COLOURS OF THE HIGH COUNTRY

Exploring place through colour

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Figure 1. Gathering vegetation at Grampians Station. 2011.

Figure 2: Gathering vegetation at Grampians Station, 2011.

ABSTRACT

In an age when digital colour and ready-made colour charts have resulted in the loss of the tactile qualities of colour this project investigates how colour can authentically represent place.
New Zealand merino has been given a stronger identity when the product is able to be traced back to the farm gate. Using the concept of terroir, a French term used in the wine industry suggesting that the flavour of wine is affected by the land and the climate where it is produced, I have sought to find a visual terroir through the material nature of colour by using dye extracted from vegetation physically collected from actual places and applying it to merino wool. Colours extracted from these plants are affected by the characteristics of each place resulting in tactile colours forming an individual colour palette unique to each sheep station with meaning and content embedded in them. My role has been to extract and interpret the colours in such a way as to allow the vegetation to reveal the truth of that place through colour. This colour, which is inherently connected to its origins, brings further integrity to the story of New Zealand wool.

Figure 3. Gathering vegetation at Temple Peak Station, 2011.

THANKS TO

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Figure 4. Gathering vegetation at Grampians Station, 2011.

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INTRODUCTION

This is a story about colour. A story about my quest to find the authentic colours of place.

A search for colour that has led me on a journey over New Zealand high country sheep stations. A pursuit for colour resulting in cut hands and splintered fingers.
Colour only to be acquired at the expense of mud-splattered boots and a torn jersey. Colour gathered from the tops of hills and the bottom of valleys.

Colour obtained from wilted vegetation and colour gained from fresh spring growth. Colour to be discovered through the steaming heat of the stove and the bubbling of boiling pots. Colour extracted amid the noise of blenders and measuring of liquid Colour infused with enchanting smells and sweet aromas. Colour possessed with pungent fumes that invaded the kitchen. Colour that left the floor sticky and the bench stained. Colour that has disappointed. And colour that has surprised and delighted.

This is a story about my experience of very real colour.

This story tells of my Master of Design project Colours of the High Country: exploring place through colour.

In an age of digital colour where immense amounts of hues are merely a click away I posit that we are losing our connections with colour. By isolating colour in readymade charts and reducing it to a string of computer code our connections to the material nature of colour have become less. Where the creation of colour was once a very physical process, colour is now readymade and easy to obtain. There are qualities of colour that are only able to be experienced through the physical process of making and finding it. We are no longer experiencing colour through all our senses. As our connections with the tactile nature of colour disappear so too do authentic connections between colour and place.

This project is an effort to re-engage with the material nature of colour and its physical connection to place. I set out to explore the question: is there a way colour can authentically characterise place?

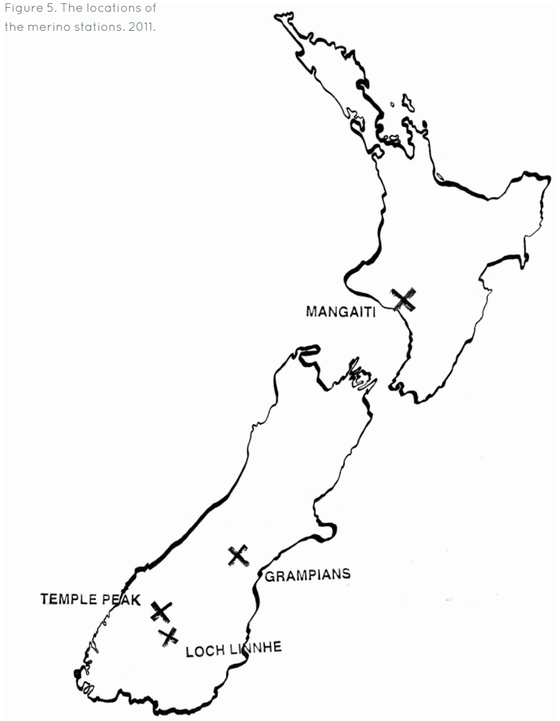
The best method to adopt for this investigation was one that enabled me to be as fully immersed as possible in the experience of the material qualities of colour. It is the process of natural dye.

I travelled to four different merino stations in New Zealand and gathered vegetation from each. Through methods of natural dye I extracted colour from the collected plants and used it to dye merino wool. Throughout this journey I have experienced the very physical nature of colour and have extracted colour in an authentic way that is embedded with place.

The merino stations are each located in a different part of New Zealand.

Temple Peak Station and Loch Linnhe Station are both near Lake Wakatipu in Queenstown, Mangaiti is located in Whanganui, and Grampians Station in the Mackenzie Basin. The different physical characteristics of each station, including the geography and climate, determined the vegetation grown at each. The different environments the plants were grown in also affected the natural dye colours able to be obtained. As I extracted colours from each location a unique colour palette was produced for each station with the colours all influenced by the individual place.

Figure 5. The locations of the merino stations. 2011.



Through this process of natural dye I discovered differences in the colours extracted from plants found growing in the different regions. There were also variations in colour depending on the season. In this way the colours obtained all held authentic connections to time and place.

This idea that the colours were affected by the places they initially came from corresponds to the notion of terroir found in the wine industry. The French term terroir suggests that the flavour of wine is affected by the region's land and climate from where it is produced. This idea is important in the New Zealand wine industry where wines are labelled with their place of origin.

Figure 6. The four stations. 2011.

The use of place in the marketing of products is important in creating brands that build connections with consumers. The story telling of place of origin is used to build integrity into products. Narratives that connect products back to their place of origin are essential in the marketing of New Zealand merino wool. Stories of high country sheep stations are told through traceability programs helping to build connections between brands and the consumer.

I hope to use colour to add to the story of New Zealand wool. I chose to gather colours from New Zealand sheep stations with the intention of adding to the histories and stories of each station. As I found out about each place I used the information and plants gathered to create colours. This enabled me to create strong links back to each place through colour.

This is in contrast to Dulux Colours of New Zealand where paints are named after places in New Zealand. This is another way of marketing that uses place to evoke personal connections with their market. But surely narrative of place cannot be accurately represented through just one colour. Nor is it truly authentic to assign location names to colours. Is there a more authentic way to define place through colour? Is there a way to tell stories of place through the creation of colour from the farm gate? Can I find and create the real colours of New Zealand?

Rather than just attaching a place name to a premade colour I have sought to find physical colour that is truly authentic to place. Colour that didn't come from a paint chart, test pot or computer program. Colour rooted deeply in its place of origin. Colour that began alongside hundreds of merino sheep. Colours extracted from the high country of New Zealand.

PLACE

In early 2010 a farmer mentioned to me that the price they got for their wool was less than what they paid the shearers. Prince Charles has said, "The sad truth is that around the world farmers are leaving sheep production, because the price they get for their wool is below the costs of actually shearing it" ("Charles", 2010). Over the past twenty years sheep numbers in New Zealand have been reducing as sheep farmers have been looking to more economically viable farming options such as dairy and meat (K. Thompson, personal communication, September 6, 2011).

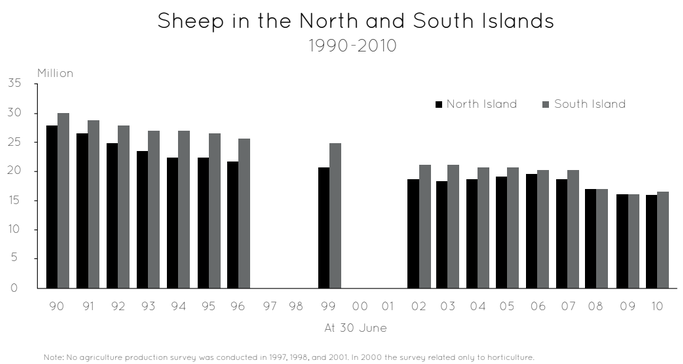


Figure 7. Sheep numbers in New Zealand. Adapted from Agricultural Production Statistics: June 2010 (final), Statistics New Zealand.

However in recent times it seems wool is slowly starting to become recognized as an important fibre. The demand for wool as a natural fibre is growing in our increasingly sustainability conscious world. In recent months woolgrowers in New Zealand have been enjoying an increase in prices for their wool (Cronshaw, 2011). The global Campaign for Wool has been launched and wool is being marketed as a natural, sustainable fibre. The future of wool is beginning to look brighter.

