:LKN:NTA</b>    | <b>83</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>5.10.1964</b>  | <b>NTA-PR</b>          | <b>64.10.05:LKN:NTA</b>    | <b>120</b>   |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>2.6.1965</b>   | <b>NTA-PPMIR</b>       | <b>65.06.02:LKN:NTA</b>    | <b>122</b>   |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>23.9.1965</b>  | <b>NTA-PR</b>          | <b>65.09.23:LKN:NTA</b>    | <b>63</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>25.6.1966</b>  | <b>NTA-PR</b>          | <b>66.06.25:LKN:NTA</b>    | <b>75</b>    |             |
| Lake Nash                         | LKN           | 1.1.1967          | NTA-PPMIR              | 67.01.01:LKN:NTA           | 0            |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>31.3.1967</b>  | <b>NTA-PPMIR</b>       | <b>67.03.31:LKN:NTA</b>    | <b>118</b>   |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>7.9.1967</b>   | <b>NTA-PR</b>          | <b>67.09.07:LKN:NTA</b>    | <b>78</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>26.8.1968</b>  | <b>NTA-PR</b>          | <b>68.08.26:LKN:NTA</b>    | <b>113</b>   |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>1.1.1970</b>   | <b>NTA-PR</b>          | <b>70.01.01:LKN:NTA</b>    | <b>257</b>   |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>6.7.1971</b>   | <b>NTA-PR</b>          | <b>71.07.06:LKN:NTA</b>    | <b>69</b>    |             |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>25.7.1973</b>  | <b>NTA-PR</b>          | <b>73.07.25:LKN:NTA</b>    | <b>170</b>   | <b>1549</b> |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>23.8.1963</b>  | <b>NTA-PR</b>          | <b>63.08.23:MDD:NTA</b>    | <b>123</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>21.5.1965</b>  | <b>NTA-PR</b>          | <b>65.05.21:MDD:NTA</b>    | <b>179</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>17.5.1966</b>  | <b>NTA-PR</b>          | <b>66.05.17:MDD:NTA</b>    | <b>146</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.6.1967</b>   | <b>NTA-PR</b>          | <b>67.06.01:MDD:NTA</b>    | <b>181</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>14.8.1968</b>  | <b>NTA-PR</b>          | <b>68.08.14:MDD:NTA</b>    | <b>176</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>18.8.1969</b>  | <b>NTA-PR</b>          | <b>69.08.18:MDD:NTA</b>    | <b>278</b>   |             |
| MacDonald Downs                   | MDD           | 29.4.1970         | NTA-PR-Short           | 70.04.29:MDD:NTA           | 0            |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>30.4.1970</b>  | <b>NTA-PR-Long</b>     | <b>70.04.30:MDD:NTA</b>    | <b>216</b>   |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.6.1970</b>   | <b>NTA-PR</b>          | <b>70.06.01:MDD:NTA</b>    | <b>176</b>   |             |
|                                   |               |                   |                        |                            | <b>+352</b>  |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.6.1971</b>   | <b>NTA-HC</b>          | <b>71.06.01x:MDD:NTA</b>   | <b>0</b>     |             |
| MacDonald Downs                   | MDD           | 2.6.1971          | NTA-PR                 | 71.06.02:MDD:NTA           | 0            |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.7.1971</b>   | <b>WWD</b>             | <b>71.07.01x:MDD:WWD</b>   | <b>0</b>     |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.7.1971</b>   | <b>WWD</b>             | <b>71.07.01:MDD:WWD</b>    | <b>242</b>   |             |
|                                   |               |                   |                        |                            | <b>+424</b>  |             |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>15.7.1971</b>  | <b>WWD</b>             | <b>71.07.15:MDD:WWD</b>    | <b>246</b>   |             |
|                                   |               |                   |                        |                            | <b>+466</b>  |             |

|                 |     |            |        |                  |             |               |
|-----------------|-----|------------|--------|------------------|-------------|---------------|
| MacDonald Downs | MDD | 26.7.1971  | WWD    | 71.07.26:MDD:WWD | 246<br>+466 |               |
