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‘Once more into the breach, dear friends …’ – the ongoing battle for the Cooper

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Introduction

Kati Thanda-Lake Eyre, the immense ephemeral salt lake at the heart of this dry continent, continues to haunt and fascinate the Australian consciousness. The lake itself is the dominant feature within a huge network of smaller fresh and saltwater lakes, swamps and sand dunes of the north-east deserts of South Australia and a vast expanse of channels, floodplains, swamps, dunes and ephemeral lakes of the fabled Channel Country of Queensland (Fig. 17.1). The whole region responds with spectacular growth and beauty in the rare seasons of extensive flooding sufficient to reach and fill Lake Eyre, as memorably documented by the late and much lamented ABC film crew, Paul Lockyer, Gary Ticehurst and John Bean

Fig. 17.1. The spectacular Channel Country of the Lake Eyre Basin rivers floods and drives a boom in numbers of animals, plants and other organisms as well providing a livelihood to many pastoralists who are committed to protecting this magnificent river system (photo, R.T. Kingsford).

(Lockyer 2012). As any resident of the region knows, these big floods are the exception rather than the rule. The region endures extremely dry conditions for much of its existence. The occasional life-giving flows of the rivers towards Lake Eyre are absolutely vital to survival in this uncompromisingly harsh though beautiful environment. Any threat to the integrity of these flows must be viewed with alarm.

Such a threat continues to loom large. The Liberal National Party Government in Queensland (2012–15), under Premier Campbell Newman, dismantled Wild River protections for the Channel Country and altered water legislation, allowing oil and gas resources companies and irrigation access to the Channel Country's water resources, wetlands and floodplains (see Chapters 20–22). The Lake Eyre Basin has become another battleground for two great competing drives of modern civilization: the drive for growth which has already devastated the Earth's ecosystems and biodiversity, versus the desire to respect, conserve and wisely use those remnants of natural beauty and biodiversity still left in our diminished world.

Seventeen years ago, people of Cooper Creek, with the scientific and conservation communities, successfully fought a battle to protect the 'Cooper' from the damaging effects of a proposed large-scale cotton irrigation development (see Chapter 7). The Newman Government's intention to open up the Channel Country rivers to irrigation, and to unconventional oil and gas development and the destructive effects of hydraulic fracturing ('fracking'), now means the earlier battle must be fought again, this time on the wider front, encompassing the three major rivers of Lake Eyre: the Cooper, the Diamantina and the Georgina Rivers. Hence the title of this chapter, 'Once more into the breach', evoking Shakespeare's portrayal of Henry V's rallying speech to the English outside the walls of Harfleur (Bate and Rasmussen 2007). I provide a brief history of the first battle for the Cooper, highlighting the critical role of politics in the struggle to protect the rivers of the Lake Eyre Basin.

Proposed Currareva irrigation development

On 25 September 1995, a consortium of four people from the Macquarie River, which supplies the Macquarie Marshes, a New South Wales wetland which had already incurred great social and environmental costs (see Chapter 16), announced their intention to develop a large irrigated cotton farm on the Currareva property, on the floodplain of Cooper Creek, ~12 km from Windorah (Fig. 17.2). The development, by what was known as the Currareva Partnership, was outlined in their Initial Advice Statement, proposing the growing of 3000 ha of cotton, with an annual harvest of 47 000 ML of water from the Cooper: 42 000 ML of new licence applications and 5000 ML of existing licences registered to the property. Less than 10% of Currareva's existing licence allocation had ever been used, by a previous owner to irrigate a small (50 ha) stock fodder crop. The major portion of the existing licence allocations remained as 'sleepers', largely unused (see Chapter 20), until the Macquarie Valley consortium proposed to fully activate them. Other proposed infrastructure included the necessary large water harvesting pumps, a large diversion channel (700 m long and 9 m deep) to a pump station and 25 000 ML of shallow storage (ring tanks) on the floodplain (over 5 km^2, 4.5 m deep). Their proposal foreshadowed possible future extensions of the project to horticulture and aquaculture, accompanied by additional demand for water.

Fig. 17.2. The Currareva waterhole, part of Cooper Creek near the town of Windorah, was to be the proposed site for a massive irrigation development involving the pumping of water into large dams or ring tanks to irrigate cotton (photo, R. T. Kingsford).

To achieve reliability of water supply from the highly variable flows of the Cooper, the consortium also proposed to take water at very low flows: 400 ML/day from flows of only 1400 ML/day (29% of the flow) and reaching maximum pumping capacity of 920 ML/day at flows of only 8000 ML/day (11.5% of the flow). It became immediately obvious to the people of the Cooper that such an extraction regime would destroy the connectivity, afforded by low flows to downstream drought refuge waterholes.