Still, not all wool has been struggling in the marketplace. In the New Zealand wool industry over the past ten years, while strong wool prices have been generally low, merino wool has been doing noticeably better. Merino growers are getting considerably more for their clip than other wool sales.

The marketing of merino wool through story has played a crucial role in this success.

Stories linking merino wool back to its place of origin in the New Zealand high country have helped craft connections between merino wool and the consumer (Perriam, 2009, p.136).

Brand identity and authenticity is important in marketing and is a concept adhered to in the marketing of merino.

Marketing Professor Michael Beverland (2009, p. 28) has said, "...brand authenticity involves creating a rich story..." Authenticity is an important aspect in branding. It is often shown through narrative and traceability which are becoming increasingly prominent in marketing. Rich stories are told in the marketing of merino products as a way of creating authenticity and a type of romanticism about the fibre. Stories are told of the high country sheep that produce the fibre, the landscape and the environment it's grown in, and the farmers who grow the wool.

This storytelling of New Zealand merino fibres has been made possible through traceability programs, such as Icebreaker's Baacode. Every Icebreaker garment has a unique Baacode that allows the consumer to trace the garment's production history right back to the sheep station it came from. By entering the code on the Icebreaker website it is made possible to find out more about the fibres origins and this allows the consumer to feel more connected to the product.

Figure 8. Baacode on an Icebreaker garment

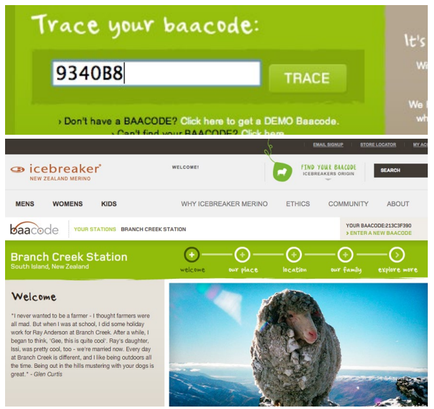


Figure 9. Tracing the Baacode on the Icebreaker website.

As Beverland (2009, p. 8) points out, "Authentic brands reinterpret their roots for the times, adding new stories and layers of richness to their histories." Brenda Laurel, designer, researcher and writer on the interactive narrative and cultural aspects of technology, discusses branding and how people notice brand messages. She says, "Messaging needs to be repeated time and again. The same message often needs to be dressed up in different ways to be accepted... over time the message needs to be refreshed" (Laurel, 2003, p. 311).

My work aims to refresh and build greater integrity into the story telling of New Zealand wool by advancing the connections of the place of origin through colour. Colours extracted from the different merino stations have provided tangible links back to each place. Through this process I have been exploring potential ways to enhance the identity and story of New Zealand wool.

It is of value to note that while connections to place are an important aspect in the branding of New Zealand's wool industry it is also significant in the New Zealand wine industry. Wine bottles labelled with their place of origin assist the marketing of wines in the same way stories of the NZ high country tell of merino wool in its place of origin.

John Perriam, the owner of Bendigo Station in Central Otago, compares the telling of stories and foregrounding of the place of origin in the marketing of merino to that of the New Zealand wine industry where the wine labels are crucial for creating identity, integrity and story "...which is so important at the retail level where customers have such a choice of products" (Perriam, 2009, p.137). This realization can be seen through both the merino wool and wine produced at Bendigo Station. Perriam explains, "When we came to Bendigo 30 years ago we had no idea where our wool clip went beyond the farm gate. Today we know the destination of every nylon packed bale" (2009, p. 129).
He goes on to explain how the labels on the bottles of wine produced at Bendigo are crucial to their marketing (Perriam, 2009, p. 136).

Marketing with focus on the place of origin is prominent throughout the New Zealand wine industry. The wine industry has successfully created brands with points of difference with the wine labels linking wines back to the place where the grapes were originally grown.

In their research of the marketing of New Zealand and Australian wines researchers Glenn Banks, Steven Kelly, Nicolas Lewis and Scott Sharpe (2007) maintain that references and representations of place used in the marketing of the New Zealand wine industry are crucial for its success.

They identify regions that are associated with specific wine varieties; "notably the predominantly Pinot Noir regions of Martinborough and Central Otago, Marlborough for its highly distinctive Sauvignon Blanc and now Pinot Noir, and Hawke's Bay for its warmer climate red styles" (Banks et al., 2007, p. 21). The labeling of the wines link back to different places which are increasingly well-known for particular wine varieties with New Zealand's newer wine regions all benefitting "under the banner of Brand New Zealand" (Banks et al., 2007, p. 21).

Figure 10. New Zealand wine labels linking the wines back to their place of origin. Majestic Wines 2011.

Banks et al. (2007, p. 21) also point out that;

> the use of place-based imagery and associations has a strong tradition amongst other alcoholic beverages in New Zealand, notably beer. Not surprisingly, the stark beauty of the South Island, and the pastoral association which it evokes, has ensured that its representation has accounted for much of the imagery used in creating such place-based associations.

"Producers in New Zealand in particular continue to conceive of and market their product with a strong emphasis on the place, region or country of origin" (Banks et al., 2007, p. 32). However, Banks et al. (2007) go on to claim, whilst New Zealand wine labels rely heavily on references to local specific places in exporting the wine at high price points, these labels are not necessarily 100% accurate. Banks et al. (2007) point out that some New Zealand wine labels suggest the wine has its origins in particular landscapes but the location of the winery does not actually have direct connections to the particular region.

Banks et al. (2007) give the example of the word Estate which is often used in the names of New Zealand wine companies. This is often, at least, a partial attempt to establish the company in a particular place but may have very little connection to the actual source of the grapes used – that is, some grapes used for their wine production could well have been grown elsewhere (Banks et al., 2007). So while wine makers rely on the notion of 'inimitable origins' to evoke continuing associations between wine and place, there is the potential that the actual wine itself was not necessarily fully produced from grapes grown in the place behind the brand (Banks et al., 2007).

Connections to place in the wine industry can often rely on ambiguity in the branding of wines. Through my research project I have sought to create links to place with more integrity to tell the story of New Zealand wool. By creating colour from vegetation actually grown on and collected from each individual sheep station I have undergone a process with more authenticity in relation to place.

The use of place in the marketing of New Zealand wine follows the French concept of terroir. Terroir has origins in the French wine industry and is used to describe the taste of place. As well as its use in French wines terroir is also found in referencing the regionalities of cheese and tea.

Terroir is used to suggest the way the geography, geology, climate and growers all contribute to unique qualities of the product.

Figure 11. Vegetation growing on the land.

In his book Pinot Noir: The New Zealand Story wine writer John Saker describes terroir as "the sum of all the environmental factors that make a wine turn out the way it does. Most definitions of terroir cite four key, contributing elements: the land (mainly soil and aspect), climate, grape variety and human involvement" (Saker, 2010, p. 90).

> The notion that a wine's personality is shaped by the place in which it is grown, and by the people who grow it, is perfectly logical and easy to grasp. All living things are to a certain extent products of their environment. It's also easy to see the concept's appeal from a marketing perspective. Everyone likes to differentiate their product and that is exactly what terroir does. Terroir is a way of saying USP (unique selling proposition) in more poetic language. (Saker, 2010, p. 90)

Similarly the production of tea is infused with art, history and care at every stage, from the hand picking of the leaves through to the traditional process of its production, through to the art of tasting for quality. Tea, like wine, is also influenced in taste, flavour and aroma by climate and weather, soil, region, and the art of the teamaker. The subtle character of the tea is determined by the natural alchemy of these elements (Dilhan, 2009).

As terroir is in wine, terroir in tea also is embedded with the identity or a sense of place unique to its origins. However geologist James E. Wilson highlights the idea that terroir is a concept which has become a "buzz word". He says;

> This lighthearted use disregards reverence for the land which is a critical, invisible element of the term. The true concept is not easily grasped but includes the physical elements of the vineyard habitat – the vine, subsoil, siting, drainage, and microclimate. Beyond the measurable ecosystem, there is an additional dimension – the spiritual aspect that recognizes the joys, the heartbreaks, the pride, the sweat, and the frustrations of its history. (Wilson, 1998, p. 55)

And so like this deeper model of terroir while I am looking at place association, I am hoping to do it in a truly authentic way as opposed to just another branding story. As I journeyed to find the terroir of the sheep stations through colour I went beyond just gathering facts and data about each station but

fully experienced the creation of colour

by physically going to each sheep station. As each farm has been shaped by the farmer, they too have been influenced by the land. Likewise, I have become part of that story as the individual farmers guided and assisted me in the collection of vegetation from their land to source the plants most prolific and relevant to the individual station. As I sought to find the visual terroir of each station I discovered that extra dimension of the 'spiritual aspect' as described by Wilson. Beyond the geography, geology & climate of the sheep stations visited I became incredibly familiar with

the pain, sweat, frustrations and joy of seeking colour.