| MacDonald Downs | MDD | 14.8.1971  | WWD    | 71.08.14:MDD:WWD | 248<br>+474 |               |
| MacDonald Downs | MDD | 19.8.1971  | WWD    | 71.08.19:MDD:WWD | 248<br>+470 |               |
| MacDonald Downs | MDD | 4.9.1971   | WWD    | 71.09.04:MDD:WWD | 246<br>+476 |               |
| MacDonald Downs | MDD | 28.9.1971  | WWD    | 71.09.28:MDD:WWD | 246<br>+444 |               |
| MacDonald Downs | MDD | 9.10.1971  | WWD    | 71.10.09:MDD:WWD | 254<br>+434 |               |
| MacDonald Downs | MDD | 3.11.1971  | WWD    | 71.11.03:MDD:WWD | 261<br>+384 |               |
| MacDonald Downs | MDD | 16.11.1971 | WWD    | 71.11.16:MDD:WWD | 261<br>+468 |               |
| MacDonald Downs | MDD | 7.12.1971  | WWD    | 71.12.07:MDD:WWD | 261<br>+474 |               |
| MacDonald Downs | MDD | 21.12.1971 | WWD    | 71.12.21:MDD:WWD | 250<br>+460 |               |
| MacDonald Downs | MDD | 15.1.1972  | WWD    | 72.01.15:MDD:WWD | 249<br>+302 |               |
| MacDonald Downs | MDD | 17.2.1972  | WWD    | 72.02.17:MDD:WWD | 249<br>+368 |               |
| MacDonald Downs | MDD | 3.3.1972   | WWD    | 72.03.03:MDD:WWD | 249<br>+411 |               |
| MacDonald Downs | MDD | 19.3.1972  | WWD    | 72.03.19:MDD:WWD | 249<br>+424 | 5480<br>+7473 |
| Mosquito Creek  | MCK | 20.11.1957 | NTA-PR | 57.11.20:MCK:NTA | 0           | 0             |
| Mount Riddock   | MTR | 16.10.1969 | NTA-PR | 69.10.16:MTR:NTA | 0           | 0             |
| Ooratippra      | ORT | 10.8.1960  | NTA-PR | 60.08.10:ORT:NTA | 9           |               |
| Ooratippra      | ORT | 30.5.1961  | NTA-PR | 61.05.30:ORT:NTA | 19          |               |
| Ooratippra      | ORT | 7.9.1962   | NTA-PR | 62.09.07:ORT:NTA | 19          |               |
| Ooratippra      | ORT | 10.10.1963 | NTA-PR | 63.10.10:ORT:NTA | 13          |               |
| Ooratippra      | ORT | 6.4.1965   | NTA-PR | 65.04.06:ORT:NTA | 25          |               |
| Ooratippra      | ORT | 1.1.1966   | NTA-PR | 66.01.01:ORT:NTA | 6           |               |
| Ooratippra      | ORT | 5.10.1967  | NTA-PR | 67.10.05:ORT:NTA | 15          |               |
| Ooratippra      | ORT | 13.3.1970  | NTA-PR | 70.03.13:ORT:NTA | 21          |               |
| Ooratippra      | ORT | 1.1.1971   | NTA-HC | 71.01.02:ORT:NTA | 9           | 136           |
| Stirling        | STR | 23.2.1965  | NTA-PR | 65.02.23:STR:NTA | 0           |               |
| Stirling        | STR | 23.6.1966  | NTA-PR | 66.06.23:STR:NTA | 0           |               |
| Stirling        | STR | 30.6.1967  | NTA-PR | 67.06.30:STR:NTA | 0           | 0             |
| Tennant Creek   | TCK | 11.6.1964  | NTA-PR | 64.06.11:TCK:NTA | 0           |               |
| Tennant Creek   | TCK | 1.4.1966   | NTA-PR | 66.04.01:TCK:NTA | 0           |               |
| Tennant Creek   | TCK | 30.6.1966  | NTA-PR | 66.06.30:TCK:NTA | 0           | 0             |
| Tobermorey      | TBR | 2.4.1970   | NTA-PR | 70.04.02:TBR:NTA | 0           | 0             |
| Utopia          | UTP | 11.10.1963 | NTA-PR | 63.10.11:UTP:NTA | 14          |               |
| Utopia          | UTP | 24.5.1965  | NTA-PR | 65.05.24:UTP:NTA | 20          |               |
| Utopia          | UTP | 28.5.1966  | NTA-PR | 66.05.28:UTP:NTA | 5           |               |
| Utopia          | UTP | 30.5.1967  | NTA-PR | 67.05.30:UTP:NTA | 13          |               |
| Utopia          | UTP | 10.9.1968  | NTA-PR | 68.09.10:UTP:NTA | 17          |               |
| Utopia          | UTP | 10.5.1970  | NTA-PR | 70.05.10:UTP:NTA | 21          |               |
| Utopia          | UTP | 1.7.1971   | NTA-PR | 71.07.01:UTP:NTA | 146         | 236           |
| Warrabri        | WRB | 1.6.1963   | NTA-PR | 63.06.01:WRB:NTA | 72          |               |
| Warrabri        | WRB | 27.7.1963  | NTA-PR | 63.07.27:WRB:NTA | 0           |               |
| Warrabri        | WBR | 8.2.1965   | NTA-PR | 65.02.08:WRB:NTA | 0           |               |
| Warrabri        | WRB | 1.1.1967   | NTA-PR | 67.01.01:WRB:NTA | 0           |               |
| Warrabri        | WRB | 2.1.1967   | NTA-PR | 67.01.02:WRB:NTA | 133         |               |
| Warrabri        | WRB | 12.9.1969  | NTA-PR | 69.09.12:WBR:NTA | 114         | 321           |
| <b>Total</b>    |     |            |        |                  |             | <b>16,213</b> |



