

## S N A P F R O Z E N

TUESDAY, OCTOBER 21

### Anticipating White

I've been looking at a photograph I took in Explorers Cove three years ago. It spotlights a small iceberg that's been trapped off that coastline for ten, maybe eleven, years. In past times, icebergs such as this one would have run aground for the winter season then been released back into open waters when the spring thaw came. These cycles are no longer predictable, however - this iceberg may in fact never leave its accidental berth; its sentry-like presence has all the elements of silent protest, a wordless testament to our environmental misdemeanors.

WEDNESDAY, OCTOBER 22

### Anticipating White

After a helicopter flight back to our field camp yesterday, Sam wrote to say that the sea ice is looking treacherous - choppier and more chaotic than it's been for years. Traversing the moat area will be tricky on skidoos; it's likely we'll have to make the many treks out to dive sites on foot. This will add an extra level of challenge to our season's work, but he sounds undeterred, is typically steady and resolute.

At this point, five of our group are already down there - 'there' being McMurdo Station. They're crating up food and water supplies, bedding, lab equipment, vehicles, etc... for the coming weeks. Four of us from the 2005 season are returning - Sam, Steve, Henry and me; this year, we'll be enjoying the additional company and skills of Molly, Sally, Shawn and Cecil. Four women plus four men augurs well for a lively six weeks.

My piles of gear are laid out and ready to pack – amongst the woolen gloves and Icebreaker long-johns are a flotilla of bamboo boats I've spent months making for this trip, a batch of 'bibulous' lab notebooks, watercolour pencils & crayons, ink and brushes, my indispensable laptop, cameras x two, a field recorder and an unavoidable tangle of cables, plugs and chargers. A week or so ago, Sam and I crated up Katherine's porcelain bell vessels and Christina's sculptural Euclidian forms, so these are already down there, waiting to begin their collaborative dance.

Can you tell? I'm practising the energy of restraint.

FRIDAY, OCTOBER 25

### Lining the stomach of the C17

C17 planes are like giant metal whales. Strapped to the inside of one, it's not hard to imagine how Jonah might have felt, the entire contents of his host's stomach in view. It's all there to see; pipes, cables, lining, wiring, electronics, engine components, emergency pulleys, winches, ropes... not to mention a small village-worth of cargo - and us, a raggedy group of red- and blue-jacketed folk, strangers eying each other up, cautiously acknowledging kinship.

Three years ago, I wept when I left the White Continent, not knowing then that I would return; I have no words for how it felt to see it come back into view.

## **SATURDAY, OCTOBER 25, 2008**

### **Pegasus**

We landed on Pegasus Airfield just after 5.00PM. For the time being I'm without a clock, not that this will matter too much. Kronos and Kairos cohabit contentedly down here.

McMurdo has been a blustery, blurry place today, the landscape shuddering and buildings coming in and out of focus since about mid-morning. (Condition 2 at times - bracing, invigorating stuff). The slightly maddening thing is that the helicopters have been grounded for another day. Next opportunity to fly out to New Harbor? Monday.

Most of today's been taken up by various refresher courses one's duty-bound to go through before being allowed back into the field - survival/safety training, ice reading, helicopter protocol, environmental codes specific to both here and the Dry Valleys... We pitched tents, demonstrated our 'knot and hitch' tying skills, revisited procedures like ice drilling, ice wall construction and radio communications.

Over dinner in the big communal galley, I enjoyed a stimulating conversation with a geologist named Allan. He's working with a team of four in the deep field, a hundred kilometers North of our camp in Explorers Cove. Tomorrow evening, a film's being shown documenting the work these men have been doing over the past decade or so. *Ice Men* apparently focuses as much on the social dynamics of their field group as it does on their paleontological research. They recently discovered plant fossils that confirm that Antarctica was once fertile tundra area. I'll wait till I've seen the movie before commenting further - wouldn't want to make inaccurate statements that I'll have to retract or apologize for later!

I also talked with Allan about notions of silence and what 'the space between' might mean in a place such as this. He's agreed to do a recorded interview with me sometime over the coming few days, before we all head off to our far-flung places.

## **MONDAY, OCTOBER 27, 2008**

### **Open-air Theatre**

It's 9.17PM and I'm sitting in Crary lab's upstairs library where a wide sweep of windows overlooks the Sound and the distant Transantarctic mountains. The sky is up to high-jinks

tonight.

As far as Antarctica goes, McMurdo is for me a place of transition rather than arrival.

So saying, one of the gifts of this time is being in the company of like-minded zealots. Time and again, I'm reminded of the potency of conversation. Our world is pretty much built on it; it has the power to transform ideas into actualities, visions into reality.