Figure 12. Loch Linnhe Station. 2011.

Wilson states that “a wine is not just a commodity … but a distinct product from a unique place” (Wilson, 1998, p. 56). Similarly I am suggesting that

distinct colours can be obtained from an individual place.

The notion of terroir suggests the flavour of the wine is affected by the land and climate from where it is produced. I am suggesting that ideas of terroir can be used further in the wool industry. By extracting colours from the vegetation taken from each station I am creating a visual terroir – colours embedded with a sense of place.

Ideas of a visual terroir are consistent with observations reported in natural dye literature. Many natural dyers have noted that any plant used in natural dyeing is intrinsically connected to the environment it is grown in.

Geographical elements including the climate, soil and altitude of the land can all affect the colour obtained.

Natural dye expert Ann Milner explains, “…let us realise that one plant can give a different colour to that from the same type of plant growing only a few miles away. The soil and climatic conditions play a considerable part in the degree of perfection of the plant.” Colours from the same plant may vary in different parts of the country, “The basic colour will be the same but the depth and brilliance may be different. This is all part of the effect of climate, soil and altitude” (Milner, 1971, p. 6.). Australian dye expert India Flint (2008, p. 26) states; “Even a small group of plants may yield a rich diversity of colour, as hues will vary depending on the season, the geographical and climatic location of the substrate (including temperature and precipitation), the chemical burden of the air (think metropolitan, industrial, suburban or rural) and the quality of the soil”.

These observations are consistent with my analysis of the colours I gathered from each station. Using vegetation grown at each station I have extracted colours that are inherently connected to place. I found plants of the same type gathered from different stations have yielded variations in their colours. Consequently the colours obtained have formed an individual colour palette for each station with each colour preserving intrinsic connections to place.

COLOUR

Throughout history the world has been captivated by colour. Tim McLaughlin (Maiwa, 2009), editor at Maiwa Handprints, describes his reaction to colour as this;

> For many of us there's no greater magic than the magic of colour. Like the crow beguiled by a love of bright, shiny objects, we are all held captive by a power beyond light and darkness, an elusive mercurial sensation which changes with the light of day, the light of the season, and even the peculiar signature light of a country. That power is colour. It is the flavour of the visual world.

McLaughlin's illustration of colour as visual flavour highlights the potential of colour to be experienced through the senses. In her book *A Natural History of the Senses*, Diane Ackerman points out the importance of our senses in the way we perceive and understand the world. How everything we know is through our senses so "as born explorers and questers after the unknown"(1990, p. xv- xvii) we spend a lot of our lives searching.

Colour has engaged our visual senses and we have not stopped looking for ways to create it. Spanning across the ages the search for hues has consumed many. French dye chemist Dominique Cardon (2010, p. 1) observes, "Since the dawn of humankind, the quest for sources of dyes and pigments went abreast with the selection for food and medicinal plants and animals." People have been absorbed in ways to manufacture colour to use as pigments and dyes to colour the world around them.

In the book *Colour: Travels through the Paintbox* Victoria Finlays investigations of the efforts to create colour reveals accounts behind the colours pursued. She uncovers many different ways artists and artisans have sought to produce colour as well as stories of secret recipes and mysteries of colours (2002, p.26.). Finlay offers insight into the physical nature of colour and the experiential process of finding it.

As McLaughlin (Maiwa, 2009) reminds us,

> Colour is a genie that can take many forms. At times it is a fruit that can easily spoil, at times it is a seed that if not cared for will disappear forever. At times it is a powder that will hold its potential for thousands of years. And finally, at times it is a liquor, an elixir, a vat, a sensational liquid that generously offers to share its hue with others.

Throughout history the material qualities of colour have been explored and experienced this way by many including alchemists, artists and dyers. The process of making colour has resulted in colours being imbued with certain meanings or as symbols of great significance. For example, the colour known as imperial purple was extracted from molluscs found in the Mediterranean. It held great value and only the Roman emperors were permitted to wear it (Delamare & Guineau, 2000, p. 35).

Colour is also closely connected to our emotions. As Ackerman (1990, p. 253-254) explains; "The emotions and memories we associate with certain colors also stain the world we see ...scientists have known for years that certain colors trigger an emotional response in people."

Many people, including philosophers, scientists, artists and psychologists, have conducted considerable research of colour. Traditionally colour has held emotive and historical associations as artists mixed their own colours from natural sources on a palette. Finlay (2002, p. 437) explains, "...how mummy brown and ultramarine and Scheele's green and Turner's yellow and so many colour names hold entire histories of deceit and adventure and experimentation in their syllables." Colours such as these have been embedded with stories of colour exploration and are intrinsically connected to place.

Throughout history attempts have been made to position colour both subjectively and objectively. Ann Temkin, curator of 2008 exhibition *Color Chart: Reinventing Color, 1950 to Today* at The Museum of Modern Art, refers to scientist Isaac Newton's colour wheel which "for three centuries embodied the attempt to organise colour meaningfully and hierarchically according to spiritual or scientific theories" (Temkin, 2007, p. 17). In the 17th century Newton systematically measured colour as wavelengths of light yet he organised the colour spectrum in relation to his own historical context (Finlay, 2002, p.375-376). In many ways colour has never been far removed from associations to culture, time and place.

However I posit, particularly in this digital age, that colour has become isolated from emotive, historical and scientific associations. Renowned artist and theorist David Batchelor (2000, p.105) argues that the development of ready-made commercial colour has resulted in hues becoming detached and the colour chart has become a simple list in which every colour is equal to and independent from every other colour. My assertion that computer technology has even further increased our distance from colours is reinforced by artist Steven Bleicher. He states that digital colour is the most ephemeral. He suggests that in one sense it doesn't exist as a solid material entity, that is you can't physically touch it because it is pure light that can only be seen through monitors, "nothing more than a string of computer code" (Bleicher, 2005, p. 90). Dye and pigment experts, François Delamare and Bernard Guineau, expand this idea further to point out, "the very abundance of colors in the modern world seems to dilute our relationship with them. We are losing our intimate connection with the materiality of color, the attributes of color that excite all the senses, not just sight" (Delamare & Guineau, 2000, p. 125).

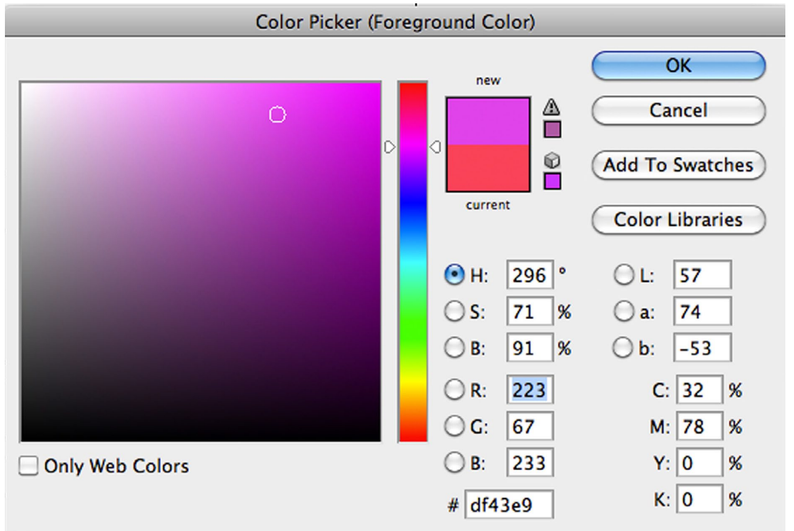


Figure 13. Computer generated colours. *Colour Picker.* Photoshop CS5 Extended. 1990-2010 Adobe Systems Incorporated.

Since the discovery of synthetic dyes and pigments, the commercialisation of paint, and the development of digital technology there are more colours available than ever before. There are endless options to choose from and colours can be accessed almost instantly. Pantone founder Lawrence Herbert has created a standardised colour system in which colours can be identified and matched through a numbering system creating an innovative way to communicate colours worldwide (Pantone, n.d.). Smartphone applications such as the ColorScanPro (Figure 14.) allow the user to scan a colour which then translates it into an HTML code as well as giving the RGB and CMYK percentages.