**Table 15.** NTA census reports sorted by Census Code, therefore in strict chronological order. Columns 6-7 contain a tabulation of the contents of the reports summarized by 5-year intervals.

\* Location **bold** and left justified = data OK, report used

\* Location **gray** and right justified = report not used due to no usable data or too many errors

\* Location **red and right justified** = report not used due to child killed by dogs (see text)

| Location*                         | Location Code | Date              | Source Type            | Census Code<br>YYMMDD:Loc:Src | # Per Report | # Per 5-year Interval |
|-----------------------------------|---------------|-------------------|------------------------|-------------------------------|--------------|-----------------------|
| <b>NTA Register of Wards 1956</b> | <b>R56</b>    | <b>1955-56</b>    | <b>NTA master list</b> | <b>56.01.01:R56:NTA</b>       | <b>269</b>   |                       |
| Mosquito Creek                    | MCK           | 20.11.1957        | NTA-PR                 | 57.11.20:MCK:NTA              | 0            |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>11.7.1958</b>  | <b>NTA-PR</b>          | <b>58.07.11:LKN:NTA</b>       | <b>92</b>    |                       |
| <b>Elkedra</b>                    | <b>ELK</b>    | <b>16.3.1960</b>  | <b>NTA-PR</b>          | <b>60.03.16:ELK:NTA</b>       | <b>51</b>    |                       |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>10.8.1960</b>  | <b>NTA-PR</b>          | <b>60.08.10:ORT:NTA</b>       | <b>9</b>     | <b>421</b>            |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>30.5.1961</b>  | <b>NTA-PR</b>          | <b>61.05.30:ORT:NTA</b>       | <b>19</b>    |                       |
| Alcoota                           | ALC           | 3.6.1961          | NTA-PR                 | 61.06.03:ALC:NTA              | 0            |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>20.6.1961</b>  | <b>NTA-PR</b>          | <b>61.06.20:LKN:NTA</b>       | <b>94</b>    |                       |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>7.9.1962</b>   | <b>NTA-PR</b>          | <b>62.09.07:ORT:NTA</b>       | <b>19</b>    |                       |
| Aileron                           | ALR           | 3.5.1963          | NTA-PR                 | 63.05.03:ALR:NTA              | 0            |                       |
| <b>Warrabri</b>                   | <b>WRB</b>    | <b>1.6.1963</b>   | <b>NTA-PR</b>          | <b>63.06.01:WRB:NTA</b>       | <b>72</b>    |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>6.6.1963</b>   | <b>NTA-PR</b>          | <b>63.06.06:LKN:NTA</b>       | <b>95</b>    |                       |
| Warrabri                          | WRB           | 27.7.1963         | NTA-PR                 | 63.07.27:WRB:NTA              | 0            |                       |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>23.8.1963</b>  | <b>NTA-PR</b>          | <b>63.08.23:MDD:NTA</b>       | <b>123</b>   |                       |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>10.10.1963</b> | <b>NTA-PR</b>          | <b>63.10.10:ARG:NTA</b>       | <b>8</b>     |                       |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>10.10.1963</b> | <b>NTA-PR</b>          | <b>63.10.10:ORT:NTA</b>       | <b>13</b>    |                       |
| <b>Utopia</b>                     | <b>UTP</b>    | <b>11.10.1963</b> | <b>NTA-PR</b>          | <b>63.10.11:UTP:NTA</b>       | <b>14</b>    |                       |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>10.11.1963</b> | <b>NTA-PR</b>          | <b>63.10.11:AMR:NTA</b>       | <b>15</b>    |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>9.5.1964</b>   | <b>NTA-PR</b>          | <b>64.09.05:LKN:NTA</b>       | <b>83</b>    |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>5.10.1964</b>  | <b>NTA-PR</b>          | <b>64.10.05:LKN:NTA</b>       | <b>120</b>   |                       |
| Barrow Creek                      | BCK           | 12.5.1964         | NTA-PR                 | 64.05.12:BCK:NTA              | 0            |                       |
| Tennant Creek                     | TCK           | 11.6.1964         | NTA-PR                 | 64.06.11:TCK:NTA              | 0            |                       |
| Warrabri                          | WRB           | 8.2.1965          | NTA-PR                 | 65.02.08:WRB:NTA              | 0            |                       |
| Stirling                          | STR           | 23.2.1965         | NTA-PR                 | 65.02.23:STR:NTA              | 0            |                       |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>6.3.1965</b>   | <b>NTA-PR</b>          | <b>65.03.06:ARG:NTA</b>       | <b>26</b>    |                       |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>6.4.1965</b>   | <b>NTA-PR</b>          | <b>65.04.06:ORT:NTA</b>       | <b>25</b>    |                       |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>21.5.1965</b>  | <b>NTA-PR</b>          | <b>65.05.21:MDD:NTA</b>       | <b>179</b>   |                       |
| <b>Utopia</b>                     | <b>UTP</b>    | <b>24.5.1965</b>  | <b>NTA-PR</b>          | <b>65.05.24:UTP:NTA</b>       | <b>20</b>    |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>2.6.1965</b>   | <b>NTA-PPMIR</b>       | <b>65.06.02:LKN:NTA</b>       | <b>122</b>   |                       |
| Jervois Mine                      | JVM           | 9.4.1965          | NTA-PR                 | 65.09.04:JVM:NTA              | 0            |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>23.9.1965</b>  | <b>NTA-PR</b>          | <b>65.09.23:LKN:NTA</b>       | <b>63</b>    | <b>1110</b>           |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>1.1.1966</b>   | <b>NTA-PR</b>          | <b>66.01.01:ORT:NTA</b>       | <b>6</b>     |                       |
| Tennant Creek                     | TCK           | 1.4.1966          | NTA-PR                 | 66.04.01:TCK:NTA              | 0            |                       |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>17.5.1966</b>  | <b>NTA-PR</b>          | <b>66.05.17:MDD:NTA</b>       | <b>146</b>   |                       |
| <b>Utopia</b>                     | <b>UTP</b>    | <b>28.5.1966</b>  | <b>NTA-PR</b>          | <b>66.05.28:UTP:NTA</b>       | <b>5</b>     |                       |
| Stirling                          | STR           | 23.6.1966         | NTA-PR                 | 66.06.23:STR:NTA              | 0            |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>25.6.1966</b>  | <b>NTA-PR</b>          | <b>66.06.25:LKN:NTA</b>       | <b>75</b>    |                       |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>29.6.1966</b>  | <b>NTA-PR</b>          | <b>66.06.29:AMR:NTA</b>       | <b>7</b>     |                       |
| Tennant Creek                     | TCK           | 30.6.1966         | NTA-PR                 | 66.06.30:TCK:NTA              | 0            |                       |
| Lake Nash                         | LKN           | 1.1.1967          | NTA-PPMIR              | 67.01.01:LKN:NTA              | 0            |                       |
| Warrabri                          | WRB           | 1.1.1967          | NTA-PR                 | 67.01.01:WRB:NTA              | 0            |                       |
| <b>Warrabri</b>                   | <b>WRB</b>    | <b>2.1.1967</b>   | <b>NTA-PR</b>          | <b>67.01.02:WRB:NTA</b>       | <b>133</b>   |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>31.3.1967</b>  | <b>NTA-PPMIR</b>       | <b>67.03.31:LKN:NTA</b>       | <b>118</b>   |                       |
| <b>Utopia</b>                     | <b>UTP</b>    | <b>30.5.1967</b>  | <b>NTA-PR</b>          | <b>67.05.30:UTP:NTA</b>       | <b>13</b>    |                       |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>1.6.1967</b>   | <b>NTA-PR</b>          | <b>67.06.01:MDD:NTA</b>       | <b>181</b>   |                       |
| Stirling                          | STR           | 30.6.1967         | NTA-PR                 | 67.06.30:STR:NTA              | 0            |                       |
| Alcoota                           | ALC           | 10.7.1967         | NTA-PR                 | 67.07.10:ALC:NTA              | 0            |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>7.9.1967</b>   | <b>NTA-PR</b>          | <b>67.09.07:LKN:NTA</b>       | <b>78</b>    |                       |
| <b>Ammaroo</b>                    | <b>AMR</b>    | <b>4.10.1967</b>  | <b>NTA-PR</b>          | <b>67.10.04:AMR:NTA</b>       | <b>19</b>    |                       |
| <b>Ooratippra</b>                 | <b>ORT</b>    | <b>5.10.1967</b>  | <b>NTA-PR</b>          | <b>67.10.05:ORT:NTA</b>       | <b>15</b>    |                       |
| <b>Argadargada</b>                | <b>ARG</b>    | <b>5.10.1967</b>  | <b>NTA-PR</b>          | <b>67.10.06:ARG:NTA</b>       | <b>12</b>    |                       |
| <b>MacDonald Downs</b>            | <b>MDD</b>    | <b>14.8.1968</b>  | <b>NTA-PR</b>          | <b>68.08.14:MDD:NTA</b>       | <b>176</b>   |                       |
| <b>Lake Nash</b>                  | <b>LKN</b>    | <b>26.8.1968</b>  | <b>NTA-PR</b>          | <b>68.08.26:LKN:NTA</b>       | <b>113</b>   | <b>+176</b>           |

