

## Review

William Beinart and Luvuyo Wotshela (2011)  
*Prickly Pear: the social history of a plant in the Eastern Cape*. Johannesburg: Wits University Press

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Viewed from the vantage point of a plant species, *Prickly Pear: the social history of a plant in the Eastern Cape* offers insights into cultural landscapes, the history of colonial science, and the adaptive capacity of post-colonial scientists to shifting values about how natural resources ought to be managed in South Africa. By taking this approach, Beinart and Wotshela anchor the claim that ‘it is impossible to imagine the contemporary world without understanding the scale and significance of plant transfers’ (6-7). Indeed plant transfers have been ‘fundamental in demographic and economic growth, great agrarian complexes and in the expansion of empire and settlement’, as well as agrarian social history (think of maize, sorghum, cotton, sugar, etc) (6-7). Although plants are not actors in their own right, they travel through complex ecological conduits on an uneven global terrain – over spatial and racial borders – oscillating in meaning between useful crop and alien invader. Basing their account in the social and historical milieu of the Eastern Cape, Beinart and Wotshela characterise a central contradiction constructed around the prickly pear (*optunia*) as follows: it is 1) ‘the basis for a market turnover of millions of Rand with important contributions to the livelihoods of rural communities’ (32) and, 2) a ‘scourge for farmers’ with implications for scientific expertise and how the environment is regulated (4).

The social and colonial history of *optunia* begins in the Americas where it was used in the production of red dye, one of the first major exports by the Spanish in Mexico. By the eighteenth century, *optunia* had travelled

with pastoralists to the far reaches of south African settlement, especially to water-stressed regions such as the eastern Cape where it was used as a drought fodder. Tensions concerning this plant first emerged in the form of colonial prejudice. White farmers vented scorn against rural black people who adopted a 2000-year-old Khoisan fermentation technique for brewing honey beer from *optunia*. According to farmers, the consumption of this brew made workers unfit for their ordinary duties and increased instances of stock theft. Using a contemporary vignette however, Beinart and Wotshela make the interesting counter point that ‘the process of brewing and drinking *iqhilika* [prickly pear beer] underpins neighbourhood sociability’ in rural areas. Associated social problems like alcoholism aside, *iqhilika* ‘keeps money circulating amongst the poor people within the township rather than going straight out to retailers or tavern owners who sell factory manufactured, branded liquor’ (34). For rural women the profits of brewing can provide a major source of income comparable (or better than) with the pay of domestic servants, cleaners or similar manual labourers.

Not only did *optunia* construct ‘naughty natives’, it also attracted the archetypal colonial agricultural scientist whose expertise was directed to mitigate impacts on livestock. The swallowing of *optunia* thorns caused swelling in the throats of animals. Scientific and agricultural management activities in the first decades of the twentieth century were informed by a particular techno-scientific worldview, the norms and standards of which coincided with the post South African War reconstruction period and the formation of the Union. In general terms this period saw a move to the use of scientific expertise in decision-making about natural resource management. Statewide legislation to manage the invasion of *optunia* emerged, most notably the Weeds Act (42 of 1937), which facilitated public works programmes to eradicate the plant. By mid-1947 the state had made sufficient progress to transfer the responsibility for eradication to private landowners. By 1950, three-quarters of wild prickly pear had been destroyed using a combination of mechanical clearing and biological control.

Government officials failed to cost any potential losses to people that might be caused by complete eradication of *optunia*. The debate about the costs and benefits of eradication was conducted primarily among white officials and farmers. African opinion was not sought. Therefore ‘public’ perceptions of *optunia* were shaped by an official elite rather than by poorer rural communities who made extensive use of the plant (beyond just the brewing of alcohol). Ironically though, popular interest in the shape of

Afrikaner heritage revival festivals in the early twenty-first century have helped to expand the scope for innovative thinking about the plant and its fruit, illustrated in the form of a 'potent spirit' called *witblitz* ('white lightning') (195).

'Extending beyond the intellectual inversions central to post-colonial critique', *Prickly Pear* contributes to building a 'more open curiosity' (Beinart, Brown and Gilfoyle 2009: 414) about the natural sciences by exploring the capacity of later generations of South African scientists to adapt to shifting values about how resources ought to be managed. From the 1970s to 1990s 'there was a striking change in the views of specialists related to the changing balance of power and knowledge in the new South Africa, which marked a period of fruitful experimentation and conceptual innovation amongst experts' (164). In a broad sense, scientists began to pay more attention to the challenge of poverty alleviation and priorities of 'development', drawing strongly on a global and local rhetoric of development – which emphasised the social and ecological benefits of *optunia*. This meant for example recognizing the fact that *optunia* 'constituted the basis of impoverished people's diets during certain months of the year as a nutritious vegetable rich in proteins and vitamin A and C with high levels of potassium, calcium and phosphorous' (Brutch cited on 172). More recently, scientists have promoted 'cactus pear' (a spineless variety of *optunia*) as a plant that would 'come of age in an era of global warming and climate change'. The plant was now seen as 'potentially the ultimate multi-purpose crop, linked to soil conservation, poverty alleviation, food security, rural development and environmental sustainability'. Scientists have contributed to the reinvigorating of economic interest in *optunia* as a 'source of biofuels, fruit juices, cosmetics, and natural medicines' (211).

While *Prickly Pear* in part follows an analysis of colonial science as the application of coercive policies and technical failures in the past, it does not read as an 'anti-developmental, anti-innovation perspective about science and technology'. As noted, it builds on perspectives that aim instead to establish a 'more open curiosity about colonial and post-colonial science and in interdisciplinary research' (see Beinart, Brown and Gilfoyle 2009: 414). In the view of this reviewer, *Prickly Pear* provides fertile ground for future scholarly work about the present moment of knowledge production, facilitated to a large extent by transnational conservation non-governmental organisations which emerge in South Africa ostensibly to test, monitor and provide feedback on government tools aimed at managing natural resources.

Relevant to the capacity building of contemporary scientific knowledge is that *Prickly Pear* speaks to what Hattingh (2001) calls an ‘ethics of conceptual responsibility’ in relation to categories of ‘alien, bio-invader, weed, useful plant and crop, which are clearly shown to be fluid’ (213). This point deserves more careful consideration by South African research institutions such as the DST-NRF Centre of Excellence for Invasion Biology, whose scientific work promotes pro-poor public works programmes such as Working for Water. These programmes, like recent approaches to *optunia*, may be viewed as located with an articulation of privatised knowledge and the continued process of transforming previously uncapitalised land into units of commercial interest – now articulated within the ethos of a ‘green economy’.

## References

- Beinart, W, K Brown and D Gilfoyle (2009) ‘Experts and expertise in colonial Africa reconsidered: science and the interpenetration of knowledge’, *African Affairs* 108.
- Hattingh, J (2001) ‘Human dimensions of invasive alien species in philosophical perspective: towards an ethics of conceptual responsibility’, in JA McNeely (ed) *The Great Reshuffling: human dimensions of invasive alien species*. Gland, Switzerland and Cambridge: IUCN.