

Prickly pear in the Eastern Cape since the 1950s – perspectives from interviews

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Prickly pear cactus species (opuntia) originate largely from Mexico and neighbouring parts of meso-America. They were amongst the earliest plants brought back to Europe by the Spanish conquerors of the Americas and were established in the Mediterranean and the Canary islands during the sixteenth century.¹ There are many different species, many with flat leaves or cladodes. One species, at least, was brought to the Cape in the seventeenth century; one, probably the *Opuntia ficus-indica*, South Africa's most common prickly pear, to Graaff-Reinet with the earliest white settlers in the eighteenth century.

Prickly pear was spread initially because it was a useful plant. Plants cross spatial and racial boundaries. Various opuntia species have been, at some time, of importance to white commercial farmers, farmworkers, African land-holders and urban communities in the midland and Eastern Cape. Although there were strongly different opinions about the value of different opuntia species, many people used these plants for one purpose or another. The main species of prickly pear became of particular value to poorer rural people as a multi-purpose fruit, fodder and hedging plant.

Environmental history as a sub-discipline has reawakened interest in the reciprocal relationship between people and the natural world on a global scale. The history of plant transfers, of Botany and botanical institutions, and of their relationship with colonialism has now been widely rehearsed.² Such concerns have increasingly impinged on South African historiography and there is also a long legacy of scientific research into exotic plants, especially those that were considered invasive.³

The basic outlines of the earlier history of prickly pear in the midland and Eastern Cape are reasonably well established.⁴ These studies draw largely on documentary evidence to trace the spread of opuntia species, and analyse the conflicts over their eradication, up to about 1950. The discussion is largely focussed on white farmers and agricultural officials, many of whom came to regard wild, spiny

1. P.S. Nobel, *Remarkable Agaves and Cacti* (New York: Oxford University Press, 1994); P.S. Nobel, *Environmental Biology of Agaves and Cacti* (Cambridge: Cambridge University Press, 1988).
2. L. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New York: Academic Press, 1979); A.W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe 900-1900* (Cambridge: Cambridge University Press, 1986); R. Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860* (Cambridge: Cambridge University Press, 1995); R. Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World* (New Haven: Yale University Press, 2000). For a discussion, see William Beinart and Karen Middleton, 'Plant Transfers in Historical Perspective - a review article', *Environment and History*, forthcoming 2004.
3. I.A.W. Macdonald, F.J. Kruger and A.A. Ferrar, eds., *The Ecology and Management of Biological Invasions in Southern Africa* (Cape Town: Oxford University Press, 1986).
4. L. van Sittert, "'The Seed Blows About in Every Breeze": Noxious Weed Eradication in the Cape Colony, 1860-1909', *Journal of Southern African Studies*, vol. 26(4), 2000, 655-674; W. Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock and the Environment, 1770-1950* (Oxford: Oxford University Press, 2003).

prickly pear as an invader and a pest that threatened agriculture. At its height, in the 1930s, the plant was estimated to infest 900,000 hectares. Jointed cactus (*Opuntia aurantiaca*) was also spreading rapidly at the time and was of little use to anyone. The Department of Agriculture initiated a biological control programme, using introduced insects, cactoblastis and cochineal, in the early 1930s. Within a couple of decades, perhaps three-quarters of the wild *Opuntia ficus-indica* had been destroyed, although the campaign was less successful against jointed cactus.⁵

From the 1910s, many livestock farmers in the semi-arid districts of the Cape established plantations of cultivated varieties of spineless cactus. Most of these plants had been developed by Luther Burbank in California as a drought fodder crop. Grootfontein Agricultural College in Middelburg district became a centre for experimentaton and promotion of spineless cactus. The introduced insects largely destroyed these plantations, along with the spiny prickly pear.

This article focuses very largely on the period since 1950, and on the perspective of African communities, drawing on interviews in Hewu, Middledrift, Fort Beaufort and Hankey districts.⁶ At its heart is a historical analysis of changing prickly pear incidence and use over the last fifty years. We wanted to explore whether these plants are still spreading and whether this a problem? Are opuntia still useful and to whom? To what extent do they have an economic value and how are they viewed by different social groups? Are opuntia still best thought of as invader species?⁷ And in view of South Africa's experience with prickly pear, is optimism surrounding the potential of the cultivated spineless cactus justified? Can and should land occupiers and the state do anything about these plants?

