From Snagger to Passenger Cruiser:

P.S. *Melbourne* a Murray River Paddle Steamer

By Amanda Hale

(P.S. *Melbourne* docked at private mooring. Photo: Amanda Hale 2006)

Department of Archaeology
Flinders University
June 2006
Declaration of Candidate

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

________________________________________

Amanda Hale

June 2006

Flinders University

Adelaide, South Australia
Abstract

An archaeological investigation of Murray River paddle steamers provides an insight into the motivation behind the modification of vessels for continuous use. The public’s perception of paddle steamers is a major cause for current vessel modifications on the Murray from commercial vehicles into passenger cruisers. Modifications, for economic and cultural reasons, as well as mechanical transformations, illustrate technological advancements and social evolution of the communities along the river. A survey conducted in May 2006, of P.S. Melbourne, an early 20th century paddle steamer located at the historic port of Mildura in Victoria focused on the modifications from 1912 to the present, and how these upgrades enhanced the commercial value of the vessel and P.S. Melbourne’s relationship to the tourist industry.
Acknowledgements

The study of P.S. *Melbourne* was possible through the love, support, and guidance of various individuals. I wish to express my sincerest gratitude to my advisor Ms. Jennifer McKinnon, Lecturer in Maritime Archaeology, Flinders University without her patience and supervision this thesis would not have been possible. Associate Professor Dr. Mark Staniforth, Postgraduate Coordinator, Department of Archaeology, Flinders University, for his support and guidance during my postgraduate studies. Dr. Susan Briggs, Lecturer in Maritime Archaeology, Flinders University, for her support.

I would also like to give thanks to Mrs. Lyn McKenzie and the crew of P.S. *Melbourne* for their assistance during fieldwork and their overall interest in the project. I wish to express gratitude to those hardworking individuals at the South Australian State Library. To Flinders University who granted the project $500.00 of the $600.00 Australian dollars asked for as Research Student Maintenance provided by the university, which aided in the overall completion of research.

To my research assistants, the Flinders University students, Mr. Scott Chisholm and Ms. Karson Winslow for the investment of their time on this project and assistance in photographing, measuring, and investigation of P.S. *Melbourne*.

Special thanks go to Mr. and Mrs. Alf Chisholm parents of Scott Chisholm, who so graciously offered their residence as a command centre for the duration of fieldwork.
Dr. Doug Dalton, Dr. James W. Jordan, and Dr. Brian D. Bates, Department of Archaeology, Longwood University, who first introduced me to Archaeology and for their support through my undergraduate career and beyond.

Finally, to my friends and family, who have stood by me throughout my educational career and have been there when I needed them. To my parents Alice and Lacie Hale and my sisters Rebecca and Kimberly, who have been the guiding light in my life for so many years.
TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION ................................................................................... 1

CHAPTER 2: HISTORY OF STEAMBOATS ON THE MURRAY RIVER AND THE PORT OF MILDURA .......................................................... 6

   ARCHIVAL LIMITATIONS ..................................................................................... 6
   THE MURRAY AND ITS IMPORTANCE ................................................................... 7
   EARLY USE AND EXPLORATION OF THE MURRAY: PRE 1853 .......................... 8
   1853: STEAM NAVIGATION BEGINS IN AUSTRALIA ....................................... 9
   1870-1880: PEAK STEAM NAVIGATION ON THE MURRAY; HEYDAY OF RIVER TRANSPORT ......................................................... 10
   TYPES OF PADDLE STEAMERS ........................................................................ 12
   PADDLE STEAMER CHARACTERISTICS ......................................................... 14
   TYPES OF PADDLE STEAMERS ON THE MURRAY FROM 1853 TO 2006 .......... 16
   DEATH OF THE RIVER TRADE ................................................................. 18
   HISTORY OF MILDURA .................................................................................. 19
   LOCKS AND WEIRS ....................................................................................... 20
   MILDURA’S CURRENT MODIFIED VESSELS ................................................. 20

CHAPTER 3: P.S. MELBOURNE .......................................................................... 23

   PREVIOUS VESSELS NAMED MELBOURNE .................................................. 23
   THE 1912-1913 P.S. MELBOURNE ................................................................. 23

CHAPTER 4 THE MODERN P.S. MELBOURNE .............................................. 28

   THE CREW’S PERSPECTIVE .......................................................................... 30
   MILDURA WHARF CRUISE ............................................................................ 33
   LIMITATIONS ................................................................................................. 34
   RESEARCH DESIGN AND METHODS ......................................................... 35
   FIELDWORK .................................................................................................. 38
   PHYSICAL APPEARANCE: EXTERIOR ....................................................... 40
   MAIN DECK .................................................................................................... 42
   UPPER DECK ................................................................................................. 50
   HOLD .............................................................................................................. 52
   ORIGINAL CABIN AND WINCH ............................................................... 55
   INSCRIPTIONS ............................................................................................... 57
   DISCUSSION ................................................................................................. 58
   CONCLUSION ................................................................................................. 61

CHAPTER V: P.S. MELBOURNE AND THE PUBLIC’S PERCEPTION ............ 63

   PUBLIC INTERPRETATION ............................................................................. 64
   TRADITIONAL MUSEUMS ........................................................................... 66
   NON-TRADITIONAL MUSEUMS ................................................................. 67
   P.S. MELBOURNE: A NON-TRADITIONAL MUSEUM .................................. 67
   THE PAST VIA THE PRESENT ....................................................................... 68
   TOURISM ON THE MURRAY ........................................................................ 69
   TOURISM IN MILDURA ................................................................................ 70
   COMMUNITY INVOLVEMENT ...................................................................... 70
   MODIFICATIONS FOR PUBLIC USE ............................................................ 71

CHAPTER 6: CONCLUSION ................................................................................. 73

APPENDIX A ..................................................................................................... 79

REFERENCES .................................................................................................. 80
### LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P.S. <em>Melbourne</em> docked at private mooring.</td>
<td>29</td>
</tr>
<tr>
<td>2</td>
<td>P.S. <em>Melbourne</em> 1966 first year of operation after modifications to passenger cruiser.</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>In Mildura prior to Mr. Pointon’s modifications 1965.</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>P.S. <em>Melbourne</em> crew and Lyn McKenzie.</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>John loading wood prior to departure.</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>Leaving Lock 11 heading downstream.</td>
<td>34</td>
</tr>
<tr>
<td>7</td>
<td>Karson Winslow and Captain Lance.</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>Red Fire Buckets.</td>
<td>39</td>
</tr>
<tr>
<td>9</td>
<td>Engine Room view of composite hull.</td>
<td>40</td>
</tr>
<tr>
<td>10</td>
<td>Main deck forward.</td>
<td>41</td>
</tr>
<tr>
<td>11</td>
<td>P.S. <em>Melbourne</em> plans, redrawn from 1912 plans.</td>
<td>43</td>
</tr>
<tr>
<td>12</td>
<td>Diagram of superstructure modifications.</td>
<td>44</td>
</tr>
<tr>
<td>13</td>
<td>Diagram of vessel modifications.</td>
<td>45</td>
</tr>
<tr>
<td>14</td>
<td>Main deck forward, facing the bow.</td>
<td>46</td>
</tr>
<tr>
<td>15</td>
<td>Remodelled paddlewheel.</td>
<td>46</td>
</tr>
<tr>
<td>16</td>
<td>Stairway leading to upper deck.</td>
<td>47</td>
</tr>
<tr>
<td>17</td>
<td>Metal paneling midship surrounding the engine room.</td>
<td>47</td>
</tr>
<tr>
<td>18</td>
<td>View down into the engine room.</td>
<td>48</td>
</tr>
<tr>
<td>19</td>
<td>P.S. <em>Melbourne</em> after launch 1912.</td>
<td>49</td>
</tr>
<tr>
<td>20</td>
<td>View of main deck aft from kiosk.</td>
<td>49</td>
</tr>
<tr>
<td>21</td>
<td>Main deck aft, kiosk.</td>
<td>49</td>
</tr>
<tr>
<td>22</td>
<td>Upper deck forward, view towards aft.</td>
<td>51</td>
</tr>
<tr>
<td>23</td>
<td>Upper deck midship to aft view.</td>
<td>52</td>
</tr>
<tr>
<td>24</td>
<td>Hold with keelson.</td>
<td>53</td>
</tr>
<tr>
<td>25</td>
<td>Hull structure with oakum, fibrous filler.</td>
<td>54</td>
</tr>
<tr>
<td>26</td>
<td>Hold with orange replacement strakes.</td>
<td>54</td>
</tr>
<tr>
<td>27</td>
<td>Engine room, bulkhead.                                     <strong>Note:</strong> Integrated with text.</td>
<td>55</td>
</tr>
<tr>
<td>28</td>
<td>Original cabins from 1912.</td>
<td>56</td>
</tr>
<tr>
<td>29</td>
<td>Original winch from 1912.</td>
<td>56</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

Prior to a dependable source of land-based transport, the river was the most economically viable source of transportation. The Murray has always been a vital source of water, food, and a habitat for animals, raw materials, transportation, and an outlet for leisure activities. The first major commercial utilization of the Murray occurred in 1853 when steam navigation was introduced in Australia. From 1870-1880 marked the peak of steam navigation along the Murray River, ushering in a period of paddle steamer construction and mobilization. Paddle steamer transportation on the Murray River vanished as quickly as it began through the introduction of the railroad. Years later, there was a move towards the conversion of paddle steamers from their original form into pleasure cruisers.

A majority of the paddle steamers travelling on the Murray at present are converted barges, towboats, passenger cruisers, or houseboats. Most of the original craft were wrecked, sold, chopped up, burned, or converted into other vessels. Currently, *Adelaide* is the only original unmodified boat still in operation from 1853-1870. There are some vessels however, which operate with various modifications, the most famous being P.S. *Melbourne* located at the port of Mildura in Victoria.

This research investigates paddle steamers on the Murray River focusing on the significance and modifications of P.S. *Melbourne*, a historic paddle steamer, from a snagging vessel into a passenger cruiser. The modification of the 1912 P.S. *Melbourne* altered the boats appearance and function. Originally constructed in 1912, P.S. *Melbourne* was a snagging steamer but has since been modified to function as a passenger cruiser. P.S. *Melbourne* has the luxury of
continuously operating with its original steam engine making it a renowned tourist attraction. Investigations of P.S. *Melbourne* have much to contribute to the general understanding of steamboat modifications and public interest in this historic craft, which adds to the exiting historic record.

Through fieldwork conducted in May 2006, this study provides insight into the motivation behind the modification of Murray River steamboats for continuous use, and the purpose this practice serves both economically and culturally for the community of Mildura. It will accomplish this by discussing specifically the structural modifications made to P.S. *Melbourne* to transform this craft from a snagging steamer into a passenger cruiser.

Public interest in paddle steamers is a major cause for current modifications on the Murray from commercial vehicles into passenger cruisers. Modifications, specifically mechanical transformations, illustrate technological advancements as well as the social evolution of the communities along the river.

Further investigation reveals information concerning public interpretation of archaeology, the concept of value, the heritage tourism industry, and the industries influence on Mildura and P.S. *Melbourne*. P.S. *Melbourne* is unique archaeological speaking in that, it has not lost its economic potential like most historic craft, or shipwrecks archaeologists study. Alterations transformed P.S. *Melbourne*, a once abandoned vessel, into a modern day non-traditional floating museum. Functioning outside the stereotypical social expectations, non-traditional museums are interactive and promote visitors to engage with the exhibits. Mississippi river steamers that operate cruises out of New Orleans, and historic Jamestown in Virginia, where modern actors replicate the daily activities
and products of colonial individuals, both function as modern non-traditional museums.

P.S. *Melbourne* is not simply a modern heritage tourism attraction but is an operational example of a social and economic movement that occurred along the Murray River. The vessel is an archaeological and historical site with, significance to the local community of Mildura and Australia. The investigation of paddle steamers along the Murray River produces information relating to Australian shipbuilding construction, the general understanding of vessel modifications, the progression of paddle steamer technology along the Murray and overall public interest in these craft.

**Literature Review**

Previous work conducted by Peter Plowman (2005), with his book *Murray Darling Paddleboats*, historically catalogues the current paddle steamers and diesel driven steamers on the Murray River. Sarah Kenderdine’s 1995, archaeological investigation of *Historic Shipping on the River Murray: A Guide to the Terrestrial and Submerged Archaeological Sites in South Australia*, examines typology and chronology of paddle steamers on the Murray while identifying management schemes for submerged and terrestrial sites. Peter Christopher’s 2001, historical account of *Paddlesteamers and Riverboats of the River Murray*, discusses towns along the Murray and the types of paddle steamers located at those inland river ports. A large portion of work conducted on the Murray is anthropological in nature.

