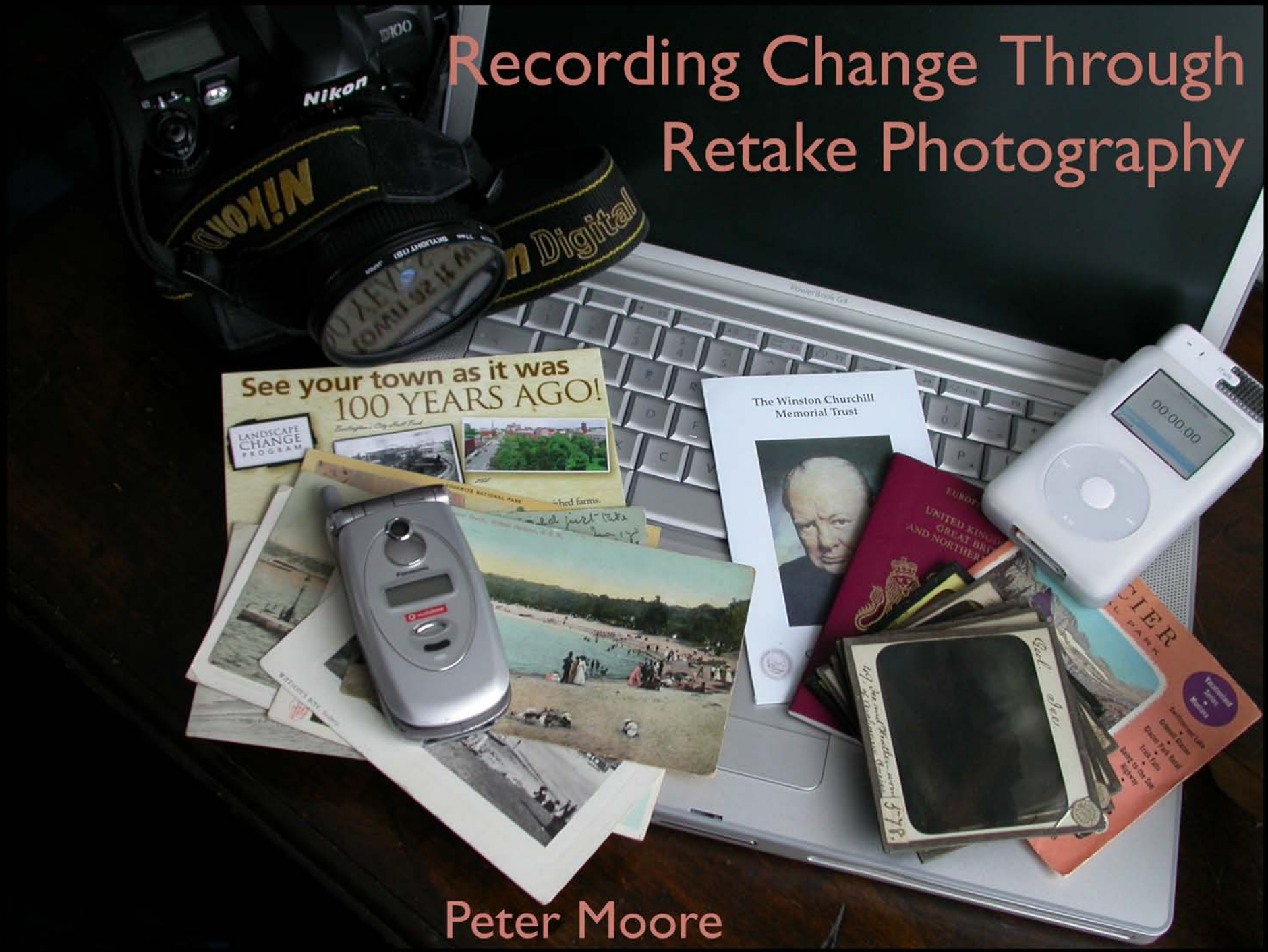
Recording Change Through Retake Photography



Peter Moore

Introduction

For many, change goes unnoticed; a constant, imperceptible evolution, registering only in the conscious at a time when the change is dramatic. Seasons are an obvious example, but changing trends in fashion or advertising, in the colour of cars, in the appearance of a landscape, in our way of life can all be discerned, not at the time, but often years after the event. Change is happening all around us, all the time and one of the simplest way of demonstrating this change is to show someone two comparative photographs; a ‘then’ and a ’now’.

Retake photography is variously described as ‘repeat photography’, on occasion, ‘photopoint photography’ and simply, ‘rephotography’. The process however, remains much the same. In its purest form, these terms describe the retaking of a photograph from exactly the same location as a previous image has been made.

I’m going to refer mainly to the process as ‘rephotography’, which, as I have delved deeper and met more of the practitioners, seems to be the most widely accepted, commonly understood description. While I am comfortable with the term ‘rephotography’ for the process, with the verb ‘to rephotograph’ and indeed, being referred to myself as a ‘rephotographer’, I am a bit unsettled with the product of this process being described as ‘a rephotograph’.

Retake photographs are usually taken to explore the passage of time and demonstrate change. The aim of my Fellowship was to meet with, discuss and work with individuals and groups engaged in retake photography, exchanging experiences of method, analysis and the use of such work. I was particularly keen to explore ways that ordinary people could be engaged in the process.

Through the Fellowship, these aims translated into a series of meetings with the key rephotographers in the world. Without exception, their generosity of time and knowledge has resulted in my expectations of the fellowship outcomes, being far exceeded.

During my travels, I decided to make my own retake photographs. I wanted to explore for myself the challenges afresh, concentrating on the minimum requirements to undertake the process and on the use of the latest digital technology in the process. A few examples are included within this report.

In some instances, the retakes were a pre-meditated action, initiated by the purchase of a postcard or other such ephemera and concluded by the deliberate search for the location. In other instances, I would react to opportunities along the way, perhaps through the discovery of a vintage photograph adorning the wall of an office or hotel lobby, or a contemporary image happened upon. The experience of completing these tasks at a number of locations has proved valuable experience and will inform my guidance of others in the process.

The internet was a key factor in the success of my fellowship. I took full advantage of the technology to discover active rephotographers, to plan the route, book

tickets, agree final arrangements and communicate with my family during the trip.

The Fellowship not only took me on a journey of discovery around the world, in the company of others, it allowed me to view as tourist, photographer and scientist and above all, time to explore the rephotographic process to the full, to share and to experiment.

Acknowledgements and thanks

First and foremost, I would like to thank the Winston Churchill Memorial Trust for awarding me a 2005 Fellowship, for the unexpected opportunities which Fellowship brings and for covering the cost of a trip which otherwise would have remained a dream.

I thank my employers Scottish Natural Heritage and in particular, George Hogg for supporting my application for three months absence and my colleagues Keith Duncan and Siobhan Egan for covering my work in my absence.