Perceptions of the Incidence of *Opuntia* over the last 50 years

Given the scale of the biological eradication campaign, as well as felling and poisoning, it is interesting how much prickly pear and jointed cactus survived. Parts of Graaff-Reinet, Cradock and Bedford districts, and the eastern Karoo more generally, which had some of the heaviest stands of *Opuntia ficus-indica*, were largely cleared. But eradication seems to have been less successful in the coastal districts, especially Uitenhage, and in the Ciskei. These areas had higher rainfall and it was more difficult to clear prickly pear in the denser vegetation; jointed cactus was restricted to these areas.⁸ Predatory beetles and ants, as well as some mammals, attacked the cactus-feeding insects and reduced their effectiveness. And the eradication campaign was resisted in places like Middledrift.⁹

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5. F.W. Pettey, 'The Biological Control of Prickly Pears in South Africa', *Union of South Africa, Department of Agriculture and Forestry, Scientific Bulletin*, 271 (Pretoria: Government Printer, 1948) is an extended analysis by the key entomologist involved. D.P. Annecke and V.C. Moran, 'Critical reviews of biological pest control in South Africa: 2. The Prickly Pear, *Opuntia ficus-indica* (L.) Miller', *Journal of the Entomological Society of South Africa*, vol. 41(2), 1978, 161-188.
 6. The interviews have been done by Luvuyo Wotshela over the last couple of years. The background documentary research and writing has been done by William Beinart. The research was funded by the Nuffield foundation, United Kingdom - to whom we are very grateful - as part of a larger project on which the main researcher was Dr Karen Middleton, focussing on southern Madagascar. William Beinart thanks her for discussions.
 7. H.G. Zimmerman, V.C. Moran and J.H. Hoffman, 'Insect Herbivores as Determinants of the Present Distribution and Abundance of Invasive Cacti in South Africa' in Macdonald et al., eds., *Biological Invasions*, 269-274.
 8. M.O. Brutsch and H.G. Zimmermann, 'The Prickly Pear (*Opuntia Ficus-Indica* [Cactaceae]) in South Africa: Utilization of the Naturalized Weed, and of the Cultivated Plant', *Economic Botany*, vol. 47(2), 1993, 154-162.
 9. Interview, Luvuyo Wotshela with N. Muwezi and M. Mtunzi, Mhlambiso village, Amatola basin, Middledrift, 12.11.2002. (Landowners in their 50s)

The biological eradication campaigns in South Africa proved, on the whole, more difficult than those in Australia. By the 1980s, Zimmerman estimated about 100,000 ha to be infested with prickly pear and a great deal of scattered prickly pear remained over a far larger area.¹⁰ Ten opuntia were still listed in the condensed official *Declared Weeds* publication.¹¹ Spiny prickly pear was one of the nine species declared invader plants under the Conservation of Agricultural Resources Act of 1983.¹² Jointed cactus was spreading and by 1982 affected over 800,000 ha - though much of this was not densely overgrown.¹³ In sum, it was possible for opuntia species to coexist with the introduced insects.

It is interesting that informants whom Luvuyo Wotshela interviewed in Hankey, Hewu and Middledrift districts remember that prickly pear was quite widespread at least up to the 1960s. Some did note that they had heard of even denser coverage in their parents' time. But most agreed that the significant decline in the incidence of prickly pear had occurred in recent decades, since about the 1970s, and - as will be illustrated - for reasons other than the biological campaign.

Five types of opuntia were mentioned in the interviews. We should sound a warning about identifications. We are inexperienced in this field and informants used local or colloquial names in three languages. (*Turksvy*, or Turkish fig, is the colloquial name for prickly pear in Afrikaans, and *itolofiya*, derived from it, in Xhosa.) Opuntia species do hybridise, and vary in their shape and colour; moreover, some indigenous euphorbia species are superficially similar to certain exotic cacti.

Whereas farmers in the early twentieth century identified prickly pear species by their leaves - notably the doornblad, kaalblad and rondbljaar - African people in the Eastern Cape tended to focus on the fruit. The most widespread, and the most important, is called *itolofiya yasendle emhlope* - wild, white prickly pear - or just *itolofiya yasendle*. This is almost certainly the *Opuntia ficus-indica*, called doornblad in the early twentieth century and still referred to in Afrikaans as doringblad. The leaves are longer and narrower than other types, with many long white thorns, and a whitish, small, but very sweet fruit that ripens in summer from January to March. In Middledrift, they spoke of the fruits as light green and there may be different varieties or hybrids.

This variety is recalled as most common by the oldest men interviewed; A.D. Sishuba said that his grandfather spoke of it on African settlements and white farms south of Queenstown in the nineteenth century.¹⁴ In Hewu, *itolofiya yasendle* thrives on slopes and rocky land. In Hankey, in the southern Cape, informants suggested that this plant did best in lowlands and river valleys, and there is no doubt that rivers have been one of the main routes by which prickly pear has spread.¹⁵ Hankey, in the Gamtoos river valley, was considered one of the worst infested areas

10. Zimmerman, Moran and Hoffman, 'Insect Herbivores'.

11. M. Henderson, D.M.C. Fourie, M.J. Wells, L. Henderson, *Declared Weeds and Alien Invader Plants in South Africa* (Department of Agriculture and Water Supply, Pretoria, 1987).