We woke to settled weather, by the way, so it looks likely that we'll be flying out to Explorers Cove after lunch as scheduled, not returning to McMurdo till our season's work is done. I've been out with my camera, piecing together an unconventional portrait of this place; there's evidence everywhere of weather, age and history. As with every face, it's the blemishes, scars, dimples and frown-lines that tell the stories of life lived so I've focused in on the gritty, largely overlooked sides of the town, wanting to capture something of the beauty that can be found in & amongst the largely ignored surfaces and corners of this hard-working place.

Who was it who said *Nature is as alive and glorious in rust as it is in a rose... ?*

THURSDAY, OCTOBER 30, 2008

### Leaving the ice to speak for itself

It's 1.40AM and I've just come in from my first walk at Explorers Cove.

The wind is making its presence felt tonight - it's not quite catabatic, but fierce enough to wire the atmosphere inside and out. This instant wildness is strangely comforting and – dare I suggest this - feels like a welcome home.

Work preparations are well under way; the divers have been into the water a couple of times already, testing scientific gear and underwater camera equipment. The three scientists - Molly, Sally and Sam - have been getting the lab set up with microscopes, experimental arrays, cores, etc... so that when the first samples are brought up from the sea floor, we'll be ready to start sifting and sorting. And what have I been up to? Amongst other things, I've cooked, tended the divers and stitched dozens of small sample bags out of fine mesh and fishing nylon.

MONDAY, NOVEMBER 03, 2008

### Nomad

A lone Adelie wandered purposefully off-track, heading inland for a good hour or so before stopping, re-assessing the situation and turning back. This sort of 'lost penguin' incident seems to happen fairly often. Mummified Adele penguins and Weddell seals are common sights hundreds of kilometres up the Dry Valleys. What is it that causes them to go so obviously wrong - does their ordinarily reliable instinctual 'navigation system' malfunction? Are they spurned by their waddle? (I just learned that a group of land-based penguins is aptly named a 'waddle.') Or are these rebel birds pushing the parameters of what it means to be

'penguin,' independent characters breaking the rules of their community group in a bid to assert their autonomy or forge their own route?

It's difficult not to anthropomorphize these endearing creatures.

## **TUESDAY, NOVEMBER 04, 2008**

### **Repertoire of sounds**

I should be fast asleep (it's 1.47AM) but instead I'm rugged up and listening - through headphones - to various sound recordings I've collected this past week. I wouldn't ordinarily choose to do this - plug myself into my computer pre-sleep - as I prefer to tune in to the sound (or absence of sound, depending...) that accompanies these icy nights. But for a few hours tonight, the generator's on, and, much as I appreciate its invaluable contribution to camp life, the noise it makes knocks my ions about and its loud rumbling never fails to feel like a rude intrusion.

So, what have I been recording - and what am I listening to?

The wind. Wordless walks across a myriad textures of ice. The scrunch of crampon-ed boots on volcanic grit. McMurdo's telephone wires being taunted into song by high winds (you wouldn't believe the harmonics). The unearthly notes of a gas cylinder's hum. The clonk and split of chipping ice. The clear call of Katherine's bell vessels as they encountered this frozen landscape for the first time. Bubbles rising from 60 feet below the ice to effervesce then burst across the surfaces of dive holes. Helicopter rotors. Flags flapping. Wind. Breath. Silence.

Explorers Cove has re-drawn itself since my first visit. Today's ice is a different substance with a different character. The intricate calligraphy - those multifarious and meticulous patterns the ice delivered up in 2005 - has made way for wide, gestural marks. Detail and subtlety has been replaced by crude, spontaneous impasto. Volcanic grit has taken over, making the sea ice brown and grubby as opposed to milky white, glass-like or transparent turquoise. It's chaotic and messy but I like it like this every bit as much.

The ice will become increasingly challenging to walk across as the season progresses. The transition moat is already starting to thaw in places, making walking whilst carrying precious cargo such as foram samples, scallop arrays and fragile porcelain pieces a breath-holding experience. It's as if the ice wants us to approach our journey mindfully, to walk the distance from 'here to there' like a meditation. This is something I am trying to do. It's an exercise in concentration, application and surrender all at once.

## **SATURDAY, NOVEMBER 08, 2008**

### **Welcoming change**

There was, of course, jubilation in camp on 5th when the US election results came through – a big 'YES' to Barack Obama being welcomed to leadership by our world community. With

him comes a sense of hope, faith and restoration. The many - *many* - things that went so dramatically, alarmingly awry during the Bush administration will now have a chance to heal.

Today is Saturday 8th and it's our turn - New Zealand's - to take to the polls. I felt a pang of tender-heartedness at the NZ Herald's mention of the fact that by 4.00PM yesterday, 2 979 366 citizens had enrolled to vote; almost 95% of those eligible. Many of us will be holding our breath - there is, as there must be, a mix of anticipation and apprehension pre-results. Our process and outcome is not a straight-forward one, either, but people's proactivity when it comes to voting is in itself to be celebrated.