Most authors focus on the original steamers *Lady Augusta* and *Mary Ann* with an occasional mention of later vessels of importance and various boat captains. Ian Mudie’s 1961 *Riverboats*, 1969 *River Murray Sketchbook*, and


Chapter 1 offers a brief introduction to the topic and review of literature. Chapter 2 provides background information on the history the Murray and early uses of steam navigation along the river, types of paddle steamers, and the history of Mildura. Chapter 3 considers the use of the name *Melbourne* for various craft along the Murray and the early life of P.S. *Melbourne*. Chapter 4 discusses the modern P.S. *Melbourne* and the fieldwork conducted on the vessel during May of 2006 in Mildura, Victoria. It also discusses the methods employed to document the boat and both physical and visual modifications of the vessel.
Chapter 5 provides an insight into the current public’s perception and interpretation of P.S. Melbourne, heritage tourism, community involvement, and the interpretation of P.S. Melbourne as a non-traditional museum. Chapter 6 is a summary of research findings and considers recommendations for future research.
Chapter 2: History of Steamboats on the Murray River and the Port of Mildura

Archival Limitations

Over the years, several have tried to catalogue the various paddle steamers on the Murray; however, records are scarce and difficult to find as most vessels have changed owners and shape so many times. Often, remnants of the original craft are minimal, making it difficult to track such vessels.

Prior to the commencement of fieldwork information was obtained through archival research of parliamentary papers containing the Victorian Government Gazette from 1910 to 1914. The internet, photographs, microfilm, newspapers, magazines, general reference books, and articles on the Murray, the history of Mildura, and P.S. Melbourne from various locations within South Australia and Victoria provide a historical background, to formulate ideas concerning P.S. Melbourne’s life and workings as a snagger and passenger cruiser. Missing information was obtained from interviews with Lyn McKenzie and photographs located on the vessel.

A major problem encountered during research was a shortage of archival and historic details concerning boat plans and construction in regards to exact specifications for paddle steamers. Most of the information only consisted of width, length, and depth and a general overview of the description as a snagging vessel operating for the Victorian Government. This information offers only a glimpse into the composition of such a vessel. The problem lies in the inadequacies of records to depict plans or models for such craft and access to government files. Further investigation is necessary to locate government plans.
The Murray and its Importance

Before efficient land based transport, the rivers provided a means to transfer goods in a timely fashion. River transportation at the time of its conception was an economical alternative to the current land based scheme. The Murray River, the Murray Darling Basin, or simply the Murray is the world’s fourth largest river system. Narrowly flowing through “flat dry plains” 2,530 km to the Southern Ocean, the river is divided into four main sections; Great Dividing Range Catchment Area, Dry Plain Flow, Pinnaroo Block, and Lake Alexandrina (Tucker 1985, p. 1). In Redgum & Paddlewheels: Australia’s Inland River Trade, Phillips writes, “The Murray, Darling, and Murrumbidgee Rivers, together with their tributaries, cover more than one eighth of the area of Australia and of this more than 3,500 miles is navigable river” (Phillips 1972, p. 7).

From the Snowy Mountains in New South Wales to the Southern Ocean in South Australia, the Murray posses a Mediterranean climate with the average temperature ranging from 16°C in July to 32°C in January (Murray River South Australia 2004, p. 1). The climate provides refuge for a variety of “35 endangered species of birds, 16 species of endangered mammals, and over 35 different native fish species” including, various types of aquatic plants, amphibians, crustaceans, and insects (Murray Darling Basin Education Magazine 2005, p. 4).

The Murray Darling Basin climate is optimal for domestic, industrial, environmental, recreational, and agricultural exploits making the region Australia’s most important agricultural area that produces one third of Australia’s food supplies (Murray Darling Basin Education Magazine 2005, p. 1). For millions of Australians, especially South Australians living in the driest state on
the driest continent, the Murray is an integral part of daily life, providing domestic water for approximately 1.25 million people (The River Murray: A Multi-Use Resource 2006, p.1). Water supply on the Murray is minimal while demand remains high due to the plethora of wineries and fruit farms along the river. On average, the Murray’s annual discharge is “16% of the Nile, less than 3.5% of the Mississippi, and 0.25% of the Amazon” (The River Murray: A Multi-Use Resource 2006, p. 3). If water consumption continues the way it has been over the last 50 years, the Murray and South Australia are in grave danger of vanishing completely.

Early Use and Exploration of the Murray: Pre 1853

The river Murray basin emerged two hundred thousand years ago. Aboriginal peoples arrived fifty thousand years ago, hunting, fishing, and living in harmony with the river until the early 1800s saw the inundation of white settlers (Christopher 2001, p. 94). The river and its surroundings provided the raw materials, food, and water supply, necessary to sustain a viable indigenous Australian society (The River Murray: A Multi-Use Resource 2006, p. 1). Considering the initial reliability of river resources, in 1824 Hamilton Hume and William Hovell became the first white men to travel the river. In 1839, Captain Charles Sturt explored along the Murrumbidgee River and its junction finding the Murrumbidgee flowed into the Hume, which he named the Murray (Painter 1979, p. 1). Colonists realized by the end of the 1840’s that the Murray and its tributaries could become the “Australian Mississippi” except for the obvious lack of proper steamers and a suitable port at the Murray mouth (Parsons 1986, p. 54). Almost instantly, the Murray became a hub of communication and transportation.
1853: Steam Navigation Begins in Australia

Necessity breeds innovation and in 1853 navigation of steam-powered vessels became the first major commercial utilization of the Murray (The River Murray: A Multi-Use Resource 2006, p. 2). “River transport played an important part in the opening up and settlement of southern and western New South Wales, Northern Victoria, the Murray Valley in South Australia and even southern Queensland” (The River Murray: A Multi-Use Resource 2006, p. 2). States depended on steamer transportation of cargo and food that was not physically or economically viable for bullock wagons (The River Murray: A Multi-Use Resource 2006, p. 4).

Transportation of such goods would not be possible if it were not for two men who revolutionized transportation on the Murray, Mr. William Richard Randell, and Captain Francis Cadell. Known as “pioneers of Australian river navigation” Randell and Cadell were the first to navigate the Murray with paddle steamers (Kerr & Kerr 1975, p. 50).

William Richard Randell, born in England on May 2, 1824, arrived in South Australia with his parents and siblings in October 1837. From the time of his arrival, Randell was determined to be the first man to put a steamboat on the river (Mudie 1961, p. 11). In 1852, having never personally seen a steam engine, twenty nine year old Randell began to build the famous Mary Ann named after his mother (Kerr & Kerr 1975, p. 20). “Mary Ann set off on March 4th the first steamer to disturb the waters of the Murray” (Mudie 1961, p. 18).

Not far behind was Captain Cadell and Lady Augusta. Cadell, an experienced seaman and adventurer born in Scotland, had visions of a fleet of steamers to carry cargo and wool (Kerr & Kerr 1975, p. 21). Cadell at the age of
fourteen became a midshipman on an East Indiaman and in January 1849 made his first visit to South Australia. On March 23, 1853, Cadell launched *Lady Augusta* in Sydney (Mudie 1961, pp. 36-39). Randell and Cadell raced to be the first down the Murray. The boats passed each other several times along the way. *Lady Augusta* reached Swan Hill on September 17, four hours ahead of *Mary Ann* (*Inland Shipping* 2005, p. 2). Within ten years, there were seventeen steamers on the river, and Randell and Cadell proved paddle steamers were a viable source of transportation, carrying massive loads cheaply and quickly (Phillips 1972, p. 7). Steam navigation provided a means of transporting goods and services long distances facilitating trade and ultimately prompting industrialisation (Kane 2004, p. 13).

**1870-1880: Peak Steam Navigation on the Murray; Heyday of River Transport**

The most significant period of Murray River transportation is between 1864 and 1914. The manufacture of fifty-three paddle steamers and fifty-one barges occurred during the peak construction from 1874-1878. This construction tapered off after 1878, and almost ceased after 1913 (Parsons & Tolley 1967, p. 61). The number of vessels built during peak construction years provides evidence for a high construction rate where several steamers were erected, but why are so few from this period still in existence and used today?

Forty years after the commencement of the steamboat trade on American rivers, Australian river trade was born and with it brought a period of construction and mobilization. The river was at the time, an artery “through which the wealth of the inland was brought to the coast” (Phillips 1972, p. 50). Early paddle steamers transported flour, tea, tobacco, grain, beer, salt, bran,
passengers, general station supplies, sheep, sawn timber, and iron for the railroad (Painter 1979, p. 88).

As maritime activities along the coast increased so did the export of viable goods. “In 1859, twenty-eight vessels transported 3,434 tons of cargo upstream and only a few less tons down” (Kerr & Kerr 1975, p. 36). Wool became the foundation of trade on the river. Considering the quick and inexpensive means of shipping wool along the Murray, settlers increased their flocks and began purchasing luxury items (Phillips 1972, p. 7). Paddle steamers transformed the Murray as ports were extended, loading facilities modernised, and longer and wider barges were constructed (Phillips 1972, p. 50). Paddle steamers carried supplies to isolated places and became the link for the early settlers with the outside world.

Initially not well received, was the concept of steamboats on the Murray. Riddled with trees, people believed there were not enough inhabitants along the Murray to support a harbour to transport commodities. However, after the initial navigational success of Randell and Cadell, ports sprang up like wild flowers. In the 1870s, “Echuca was the second largest port in Victoria and Wentworth was the third largest port in New South Wales” (Wardle 1970, p. 6).

As quickly as paddle steamers arrived on the Murray they vanished, first through the extension of the railroads, “then by the trucks and the snorting automobiles and by a world, which had not time for leisure” (Burman 1973, p. 17). The Murray felt the impact of railroad expansion much like that of the Mississippi. By the turn of the century, the railroad supplied the majority of inland centres (Phillips 1980, p. 51). However, some steamers remained and were reborn into passenger cruisers for tourism along the Murray.
Types of Paddle Steamers

A new era of social and economic development occurred with the construction and implementation of the steamboat, which was a result of the industrial revolution. Its concept changed social views through its use and for the sheer fact that a once perceived impossibility was now a reality. Once only a concept on a drawing board, this idea of steam-powered vessels, transporting goods and passengers up and down a river and cutting transportation time in half was born (Flexner 1978, p. 364). James Watt, the father of the steam engine, and Robert Fulton and Henry Shreve, the inventors of the steamboat, made all of this possible (Dayton 1925, pp. 3-11).

A paddle steamer, paddleboat, or paddle wheeler is a vessel with a steam engine that drives paddles either in the stern or on the side of the vessel, propelling the craft through the water. Murray River steamer design is the product of steamer design from the Mississippi River. “Early Mississippian vessels were deep drafted, heavily built ships, but by the mid 1830s the standard became shallow, lightly constructed, flat bottomed boats with multiple decks high above the water line” (Kane 2004, p. 84). The new long, flat bottoms allowed the Mississippi vessels to slide over shallow areas such as sandbars and submerged debris. Technological advances along the Mississippi occurred due to gradual improvements in machinery and hull construction by mechanics, engineers, and shipwrights. These advances lead to the ability to carry a substantially larger number of passengers and cargo (Kane 2004, p. 84). Because of these constant modifications and improvements, each steam vessel is unique.

Some of the initial vessels on the Mississippi were flat boats and keelboats, which “filled the role of passenger and trade good carriers before the
introduction of the steamboat” (Kane 2004, p. 7). Flatboats were rectangular vessels of various sizes with box-like hulls that relied on river currents and a back oar to move the vessel packed with cargo and passengers downstream.

Built plank on frame with heavy timber, Mississippi keelboats were long and narrow with a rocketed keel; an oar was placed over the sternpost for steering and a cabin extended the length of the vessel. Designed for shallow, swift rivers and streams, keelboats were sturdy watercraft (Kane 2004, pp. 8-9).

Side and stern-wheel packet boats were the most prominent wooden-hulled vessels on the Mississippi carrying passengers and freight on the main deck. Used during times of minimal river flow, stern-wheelers in Australia moved over sandbars and shallow reefs with ease, but proved unsuitable for towing barges. Side-wheelers, the most common type of vessel on the Murray River, were cleverly crafted boats. Due to the intense central weight of the boiler, engine, and paddle wheels, bulkhead placement was a critical design concern (Marshall 1988, p. 48). The placement of each bulkhead aided in the overall weight distribution throughout the vessel.

Hog chains, a key feature on some Mississippian boats, pulled the ends of the vessel up to prevent hogging or sagging, provided a lighter draft through even weight distribution over the entire vessel (Bates 1968, p. 34). Built for extreme conditions of the upper Missouri, mountain boats were both side-wheelers and stern-wheelers. The side-wheeled vessels were limited to lower river trade, while stern-wheelers, were designed to handle extreme conditions in the upper river regions (Bates 1968) in (Corbin 2000, p. 7).

Snagging vessels played a crucial role in the network of steamers travelling and working a river, especially along the Murray. With a strong engine
and winch, these vessels cruised up and down the Murray removing snags using cables, a pulley system, and winch. The cables ran through a pulley chained to a tree on the bank and then back to a winch on the steamer that turned while the steamer’s engine was in reverse to remove the snags. “The average number of snags removed and burnt each month was between three and four hundred,” on the Murray River, proving these vessels played a vital role in steamer transportation and movement of goods along the river (Phillips 1972, p. 64).

Finally, there were towboats and barges. “Historically many of the original paddle steamers along the Murray, started their lives as barges, with their hulls being added to and converted to paddle steamers, complete with engines and superstructure” (Christopher 2001, p. 80). Towboats moved barges full of cargo such as coal and wool up and down the river. Showboats were another type of barge found on rivers; these functioned as theatres and towed by towboats.

