

On the Armstrong family and herbarium. Part I

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And, from the standpoint of this little book, an especially pleasing feature is the greatly extended use of New Zealand plants. This does not mean that previously they were almost neglected. On the contrary, the early 'eighties of the last century saw ... their use, and much earlier [from 1867] was the Armstrongs' collection in Christchurch begun (Cockayne 1923, p 118-119).

This article is a work in progress. We hope it will lead to the discovery of further information about the Armstrongs that will help resolve lingering questions for which we can currently suggest only plausible answers. We write about the friends and relatives of the Armstrongs living in Canterbury in the early 1900s, including Mr John Joseph Shaw once of Waihao Downs and his sister Maria Shaw of Fairlie, and of Mr James Mitchell, a fellow plant collector of Christchurch. It is possible the descendants of some of the people we mention have kept personal correspondence from that time, which we hope they would like to share. Other readers might be able to help us access correspondence involving the Armstrongs in archives we have not yet located.

We have divided the article into two main parts: Part I, which follows the Introduction below, covers Armstrong family history and provides some social context for the Armstrongs in Christchurch; and Part II, which will be published in due course, brings us closer to understanding why the Armstrongs' initial botanical and horticultural successes did not develop into sustained public and professional appreciation at the time, instead withering with their progressive anonymity and the prolonged sequestration of their notorious herbarium.

Introduction

The Armstrongs and their herbarium specimens

At the centre of this research project are a father and son who, among many other things, collected and prepared most (about 90%) of the herbarium specimens that would eventually be known as the Armstrong Herbarium: John Francis Armstrong, and his son, Joseph Beattie Armstrong. We await word of the contributions made by those close to them, particularly their wives, Annie and Annie Elizabeth.

The Armstrong family – John, Annie, and their two children, Joseph and Ann – emigrated from England, arriving in New Zealand in September 1862. John Armstrong had been apprenticed and gained experience in gardening, forestry and estate management on Netherby Estate near the Scottish border. He was regarded as an authority on the study of native plants of the north of England and was skilled in the cultivation of exotic plants, including grapes and tropical species. He had also collected plants in Australia between 1853 and 1857 for the well-known botanist at the time, Dr [John] Lindley (Anon. 1902, 22 Sep). He continued studying, recording, and collecting plants the moment he arrived in New Zealand. “Indeed, his first collection of plants was made in walking over the Bridlepath from the Port to the site of the city” (Anon. 1902, 22 Sep).

John and Annie’s son, Joseph, showed a similar aptitude. He was only 14 when he recorded 88 indigenous plant species growing in the sandhills, shingle beds and wetlands of a still relatively wild Hagley Park in 1864 (“List A” in Herriott 1919, p. 441–442). This number would dwindle to 30 of the commoner species in 1918 (“List B” in Herriott 1919, p. 444), and to around 18 in 1924 (Wall 1934, 3 Mar). Joseph had arrived just in time to catch sight of a fragment of native vegetation in the heart of the city.

John Armstrong found work initially with a contemporary of his who had been apprenticed in Scotland, Mr W. Wilson (presumably “cabbage” Wilson, the energetic Christchurch nurseryman and investor) (Challenger 1979), and then with Mr George Gould, the prominent Christchurch businessman (Anon. 1902, 22 Sep). Singly or together, John and son Joseph Armstrong also found time to join expeditions led by Julius Haast in the early 1860s, and helped to collect live plants and herbarium specimens for the new Canterbury Museum (Armstrong JF 1870). John Armstrong is described by Haast in a letter to Joseph Dalton Hooker dated June 1866 as a “gardener to Mr Gould”, “very zealous”, “always collecting”, and prepared to do the work “gratis, in love for science and as he says respect for you [Hooker]” (Nolden et al. 2013, p. 100). Haast acknowledges “complete sets” of the local flora had been collected and mounted for him by the Armstrongs over four or more years in the 1860s. They were his “two botanical assistants” (Armstrong JF 1870, p. 118).