12. Brutsch and Zimmermann, 'The Prickly Pear'.

13. H.G. Zimmermann and V.C. Moran, 'Ecology and Management of Cactus Weeds in South Africa', *South African Journal of Science*, vol. 78, 1982, 314-20.

14. Interview, Luvuyo Wotshela with A.D. Sishuba, Lower Hukuwa, Hewu (born 1929, former headman).

15. Interview, Luvuyo Wotshela with T. Jones, The Grange, Hankey South, 13.4.2002 (born 1937).

in the first half of the twentieth century and one of the most difficult for biological control.

A second species of wild prickly pear had rounder leaves, and was called *ebomvu* or *esibomvu* in Hewu. The spikes are browner and shorter, and the reddish fruit, that ripens in autumn, from March to May, is sour. This type was called *surtjie* in Afrikaans by those interviewed in Hankey and is almost certainly the kind called *rondeblaar* in earlier decades. In the Amatola basin of Middledrift, this or a similar variety is called *isidwedwe*, or *ugazini* - red as blood.¹⁶ It is most prevalent in wetter districts closer to the coast and was not reported in the drier, higher parts of Hewu. These plants are almost certainly derived either from the species *Opuntia stricta* or *Opuntia lindheimeri*, or both. The former, which was the main invader species in Australia, tends to have longer spines than those commonly described for the *ebomvu*; the latter is found very largely in the Eastern Cape in South Africa and it can be variable in its shape and growth.¹⁷

A third kind (*emthubi*) also has long leaves, but a large yellowish fruit with fewer thorns and fewer spicules on the fruit. The spikes are shorter and brownish. It is also favoured for eating and according to some informants, the fruit tastes even better than the white prickly pear. Those interviewed in the northern part of Hewu around Kamastone and Bulhoek mentioned it as more prevalent. While some thought that it had been present for a very long time, the oldest informant in Kamastone recalled that it had been brought from neighbouring white farms in the 1920s and 1930s.¹⁸ Two former headmen in the area agreed that it was planted around this time, on the borders of arable lands, but by the 1940s had spread along streams and valley bottoms on the Kamastone commonage.¹⁹

It is not yet clear whether this plant is derived from a separate species. Possibly it is a variety of spineless cactus, which has partially reverted to the spiny form. The degree to which spineless cactus can and does revert or hybridise is not yet clear to us. Most spineless cactus is reproduced vegetatively, by cloning - the cladodes soon put out roots if placed on bare soil - in which case it is less likely to develop spines. But if the fruit produces fertile seeds, a major cause of the spread of wild prickly pear, then it is more likely to revert.

According to Nobel, a leading authority on these plants, Burbank spineless cactus introduced into Australia in the early twentieth century did produce viable seed and some of the resulting plants became spiny invaders.²⁰ This appears to be uncommon amongst the most widespread Burbank varieties in South Africa called *Robusta*, *Chico* and *Monterrey* - although exceptions have been noted.²¹ These varieties have been grown largely because they are the most resistant to cactoblastis and cochineal insects. However, many other varieties of spineless cactus were introduced in the early decades of the twentieth century; one called *Fusicaulis* was especially popular for its succulent leaves and fruits. While most of it was

16. Interview, Muwezi and Mtunzi.

17. Henderson, et al., *Declared Weeds and Alien Invader Plants in South Africa*, 74, 80.

18. Interview, Luvuyo Wotshela with R. Sokhaba, 27.10.2001, Kamastone, Hewu (born 1908).

19. Interview, Luvuyo Wotshela with V. Mpendukana, Kamastone, 7.10.2001 (born 1937 former headman); interview, Luvuyo Wotshela with S.M. Matshoba, Bulhoek (born early 1930s, former headman).

20. Nobel, *Remarkable Agaves and Cacti*, 66.

21. Correspondence, Helmuth Zimmermann to Dave Richardson and William Beinart, 15.10.2002.

destroyed by cochineal, it may have left descendants. Some, perhaps all, spineless cactus varieties can produce fertile fruit. African informants thought that the *ethubi* was a hybrid of kinds. In Middledrift, they thought that similar plants, growing close together, could produce both the yellowish fruit or white/light green fruits.

Fourthly, the jointed cactus, which became a major menace by the inter-war years, is still widespread. The Xhosa word for this plant was reported in early twentieth-century documents as *injubalani* for its capacity to stick fast to passing livestock.²² Now it is called *ukatyi*. The word *isihlehle*, which originally referred to a type of indigenous euphorbia, may also be applied to some kinds of exotic cactus, but usage is unclear.