4 hours, 3 minutes and 31 seconds till voting closes...

## **SATURDAY, NOVEMBER 08, 2008**

### **Sleeping with mountains**

The past few days have been spent largely away from camp, with skidoo trips South from Explorers Cove, across uninterrupted miles of sea ice towards the Herbertson Glacier where we're in the process of melting a new dive hole. This is pristine Antarctica; one would be hard-pressed to find a more stunning site to pitch a tent.

Getting the dive hole started has not been a straight-forward process. Moments away from breaking through the 18 - 21 feet-thick ice into water - six drill flights down - the flights froze into the slush and would not budge. So, it was back to the drawing board to come up with a recovery strategy. Fortunately, this is a resourceful team of highly-experienced men and women for whom no task seems too daunting. A plan of action's been implemented and the 'melt' is on track again. Exercises such as this one away from home require round-the-clock monitoring, so we're scheduled to come out in pairs for eight to twelve hour shift, to keep an eye on things. We have to check the Hotsy (a large coiled copper immersion heater) every four-six hours; routine-wise, it's not unlike having a hungry newborn in the family.

Travel to and from the site is exhilarating, but tough on the body. Our old skidoos are noisy, heavy vehicles to drive and the terrain, hard, bumpy and unforgiving. But, oh my goodness - the beauty!

At times like this, work is grit, sweat, dance, journey and reflection.

## **SATURDAY, NOVEMBER 15, 2008**

### **Ice diving & The Jesus Effect**

'The Jesus Effect' is a term divers have adopted to describe the dramatic shaft of light that streams down towards them from the hole on the surface of the ice. The atmosphere and environment below the ice (dives here are to an average depth of 80 feet or 23 metres) is

often ascribed cathedral-like characteristics - the ice above, a vaulted ceiling; the light, diffuse; the strange weightlessness and slow-motion movement of the swimmers almost other-worldly.

Dramatic light beams are not a common underwater occurrence. Everything depends on the angle of the sun in relation to the dive hole - it needs to be pretty much directly above in order for light to penetrate the 12 - 20 feet-thick shaft of ice.

## **THURSDAY, NOVEMBER 20**

### **Science, Art & ArtScience**

It's time I outlined our group's research objectives for this season. Chances are this will ask for more than one installment. As the title of this post suggests, several disparate-but-strongly-related research strands are being followed, one of the ultimate intentions being to find both the distinguishing features and the connection points between each one of them so that the relationships between them can be woven together to form a more comprehensive overview. People are working independently, collaboratively, across specialty areas and disciplines. Each person in Team G-093 brings something unique and essential to the mix; as a group, we'll be able to accomplish more together than we could if we stood alone. So far, it's proving to be a season of rich pickings.

I can't possibly go into all the intricacies of the various projects here, but I'll start by synthesizing the way I understand things so far, drawing additionally on spoken or written input from the three Principal Investigators - Sam Bowser (*cell biologist*), Molly Miller (*geologist*) and Sally Walker (*taphonomist*).

In a nutshell, the group's driving observation has to do with the fact that while the Antarctica sea floor is teeming with life, there's virtually no record (body fossils or burrow bioturbation\*\*) available for interpretation through the Cenozoic sediment sampled just offshore. What processes cause this disjunct? How can the Explorers Cove sediment and contained life be used to elucidate the Cenozoic environment recorded in cores?

Experiments are being conducted in and around Explorers Cove to determine (1) if shells and skeletal material dissolves, and if so, how fast? (2) to identify specific characteristics of New Harbor sediment, its mode of delivery to the sea floor and the rate of sedimentation (important when it comes to interpreting the relative density of animals and shell material, and assessing the rate and record of bioturbation, and (3) the rate of bioturbation by infaunal animals\*\*\*. The group's intention is to evaluate these determining characteristics in different areas and by so doing, to ascertain whether concerns (1), (2) and (3) differ from one area to the next. (This explains the need for multiple dive holes, and for there being three major sites at reasonable geographical distance from each other).

Additional work is being done using the information gleaned from the above key questions, including the development of a mathematical model that effectively simulates the sedimentary record, thereby allowing for comparisons to be made between new material and

existing sequences found in cores.

There's also an outreach component that runs adjacent to each of these projects, which is where art comes in (1) in its own right as a conceptual medium and method of communication, (2) in its collaborative ArtScience capacity where it plays a powerful advocacy role on behalf of science and re: the Antarctic continent in general, and (3) as a bridge-builder connecting the dots between research areas and disciplines. Ideally, in this context, art (in various forms) will act as a catalyst making art more accessible to scientific audiences, and at the same time conveying the wonders of science to a wider creative public.

This is rather a loooooong post. I'll pick up where I left off just as soon as time and camp activity allows. Before I go, though, here's a brief glossary of terms in case it's helpful. I've certainly had to refer to the dictionary *often* during this field season!