|                 |     |            |              |                   |      |        |
|-----------------|-----|------------|--------------|-------------------|------|--------|
| Utopia          | UTP | 10.9.1968  | NTA-PR       | 68.09.10:UTP:NTA  | 17   |        |
| Ammaroo         | AMR | 1.1.1969   | NTA-PR       | 69.01.01:AMR:NTA  | 0    |        |
| MacDonald Downs | MDD | 18.8.1969  | NTA-PR       | 69.08.18:MDD:NTA  | 278  |        |
| Warrabri        | WRB | 12.9.1969  | NTA-PR       | 69.09.12:WRB:NTA  | 114  |        |
| Alcoota         | ALC | 15.10.1969 | NTA-PR       | 69.10.15:ALC:NTA  | 0    |        |
| Mount Riddock   | MTR | 16.10.1969 | NTA-PR       | 69.10.16:MTR:NTA  | 0    |        |
| Lake Nash       | LKN | 1.1.1970   | NTA-PR       | 70.01.01:LKN:NTA  | 257  |        |
| Ooratippra      | ORT | 13.3.1970  | NTA-PR       | 70.03.13:ORT:NTA  | 21   |        |
| Derry Downs     | DDN | 14.3.1970  | NTA-PR       | 70.03.14:DDN:NTA  | 30   |        |
| Tobermorey      | TBR | 2.4.1970   | NTA-PR       | 70.04.02:TBR:NTA  | 0    |        |
| MacDonald Downs | MDD | 29.4.1970  | NTA-PR-Short | 70.04.29:MDD:NTA  | 0    |        |
| MacDonald Downs | MDD | 30.4.1970  | NTA-PR-Long  | 70.04.30:MDD:NTA  | 216  |        |
| Utopia          | UTP | 10.5.1970  | NTA-PR       | 70.05.10:UTP:NTA  | 21   |        |
| Derry Downs     | DDN | 22.5.1970  | NTA-PR       | 70.05.22:DDN:NTA  | 27   |        |
| Ammaroo         | AMR | 23.5.1970  | NTA-PR       | 70.05.23:AMR:NTA  | 75   |        |
| MacDonald Downs | MDD | 1.6.1970   | NTA-PR       | 70.06.01:MDD:NTA  | 176  |        |
| Ammaroo         | AMR | 31.12.1970 | NTA-PR       | 70.12.31:AMR:NTA  | 20   | 2349+5 |
|                 |     |            |              |                   |      | 28     |
| Ammaroo         | AMR | 1.1.1971   | NTA-HC       | 71.01.01:AMR:NTA  | 0    |        |
| Derry Downs     | DDN | 1.1.1971   | NTA-HC       | 71.01.01:DDN:NTA  | 34   |        |
| Ooratippra      | ORT | 1.1.1971   | NTA-HC       | 71.01.02:ORT:NTA  | 9    |        |
| MacDonald Downs | MDD | 1.6.1971   | NTA-HC       | 71.06.01x:MDD:NTA | 0    |        |
| MacDonald Downs | MDD | 2.6.1971   | NTA-PR       | 71.06.02:MDD:NTA  | 0    |        |
| Utopia          | UTP | 1.7.1971   | NTA-PR       | 71.07.01:UTP:NTA  | 146  |        |
| MacDonald Downs | MDD | 1.7.1971   | WWD          | 71.07.01x:MDD:WWD | 0    |        |
| MacDonald Downs | MDD | 1.7.1971   | WWD          | 71.07.01:MDD:WWD  | 242  |        |
|                 |     |            |              |                   | +424 |        |
| Lake Nash       | LKN | 6.7.1971   | NTA-PR       | 71.07.06:LKN:NTA  | 69   |        |
| MacDonald Downs | MDD | 15.7.1971  | WWD          | 71.07.15:MDD:WWD  | 246  |        |
|                 |     |            |              |                   | +466 |        |
| MacDonald Downs | MDD | 26.7.1971  | WWD          | 71.07.26:MDD:WWD  | 246  |        |
|                 |     |            |              |                   | +466 |        |
| MacDonald Downs | MDD | 14.8.1971  | WWD          | 71.08.14:MDD:WWD  | 248  |        |
|                 |     |            |              |                   | +474 |        |
| MacDonald Downs | MDD | 19.8.1971  | WWD          | 71.08.19:MDD:WWD  | 248  |        |
|                 |     |            |              |                   | +470 |        |
| MacDonald Downs | MDD | 4.9.1971   | WWD          | 71.09.04:MDD:WWD  | 246  |        |
|                 |     |            |              |                   | +476 |        |
| MacDonald Downs | MDD | 28.9.1971  | WWD          | 71.09.28:MDD:WWD  | 246  |        |
|                 |     |            |              |                   | +444 |        |
| MacDonald Downs | MDD | 9.10.1971  | WWD          | 71.10.09:MDD:WWD  | 254  |        |
|                 |     |            |              |                   | +434 |        |
| MacDonald Downs | MDD | 3.11.1971  | WWD          | 71.11.03:MDD:WWD  | 261  |        |
|                 |     |            |              |                   | +384 |        |
| MacDonald Downs | MDD | 16.11.1971 | WWD          | 71.11.16:MDD:WWD  | 261  |        |
|                 |     |            |              |                   | +468 |        |
| MacDonald Downs | MDD | 7.12.1971  | WWD          | 71.12.07:MDD:WWD  | 261  |        |
|                 |     |            |              |                   | +474 |        |
| MacDonald Downs | MDD | 21.12.1971 | WWD          | 71.12.21:MDD:WWD  | 250  |        |
|                 |     |            |              |                   | +460 |        |
| MacDonald Downs | MDD | 15.1.1972  | WWD          | 72.01.15:MDD:WWD  | 249  |        |
|                 |     |            |              |                   | +302 |        |
| MacDonald Downs | MDD | 17.2.1972  | WWD          | 72.02.17:MDD:WWD  | 249  |        |
|                 |     |            |              |                   | +368 |        |
| MacDonald Downs | MDD | 3.3.1972   | WWD          | 72.03.03:MDD:WWD  | 249  |        |
|                 |     |            |              |                   | +411 |        |
| MacDonald Downs | MDD | 19.3.1972  | WWD          | 72.03.19:MDD:WWD  | 249  |        |
|                 |     |            |              |                   | +424 |        |
| Lake Nash       | LKN | 25.7.1973  | NTA-PR       | 73.07.25:LKN:NTA  | 170  | 4433+6 |
| Ammaroo         | AMR | 13.10.79   | RMM          | 79.10.13:AMR:RMM  | 427  | 945    |
|                 |     |            |              |                   |      | 427    |
| Total           |     |            |              |                   |      | 16,213 |

## Census Location and Residence Codes (Var. 25-97 Values)

Here I include not only what I believe to be “core” Alyawarra territory, but also fringes such as the Barkley Highway, Stuart Highway and Plenty River Areas that lay outside traditional southern Alyawarra territory but were home to many Alyawarra in the NTA censuses from the 1960s and 1970s. Also I have included locations in Queensland and other parts of the interior of Australia where members of the research population were known to live at the time of the NTA censuses.

Alphabetic location codes themselves are inspired by international airport codes and should be self-explanatory.

As suggested above under Census Sources and Codes, alphabetic location codes sometimes are modified by one or two levels of numerical codes.

- Aboriginal camp codes (1-7) designate specific Aboriginal camps at MacDonalD Downs and Derry Downs Stations when that information is available. Hence MDD is the generic code for MacDonalD Downs Station, whereas MDD1 is the specific code for Gurlanda Camp at MacDonalD Downs Station.
- Aboriginal residence codes (10-89) designate specific structures within specific Aboriginal camps when that information is available. Residence codes are used only when camp codes are known as well. Hence MDD1.21 is a specific alugera within Gurlanda Camp at MacDonalD Downs Station.

Table 16 contains a complete list of physical locations (pastoral properties, Aboriginal camps, towns, settlements, missions, etc.) grouped by regions. These locations are organized in clusters that have some underlying physiographic basis such as river drainage basins, and that also correspond to some extent to the ways the Alyawarra used this region in the last quarter of the 20<sup>th</sup> century. Usage patterns are empirically researchable in the dataset and inclusion of this key should facilitate such analysis. But until the analysis is done, I am operating on the basis of informal observation in 1971-72 and detailed but non-quantitative examination of the NTA census data in 2006.