Many, if not most, of the herbarium specimens the Armstrongs made for Haast, along with live New Zealand plants in Wardian cases, were sent by him to his colleagues in botanic gardens and herbaria around the world, including to Hooker at Kew (Armstrong JF 1870, Nolden et al. 2013, W Harris pers. commun.). The large herbarium of the Canterbury Museum, now held by Manaaki Whenua - Landcare Research in the Allan Herbarium, contains only around 100 specimens bearing a neat Canterbury Museum label signed by collector “J.B. Armstrong” (Joseph Beattie Armstrong), and another three signed “J.F.A.” (John Francis Armstrong). They bear no date and little or no collection detail, suggesting these could be the remnants of the Armstrongs’ “complete sets” prepared for Haast in the 1860s. They would have had appeal more as displays of species representative of the Canterbury flora than as collections for

scientific purposes. In contrast, Haast stressed the trouble he himself would take to record the exact location of each plant collection, the altitude, the position in the landform, and other details for Hooker (Nolden et al. 2013, p. 100).

We know John and Joseph Armstrong were also making specimens for their own herbarium in the 1860s. Collections bearing their names and a date were made mostly around Christchurch and Banks Peninsula in 1863-64. More specimens were collected locally but also at Porters Pass, Arthurs Pass, Otira, Teremakau [sic] and Westland in 1865, and in the Upper Poulter, Ashburton and Rangitata in 1869. Joseph Armstrong later recalled collecting in the Poulter region with, or for, Haast on a number of occasions in 1867-1869 (Armstrong JB 1900, 16 Apr).

The Armstrongs did their botanical fieldwork and specimen preparation in their “leisure hours” (Armstrong JF 1870, p 119), in their “spare time” (Armstrong JB 1879, 29 Nov), and “during what little time could be spared from ... regular employment” (Armstrong JB 1880, p. 336). In 1867, Haast described the Armstrongs’ plant finding and collecting on Banks Peninsula being undertaken “during their Sunday rambles” (Nolden et al. 2013, p. 113).

In August 1867, John Armstrong successfully applied for the position of Government Gardener of the Christchurch Domain (Anon. 1867, 9 Aug). At the time, the Christchurch Domain was also variously known as the Government Gardens, the Public Gardens or the Botanic(al) Garden(s). The Domain would eventually become known as the Christchurch Botanic Gardens.

In 1873, John Armstrong’s son, Joseph, who had just returned from a botanical exploration of Victoria and New South Wales (Armstrong JB 1880), started to work with his father in the Domain. John Armstrong was widely known as the Curator, and Joseph Armstrong sometimes referred to himself as the Assistant Curator (Armstrong JB 1883, p. 300). They worked together in the Christchurch Domain for 16 years until 1889. Possibly because of their overlapping roles, carelessness, or sometimes, it would appear, malice, the father and son have been confused for each other in newspaper reports and other publications: the father being given credit (or blame) for the son’s actions, and vice versa.

The achievements of John and Joseph Armstrong and their time at the Domain have been covered from different perspectives by a number of authors, e.g. Barnett et al. eds. 1962, Beaumont 2013, Madgin 2014. We will review these in light of new information in Part II of this report.

The Armstrongs’ specimens disappear and resurface

John Armstrong and his son, Joseph, resigned their positions in the Domain in August 1889 (Anon. 1889, 10 Oct; Anon. 1889, 12 Oct). Their herbarium specimens departed with them. This might well have been the last anyone outside the Armstrongs’ immediate family would see them. In effect the specimens ceased to exist for the scientific community, apart from a rare

revelation concerning a small specimen of *Veronica loganioides* in 1921 (Wall 1935, p. 102). However, their existence could not be forgotten by other botanists who needed to refer to them for their own work. Some would be scornful of the Armstrongs as a result (Wall 1934, 10 Mar).

Botanists would have to wait 37 years for the herbarium specimens to reappear, and a further seven years before they were made presentable in 1933. By this time two noted botanists of the day, T.F. Cheeseman (1845-1923) and Leonard Cockayne (1855-1934), had died.

Joseph Beattie Armstrong himself died suddenly and unexpectedly on 27 February 1926. As reported in the local press, Joseph Armstrong is purported to have bequeathed his herbarium specimens to the Christchurch Domain Board, along with his botanical library of about 90 reference books, scientific instruments, and an oil painting of his father (Anon. 1926a, 6 Feb; Anon. 1926b, 6 Feb). A long-time friend, Mr James Gray, went to Joseph's house in Burlington Street after his death to collect these botanical items. It was "a large collection and quite a lorry load". The herbarium specimens alone were in 75 paper parcels containing 4000-5000 plant specimens, and said to be "incredibly mixed up" (Anon. 1933, 22 Nov). James Gray was accompanied by the then Curator of the Christchurch Botanic Gardens, Mr James Young, who put "the whole lot" in his office until his retirement early in 1933 (Gray 1933).