**Paddle Steamer Characteristics**

Most Mississippi and Murray vessels possessed common structural attributes. Such features included a main deck, a stokehold containing the engine and boiler, derrick crane, and winch for lifting, or lowering cargo in and out of the steamer or barge. Typically, two double acting steam engines drove stern-wheelers while side-wheelers had one engine per wheel (Bates 1968, p. 95). A wooden rudder was used to steer the boat and protruded from the aft of the vessel. Located at the front of the vessel was a steering pole also known as a sight pole, or guide pole. A tow post and wheelhouse were some of the initial components of paddle steamers (Tucker 1985, pp. 41-44).

The hulls generally contained longitudinal strakes, bilge keelsons, and clamps for longitudinal support (Kane 2004, p. 106). Paddle steamers possessed
a stronger keelson but a light keel “which runs fore and aft along the vessel’s centreline and is no more than one or two inches below the bottom of the hull” (Kane 2004, p. 98). The planking made up the exterior hull. The inside framing consisted of “flat floors and vertical futtocks throughout the hull, with more complex curved frames at the bow and stern.” The bulkheads created a wall of interlocking timbers spanning the entirety of the bottom of the hull, reinforcing the vessel (Kane 2004, pp. 107-108).

As paddle steamer technology progressed, vessels became longer and wider introducing hog chains, which were wrought iron rods that countered hogging on a new vessel; hog chains created a lighter hull structure and shallower draught (Kane 2004, p. 112). Guards, decking, and deck beams increased carrying capacity through expansion of the main deck where most of the cargo was stored. “On side-wheelers guards typically added 50-75 percent of breadth, depending on the width of the paddle wheels to the main deck relative to that of the hull” (Kane 2004, p. 111). Finally, the pilothouse was the highest point on a paddle steamer where the captain would steer the vessel (Bates 1968, p. 70).

Incremental improvements occurred through technological implementation of new machinery and ideas. Steamboat adaptation was a trial and error process, which occurred not only on the Mississippi but on the Murray as well. The Murray had the benefit of the knowledge and mistakes of the Mississippi River steamers (Kane 2004, p. 53). This knowledge is probably why vessels on the Murray changed structurally more rapidly that those on the Mississippi.
Types of Paddle Steamers on the Murray from 1853 to 2006

A shipbuilding industry began within ten years after the voyage of Lady Augusta and Mary Anne (Phillips 1980, p. 32). The construction and operation of ten steamers took place in the first eight months of 1865 and from 1870 to 1880, a massive steamboat boom took place on the Murray (Phillips 1972, p. 35). Over three hundred and sixty paddle steamers and barges were constructed between 1852 and 1925 for use on the Murray and adjoining river systems (Parsons & Tolley 1967, p. 61).

It is apparent paddle steamer design along the Murray stemmed from American influences. Over time, the design of Murray vessels changed to fit the needs of the river, improving on the overall structural design and visual ecstatics. The Murray is narrow posing a problem for the ever-popular stern-wheel steamers like those of the Mississippi. These stern-wheelers lacked the stability necessary for use on the Murray; thus shipwrights switched to side-wheelers. A shallower draft steamer with a broad beam for greater stability, being able to negotiate sharp bends, and a hull thick enough to withstand hitting a Redgum at full speed was more advantageous than the outsized bulkier Mississippian vessels (Phillips 1972, p. 32).

Within a few years, all new Murray steamers were side-wheelers or converted stern-wheelers to side-wheelers, proving that from the inception of vessels on the river, alterations and modifications occurred to fit the needs of the river and river people (Tucker 1985, p. 45). Contrasting American steamers, Murray River steamers were under constant modifications and adjusting to changing river conditions. Murray steamers focused on “adaptability and durability; barges became steamers and vice versa” (Painter 1979, p. 96). It is
pertinent to remember that the modern man-powered flatboats of the Mississippi were nonexistent along the Murray and shipwrights along the Murray altered vessels from the inception of river craft (Painter 1979, p. 96).

With the majority of steamers and barges constructed out of timber, and operated by timber as fuel, wood supply was a major concern. Early steamers used one ton of wood during eight hours and frequent stops were needed to refuel (Mudie 1961, p. 124). Redgum, (*Eucalyptus Camadulensis*) a tough hard-grained wood, was the most prominent and prevalent steamer construction material on the Murray (Phillips 1980, p. 34). Redgum was highly available and there were plenty of individuals along the river skilled in the art of working with Redgum. With this in mind, it was economically feasible to use local resources such as Bluegum and Swan River mahogany to construct vessels. In conjunction with the use of Redgum, the implementation of new design improvements such as the use of steel and iron advanced the craft yet again. “Skippers had found that, with wooden hulls, the planks above the waterline dried out and shrunk, so the composite hull of a Redgum bottom and steel or iron topsides became generally accepted” (Phillips 1980, p. 34).

Some of the various types of vessels were milk boats, dubbed so due to their delivery of milk, groceries, mail, small cargo, and sometimes passengers (Christopher 2001, p. 92). Hawking steamers, which were particular to the Murray, were floating stores, carrying materials such as farm equipment, food supplies, and clothing (Christopher 2001, p. 90). Snagging vessels were equally important on the Murray. These were small vessels owned and operated by the government and equipped with powerful engines, winches, handsaws, and axes, as well as cabins, a galley, a dining room, and bathrooms. With the use of side-
wheels for mobility, these steamers kept the rivers clear from fallen logs and overhanging branches (Tucker 1985, p. 48). River transport would not have been possible without these boats (Phillips 1972, p. 7). Snagging vessels employed to remove menacing Redgums, which clog up the Murray appeared within two years following the introduction of steamers on the river (Phillips 1980, p. 86).

There were many hazards for steamboats operating on the Murray River. Snagging vessels worked hard because of hazards such as bridges that acted as dams for debris. Locks and weirs, narrow bends, the river level (which could drop and leave a vessel stranded for months) heavy currents, overhanging tree limbs, snags, sand bars, submerged rocks, and flooding events were also hazards which caused blocks (Tucker 1985, pp. 72-76). Wind was also a major problem, “A side wind could catch a steamer especially a passenger steamer with her high deckhouses and almost send her skidding sideways on her shallow draught flat bottom” (Mudie 1961, p. 161). Another great concern was wood burning steamers and sparks, which could catch cargo on fire and destroy a vessel. “Steamers lost by fire were probably higher in inland Australia than among vessels anywhere else in the world” (Mudie 1961, p. 203).

**Death of the River Trade**

Once considered a major shipping highway, moving thousands of tons of cargo each year, the Murray played a crucial role in the development of modern day Australia. Ports sprang up and the fruit and wine industry blossomed (Christopher 2001, p. 6). Unfortunately, the golden age of paddle steamers ended with the introduction of the “railroad, roads, cars, and air transport” (Tucker 1985, p. 80). With the introduction of these modes of transportation steamboats became obsolete, abandoned, broken up, or fell into disrepair (Christopher 2001,
p. 6). Tucker writes, “By the end of the 1930s there were only a few working steamers left on the river, by the 1940s there were fewer still” (Tucker 1985, p. 80). The once massive fleet of paddle steamers shrank to almost nothing and “the last of the mud pirates, the freshwater seamen, the inside sailors were gone” (Mudie 1961, pp. 103-104). Recently a surge of new interest has surfaced regarding paddle steamers. This interest is from the tourist industry where historic steamers have taken on the role as recreational vehicles, such as P.S. Melbourne a side-wheeler that resides in Mildura (Tucker 1985, p. 80).

**History of Mildura**

As the river trade grew so did the towns along the river, one such famous port was that of Mildura in Victoria. Settlers initially resided in tents or timber shelters but as time progressed, proper establishments were constructed and Mildura became a center of activity. Linked with the railway line to Melbourne in 1903, “Mildura became a significant working river port for cargo and passengers and is still the home of famous riverboats that carry tourists and not cargo” (Christopher 2001, p. 35).

George and Ben Chaffey the Canadian born engineering brothers established the Mildura Irrigation Settlement in 1887. They recognised this area as a lush oasis in an otherwise hot dry climate, with low rainfall, and lots of sunshine (Kerr & Kerr 1975, p. 43). The establishment of such a colony marked the beginning of a water management scheme for 250,000 acres along the Murray (Christopher 2001, p. 95).

Granted water-pumping rights, the Chaffey Brothers Ltd. formed their settlement but were followed by the Mildura Irrigation Company. Delays in the construction of pumps caused the use of an older paddle steamer *Jane Eliza* to be
used as the first pumping station on the Murray (Kerr & Kerr 1975, p. 43).

Mildura became the blueprint for several other port towns along the river such as Renmark.

After the introduction of the pumping station the region’s interests shifted from wool to fruit production which is still its main economic draw today (Christopher 2001, p. 35). This secured Mildura’s status as a thriving port from its inception to date. As one of Australia’s “gateways to the outback,” Mildura has a multitude of activities and has become a significant tourist destination with several wineries and family orientated activities (Christopher 2001, p. 35).

**Locks and Weirs**

After the Chaffey Brothers’ success, it was evident that water flow along the Murray needed regulation in order to sustain the new river lifestyle. A locks and weirs system would revolutionise navigation and water distribution along the river. In 1917, work began on locks, which in theory would regulate water flow for navigation and trade, but the project came too late for the river trade boom. By 1940, there were a total of 26 locks and weirs constructed along the Murray (Christopher 2001, p. 95). In the end, farmers benefited through irrigation and not the riverboat men (Phillips 1980, p. 51).

**Mildura’s Current Modified Vessels**

There are varying degrees of historic paddle steamers scattered across Australia, some that are still in operation from the 19th and 20th centuries. Murray riverboats today, consist of a melting pot of original designs and constructions, meshed with restorations and modifications (Christopher 2001, p. 5). The older, original steamers hold the key to the later built steamers on the Murray.
P.S. Adelaide is Australia’s oldest operating paddle steamer, constructed in 1866 and the third oldest operating vessel in the world. Restored after several years as a land decoration, it now tours passengers on the Murray from Port Echuca (Christopher 2001, p. 79). Avoca, originally built in 1877 as a cargo vessel, is the second oldest operating paddleboat. Converted in 1934 into an excursion boat, it now functions as a floating restaurant. Outside of Mildura, but still in Victoria, the Wentworth Shire Council owns P.S. Ruby, one of the newest restored steamers. Originally built in 1907, this 132-foot long vessel navigated the rivers until its retirement in the 1930s (P.S. Ruby 1907 2005, pp. 1-3). In 1995, the council started restorations on the vessel, with completion being sometime in mid-2006. P.S. Melbourne a snagging steamer built in 1912 and modified into a passengers cruiser in the 1960s carries tourists from Mildura wharf along the Murray. Still in operation today with its original steam engine from 1912, P.S. Melbourne is Australia’s most famous steam driven paddle steamer on the Murray (McKenzie 2005, pp. 1-5). The reason for P.S. Melbourne’s fame lies in the possession and operation of the original 1912 steam engine and in marketing through the internet, newspaper attention, and visitors to the vessel.

Over the last few decades, interest in paddle steamers along the Murray has skyrocketed with the restoration of older vessels and jetties (Christopher 2001, p. 79). The introduction of former barges and working vessels as passenger cruisers has occurred especially in Mildura. Coonawarra is one example as it is restored and upgraded from the former 1894 J.L. Roberts barge with shaftings from P.S. Murrumbidgee. Coonawarra aroused great interest in the tourist trade and is now a commercial craft used for excursions (Painter 1979, p. 3). Other
such vessels as *Rothbury*, one of the fastest steamers on the Murray built in 1881, followed suit and had passenger decks built on what was a former working steamer (Parsons 1987, p. 39). P.S. *Melbourne*, built in 1912 as a snagging steamer and modified in the 1960s into a passenger cruiser, is not the only restored and operational vessel.
Chapter 3: P.S. Melbourne

Previous Vessels Named Melbourne

Two others vessels named Melbourne operated on the Murray River prior to the construction of the 1912-1913 P.S. Melbourne. The first Melbourne (number 31500) was built in Port Glasgow, Scotland in 1852. It was an iron hulled 25-horsepower clinker-built side paddle steamer weighing 97 tons. Built for the Melbourne to Geelong trade the vessel had various owners and wrecked at the Murray mouth on November 16, 1859 (Parsons & Tolley 1967, Parsons 1987). Launched at Echuca on April 12, 1865 was another Melbourne but this one was a snagging punt. A single deck iron stern-wheeler measuring 85 ft long and drawing 21 inches of water, this vessel had several owners one of which was the Victorian Government. Melbourne worked until it was replaced in 1914 and currently lies derelict somewhere near Goolwa (Phillips 1972, Parsons & Tolley 1967, Marshall 1988).