Lastly, informants identified a few different types of spineless cactus or *itolofiya engenameva*. They associated this particularly with white-owned farms, including some that had been taken over by the Ciskeian government. Some of these plantations, bordering Middledrift, have spread. The plants have a thick round, green leaf, and a large, yellowish, sweet fruit. They contrasted this type with those grown at Fort Cox experimental farm, with less attractive fruit.

Informants mostly perceived wild prickly pear (*itolofiya yasendle*) to be declining. Different reasons were cited. In Hankey, much was cleared with heavy machinery from the 1950s to open rich alluvial land in the valley bottoms for cultivation. The Paul Sauer and Kouga dams facilitated large-scale irrigation in the Gamtoos valley for citrus, tobacco and vegetables; naartjie plantations spread up the valley sides.²³ Hankey commonage still has dense prickly pear, as does the Soetkloof Pass to the south-west. But one informant claimed that many plants had succumbed to the expansion of townships (Centerton and Weston), as well as recreational facilities such as football fields. On Middledrift commonage, prickly pear was also perceived to have declined recently because of housing and the prison garden.

In former Ciskeian districts, the dwindling of *itolofiya yasendle* is attributed more to changes in settlement patterns. Prickly pear was very widely used for hedging by both white farmers and Africans in the nineteenth and early twentieth centuries. Before betterment (*phambi kwe trusti*), people would transplant wild prickly pear to fence residential plots, gardens or arable lands alongside their homesteads.²⁴ The hedges helped to keep out livestock as well as secure their crops against theft and wild animals, especially baboons. Prickly pear was thus useful to '(*bazobe imida yabo*) delineate their boundaries and also (*balawule indawo yabo*) control their space.' There was the additional benefit of fruit and fodder close at hand. The use of prickly pear in this way could be construed as what later became called agro-forestry, into which a great deal of development funding has poured over the last couple of decades.²⁵ Prickly pear is not usually mentioned in this con-

22. *Agricultural Journal of the Cape of Good Hope*, vol. 5(7), 28.7.1892: A. Fischer (editor), 'New Cactus. (Prickly Pear.)', 93-4; *Agricultural Journal*, 23.8.1894: John B. Bowker, 'Jointed Cactus' (*Opuntia aurantiaca*), 405. Here the Xhosa word is given as *injubalani* from the root *ukujuba* which can mean to hold fast, or rebound and scratch in the manner of a thorn tree.

23. Interview, Luvuyo Wotshela with D. Schellingehout, Thorndale farm, Hankey, 1.5.2002 (born about 1919).

24. Interview, Luvuyo Wotshela with Mr. Mxiki, former extension officer in the Shiloh Irrigation Scheme, interviewed at Whittlesea, 23 April 2002 (born c.1947).

25. Nobel, *Remarkable Agaves and Cacti*; for a recent survey of North Africa, see A. Nefzaoui and H. Ben Salem, 'Opuntiae: a Strategic Fodder and Efficient Tool to Combat Desertification in the Wana Region', published on the Web, Institut National de la Recherche Agricole de Tunisie, n.d.

text, although it is widely planted for multi-purpose use, especially in north and north-east Africa. The major species advocated for agro-forestry in Africa have tended to be for fuelwood, as much as fodder; some favoured acacia species provide both.²⁶

Spiny prickly pear could be grazed as it stood, especially by goats, and thus was not always a secure barrier. It did not always knit together at ground level. *Agave americana* (garingboom), another exotic from the Americas, with its long, spiky leaves, was a better guarantee against damage by animals, although it could grow unevenly. Both were thus planted together for some hedges, especially around kraals. The succulent bulbous base of agave leaves can also be used as fodder, after the spikes are removed and it is cut across the grain of the leaf. Indigenous aloe was also used for hedging.

After homesteads were moved during betterment, the hedges on what became grazing commonage could not be protected and some of the plants around the old homesteads were destroyed by animals. Even if people retained their old fields, they lost control of the prickly pear. In Middledrift, the Ciskeian government ordered the uprooting of prickly pear on old sites during betterment. Planners also instructed people to chop down and uproot prickly pear and thorn bushes in the new villages sites.²⁷ After betterment 'it became fashionable to use wire (*ucingo*) as fencing.'²⁸ Households had to compete for the remaining prickly pear on the veld, which resulted in both a reduction of availability and of usage.²⁹

Some people replanted prickly pear, but it was less suitable in the cramped conditions of the new villages and was not encouraged. They tended to have a few plants in vegetable gardens along with spineless cactus and other fruit trees such as figs, peaches and pears. In one interview, it transpired that herdboys had planted *itolofiya yasendle* from the veld onto a roadside homestead site. They did so for easier access to the fruit. But the plants grew very slowly because they were eaten by livestock. Around the village of Machibini, south of the main road between Middledrift and Alice, a woman remembered that prickly pear had been so thick in her youth that they called it *ezitolofiyeni* (the place of prickly pear).³⁰ Now she had to pick fruit across the Tyume river, in Victoria East, on former white farms which were not so densely settled.

