

LOUISE CRISP

## *Guthega*

*Under these stars no more water flows. By daybreak the absence of the river will have reached down into the gorges and all day the sand will dry its colours in the bare sun. These are the ghosts of rivers, night-flowing vines of water, rivers of dreams.*

Beverley Farmer, 'Land of Snows'<sup>1</sup>

### **Flying over Mt Kosciusko**

From an aerial perspective it appears as if two giant snakes slid in opposite directions, tails (artificially) entwined over the Great Dividing Range: the Snowy and Murray Rivers inextricably linked.<sup>2</sup>

### **Late snow (February 2005)**

In early February late snow had fallen on the Snowy Mountains and a few weeks later remnant patches still lie across the upper valley of the Snowy River under Mt. Kosciuszko. Two old people sit calmly on a rock watching as I cross the river at the stepping-stones below Charlotte Pass. The water flows swiftly over the middle stones. Walkers had fallen in and they were waiting for the next one.

I follow the concrete path up to cliffs circling Blue Lake then out the bare stony ridge into the mist. The foot-track becomes a flattened line along the exposed back of the Main Range and nothing else to be seen bar the steepest fall either side of the Divide. White wet cloud shifts and sinks barely shoulder height around me. Mount Sentinel appears to the northwest above a deep, forested valley – turbulent source place of winds that rise and buffet. I walk half blinded through the thick fog up Carruthers Peak. A wooden signpost is jammed in the rocks. Sky walking: no shelter this side of the Cape of Good Hope. I concentrate on the weight of my boots meeting frozen ground. Far below Lady Northcote Creek snakes down through *Sphagnum* bog and *Carex* fen pools to Lake Albina then vanishes over the rim of the

canyon into the fall of the Murray. Snow patches hang off the walls of the steeply carved valley and over glacial boulders scattered across the basin slopes. Snowmelt seeps and trickles from every crevice and gully.

The narrow track cuts across the precipitous western face of Mt Northcote then to my relief crosses back over to the broader eastern slope of the Divide. Approaching Mueller's Pass deep snowdrifts cover the track. I tromp through the icy crust. Then the mist swirls away from blue sky, to reveal the headwaters valley of the Snowy River.

**Cool-skink, *Pseudemoia pagenstecheri***

Beside the track a tiny skink clings half-curved in the sun to a tilted granite slab. It runs up the orange speckled stone. I stand utterly still. The air vibrates in waves out over the distant valley. I stare. Tussock grassland shimmers under blue sky. I almost overbalance. Dream lizard from years ago when first writing and walking the Snowy – someone had shown me an engraving hidden on the underside of a boulder. In a high alpine valley, refuge from drought blighted plains.

**Minimum Operational Level (February 2008)**

Black and white choughs fly back and forth across the empty concrete spillway of Eucumbene Dam, squawking and whistling above me. I walk down to the lip of the spillway. Through the high wire fence, I can see west into the massive rock face of the dam wall rising one hundred metres above the valley floor. A trickle of water drains out at the base of the dam into the weedy bed of the absent Eucumbene River.<sup>3</sup>

I drive down the zigzag track to the bottom of the dam wall for a closer look. Through a concrete V-notch at the front of a tin shed a tiny rivulet pours into a slimy gutter. A locked wire gate crosses the huge open mouth of the tunnel portal under the dam wall. A powerful roar rises and falls from deep inside the tunnel. When is a river beside itself? When it rages at its own absence.

I drive back up to the crest of the dam and turn off onto a dirt track going down the inside of the wall to a pontoon floating on the lake. A few silent boats are tied up alongside. Dead trees range the bank of the bay opposite. The water level is very low and the air hot and breathless. Down the red pebbly hill a line of numbered white crosses descends into the water, marking the level of the emptying reservoir.

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In an old black and white photograph a fisherman casts his line into the broad stream of the Eucumbene downstream at Kalkite, now beneath the waters of Jindabyne Dam. The man has his back to the photographer but his arms are raised to the generosity of the river.