Figure 14. The *ColorScanPro* application for iphones. 2011.

These technological developments have meant the physical process of producing a colour has become even more distant from the colour itself. Colour has become removed from any connections it once had with the making process and its place of origin. The translation of colour has distanced the materiality of colour. Paint charts, slightly more tactile than a computer screen, continue to display colour as flat, individual blocks against a neutral background. Colour used this way is detached from any historical, physical or emotive associations.

In recognising that isolating colour in charts has very little meaning paint companies have created names for each paint colour to appeal to memories and emotions. Associations are made between the branded colours and the users own personal experience allowing them to identify with the colour. Resene marketing manager Karen Warman, who selects the colour names for New Zealand paint company Resene, explains, "A few people pick colours because they really like the name. For most people though the colour name adds to the personality of the colour" (K. Warman, personal communication, June 24, 2011).

Paint company Dulux has taken this a step further and used familiar New Zealand place names to create connections between their range of colours and place. Each colour in the Dulux Colours of New Zealand range is named after a place in New Zealand. Paint names are of city locations, such as K-Road, Courtenay Place and Aro Street, as well as more rural places, such as Te Awamutu and Sandfly Point. The paint colours are marketed by building upon place associations to create colours that evoke personal connections with New Zealanders. However, the problem with this approach is that the assigning of place names to colour is subjective and lacks authenticity of the actual place.

To compliment the *Dulux Colours of New Zealand* range, Dulux has created an app for iPhones. It identifies the colours in a photo to the matching *Dulux Colours of New Zealand* hue. I tried this out with a photo of my dad (Figure 15). The app described parts of his beard as Dulux colour Little Manly Quarter and the colour in his cheeks as Big Glory Bay. In a couple of finger taps my dads face had become a selection of colours alluding to place. Colours had been pulled directly from isolated areas in his face creating new associations to colour and place. The isolation of colour enabled by the Dulux app is also found in the work of American artist Byron Kim.

Figure 15.The *Dulux Colours of New Zealand* iphone application. 2011.

Figure 16. *opposite. Synecdoche.* Byron Kim 1991-present. Richard S. Zeisler Fund Image courtesy of the National Gallery of Art, Washington: 305.44 x 889.64 cm.

While Dulux uses colours to represent place, the ability of a single colour to represent a person is explored in Kim's work *Synecdoche* (Figure 16). A synecdoche is a figure of speech in which a part is used to represent the whole. In Kim's on-going work the skin colour of an individual is painted on a panel to represent that one person. Kim has painted nearly 400 panels of colours, each coloured panel matching the skin tone of a different person.

"Rather than reaching for the sublime, Kim grounded his project in the concrete: each oil-and-wax panel was painted from life, based on the skin tone of an individual. He was not after the chromatic nuances or anatomical details of human flesh. Instead he aimed to capture a single color as representative of one person's skin" (Temkin, 2008, p. 188).

Like the Dulux iphone app, Kim's work reduces the person's identity to one colour "flattening individual identity"(Temkin, 2008, p. 188).

The subjectivity of mixing the colour that best represents the individuals skin is hidden in the colour chart structure that

> represents colour as truth, but – as Kim is well aware – observed color is anything but straightforwardly factual. The painter's concept of intrinsic local color notwithstanding, a color cannot be isolated either from its immediate context or from its perceiver. Kim wrestled with the inherent instability of color each time he faced a new sitter, 'staring at [his or her] arm while trying to see its local color while wondering whether local color was what I was after, after all... what is the right color?' (Temkin, 2008, p. 188)

Kim's struggle in portraiture to isolate colour from its immediate context can be compared to the process of separating colour from the environment. As the material qualities of colour have been lost in the translation from real life to pixel, unique qualities of place can be lost when it is attached to a colour. Dulux has formed associations between place and colour flattening the character of place by reducing it to a single colour. Through exploring colour I have continued to question how can it be authentically connected to place without reducing the place's character.

With ready-made pigments and dyes colour is almost instant, particularly with digital technology, colour is simply a click away. However I have tried to re-engage with the physical elements of colour and place finding the materiality of colour to be most accessible through the process of natural dye. Rather than attempting to imbue meaning into colour by attaching a label to a pre-existing colour I have physically begun my process at the specific place and tangibly extracted colour from the land. Through this process I have discovered connections between the colours obtained and their place of origin.

PROCESS

He was indefatigable when it came to crushing bitter almond seeds in the screw press or mashing musk pods or mincing dollops of grey, greasy ambergris with a chopping knife or grating violet roots and digesting the shavings in the finest alcohol. He learned how to use a separatory funnel that could draw off the purest oil of crushed lemon rinds from the milky dregs. He learned to dry herbs and flowers on grates placed in warm, shady spots and to preserve what was once rustling foliage in wax-sealed crocks and caskets. He learned the art of rinsing pomades and producing, filtering, concentrating, clarifying and rectifying infusions. (Suskind, 1985, p.98)

Figure 17. Extracting the colours, 2011.

In the novel Perfume: The story of a murderer protagonist Grenouille learns the secrets of extracting smell. I too have undergone a similar process to obtain colours from the stations. My search for truly authentic colour has led me to research through experiential methodology and employ haptic research methods. I travelled to each of the four merino stations during September 2011. At each farm I collected various samples of vegetation to use in the natural dyeing of wool.

The plants I used as dyestuff were processed differently according to the structure of the plant. Tree barks and tough branches were soaked for long periods of time in water before being used further. Soft grasses and leaves were blended into smaller pieces to enable an effective extraction of colour. Plants were boiled on the stove for varying periods of time and then the exhausted plant matter was removed. The remaining dye colour was fixed to wool through simmering in a hot dye bath, again with varying periods of time. To maintain a consistent approach as I generated recipes of colour I kept thorough notes of each plant dyed. Information recorded included the weight of the plant matter and material to be dyed, the part of the plant used, the pH of the dye liquid, and the time taken to extract the colour and dye the wool.

Figure 18. Processing the gathered plants, 2011.

Figure 19. Matagouri at Grampians Station, 2011.

French dye chemist Dominique Cardon mentions; “Florentine dyers of the early 15th century were wont to joke that ogni erbaccia fa tinta – any weed can give a dye” (Cardon, 2007, p. 51). Having considered this idea that colour could be obtained from ‘any weed’ my gathering of plants was not limited to just crops and vegetation grown purposefully by the farmer but also included weeds and vegetation that were often seen as pests on the farm, for example, matagouri, gorse and broom.

Natural dye expert Ann Milner suggests, “...If your area is rich in lichens use them to advantage; if rich in tree barks, use them. One of the fundamentals of dyeing is to find what is easily accessible in sufficient quantities, so as not to destroy it by over use, and by using it to a reasonable degree” (Milner, 1971, p. 6.). I have endeavored to maintain sustainable ideas in the process of natural dye by collecting vegetation that is most indicative of the individual station. By using plants that are prominent in each place I am taking just enough to use in dyeing without stripping the land bare (although the farmers would not miss the matagouri and gorse).

Figure 20. Collecting gorse at Mangaiti, 2017

THE MERINO STATIONS

I travelled to four different merino stations, each one located in a different part of New Zealand. The different geographical environments influenced the natural dye colours extracted from the plants which were gathered from each place. The hues obtained have formed a colour palette that is unique to each individual station.

At each station I recorded where I gathered the plants and documented the different species collected. Notes were taken on the pH and soil structure, along with the climate, altitude and other factors that had potential to affect the dye colours yielded.

Mangaiti

Tuesday 6th September 2011

Mangaiti, the first sheep station in my search for colour. As we wind up the bumpy metal road past rows of pine trees the land gets higher and the hills get steeper. Beside the road bright yellow gorse flowers are an encouraging sight of potential colour I could soon obtain. (Journal extract, September 6, 2011)

Figure 21. Mangaiti, 2011.

Upon arrival at Mangaiti station just north of Whanganui I was greeted by merino growers Kerry and Julie Thompson. With the homestead situated at the top of the rise, the steep green hills dropped down into bush-filled gullies stretching out in all directions. I recognised several plants that were typical to many New Zealand farms. These included gorse, grass, foxglove and thistles as well as less familiar vegetation. Some I knew held potential for colour while for others I was less certain.