Professor Arnold Wall was the long-serving honorary curator of the Canterbury Museum Herbarium at the time (<https://teara.govt.nz/en/biographies>; Godley 1999). In October 1933 it was agreed that Wall would "sort the collection and put it in thorough order" (Christchurch Domain Board 1933, 6 Oct). The resulting catalogue, which had now been pared down to only 2607 pressed and mounted herbarium specimens, then became known as the Armstrong Herbarium. Each sheet bore the label "ARMSTRONG HERBARIUM" at the top. The Armstrong Herbarium stayed at the Museum where it was held on indefinite loan, with the agreement of the new Curator of the Botanic Gardens, Mr J.A. McPherson.

The movements of the Armstrong Herbarium

In May 1975 the whole Canterbury Museum Herbarium of ca. 8,000 vascular plant specimens and 12,000 cryptogams, and probably including the Armstrong Herbarium, was transferred to DSIR Botany Division at Lincoln (Godley 1999). It would have been a major task for Botany Division staff to check each specimen received against the Museum catalogue of specimens, which might explain why Mary Barker, Senior Herbarium Technician at the Botany Department, University of Canterbury, was assisting. Mary Barker had begun to check the Armstrong Herbarium specimens against Arnold Wall's catalogue. She "had just done two cabinets when [she] learnt the Herbarium was to be taken over, and stopped at that point". It seems that she was unaware that Botany Division had agreed to the Armstrong Herbarium being returned to the

Botanic Gardens, or “taken over”, as Mary Barker put it (CHBG unpub. corr. Barker to Metcalf Sep 1975, Macmillan 1976).

Lawrie J. Metcalf was Assistant Director at the Botanic Gardens at that time. He proceeded to catalogue the specimens himself, numbering the sheets with his distinctive stamp. At least some of the specimens were determined and initialled “LJM”. Metcalf was also handling loan requests for Armstrong Herbarium specimens in 1975. Dr P.J. Brownsey of the Victoria University of Wellington wrote to Lawrie Metcalf in a letter of 10 July 1975 to request the loan of *Asplenium* specimens from the Armstrong Herbarium (CHBG unpub. corr. Brownsey to Metcalf 10 Jul 1975). Lawrie Metcalf forwarded 35 *Asplenium* specimens on loan (CHBG unpub. corr. Metcalf to Brownsey 20 Nov 1975).

A selection of Armstrong specimens were being held at the University of Canterbury in 1975, some of which (*Ourisia* species) had been on-loaned by the University to the New York Botanical Garden in 1972 and had been returned in 1974. Mary Barker attended to the return of these to Lawrie Metcalf, and the hunting down of others, during 1975 and 1976 (CHBG unpub. corr. Barker to Metcalf 31 Jul 1975, 27 Feb 1976, 5 May 1976).

Lawrie Metcalf left the Botanic Gardens in 1977. Eventually, in June 1983, the Armstrong Herbarium was transferred back to DSIR Botany Division, once more on indefinite loan (W. Harris pers. commun.), where it remained in limbo until 2014.

In a Deed of Gift between Christchurch City Council and Landcare Research New Zealand Limited effective 1 July 2014, the specimens of the Armstrong Herbarium passed wholly into the care of the Allan Herbarium at Lincoln. The Armstrong Herbarium had been stored at the Allan Herbarium on indefinite loan to Landcare Research since 1983. Because the specimens were not owned by Landcare Research, they could not be accessioned and curated in a way that such a significant collection required. Keeping specimens on indefinite loan also contravened the requirements set by the Council Heads of Australasian Herbaria for the maintenance of herbarium specimens. The City Council’s gift resolved these issues. It allowed the specimens to be held under the best possible conditions, cared for by an organisation with a science mission, in order to support scientific research.