The picture is clearly uneven, and different factors - biological agents, land clearance, changing settlement patterns - all seem to have contributed to the apparent decline of the wild white prickly pear. In the largely white-owned farming districts of the eastern Karoo, it is possible that the spread of prickly pear has been inhibited by increased grass cover; the inverse process was a factor in the spread of prickly pear in the early twentieth century.³¹ Two landowners in the Amatola basin,

26. For a survey of projects, see P. Kerkhof, *Agroforestry in Africa: A Survey of Project Experience* (London: Panos, 1990). *Calliandra calothyrsus*, which has met with some success in Kenya, also produces fodder.

27. Interview, Muwezi and Mtunzi.

28. Interview, Sishuba.

29. Interview, Matshoba.

30. Interview, Luvuyo Wotshela with Mrs N.Xhaphé (born 1952) and Mrs N. Joko, Ngwenya village, 28-9.1.2003. Both hawkers.

31. M.T. Hoffman and R.M. Cowling, 'Vegetation Change in the Semi-arid Eastern Karoo over the Last 200 Years: an Expanding Karoo - Fact or Fiction?', *South African Journal of Science*, vol. 86, 1990, 286-294; A.R. Palmer, C.G. Hobson and M.T. Hoffman, 'Vegetation Change in a Semi-arid succulent Dwarf Shrubland in the Eastern Cape, South Africa', *South African Journal of Science*, vol. 86, 1990, 392-395; Beinart, *Rise of Conservation*.

Middledrift described some of the complex dynamics that they thought affected the incidence of prickly pear locally.³² Prickly pear grew amongst dense vegetation, especially around ‘mimosa’ (*umga* or *Acacia karoo*). On the one hand, they suggested that it did not always out-compete indigenous species, and they had noted that it had been submerged in places by acacia and indigenous aloe (*ikhala*). On the other hand, people chopping acacia for firewood, or aloes for medicine, ‘often free the space for prickly pear to expand.’ They, and fruit collectors, also broke off leaves, which then germinated.

Usage

A great variety of uses were evolved for prickly pear and spineless cactus by both whites and blacks. Many of these are reported from Mexico, the main home of prickly pear and the Mediterranean.³³ While some of this knowledge may have come with early imports of the plant to South Africa, or through international networks of information, some may have been locally developed. Prickly pear has been in the midland and eastern Cape for over two hundred years. Rural communities have clearly been highly adaptable in incorporating it into their lives and developing a local knowledge around various species and parts of the plant. It is interesting that most of the African people interviewed do not seem to see it as exotic, or an invader.

Opuntia species provided a useful fodder and food source that required little cultivation. However, many uses involved time-consuming preparation. Prickly pear was ideal in societies where households produced many of their own manufactures and where there was sufficient labour time for processing. In discussing local knowledge and plant use, we must be aware of chronology, of taste, and of the changing availability of household labour.

Perhaps the most common usage, reflected in the way that African people name *opuntia* varieties, is for fruit. Wild prickly pear has a long season, and it is free. Its disadvantage is that pickers have to be careful not only of the spiny leaves but of the thin spicules or needles (glochids in the scientific literature) which cluster on the skin of the fruit. These are easily dislodged and stick in the skin or the mouth. One woman remembered:

As young girls, we ate a lot of prickly pear on the move. Picking up fruit required good skill especially from the thorny, white, wild prickly pear. We used objects such as sticks to unhook or detach the fruit from its leaf. The difficult part was picking up the thorny fruit from the ground into a container. One has to cushion your hands with either a cloth or a plastic bag. It is trickier when one has to eat the fruit on the spot. Before unskinning or peeling off the cover, the fruit needs to be rubbed very hard on the grassy surface so that spikes are crushed. But even so in the process of dissecting the cover one expects to be needled ... A number of parents used

32. Interview, Muwezi and Mtunzi.

33. Nobel, *Remarkable Agaves and Cacti*.

to discourage children from eating the fruit on the move ... because they tended to finish skinning off the cover with their teeth and mouth, just as monkeys and baboons do.³⁴

One man recalled that as youths they tried not to pick when it was windy as the spicules blew into their eyes. Clearance teams in the 1940s had enormous difficulties with spicules in the skin and eyes of workers. This was one reason why Italian prisoners of war, who were initially used for this purpose, struck work.