### **When the bogs and fens dry out** (*March 2009*)

A blue winged parrot is perched noncommittal in a snow gum at the edge of the track, half-hidden among bluish-green leaves. My sister and I leave the Hydro Summit Road to Mt. Kosciuszko a few kilometres beyond Charlotte Pass and head down through the heath and snow grass towards the upper Snowy. At the base of the hill we jump a small stream flowing through overhanging banks and climb a narrow spur to avoid hummocks of *Sphagnum* moss and candle heath fringing a dried up fen, the mud cracked and whitening. Alpine tuft-rush spreads in rings across the bed of a dry pond and wallaby-grass has intruded onto the edges of the barren surface. After years of drought it's the driest I've seen the uplands.

Pushing through dense swamp heath we reach the Snowy at the junction of the headwaters. The river is low but there are pools two or three metres deep and intensely clear – we can see down to the dark honey coloured cobbles. Looking upstream, the main branch of the Snowy disappears around a bend up into Etheridge Gorge, towards its source under Mt. Kosciuszko.

We follow the smaller branch to the right continuing upstream from pool to pool, west towards Muellers Pass. In the deeper pools the light plays greenish yellow through the water. Millions of years of spring snowmelt floods have sculpted the granite bedrock.

### **Water skink *Eulamprus tympanum***

A creature watches us: (shiny brown with black speckles) raised on its elbows looking downstream over a ledge of water-smooth rock towards the deep pool at the Snowy junction.

We go past, heading upstream beneath a high spur running out from the main range: a broad treeless moor. I enter a pool, late sun striking crag wallaby-grass, white seed heads gently brushing granite boulders lit by the low sun behind. Restorative waters.

### **Dust storm** (*November 2009*)

Icebergs have broken off the deep snow pack along the west bank of the Snowy River and fallen into the water in dusky-pink geometric shapes. The dust storm in September that halted air traffic in Sydney has coated the Alps in red inland dirt. Where the blocks have cracked open, clean white snow, like the inside of an apple, is exposed. In a still pool upstream from the bridge, the pink and white angular floes are reflected in perfect mirror image. From the bank of the river Rams Head North is a small dark hat low on the dirty white horizon.

I go downstream across tussock grassland of snow wallaby-grass keeping well clear of the sodden ground and fen pools along the river. Black Etheridge Gorge roars with snowmelt before I can see it – hanging out off a rock ledge – greenish icy water pours out of the Gorge down to the Snowy junction, racing towards the drop-off below Charlotte Pass before it disappears out of sight en route to Spencers Creek above Illawong and Guthega. All the catchment bears towards Illawong.

### ***Preliminary Snow Investigations***

After a steep pinch up out of Blue Cow Creek the track from Guthega village follows an easy grade above the river for a couple of kilometres. Swathes of fragrant alpine mint-bush brush my legs as I follow the wending track up to Illawong Hut. I cross the Snowy on the swing bridge and make my way upstream to the deep pool at Spencer's Creek junction. Up on the main range the pale stony face of Mt Twynham watches over the Snowy, racing on late spring snowmelt. The river pours out of the narrow gap above the junction into a wide course, flattening ribbony grass on an island midstream, sweeping through the junction and on downstream through a chute of granite boulders below Illawong, widening again through the big pools and riffles below the Snowy stream gauge before it swirls around the last bend above Guthega Pondage and vanishes.

### **Dry throat of silence**

I walk out onto Guthega Dam wall: Perisher Range aqueduct empties noisily into the dam at the eastern edge of the wall, Falls Creek aqueduct spills in on the other side. Upstream the drowned valley of the Snowy River backs up into Blue Cow Creek and Guthega River. I look downstream over the dam wall straight into the speechless throat of the empty riverbed: the dry white stones of the extinguished Snowy River move silently northeast towards Munyang

Power station. In macabre harmony dead white snow gums burnt in the 2003 bushfires float down the ridges and across the ghostly dry river.