Unless otherwise indicated, all locations are in the Northern Territory. Impermanent Aboriginal camps located at MacDonalD Downs and Derry Downs Stations between 1970 and 1972 are denoted by bullets; all other place names refer to “permanent” settlements in a European sense.

**Table 16.** Location Codes grouped by regions, as used in Census Location cells.

| Display Code | Name                     | Type | Date | S Lat | E Long | AEA Code |
|--------------|--------------------------|------|------|-------|--------|----------|
|              |                          |      |      |       |        |          |
|              | <b>Bundey River Area</b> |      |      |       |        |          |

|            |                                       |                         |                        |          |          |           |
|------------|---------------------------------------|-------------------------|------------------------|----------|----------|-----------|
| ALC        | Alcoota                               | Pastoral Station        |                        | 22°50'   | 134°25'  | 14        |
| DDN        | Derry Downs                           | Pastoral Station        |                        | 22°30'   | 135°05'  |           |
| DDN4       | ▪ Angungera Camp                      | Aboriginal camp         | Occupied 1971-72       | 22°05'   | 135°19'  | 4         |
| DLM        | Delmore Downs                         | Pastoral Station        |                        | 22°30'   | 134°50'  |           |
| DLN        | Delney Downs                          | Pastoral Station        |                        | 22°35'   | 134°50'  |           |
| <b>DNP</b> | <b>Dnieper</b>                        | <b>Pastoral Station</b> | <b>See Mackett map</b> | <b>X</b> | <b>Y</b> | <b>11</b> |
| HKO        | Huckitta (Old)                        | Pastoral Station        |                        | 22°30'   | 135°25'  |           |
| MDD        | MacDonald Downs                       | Pastoral Station        |                        | 22°30'   | 135°15'  |           |
| MDD1       | ▪ Gurlanda Camp                       | Aboriginal camp         | Occupied 1971-72       | 22°15'   | 134°58'  | 1         |
| MDD2       | ▪ Bendajjerem Camp @ MD New homestead | Aboriginal camp         | Occupied 1971-72       | 22°23'   | 135°06'  | 2         |
| MDD3       | ▪ Liladera Camp @ MD Old Homestead    | Aboriginal camp         | Occupied 1971-72       | 22°27'   | 135°15'  | 3         |
| MDD5       | ▪ Bunday River Camp                   | Aboriginal camp         | Abandoned 1970         | 22°20'   | 135°07'  | 20        |
| MDD6       | ▪ Spinifex Bore Camp                  | Aboriginal camp         | Abandoned 1970         | 22°12'   | 135°07'  | 21        |
| MTS        | Mount Swan                            | Pastoral Station        |                        | 22°40'   | 135°15'  |           |
|            |                                       |                         |                        |          |          |           |
|            | <b>Plenty River Area</b>              |                         |                        |          |          |           |
| HKN        | Huckitta (New)                        | Pastoral Station        |                        | 22°35'   | 135°35'  |           |
| HRP        | Harts Range                           | Police Post             |                        | 23°00'   | 134°55'  | 13        |
| JVM        | Jervois                               | Mines                   |                        | 22°40'   | 136°10'  |           |
| LCK        | Lucy Creek                            | Pastoral Station        |                        | 22°25'   | 136°20'  |           |
| MRQ        | Marqua                                | Pastoral Station        |                        | 22°30'   | 137°30'  | 15        |
| MTR        | Mount Riddock                         | Pastoral Station        |                        | 23°05'   | 134°40'  |           |
| PRV        | Plenty River                          | Mine                    |                        | 22°45'   | 135°30'  |           |
|            |                                       |                         |                        |          |          |           |
|            | <b>Sandover River Area</b>            |                         |                        |          |          |           |
| AMR        | Ammaroo                               | Pastoral Station        |                        | 21°45'   | 135°15'  | 12        |
| ARG        | Argadargada                           | Pastoral Station        |                        | 21°40'   | 136°40'  |           |
| ARP        | Arapunya                              | Pastoral Station        |                        | 22°15'   | 135°55'  |           |
| GRG        | Georgina Downs                        | Pastoral Station        |                        | 21°05'   | 137°40'  |           |
| LKN        | Lake Nash                             | Pastoral Station        |                        | 21°00'   | 137°50'  | 7         |
| LKP        | Lake Nash                             | Police Post             |                        | 21°05'   | 137°55'  |           |
| ORT        | Ooratippra                            | Pastoral Station        |                        | 22°00'   | 136°00'  | 18        |
| TBM        | Tobermory                             | Pastoral Station        |                        | 22°15'   | 138°00'  |           |
| UTP        | Utopia                                | Pastoral Station        |                        | 22°15'   | 134°30'  | 6         |
| WDG        | Woodgreen                             | Pastoral Station        |                        | 22°25'   | 134°15'  |           |
| WTR        | Waite River                           | Pastoral Station        |                        | 22°30'   | 134°30'  |           |
|            |                                       |                         |                        |          |          |           |
|            | <b>Barkley Highway Area</b>           |                         |                        |          |          |           |
| ALX        | Alexandria                            | Pastoral Station        |                        | 19°05'   | 136°40'  |           |
| AVD        | Avon Downs                            | Pastoral Station        |                        | 20°05'   | 137°30'  |           |
| BRK        | Barkly Downs                          | Pastoral Station        |                        | 20°30'   | 138°25'  |           |
| SDN        | Soudan                                | Pastoral Station        |                        | 20°05'   | 137°00'  |           |
|            |                                       |                         |                        |          |          |           |
|            | <b>Hatches Creek Area</b>             |                         |                        |          |          |           |
| ANN        | Annitowa                              | Pastoral Station        |                        | 21°10'   | 136°20'  |           |
| ELK        | Elkedra                               | Pastoral Station        |                        | 21°10'   | 135°25'  | 8         |