As the Thompsons talked about their farm Kerry mapped out potential locations to gather plants that were indicative of vegetation on the farm. *"We can get down there and onto one of the ridges, scramble through the gorse ...it's all pretty steep country"* (K. Thompson, personal communication, September 6, 2011). Gorse is the main woody pest plant on the farm and I make a note to be sure to gather some. Like many plants on the stations Kerry points out they have to be constantly whittling away at it. *"If I left this country out here just to revert, it would come back in gorse first and then manuka would overgrow out through the gorse. And then you'd get into bush regrowth after that"* (K. Thompson, personal communication, September 6, 2011).

Figure 22. Gathering vegetation at Mangaiti. 2011.

Manuka and fern self-seed and are often found growing back however the sheep do assist in managing the land. *"Normally once you've cleared pasture and the sheep are on it they actually eat the seedling manuka as it comes out of the ground ... Some of it will end up getting away and you've got to do a bit about it every now and again but it's not really the same issue as the gorse"* (K. Thompson, personal communication, September 6, 2011).

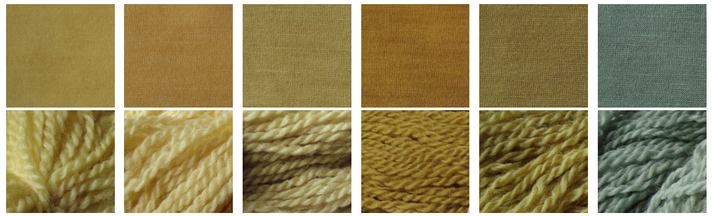
On the farm quad bike we rode down a track that runs along the boundary, a path travelled by the farm stock as it is moved from one part of the farm to the next. Bush samples were gathered from this track bordering an old farm that was abandoned in the 1930s which has all grown back into thick bush. In 1945 Kerry's granddad took a truck in there to remove an old woolshed, and that was the last big vehicle down there. The farm has been in the family for many years with merinos first brought to the property in 1989 by Kerry's dad, and they have been run on it ever since.

"It's unique in this area for running merinos" (K. Thompson, personal communication, September 6, 2011). Kerry mentioned. Mangaiti is one of only six remaining farms in the North Island that grow merino with many farms preferring to run crossbred sheep. Compared to high country farms in the South Island Mangaiti is lower in altitude and the climate is mild with an annual rainfall of about 1250mm.

From Mangaiti plants I gathered included grass, foxglove, gorse, thistles, tutu, manuka, lancewood, rewarewa, macrocapa, lichen, flax, fern and mountain beech. The colours obtained were mainly yellows with greens and browns. An orange colour was obtained from lichen and a blue shade was extracted from the flowers of a rewarewa.

Friday 4th November 2011
I revisited Mangaiti two months later and gathered more of the same vegetation. The colours yielded from this were already different within this short amount of time.

Rewarewa *leaves*
Flax pods
Lichen
Silver fern
Gorse *flowers*
Variegated thistle
Foxglove



Gorse
Grass
Lancewood
Mountain beech
Tutu
Rewarewa *flowers*

Station: Mangaiti

Date: Tuesday 6th September 2011

Location: Whanganui, North Island, New Zealand

Area: 1,500Ha

Climate: mild, annual rainfall averages 1,250mm

Soil: pH 5.4 in hard hill country

Altitude: about 90-400m asl

Stock: 3,000 merino, 2,500 perendale

Micron: merino adults average 18-19, hoggets range mid-16-17

Figure 23. Mangaiti. 2011.

Figure 24: Grampians Station, 2011.

Grampians Station

Wednesday 14th September 2011

The landscape is a vast expanse of brown. The flat land stretches far across the Mackenzie Basin to the surrounding hills. The blue sky meets the tops of the snow-covered mountains in the distance. The land is bare and dry. I don't know how successful I will be in gathering plants. Will I be able to extract any colour from this place? (Journal extract, September 14, 2011).

As I neared Grampians Station in the Mackenzie Basin the seemingly barren landscape was unsettling. I was unsure if I could obtain colour from vegetation growing there, if indeed there was anything growing at all. However, as the biggest station I visited at 22,000Ha with 15,000 merinos surely there would be something.

Managers Guy and Gill King confirmed, yes it was indeed dry there. *"This is the driest... The eastern side of the Mackenzie is the driest of all this Mackenzie"* (G. King, personal communication, September 14, 2011). With a rainfall of less than 300mm a year the climate is described as extreme. When the Kings first arrived at the station they put in an irrigation system which helps to keep the pasture on the flats fairly green. With about one third of the property on flat land cereal crops like oats grow alongside the grass pasture.

Guy and Gill pointed to the map; *"If you want to look for colours this area in here running up to the pass... That'd be the best place for you to go really. Or to go up that road... It would because you've got good tussock, beautiful tussock country up through here"* (G. King, personal communication, September 14, 2011).

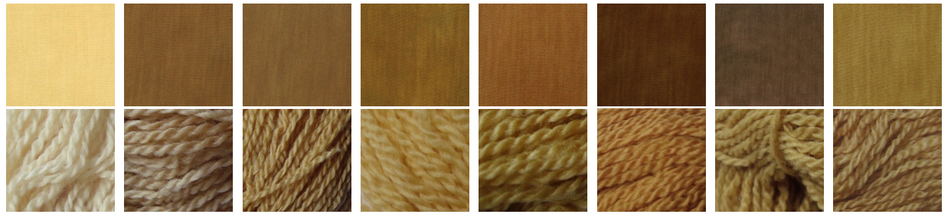
Contrary to my initial assumptions, there was actually a surprising amount of vegetation growing on the property. Guy and Gill mentioned a plant that was particularly flourishing. The rose briar. They spring up and *"they just take over." They've got "...terrible prickles on them ...thorns that choke and you can't get through"* (G. King, personal communication, September 14, 2011). Gill (personal communication, September 14, 2011) recounted; *"We had an old chap here who was a shepherd here as a boy ...they'd ride on their horses and they'd have to carry a little a pot of poison with them and if they saw a briar bush they had to get off and poison them. He was horrified. And now it's just everywhere."* Although it was a time-consuming process marred by sharp thorns I made sure to gather all parts of this prolific plant, from the roots, to the branches, to the red rose hips.

Matagouri and spaniard grass were other challenging plants to collect. Guy had warned, *"Spaniards, you'd probably want to wear your gloves to pick them up, and the matagouri"* (G. King, personal communication, September 14, 2011). And he was completely right. My mothers garden gloves were no match for the spiky plants. The more fertiliser that is put on the land, the more matagouri and spaniard grass that grows. *"...they just choke the gullys and you can't get through so we have to spray. We sprayed them quite a bit this year"* (G. King, personal communication, September 14, 2011).

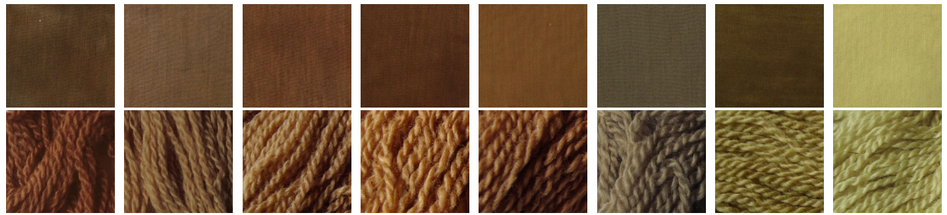
I accessed these plants along Hakataramea Pass Road which runs through Grampians Station. This allowed me to record the exact location of the plants gathered using the GPS (Global Positioning System) in the car, later locating them on the map.

I left Grampians Station laden with more plants than I had imagined, many coated in dust. Vegetation included grass, tussock, matagouri, willow, spaniard grass, rose briar and oat seed. Grampians Station was by far the driest station visited and the dye colours that emerged from there have appeared to reflect the lack of moisture. As the colours were extracted from Grampians Station vegetation a duller range of colours materialised in varying shades of greens and browns.

Figure 25. Gathering vegetation at Grampians Station. 2011.