Prickly pear fruit are part of childhood memories and, as in other contexts, can be associated with a certain freedom and adventure. This could include association across racial boundaries that became more difficult in adulthood. A white woman informant, graduate of Rhodes, recalled 'a number of occasions [when] we used to walk some distance with some coloured children on our farm just to pick prickly pear and we used to be stung on our hands and our mouths because we ate the fruit as we moved along.'³⁵ Children would even add to their labours to get their favoured fruit. In Hewu, Mrs Ngudle recalled:

Most of my friends including myself preferred the yellowish fruit even though it was a bit scarce and difficult to access from Mceula's veld. But we were always keen to move and gather wood from other areas around Kamastone where we knew we would get the yellow prickly pear. Most times this involved longer trips; fortunately we always had white prickly pear to fall back on.³⁶

Prickly pear is still widely eaten by African people 'on the move', hunters (*abasingeli*), herders (*abelusi*) and firewood collectors. But some interviewees suggested that it was less accessible now either because, in Hewu, it was no longer so bountiful on old kraal sites, or, in Hankey, because so much had been cleared around the commonage.³⁷ As one Hankey woman remembered: 'even though we still crave the prickly pear fruit ... areas where I used to walk in order to pick the fruit ... are now either part of the municipal parks or are rugby and soccer fields.' 'We feel disappointed because we are buying what we used to obtain freely.'³⁸ She did acknowledge, however, that tastes were changing and some preferred cheap citrus.

Prickly pear fruit brought home in any quantity was soaked in water so that the buds softened and the spicules or glochids detached themselves. The skin could then be wiped and peeled. Both the white and yellow wild fruits, and some spineless varieties, are suitable for making jams, syrups, and preserves. In Hankey, syrup was the most common product on the farms, widely made up to the 1950s.³⁹ Five litres of fruit would produce about 750 ml. of syrup. The fruit had to be peeled and boiled until it dissolved into a thickish, soup-like liquid. Some of the

34. Interview Luvuyo Wotshela with Mrs. N. Ngudle, Mceula, Zulukama, 23.11.2001 (born in early 1960s).

35. Interview, Luvuyo Wotshela with Daphne le Roux, Spes Bona farm, Rooivlakte, Hankey West, 13.4.2002 (c. 75 years old).

36. Interview, Ngudle.

37. Interview, Luvuyo Wotshela with Mrs N. Ferreira, Phillippsville, Hankey, 1.5.2002 (born about 1929).

38. Interview, Ferreira.

39. Interview, le Roux.

fruit pips were then removed, honey and brown sugar added, the mixture reboiled for another hour, by which time it had turned dark brown. It was then poured into containers and sealed.

In African households in Hewu, jam was commonly made. Mrs Mpendukana recalled that in the 1950s,

Hewu women were part of the Zenzele [self help] Cooperatives ... Women were trained in church circles and in a number of agricultural societies in social and household skills and particularly they used *itolofiya* and other summer fruits such as peaches (*iipesika*) and figs (*amafiya*) to process a number of products such as jam (*inyhobanyhoba*) ... My mother taught me how to cook prickly pear fruit with a little water then filter away fruit stones, add the cooked, thick liquid with a bit of syrup and then boil slowly again. When simmering, a bit of gelatine would be added on the mixture and it would be left for a day to cool down. When cool it should attain a soft thickish shape.⁴⁰

The jam stored for several months. In both Hewu and Middledrift, it was used with homemade bread (*umbhako*), including steamed breads, 'which tasted very good with homemade prickly pear jam.'⁴¹ Some was sold but there was always a problem with finding sufficient containers. It was used at school concerts, sports and church functions.

'At that stage prickly pear was part of people's lives because they lived around and used it'; jam and syrup are less widely made now by African households.⁴² Mrs Mpendukana explained this change in Hewu by the easier availability of transport and cash incomes, which made manufactured jams and canned fruit accessible. She did occasionally process fruit from the garden, but not on the same scale. Another Hewu informant mentioned, 'it is a long while since I have heard of households producing prickly pear fruit jam ... People seem to buy jam from the shops nowadays.' In Middledrift, one informant thought that tinned jam from spaza shops finally displaced home-made produce in the 1980s.⁴³ As one man noted, 'most of the current generation rely on buying finished products from retailers and do not have time to process prickly pear leaves or its fruit.'⁴⁴ While many people harvested the fruit for consumption during the summer, few still processed fruit into jam and preserves.