I was fortunate that my wife Anne was able to shelve her commitments back home and travel with me, her support throughout the sometimes hectic schedule, allowed me to focus on the purpose of the trip and concentrate on developing creative outcomes.

Many people helped me with support or advice along the way. Many thanks to; Paul Bierman & Christine Massey, Pat Norris, Rob & Carol Watt, Lisa McKeon, Eric & Stephanie Higgs, Trudi Smith, Graham Watt Gremm, Lisa Levesque, Nicolette Stessin, Tony Ormsby, Byron Wolfe, John & Lyndsey Fairbairn, Harry Maitland, Ray & Jeanne Turner, Bob Webb, Diane Boyer, Julio Betancourt, Mark Klett, Betsy Atkins, Bill Fountain, Dave Oldfield, Paula Tomsett, Dorothy Denhollander, Grayem & Briony Forrest, Lyn McGlauchlin, Glenis & Harold Cislowski, Warren Derrick, Wayne Cislowski, Iain & Frances Gordon, Rod Fensham, Doug Spowart & Victoria Cooper, Peter Forrest, Stuart & Di Rae, Darrell Lewis, Libby Robin, Anthony & Bev Johnston, Anna Bienvenu, Genevieve Wright, Michael Doherty, Dick Balharry, Karen Hilditch, Ben Moore, Nick Moore.

Pete Moore
March, 2006

Landscape Change in Vermont

Within a few short hours of landing in America and within twenty four of leaving my home in the Scottish Highlands, I attended a meeting of the Williston Historical Society in the heart of Vermont.

The lunchtime seminar, part of a wider winter schedule was gathered to hear a talk by Paul Bierman, a geology professor at the University of Vermont and was an introduction to The Vermont Landscape Change Program. The meeting was an opportunity for Paul to describe the work of the program and most importantly, to engage directly with ordinary Vermontians, who are vital to the success of the project.

Paul and his students have built a considerable archive, drawing public and private records into a searchable online catalogue of images. They use the resource as a means of interpreting and understanding natural processes. The bi-product is that they are able to make images and narrative widely available via the internet.

Although the core of the collection is from National and State archives, an important component is the resources shared by members of the public. Using laptop computers and portable flatbed scanners, the Program team can make copies of photographs, at a home, a library … wherever … and most importantly, without the contributor having to part with their original. The team also employ the latest digital recording technology to collect oral histories which interpret the pictures further.

I was intrigued to watch the audience respond to Paul's presentation as he asked them to describe the images shown. Individual perception and experience added a variety of detail to the image … which in turn prompted other thoughts and memories. It was a brainstorming session with a difference; the results of which could later be recorded in the database against the image, to create a social documentary.

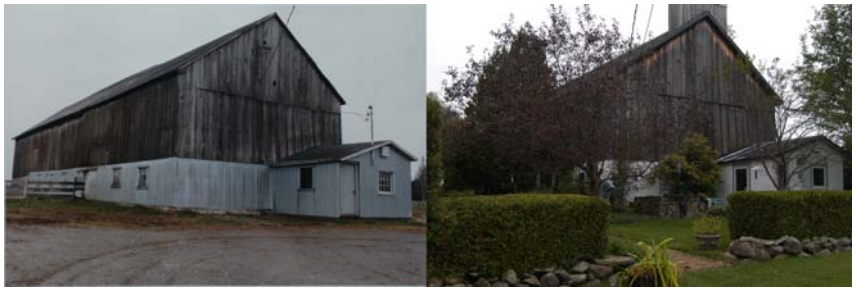
Being primarily web-based could be a barrier to some, but in technologically advanced Vermont, where the primary users live, this seems unlikely. Talks and seminars, such as the one I attended, are part of a wider programme and an additional support component is available for teachers and local groups to enable the resource not only to be used, but to be developed.

As well as meetings, the program encourages the visitor to contribute thoughts and memories … or corrections and additions about images on line. One extra dimension to the outreach is a special programme conducted through face to face interview, which seeks input from the First Nations residents of New England. The native oral tradition coupled with the very descriptive nature of the language often results in their impressions and descriptions of an image being different, adding insight and breadth to the interpretation.

In the evening of my second night in America I delivered a presentation to a group of students and department heads from the Geology, Civil Engineering, Plant and Soil

Science, Natural Resources and Botany departments of UVM. In the subsequent lively discussion, which stretched well into the evening, we considered ways in which the scientific message can be communicated to a non-scientific audience. Photography in general and retake photography especially, is near the heart of this process; along with the considerable opportunities afforded by improving and advancing technology.

Over that first weekend in North America, I stayed with friends at a converted barn just over the border in Quebec. The old photograph album lying on the coffee table contained a set of photographs from around 35 years before when the barn was a barn, prior to residential conversion. It was first opportunity for spontaneous repeat photography and having made copies of the album images with my digital camera, I rephotographed the scenes.



Pat's Barn, North Hatley, Quebec

In the footsteps of Bridgland

From Boston, I flew to Calgary. Arriving as I was, in western Canada, late in the season, I had arranged a two-stage visit to the Rocky Mountain Repeat Photography Project. I was keen to get into 'the field' before the full onset of winter and had arranged a few days with Rob Watt of Parks Canada at Waterton Lakes National Park. I had then arranged to fly to Victoria on Vancouver Island to meet with the Project leader, Eric Higgs and the rest of the team at the University of Victoria. Eric had mentioned to me in a phone conversation, the work of the United States Geological Survey, at West Glacier, Montana who are using rephotography to monitor the retreat of the permanent snow beds and glaciers, which is attributed to global warming. I had arranged to drive across the border and meet them as well. First stop in British Columbia was a very windy and bleak Waterton Lakes Village. Rob Watt showed me matched pairs of photographs on the computer and we discussed the scope of the work that had taken place in the park … and how it might influence land management decisions.

The Waterton retakes (and indeed a similar study, based to the north in Jasper National Park) are founded on the wealth of imagery arising from the various International Boundary Commission surveys, which straddle the 19th and 20th Centuries, the Bridgland/Hyatt topographic survey and the Interprovincial Boundary Survey.

The association between Parks Canada and the University of Victoria, which enables the work, is an interesting partnership. In keeping with many other bodies with land management duties and responsibilities, Parks Canada are required to base their management decisions on creditable opinion … and that usually means hard science. They lack

a research department and undertake such work through external contract; in this instance, a partnership with UVic. For the University, there's the prestige of co-operation with a government department, a consequently smoothed path to research on government-owned land and also a significant contribution to research costs. For Parks Canada, the Rocky Mountain Project provides an insight into vegetational succession at Waterton, particularly an insight into the history and incidence of fire and the possibility of guiding the controlled reintroduction of it, in order to mimic natural effects.