### **River Piracy** (*February 2010*)

At Island Bend the Snowy is low but running steadily as it comes out of the ranges under a red cliff: Mungyang upstream must be generating. Skirting back around the abandoned Hydro camp, I leave the car at the locked gate and hike in to the dam wall. The track ends in a high wire gate fenced to the edge of the dam wall fill. Sign: *No access*. I crawl around under a bit of turned up fence, the gravel slips out from underfoot and spills 50 metres down the embankment but I swing off the wire and come up onto the road on the dam side. The Snowy valley is very deep and narrow here. Black and silver the dam water barely ripples under a dark cloudy sky hanging low over Bar Range. Diggers Creek aqueduct empties directly below me. Across the other side of the dam is the concrete intake tower – the ‘bottomless’ plughole where all of the upper Snowy is dropped 120 metres down a shaft into the Snowy-Geehi tunnel to run un-naturally west, out to Geehi Dam and the Murray – under the mountain range the river flows in darkness away from itself.

From the high dam wall I can see a few kilometres downstream. Only a rusty trickle emerges from the base of the wall. In the dry riverbed sculpted boulders and bedrock lie like the bones of a thousand dead – scapulas and femurs. I rock hop down the wide stony bed to the bridge on the access road around to the dam control structures, passing a few slimy seepage pools as the remains of Diggers Creek run into the empty Snowy.

### **South Lagoon, Coorong, SA** (*April 2010*)

North of Salt Creek I turn off the highway onto a rough track and bounce over the grassy dunes towards the South Lagoon. The track ends at a locked gate at the edge of a pink salt lake. As I walk over the last grassy rise, rabbits and western greys hop off along the lakeshore. There are no sheep. A wide curve of muddy beach runs down to the shrunken lake. What are the ‘roos drinking? I dip my fingers to lick cautiously – salt. The high yellow dunes of Younghusband Peninsula opposite appear like a mirage over the still waters of the Coorong. It’s difficult to estimate distance: the steep sand hills and bands of scrub shift in the glistening light reflected off the water by thin cloud. The South Lagoon is sulphurous: brownish froth bubbles around limestone rocks in the thick greenish shallows. On the broken

limestone point red fossilized stumps of ancient dead trees are exposed near the water's edge – looking northwest up the drying lagoon, there's an eroded stump with the stretched open mouth of a being in pain.

All the headwaters of the Snowy River are drained into the Murray and even so the Murray lies dying.

### **Break** (*Summer 2009-10*)

Heavy rain starts falling in the upper Murray-Darling Basin.

### **Spill** (*September 2010*)

Barmah Lake is flooded and at the breakaway above the Narrows the Murray River is spilling into Lake Moira. Down the stream flow of floodwater through a gap in the trees, Lake Moira looks happily pink beyond the reflections.

### **Tauwitcheree** (*October 2010*)

My partner Tom and I paddle up the North Lagoon of the Coorong to Tauwitcheree barrage. For the first time in a decade, Murray River water is running through the opened barrage from Lake Alexandrina into the Coorong. Our kayaks rock on the swirl of freshwater pouring through the raised gates – flocks of birds: Fairy terns, pelicans, cormorants, and larger Caspian terns dive into a feast. We paddle up to Tauwitcheree Island then across the Lagoon. As I come around the headland to Panmuring Point five emus slowly step from the narrow sandy beach into the Coorong. They sink down into the freshwater, squatting with only their long necks visible: bathing; then each bird stands, shakes its heavy wet feathers like a shaggy duster and strolls back out to dry land. Green slime hangs in sheets from dead tea-trees along the sandbank but the noise of freshwater rushing through barrages is joyous.

In the bay beyond Gnurlung Point we pull the kayaks up onto the sand. From the top of the first dune Lake Alexandrina to the north stretches like a brown sea to the horizon. We walk across the high hot dunes of Younghusband Peninsula to the Southern Ocean past acres of stark white shell middens lying in dune hollows.