The 1912-1913 P.S. Melbourne

Paddle steamer innovation from design to development holds a vital position in Australian shipbuilding history, especially along the Murray River. Vessels constructed in the early stages of boat building on the Murray were flexible with alterations occurring according to circumstances; few vessels were built from original plans and drawings. The majority of early Murray vessels possessed a composite construction of iron topsides and steel frames with timber planking. A timber hull gave the paddle steamers more flexibility to manoeuvre upon encountering snags in the river. Shipbuilders’ designs and combination of

Shipwrights and captains were constantly looking for ways to improve vessels to make them bigger to carry more cargo, more adept for river navigation, and more comfortable for the growing number of crew a boat was able to hold. “Vessels were lengthened, shortened, two hulls incorporated together, side-wheelers were made into single screw steamers, draught was altered, funnels added and deckhouses redesigned” (Kenderdine 1994, p. 63). Most modifications were to the “superstructure” while basic dimensions of the vessels remained close to the original composition. These modifications and alterations are a fundamental part of understanding the construction of P.S. Melbourne and the reasoning behind such modifications over the years.

In the years 1910-1919, there were eleven steamers and six barges built, along the Murray, one of which was P.S. Melbourne (Parsons & Tolley 1967, p. 64). P.S. Melbourne emerged with a wooden deckhouse and composite hull made of Redgum bottom, iron topsides, and steel frames. The Government Dockyard at Williamstown near Port Melbourne and St. Kilda in Hobson’s Bay fabricated the steel frames and bulkheads, then transported them to Koondrook for assembly where P.S. Melbourne was built (Plowman 2005, Mudie 1975).

According to the Victorian Government Gazette from 1910-1913, there were various types of Public Works expenditures and purchases for Williamstown Dockyard that could be linked to the construction of P.S. Melbourne.

In 1912, the supply and delivery of a heating furnace, hydraulic hoists, fire pump, and canvas hose (Victorian Government Gazette 1912, pp. 3539).
In 1913, the supply and delivery of two complete sets of propelling machinery with two-200hp compound inverted cylinder 130lbs marine engines, two independent surface condensers, two marine boilers with uptake funnel and all mountings, and one belt driven fire pump, suggest the construction of steamboats (Victorian Government Gazette 1913, pp. 2239).

On Friday October 24, 1913, a shipment was received including one steam and hand windlass, three hydraulic lifting ramps, one hydraulic pressure pump, one rivet and bolt leader and two weighting blocks (Victorian Government Gazette 1913, p. 4610).

It is obvious there were various types of items purchased and used during the construction of P.S. *Melbourne* indicating that the Williamstown Dockyard was a centre of activity during 1912-1913.

In 1912-1913, the government contracted a shipwright, Mr. J Brosch to design P.S. *Melbourne*. This snagging steamer was commissioned by the Victorian Government to remove fallen trees and snags from any public works along the river such as the construction of bridges, weirs, and locks. P.S. *Melbourne* was a side-wheeler with an English built 25-horse power twin cylinder compound Marshall Steam engine and locomotive type upper deck with a maximum steam pressure of 150 psi. The vessel measured 98 ft x 21 ft x 3.6 ft (Plowman 2005, Mudie 1975, Marshall 1988).

Launched sideways into the river, the newly constructed P.S. *Melbourne* made its way from Koondrook to the “largest shipbuilding centre on the Murray” and most productive port in Australia at the time, Port Echuca (Kenderdine 1995, Marshall 1988).
Dubbed Hopewood’s Ferry after Henry Hopwood, a convict turned police officer, Echuca also known as the “Chicago of Australia,” maintained a three-story wharf allowing vessels to load and unload cargo despite river height (Mudie 1969, pp. 18-20). Echuca attracted rivermen in droves (Priestley 1965, p. 67). “When linked by rail with Melbourne on September 19th 1864, Echuca developed into the colony’s second port although just over 155 rail miles from sea” (Studies in Transport 1980, p. 53). Between 1867 and 1876, Echuca expanded and became increasingly more popular as an inland port and town (McCulloch 1986, p. 18).

Gus Jansen the skipper of the previous iron Melbourne became the skipper of the new composite built P.S. Melbourne and operated the vessel for some time. In 1940, the Evans Brothers Timber Mill at Echuca purchased P.S. Melbourne, made general hull repairs, and then used the vessel for logging and towing timber barges for several years. Recommissioned only when necessary due to the decline in river trade, snaggers had difficulty finding work. Despite these odds, P.S. Melbourne in the 1940s, after a massive flood, cleared timbers blocking the Torrumbarry Weir making it safe again for trade and travel (Phillips 1980, p. 93).

In 1942, the Victorian Government pressed older riverboats back into service due to a shortage of fuel in Melbourne; the steamers P.S. Melbourne, Adelaide, and Edwards yet again had the waters of the Murray beneath them (Phillips 1980, p. 153). After the onslaught of the World Wars, decades of flooding and droughts, and the ever-expanding railroad system, the Evans Brothers Timber Mill left P.S. Melbourne to rot away at its moorings against the
banks of the Murray. This once great workhorse of the Murray was quickly fading into oblivion.

If not for Captain Alby Pointon in 1965, a keen businessman from Mildura with a capitalistic drive, this vessel would now be lost forever. Captain Pointon was in the business of restoring historic vessels and converting them into passenger cruisers. He was already operating the previously rebuilt vessel _Mayflower_ when he found and began restoring _P.S. Melbourne_. _P.S. Melbourne_ was in great disrepair and before commencing its journey to Mildura Captain Pointon placed his newly purchased vessel on the slip at Moama for hull and upper deck repairs. Captain Pointon refitted and almost completely rebuilt the vessel into a passenger cruiser capable of carrying 300 passengers. January 1, 1966 _P.S. Melbourne_ left Mildura Wharf on its first voyage as a passenger cruiser (Parsons & Tolley 1967, Parsons 1987, Wardle 1970).

After Captain Pointon’s alterations, _P.S. Melbourne_ had “two open decks with rows of brightly coloured canvas chairs, about 200 on each deck, a refreshment counter, and piped music” (Plowman 2005, p. 49). The original winches used for lifting snags and fallen timber were removed but _P.S. Melbourne_ still possesses its original boiler, steam engine, and paddle boxes; but a new observation deck replaced the older cabins. _P.S. Melbourne_ has had a remarkable life as one of the few remaining wood burning vessels on the river. The craft continues to enchant individuals with its cruises (Bennett 2004, Parsons & Tolley 1967, Parsons 1987, Wardle 1970).
Chapter 4 The Modern P.S. Melbourne

Archaeology above and below the water is more than a set of prescribed techniques; it is an inner desire or quest for answers, which dictates an archaeologist’s work. Archaeology is the pursuit to unlock the secrets of the wide and varied history of the Murray River where vessel alterations due to social and economic changes affecting the river was common practice.

The following chapter outlines the fieldwork conducted in May 2006 on P.S. Melbourne and the methods employed to record and document the vessel. Figure 1. This chapter examines the current use, and modifications of P.S. Melbourne from a snagging vessel into a passenger cruiser. It discusses specifically the major alterations that took place in the 1960s by Mr. Alby Pointon and current modifications to date. Further alterations transpired over the years to comply with health and safety regulations maintaining the vessel’s new status as a passenger cruiser.

It is evident that future investigation of the craft is necessary to identify the full scope of its operations from 1912 to the present. This investigation briefly touches on information gleaned from the boat but opens the door for future research.

The subject of investigation is P.S. Melbourne, originally commissioned for the Victorian Government in 1912 as a snagging steamer; it was transformed in the 1960s with the help of Mr. Alby Pointon into a passenger cruiser. Figure 2. Owned and operated by the Pointon family for over 30 years in Mildura “P.S. Melbourne, along with the Avoca and Rothbury carry on the tradition of the earlier steamers” (Phillips 1980, p. 121). According to the Pointon family P.S.
Figure 1. P.S. Melbourne docked at private mooring. Photo: Amanda Hale 2006

Figure 2. P.S. Melbourne 1966 first year of operation after modifications to passenger cruiser. Photo: Pointon Family Collection
Melbourne is known to be the most famous steam driven paddle steamer on the Murray (McKenzie 2005, pp. 1-5). Figure 3.

Figure 3. In Mildura prior to Mr. Pointon’s modifications 1965. Photo: Pointon Family Collection

P.S. Melbourne is a two-deck (main and upper), flat-bottomed, side-wheeler, with a shallow draft, operational in less than 1.22m/4ft of water, it is 29.8m/98ft in overall length, 6.4m/21ft beam at the waterline and 12.2m/40ft wide across the top of the paddle boxes. Vessel tonnage equals 100 tons. The engine turns the paddlewheels 60 times per minute and at maximum speed, the wheels turn 130 times per minute producing a cruising speed of eight knots (McKenzie 2005, p. 1).

Recipient of the Victorian Tourism Award for Excellence in 1990 and licensed to carry 300 passengers, P.S. Melbourne possesses all the comforts of home with its open planned decks and seating for summer and heated enclosed areas for winter. There are toilet facilities on board, wheelchair access and a food kiosk for passenger convenience (McKenzie 2005, p. 2).

The Crew’s Perspective

The first to board P.S. Melbourne each morning is John Lauder, the engineer. Working on P.S. Melbourne for the last ten years John, like the rest of the crew, is friendly and possesses knowledge about the vessel that only time can
provide. When questioned about his duties and the engine he was happy to reply. Figure 4.

Kept warm constantly, through the addition of firewood each night prior to the crew’s departure for the evening, it only takes two hours in the morning to re-pressurize the engine and boiler prior to departure unlike a cold start, which takes eight hours. P.S. Melbourne uses about one ton of oak per year, provided by Mr. Robert Burnett, a freelance woodcutter from Mildura. Each morning it takes about one and one half hours to load the wood for the entire day. Figure 5. John must periodically add fuel to keep the fire going, and lube the engine every hour of operation. Due to the high temperatures reached by the engine there are two types of oil used, general-purpose oil and a Coral D blend of mineral oil that is a water resistant type of grease employing this type of mixture prevents overheating. John equates the functioning of the engine to that of a wood stove. To maintain reliability and for safety reasons the engine is checked every year and the hold every two by the Waterways Authority in Sydney.

About an hour after John begins his work the other crew members Bev Martin and Joanne Seymour, the women who run the kiosk and function as deckhands, arrive along with Lance Bramley, the captain. Prior to departure from the private mooring, Bev and Joanne scrub P.S. Melbourne from top to bottom making sure all the floors, windows, and seats are washed.

The women sell novelty items such as shirts, postcards, hats, toys, Murray River Flag replicas, and even stubby holders at the kiosk as well as tea, coffee, sandwiches, cakes, and warm scones. Once the vessel docks at Mildura Wharf, Bev and Joanne greet passengers and take fares.
Lance, P.S. *Melbourne’s* captain for over two years, started boating at age fourteen. He now posess his Certification of Competency with a Master Class 4 for Inland Waters issued in New South Wales and Marine Engine Driver 3. These certifications allow him to captain P.S. *Melbourne* and other company boats as well. Lance provides commentary on the rules aboard P.S. *Melbourne*,

Figure 4. P.S. *Melbourne* crew and Lyn McKenzie. Photo: Amanda Hale 2006

Figure 5. John loading wood prior to departure. Photo: Amanda Hale 2006
the Murray and the locks and weirs systems while the craft passes up and down
the river. He enjoys the fact P.S. Melbourne possesses its original steam engine
and is surprised that as a captain he must rely on the engineer to change gears.
Using a bell system where the captain rings the engineer to change gears and the
engineer rings back to the captain illustrates the teamwork involved in the
operation of the vessel. Through the diligent efforts of the crew, P.S. Melbourne
remains operational.

**Mildura Wharf Cruise**

After the initial preparations of the vessel take place at the private
mooring, P.S. Melbourne travels to Mildura Wharf, where passengers board the
vessel. There are two cruises a day: the morning cruise departing at 10:50 am
returning at 1:00 pm and afternoon cruise, departing at 1:50 pm, and returning at
4:00 pm. The cruise travels downstream through Lock 11, which lowers P.S.
Melbourne for the downstream passage, and raises it for the upstream journey
home. Figure 6.

During the cruise Lance, comments on the picturesque winding Murray
littered with Redgums, ducks, swans, and historic homesteads along with
historical information on P.S. Melbourne. Passengers are encouraged to walk
around the vessel, watching its massive engine and paddle wheels in action.

One of the many benefits of this cruise is taking a turn at the wheel,
Lance allows passengers young and old to take the wheel for a short time and
experience what steering a paddle steamer is like. Figure 7.

There is a handout given upon request with information about the history
of the boat, the Murray, and the locks and weirs system, as well as a brief section
on the Murray River Flag. As the tour ends, the captain with help from the
engineer slides the vessel back into its mooring to unload the passengers after their brief but entertaining journey along the river.

Figure 6. Leaving Lock 11 heading downstream. Photo: Amanda Hale 2006

Figure 7. Karson Winslow and Captain Lance. Photo: Amanda Hale 2006

Limitations

Limitations included time constraints for recording the project and time constraints placed on the researchers with permissible hours of investigation. The imposition of these limits occurred due to the nature of the operation of the
vessel. Measurements could only be taken when passengers were not aboard, thus limiting measuring time. Accesses to various parts of the vessel considered off limits at first were later investigated briefly.