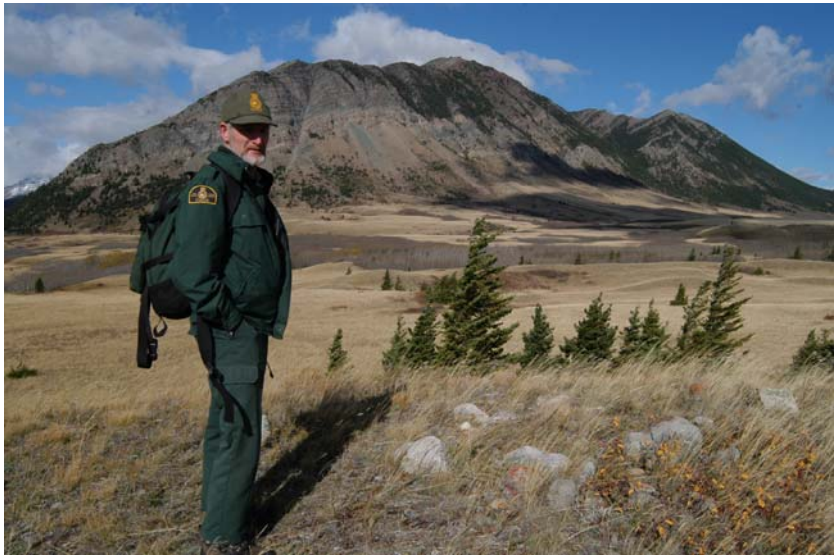
The research is achieved both by the core work of the project, but also through the associated studies undertaken by masters or doctoral students. This increases the rephotographic coverage, the analysis of existing photographs and can provide additional information such as 'ground-truthing' of the photographs by survey. While there is a considerable amount of 'leg work' necessary to cover the distance and terrain of the park, the project is not averse occasionally to hiring a helicopter to maximise a window of opportunity and deploy the team to remote vantage points allowing up to nine retakes to be achieved in a day.

Alongside a few hours of discussion with Rob, came a glorious day in the field. Rob came to Waterton twenty-seven years ago and has explored much of it on foot or horseback over the years. In the last few summers he has explored the park in search of rephotography locations, he knows the ground and the messages it contains, very well.

We stood, for a while on a small moraine out on the prairie grassland. Mountains to the west and south and vast flat lands to the north. A few hundred metres away a small herd of bison grazed. A chill wind blew from the snow covered tops of the Rockies and sang with a gentle 'whoooosh' through the grass. We were following in the footsteps of Morrison Parsons Bridgeland, a surveyor and photographer and we had a copy of one of his photographs in hand.

As we topped the moraine, almost a hundred years after Bridgeland, Rob pointed out a small scatter of stones; the remains of a surveyors cairn - tangible evidence of his being there. Running across Bridgland's image were the unmistakeable parallel tracks of a wagon trail. Standing to the left of his frame, and slightly off the trail was a mule and cart. The mule stood disconsolately, awaiting its driver and passenger to return from the hill we stood upon. The view looked much the same; the skyline, the rocks in the distance, the form of the land; in detail, there are subtle differences - a few extra trees, extra shrubs in the grassland but astonishingly, below us that same wagon trail, showed faintly in the prairie grass. Flicking between image and landscape the subtle tones of the photograph became almost a window through which we could look back in time.

This for me is one of the most fascinating aspects of rephotography; the point at which everything lines up and you stand, literally in the footprints of another photographer. A photographer from another generation. Another age. Another world.



Rob Watt at the Bridgland site

Abstracting information from a picture requires skill and sometimes the need to think outwith the frame. Among the factors pertinent at Waterton is the influence of fire in the suppression of the vegetation. Fire is a complex issue but can be naturally occurring or man-managed. At Waterton, the cycle of deliberate burning practised by the First Nations Americans is of particular interest.

In order to kill the large, strong and potentially dangerous bison effectively, the natives would drive them over cliffs - perhaps the most famous example being the nearby, Head-Smashed-In-Buffalo-Jump, now a National Park. For this to be effective the animals had to be driven at speed, and channelled into a small area where they could be forced over the cliff. Fire was the effective means in this regard and long fire lines would guide the animals in panic towards the 'jumps'. The repeated cycle of burning events surpressed certain types of vegetation and in the absence of fire in the last century, changes have started to happen.

Just across the border, about three hours of spectacular driving from Waterton, lies the town of West Glacier in Montana. I had gathered some references from e-bay in the months prior to departure which included a 1949 collection of 'Viewmaster' reels - pairs of Kodachrome images, which are viewed in stereo, through a hand-held viewer.

The locations I noted, were all at the sides of roads, most taken from lay-bys and still in use. I was interested in retaking a few of these images myself but in the event, the weather deteriorated badly during the drive across the border and I was only able to satisfactorily repeat one or two in extremely marginal conditions.

Several days later I found a shop display stand full of contemporary Viewmaster reels. The original 1949 reels which I had purchased, had been updated and it was interesting to note that some of the early viewpoints had been repeated. Obviously, not 'retake' photography in its purest form, but nonetheless, these images taken over fifty years apart, achieve much of what I was exploring; a tangible (and extremely accessible) demonstration of change.

1949 Viewmaster and retake. St Mary Lake

The Glaciers of Glacier National Park

The United States Geological Survey's Global Change Research Program is based at West Glacier and led by Dan Fagre. In a bizarre twist, Dan was visiting Scotland on climate-change business at the time I was visiting West Glacier, but I was met by a member of his staff; Lisa McKeon, who has been involved in the rephotography from the outset.

Fagre's attention was drawn to the possibilities by a National Parks Ranger, who dropped by his office one day with a matched pair of photographs of Boulder Glacier. The vintage photograph showed an ice cave with visiting tourists taken in 1932 while the 1988 repeat shows an alpine meadow, graphically demonstrating the change in the extent of glacial ice.

In the last fifteen years, around seventy images held by the USGS, of various glaciers in the National Park have been repeated. In spite of the fact that the fruits of this work has been snapped up by the press as a graphic portrayal of the effects attributed to climate change, published in journals such as Newsweek and the New York Times and has brought the researchers more recognition than their core work, USGS rephotography is neither specifically promoted nor funded. It is an 'area of interest' undertaken by dedicated staff as and when resources can be spared.

Due to Glacier National Park's extreme topography, access to undertake the work is restricted by season. Snow cover persists through spring and when the snow has melted there are high risks of forest fire which both serve as a high safety risk and also limit visibility. The Park also has strict rules relating to the use of helicopters or other motorised access and so all equipment must be carried in on foot, increasing the time required to fulfil each retake. A clear contrast between the adjoining parks in the two countries.

Lisa was currently working on the redevelopment of the USGS repeat photography web page and I was able to point her towards other examples of repeat photography sites, which I note she has now incorporated. As a Government agency the USGS does not see its photography as anything other than a public asset and has uploaded many of its images in a variety of resolutions for free public use. Given the financial constraints on the research and the obvious commercial worth demonstrated through popular editorial use, this would appear to be one for which they should receive some compensation.