The next day we drive around Lake Alexandrina to Narrung ferry *en route* to Goolwa and the Murray Mouth. Narrung, named by Ngarrindgeri, for the big sheltering she-oaks that

once grew here. By the jetty a mudlark and willy wagtail have nested in the sole remaining old tree, a weeping willow. The earthen barrage between Lake Albert and Lake Alexandrina that had been built during the drought so water could be pumped into drying Lake Albert to cover the acid sulphate soils has been removed. The brown floodwaters of the Murray are flowing swiftly through pale *Phragmites* down the Narrows into Lake Albert. Re-connected.

**Election** (*early November 2010*)

The big outlets at Jindabyne Dam are releasing 3,000 megalitres a day in a plume of white spray curving seventy metres into the air. It's the Victorian election campaign and John Brumby the Victorian Premier is in Jindabyne NSW to announce a major water release to the Snowy River to a clutch of selected journalists bussed in to the dam wall.

A few days later I arrive in Dalgety, downstream from Jindabyne. The water is flowing wide under the bridge, filling the broad riverbed in an imitation of the old Snowy in the black and white photographs on the walls of the Iona Café. A few locals and travellers come down to look. There's quiet excitement at the sight of so much water. That night at the Buckley's Crossing Hotel, talk among the locals turns to concern about the fate of nesting water birds and the platypus colony upstream from the camp park – the female platypus with young inhabit nesting burrows for the next few months and whilst they build an air tunnel a metre or so above water level no-one knows if this will be sufficient for them to survive the man-made flood or if the young will be drowned in their burrows. The water was released with no weather warning of rising river levels: there had been no thunderstorms for weeks and no rain imminent. The scale of the release is equivalent to the daily spring snowmelt flow that occurred in the Snowy below Jindabyne before the dam was built but that was more than forty years ago. The river creatures would have no species memory of such a flood.

Canoeists from the NSW River Canoe Club ride the river from Jindabyne Dam through Beloka Gorge to Dalgety repeatedly over the four days of peak releases, rescuing floating blue-tongue lizards on their way down.

I go upriver to Waterford, climbing up to a high rocky outcrop overlooking the Snowy. Below me the river makes a deep swishing sound as it swings out of Beloka Gorge and around the big bend heading downstream past El Paso.

What sound does a big river make when permitted to flow for a brief time? It sighs deeply.

### **Fault line** (*early November 2010*)

*You could prove to me that the deepest rivers are, in fact, no rivers at all.* (Rosemary Waldrop).<sup>4</sup>

That afternoon while the Snowy is in high flow below Jindabyne Dam I drive further up the river into Kosciuszko National Park to Island Bend Dam. Looking up the valley from below the dam the high concrete dam wall completely blocks the river (and half the sky). No matter how many times I revisit this place I am shocked at the utter deprivation of water. I follow the dirt road five kilometres downstream and cross the Snowy at the bridge just above the Gungarlin River junction. Here the Snowy riverbed abruptly changes direction to run southeast down a fault line nine kilometres to Jindabyne. Through the dry boulders a weak trickle of water runs under the bridge.

### **Burrungubugee** (*early November 2010*)

After a steep haul uphill out of the Snowy, the fire-trail follows the contour around the north side of the spur; there's a very deep dry gully below me. At a shady corner there's the sound of running water but no creek. I look among the scrub, on the topside of the track – there's a small, gated weir across a little tributary stream. Every last drop!

#### **Mountain Dragon** *Tympanocryptis diemensis*

Scuttle in the curled bark on the side of the track to Burrungubugee weir. The russet-ochre diamond pattern: startling, secreted among dry leaves. The creature is very still, trusting the illusion of its non-presence and ...spiky scales.