While conducting fieldwork several challenges ensued due to the boat’s location and current operation on the Murray. The most frustrating aspect was waiting until the cruise had ended and passengers were no longer aboard to begin measurements. Considering the fact this vessel is not wrecked it was difficult to measure various aspects of the craft such as the rudder and keel. It was also tricky to obtain a proper length of the vessel due to obstructions located throughout the boat. Bow and stern profiles were difficult, and almost impossible due to the craft’s submersion in the Murray River. It was not permissible to view inspection documents concerning the vessel from 1960 to 2006 due to the status of the vessel owner’s office materials.

**Research Design and Methods**

“The fundamental purpose of archaeology must be to provide people with a better understanding of the human past and archaeologists have a duty both to colleagues and to the general public to explain what they are doing and why” (Renfrew 2000, pp. 559-563). The acquisition of knowledge through the implementation and investigation of field experiments forms the basis for archaeological theory. An archaeologist sets goals and objectives, which formulate a research design, guiding fieldwork. The research design “discusses methods and techniques of data acquisition” (Hester, Shafer & Feder 1997, pp. 21-41). Research designs simplify concepts creating a workable and understandable plan of action by clarifying the researchers approach to the subject and overall project goals. Planning is paramount, but archaeologists must
be flexible and prepared for unforeseen incidents, which might occur that alter the research design.

Prior to the commencement of research, there are fundamental aspects to consider.

1. Choose what kinds of archaeological data to collect, objects that can be counted and sampled directly?
2. What sampling approach best fits the goals of the research design?
3. How to control for bias?
4. What percentage of the whole is to be sampled?


P.S. Melbourne was chosen for this study because it is the only vessel on the Murray River powered by its original steam engine from 1912. This thesis focuses on the documentation of the entire craft. It concentrates on the modifications from 1912 to 2006, specifically focusing on the alterations in the 1960s from a snagger to a passenger cruiser. Measurements were taken throughout the entire boat to illustrate the modifications over time transforming P.S. Melbourne into its current form. The suggestion of a full-scale sampling of the vessel where every aspect was measured and photographed appeared the most logical method for vessel examination.

The initial plan for P.S. Melbourne was to measure, photograph, and inventory every object on the vessel and to catalogue visible alterations made to the boat. The concept of measuring every object in sight provides the researcher with mountains of information to sort through, but in the end proves useful in regards to having viable data to examine. Logistically speaking measuring an entire craft proved an arduous task so the vessel was divided into workable
sections: main deck, the primary deck when boarding the vessel; the upper deck, the top or upper most deck; engine room, and hold. The subdivision of each deck formed:

<table>
<thead>
<tr>
<th>Main deck forward</th>
<th>Upper deck forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main deck midship</td>
<td>Upper deck midship</td>
</tr>
<tr>
<td>Main deck aft</td>
<td>Upper deck aft</td>
</tr>
</tbody>
</table>

Five bulkheads separated the hold with access via two hatches located on the main deck forward, and two hatches on main deck aft. The engine room was sunken in the midship section of the vessel. It was difficult to measure the hold due to the division of the hold by bulkheads but an overall length was obtained via the measurements taken between the bulkheads.

Larger items were measured first such as the cabins, and then smaller secondary items such as fasteners and bolts were measured. Special consideration was given to places possessing visible modifications as determined by historic pictures and schematics. Measurements were recorded in metric units and imperial conversions were produced post fieldwork. Measurements are reported in both units of measurement. Photographic documentation and a general inventory of items were key methodological elements to the fieldwork plan.

The following is a general list of items measured: windows, doors, length, width, and height of cabins, stanchions, deck beams, chairs, pilothouse, kiosk, deck planking, hold, ceiling planking, superstructure barrier, bow, stern, waterline, anchor, paddle wheel casing, stairs, planks, and life saving devices.

Equipment consisted of one Nikon digital camera, spare battery, and memory card, two large fifty-meter measuring tapes and one small five-meter
measuring tape, one small centimetre scale bar, one large range pole, one
drawing board, and plum bob, graph paper, pencils, and erasers.

**Fieldwork**

Permission to record P.S. *Melbourne* was granted by Mrs. Lyn McKenzie
daughter of Alby Pointon) and her brother Chris Pointon who now run P.S.
*Melbourne* as a tourist attraction. P.S. *Melbourne* is docked each morning and
evening at a private mooring at 10 River Dr. beyond Mildura Wharf and across
the Abbotsford Bridge into New South Wales.

Recording and photography of P.S. *Melbourne* occurred from May 8 to
11 2006, when two Flinders University Students drove the 400 km from
Adelaide to Mildura.

A general photographic survey of the vessel and its mooring dictated the
next methodological step. Measurements and photographs taken internally and
externally from the starboard and port side of the vessel were crosschecked for
symmetry. Because the vessel operates as a tourist attraction recording began at 8
am two hours prior to arrival and boarding of passengers, one hour was allowed
during lunch and one hour after docking at the private mooring in the evenings.
One of the first priorities was to measure as much of the vessel on the first day as
possible so the next two days could be devoted to smaller details. Areas of high
priority, such as areas of public interest, were measured first. Areas of public
interest were ranked as high priority because of the time allotted to measure the
vessel. Passengers occupied these areas first and it was imperative that the
researchers spend as much time as possible measuring every aspect of the vessel.
For ease in measuring, dividing the boat according to deck and then sub dividing
each deck into more workable sections proved necessary. The main deck and most of the upper deck were recorded on the first day of the project.

The vessel departs its private mooring and arrives ten minutes later at Mildura Wharf its public mooring where passengers board for the daily cruises. The main objective during the cruise was to be as unobtrusive as possible by taking photographs, interviewing the crew, and taking inventories of buckets, fire hoses, deck planking, bolts, and chairs. Figure 8. This information is vital to the overall alterations and modifications made to the vessel to make it a passenger cruiser.

![Figure 8. Red Fire Buckets. Photo: Amanda Hale 2006](image)

The compilation of field research occurred each evening after which a discussion arose concerning the day’s accomplishments. Areas of priority were determined and a general plan and list of items and areas of the craft to measure were constructed for the next day’s fieldwork.

Day two and three focused on the hold and engine room. The hold proved the most fascinating aspect of the vessel. Despite the dark and dank conditions below deck, visible timbers were measured, counted, and photographs taken illustrating a composite hull. Figure 9.
After day one, it was apparent due to time constraints and permissible hours of recording, a concentration on larger vessel structures was more worthwhile. It would be virtually impossible to record every single fastener.

**Physical Appearance: Exterior**

“Recording information and data either during a survey or an excavation is surprisingly difficult to do in a systematic manner and often information is lost” (Green 2004, p. 275). This section discusses measurements taken of modifications to P.S. *Melbourne*. Research specifically focuses on the newly added superstructure and changes made to accommodate passengers for safety and aesthetic reasons. The term “modified” describes any alterations to the craft that occurred after its original construction in 1912. Mr. Pointon attempted to maintain the original structural integrity of the vessel, only making additions that enhanced the boat’s capacity to carry passengers and make the vessel more comfortable.

P.S. *Melbourne* is a two-decked, side-wheeled vessel with a sunken engine room midship that houses its 1912 steam engine. Preliminary results reveal a composite hull with Redgum (*Eucalyptus Camadulensis*) bottom, iron
topsides, and steel frames (Alien Plant Invaders of Natural Areas 2006, p.1). Deck planking is New Zealand Kauri. The vessel is painted white and uses an array of colours to signify the differing areas such as white for the cabins, red and yellow on steps and areas of caution such as where the floor turns from wood to steel and slopes. Figure 10.

Figure 10. main deck forward. Photo: Amanda Hale 2006

Originally, the boat had more of an open plan main deck with enclosures only surrounding the paddlewheels and an open plan pilothouse as well. The upper deck consisted of a pilothouse with few enclosed cabins. Figure 11.

The addition of a metal and glass enclosure surrounding the main deck and the addition of the superstructure on the upper deck drastically alters P.S. Melbourne’s appearance. Figure 12 & Figure 13. Exterior stairs located atop the paddlewheel casings lead from the main deck to the upper deck. The crew uses these stairs when entering the locks to throw ropes to the lockmaster and anchor the boat inside the lock to prevent movement during flooding of the lock when raising and lowering the craft. Four vehicle tires are used as fenders on the port and starboard side of the craft at the forward and aft sections of the paddlewheel casings to help prevent vessel damage during locking as well. Various life saving
devices are located around the outside of the upper deck in conjunction with exterior lighting units.

**Main Deck**

The main deck is divided into main deck forward, main deck midship, and main deck aft. A superstructure now built on the main deck forward encloses nearly all of the deck. Many of the alterations made deal with additions for safety regulations and passenger comfort.

Main deck forward is a prime location for tourists and consists of half New Zealand Kauri deck planking, and steel plate flooring with a series of thirty-four pitch sealed deck planks arranged lengthwise across the forward deck possessing a board width of 0.25m/0.82ft.

Completely enclosed by the superstructure, main deck forward contains a series of seventeen sliding glass double pane windows measuring 1.0m/3.28ft in length and 1.2m/3.94ft in width. The superstructure consists of sixteen metal interlocking barrier panels located below the windows with a height of 0.83m/2.72ft. Each barrier panel contains four nuts and bolts per panel fastening the panel in place to the deck planks.

There are thirty-eight carlines with a width of 0.21m/0.69ft and seventeen deck beams measuring 5.55m/18.20ft sided, 1.08m/3.54ft molded. There are two vertical stanchions the forward most stanchion has a height of 2.1m/6.89ft and the aft most stanchion a height of 2.0m/6.56ft. Located throughout the entire cabin are twenty rows of benches varying from three small benches of 1.13m/3.71ft in length, 0.53m/1.74ft in width, and 0.86m/2.82ft in height. There are eleven medium benches measuring 1.88m/6.17ft in length, 0.53m/1.74ft in width, and 0.86m/2.82ft in height. Figure 14.
Figure 11. P.S. Melbourne plans redrawn from 1912 plans

P.S. Melbourne
Not registered, wood, MR. 7 tons 98.0 x 21.0 x 7\frac{1}{2} (moulded depth not known) Still in existence
Owners: Victorian Government, 1965 A.E. Pointon
Redrawn by Dean Claflin, 1987
Scale 1\:\textquoteleft: 1\textquoteleft 0\textquoteleft
29.87m x 6.4m
Figure 12. Diagram of superstructure modifications.
Figure 13. Diagram of Vessel Modifications
The women and men’s toilets are located midship as well as the paddlewheels. Main deck midship has little alterations with the exception of the conversion of the original kitchen into the women’s toilet. The added superstructure consists of chain barriers, and a few metal doors and panels to keep passengers from venturing beyond the outside railing and falling overboard. The most recent modifications occurred in August of 2005 when the wooden paddlewheel frames were replaced with metal frames of the same shape, size, and colour and enclosed in a galvanized steel casing. Figure 15. Mr. Lauder stated the paddlewheels are 10.6ft/ 3.23m in length with fifteen floats, or paddles. The width is unknown due to their enclosure inside the paddle boxes. The paddle boxes are 2.26m/ 7.41ft in height with an overall length of 5.83m/19.1ft.

Two companionways consisting of eleven stairs and handrails lead to the upper deck. Figure 16. Engraved at the base of the stairwell are the words “Hall Side.” Enclosing the area where the engine room is located are fifteen metal panels, which are 2.4in/6cm thick. Figure 17.
Figure 15. Remodelled paddlewheel. Photo: Amanda Hale 2006

Figure 16. Stairway leading to upper deck. Photo: Amanda Hale 2006

Figure 17. Metal paneling midship surrounding the Engine Room. Photo: Amanda Hale 2006
Most of main deck midship consists of a large portion of the sunken floor leading to the engine room. Discussed later in the hold section of this paper, the engine room technically is below deck and one of the five sections that make up the hold. Figure 18.

![Figure 18. View down into the engine room. Photo: Amanda Hale 2006](image)

There are eighteen photographs on display ranging from 1912 to 1965 in main deck aft. Figure 19. A large elliptical shaped table is located in the aft end of the vessel supported by thirteen support posts; small stools affixed to the floor line the table. Figure 20. The souvenir and food kiosk is located in this aft section as well. The kiosk measures 3.65m/11.97ft in length, a width of 4.02m/13.19ft, and a height of 2.7m/8.86ft. From the kiosk to the aft portion of the superstructure is a distance of 5.5m/18.04ft. Figure 21. The area where the current kiosk is located used to be part of a cabin structure.

Centrally located is a vertical metal stanchion supporting the upper deck, which is 2.0m/6.56ft in height with a circumference of 0.25m/0.82ft. There are ten large sliding glass windows measuring 1.08m/3.54ft in length and 1.92m/6.30ft in width. There are six smaller windows with a length of 1.07m/2.59ft. Vertical clearance from the top of the window to the ceiling
measures 0.36m/1.18ft. Nineteen deck beams measure 0.014m/0.05ft sided and 0.15m/0.49ft molded. A series of thirty bolts spanning the entirety of the deck secure the upper deck onto the main deck.

Figure 19. P.S. 

Figure 20. View of main deck aft from Kiosk. Photo: Amanda Hale 2006

Figure 21. main deck aft, kiosk. Photo: Amanda Hale 2006
There are two large and two small metal air vents at the rear to release air in case of a fire and to prevent an explosion. The metal vents run from the hold upward through to the main deck where air is released. Through photographs, it appears these vents were added after Mr. Pointon’s purchase and modification of the vessel. The large vents measure 0.41m/1.34ft in length, 0.15m/0.49ft in width, and 0.69m/2.26ft in height.