Joseph Beattie Armstrong’s Last Will and Testament

The crucial document here and the starting point for our investigation was Joseph Beattie Armstrong’s will. We needed to sight his will, any codicil(s), and probate documents to establish that the Christchurch City Council owned the Armstrong Herbarium, and was therefore entitled to gift it to Landcare Research. What we discovered was both more and less than we expected.

On the one hand, the will named numerous individuals as beneficiaries, none of whom bore the family name Armstrong. We wanted to find out who these

people were, and how they were related, if at all, to Joseph Armstrong and to each other. After all, we knew almost nothing about this family that had worked in the public eye and in private in Christchurch for 70 years. On his retirement in 1889, John Armstrong, had given some glimpses into his upbringing, training and travels (Anon. 1889, 12 Oct), but he told us little about his family in England, or if there were any relatives living in New Zealand.

Joseph's mother, Annie Armstrong, had died in 1899, and his father, John Armstrong, in 1902. Joseph's young sister, Ann, had died in 1872. His parents' wills were concise in bequeathing all they owned to Joseph. This made the multiple beneficiaries named in Joseph Armstrong's will all the more remarkable.

On the other hand, Joseph Armstrong's will also yielded less than we expected. It was completely silent on the future he intended for his herbarium specimens and other botanical possessions. No, he did not bequeath items named as his herbarium specimens, books, instruments and an oil painting of his father to the Christchurch Domain Board. The said gift of these was indeed made to the Domain Board in 1926, but it was made by Joseph Armstrong's sole Executor, Mr John Joseph Shaw. And it was made in the absence of any legal requirement to do so, or of any known written instruction from Joseph.

Objectives

We report on the Armstrongs' extended family in Part I of this article. We wanted to satisfy a sense of historical curiosity. We also wanted to provide some context for the world in which Joseph Armstrong was placed when he and his father chose to leave their employment in the Domain in 1889, and after his parents died.

Starting with the names of the beneficiaries in Joseph's will, we searched archival documents and online databases to determine family relationships, the timing of births, marriages and deaths, residence and employment at the time of censuses, and immigration events. These were supplemented by historical newspaper reports of the named beneficiaries or their relatives.

As with any search of this type, it is possible to interpret the findings wrongly, or worse, to take the absence of search results to signify that a person or a relationship did not exist, when in fact they might have done. Wherever possible, we have corroborated findings, e.g. linking census data, births and marriages, and immigration events.

Although we have described the Armstrong extended family as if we knew all the answers, we clearly do not, and welcome corrections and additions. By publishing this imperfect record we hope that others will come forward if they have more accurate or additional information based on papers and documents not readily available during New Zealand's unprecedented Covid-19 lockdown.

In Part II, we will re-examine puzzling aspects of the professional lives and achievements of John Francis Armstrong and Joseph Beattie Armstrong.

Much of the factual material surrounding the Armstrongs has been covered already in Eric Godley's Biographical Notes (Godley 1999) so we will not repeat any more of this than is necessary. However, we will make a substantial addition to the Armstrongs' publication list reported by Godley. For instance, Joseph Armstrong was a particularly prolific author in the 1880s, and his father resumed publication in that decade after a gap of 10 years. There are occasional references to anticipated publications or to articles that might have been published that we could not locate.

Sadly, the Armstrongs are frequently remembered more for their sudden departure from the Domain in 1889 than for their achievements in office; more for their withdrawal from the world of science than for their earlier scientific exploration, collecting and publishing from the early 1860s. Eric Godley describes these career-changing decisions as a puzzle; a puzzle that is complicated by, what appeared to him and others to be, an inexplicable refusal on the part of the Armstrongs to share their herbarium specimens with others. Godley paints a particularly bleak picture for the talented 39 year-old Joseph Armstrong who chose to enter a world of relative obscurity, indeterminate employment, continuing lack of scientific recognition, and in which his work to create the Native Section of the Christchurch Botanic Gardens would be undone (Fig. 1). As Eric Godley seems to exclaim with grim finality "Joseph wrote nothing more to speak of" (Godley 1999, p. 5).



Figure 1. "Fig. 24 A portion of that part of the Christchurch Botanic Garden, which is devoted entirely to indigenous plants." (Photo. C. E. Foweraker) from Cockayne (1923).