I come around the bend face to face with Burrungubugee River leaping down black rocks from the hill above me. (At a friend's house in Jindabyne I had seen a photograph of her son canoeing down the falls just upstream from here, riding a near vertical flood.) But the rushing river is completely truncated at a concrete weir. It simply vanishes before my eyes. Below the weir exposed dry bedrock drops into the deep gully. I hold on to the rail of the metal steps leading up to a platform over the weir. The sudden utter absence of the living river from below the weir is like witnessing a be-heading. I climb up onto the side of the intake chamber<sup>5</sup>, a huge concrete box with metal bars at one end descending into the water. The river is pounding and thrashing inside the box like a tortured creature.

How do you apologise to a river? You weep.

**Gungarlin weir** (*early November 2010*)

I follow the contour track from Burrungubugee weir around the hill to the Gungarlin River. Snorkel air vents out of the buried aqueduct thrum beside the track. The valley opens out, the afternoon sun lights on the reddish rock face of the hillside opposite. I come around the spur to another concrete weir: from bank to bank, the weir wall stops the river. Upstream the Gungarlin River cascades out of the gorge, emerging around a high rock outcrop jutting over the river, it tumbles through pools and side channels before its last descent into the weir. River *lomatia* and mountain tea-tree grow to the edge of the clearest water I've ever seen. I cross below the weir: a triangular pattern of extinct river flow is indicated by a gap in the burgan and *Cassinia* that have colonised the dry riverbed.

I clamber upstream along the east bank of the river towards the big rock outcrop. Royal *grevillea* flowers curl their bright red fingers among the boulders. I inch my way around the north side of the outcrop leaning out over the fast river longing to see up into the gorge but the river turns around a rocky bend. From the lie of the land it may be only a few kilometres upstream before the steep valley opens out at Botherum Plain. I check the map. I am very tempted to go on. The fall of the river and the upper valley from which it comes are deeply inviting.

Back at the weir wall I walk out onto the metal platform over the barred mouth of the aqueduct diverting the Gungarlin River back to the Burrungubugee Intake.

The big rock outcrop upstream is a powerful presence, watching over the last pool of the Gungarlin, its entry into darkness. Guardian at the place of the river's descent to the underground.

Below the weir the dry riverbed drops into a deep shaded gorge and I follow it down towards its junction with the dry Burrungabugee but other than slimy pools of seepage the river has gone. The gorge becomes impassable and I climb back out up a scree slope to the track and head back down to the Snowy.

***Echuca and Kerang bracing for Floods*** 16 January 2011

*The SES says a total of 34 towns have been affected in Victoria, mostly in the north and northwest as record rainfalls have swollen rivers and flooded communities... AAP*

‘Six inches overnight at Khancoban’: Hydro worker at Munyang Power Station

### **Munyang** (17 January 2011)

In the morning when I drive up through the Park past Island Bend to Guthega, Munyang Power Station is silent. A small stream, the diminished flow of the Snowy from the catchment below Guthega Dam, is trickling under the bridge to the power station.

When is a river not a river? When thunderstorms become irrelevant.

I pull up on the roadside just before Guthega Dam. Through the white sticks of dead snow gums aromatic cascade everlasting spills white flowers down the slope into the dry riverbed at the base of the white concrete dam wall.

On foot, I follow the Illawong track upstream beyond the dam: to walk where the river still flows. As I come over the spur through the snow gums, the Snowy is running fast around the last big bend before it enters the pondage. Yellow *kunzea*, billy buttons and munyang (yam daisy) are flowering across the hillside.

In the afternoon I drive back down past Munyang, swirling waters more than a metre deep are pouring out of the power station, rushing around the concrete groin and downstream to Island Bend Dam. From the surge tank two hundred and fifty metres above the power station two huge white pipes convey the headwaters of the Snowy River, collected from Guthega Dam down the spur to the power station. The two 33 MW generators are rumbling inside the building at the edge of the river.

When is a river not a river? When a season is forced into a single day.