Oats | Spaniard grass stalk | Willow branches | Silver tussock | Grass | Pine bark | Rose briar branches | Foxglove



Rose briar root | Rose briar hips | Matagouri | Willow bark | Pine cones | Pine needles | Hebe | Spaniard grass

Station: Grampians

Date: Wednesday 14th September 2011

Location: Mackenzie Basin, Canterbury, South Island

Area: 22,000Ha

Climate: extreme, annual rainfall under 300mm

Soil: pH 5.5-5.6

Altitude: 520-1,900m asl

Stock: 15,000 merino, 7,000 half-bred merino

Micron: merino between 15-18, half-bred merino; hoggets 20, adults 27-28

Figure 26. Grampians Station, 2011

Figure 27. Temple Peak Station. 2011.

Temple Peak Station

Thursday 15th September 2011

"Central Otago: Scattered rain clearing late morning and fine spells developing. A few afternoon showers possible. Cold westerlies." (Otago Daily Times, 2011, p. 35)

On the day of visiting Temple Peak Station the weather forecast mentioned the possibility of rain which, as it turned out, was rather befitting for this station. Located about 12km north of the head of Lake Wakatipu station owners Mark and Amanda Hasselman established they get a lot of rain at Temple Peak. With the annual rainfall ranging from 1150mm to more than 2500mm higher up they are one of the only stations that grow merino in such wet conditions. *"Most people just laugh... it's an area that runs merinos because it's a harsh environment but it's not really suited to merinos in terms of its climate and its rainfall ...animal health wise it's very difficult to keep them going in a high rainfall area"* (M. Hasselman, personal communication, September 15, 2011). The high rainfall is evident in the vegetation growing at the station. Down near the river flats green pasture climbs up the foothills and disappears into the steep snow covered backcountry. The Hasselmans suggested a possible route to gather plants; *"There's a track that goes around, takes you up to Davidsons Mine. And then you could just head on up the hill really. And you'd go through green grass, bit of bracken, bit of manuka, might find a few tussocks...You'd get a bit of an altitudinal sequence."* (M. Hasselman, personal communication, September 15, 2011).

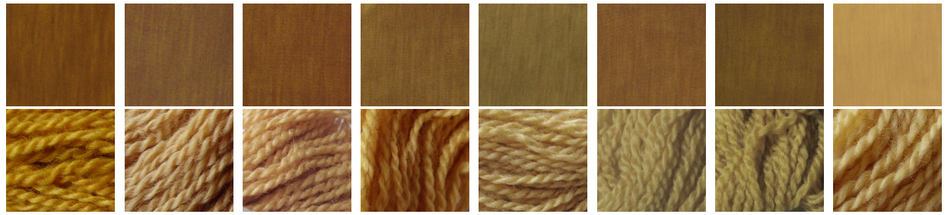
As Mark headed off to dip the sheep Amanda drove the truck up to the abandoned mine and we trekked up the hill gathering plants along the way. With the vegetation varying with the altitude, which ranges from 320-2245m above sea level, we gathered samples from many plants. The lower slopes are mostly introduced grassland as well as bracken ferns and manuka. *"What we've done is we've effectively developed a farm out of bracken. We took the bracken out ... and replaced it with grass and then started farming it. ...But bracken continues to come back. You have to, sort of got to, stay on top of it"* (M. Hasselman, personal communication, September 15, 2011).

Mountain beech grows in the gorges and tall tussocks cover much of the property. These were gathered with the idea to compare their colours to the hues extracted from these same plants from earlier stations. Samples of matagouri and bush lawyer, other memorable plants, were also collected. Mark had earlier recalled; *"The sheep get all tangled up in it. They go to eat the wee leaves and then they get caught all around the neck and then they jump into a bush to try and get away and then they get more caught and they twist around and then you find the sheep, you find them sometimes alive and sometimes dead"* (M. Hasselman, personal communication, September 15, 2011).

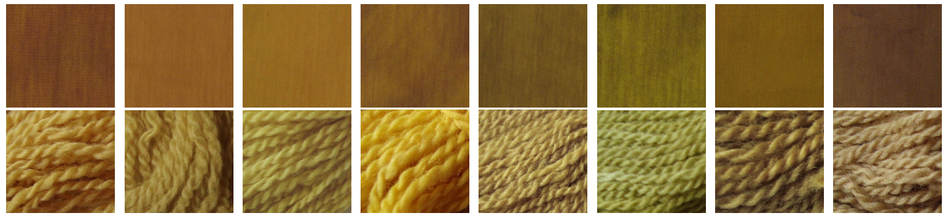
Merinos have got quite high health requirements so the farm cannot be organic however, where possible the Hasselmans look at only adding natural elements to their land. To improve the acidic soils they add natural rock phosphate, lime flour and assorted minerals. *"So it's a whole challenge to what's been the traditional way of doing things for a while... we sort of like to call ourselves biological farming really"* (A. Hasselman, personal communication, September 15, 2011). *The merinos are all blade shorn; "It's just like great big scissors. ...Just the old fashioned way of doing it ...it's just what they always used to do... Blade shearing makes a big difference and we've been doing it for 25 years so it's just what we do"* (A. Hasselman, personal communication, September 15, 2011).

Vegetation gathered at Temple Peak included bracken fern, manuka, mountain beech, tussock, grass and koromiko. Colours obtained were similar to that found at Grampians Station but with a tendency to more vibrant greens and less browns.

Figure 28. Gathering vegetation at Temple Peak Station. 2011.



Ground fern | Bush | Matagouri | Willow | Reeds | Grass | Broom | Barberry root



Manuka | Foxglove | Cabbage tree | Bush lawyer | Koromiko | Coprosma | Mountain beech | Bracken

Station: Temple Peak

Date: Thursday 15th September 2011

Location: Glenorchy, Otago, South Island, New Zealand

Area: 8,000Ha

Climate: annual rainfall 1150mm, higher up 2500mm+

Soil: pH 5.2 on hill, 5.6 on flats

Altitude: 320-2245m asl

Stock: 4,500 merino

Micron: averaging 18.5

Figure 29. Temple Peak Station. 2011.

Figure 30. Loch Linnhe Station, 2011.

Loch Linnhe Station

Friday 16th September 2011

Loch Linnhe. The last station. But the closest in land and locality to Temple Peak. Will there be a difference? (Journal extract, September 16, 2011).

Loch Linnhe Station is situated on the lower east side of Lake Wakatipu. Located at the other end of the lake to Temple Peak Station the vegetation was similar. Whether Loch Linnhe would offer a difference in colours was initially speculative.

However, it was discovered that the station, run by Murray and Karen Scott for over 30 years, does have a different climate to Temple Peak Station. Murray situates it as *"very much different. Our average rainfall ranges between 24 and 34 inches a year ...if you go to the north end, especially where they are, they're probably up to about 50 inches a year. Every mile you come east of the main divide you lose an inch, virtually, so basically they get a lot of rain"* (M. Scott, personal communication, September 16, 2011). This assertion was reassuring that there were still hues to be discovered that would be unique to this place.

The vegetation gathered from Loch Linnhe was found growing on the west facing slopes, like that gathered at Temple Peak. To gather the vegetation Murray drove us down the main road to get to a track that winds up the hill on the station. Loch Linnhe is located beside the main road that runs between Kingston and Frankton. Sometimes, when the merinos are mustered they are walked down the road. *"We try and time it between the buses in the morning with the motel traffic sort of after 10.30 but it's just a fact of life. The sheep spread out, we try and get them stretched right out so by the time they get here they're all walking on one side of the road and the motorists can drive up the other side"* (M. Scott, personal communication, September 16, 2011).

Murray drove us up to the tussocks at a higher altitude. The soil of the glacially worn lake faces was muddy and Murray had to attach chains to stop the truck slipping. I gathered cuttings from the different tussock varieties as well as spaniard grass like that which had been found at Grampians Station. Driving back down the hill I collected other vegetation, plants which had also been gathered from the previous stations. Back down at the base of the hill a kohuhu tree had seed capsules that oozed sticky yellow colour. I gathered branches from the pittosporum with the hope of obtaining this yellow hue.

From Loch Linnhe plants I collected included bracken fern, matagouri, tussocks, grass, spaniard grass, broom and kohuhu. Colours obtained varied but were similar to the other stations in the South Island. However, the yellow of the kohuhu seed that I had hoped for was not to be.

Figure 31. Loch Linnhe, Jason, 2011.