|      |                            |                    |  |        |         |    |
|------|----------------------------|--------------------|--|--------|---------|----|
| EPN  | Epenarra                   | Pastoral Station   |  | 20°25' | 135°15' | 17 |
| HCK  | Hatches Creek              | Pastoral Station   |  | 20°55' | 135°10' |    |
| KRN  | Kurundi                    | Pastoral Station   |  | 20°30' | 134°40' |    |
| MCK  | Mosquito Creek             | Kurundi Outstation |  | 20°15' | 134°35' |    |
| MRD  | Murray Downs               | Pastoral Station   |  | 21°05' | 134°40' | 19 |
|      |                            |                    |  |        |         |    |
|      | <b>Stuart Highway Area</b> |                    |  |        |         |    |
| ALR  | Aileron                    | Pastoral Station   |  | 22°40' | 133°20' |    |
| BCK  | Barrow Creek               | Town               |  | 21°40' | 133°53' |    |
| STR  | Stirling                   | Pastoral Station   |  | 21°45' | 133°45' |    |
| TCK  | Tennant Creek              | Town               |  | 19°40' | 134°10' |    |
| TTR  | Ti Tree                    | Pastoral Station   |  | 22°10' | 133°15' |    |
| WRB  | Warrabri                   | Aboriginal Reserve |  | 21°00' | 134°20' | 10 |
|      |                            |                    |  |        |         |    |
|      | <b>Southern Fringe</b>     |                    |  |        |         |    |
| ASP  | Alice Springs              | Town               |  | 23°40' | 133°50' | 9  |
| STM  | Santa Theresa              | Mission            |  | 24°05' | 134°20' | 16 |
|      |                            |                    |  |        |         |    |
|      | <b>Queensland</b>          |                    |  |        |         |    |
| BOU  | Boulia                     | Town               |  | 22°54' | 139°54' |    |
| CAM  | Camooweal                  | Town               |  | 19°54' | 138°07' |    |
| HDG  | Headingly                  | Pastoral Station   |  | 21°20' | 138°15' |    |
| DJR  | Dajarra                    | Town               |  | 21°41' | 139°56' |    |
| MTI  | Mount Isa                  | Town               |  | 20°43' | 139°28' |    |
| URD  | Urandangie                 | Town               |  | 21°36' | 138°19' |    |
| QLD  | Unknown loc. In QLD        | DK Qld             |  |        |         |    |
|      |                            |                    |  |        |         |    |
|      | <b>Misc</b>                |                    |  |        |         |    |
| ANL  | Anthony Lagoon             | Pastoral Station   |  | 18°00' | 135°30' |    |
| CLB  | Coolibah                   | Pastoral Station   |  | 15°35' | 131°00' |    |
| ALH  | Adelaide Hospitals         | Town               |  | 13°15' | 131°05' |    |
| BSW  | Beswick                    | Aboriginal Reserve |  |        |         |    |
| OTHR | Other                      |                    |  |        |         |    |
| DK   | Don't know                 |                    |  |        |         |    |

In Table 17 contains the same information that appears in Table 16, but the codes are listed in alphabetical order by Name, as used in Census Location cells.

**Table 17.** Location codes listed in alphabetical order.

| Display Code | Name                   | Type             | Date | S Lat  | E Long  | AEA Code |
|--------------|------------------------|------------------|------|--------|---------|----------|
| ALH          | Adelaide Hospitals, SA | Town             |      | 13°15' | 131°05' |          |
| ALR          | Aileron                | Pastoral Station |      | 22°40' | 133°20' |          |
| ALC          | Alcoota                | Pastoral Station |      | 22°50' | 134°25' | 14       |
| ALX          | Alexandria             | Pastoral Station |      | 19°05' | 136°40' |          |
| ASP          | Alice Springs          | Town             |      | 23°40' | 133°50' | 9        |

|      |                      |                    |                  |        |         |    |
|------|----------------------|--------------------|------------------|--------|---------|----|
| AMR  | Ammaroo              | Pastoral Station   |                  | 21°45' | 135°15' | 12 |
| DDN4 | ▪ Angungera Camp     | Aboriginal camp    | Occupied 1971-72 | 22°05' | 135°19' | 4  |
| ANN  | Annitowa             | Pastoral Station   |                  | 21°10' | 136°20' |    |
| ANL  | Anthony Lagoon       | Pastoral Station   |                  | 18°00' | 135°30' |    |
| ARP  | Arapunya             | Pastoral Station   |                  | 22°15' | 135°55' |    |
| ARG  | Argadargada          | Pastoral Station   |                  | 21°40' | 136°40' |    |
| AVD  | Avon Downs           | Pastoral Station   |                  | 20°05' | 137°30' |    |
| BRK  | Barkly Downs         | Pastoral Station   |                  | 20°30' | 138°25' |    |
| BCK  | Barrow Creek         | Town               |                  | 21°40' | 133°53' |    |
| MDD2 | ▪ Bendaijerem Camp   | Aboriginal camp    | Occupied 1971-72 | 22°23' | 135°06' | 2  |
| BSW  | Beswick              | Aboriginal Reserve |                  |        |         |    |
| BOU  | Boulia, QLD          | Town               |                  | 22°54' | 139°54' |    |
| MDD5 | ▪ Bundey River Camp  | Aboriginal camp    | Abandoned 1970   | 22°20' | 135°07' | 20 |
| CAM  | Camooweal, QLD       | Town               |                  | 19°54' | 138°07' |    |
| CLB  | Coolibah             | Pastoral Station   |                  | 15°35' | 131°00' |    |
| DJR  | Dajarra, QLD         | Town               |                  | 21°41' | 139°56' |    |
| DLM  | Delmore Downs        | Pastoral Station   |                  | 22°30' | 134°50' |    |
| DLN  | Delney Downs         | Pastoral Station   |                  | 22°35' | 134°50' |    |
| DDN  | Derry Downs          | Pastoral Station   |                  | 22°30' | 135°05' |    |
| DNP  | Dnieper              | Pastoral Station   |                  | X      | Y       | 11 |
| ELK  | Elkedra              | Pastoral Station   |                  | 21°10' | 135°25' | 8  |
| EPN  | Epenarra             | Pastoral Station   |                  | 20°25' | 135°15' | 17 |
| GRG  | Georgina Downs       | Pastoral Station   |                  | 21°05' | 137°40' |    |
| MDD1 | ▪ Gurlanda Camp      | Aboriginal camp    | Occupied 1971-72 | 22°15' | 134°58' | 1  |
| HRP  | Harts Range          | Police Post        |                  | 23°00' | 134°55' | 13 |
| HCK  | Hatches Creek        | Pastoral Station   |                  | 20°55' | 135°10' |    |
| HDG  | Headingly, QLD       | Pastoral Station   |                  | 21°20' | 138°15' |    |
| HKN  | Huckitta (New)       | Pastoral Station   |                  | 22°35' | 135°35' |    |
| HKO  | Huckitta (Old)       | Pastoral Station   |                  | 22°30' | 135°25' |    |
| JVM  | Jervois              | Mines              |                  | 22°40' | 136°10' |    |
| KRN  | Kurundi              | Pastoral Station   |                  | 20°30' | 134°40' |    |
| LKN  | Lake Nash            | Pastoral Station   |                  | 21°00' | 137°50' | 7  |
| LKP  | Lake Nash            | Police Post        |                  | 21°05' | 137°55' |    |
| MDD3 | ▪ Liladera Camp      | Aboriginal camp    | Occupied 1971-72 | 22°27' | 135°15' | 3  |
| LCK  | Lucy Creek           | Pastoral Station   |                  | 22°25' | 136°20' |    |
| MDD  | MacDonald Downs      | Pastoral Station   |                  | 22°30' | 135°15' |    |
| MRQ  | Marqua               | Pastoral Station   |                  | 22°30' | 137°30' | 15 |
| MCK  | Mosquito Creek       | Kurundi Outstation |                  | 20°15' | 134°35' |    |
| MTI  | Mount Isa, QLD       | Town               |                  | 20°43' | 139°28' |    |
| MTR  | Mount Riddock        | Pastoral Station   |                  | 23°05' | 134°40' |    |
| MTS  | Mount Swan           | Pastoral Station   |                  | 22°40' | 135°15' |    |
| MRD  | Murray Downs         | Pastoral Station   |                  | 21°05' | 134°40' | 19 |
| ORT  | Ooratippra           | Pastoral Station   |                  | 22°00' | 136°00' | 18 |
| PRV  | Plenty River         | Mine               |                  | 22°45' | 135°30' |    |
| STM  | Santa Theresa        | Mission            |                  | 24°05' | 134°20' | 16 |
| SDN  | Soudan               | Pastoral Station   |                  | 20°05' | 137°00' |    |
| MDD6 | ▪ Spinifex Bore Camp | Aboriginal camp    | Abandoned 1970   | 22°12' | 135°07' | 21 |