### **Perisher**

Below Munyang I turn off the road at Perisher Creek and follow the dirt Link Track up to the weir under Blue Calf Peak. Another dry riverbed! Above the weir Perisher Creek is a clear alpine stream splashing through overhanging river tussocks and heath. Runs and ripples and pools. There are large slightly rounded granite rocks in the creek. Something flaps into the water off a low rock, then another: Mountain galaxias leaping off their sunning rock. Irony of the extinguishing weirs: they protect the remnant native fish from feral trout predation.

## **Gungarlin weir**

As I come around the track to the stony absence of the dry riverbed below the weir wall I can hear the river running upstream. Rain over recent weeks has lifted the water level and the river is flowing strongly but nothing flows over the weir.

There is a strong sweet scent from the creamy flowering river lomatia growing on the riverbanks and on the island above the weir. I swim in the deep pool under the big rocks. The river is so fast I cannot cross but keep close to the edge in the icy water. When I'm dressed again I make my way back downstream along the west bank looking for toeholds in the rock face to scramble across to the steel platform. As I jump down off the platform on to the grass below the weir there is a sudden subtle shift in the late afternoon light, as if the sun had dropped unexpectedly behind a hill. I look for the sun but it's still high above the range. What has altered? I make an effort to control my fear: I pick up a heavy stick and walk with the pretence of confidence back to the vehicle. Has my luck left me?

## **Burrungubugee Bridge** *(18 January 2011)*

Intensely clear mountain water runs over the gravelly riverbed below the wooden bridge, sun light glitters on the water. I listen inside the sound of the stream, the is-ness of water: inexplicable joy. Born by a creek, I grew up hearing the sound of water trickling among stones – the song before I could speak. The river bounces downstream around boulders and under thick overhanging burgan, descending rapidly out of sight around a bend towards the falls and irrevocably to the weir.

Up the track from the bridge two old wooden posts mark the gateway to the overgrown track up to Burrungubugee Hut. The track winds along above the river up through a gentle montane valley, swathes of vanilla lilies, scaly buttons and pink grass-trigger plants spread among the soft tussocks. The track ends at the old hut site, a grassy hollow back from the river and an ancient snow gum off to one side – a perfect campsite. In the distance the valley runs up under the bare peaks of Bulls Peaks on the main range.

What is the longing for headwaters country but for a place beyond diversion.

## **Murray Floods** *(12-13 February 2011)*

*The once-parched River Murray system is full to overflowing, with water levels crossing the South Australian border not seen since the early 1990's.*

The Weekend Australian

### **Kosciuszko**

In 1944 the NSW Government passed the Kosciusko State Park Act, five years later the Commonwealth established the Snowy Mountains Hydro-Electric Authority.

*But it is exceedingly regrettable that those responsible for the original plan should have considered it necessary to include in their scheme of operations this unique Area, and to violate for material ends a region that should have been preserved as a sanctuary. And no less blameworthy are those of us who without protest acquiesced in the destruction. One thing is certain, that outraged Nature will take her revenge...*

(W.H. Browne, 1952: viii)

In June 2002 the Snowy Mountains Hydro-electric Scheme was corporatised and Snowy Hydro Ltd established as a company owned by three shareholders: the Victorian, NSW and Commonwealth Governments

### **Snowy Water Licence**

In May 2002, the NSW Government issued Snowy Hydro Ltd with a 75-Year Snowy Water Licence, to collect, store and divert all the waters of the Snowy Mountains Scheme. Limited environmental flows were scheduled to be released to the Snowy River below Jindabyne Dam<sup>6</sup>, as well as sections of the upper Snowy River (above Jindabyne Dam) in Kosciusko National Park. Environmental releases to the montane Snowy River below Guthega Dam were required from 2007/08 and below Island Bend Dam from 2009/10.<sup>7</sup> In May 2013 limited increased flows were at last delivered to the Snowy below Island Bend via weirs on two small tributary creeks but not from the major Snowy tributary, the Gungarlin River, as required by the Licence. To date no increased flows whatsoever had been released to the Snowy River below Guthega Dam.