To try to solve the puzzle, or at least to propose plausible explanations that extend those advanced by Godley (1999), we again started with Joseph Armstrong's will. This tangible piece of evidence gives us an insight into Joseph Beattie Armstrong's view of the world at the age of 75. The will was signed seven days before his death in 1926. We will include new information about the circumstances surrounding his death. No one wrote an obituary for Joseph Beattie Armstrong at the time.

We will also refer to an obituary that was written for John Armstrong, and which was not mentioned by Godley (Anon. 1902, 22 Sep). We think this obituary makes a significant contribution to solving the Armstrong puzzle, as does a careful reading of historical notes on the Armstrongs written in the 1950s (Macdonald 1950). Further research continues in the archives of the Christchurch Domain Board where we expect to find new pieces of the Armstrong puzzle, or further clues to its solution.

Part I. The Armstrongs' extended family

The detail that Joseph Beattie Armstrong provides in his will suggests he pondered carefully on how to distribute his estate. Joseph's parents had long since died. Joseph's wife, Annie Elizabeth Armstrong (née Abbott), had died in 1917 when she was 64. Joseph and Annie Elizabeth did not have any children. With no living parents, spouse, brother, sister, or direct descendants, Joseph decided to benefit others who were close to him.

First named beneficiaries: Hannah Taylor and her family

The first-named beneficiary was Hannah Taylor. Joseph left Hannah his property at 11 Cadogen Street and the sum of £200, also lesser amounts to each of her five children: James (a labourer), Edgar Scott (a brushmaker), Muriel, Reginald (also a brushmaker), and Alice Ann (Fig. 2, p. 107). Hannah had been widowed when James Taylor senior died in 1912.

The will says Hannah Taylor was Joseph's sister. She was actually his sister-in-law. Hannah Taylor (née Abbott) was the sister of Joseph's deceased wife, Annie Elizabeth Armstrong (née Abbott).

The two Abbott sisters living in Christchurch (there were others who stayed in England) were born in Bridlington, Yorkshire. Annie Elizabeth was born in 1852, and Hannah in 1858. Their mother's maiden name was Syson or Sison. As far as we can tell, the Abbott family had no connection with the Armstrongs in England. Annie Elizabeth Abbott was a cook by occupation. She emigrated to Canterbury on board the *Merope* in October 1870, and married Joseph Beattie Armstrong in 1874. Hannah Abbott, listed as a servant by occupation, emigrated on board the *Waitangi* in December 1875 to join her big sister in Christchurch. She married James Taylor two years later.