Rocky Mountain Repeat HQ

To conclude the Canadian leg of my Fellowship I visited the Rocky Mountain Repeat Photography Project Leader Eric Higgs at the University of Victoria, Vancouver Island. Here, the full technological complexity of the project became apparent.

In Room 132 of the Sedgewick Building at UVic, home of the Rocky Mountain Repeat Photography Project, I met the team; Eric, Trudi Smith, a PhD student, who has been project photographer for the least three years and Graham Watt-Gremm a self-confessed computer geek who has been responsible for developing a complex database to allow rapid search of the archive and the delivery of a specific image in any of several resolutions, to the desktop in a matter of seconds. Trudi meanwhile, describes herself as a 'visual anthropologist' and as such is considering all forms of visual influence in her studies. Her exploration has included a variety of ephemeral artefacts such as early National Park publications, tourist postcards, railway company literature and viewmaster images.

The project is well funded. It uses the latest (and one of the most expensive) digital cameras available - the first to be imported to Canada - and backed up with several extremely powerful computers. The project holds one of the most versatile set of images I saw; Raw files of tens of megabytes can be viewed in colour or black and white, and analysed to thirteen stops over or ten stops under optimal exposure, to release detail in light or shade areas of the image.

They typically view the images by opening both the original and the retake in Adobe Photoshop and simply 'snapping' between the two on screen; one behind the other. Such is the accuracy of registration that individual trees in Bridgland's images can be zoomed into and with a click of the mouse the contemporary view of the same area snapped into place to reveal its fate.

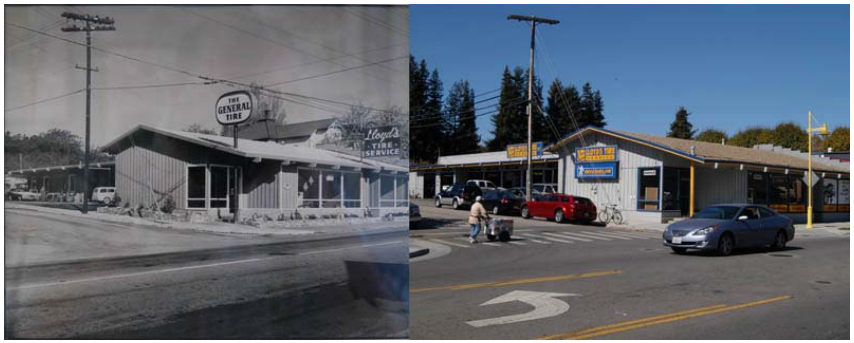
Aside of the analytical opportunities, digital offers the advantage of being able to check results immediately. Having begun with the traditional wet photographic process and not travelling in the style of Bridgland with a full photographic darkroom set-up, they were unable, in the early years. to assess the success of their shoots until days, even weeks afterwards.

An interesting part of our discussions centred on the longevity or 'archivability' of the digital image. It's important to remember that our visual archive has survived largely because it is an entity; a piece of glass, a celluloid negative, a print and frequently it survives as two of these. In the digital world, there are concerns about both the future readability and the durability of media and I was keen to understand what measures the team were taking to ensure that the images provide not only a repeat of Bridgland's work, but a lasting documentary to extend the photographic coverage.

One option is to treat the digital file as a 'negative' and print from it, relying upon the archival nature of ink and paper to sustain the information … and this may indeed be a viable option, because it does at least offer the opportunity of re-digitising at a future date, albeit with some loss of quality. In terms of the analysis and dissemination of the images, there is no doubt that the digital medium offers by far the best options. Eric's view is that with due care and attention, the digital option is safe, but it requires certain safeguards including a rigorous protocol of backing up data, which can have significant resource implications. He also believes that it must be retained in a 'live' medium ie held on a hard disc of a computer as opposed to being committed to a fixed medium such as a CD or DVD. To this end the project has a formidable array of hard drive units and generous space on the University server allocated to it.

After a ferry trip through Puget Sound and a brief stopover in Seattle where I was able to rephotograph an early postcard view of a totem pole in Pioneer Square, I flew south to San Francisco and drove round The Bay to the university town of Berkeley. I stopped at the Golden Gate Bridge briefly and was pleased to find here, an interpretive panel featuring an early picture by Ansel Adams of the 'Golden Gate', taken before the bridge was built. The image hadn't been repeated but the interpretation required the viewer to make the link between printed image and the changes to the landscape in front of them; it was a subtle piece of interaction.

Lloyd's Tyres
En route to Yosemite I stopped over in Santa Cruz and discovered first thing the next morning that my car tyre had a screw sticking out of it and required attention. I happened upon Lloyd's Tyre Center a busy but otherwise non-descript workshop down a side street in town. With American efficiency the car was booked-in within seconds and I was left standing on the forecourt with directions towards the waiting room and coffee machine indoors.
I decided to sit out in the sun while the tyre was being fixed.
Twenty minutes later, with car standing ready to go and bill in hand, I wandered inside to settle up. There, beside the counter was a black and white photograph of Lloyd's Tyre Centre, taken when it first opened sixty years beforehand. After a rushed explanation to the receptionist, it took no second bidding to copy the image using my digital camera and to nip outside onto the sidewalk and retake the image. An opportunity grabbed and an experience to pass on to other rephotographers.



Yosemite in Time
At Berkeley I had been invited to attend the opening of an exhibition of retake photographs and the launch of a book called *Yosemite in Time*, which would include a panel

discussion. The photographic team for *Yosemite in Time* were Mark Klett and Byron Wolfe. Both eminent in their own rights and previous collaborators in a project called *The Third View*. Together they have set new standards in the process of rephotography and particularly in the dissemination of the experience of the passage of time. The Yosemite work is another step forward and it was a privilege to join them as this work was celebrated, scrutinised and peer-reviewed.

The Yosemite study is based on the 1870s photographic work by Eadward Muybridge who photographed (amongst other places and things) the American West using a 'Mammoth' plate camera. This is a magnificent, though cumbersome piece of equipment which takes 'Mammoth' glass plates; photographic negatives some 20 by 24 inches rendering superb detail.

In the course of the work Mark and Byron discovered that other photographers such as Ansel Adams and Edward Weston had also taken photographs of slightly different views over the years, but from almost the same vantage points. They rephotographed these images from exactly the same spot and in several of the finished pieces, created panoramic landscapes and inserted 'windows' from the 1870s, 1930s and the 1940s seamlessly in to the contemporary view.

What their work is revealing is not only the sometimes dramatic changes which have taken place in the valley in the intervening years but also something about the photographers themselves; some of the choices they made when taking their images – what they include within their viewfinders and what they left out. The very concept of this explores not only change, but also time and psyche.