Prickly pear beer was widely produced in the eastern and midland Cape during the late nineteenth and early twentieth century - so much so that farmers saw it as a menace to their labour supply.⁴⁵ This view was echoed by a white farmer in Hankey, who explained that the brewing season coincided with a period of high demand for agricultural labour. Prickly pear 'wine' has been brewed over the last

40. Interview, Luvuyo Wotshela with Mrs N. Mpendukana at Kamastone, 24 June 2003 (60 years old, wife of former headman).

41. Interview, Joko.

42. Interview, Mpendukana.

43. Interview, Joko.

44. Interview, Matshoba.

45. Beinart, *Rise of Conservation*.

couple of decades by coloured people on the farms and in Hankey township despite hostility from farmers and police raids.⁴⁶ The brewing season is longer than the fruit season because the reddish suurtjies (*ebomvu*) from the rondebelaar, harvested into May and even June, can also be used.

Informants in Hewu suggested that brewing was less common in that area. It is possible that the interviews, largely with the respectable rural elite, including former headmen and agricultural officers, gave a partial picture. They attributed it partly to the fact that prickly pear brew (*iqhilika*) was strongly discouraged, even 'ruled as an illegal substance' by the Ciskeian authorities. They saw Middledrift, regarded as '(ikhaya letolofiya) the home of prickly pear' and Peddie, as the chief brewing centres. Some households produced prickly pear fruit soft drinks.

In Fort Beaufort and Middledrift, where brewing remains widespread, prickly pear fruit sellers are also brewers. They preferred overripe fruit, and late-season fruit, for brewing. The outer skin of the fruit is peeled with a knife, leaving the softer inner white tissue. This is boiled until liquid, cooled, and filtered to get rid of the pips. The crushed roots of the moerplantjie, or *mula* (an indigenous plant), are added, for yeast, and the mixture fermented for two days. After a further filtering process it is ready to drink. The beer is partly sweet and partly bitter, and very intoxicating. In the past, prickly pear beer was often drunk at the home-stead like *utywala* but some did sell it. The recipe for the non-alcoholic drink was slightly different.

In recent years lack of access to prickly pear in sufficient quantity may have been a factor for some people in reducing beer production. In larger settlements, shebeens and taverns selling bottled beer catered to new tastes. Women in Middledrift noted that honey beer was now preferred in Grahamstown. For non-alcoholic cool drinks, most people preferred fizzy, bottled products or 'Oros and Coco-pine from the shops' - to which, of course, they had only to add cold water.

In Fort Beaufort, however, prickly pear brewers seemed to be thriving at time of the interviews (2002-3) and they extended their season by producing honey beer.⁴⁷ Men are also involved in honey beer production, including bee farming. *Iqhilika* brewers sold to the rural and small-town poor who could not afford to go to shebeens and taverns. They could make up to R1,000 a month at the height of the season. Since the 1980s, police raids have stopped, and brewers are no longer troubled by the comrades, some of whom, at that time, felt that they were selling too much liquor.

Prickly pear and spineless cactus leaves, as opposed to fruit, have long been used as fodder.⁴⁸ White farmers expressed doubts about prickly pear many years ago, because of its low nutritional value, the damage caused to animals and the labour required in processing. Some African informants shared this view. But leaves are still picked and brazed, or burnt, in order to remove the thorns before feeding to livestock. Goats, especially, eat wild prickly pear, nibbling away around

46. Interview, Ferreira.

47. Interview, Luvuyo Wotshela with Mrs Alice Ningiza (born 1937), and Mrs Nocingile Platyi (born 1954), Fort Beaufort Location, 22 And 23rd June 2003 (both prickly pear hawkers).

48. Beinart, *Rise of Conservation*.

49. Interview, Luvuyo Wotshela with J. Ngoma, former Ciskei agricultural officer, Hewu district, at Whittlesea, 22 April 2002 (78 years old).

the thorns.⁴⁹ This is one reason why the remnant plants around old homesteads in the former Ciskei have gone - and goat numbers have probably increased in these districts during recent decades. Spineless cactus fodder is discussed below.

Leaves were also important for some home manufactures, and here the wild, spiny *itolofiya yasendle* was preferred. Spineless cactus leaves were thought to be less effective because they did not carry the same type or strength of 'fluids'. Leaves were used for soap making up to the 1960s, and a Hewu woman recalled how her mother boiled large quantities of leaf, mixed it with soda and then let it solidify into a hard soap which was sold.