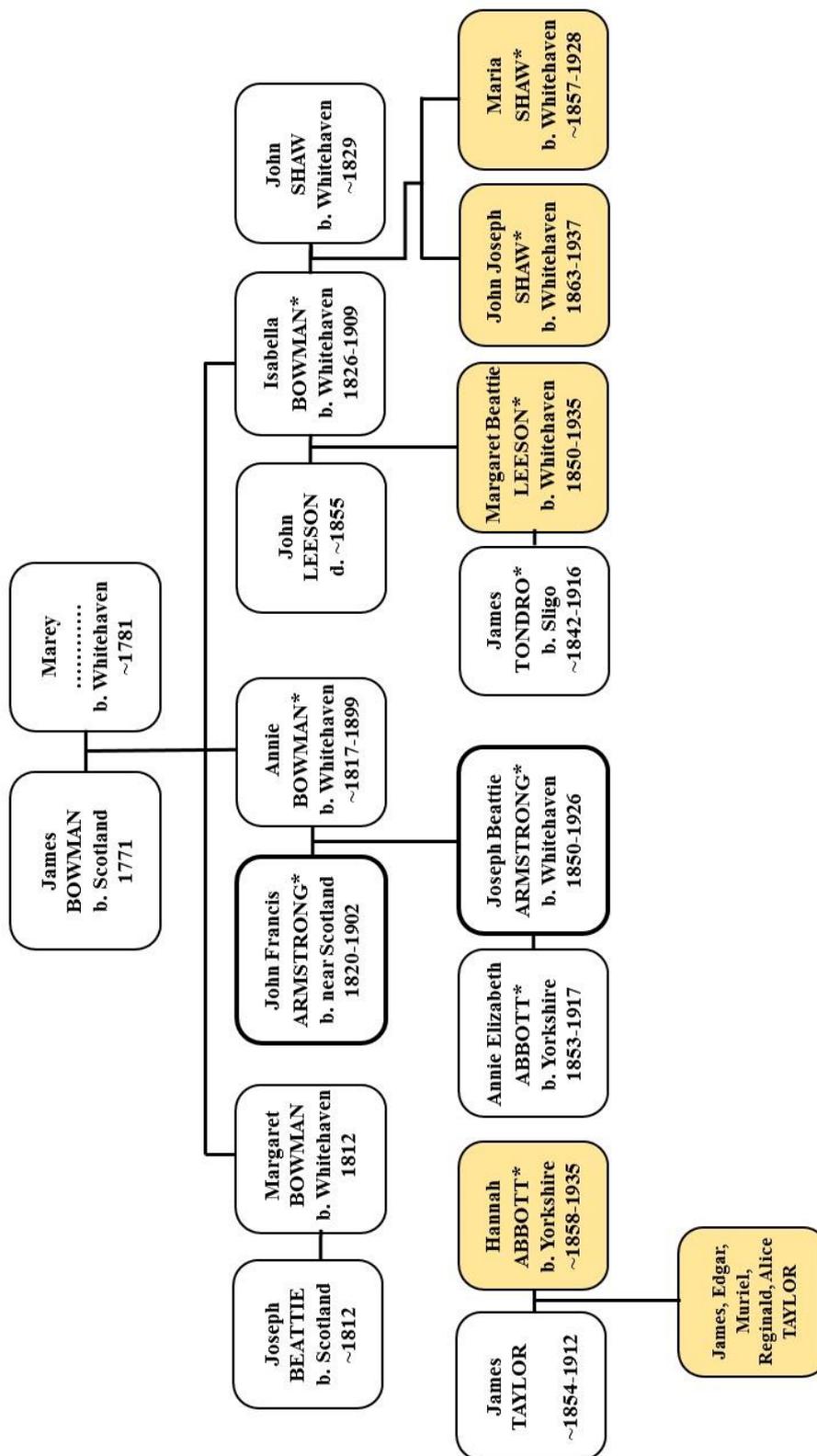


Figure 2. A family tree showing the descendants of James and Marelly Bowman: three Bowman daughters, their husbands (two in the case of Isabella), and their children. Boxes for the beneficiaries of Joseph Beattie Armstrong (his sister-in-law and her children, and Joseph's three cousins) are coloured. An asterisk (*) indicates those who are known to have emigrated to New Zealand. Not shown: other children of James and Marelly Bowman and children of John Joseph Shaw.

Although Joseph and Annie Elizabeth Armstrong had no children of their own, we imagine they enjoyed the company of sister Hannah and her family. After Annie Elizabeth died in 1917, Joseph lived close to them through the 1920s. Joseph's home at 16 Burlington Street, Sydenham, was a stone's throw away from where Hannah and her family lived in Cadogen and Hastings Streets, and in Waltham Road.

Three more beneficiaries: Margaret Beattie Tondro and the Shaws

“All the rest residue and remainder” of Joseph's property was to be converted into money and divided equally between three people: Margaret Beattie Tondro (a widow of Fairlie), John Joseph Shaw (a farmer from Waihao Downs, near Waimate, South Canterbury, also Joseph's Executor), and Maria Shaw (a spinster of Fairlie).

Understanding the link between Joseph Beattie Armstrong and these other beneficiaries was more difficult to establish. Although they are named in the will, the relationships of each to Joseph is not stated. Of course, Margaret Tondro's middle name, “Beattie”, suggests a family connection, as does John Joseph Shaw's first names.

Rather than climbing back through their family tree, it might be easier to describe these relationships by starting with the oldest known ancestor we have been able to trace, Mr James Bowman, and work down to these three beneficiaries (Fig. 2).

The Bowman family of Whitehaven

James Bowman senior was born in Scotland about 1771. His wife, Marey (maiden name unknown) was born about 1781 in Whitehaven, the Cumberland town in north-west England. The town is on the coast about 75 km south of Carlisle and the border with Scotland. James and Marey were married in Whitehaven around 1810 and raised at least five children over the next 18 years.