Following the *Yosemite in Time* exhibition, I spent a couple of days at Yosemite soaking up the ghosts of so many photographers; Adams, Weston, Muybridge … many others and countless tourists who have documented Yosemite over the years. I spent an afternoon near Lake Tenaya at one of the locations where all three photographers had planted their tripod legs and where, just a couple of years before Mark and Byron had created one of their massive images.

I had arranged to spend some time with Mark in Phoenix later in the trip, but visited Byron at his office in Chico State University, a couple of hours north of San Francisco, some days later.

Byron's central role in the innovative means of disseminating the results of Third View was the topic of much of our discussion. The concept of animating the change from the vintage picture to the modern retake, the use of monochrome as well as or instead of colour and the additional digital media incorporating sound files and video in the finished product are all testimony to his skills and project management. I found our discussions very rewarding. We also touched on other aspects of Byron's work which as well as retaining an interest in the process of rephotography, he is also exploring the passage of time in different ways. A recent project documents the time between his 35th and 36th birthdays by the selection of one

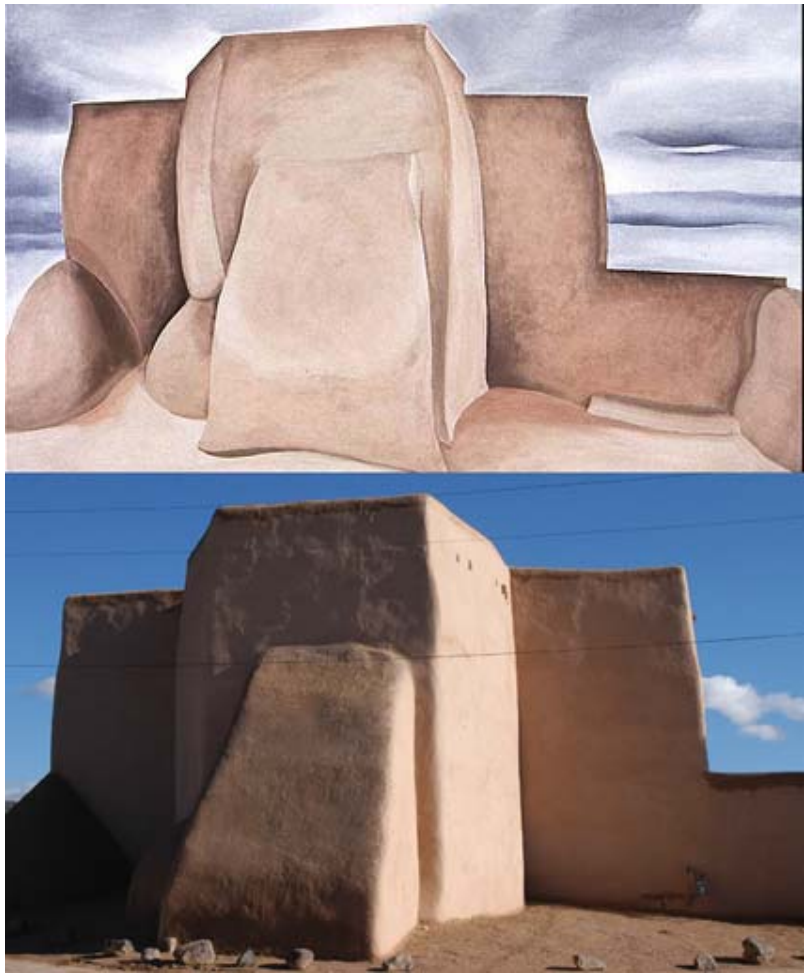
representational photograph for each of the days. Its called ‘Everyday’ and is a beautifully composed and executed study which is in the process of being published.

The next part of my Fellowship took me to Colorado, New Mexico and Arizona. In Denver I briefly touched base with John Fielder a commercial photographer who, after publishing twenty-six glossy coffee table books of South west landscapes, sought a special celebration for the millennium and published a lavish A3 sized faux leather bound book entitled Colorado 1870-2000. According to the publicity, it’s Colorado’s all-time best-selling regional title, with over 135,000 copies sold. The book contains many photographs by William Henry Jackson which have been retaken by John. Its a very successful and commercial use of rephotography, presented as a record of the heritage of Colorado and tugging mercilessly at the heartstrings of ordinary Americans in their search for heritage and times past.

In search of Adams and O’Keeffe

The journey from Denver, ultimately to Phoenix and Tucson by road took me through a very special part of America, from Colarado, through New Mexico to Arizona. An area rich in images; having been a popular destination for artists and photographers throughout the twentieth century. I was guided to some of the locations by an online rephotography project collated by Mark Mangold of the New York City Ballet.

I was keen to see was the St Francis Church at Ranchos de Taos, an iconic, adobe church, which had been portrayed by a generation of photographers and artists such as Alfred Stieglitz, Paul Strand, Ansel Adams, Georgia o’Keeffe and John Marin.



The Ranchos Church as painted by Georgia O’Keeffe and rephotographed

It was an interesting exercise not only to rephotograph some of their trademark views, but also to explore the sights, the smells, the tastes which influenced their genre so intensely. At another location, on the outskirts of the town of Española I stood at the location of what is perhaps one of the most famous landscape photographs of all time. 'Moonrise, Hernandez, New Mexico' was photographed by Ansel Adams and has become one of his most popular images.

'Moonrise' has been scrutinised many times. We know not only what equipment was used but, by analysing the moon's position in the photograph, exactly when it was taken in 1941. Adams' viewpoint has been revisited by photographers many times over the years and the owner of the land over looked from that part of the roadside, is now quite hostile towards photographers.

In spite of this with accurate directions, I was determined to pay a brief visit. The image is a one-off; taken on impulse and described by Adams as a once-in-a-lifetime opportunity. The location, unremarkable at the time, is much less appealing now with considerable scrub growth, development … and traffic. The same profile of hills on the horizon is just about visible, but new buildings partly obscure the stark simplicity of Adams' composition and scrub hides the graveyard from view. Above all, in the absence of the once-in-a-lifetime cloud effects, a rising moon and a spectacularly lit graveyard, there is little to entice one to re-shoot the scene (see back cover).

The Changing Mile

After the clear mountain air and frosty nights of New Mexico, I drove into the south western deserts to Tucson to meet with the elder statesman of rephotography; Ray Turner.

Ray has been retired from the US Geological Survey for sixteen years, but retains an active emeritus role at The Desert Laboratory and at the University of Arizona. He is one of the original rephotographers and started taking 'matched pairs' of pictures back in the 1950s. His early work was published in The Changing Mile in 1965, which he co-authored. It was only the second 'rephotographic' study to be published (the first being a study of Vegetational Changes in Africa, published in a paper by the University of Arizona in the 1950s, which Ray has subsequently updated forty years on).