Lichen | Matagouri | Bracken | Silver tussock | Grass | Broom | Rose briar

Coprosma | Foxglove | Kohuhu leaves | Kohuhu branches | Spaniard grass | Snowgrass seedheads | Snowgrass

Station: Loch Linnhe

Date: Friday 16th September 2011

Location: Kingston, Otago, South Island, New Zealand

Area: 11,057Ha

Climate: warm summers, cold winters, annual rainfall 850mm

Soil: average pH 5.2-5.3

Altitude: 300m – 2,000m asl

Stock: 6,000 merino ewes, 1,400 hoggets

Micron: averaging just under 23

Figure 32. Loch Linnhe Station, 2011.

DYE ANALYSIS

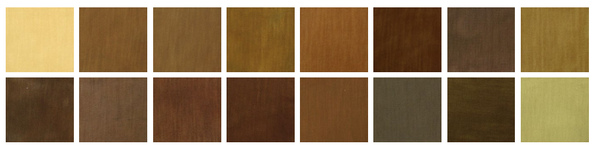
The results of my investigations indicate that there is a strong relationship between colour and place. In my search for the 'visual terroir' of place it was established that unique colours could be extracted from individual places. Hues yielded by the vegetation of each station formed a colour palette that was distinctive to each. This was particularly visible when comparing the North and South Island farms. With a more vibrant range of hues, the colour palette of Mangaiti is notably different to those of the South Island.

A possible explanation for this is the milder climate and the fact that Mangaiti's North Island location produced different vegetation to that of the South Island farms. It is also possible the lower altitude was also a contributing factor. The colours obtained from the South Island stations were more similar to each other reflecting their much closer geographical locations and altitudes. While Mangaiti produced several yellow hues and brighter colours, the South Island stations gave a wider range of browns and deeper greens.

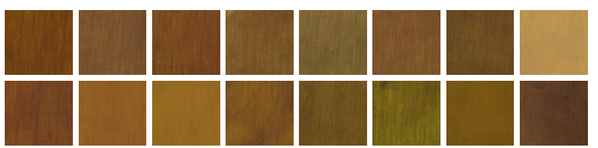
Figure 33. Different colour palettes obtained from each station.

These swatches give an indication of the colours obtained from each station however it is of value to note that the actual physical colours vary widely from the printed colours.

Mangaiti



Grampians



Temple Peak

Loch Linnhe

An interesting observation was that the colours extracted were affected by the season. The vegetation from each station was gathered in early to mid September, so there was not much fresh green growth, particularly on the South Island stations. However, two months later I revisited Mangaiti and gathered more of the same vegetation. The colours yielded from this were different to the hues obtained previously. For instance, gorse flowers yielded a brighter yellow from my second attempt in November. Although I used the same dye recipe both times, it is likely the flowers became more concentrated as they had died and dried up. Other colours I extracted from the November plants appeared to have dulled in colour. The bright yellow extracted from foxglove gathered in September was more vibrant than the foxglove collected later. Even within two months there was a noticeable variation in the colours able to be extracted. A likely explanation is that the plants had changed with the season.

Gorse flowers, September 2011

Gorse flowers, November 2011

Foxglove, September 2011

Foxglove, November 2011

Figure 34. Different hues yielded by the same plants within the space of two months. September and November at Mangaiti Station, Whanganui. 2011.

Parts of the plant available to be gathered had also changed with time. The rewarewa was another plant that had changed its potential for producing colour. Since September the tree had flowered enabling a pink shade to be extracted from the flowers as a dye which turned purple as the wool dyed blue. This colour was a refreshing change from the rest of the colours and it was distinctly different. However tests showed it had poor light fastness and is likely to fade over time.

Figure 35. Colour extracted from the flowers of a rewarewa tree gathered at Mangaiti Station in November. 2011.

As supported by previous research, my investigations into colour indicate that colour extracted in natural dyeing is dependant on many variables, from the maturity of the plant to the environment it is grown in. As a response to this I attempted to maintain consistency across all four stations by dyeing the same type of merino wool. I dyed skeins of natural merino yarn as well as pieces of lightweight merino knit fabric. Both materials were 100% merino however, even when they were dyed in the same dye bath, they would often absorb the dye differently. The different forms of wool dyed different shades from the same dye batch. This could have been due to finishing on the knitted cloth or the initial way the wool was processed. An implication of this is the possibility that merino wool from the different stations is likely to dye differently, however further work is required to establish this.

Cardon describes how natural dyes are much more complicated as colorants compared to synthetic dye... "these dyes are made up of groups of molecules that are often numerous, many of which still remain unidentified ...these colorant molecules often have only a weak chemical affinity with the textile fibres and need to be fixed with the help of a variety of other substances, called 'mordants', that react with the colorants and the fibres in a manner that is not yet fully understood"(Cardon, 2007, p. 1). I used aluminium sulphate (alum) as a mordant throughout my dyeing process as I found it the most consistent for colour fixing. For most of the dye colours, apart from alum, no other chemicals were used. The merino wool was dyed purely with the gathered dyestuff from each station.

However, a few times I adjusted the chemical balance of some dye baths to correspond with the soils of each individual station. I changed the pH of the solution by making the dye more acid or alkaline to correlate with the pH of the soil. At Mangaiti station the sheep are feed copper sulphate to make up for the lack of it in the soil so I added copper sulphate to a few samples to see how it affected the colour. I managed to achieve a few different variations in colour but generally the colours just became slightly greener.

Another interesting discovery was dyes extracted from plants of the same type but gathered at different stations yielded different shades. I had gathered foxglove and grass at all the stations and when compared to each other although they were of a similar colour there were many variations within the tones obtained.

Figure 36. Exhibition. 2011.

CONCLUSION

As I analysed the colour palettes of the four merino stations I found differences between each distinct place. Although the observed differences between the South Island sheep stations were not as distinct compared to the North Island station my explorations indicate it is possible for connections to exist between colour, place and time. Through this investigation of colour I have extracted a 'visual terroir' from each individual station.

As I embarked on this project I began by asking if colour could authentically represent place in an age where digital colour holds little meaning. I undertook to examine this question through experiential research, specifically through obtaining colour extracted from vegetation gathered from different merino sheep stations in New Zealand and applying it to merino wool. Using haptic research methods I explored the tactile nature of colour and its inherent connections to place. Employing trial and error through the process of natural dye I have achieved authenticity in creating a range of colours actually drawn from and unique to individual sheep stations.

New Zealand merino is given a stronger identity when the product is able to be traced back to the farm gate strengthening the integrity of the story of the wool through its connections to a particular place, such as Icebreaker's Baacode. The telling of the story links the consumer and product. It is through this traceability and the sharing of the narrative behind merino that has enabled the fibre to lead to success in the marketplace.

Dulux Colours of New Zealand is a range of colours named for over 900 different New Zealand locations but assigning place names to colours on a flat paint chart, while prompting the consumer to bring their own background experiences and memories to connect with the colour, does not allow for the real story to be told about the place. Surely narrative of place cannot be accurately represented through just one colour. I have been seeking a more authentic way to portray the identity of place through colour than just assigning location names to colours. I have been looking to find a way to tell stories of places through the creation of colour from the farm gate – to identify and create the real colour of New Zealand.

I have sought to find a visual terroir through the material nature of colour. By using dye extracted from plants physically collected from actual places I have been able to create a colour palette that specifically belongs to each sheep station. Through my process I have taken elements embodied in the landscape and transformed them into tactile colours with context and meaning embedded in them. I have explored how the individual character of each place can be extracted from aspects that are unique to each – that is, soil, climate, vegetation, merino sheep, growers and history. My role has been to extract and interpret the colours in such a way as to allow the vegetation to reveal the truth of that place through colour. This colour, which is inherently connected to its origins brings further integrity into the story of New Zealand wool.

My work - from going to each sheep station, talking to the farmers, gathering vegetation and information, cutting, blending, boiling, and steeping wool into the dyes which have formed – has been an adventure into the very real and physical world of colour. This is not just a standardised paint swatch nor a string of computer code, but it is colour that has engaged the senses. It is colour infused with smells and noises – visual colour and tactile colour. It is colour determined by time, place and season.

Ironically as I have attempted to record the natural dye colours for this work it has been difficult to accurately capture the correct shades. The location – either inside or outside, and the lighting – artificial or natural, affect the way the camera captures the hues. So in my attempt to document the colours digitally they have become flattened and the material quality that I have sought has been removed through the digitalisation process.

My journey so far has opened up many other possibilities. Vegetation could be collected and colours created throughout different seasons resulting in seasonal colour palettes for each place. This idea could also be extended beyond merino sheep stations to other wool producers and other types of wool which would bring their own stories to bear. It would be interesting to research further into the viability of authentic colour being able to be used in the marketplace as a commercial enterprise.