They had (at least) three daughters: the oldest, Margaret Bowman (born 1812), the middle daughter Annie Bowman (born about 1817), and the youngest, Isabella Bowman (born 1826) (Fig. 2).

Margaret, the oldest, married a Joseph Beattie in Whitehaven on the 23 January 1832. Joseph Beattie was born in Scotland around 1812, so both he and Margaret were about 20 years old when they married. Much later, at the time of the 1861 Census, Joseph Beattie described his occupation as “ship bread baker”. Ship bread, or “hardtack”, was an unleavened, practically indestructible biscuit used for centuries on board ships on long voyages. The bakery would have had a brisk trade supplying vessels running coal from the local Cumberland collieries to Ireland, and those involved in the trans-Atlantic shipping trade. Joseph Beattie employed two men and two boys in the bakery.

Margaret and Joseph Beattie must have been hospitable and reasonably wealthy by Whitehaven standards. A sister-in-law and two nieces on the Bowman side of the family were living with them in Whitehaven at the time of the 1861 Census, and a different Bowman niece was there at the 1871 Census. It is perhaps unexpected for the time that Margaret and Joseph Beattie, a young and enterprising couple, newly-married at the age of 20, had no children of their own, or at least none who lived long enough to appear in any census record. Of course, for any number of reasons including illness, poverty and hardship when they were first married, this could have been their choice. For instance, as reported much later, John Francis Armstrong found life in his home country unbearable with “poverty and wretchedness stalking about the Old Country” (Anon. 1889, 12 Oct).

The next Bowman daughter to marry was Annie. She married our John Francis Armstrong in 1845. John Armstrong was born in 1820, one of the children of Thomas Armstrong and Catherine Brown who married in 1815. Joseph Beattie Armstrong was born in Whitehaven in the second quarter of 1850. He was their second child and only son. Their two daughters Margaret Armstrong (born 1847) and Ann Armstrong (born 1858) were also born in Whitehaven. Joseph’s sister Margaret had died before the family emigrated to New Zealand in 1862. His sister Ann died in Christchurch in 1872 when she was only 14 years old.

Last of the Bowman daughters to marry was Isabella, who married John Leeson in Whitehaven in 1847. Their daughter, Margaret Beattie Leeson, was born in 1850. John Leeson died around 1855 when his widow Isabella would have been no more than 30 years old. Isabella married once more in Whitehaven in 1856. Her second husband was John Shaw, who was the Deputy Harbour Master in Whitehaven during the 1860s and 1870s. Their children were all born in Whitehaven: William and Maria Shaw, twins born about 1857 or early 1858, and John Joseph Shaw, born in 1863. John Shaw, Isabella’s second husband, died in 1879 when he was only 50, and their son William died in 1880, aged just 21. This left the twice bereaved Isabella with three children: Margaret Beattie from her first marriage, and Maria and John Joseph from her second.

So now we have four first cousins: Joseph Beattie Armstrong (born to Annie Armstrong née Bowman in 1850), Margaret Beattie Leeson (born to Isabella Leeson née Bowman 1850), and John Joseph Shaw and Maria Shaw (also born to Isabella). And no surviving children, and therefore no cousins, from the marriage of Margaret Bowman and Joseph Beattie (Fig. 2).

We speculate that Margaret and Joseph Beattie were unable to have, or had lost, their children at an early age. With the love and respect that Margaret’s younger sisters Annie Armstrong and Isabella Leeson/Shaw felt for the Beatties, each named one or more of their own children for them. The Beattie family name, and possibly Joseph as a first name, lived on through Margaret and Joseph Beattie’s nieces and nephews. Margaret and Joseph Beattie were aunt and uncle to at least Joseph Beattie Armstrong, Margaret Beattie Tondro née Leeson, John Joseph Shaw, and Maria Shaw. In the next generation, John Joseph Shaw’s

second son was named Allan Beattie Shaw. It appears that we have a plausible explanation for the origin of Beattie as the middle name among the cousins.

Emigration from Whitehaven

You will recall that John and Annie Armstrong had emigrated to New Zealand with their two children, Joseph Beattie and Ann, in 1862. The Armstrongs were joined by Annie's sister, Isabella Shaw (formerly Isabella Leeson née Bowman), and her three children Margaret Beattie Leeson, Maria Shaw, and John Joseph Shaw (Joseph Beattie Armstrong's cousins). It seems likely that the twice-bereaved Isabella emigrated with her children after both her husband, John Shaw, and her 21 year-old son, William, died in 1879 and 1880, respectively. Isabella lived to be 83, and is buried in Fairlie Cemetery in 1909.