The Eucumbene and Burrungubugee Rivers (and many smaller Snowy tributaries) are not scheduled under the Licence to receive any environmental flows, ever.

## **Basin Plan**

The Snowy River catchment contributes almost half of the total 2,400 gigalitres (on average) diverted each year from the Snowy Scheme west to the Murray-Darling Basin for irrigation.

In 2007 the Australian Government responded to severe environmental problems in the Murray-Darling Basin river system caused by decades of over extraction for irrigation, by passing the Commonwealth Water Act (the Act). The Act required the Murray-Darling Basin Authority to develop a Basin Plan which would identify environmentally sustainable diversion limits for all Basin water resources. However, the Snowy Scheme, which is one of the most reliable water resources in the Murray-Darling Basin, was excluded from the Basin Plan.<sup>8</sup> In addition, according to the Act, the Basin Plan may not be inconsistent with the Snowy Water Licence, even though the Snowy Water Licence permits Snowy Hydro Ltd to continue to divert massively unsustainable volumes of water from all the rivers of the Snowy Scheme. This includes not only the Snowy River catchment but also the headwaters of the naturally westerly flowing rivers, the Murray and Murrumbidgee<sup>9</sup> and its many tributaries, purportedly addressed by the Basin Plan.

Thus Snowy Hydro Ltd, jointly owned by the NSW, Victorian and Commonwealth Governments, effectively operates outside those governments' own commitments to sustainable water management as detailed in national environmental legislation such as the National Water Initiative (2004) and the Commonwealth Water Act (2007).

## **When the black sallee flowers on the Gungarlin (5-6 March 2011)**

Tom and I cross over the still waters of the Eucumbene River at Nimmo Bridge and head up the fire trail to Nimmo Hill. From there it's half an hour down a rough track under high 132KV power lines back into Kosciuszko National Park and down to the Gungarlin River bridge. We walk downstream in the late afternoon – the river is deep and swift but very clear, I can easily see to the bottom of the long pools. To the southeast, beyond the pale yellow grassland of Botherum Plain, Kalkite Gap is visible against the sky. We make camp under the flowering black sallee.

Next morning the sun shines into camp. Tree creepers nip up and down the black sallee and thornbills fly through the pale yellow flowers. Tiny seed caps and stamens fall on our camp.

We cross the Gungarlin bridge and follow Botherum Plain Fire Trail downstream beside the river. The Gungarlin disappears around a low hill then reappears out of the candle-barks and granite boulders above a shallow ford. From a low knoll we can see far across the grassland to Kalkite Gap, the track flows towards the Gap. We paddle through the icy water at the ford, stepping out into the huge gleaming plain. The last of summer everlasting and bluebells are flowering among the tall kangaroo grass and tussocks. From a high bank at a sharp bend in the river we look down into a startlingly deep wide pool. We wander across the plain, far apart and in silence.

The Gungarlin River flows in a series of long deep pools and riffles southeast through the bowl of the plain, before it turns, in a big bend at Botherum Creek, southwest towards the Snowy. At a long straight pool I look back upstream: the river appears to vanish into grassland and the range beyond. The sun flickers on the surface of the water, shining poas hang over the pool, scraggly heath leans down the banks into bright green *Carex* at the water's edge, dark-brown and golden cobbles on the riverbed fit closely together. The shape of the land is intimately woven by the necessity of stream flow: every element implicated in a living river. Exquisite country!

**Cunningham's Skink** *Egernia cunninghami*

Two skinks face each other on adjacent granite boulders in the middle of Botherum Plain. Spiny steel-grey scales, they lie along the ridge of pale lichen covered stone. Fleck patterns of scale and stone. Kangaroo grass stalks shift in the breeze. One skink looks up out over the plain, turning its head towards me, then they slide down the curve of the boulders into a gap and disappear one after the other into the darker shadow. Waiting for the humans to pass.