Upper Deck

Constructed on land and bolted on top of the pre-existing structure in the 1960s, the forward area of the upper deck is a new addition to the superstructure with portions of the original pilothouse remaining. The upper deck is mostly an open-air deck divided by the semi-enclosed pilothouse where the captain drives the vessel.

The upper deck forward possesses fifteen metal stanchions around the exterior of the vessel, fourteen carlines, and eighteen roof beams and a vertical clearance of 1.93m/6.33ft. Separating the forward from the midship area are two wooden sliding glass doors. This cabin is lined with thirty-two blue and tan canvas deck chairs and the added feature of a heating unit. Figure 22.

The cabin narrows near the bow with widths ranging from 5.11m/16.76ft at the base of the pilothouse to 4.87m/15.97ft, 4.29m/14.0ft, to 2.8m/9.18ft almost at the end of the superstructure. The distance between the pilothouse and metal barrier superstructure enclosing the deck, is roughly 1.54m/5.05ft, and 1.61m/5.28ft from the edge of the pilothouse moving aft.

The upper deck midship to aft section of the vessel is for the most part completely open. The superstructure walls with windows and enclosed roof continue through the midship section and then stop before the aft section of the
upper deck. Metal panel barriers surround the aft section of the vessel while a series of wooden tresses and metal stanchions form an unpanelled roof. This section measures 15.21m/49.89ft by 5.14m/16.86ft. There are ten sets of windows, twenty-four rows of blue plastic chairs facing forward and twenty-three chairs in a circular position in the aft section. There are one hundred and nineteen chairs total with a total vessel seating capacity for three hundred. Eleven metal stanchions circle the aft section from the edge of the midship windows. Twenty-seven roof beams run from the midship stairs to the stern. There are thirteen carlines from port to starboard over the entire aluminium roof.

The pilothouse is 1.93m/6.33ft high with two front windows measuring 1.03m/3.38ft by 0.57m/1.87ft, and four large side windows measuring 1.28m/4.20ft by 1.01m/3.31ft. The pilothouse contains two cabin doors either side of the wheel. The overall length at the widest point is 2.4m/7.87ft and the length from door to door is 2.2m/7.22ft. The helm is 1.5m/4.92ft in diameter with a circumference of 0.22m/0.72ft. The pilothouse is not fully enclosed and only a metal railing separates the pilothouse in the rear from the midship section of the deck. Figure 23.

Figure 22. upper deck forward, view towards aft. Photo: Amanda Hale 2006
Hold

There are five access points to the hold, four by hatches on the main deck forward, and aft. The fifth access point is the engine room, midship. Hatch dimensions in the forward section are 1.07m/3.51ft by 1.08m/3.54ft. Bulkheads divide the hold into five sections. An accurate measurement of the length of the vessel was prohibited by its current use, but measurements were taken from bulkhead to bulkhead for an overall measurement of 29.85m/97.90ft in length by 6.28m/20.60ft in width. A vertical clearance of 1.98m/6.49ft in the forward section of the hold provides just enough room to conduct repairs if necessary. Stanchions located throughout the centreline of the hold measure an average of 1.63m/5.35ft with stanchions located near the bow measuring 1.73m/5.67ft in height.

Composed of river Redgum and covered by steel plating the keelson measures 3.0in/7.62cm sided, runs from bow to stern and measures 20.85m/68.38ft with a molded depth of 0.24m/0.79ft in the forward hold, and a molded depth of 0.21m/0.69ft in the aft hold. Figure 24. The overall keelson length is taken from measurements between bulkheads. Moving from the base of
the keelson to the iron topsides, including the garboard, there are eleven visible strakes on starboard and port side of the hold. Between each strake, a fibrous filler known as oakum cauls the vessel making it watertight. Figure 25. Replacement strakes appear orange in colour and a series of ten metal plates with six bolts attached to the strakes secure the hold together. Figure 26. Due to time constraints and the size of the hatch, no investigation occurred concerning one section of the aft hold.

![Figure 24. hold with keelson. Photo: Amanda Hale 2006](image)

The hold originally contained cement in the forward and aft sections providing ballast for the vessel and stability during the operation of the winch. The cement was removed in the 1960s and water filled oil drums used as ballast were placed in the aft section of the hold where the sewage tanks are located.

The engine room is located below the main deck in the midship area. Bolted into the hull are fifteen steel frames. Thirty-two ceiling planks span 5.67m/18.60ft and rest 7.61cm/3in above the base of the original hull. The vertical bulkhead height measures 1.4m/4.59ft. Figure 27. Overall breadth of the engine room taken from the iron topsides on the port and starboard side of the vessel measures 6.28m/20.60ft. Below deck surrounding the engine are a series
of various tools, piping, rope, buckets, cans of oil, a ladder, and twenty life jackets. Due to the nature of the vessels use, wood samples were not taken in the hold.

Figure 25. hull structure with oakum, fibrous filler. Photo: Amanda Hale 2006

Figure 26. hold with orange replacement strakes. Photo: Amanda Hale 2006
Original Cabin and Winch

Located near the new office on the Pointon’s property are the original cabins, removed from the upper deck and winch from 1912. The cabins were converted in the 1960s after their removal, into the sleeping quarters for one of the previous captains of the vessel and converted later into a storage shed. Rough measurements of the cabins are 14.9m/48.87ft in length, 1.96m/6.43ft in height and a general width of 2.77m/9.09ft. Mrs. McKenzie recalls the alteration of the cabins and the addition of a new roof some years after the cabins were removed from P.S. Melbourne. Figure 28.

The original deck winch was a mechanical device with a spool and crank gear assembly used to wind up a cable. Overall winches posses a horizontal axis with a motor, winch drum, wire rope, fairlead that guides the wire rope onto the spooling drum. A gear train and braking system with a clutch allowing for manual disengagement of the spooling drum from the gear train (Warn Industries 2006, p. 1).
The P.S. *Melbourne* winch was used for industrial pulling and hoisting during logging operations. Left to the elements for several years and rusted, the winch measures a length of 2.95m/9.68ft at its base with the longest portions of the winch being the flange at the end of the drum stretching to 3.65m/12.3ft. Gear height from the centre point is 1.46m/4.79ft with a diameter of 1.2m/3.94ft.

Written on the winch was the inscription, David Munro and Co. Melbourne. David Munro was a Scottish born engineer and contractor. He moved to Victoria in 1854 with his family. By 1869, David and his father John formed Munro & Son, a blacksmiths and contractors business in Melbourne. Later David started his own engineering and machinery business, “David Munro & Co.” using a
phoenix rising from the ashes as his trademark. David Munro & Co. became one of the largest labour employers during the railroad boom of the 1870s and 1880s. Munro died in 1898, survived by his wife, two daughters, and three sons (Cannon 1974, pp. 311-312).

It is apparent that the David Munro & Co. are the manufacturers of the original winch located on P.S. *Melbourne*. It is unclear however, how long the company was in business and manufacturing winches.

**Inscriptions**

On the main deck forward located on the ceiling near the ventilation unit is the engraving “BHP WA” the name of a steel company appears. The Broken Hill Proprietary Company incorporated in 1895, operated a mine in Broken Hill, New South Wales. The company, in 1915 undertook steel manufacturing and eventually became Australia’s largest corporation. A merger in 2001 saw the joining of BHP with Billiton mining company forming BHP Billiton. In 2002, BHP Steel was formed as part of the 2001 merger and later 2003 renamed to BlueScope Steel (BHP Billiton 2006, p. 1). The engraving came from this company and apparently from one of their steel plants in Western Australia signified by “WA.”

It is unclear what the engravings “EZ” located on an upper deck forward beam and upper deck aft beam, and “Hall Side” written at the base of the steel railing at the stairway leading to the upper deck stand for. Judging by other inscriptions located on the vessel the “EZ” probably relates to the company that manufactured the steel and “Hall Side” is most likely a directional sign.

An inscription on the engine, “The Pyle National Co. Chicago USA” was a company established in 1899 in the United States and is now a subsidiary of the
Amphenol Corporation. The corporation focuses on the air, rail, and industrial market (Amphenol Pyle National 2006, p. 1). They also manufacture electrical connectors used in oscillating warning lights or signal lights that originated during the late steam age. Milwaukee Road, Burlington and South Pacific railroad installed units on selected steam engines for passenger vessels (Amphenol Pyle National 2006, p.1).

Discussion

Archaeologists create generalizations about a time, place, and people based on a few objects or items or bits and pieces of a wreck. Archaeologists attempt to be windows or time machines into the past. Archaeological interpretations are based on samples of a site or area and rarely do archaeologists have the entire vessel or intact vessel to observe. In this instance P.S. Melbourne like most other vessels on the Murray retains in part its original structure; only a few additions and modifications were made to produce the craft which glides along the Murray today.

This section discusses the modifications that took place from 1912 to 2006 specifically focusing on modifications made in the 1960s to alter P.S. Melbourne into a passenger cruiser.

After examining the vessel and taking several measurements, it is clear that the addition of the superstructure is the defining factor in transforming the craft from a snagging steamer to a passenger cruiser. Previously the vessel’s enclosures were much smaller and the main deck was more open. Prior to expansions the boat lacked the outer superstructure including the sliding glass windows and sliding glass doors, two toilets, a kiosk, chairs, benches, stools, and
the fore and aft cabin on the main deck, and the fore and aft cabin of the upper deck.

Now enclosed in glass and metal and possessing several benches is the main deck forward, the area where the winch was installed. Just beyond the former winch area is a circular metal plate in the floorboards that appear to be in the same position as a previous vent in one of the original pictures of the craft indicating that for the most part the hold structure is unchanged. The hull is of composite construction due to the river Redgums’ ability to withstand impacts from submerged snags. The boards are small and cut to fit the general shape of the vessel thus, the wooden hull is more flexible than an iron or steel hull. The addition of a metal stempost occurred in 1993 to replace the original Redgum post. Redgum was not used due to the lack of a large enough Redgum available for replacement.

The midship section of the main deck remains virtually the same with the addition of safety features such as buckets, fire hoses, and the continuation of the superstructure. The existing women’s toilet was the original kitchen. Modified recently the toilet boxes no longer contain their original timber.

The aft section is currently fully enclosed in glass and metal with the addition of a kiosk, a bench area, and stools function as a seating area for passengers. The kiosk once contained four windows and now possesses only two indicating as stated before, that area was altered previously.

The upper deck contains the largest number of changes considering the entire deck is new and simply bolted on top of main deck. It is difficult to ascertain the exact location of the original upper deck but photographs indicate it was near the end of the old pilothouse. The pilothouse is now enclosed with glass
windows in the forward section but open behind the wheel with only a metal railing separating the passengers and captain; this design follows the open plan theme of the upper deck.

The accompaniments of such features as historical lanterns with modern light fixtures add to the feel of the vessel giving it a touch of ambiance. The addition of heating and air conditioning create comfort. A large portion of visible modifications comes from photographic evidence. In conjunction with measurements, obvious differences in structural integrity occur between the original 1912 vessel and the current P.S. *Melbourne*. The original 1912 P.S. *Melbourne* had a much larger smoke stack, the current kiosk area was a fully enclosed cabin, and all areas presently enclosed by the superstructure were open space. The upper deck was not as long and ended just beyond the wheel in the pilothouse. It appears Mr. Pointon constructed the upper deck without any real plans.

The addition of such items as railing, fire extinguishers, rubber tires on either side of the vessel for entering Lock 11, more floodlights, and heating and air conditioning occurred because of the conscious decision to convert the vessel into a passenger cruiser. These items are either safety features or additions for comfort. Modifications occurred after the 1960s such as the addition of windows and the metal panelling around the superstructure. Most of the initial modifications, not documented by Mr. Pointon, relate to the initial transformation into a passenger cruiser.

The addition of an enclosure surrounding the exterior of the craft and constructed for safety reasons gave the vessel a more oval paddle steamer shape. The paddle boxes, paddlewheels, and hold structure are virtually the same. The
vessel currently maintains its original length. Modifications were made to the main deck, and the upper deck is completely new.

In general, the vessel appears in proper working condition and the crew, most of which had worked on the vessel for at least ten years with a maximum of twenty-five years, were knowledgeable, and helpful. One of the surprising aspects of the trip was the constant noise created by not only the paddlewheels but also the pressure from the steam engine as well as the vibrations felt as the wheels pushed the craft along the Murray.

Conclusion

As outlined by Annalis Corbin there are three aspects to consider, historical, technological, and scientific significance (Corbin 2000, pp. 1-237). P.S. Melbourne’s historical significance lays in its work for the Victorian Government in 1912 as a snagging vessel aiding in commerce and economic expansion along the river. Literally clearing the way for vessels to pass and bring goods to homesteads along the Murray. The investigation of modifications discuss mechanical, economic, and social changes along the Murray and how such changes are illustrated in the types of vessels employed along the river. P.S. Melbourne is technologically significant due to the modifications and alterations made to the vessel converting this once workhorse into the passenger cruiser it is today. It scientifically contributes to Australia’s understanding of its past through the investigation of the aforementioned historical and technological achievements. Scientific investigation with standardized principles and guidelines make archaeological endeavours possible and add creditability to the findings (Kenderdine 1995, p. 271).
Cultural investigation of historic paddles steamers aide in understanding the shipwrights who constructed such vessels. The location of usage speaks volumes for the distribution of settlement patterns along the river. The conversion and use of P.S. *Melbourne* in Mildura, illustrates Australia’s, and Mildura’s history along with the role of paddle steamers on the Murray.