Isabella's older daughter, Margaret Beattie Leeson, married a James Tondro in 1878 (Fig. 2). Margaret was 28, her husband James, 35. When James Tondro died in 1916 at the age of 73, he left "...a wife [Margaret Beattie Tondro] to mourn his loss. At his funeral many old residents of Mackenzie gathered to pay their last tribute to an old and respected companion and friend" (Anon. 1916, 1 Nov). James Tondro, possibly Tonder or Toner in his homeland, disembarked *Roman Emperor* in Lyttelton in April 1863, having emigrated from Sligo, Ireland. At 20 years old, he was the younger of two brothers who, with two sisters, arrived unaccompanied.

Tondro's obituary describes him as "another of the fast-disappearing band of pioneers of the Mackenzie Country", a shepherd and a farmer on Ben Ohau and Richmond Stations, then a boundary rider and keeper. Later, "no one ever called at the cottage without receiving hospitable treatment at the hands of Mr and Mrs Tondro". He gave his name to Tondro's Road and Tondro's Crossing over the Opihi.

Isabella's other children, John Joseph and Maria Shaw, would emerge as Joseph Armstrong's Executor (John Joseph) and other beneficiaries following his death in 1926. John Joseph Shaw farmed at Waihao Downs and Maria lived in Fairlie, possibly with her mother.

As far as we know, the oldest Bowman sister, Margaret, and her husband Joseph Beattie, stayed in Whitehaven when sisters Annie and Isabella emigrated to New Zealand.

Conclusion. Part I

The beneficiaries who would share the residue of Joseph Armstrong's estate – John Joseph Shaw, Maria Shaw and Margaret Beattie Tondro – were brother / half-brother and sister / half-sisters, all born in Whitehaven, Cumberland, England, all first cousins to Joseph, and living and working in rural South Canterbury.

Joseph Beattie Armstrong might have lost both sisters when they were young, his parents, and his wife also at a relatively young age, but he was not devoid of family for the last nine years of his life. In addition to his sister-in-law, Hannah Taylor née Abbott, and her family living nearby in Christchurch, there was a small but close-knit group of Whitehaven-born, Cumberland cousins in Canterbury who shared a similar upbringing and emigration history. There might well have been others as yet unknown to us. Joseph Beattie Armstrong trusted his younger cousin John Joseph Shaw as his Executor, and he helped his widowed cousin Margaret Beattie Tondro and the unmarried cousin Maria Shaw.

Set against the privations of poverty and wretchedness that affected the Armstrongs' and the Shaws' decisions to emigrate, the Beattie, Bowman, and Armstrong families and the people who married into those families were resourceful, hard-working, successful, and hospitable people. They had to work for a living.

There is no indication of significant inheritance, private income, advanced education, wealthy forebears or connections to industry, politics or the church that could have allowed John Armstrong and Joseph Armstrong to indulge in a life devoted to botanical or other research. Nor would these circumstances have facilitated their fostering of collegial relationships with those who did have at least some of these advantages.

The Armstrongs had to work to make a living for themselves and their families, botanising being done in whatever time they could spare. As far as we can tell neither had enjoyed higher education towards a formal qualification. Lack of professional qualifications would allow others in future decades to write off the Armstrongs' botanising skills and plant identifications as given to error (Laing 1913), and to describe father and son as "unreliable" (Wall in Macdonald 1950) or merely "enthusiastic amateurs" (Given 1971).

As Godley (1999) pointed out, Joseph Beattie Armstrong appeared to withdraw from the professional life of a scientist along with his father in the 1880s. Both would no longer deliver papers to the Canterbury Philosophical Institute or publish in its Proceedings. On the personal level at least, Joseph was not a recluse, having family to buoy him up during what must have been difficult times, made redundant at 39 and looking for work. We will bring new information and insights into the work of John and Joseph Armstrong in Part II of this report, showing, in particular, how Joseph continued to contribute as a botanist, if not to the Canterbury Philosophical Institute.

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