|     |                     |                    |  |        |         |    |
|-----|---------------------|--------------------|--|--------|---------|----|
| STR | Stirling            | Pastoral Station   |  | 21°45' | 133°45' |    |
| TCK | Tennant Creek       | Town               |  | 19°40' | 134°10' |    |
| TTR | Ti Tree             | Pastoral Station   |  | 22°10' | 133°15' |    |
| TBM | Tobermory           | Pastoral Station   |  | 22°15' | 138°00' |    |
| QLD | Unknown loc. in QLD | DK Qld             |  |        |         |    |
| URD | Urandangie, QLD     | Town               |  | 21°36' | 138°19' |    |
| UTP | Utopia              | Pastoral Station   |  | 22°15' | 134°30' | 6  |
| WTR | Waite River         | Pastoral Station   |  | 22°30' | 134°30' |    |
| WRB | Warrabri            | Aboriginal Reserve |  | 21°00' | 134°20' | 10 |
| WDG | Woodgreen           | Pastoral Station   |  | 22°25' | 134°15' |    |

Table 18 contains a complete list of Aboriginal residences (ngundya, alugera, anoardegan) cited in this dataset.

**Table 18.** Residence codes grouped by type, as used in Census Location cells.

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                     |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Census Location Suffix</b> | <b>Residences</b> Locations and compositions are highly fluid. Examine census data for details.<br><br>Alugera – women’s residences, camp locations change.<br>Ngundya – men’s residences, camp locations are fixed.<br>Anoardegan – family residences, camp locations change.<br>Unstable - Member of research population who moved from camp to camp.<br>Transient – Joined research population, stayed a while, moved on. |                                                     |
| <i>Ngundya</i>                | <i>Usual camp location</i>                                                                                                                                                                                                                                                                                                                                                                                                   | <i>Representative core residents - single men</i>   |
| 10                            | 04 Angungera                                                                                                                                                                                                                                                                                                                                                                                                                 | 051, 057, 059                                       |
| 11                            | 01 Gurlanda #1                                                                                                                                                                                                                                                                                                                                                                                                               | 008, 014                                            |
| 12                            | 01 Gurlanda #2                                                                                                                                                                                                                                                                                                                                                                                                               | Unstable - young men                                |
| 13                            | 01 Gurlanda #3                                                                                                                                                                                                                                                                                                                                                                                                               | Unstable                                            |
| 17                            | 02 Bendaijerem #1                                                                                                                                                                                                                                                                                                                                                                                                            | Unstable - young men                                |
| 18                            | 02 Bendaijerem #2                                                                                                                                                                                                                                                                                                                                                                                                            | 002                                                 |
| 19                            | 03 Liladera                                                                                                                                                                                                                                                                                                                                                                                                                  | Unstable - young men                                |
| <i>Alugera</i>                |                                                                                                                                                                                                                                                                                                                                                                                                                              | <i>Representative core residents - single women</i> |
| 21                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 166, 167, 187, 190, 192                             |
| 22                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 183, 189                                            |
| 23                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 153, 163                                            |
| 24                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 156, 207, 218, 227, 229, 230                        |
| 25                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 150, 151, 161, 213, 223                             |
| 26                            | 03 Liladera                                                                                                                                                                                                                                                                                                                                                                                                                  | 197, 199, 215, 216                                  |
| 27                            | 04 Angungera                                                                                                                                                                                                                                                                                                                                                                                                                 | 157, 159, 178, 205                                  |
| 28                            | 02 Bendaijerem                                                                                                                                                                                                                                                                                                                                                                                                               | 162, 165, 228                                       |
| <i>Anoardegan</i>             |                                                                                                                                                                                                                                                                                                                                                                                                                              | <i>Core residents - husband + wife or wives</i>     |
| 31                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 001, 154                                            |
| 32                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 021, 175                                            |
| 33                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 009, 152, 204                                       |
| 34                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 017, 183, 189                                       |
| 35                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 003, 174                                            |
| 36                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 026, 173, 196                                       |
| 37                            | 01 Gurlanda                                                                                                                                                                                                                                                                                                                                                                                                                  | 007, 155                                            |

|                            |                                                                |                    |
|----------------------------|----------------------------------------------------------------|--------------------|
| 38                         | 01 Gurlanda                                                    | 029, 186, 220      |
| 39                         | Unstable                                                       | 027, 188           |
| 40                         | 01 Gurlanda                                                    | 012, 169           |
| 41                         | 01 Gurlanda                                                    | 011, 170           |
| 42                         | Unstable                                                       | 031, 181           |
| 43                         | 01 Gurlanda                                                    | 013, 168           |
| 44                         | 02 Bendaijerem                                                 | 037, 208, 217      |
| 45                         | Unstable                                                       | 042, 203           |
| 46                         | Unstable                                                       | 045, 219           |
| 47                         | 01 Gurlanda                                                    | 020, 191           |
| 48                         | Unstable                                                       | 023, 184, 201, 202 |
| 49                         | 02 Bendaijerem                                                 | 028, 210, 221      |
| 50                         | 02 Bendaijerem                                                 | 039, 214           |
| 51                         | 01 Gurlanda                                                    | 040, 195, 211      |
| 52                         | 04 Angungera                                                   | 019, 179, 180      |
| 53                         | Unstable                                                       | 032, 200           |
| 54                         | 04 Angungera                                                   | 005, 185           |
| 55                         | 07 Lake Nash                                                   | 113, 182, 209      |
| 56                         | 02 Bendaijerem                                                 | 004, 172           |
| 57                         | Unstable                                                       | 041, 222           |
| 58                         | Transient                                                      | 127, 274           |
| 59                         | Transient                                                      | 110, 277           |
| 60                         | 02 Bendaijerem                                                 | 002, 193           |
| 61-63                      |                                                                | Not used           |
| 64                         | Transient                                                      | 022, 194           |
| 65                         | Transient                                                      | 038, 206           |
| 66                         | 03 Liladera                                                    | 024, 177           |
| 67                         | 03 Liladera                                                    | 010, 160           |
| 68                         | 03 Liladera                                                    | 015, 171, 176      |
| 69                         | 04 Angungera                                                   | 018, 158           |
| 70                         | 10 Warrabri                                                    | 035, 212           |
| 71                         | 04 Angungera                                                   | 112, 164           |
| 72                         | 04 Angungera                                                   | 006, 178           |
| 73-76                      |                                                                | Not used           |
| 77                         | 04 Angungera                                                   | 030, 198           |
| 78                         | Unstable                                                       | 044, 223           |
| <i>Miscellaneous codes</i> |                                                                |                    |
| 83                         | Ngundy - MacDonald-Derry Stockmen (location varies seasonally) |                    |
| 84                         | Ngundy - Unknown                                               |                    |
| 85                         | Alugera - Unknown                                              |                    |
| 86                         | Hospital                                                       |                    |
| 87                         | Unknown                                                        |                    |
| 88                         | Unborn - born after this census                                |                    |
| 89                         | Dead - died before this census                                 |                    |