Historically speaking there is currently a serious lack of register data concerning paddle steamers on the Murray. It appears any information is valuable and worth obtaining concerning such vessels. If the public simply lets such information fall to the wayside then a part of Australian history will be lost forever.

The importance of documenting P.S. *Melbourne* is to improve on the current historical record and to disseminate the newly acquired knowledge to the public. It appears that along the Murray most of the documented vessels are completely submerged. Recording a vessel, which is still in operation with its original hold structure and only a few alternations, can contribute in many ways.
Chapter V: P.S. *Melbourne* and the Public’s Perception

Paddle steamers used as a cheap and rapid means of transportation for people and supplies are fascinating craft and throughout history have captured the hearts and minds of many individuals. Today, brochures entice tourists with imagery of these timepieces of a bygone era. Promising modern conveniences, these converted commercial vehicles once the heart of river transportation, transport tourists up and down the Murray. Perhaps the connection to such craft stems from the need for a tangible link to the people and materials of the past.

In archaeological terms, P.S. *Melbourne* is unusual because it has not lost its economic potential like most other shipwrecks or historic vessels archaeologists study. P.S. *Melbourne* no longer performs its original duties as a snagging steamer, but functions now as a passenger cruiser and a modern day, non-traditional, interactive floating museum. As a tangible artifact from the past, individuals possess a closer connection with such a vessel, placing historical value on the craft, and emphasizing P.S. *Melbourne*’s status in the historical record as a valuable entity.

Constructed to disseminate knowledge in an informative yet stimulating manner, (floating museums) like P.S. *Melbourne* educate the public while centring on visually stimulating themes with interactive components. In terms of marketing and economy, these exhibitions produce a reaction from the participant in the form of monetary denominations, which allows the profiteer to conduct maintenance, upgrades, and expansions to the exhibition or museum.
Public Interpretation

It is difficult to present archaeology to the public as most see archaeology as unfinished work. Challenging for individual comprehension is the notion of *in situ* study and non-invasive archaeology. Most do not understand why it is not possible to, “dig everything up?” To tackle the question of public interpretation of archaeology, it is necessary to discuss the types of individuals who visit cultural heritage sites, the concept of value, and the concept of heritage tourism and the effects heritage tourism has on a community. P.S. *Melbourne* is a tourist destination with underlying archaeological and historical significance.

The theory behind public interpretation involves an understanding of the individuals who visit a site. Specific types of individuals are more apt to visit cultural heritage locations. In P.S. *Melbourne*’s case, passengers with an interest in history, paddle steamers, the Murray and Mildura are prime examples. Educated individuals, possessing a general disposition for knowledge, spend money on educational and historical ventures that give back to the local community. Tour groups of young children and retired individuals also frequent P.S. *Melbourne*. From young to old P.S. *Melbourne* functions not simply as a passenger cruiser but as an educational window into the past.

The idea of P.S. *Melbourne* as something other than a passenger cruiser focuses on the concept of value placed on the vessel by the individuals taking the cruise. P.S. *Melbourne* is a tangible artifact from the past mesmerizing passengers and sending a distinctive cultural and social message about early life on the Murray.

Tourism awards value to historic places and objects via economic significance. Tourism sites are designed for a particular type of audience. Raising
historical awareness, heritage tourism allows individuals interested in history to experience a portion of a formally inaccessible past. A chain reaction occurs where encouraging monetarily driven cultural innovation, pride, and artistic creativity, leading to a wider distribution of money (Crick 1989, p. 337).

Economic gain was the initial reason tourism was represented as an easy development option. Over time, however it became apparent that tourism was not a stable growth business; it contained seasonal fluctuations due to the type of ideals placed on the concept of tourism. Tourism in general provides an overall lack of duty and structure presenting a newfound freedom for tourists (Crick 1989, p. 327). This escape from the normalities of life is fun and exciting, allowing the tourist to experience a stimulating aspect of a previously untouched world. This lack of structure and newfound freedom creates a migratory society of tourists who briefly leave their comfort zone to venture out into the unknown. Taking into account the emotional stress of exploring a new place, tourist destinations must feel accessible and inviting. Destinations should maintain international standards, which in some way remind the tourist of home while retaining an overall mysticism.

In most instances, tourism is a valuable commodity introducing a specific culture and society to outsiders, not normally exposed to such realities. However, some believe the tourism industry has become extremely exploitive. Along the Murray River, several private hotels, motels, restaurants, and caravan parks are located for comfort and convenience but such facilities are lacking further inland. Some argue, “The recreational potential of the river is now being exploited by the paddle driven vessels and fleets of holiday houseboats” (Wells 1986, p. 244).
For some this may ring true, but for locals the heritage tourism industry provides a means for community involvement and pride.

Heritage tourism brings in money and jobs to an area and provides a sense of belonging and pride. For some communities tourism is the major source of income. Heritage tourism allows local individuals to retain cultural traditions and to educate outsiders on the local traditions and “the important things in life.” Overall, there are various reasons to visit tourist sites and several attitudes, which drive individuals; the next couple of sections will highlight museums as one form of site tourists’ visit.

**Traditional Museums**

Museums are a tourist destination. Current marketing strategies, through the internet, television, radio, brochures, and magazines provide a wider means for distributing information about these destinations.

Objects are displayed in traditional museums due to the belief in an intrinsic cultural, historical, or monetary value placed on the item by either a previous or current society (Scott-Ireton 2005, p. 20). Traditional museums attempt to portray accurate depictions of the past. Some argue that traditional museums only focus on a particular aspect of the past, narrowing perspectives, and placing a spin on the information (Scott-Ireton 2005, p. 19). Museums have their own personal bias due to human operation. Despite these biases, museums encourage visitors to question and examine the objects or information presented to them for the consideration of non-traditional ideas and concepts (Scott-Ireton 2005, p. 19).
Non-Traditional Museums

Non-traditional museums function outside of the normal range of social expectations. Take the modern day Mississippi river steamers operating cruises out of New Orleans or Colonial Williamsburg, which recreated the colonial era through modern day actors who replicate the daily activities and products of that period. Both examples are modern, non-traditional museums. They provide the public with an exciting and informative journey back through time, displaying along the way items used by the historic community (Scott-Ireton 2005, p. 11).

The P.S. Melbourne can be considered a non-traditional, modern day floating museum, which primarily operates as a moneymaking vessel with its original steam engine from 1912 on display (Scott-Ireton 2005, p. 11). Passengers are encouraged to explore the craft while speakers located throughout the vessel provide commentary on P.S. Melbourne and the Murray. P.S. Melbourne is a modern day interactive museum, passenger cruiser, and tourist attraction.

P.S. Melbourne: A Non-Traditional Museum

The modern concept of a museum is fluid. These new non-traditional museums promote active participation from visitors. The concept of a non-traditional museum applies to P.S. Melbourne in the sense that the vessel for the most part remains original. The hull and lower sections of the vessel are near original. The current usage of the original steam engine from 1912 is a major tourist draw. P.S. Melbourne, with few modifications houses items from the vessel’s past displayed and in active duty on the boat such as the steam engine, paddlewheels, and steering wheel. Commentary concerning varying aspects of the Murray is part of the two-hour cruise giving passengers insight into previous
life on the river. This resembles a guided tour given in a traditional museum setting. This vessel is still historically and economically significant as an operational craft that functions as a non-traditional museum. Thinking of P.S. Melbourne as a non-traditional museum brings a completely new meaning to the concept of the vessel as an informative and historic entity.

The Past via the Present

In most instances, the ability to view an object in situ holds a greater emotional meaning than viewing the same object in a traditional museum (Scott-Ireton 2005, p. 21). Seeing the link between an object and its location is vital to the comprehensive understanding of not only the object in question but the culture pertaining to that object as well. Society constantly searches for the human element or primordial connection with an object or culture.

“Shipwrecks as tangible remains of what often was a dramatic and tragic human event, can evoke powerful feelings in those who visit” (Scott-Ireton 2005, p. 21). A prime example of this type of scenario is that of the USS Arizona in Pearl Harbour, Hawaii. The construction of a memorial is a constant reminder of the individuals who lost their lives. Hundreds of individuals visit the site each year paying their respects and reading the plaques about the tragedy. Another example is the Holocaust museum located in Washington D.C. The museum takes patrons through a series of dark rooms filled with pictures and video screens containing stories and items recovered from concentration camps.

“Cultural resources are a part of both the past and the present, allowing the contemporary viewer to feel he or she has experienced the past through a real and direct contact in the present” (Scott-Ireton 2005, p. 21). The feeling of a
connection with the past is paramount when discussing the operation and
economic potential of a museum, non-traditional museum, or tourist attraction.

Tourism on the Murray

As one of Australia’s prime tourist locations, the Murray provides water,
food, cultural traditions, and leisure in the form of white water rafting, boating,
fishing, and luxury paddleboat cruising (The River Murray: A Multi-Use
Resource 2005, p. 1). On the Murray River paddle steamers, now used for
weddings, anniversaries, ecotourism, and cruises, revive a social and economic
aspect previously lost with the near extinction of such vessels. Through the
interest of universities and the involvement of local tourism bureaus, and
historical societies, heritage tourism in the form of paddle steamers is an
economically viable commodity blossoming along the Murray River.

Ian Showell’s launch of Liba Liba in 1961 at Renmark in South Australia
ushered a new era of vacation craft. This luxury, family-style accommodation
sternwheeler inspired the construction of similar vessels in Wentworth and
Mildura (Wells 1986, p. 243). A tour on Liba Liba provides a relaxing holiday
experience with all the comforts of home. Complete with a galley, four burner
gas stove, oven, hot water, refrigerator, room heater, enclosed front deck for
children, life jackets, river maps, gas barbecue, large living deck, air
conditioning, television, video and microwave Liba Liba is a luxury style vessel

Like Liba Liba, P.S. Murray Princess, the largest and most luxurious
paddle-wheeler, along with Proud Mary, a historically replicated paddle-wheeler,
offer overnight cruises along the scenic Murray (Murray River South Australia
Most of the focus along the Murray today, deals with the operation of the remaining paddle steamers. However, with the introduction of the Chaffey brother’s irrigation system, fruit production increased dubbing the Murray Australia’s principal wine producing area (Christopher 2001, p. 82).

**Tourism in Mildura**

After the decline in the use of paddle steamers along the river as viable options for moving materials, paddle steamers and port towns emerged as tourist attractions. The slogan of the Mildura Tourist Association in 1982 was, “Mildura, the Weather Resort,” promoting the historic port town as a delightful spot along the Murray (Wells 1986, p. 244). In 2000, a picture of P.S. Melbourne appeared on the front cover of the Herald Sun, the official newspaper of the Sydney Olympic Torch Relay, with the title, “Welcome to Mildura,” promoting the port as a heritage attraction (‘Welcome to Mildura’ 2000, p. 1). The tourism industry provides a bright future for Mildura. As the homeport for P.S. Melbourne, Rothbury, and Avoca, Mildura is reclaiming the title of “home of the Australian paddleboats” (Rebirth of the Murray 1976, p. 25). The newly acquired “houseboats, floating restaurants and modern passenger cruisers” attract individuals with varying types of social and economic backgrounds (Moore 1987, p. 12).

**Community Involvement**

Through the understanding of history, communities gain knowledge concerning present culture’s social and economic ideals. “Interpretation as a by-product of cultural tourism plays a key function in facilitating access to history by the community” (Kenderdine 1994, p. 101). Tourism provides an outlet for
communities to combine efforts for monetary and social reasons. A key factor in community involvement is the value placed on the meaning surrounding the object or place of interest. If the community feels a connection with the object or place, then individuals are more apt to devote time, energy, and money to develop the project.

The modification, operation, and success of P.S. *Melbourne* prompted vessel restorations such as the 1907 P.S. *Ruby* a paddle steamer located in Wentworth. A sense of community identity draws the funding for the operation of P.S. *Melbourne*, via tourist dollars. The value of studying, protecting, and preserving cultural heritage gives the local community an economic boost. It is up to the community to help preserve and protect local paddle steamer commodities and history.

**Modifications for Public Use**

Looking at the boat with these concepts in mind brings significance to the modifications made to the vessel and the care with which the vessel was modified. It is evident that Mr. Pointon wanted to keep the vessel as accurate to the original as possible with only safety modifications and alterations to enhance the vessels carrying capacity and overall passenger experience. Mr. Pointon’s concept of simply bolting the upper deck onto the main deck provided the addition of several seats for passenger comfort. By bolting the upper deck onto the main deck, the upper deck can simply be lifted off if necessary without damaging the original main deck.