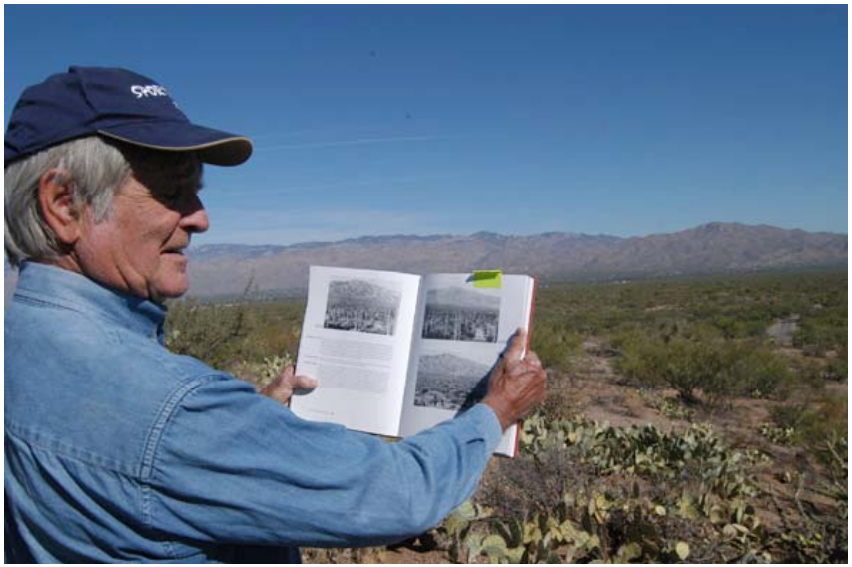
These early repeats were based upon a small archive of images taken at the turn of the century by one of the Lab's founders. The study is now one of the longest vegetation studies in existence with experimental plots still monitored for change and the photographic documentation has had a vital role in progressing this. There are now some 7000 matched pairs of images; probably the largest study of its kind in the world.

Ray introduced me to two of his protégé's, Bob Webb, who has now taken on and greatly expanded the rephotographic work and Julio Betancourt, both scientists with the USGS.

I heard some wonderful anecdote of their experiences, whether it be rephotographing out on the Baja, or re-enacting an 1870s rafting expedition down the Grand Canyon to repeat the images made by the Expedition photographer.

The team have worked for a long time with traditional film and print and not withstanding a notable disaster when a few weeks fieldwork was lost due to a carelessly opened film box, the system has served them well. They are cautiously modernising their approach, by scanning their negatives. This simplifies transmission, analysis and printing of the results, but concerns remain about the obsolescence of the technology and they are unlikely ever to make the leap to a full digital set-up. Ray cites the case when a considerable amount of their data was entered onto IBM computer cards, now impossible to read from.

Diane Boyer is in charge of the massive archive. She readily acknowledges the perils of the whole archive of negatives and working prints being housed within the same room at the University. Moves are afoot to reduce the risks. I was interested in a recent search Diane had undertaken in preparing some material for publication. A 1940s Kodachrome image published in National Geographic Magazine proved to be more difficult to track down than anticipated. The magazine photographers retain copyright and film is returned to them after a period of time. The magazine had unfortunately lost track of the photographer and his archive, so there was no alternative but to carefully dissect a vintage copy of the magazine, scan the printed images and clean them up as best they could in computer.



Ray Turner at one of the Changing Mile locations

We revisited a few of the sites in the desert where Ray has been recording the changes. A century of images has allowed him not only to detect changes in the basic vegetative structure of desert, but also to follow the fortunes of individual saguaro cacti – the tallest and most readily discernible plants of the desert.

Not looking for anything, but finding something.

I finished my stay in Arizona with much anticipated meetings with Mark Klett at his home in Tempe, Phoenix. As well as perhaps the most accomplished rephotographer, Mark is also an acclaimed photographer of the American

West. His work is published in books, exhibited in galleries and collections and exhibitions.

Mark's photographs are not produced as scientific documents or with the purpose of providing evidence of change, but as art and I was keen to explore this dimension a little more and set the respective disciplines in context in my own mind.

The differences are perhaps best illustrated in the following anecdote. Within a book about Mark and his work, I had noted the significance of the discovery of a fragment of glass at a remote camera station during a repeat visit. The glass had been found in rocks at an obscure location, adjacent to the tripod set-up by the Third View photographers to retake an image. It was of a thickness and type suitable for use as a photographic plate and the circumstances suggest that the earlier photographer dropped it on his visit. It provides a link through time; a direct connection with a photographic pioneer from over a century before. It conjures thoughts of his climb to the site, carrying heavy camera, tripod and glass plates and one can sense the exasperation as a precious plate slips from his fingers and smashes in the rocks below his tripod. Mark explores this concept, documents the shard, makes it a subject of a photograph and treats it as an artefact.

I mentioning the incident to Bob Webb; he responded 'Yeah, Sure, we come across lots of that sort of thing …' And what did you do with these artefacts? 'Oh, well, we'd have made a note of them in a field notebook somewhere, I guess.' I turned that thought across to Mark. 'Well, that's the difference; its the arts thing and the science thing'.

Part of Marks's philosophy is to explore wider than the constraints of the vintage photograph. By definition, retake is bound by the constraints of the earlier image, Mark seeks other indicators, to record the change in a simple philosophy of 'not looking for anything, but finding something'; a game of chance which heightens perception.

We also discussed the Second and Third View Projects, and the Yosemite work and hot from the press, an advance copy of 'After the Ruins' a book of images repeating photographs taken in the aftermath of the 1906 San Francisco earthquake. The poignant pictures of a smoky and rubble-strewn San Francisco are set alongside fresh retakes taken in the last year or two – interestingly, images are juxtaposed to draw the viewer to read the images in reverse chronology. The modern image and then the ruins of 1906; it's a haunting reminder to the viewer, that an earthquake will happen again someday.

After mainland America, I broke my fellowship by stopping 'mid' Pacific in Hawaii for a few days to manage jetlag, recharge my mental batteries and take stock of the previous weeks. It was an enjoyable stay but quite unexpectedly, I added to my itinerary by bumping into a rephotographer ! In a bizarre coincidence, I made a chance encounter at the annual Kona Coffee Festival Parade and was introduced to Bill Fountain a native of Colorado who splits his time between there and Big Island, Hawaii.

For Bill, repeat photography is an retirement interest. A private study which he shares occasionally with other local historians. His interest is Dredge Boats … which occasionally find their way into the corners of old photographs and through this he is also documenting landscape changes to some of the mining towns of Colorado some of which have now evolved into fashionable resort centres such as Breckenridge, Aspen and Vail.

While there are a number of archive resources some of which have been utilised by other photographers Bill has had the advantage of purchasing several original image collections from private sources and this provides him with the opportunity to create a unique documentary. His equipment although digital, is of a type widely accessible and he uses Powerpoint technology to display his results. I was interested to discuss the problems he had encountered and the various methods he has independently developed to resolve them. His experiences offer me a useful guide to pitfalls and solutions, which others with a similar level of experience might encounter.