Cooper's Creek Protection Group

People from the Cooper and Diamantina Channel Country, and indeed all who formed the audience at the public meeting which introduced the irrigation proposal, were horrified at the prospect of destruction of their beloved Cooper by relentless water demand and by the toxic chemical pollution associated with irrigated agriculture. The Barcoo Shire Council relied on the Mayfield waterhole, immediately downstream from Currareva waterhole, for the Windorah town water supply and was understandably concerned. The local community immediately formed the Cooper's Creek Protection Group, with members comprising Traditional Owners, workers, station managers, pastoralists, town residents, local business owners and people with an interest in or connection with the Channel Country and the Lake Eyre region. Its goal became the preservation of the ecological integrity and biodiversity of the Cooper system's rivers, wetlands and landscapes, recognising that the region's human communities and sustainable industries depended on the maintenance of this integrity. Since its inception, the group has actively promoted a policy against irrigation, intensive agriculture

Table 17.1. Descriptive statistics of Cooper Creek annual flows in GL (= 1000 megalitres), mean, median, standard deviation, coefficient of variation (Coeff. var.) and coefficient of skew (Coeff. skew) at the Currareva and Nappa Merrie gauges, showing the extremely high variability and skew.

Gauge[a]	Annual flow (GL)			Coeff. var.	Coeff. skew
	Mean	Median	Std. dev.		
Currareva	3150	1690	4260	1.35	3.08
Nappa Merrie	1430	240	2890	2.02	3.37

[a] https://water-monitoring.information.qld.gov.au and McMahon *et al.* (2008) , Currareva records 1939–1988 (incomplete), Nappa Merrie records 1949–2005 (incomplete)

and any activities threatening the integrity of landscapes, rivers, wetlands and biodiversity of the Cooper in particular and the Lake Eyre system.

Basic hydrology

People of the Cooper intuitively recognised the intimate dependence of the system's ecology on water flows. A fundamental understanding of the Cooper system required some knowledge of annual flow statistics (Table 17.1), available from the only two gauges for the Cooper's downstream reaches in Queensland, Currareva and Nappa Merrie, with the Nappa Merrie data supplemented for the years 1970–2005 by data from the Cullymurra gauge in South Australia, a short distance downstream. Nappa Merrie is the site of the famous Burke and Wills Dig Tree, ~400 km downstream from Currareva, the other gauge.

It was immediately obvious that there were high transmission losses between Currareva and Nappa Merrie and very high annual variability of flow, as well as very high skew introduced into mean values by extreme rare events, such as the 1974 flood period (Table 17.1). If the 1974 event was excluded from the data, the mean annual flow at Currareva would be reduced by ~500 GL or 500 000 ML. For such skewed data, the median is a much better indicator of central tendency. High transmission losses reflect the extreme aridity of the environment and the geographic scale of the system, distributing flow into extensive areas of channels, floodplains and wetlands which receive the flow and effectively prevent much of it from continuing downstream. Three large ungauged tributary systems (Kyabra Creek, Wilson River and Warri Creek) also contribute flow between Currareva and Nappa Merrie and so the measured transmission loss underestimates true loss. The proposed annual demand identified for irrigation for Currareva (47 000 ML), amounted to 19.8% of the median flow at Nappa Merrie and 2.8% of the median flow at Currareva, substantially more than estimates using means.

Water volumes measured in megalitres (ML) tend to lack concrete reference to most people, except irrigators and hydrologists. We needed to make the potential impact more meaningful. A useful basis for comparison was to imagine an 'idealised' waterhole 60 m wide across the water surface, 5 m unvarying depth and 40 m wide across the bed (bank slope of 1 in 2). Such a waterhole would need to be 4 km long to store 1000 ML. Even such a waterhole 1 km long (holding 250 ML of water) would be a significant drought refuge. The proposed annual irrigation water demand at Currareva would have filled such a waterhole 188 km long. Even more alarming was the evidence from the Murray–Darling Basin that

irrigation, once established, would lead to an ever-increasing water demand (see Chapters 14–16). The people of the Cooper needed no further evidence to convince them of the extreme threat posed by the Currareva irrigation proposal.

The Cooper alliance

Early in the campaign to protect the Cooper, a strong alliance developed between the Cooper's Creek Protection Group, the Australian Conservation Foundation, the Queensland Conservation Council and the Australian ecological science community. The alliance received strong support from people of the other Channel Country rivers, all the way to Lake Eyre, and from old ringers, drovers, outback station people generally, bush poets and songwriters, as well as disgruntled residents of cotton irrigation areas (e.g. Bourke, Narromine, Goondiwindi and Dalby), Macquarie Marshes Environmental Landholders' Association, Paroo River Association, tourism operators and tourists. There was widespread interest and support from the Australian public and strong media interest from ABC Radio and TV, from ethnic broadcaster 2WEB Bourke, from some commercial radio and TV stations, and from some of the major print media.