## Sample topics for preliminary data analysis

**Using mean age differences to refine estimates of missing YoB.** What are the age-specific mean age differences between husbands and wives, mothers and children, fathers and children at annual intervals? Refine estimated life dates that currently substitute for missing data.

**Comparing 377 with 1460.** Compare all structures in the original AU01 dataset with those in the new AU10 dataset. The first 377 records in the new file comprise the complete dataset used in the *Double Helix* and *Multiple Measures* articles, so it should be easy enough to compare the small original subset (n=377) with the large new dataset (n=1460). (The first 377 records in the two datasets are NOT absolutely identical because of a few minor changes in the new set that resulted from discoveries of previously unknown kin, etc.)

**Generating annual “thin sections” of all data.** I would like to know a great deal about the whole population as it unfolds in one-year increments over a period of 160 years (1818-1979), but this may be impossible to achieve because of the lack of Year of Death data for most people. How can we produce 160 “thin sections” at one year intervals to microscopically analyze the structure and operation of the population from 1818 to 1979? This might entail extracting static snapshots of annual population sizes, sex-age structures and related measures of births and deaths for each year during the 160 year period that the data spans.

**Conceptualizing the dynamic flow of population structures through time.** Using data from the “thin sections”, how can we describe the year-to-year flow of changes in population size and sex-age structure across this 160 year period? Is this an impossible task due to lack of reliable YoD? The topic here is process (cf. chaos, turbulence, phase transitions, etc.) rather than structure *per se*.

**Defining “generation”.** Given the sharp difference between reproductive ages of females (approximate ages 15 to 50 years; 35 year span) and males (approximate ages 30 to 80 years; 50 year span), the concept of “generation” is problematic when applied broadly to Central Australia societies. How can we use these data to define “generation” rigorously, thereby rejecting impressionistic and ethnocentric usages that have been accepted as “common sense” at least since the writing of the Old Testament?

**Developing robust mobility metric.** Use the locational components of the census data (latitude and longitude – hence distances and directions of movements – plus frequency and duration of movements, and topographic information) to develop a metric for mobility that is robust enough to fit both the Alyawarra data and David Damas’ (1963) data from the Central Arctic. Use map data and network analysis software to display mobility patterns dynamically during the quarter-century between 1954 and 1979. Use the metric to derive hard measures of mobility changes

during the quarter-century between 1954 and 1979, and to define “nomadic” and “sedentary” rigorously and mathematically, rather than impressionistically as is common practice today. A visualization of population mobility (aggregation and dispersion of populations through time on a base map of Alyawarra Territory) could be useful. (also see *Group Compositions in Band Societies Database* online at <http://www.culturalsciences.info/GCBS/index.htm>)

**Controlling for “survivals” and “culture contact”.** I suspect that we will find a lot of patterns in these data that nobody has ever before seen in Australian Aboriginal data, partly because earlier analysts did not have appropriate datasets, partly because they did not ask appropriate questions. Unfortunately, students of Aboriginal anthropology have a long tradition of dismissing anomalous findings on two major grounds: a) they are “survivals” of some ancient unknown era that is by definition inaccessible to contemporary research, or b) they are results of “culture contact” that has damaged Aboriginal cultures beyond recognition since the first Europeans arrived. Together these two ways of rejecting anomalies constitute a self-sealing mindset that rejects new questions and new answers almost before they appear. How can we do the work proposed here in such a way that critics will be unable to dismiss the results on the basis of “survivals” and “culture contact”? We can filter out some of the noise but certainly not all of it, so the measures must be robust enough to withstand the noise that we cannot eliminate.

I am certain that I have failed to answer some important questions in this manual. Please let me know what I missed so I can revise the manual accordingly.

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## Acknowledgements

I am grateful to the following for their important contributions to my research.

- The Alyawarra themselves who made it possible.
- Mac and Rose Chalmers, MacDonald Downs Station, NT, Australia, who welcomed me to MacDonald Downs, encouraged the Alyawarra to accept me, and supported my field research in every way.
- John R. Atkins, Department of Anthropology, University of Washington, Seattle, WA, USA, who guided my dissertation research and collaborated in producing the “Double Helix” kinship paper.
- Les Hiatt, Department of Anthropology, Sydney University, Sydney, NSW, Australia, who introduced me to Aboriginal Australia.
- Eugene Hammel, Language Behavior Research Laboratory, University of California, Berkeley, CA, USA, who invited me to work at his laboratory as an NIMH Postdoctoral Trainee.
- Douglas R. White, Department of Anthropology, University of California, Irvine, CA, USA, whose enthusiastic support of my work, and his extensive collaboration in analyzing my genealogical and kinship data with Pajek software, contributed greatly to rescuing me from my twenty years of self-imposed exile from basic research.
- Paul Mackett, Brisbane, QLD, Australia for the vast amount of Australian Aboriginal demographic and genealogical data he has collected systematically from the National Archives of Australia and related depositories, and has made available to the Aboriginal people of Australia and to the research community.
- Bruce S. Perlo, Business Management Systems Incorporated, Franconia, NH, USA, for behind-the-scenes support.
- Jessica Cornn, Research Assistant, Alice Lloyd College, Pippa Passes, KY, USA, for designing and implementing the Alyawarra Ethnographic Archive on the Internet.
- Jean-Pierre Bocquet-Appel, Centre National de la Recherche Scientifique, Paris, France, for seeing the merit in using the Alyawarra case as a natural experiment in his search for a Neolithic Demographic Transition.
- The Metanexus Foundation and the Woodrow Wilson National Fellowship Foundation for inviting me to attend the *Amazing Light Symposium* in honor of Charles H. Towne, at the University of California, Berkeley, 6-8 October 2005.
- AIATSIS, NSF, NIMH and the Canada Council for their generous funding.
- Nancy J. Hubley, my wife, who believed it was worth the bother and contributed so much to making it happen.