Down Under

In Australia, I had several centres for my studies, all separated by massive distances only appreciable once you're on this vast continent. Arriving fresh in from Hawaii, I took advantage of a two days stop-over in order to search out a couple of locations in Sydney, depicted on early postcards which I had bought from e-bay. One in particular proved rewarding:

We stopped in Mossman for a coffee and between parking slot and street café, passed an alley, at the end of which is the Public Library. I fell into conversation with the librarian as she pinned an exhibition poster onto a street noticeboard. The poster was advertising an exhibition of archive images and ephemera, the reproductions of old postcard images caught my eye, and proved an encouraging insight into the growing movement to respect and explore Australia's short heritage. I was able to show examples of my own studies; the local examples were of interest and may well have triggered a project locally.

Mosman Bay

We drove slowly along the shore road near Mosman; things were not quite falling into place. Above us ranks of relatively recent penthouse apartments masked what would have been open hillside. We drove the road above and I spied a private car park beneath a block of apartments. The car park balcony provided a view point within a few metres of the postcard view I held in my hand; quite sufficient for my purposes. As I checked out the various intersections within the picture in order to frame my retake, the Mossman ferry steamed round the corner, turned hard to starboard and for a few second hung in exactly the same place as its predecessor had a hundred years before.

The next leg of the Fellowship was based upon some images found in an old photograph album belonging to my wife's family. Tucked away for the better part of a century, a set of images gave an insight to the lives of colonial sugar planters at the mills built on the rich lands around Townsville in tropical Queensland. To see first hand whether and how these images might be repeated and what other information it was possible to glean from public resources, I visited this Burdekin district.

The tropics is an unforgiving climate, hot to the traveller, hard on equipment and in stark contrast to the desert environment we'd just left, a place where decay and change is accelerated. Between this and (what seems to be) an inherent disregard for heritage, the preservation of building and artefacts does not come naturally to the majority of Australians … although we came across those who are trying to turn this about.

We liaised closely with the Burdekinshire Council who were enormously helpful in setting up a series of meetings with local enthusiasts and also engaged the local press to widen the sphere of search for information resulting in a short article about our visit and providing a contact mobile number.

As with much of the arrangement for this fellowship, this part of the project would have been so much more time-consuming and less productive without the use of a laptop, mobile phones and e-mails. We were able to offer a direct line of immediate communication, people could send us material and in the event that we couldn't meet face to face, we could discuss directly with them. We took a lot of calls from people with long family links, an interest, a thought, a memory or a picture of the Burdekin district. We explored many locations under the guidance of Glenis Cislowski from the local historical society and retook various archive pictures, but much had changed and there was a difficult task to align the changing features of this industrial landscape with the archive images we had.

Back in Brisbane at the Queensland Herbarium in the shadow of Mount Coot-tha, I managed to squeeze a brief slot in Rod Fensham's busy schedule on my way out to Toowoomba. Rod's involvement with retake photography has been slightly different. Some years ago, he was presented with an early topographical survey narrative describing vegetation cover. To demonstrate the changes, he sought photographs contemporary to the narrative (but not necessarily of the locations described) and by rephotographing these scenes, was able to hypothesise that the apparent changes could be applied to the original survey location. Key to the study is to 'calibrate' the descriptions within the topographic survey – to be able to visualise what is meant when the survey narrative describes 'dense tree cover' or 'light scrub' etc.

The town of Toowoomba sits perched on The Great Divide, about 100 miles west of Brisbane and is home to Doug Spowart and his partner Victoria Cooper. Although exploring a full range of both equipment and process in their work, they embrace the opportunities afforded both through exhibition and through electronic dissemination of their imagery.

Doug has many years of photographic experience and his work is varied and original. In some ways he was doing years ago what Mark Klett and the Third View project achieved with the advent of digital imaging. Doug's approach was simple. He sought to explore the snap shot; the image either taken by a typical tourist or bought as a postcard. He was fascinated with the choices made in composition and the landscape features or tourist infrastructure, which were omitted from the picture.

His innovative way of tackling this, in the years before Adobe Photoshop was to use a very wide angle lens and simply to hold a shot against the landscape so that it perfectly aligned with the surrounding background. His images with arm extending from the side or the base of the image to hold the postcard or image in place are quite simply stunning; far more demanding that the modern techniques.

These shots not only set the image in context and portray two different 'snapshots in time' but also explore the world outside the tourist image. The margins of Doug's pictures are filled with shadows of himself and those of other on-lookers, with litterbins, clutter and cars. His images require little in the way of supporting text, beyond a short and often cryptic caption.

We had the opportunity to look through the archive of the Toowoomba Art Gallery, who in years past has commissioned a rephotographic project depicting local change for which Doug was the photographer. Its an innovative and almost unique commission on this scale.

In Canberra, contact with Libby Robin a Fellow at the Centre for Resource & Environmental Studies at the Australian National University, drew my attention to Darrell Lewis's work and I visited him at his home in the suburbs.

Darrell is an unassuming and very refreshing, no-nonsense Australian with years of experience of the outback. He is author of one of the few published studies of Australian rephotography entitled *Slower Than The Eye Can See*.

His work started with the a lifelong interest in Australian history, with a project to document Queensland Aboriginal rock art and time spent assisting his wife in her PhD studies, through the collection of Aboriginal oral histories. Over the years he collected a large quantity of other information and following submission of a few simple rephotography examples, was commissioned to undertake a study in the Victoria River District, a large cattle-rearing district in tropical Queensland.

When settlers arrived in the District in 1891 they arrived with their cameras and the pictures from that time provide a view that is pre European and Pre cattle picture of the landscape. Since then successive owners and managers, ranch hands and explorers have casually documented the landscape, however, no formal archive of images existed to work from.

Darrell tracked down all the station hands and managers who had worked in the district over the years and interviewed them. His study is compiled from oral histories, diaries, newspaper and journal accounts and a selection of

over 6000 images collected from private and public sources.

Slower Than The Eye Can See is an eloquent study, as much a record of social change as anything else and indeed, he is currently using many ways, including photography to document the heritage of the outback, changes in aboriginal lifestyle and the ways in which this has influenced the landscape.

Darrell is what you could call a 'shoebox' archivist with hundreds and hundreds of prints carefully filed in his study. His approach to safeguarding his collection is not complacent, but characteristically straight-forward; His archival safeguard extends to keeping his negatives out in his shed. This way, he explains, 'If the house goes up, I've still got the negs; and if the shed goes up, I've the prints.'

The final visits of my Fellowship took place in the Australian Alps, between Canberra and Melbourne. I was aware of quite recent extensive wildfires which had blazed through the region with the loss of a number of historic buildings and a significant influence on square miles of habitat.

Dave Oldfield and the Victorian High Country Huts Association have been using archive photography in order to exactly recreate some of the buildings lost. While Dave's work is photographically beautiful in its own right, its an example where art and documentary photography merge and where photography has enabled, not only a retake, but a re-build.