As Finlay (2002, p. 438) put it as she came to the end of writing her book *Colour* "...there was a whole world - no a whole universe - of colour stories still to find."

APPENDIX 1

Exhibition February 2012

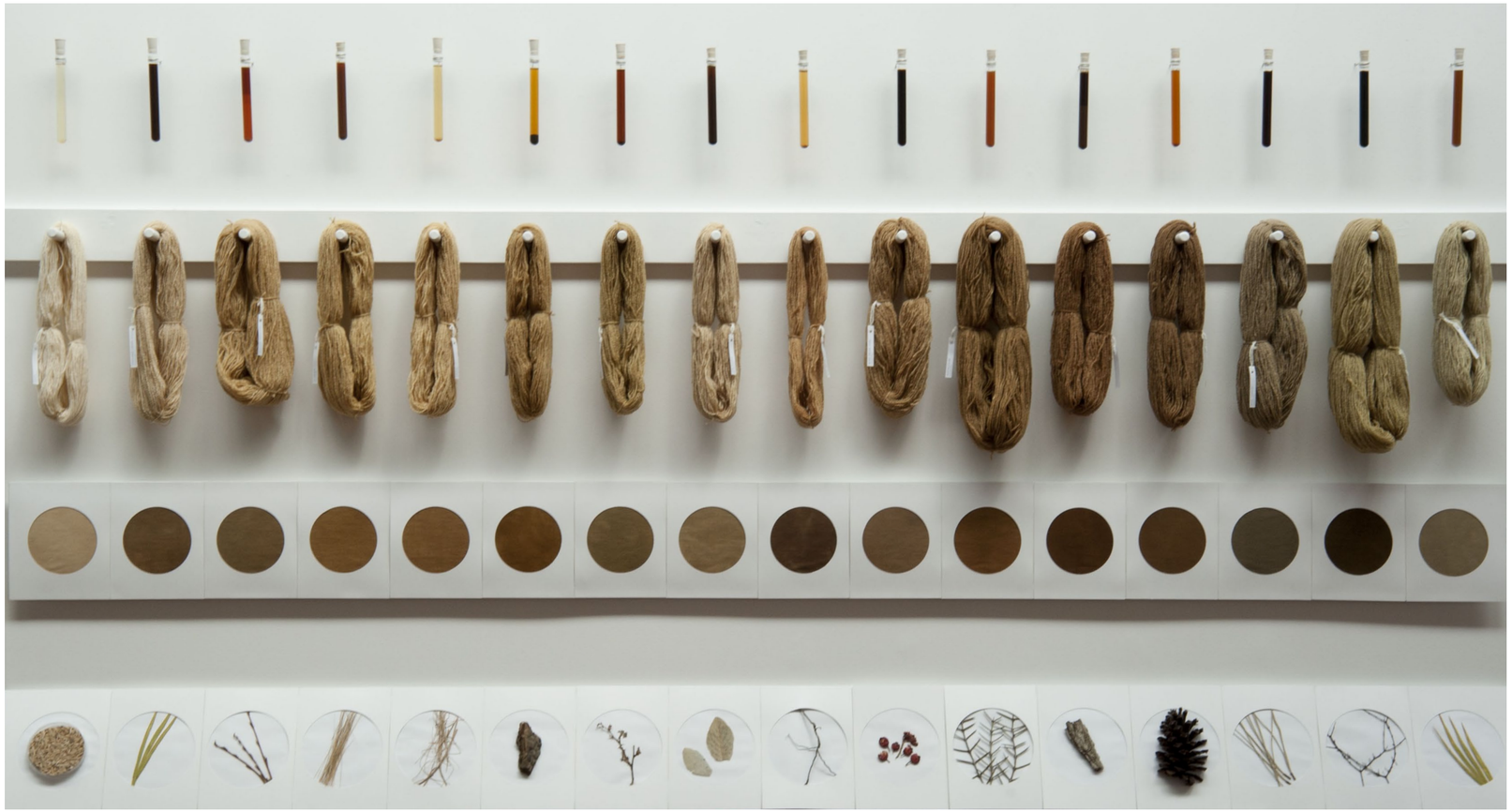
Figure 37. The colour palettes of the four stations. 2011.

Mangaiti Station

Tuesday 6th September
and Friday 4th November 2011

Grampians Station

Wednesday 14th September 2011



Temple Peak Station

Thursday 15th September 2011

Loch Linnhe Station

Friday 16th September 2011

APPENDIX 2

Ethics

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06 350 5249, e-mail humanethics@massey.ac.nz".

REFERENCE LIST

APA reference style 6th edition

Ackerman, D. (1990). *A natural history of the senses*. New York: Random House.

Banks, G., Kelly, S., Lewis, N. & Sharpe, S. (2007, March). Place 'From One Glance': the use of place in the marketing of New Zealand and Australian wines. *Australian Geographer*, Vol. 38(1), 15-35.

Batchelor, D. (2000). *Chromophobia*. London, England: Reaktion Books.

Beverland, M. (2009). *Building brand authenticity: 7 habits of iconic brands*. New York: Palgrave MacMillan.

Bleicher, S. (2005). *Contemporary color theory & use*. New York: Thomson Delmar Learning.

Cardon, D. (2007). *Natural dyes: Sources, tradition, technology and science*. London, England: Archetype Publications.

Charles promotes woolly thinking. (2010). Retrieved from http://www.woolipedia.com/the-wool-project-hrh-prince-of-wales.html

Delamare, F., & Guineau, B. (2000). *Colour: Making and using dyes and pigments*. London, England: Thames & Hudson.

Dilhan. (2009, October 6). *21st century beverage: Terroir in tea* [Web log message]. Retrieved from http://www.integritea.org/tea/434

Finlay, V. (2002). *Colour: Travels through the paintbox*. London, Great Britain: Hodder and Stoughton.

Flint, I. (2008). *Eco colour: Botanical dyes for beautiful textiles*. NSW, Australia/ London: Murdoch Books Pty.

Laurel, B. (Ed.). (2003). *Design research: methods and perspectives*. Cambridge: M.I.T.

Maiwa. (2009). *European blue: Woad and bleu de lectoure*. Maiwa Podcast: Maiwa Textile Symposium.

Milner, A. (1971). *Natural wool dyes and recipes*. Dunedin, New Zealand: John McIndoe.

Pantone. (n.d.). *Pantone: what we do*. Retrieved from http://www.pantone.com/pages/pantone/pantone.aspx?pg=19295&ca=10

Perriam, J. (2009). *Dust to gold: The inspiring story of Bendigo Station, home of Shrek*. Auckland: Random House.

Saker, J. (2010). *Pinot noir: The New Zealand story*. Auckland: Random House NZ.

Schmidt, P. The conflict of colours. In Glasner, B. & Schmidt, P., (2000) *Chroma: design, architecture & art in color*.

Suskind, P. (1985). *Perfume: The story of a murderer*. London: Penguin Books.

Temkin, A. (2008). *Color chart: Reinventing color, 1950 to today*. New York: The Museum of Modern Art.

Temkin, A. (2008). Color Shift. In *Color chart: Reinventing color, 1950 to today*. New York: The Museum of Modern Art.

Wilson, J. E. (1998). *Terroir: The role of geology, climate, and culture in the making of French wines*. Berkeley and Los Angeles, California/London, England: University of California Press.

IMAGE CREDITS

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Print colours are likely to differ from the original work.

Figure 7. Adapted from Agricultural Production Statistics: June 2010 (final), p. 4. Retrieved from http://www.stats.govt.nz/browse_for_stats/industry_sectors/agriculture-horticulture-forestry/AgriculturalProduction_HOTPJun10final.aspx

Figure 10. Majestic Wines 2011. Retrieved from http://www.majestic.co.uk/find/category-is-Wine/category-is-Wine/category-is-New+Zealand

Figure 13. *Colour Picker*. Adobe Photoshop CS5 Extended. Version 12.0. 1990-2010. Adobe Systems Incorporated.

Figure 16. *Synecdoche*. Byron Kim 1991-present. Richard S. Zeisler Fund Image courtesy of the National Gallery of Art, Washington oil and wax on wood each panel: 25.4 x 20.32cm (10 x 8 in.) overall installed: 305.44 x 889.64 cm (120 1/4 x 350 1/4 in.)