The pro-irrigation lobby

Forces actively promoting the proposed Currareva development comprised the four Currareva partners, the Queensland Cotton Industry Policy Council, the Queensland Irrigators' Council, and a small group of irrigation aspirants from upstream subcatchments. Interestingly, the peak cotton industry body, the Australian Cotton Foundation, remained neutral in the debate. It was generally assumed that they did not welcome the additional negative publicity likely to be generated by the Cooper cotton proposal while the Australian Cotton Foundation was attempting to promote a 'cleaner' image for the cotton industry. Recognising the unwillingness of the Australian Cotton Foundation to enter the debate, the Cooper's Creek Protection Group decided to focus negative publicity on irrigation broadly, rather than on cotton, avoiding any publicity battle with the well-resourced Cotton Foundation.

Department of Natural Resources

The Currareva proposal and development application triggered the first Water Management Plan (now called a Water Resource Plan) in Queensland. This required stakeholder consultation, under the *Water Act 1989*. This was achieved by setting up a 'Cooper Creek Advisory Panel', including individuals from the Cooper's Creek Protection Group, South Australian Department of Environment and Natural Resources, the South Australian Arid Areas Water Resources Commission, the Queensland Department of Natural Resources, the Queensland Department of Environment, the Barcoo Shire Council, the Conservation Council of South Australia, the Queensland Conservation Council, as well as the Currareva proponents and their allies from the Queensland Irrigators' Council and the Queensland Cotton Industry Policy Council. The process was conducted by the Queensland Department of Natural Resources. Hydrological modelling of Cooper flows was done by an expert group within the Queensland Department of Natural Resources.

The Minister for Natural Resources (National Party), Howard Hobbs, refused repeated calls from the Cooper's Creek Protection Group, the conservation bodies and the Environment Department for ecological science input. It became obvious that Minister Hobbs and the National Party Government openly favoured extending irrigation development to the Cooper. It was also clearly apparent that a powerful subsection of departmental culture at the time endorsed the minister's views.

Windorah scientific workshop

The Cooper alliance's strategic response to the minister's obdurate stance on ecological input was to organise what may well have been the first scientific meeting ever held in a small outback town – the Windorah Scientific Workshop: An Ecological Perspective on Cooper's Creek, 3–6 September 1996. Over 100 people attended, including conservationists, interstate bureaucrats, natural resource managers, local community, pastoralists and, of course, scientists who presented papers from a range of disciplines focusing on aquatic and arid zone ecology (Angela Arthington, Stuart Blanch, Stuart Bunn, Peter Davies, Martin Denny, Richard Kingsford, Jerry Maroulis, Grant McTainsh, Mike Olsen, Jim Puckridge, Julian Reid, Brian Roberts and Brian Timms).

The workshop made an important recommendation in an open letter to the Queensland Government, supported by a summary of ecological considerations. The recommendation stated that no irrigation or other large-scale water extraction should be allowed for the Cooper or other Lake Eyre Basin rivers, given the aridity of these desert systems, their very high flow variability, the role of rivers and wetlands of the Lake Eyre system in sustaining biodiversity through periods of boom and bust, and the degradation already evident from irrigation development in the semi-arid Murray–Darling Basin. This recommendation and abstracts of papers were published (Noonan 1996).

The recommendation was also endorsed by scientific bodies: the Australian Society for Limnology, the Institute for Wildlife Research (University of Sydney), and the 5th International Ecological Conference, Perth, September 1996. Later in September 1996, 127 horsemen and horsewomen from the Channel Country staged a mounted rally, supporting the workshop recommendation and protesting the government's intransigent attitude. The workshop and the rally attracted widespread media interest, which reflected poorly on the government's stance on the issue.

The politics of protection

The National Party Government partially capitulated to the combined forces opposing the Currareva project, shortly after September 1996 announcing that it would not allow cotton irrigation on the Cooper. However, its duplicity was revealed in its Draft Water Management Plan of April 1998, which proposed 22 500 ML of new water harvesting licences, as well as a suggestion to force the activation of 'sleeper' licences on the Cooper – the two largest of which amounted to 10 000 ML, split between Currareva and its neighbouring property Hammond Downs (see Chapter 20). The Queensland Department of Natural Resources and the minister were clearly pursuing a development agenda. The department's hydrological

modelling indicated significant downstream effects, low flows being particularly vulnerable to proposed low-threshold extraction conditions.