Part of P.S. *Melbourne*’s appeal deals with the fact there were few modifications made to the vessel. With few alterations, tourists are able to experience the thrill of travelling down the Murray River via this historic craft.
P.S. *Melbourne* is slightly more luxurious with the additions of two toilets, a food and souvenir kiosk, and several safety devices including the metal and glass barrier that surrounds the main deck now. P.S. *Melbourne* stands as a living, breathing archaeological treasure. Functioning as a modern day floating museum this vessel contains information about its history on the craft, like historic photographs documenting various stages of vessel usage. Through community involvement via tourist dollars, school tours, senior tours, and the determination of the Pointons, P.S. *Melbourne* is now a mainstay of the local community and part of a line of vessels representing the pride and history of the Murray.
Chapter 6: Conclusion

River transportation, prior to a reliable source of land based transport, provided an economical alternative to the transfer of goods along the Murray. From the beginning, the Murray provided a source of water, raw materials, transportation, food, a habitat for animals, and an outlet for leisure activities, all of which contribute to the sustainability of a community. After Charles Sturt’s 1839 exploration of the Murrumbidgee and its flow into the Hume, later renamed the Murray, colonists realized in 1840, the Murray had the potential to become the “Australian Mississippi.” However, the Murray lacked paddle steamers.

The first major commercial utilization of the Murray occurred in 1853 with the introduction of steam navigation in Australia. Visionaries William Richard Randell, captain of Mary Ann and Captain Francis Cadell of Lady Augusta were the first to navigate the Murray via paddle steamers. Almost instantly, the Murray became a hub of communication and transportation.

From 1870-1880, the heyday of river transport marked the peak of steam navigation on the Murray. The Australian river trade, arriving forty years after the commencement of trade on the American rivers, ushered in a period of construction and mobilization. The river was an economic hub, transforming the Murray through the establishment of homesteads and ports along the river.

As steam navigation along the Murray progressed so did technology. Knowledge of Mississippi River steamer mistakes aided in the structural transformation of Murray River steamers. Hulls were flattened to manoeuvre over shoals and sandbars. The construction of composite hulls increased to strengthen vessels and provide a more flexible hull assembly that was less likely to break under pressure from a Redgum snag. New machinery and ideas brought
about design improvements that altered Murray vessels to fit the ever-changing needs of the river. Snagging steamers for instance improved river navigation through extensive use along the Murray for Public Works such as removing snags, and aiding in bridge construction.

As quickly, as paddle steamer transportation began on the Murray, it faded with the introduction of the railroad. Recently, a surge of new interest in heritage tourism has surfaced regarding paddle steamers. Historic steamers, which previously worked on the river now, have taken on the role of recreational vehicles, such as the paddle steamer P.S. *Melbourne* in Mildura.

At present, a majority of the paddle steamers travelling along the Murray are converted barges, towboats, houseboats, or passenger cruisers. The modification of the 1912 P.S. *Melbourne* from a snagging vessel into a passenger cruiser altered the boat's appearance and function. Mr. Alby Pointon’s vision, in the 1960s was to transform this once Murray workhouse, into a thriving tourist attraction. Mr. Pointon attempted to keep the vessel as close as possible to the original construction with only additions enhancing P.S. *Melbourne*’s marketing potential for passenger comfort and safety. Items included benches, enclosed areas with heating and cooling systems, toilets, kiosk, fire extinguishers, life vests, and life preservers. It appears the majority of modifications, made for monetary reasons, occur on the main deck with an entirely new upper deck. Below the main deck, the hold is near original. Few alterations have occurred with the exception of the cement ballast that was replaced by water-filled drums and some overall general repairs such as hull planking which was replaced.

The enclosure surrounding the main deck with metal barriers at bottom and glass windows atop protect passengers from falling off the vessel. The new
upper deck with its open-air feel contains several chairs allowing passengers to relax and enjoy the scenery of the Murray. The upper deck is bolted into the ceiling of the main deck, making it possible to fully restore P.S. Melbourne to its original assembly.

Over the years, P.S. Melbourne has witnessed several changes, from a Victorian Government workhorse, to the use as a tow barge for the Evans Brothers Timber Mill, to the purchase and modification into a passenger cruiser by the Pointon family. During this time, no one has ever attempted physically and photographically to document the vessel.

What knowledge is gained through the study of paddle steamers? Through investigations of vessels along the Murray, information is acquired concerning Australian shipbuilding construction, vessel modification, and the progression of paddle steamer technology along the river. Further investigation reveals cultural change, trading, the establishment and expansion of ports and towns, community involvement in heritage tourism, and the economic ramifications of a tourist attraction on the local community.

Considered a modern non-traditional floating museum and functioning outside of the typical realm of social expectations for museums, P.S. Melbourne operates primarily as a moneymaking vessel. As a non-traditional museum, passengers are encouraged to examine the craft while on the cruise and question the crew about the boats previous usage and the current operation of the 1912 steam engine. Part of P.S. Melbourne’s allure is that the vessel possesses few modifications, most of which deal with safety alterations to enhance the boats carrying capacity and overall passenger experience. Keeping these concepts in
mind brings significance to the modifications made to the craft by Mr. Pointon and the care that was taken to modify the vessel.

The investigation of P.S. *Melbourne* contributes to the general understanding of how vessels along the Murray were and are modified and the overall public’s interest in these ships. Mechanical transformations illustrate technological advancements and social evolution of communities along the Murray. Archaeological examination of physical modifications enhances the existing historical record.

The basis of this research focused on the life of paddle steamers on the Murray River and the modification and significance of P.S. *Melbourne* as a historic paddle steamer. The study provides insight into the motivation behind the modification of vessels for continuous use and the social and economic ramifications for the community of Mildura, discussing specifically how the vessel was modified from a snagging steamer into a passenger cruiser.

Known as the most famous steam driven paddle steamer on the Murray River, P.S. *Melbourne*’s public interest rests in the continuous use of its original 1912 steam engine, drawing tourists from all lifestyles (McKenzie 2005, pp. 1-5). The modifications to P.S. *Melbourne* are a reflection of a specific culture or of cultural changes over time. The modification of P.S. *Melbourne* for economic reasons, which invariably transformed the vessel into a modern day floating museum illustrate social and economic change in Mildura. The modification of P.S. *Melbourne* is a sign of social movement and industrial advancement. This act of modification indicates the state to which society has moved beyond the simplicity of every day tasks towards an age of entertainment. Society has
progressed to the stage where people are able to spend time, energy, and money on luxury items such as taking cruises and modifying vessels for pleasure.

Investigation into the public’s perception and the concept of P.S. Melbourne as a modern day non-traditional museum is a theory, which deserves additional examination. It is the author’s belief that as society and archaeology progress, more of these non-traditional museums will arise given their economic draw and interest by the public.

Understanding grows through archaeological investigation and archaeological data provides the best hint of steamboat construction and modifications. Further investigation of P.S. Melbourne’s steam engine and original winch would provide additional insight into the vessels operation on the Murray. Below the main deck, the hold contains a wealth of knowledge concerning the original construction of the vessel. It would be advantageous to spend more time concentrating on the hold. It is evident that further research is necessary for the overall understanding of P.S. Melbourne and the vessel’s relationship to Mildura and the Murray.

There is much to be gained through the exploration of current Murray steamers. For instance, information concerning the economic status of individuals living along the Murray River during peak steam navigation or the impact of railroad construction on paddle steamers and transportation on the Murray. Previous archaeological work dealt almost solely with wrecked or abandoned craft while little is known concerning currently operating historic vessels, especially those possessing original mechanical components or construction materials.
There is a serious lack of knowledge and tangible evidence concerning paddle steamers on the Murray. A proper register of submerged catalogued vessels and their locations, modified vessels, and vessels in use today, is necessary for the greater understanding of river craft on the Murray. Granted Kenderdine began a catalogue of wrecked and submerged vessels, which is an incredible start, but an expansion of this work would greatly benefit the Australian historical record. When searching to identify a specific craft it is difficult to discern at some points what the vessel’s original name was and who owned that vessel due to multiple owners and renaming practices. Gaps in the overall knowledge of paddle steamer construction and alterations exist throughout Australia and a proper accessible catalogue or database of paddle steamer wrecks, wreck-sites, and operational vessels is a key element lacking in the historical record. With a register or catalogue of vessels, it is easier to trace down a vessel and obtain information. It is apparent that more archaeological work and historical research is necessary.

Some future concerns are how much longer this vessel can physically be in use? Will the Pointons be able to maintain the operation of the vessel for several years to come or will the craft be abandoned? Provisions need to be made now to help keep this part of Australian around for generations to come.
### Appendix A

**Table 1. Vessel Inventory**

<table>
<thead>
<tr>
<th>Object</th>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amplifier</td>
<td>ARISTA 7PA 30</td>
<td>1</td>
</tr>
<tr>
<td>Ash Trays</td>
<td>metal</td>
<td>2</td>
</tr>
<tr>
<td>Benches</td>
<td>metal, plastic</td>
<td>20</td>
</tr>
<tr>
<td>Buckets</td>
<td>red, metal</td>
<td>4</td>
</tr>
<tr>
<td>Cabinets</td>
<td>wooden, in kiosk</td>
<td>11</td>
</tr>
<tr>
<td>Chairs</td>
<td>plastic, canvas, metal</td>
<td>153</td>
</tr>
<tr>
<td>Chest of Drawers</td>
<td>metal, white</td>
<td>1</td>
</tr>
<tr>
<td>Clock</td>
<td>plastic</td>
<td>1</td>
</tr>
<tr>
<td>Coolers</td>
<td>metal, in kiosk</td>
<td>4</td>
</tr>
<tr>
<td>Cord</td>
<td>Whistle cord, metal</td>
<td>1</td>
</tr>
<tr>
<td>Counter</td>
<td>wooden</td>
<td>1</td>
</tr>
<tr>
<td>Dinghy</td>
<td>metal</td>
<td>1</td>
</tr>
<tr>
<td>Ducts</td>
<td>Air Conditioning</td>
<td>4</td>
</tr>
<tr>
<td>Fire Extinguishers</td>
<td>red, metal</td>
<td>5</td>
</tr>
<tr>
<td>Fire Hose</td>
<td>red, metal, rubber</td>
<td>2</td>
</tr>
<tr>
<td>Freezer</td>
<td>metal</td>
<td>1</td>
</tr>
<tr>
<td>Gauge</td>
<td>fuel</td>
<td>1</td>
</tr>
<tr>
<td>Heating Unit</td>
<td>tan, metal, plastic</td>
<td>3</td>
</tr>
<tr>
<td>Historic Photos</td>
<td>black and white</td>
<td>18</td>
</tr>
<tr>
<td>Kiosk</td>
<td>wooden</td>
<td>1</td>
</tr>
<tr>
<td>Lamp</td>
<td>florescent, glass</td>
<td>1</td>
</tr>
<tr>
<td>Lanterns</td>
<td>metal, blue</td>
<td>4</td>
</tr>
<tr>
<td>Life Jackets</td>
<td>orange, foam and fabric, visible</td>
<td>168</td>
</tr>
<tr>
<td>Life Preservers</td>
<td>rectangular, orange (16-18 capacity)</td>
<td>20</td>
</tr>
<tr>
<td>Lights</td>
<td>bulb, glass, regular</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>florescent, glass</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>flood</td>
<td>5</td>
</tr>
<tr>
<td>Microphone</td>
<td>metal, plastic, black</td>
<td>1</td>
</tr>
<tr>
<td>Oars</td>
<td>wooden</td>
<td>2</td>
</tr>
<tr>
<td>Radio</td>
<td>CB</td>
<td>1</td>
</tr>
<tr>
<td>Signs/Poster</td>
<td>Fire Extinguisher</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Guidelines for Well Being</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Life Jacket</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No Smoking</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Paddle Boat Poster</td>
<td>1</td>
</tr>
<tr>
<td>Souvenir Tables</td>
<td>wooden, metal</td>
<td>2</td>
</tr>
<tr>
<td>Speakers</td>
<td>plastic</td>
<td>17</td>
</tr>
<tr>
<td>Stairs</td>
<td>metal, inside vessel</td>
<td>11</td>
</tr>
<tr>
<td>Stairwells</td>
<td>metal, red, white</td>
<td>2</td>
</tr>
<tr>
<td>Stools</td>
<td>metal, maroon cushion</td>
<td>15</td>
</tr>
<tr>
<td>Stove</td>
<td>metal</td>
<td>1</td>
</tr>
<tr>
<td>Throttle</td>
<td>metal</td>
<td>1</td>
</tr>
<tr>
<td>Toilets</td>
<td>wooden outside, porcelain fixtures</td>
<td>2</td>
</tr>
<tr>
<td>Trash Can</td>
<td>metal</td>
<td>3</td>
</tr>
<tr>
<td>Vents</td>
<td>metal</td>
<td>6</td>
</tr>
<tr>
<td>Windows</td>
<td>glass</td>
<td>55</td>
</tr>
</tbody>
</table>
References

Alien Plant Invaders of Natural Areas, Accessed 16 June 2006,
<www.NPS.gov/plants/alien/list/e.htm>.

Amphenol Pyle National, Prototype Quick Review, Accessed 16 June 2006,


BHP Billiton, History, Accessed 16 June 2006,