We follow the pools downstream through the plain to the end of the open country. The river descends into a narrowing wooded valley under the high hill of the Hydro trig point. An old track leaves the end of the plain and rounding a spur leads down to another river flat. Tom waits in the sun on a rock. I follow a horse pad into the trees descending from river flat to river flat until the steep sides of the valley meet the riverbank and I'm at the edge of a pool at the very top of the gorge. Rounded reddish boulders float in the river at the edge of the sky: this is where the river tips over into the gorge above Gungarlin weir. Looking straight out to the south, in the distance I can see the end of the range overlooking Island Bend and down into the Snowy valley. Gungarlin weir is only a kilometre or two downstream from where I stand. Today I choose not to walk there.

What is a river without water? An accusation.

We walk back through the heavenly plains, following the Gungarlin upstream from pool to pool to our camp under the flowering black sallee.

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## NOTES

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- <sup>1</sup> In *A Body of Water* (St Lucia: University of Queensland Press, 1990).
- <sup>2</sup> The Snowy Mountains Hydro-electric Authority, funded by the Commonwealth Government, constructed the Scheme 1949-74. The Scheme captured 99% of the headwaters of the easterly flowing Snowy River and diverted it west for hydro-electricity generation and irrigation in the Murray-Darling Basin. In total 12 rivers and 71 streams in the Snowy Mountains are affected by the Scheme
- <sup>3</sup> The Eucumbene River is the main eastern tributary of the Snowy River. Since Eucumbene Dam was completed in 1958 all the waters of the Eucumbene River are diverted west through the Eucumbene-Tumut Tunnel under the mountains to the Tumut River, a tributary of the Murrumbidgee. The headwaters of the Snowy River captured at Island Bend Dam are also diverted to Eucumbene Dam via the Eucumbene-Snowy Tunnel for storage and later return, to be diverted via the Snowy-Geehi Tunnel to the Murray.
- <sup>4</sup> *The Reproduction of Profiles*, (New Directions Press, New York, 1987) quoted by Marjorie Perloff in *Wittgenstein's Ladder*, (University of Chicago Press, Chicago, 1996:206).

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- <sup>5</sup> From the intake chamber the Burrungubuggee River is emptied down a deep shaft into the Eucumbene – Snowy Tunnel and diverted to Island Bend Dam and then south-west under the mountains to Geehi Dam and the Murray.
  - <sup>6</sup> Staged increased flows of up to 21% of annual natural flow (ANF) to be delivered by 2012 to the Snowy below Jindabyne Dam, and up to 28% ANF post-2012. However approximately half the volume of water entitlements acquired by Water for Rivers, the intergovernmental authority established in 2002 to obtain water savings in the Murray and Murrumbidgee systems to off-set the environmental flows to the Snowy, are low reliability water. It's unlikely therefore that the Snowy below Jindabyne Dam will ever regularly receive more than 15% ANF.
  - <sup>7</sup> Snowy Hydro Ltd is required to deliver environmental flows to the montane sections of the Snowy by modification of the Perisher Range and Rams Flat aqueducts below Guthega Dam; and Gungarlin River aqueduct below Island Bend Dam.
  - <sup>8</sup> The Murray-Darling Basin Plan was signed into law by the Federal Minister for Environment Tony Burke, 22Nov 2012.
  - <sup>9</sup> Even though the Act requires the Basin Plan to identify sustainable diversion limits (SDLs) for these rivers, they are irrelevant because they can only apply to the extent that they are not in conflict with the provisions of the Snowy Water Licence. In addition, River Murray environmental water (funded by the Commonwealth under the 2002 Snowy agreements) is now accumulating at 70 gigalitres (GL) per year in Snowy Scheme storages. However since 2002, the NSW Government has directed Snowy Hydro Ltd to make only one release of 38GL in 2005/06. As of Spring 2014, a total of 370GL is owed the Murray.