Had it not been for a change of government after the state parliamentary election of 1998, the Draft Water Management Plan would have been adopted and an irrigation industry would have been established on the Cooper. From 1998 to 2012 (14 years), the Labor Government in Queensland reversed the direction chosen by the National Party and implemented several important legislative instruments for protection of the Channel Country rivers. The Minister for Natural Resources, Rod Welford, introduced the new Water Management Plan for the Cooper in September 1999, ruling out any new irrigation development or water harvesting, and preserving natural flows almost in their entirety. Existing entitlements (e.g. town water supplies, riparian stock and domestic rights) remained.

Subsequent Ministers for Natural Resources, Stephen Robertson, Kate Jones and Vicki Darling, confirmed and strengthened these levels of protection. This direction was slightly altered with the development of a Water Resource Plan for the Georgina–Diamantina system, which allowed 10 000 ML irrigation entitlement (see Chapter 20). This resulted primarily from local pressure to allow for diversification and the support of the water agency, a common theme in the promotion of irrigation development. Otherwise the Georgina–Diamantina Water Management Plan conformed to the 10-year review, which strengthened protection in the Cooper system, with important new controls of overland flow water available under the revised *Water Act 2000*.

In 2011, the greatest level of protection was achieved when the Cooper, Diamantina and Georgina Rivers were declared Wild Rivers under the *Wild Rivers Act 2005* (see Chapters 20–22). Wild River declarations were important legislative instruments which could coordinate and trigger protections for declared rivers and specific areas within an array of other legislation, potentially affecting sustainability, including the *Water Act 2000* and its Water Resource Plans, the *Sustainable Planning Act 2009*, the *Environmental Protection Act 1994*, and the *Mineral Resources Act 1989* (see Chapters 20 and 21). Much of the regulation within the *Wild Rivers Act 2005* and Wild River declarations controlling mining and petroleum resource activity was coordinated through corresponding provisions of the *Environmental Protection Act 1994*. Importantly, the Wild Rivers legislation locked in regulatory controls over water take in the Water Resource Plans. The *Wild Rivers Act 2005* and declarations afforded stronger levels of protection according to ecological sensitivity of the river, wetland and floodplain environments in particular areas than other legislation: High Preservation and Special Floodplain Management Areas (see Chapter 20). These regulations controlled or prohibited potentially damaging developments such as intensive agriculture, intensive animal husbandry (feedlots) and, most importantly, mining in the designated areas. They did not impede traditional pastoralism or other industries such as tourism.

The coordinated protections afforded under the *Wild Rivers Act 2005* were not achievable under piecemeal application of instruments, available under other legislation. Sadly, the state election of 2012 heralded the end of these protections, when the Liberal National Party (2012–15) of Premier Newman, Deputy Premier Seeney and Minister for Natural Resources and Mines, the Honourable Andrew Cripps, introduced a raft of legislative changes repealing

the *Wild Rivers Act 2005* and declarations (see Chapters 20 and 21), amending the *Water Act 2000* to give unlimited water to mining and petroleum exploration and production as a statutory right, and severely curtailing democratic rights to object to mining and resource industry activities. The Western Rivers Advisory Panel, set up by Minister Cripps, was largely a sham, with local stakeholders such as the Cooper's Creek Protection Group, conservation organisations and South Australian interests denied representation. However, even this panel, containing some pro-development people, advised in favour of strong protection for the rivers of the Lake Eyre Basin (Western Rivers Advisory Panel 2013), particularly protection from unconventional gas extraction (CSG and shale gas). This advice was ignored by Minister Cripps and his Cabinet colleagues when they unleashed their unabashedly pro-mining (petroleum resource development) legislative agenda. The unfortunate consequence is that currently the rivers, wetlands, floodplains and all landscapes, water resources and ecosystems that make up the Lake Eyre Basin are facing their greatest threat ever. This is the threat of shale gas development involving the process of hydraulic fracturing.

Conclusion

While important protective instruments, such as the Wild River declarations, can be overturned at will by growth-obsessed governments, the future of our natural environment is fragile. Meanwhile, it is vitally necessary to continue the battle:

> In peace, there's nothing so becomes a man
> As modest stillness and humility,
> But when the blast of war blows in our ears,
> Then imitate the action of the tiger;
> Stiffen the sinews, conjure up the blood,
> Disguise fair nature with hard-favoured rage;
> Then lend the eye a terrible aspect;'
>
> Shakespeare, *Henry V*, Act 3, Sc.1, lines 3–9

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