There are other public groups undertaking web-based, photopoint surveys of locations; particularly local nature reserves. The changes recorded all add towards a general archive of information of the site, relating to change. Its not a uniquely Australian phenomena, as I did also come across a similar scheme at Lake Mono in California, but it is perhaps a method of collaboration which suits the independent nature of Australians.

I discovered a small on-going exhibition of photographs by Anna Bienvenu in the town of Milawa near Bright. Her pictures initially show the blackened stems of the gum forests, charred by fire. She was drawn to the monochrome landscape soon after the fires had burned out, returned when there was snow on the ground to further accentuate the graphic quality of the images and has since fallen into a rhythm of returning to the same locations as they have gradually greened up. Initially surprised by local interest in her work, she has now set aside a room at the shop of the family business to display and sell the resulting images.

I also met with Genevieve Wright of the Department of Environment and Conservation and Mike Doherty of the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Gen has been working for a number of years in the Alpine and Kosciusko National Parks recording landscape change. In a round of fixed point monitoring just a few years ago they photographed 160 sites in the uplands to establish a long term monitoring project. When all but two of these

were completely burned through in wild fire events, a few months later, the initial disappointment of apparently lost fieldwork suddenly became a prime opportunity to monitor natural recovery in subsequent years and this is now their focus.

I spent a day in the field with them in the Brindabellas, just outside Canberra on what I can only describe as a typically Scottish day. Forget visions of hot sunny days, blue skies and sightings of nonchalant kangaroos. This day was cold, very wet and shrouded in thick mist; there were however no midges and it provided an opportunity to see the rephotography process and particularly the digital equipment, stretched to the very limit.

While clearly, the 'meat' of their data is in the form of botanical survey, the images provide such an instantly readable script of the changes taking place, that it is inevitable that they will form the major part of the future reporting and any public dissemination.

A few conclusions:

I returned from my travels in early December brimming with experiences of the rephotographic process, with examples of how professional photographers, professional scientists and ordinary people were using photography to record change.

The trip has already influenced the way I work, the way I think, the way I take photographs and the way I present and describe them. I have a greater enthusiasm for the subject and a better understanding of the process of engaging the public and various means of disseminating the results.

As an individual with budget constraints, I will be forced to take a pragmatic approach to the creation of lasting archives and the use of digital media. The principles and risks, the limits of each system, I have grasped and will be able to pass on appropriate advice to organisations establishing such systems.

What my travels have unwittingly achieved is a global link between the various institutions and individuals involved in retake photography. I was intrigued for example that Mark Klett and Ray Turner had never met; one an artist, one a scientist. They both had enormous respect for the others' work and sent warmest regards to each other through me … but they live a little over an hour apart and probably have a lot to share with each other.

There are already moves afoot for an International workshop to be held in Vermont in 2007 and a book collating examples of rephotographic works from around the world has been proposed to the Cambridge University Press by the USGS and looks like going ahead.

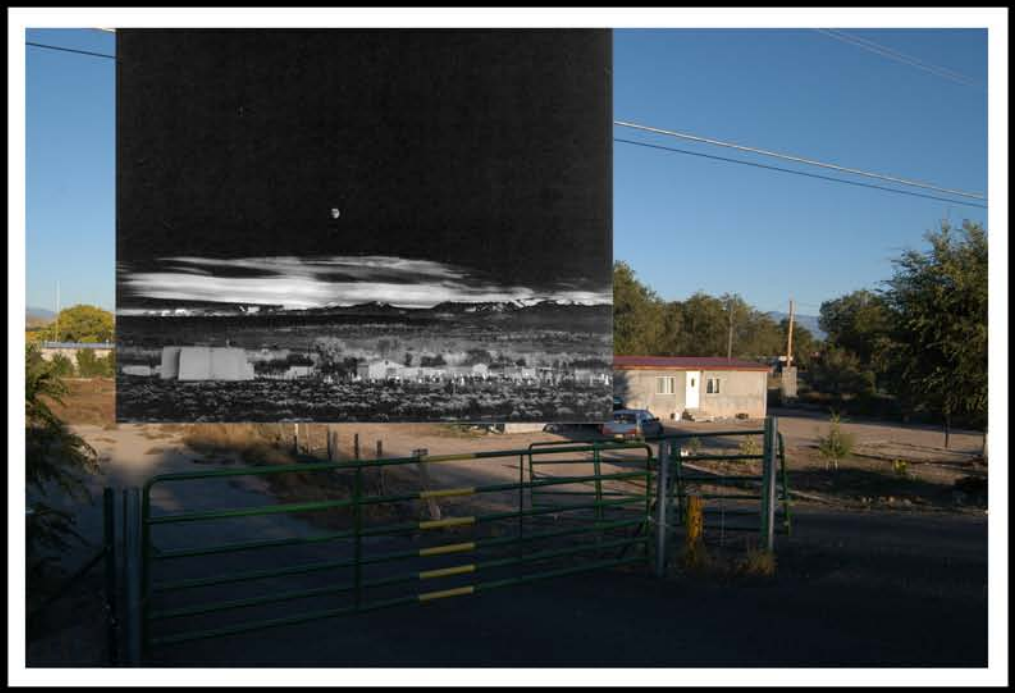
I think perhaps one of the things that is overlooked by rephotographers is that while they are busily engaged in the process of repeating the images of historic photographs, there is also a requirement to continue contemporary documentation, to lay down a baseline for future rephotographers and I shall begin to try to address

some of this in the future; perhaps initially by considering the criteria needed for the baseline.

As for dissemination, my plans to establish a project back here in the Cairngorms are slowly moving forward. I have a web site under design at the present. I have delivered two talks to camera clubs and have a third scheduled in May to talk to the local history society. The subject of the latter is simply 'Recording Change with a Camera' and I hope by that time to be able to use the opportunity as a sounding block for detailed proposals.

Annex 1 **The Fellowship itinerary**

21st September	**Edinburgh - London - Boston - Burlington – Boston**
28th September	**Boston – Calgary – Waterton Lakes – West Glacier – Calgary**
3rd October	**Calgary – Victoria (Vancouver Island)**
6th October	**Victoria – Seattle**
8th October	**Seattle – San Francisco – Berkeley – Yosemite – Chico - San Francisco**
15th October	**San Francisco – Denver - Taos – Tucson – Phoenix**
30th October	**Phoenix – Los Angeles – Hawaii**
5th November	**Hawaii – Sydney**
9th November	**Sydney – Townsville**
15th November	**Townsville – Brisbane – Toowoomba – Brisbane**
19th November	**Brisbane – Canberra – Melbourne – Canberra**
1st December	**Canberra – Sydney – Hong Kong**
4th December	**Hong Kong – London – Edinburgh**



Moonrise, Hernandez, New Mexico, by Ansel Adams, 1941
set in the context of 2005. Peter Moore