\* *Taphonomy* is the branch of paleontology that deals with processes of fossilization.

\*\* *Bioturbation* is the disturbance of sedimentary deposits by living organisms.

\*\*\* *Infauunal* refers to the animals living in the sediments of the ocean floor or river or lake beds.

~ *Foraminifera* are ancient uni-cellular aquatic organisms of which there are four main types: naked, thecate (soft-walled), agglutinated and calcereous.

## WEDNESDAY, NOVEMBER 19

### Drumming up a storm in the Dry Valleys

The weather is forecast to do an about-turn tomorrow; we've been told to expect Condition One by late-afternoon, with zero visibility in places. Hmm. Another opportunity to practice spontaneity. Unpredictability's a given down here. Helicopter schedules and field plans change from one hour to the next. Steve, Henry, Cecil, Shawn and Sally are set to fly to Bay of Sails tomorrow morning, intending to put in a full day's work, but things may well look different come flight pick-up time.

Shawn, Sam and I were the reconnaissance trio flown across to Bay of Sails earlier in the week. After scouting the bay for a suitable dive site then scouring the 'moat' area for scallops (*Adamussium colbecki*) for Sally and distinctive clues about sediment deposition for Molly, we pitched our tents out on the sea ice, using ice screws and nylon cord to anchor the pegs and stays.

Bay of Sails is an eerie length of coastline eighteen kilometres North of Explorers Cove, approximately halfway between Gneiss Point and Spike Cape. The sea ice there is the seductive texture of mill-made, cold-press paper and ranges in colour from translucent sapphire to robin's egg blue to crazy, crystalized albumen. And it's young - the sea ice, that is - just a year old, as opposed to the craggy, ten-year old, sediment-laden ice that fronts our camp. Spectacular pressure ridges heave and *sound* like cracking ribs all the way along the Bay of Sails' shoreline.

In terms of transition/threshold features, Antarctica's pressure ridges stand out for me as some of the starkest yet most dynamic of liminal spaces I've experienced in any landscape.

They're a powerful expression of the ongoing tussle between the elements – in this case, open sea ice and rock-strewn land.

The wider landscape in this area is vast and haunting; there's the grand Wilson Piedmont Glacier whose tidy South Eastern flank takes on the appearance of a patient white mountain, then goes on to show its true nature by lurching to an abrupt, chaotic end. We counted nine icebergs, poignantly frozen mid-sail. Were they captured on their way into the bay, or on their way out? There's something lost and desolate about them, as though, like weary old ships, they've run out of steam and dropped anchor, or simply ground to a standstill. This icescape brings to mind an old boats' graveyard. The bergs' shapes play havoc on the eye, exaggerating and shrinking the already-ambiguous space according to the way light strikes their surfaces.

## WEDNESDAY, NOVEMBER 26, 2008

### Blue, blue & blue

Antarctica is commonly referred to as The White Continent - aptly so, of course. But, this is a place of many colours - brown, black, coral, rust and lilac to name a few - and there are more tones of blue here than could be made to fit into any paintbox.

This morning, I re-read a poem I'd written long before I knew this place and I would meet. It seems so relevant now, especially given this season's work with its dive focus and my own happy preoccupation with boats, blue and the elements -

Blue is  
vagabond amongst colours.  
Reckless, untamed, it disembodies  
whatever becomes caught in it.

Once, I brushed the surface  
of a boat blue. Within a moment  
there were the ocean and sky - no longer  
a boat in view.

And have you heard?  
Blue has an appetite  
for monsters; stampeding and bellowing  
like shapes

fall into themselves, slip  
down the throat of blue  
into water the inside colour  
of glass.

We're in the process of bringing our season to an end. In amongst all our usual activities, the focus has been very much on drawing a circle around our respective projects and packing up various pieces of now-redundant camp gear so that it can be retro-ed back to McMurdo for storage or processing. There have been samples to sort, sediment, lab equipment, paper boats and porcelain pieces to package up for safe transport home, etc...

## **MONDAY, DECEMBER 08, 2008**

### **Late wind**

During the last days of this season in Explorers Cove, I found myself hankering for two things - falling snow to soothe the parched Dry Valleys' terrain, and a wind storm; the first for the soft edges it would bring to both landscape and psyche, the second to imprint on us one more time, the raw textures, timbres and sheer power of this place.

Snow came as bidden and fell, in giant, quiet flakes.

Twenty four hours later, the wind objected and growled down the valley. There was something rakish and adolescent about it. Wind more in the mood for play and tantrums than outspoken brute force, it brought with it the customary kit-bag of noise, protest and dramatic display; the fresh snow was chalk in its hands. Within minutes, all evidence of neat-and-tidy white had been smudged, rumped, erased.