I remember after I got married in the 1960s it became almost fashionable that wood-stoves were used in a number of households that were headed by either teachers, or by policemen or even migrant workers. These stoves led to the advent of shiny steel pots and kettles that were more difficult to clean. Some of the Zenzele women initiated a plan of mixing the prickly pear bar-soap with egg shells and then grinding the mix so that it resulted in a yellowish washing powder (*umgubo wokuhlamba omthubi*) that was used to scrub off dirt or over-burn on the outer and inner surfaces of the kettles or pots ... [laughing] not exactly as strong as the Vim 99 was, but this powder soap could clean all enamel dishes, steel pots and kettles and we also used it on our three legged black pots and it worked very well.⁵⁰

But, as one man noted, 'in the long run, people opted to buy soap even though they could have continued producing it. My wife has always pointed out to me that it is cheaper anyway to buy bar soap and that does not cost much time.'⁵¹

In Hewu, Cape aloe (*ikhala* probably *Aloe ferox*) was brewed with prickly pear leaves to produce (*iyeza lesisu*) a stomach medicine, which worked in the same way as (*iyeza lokuhambisa*) - or a laxative.⁵² (Prickly pear leaves were considered to induce the runs in animals if fed in too great a quantity.) People came from as far as East London to pick cladodes for herbal medicines on the Shiloh commonage. The outer cover was skinned, the leaf boiled for a long period, and the liquid then mixed with very bitter green aloe juice. Aloe leaves were used when young because they carried more juice, which was an important ingredient for a number of homemade medicines. The mixture was re-boiled, simmered gently, filtered, cooled and bottled. Patients were recommended to drink it cold.

A different recipe was used for a blood purification (or 'puritone') medicine. In this case, the prickly pear and aloe leaves were squashed and boiled together with water and a small quantity of sea-water or Epsom salts. When sufficiently simmered and cooled, it formed a gell.⁵³ Informants suggest that medicinal manufacture and use remains common. This is a higher value product, that makes

50. Interview, Mrs Mpendukana.

51. Interview, Matshoba.

52. Interview, Luvuyo Wotshela with S. Kata, member of the Shiloh Farmers Association, interviewed at Lower Shiloh, 14 June 2002 (67 years old).

53. Interview, Sokhaba.

the labour involved worthwhile, and it is clearly seen to be effective. Hawkers in Whittlesea sold 500ml. bottles for between R10 and R15.⁵⁴

Prickly pear leaves were used for the treatment of boils. 'Xhosa people tend to agree that boils generally grow as a result of blood infection hence they treated them with the laxative and puritone mixture.'⁵⁵ The cladode was skinned on one side, heated on a fire and then placed directly onto the boil and bandaged. The prickly pear leaf was seen to soften the tissue, hasten the bursting and clean out the dirt. This process was repeated until the boil was cured. The treatment was still being used in Hewu.

Overall, the use of prickly pear as a multi-purpose plant appears to be declining, partly because of availability but largely because of the labour time involved. Informants clearly felt that some processing, especially for jam, syrup and soap, was no longer cost effective. Most of the processing was done by women and, given the demands on the time of many rural women, it is not surprising that they have sought replacements. Taste, fashion and ideas of modernity also clearly play a part. However, a wide range of people still like and eat the fruit, and medicinal use was not perceived to be declining.

Markets and sale

Prickly pear fruits have been marketed through the southern and eastern Cape for over a century. The problem for rural households who wished to trade was not only finding labour on a sufficient scale to pick and clean the fruit, but transport. In Hewu, in the 1950s and 1960s, villagers supplied the local general dealers or had informal stalls on at church services or social events. In the 1960s fruits were sold for about 1c. Even so, 'if one picked a lot of fruit, washed and cleaned it, one stood a chance of accumulating some cash. Remember even the school fees were just about 10c a quarter of a year those days and some of us did pay our annual school fees through prickly pear sales.'⁵⁶

Mrs Ferreira outlined the recent history of marketing in Hankey. During the 1950s, Coloured farmworkers used to load and transport fruit by ox-wagon to Humansdorp and other towns. They supplied local agents who in turn sold at the fruit and vegetable markets.⁵⁷ Returns would be split in half between the farmers and the workers who picked and transported the fruit; the workers would have to pay the agents out of their share. Sometimes, farmworkers would stay with relatives in Humansdorp and sell the fruit themselves so that they did not have to pay the commission fee. In the 1960s, the clearance of land and the absorption of workers into the new irrigation schemes diminished both the amount of prickly pear and labour for picking and preparing. Mrs Ferreira suggested that some farmworker families, and women in particular, bemoaned the loss of prickly pear income: 'we felt with prickly pear that we had our own control.' Citrus picking and sales were completely controlled by farmers.

54. Interview, Ngudle.

55. Interview, Mrs Mpendukana.

56. Interview, Mxiki.

57. Interview, Ferreira.

Africans in Weston took over the business. Those with vans hired women fruit pickers and sold along the roads and in towns. The advent of taxis in the 1980s made it possible for a wider range of people to engage in trade, in that they could use them for the transport of small quantities. In 2002, vehicle-owners were still employing people to pick and load fruit in the Soetkloof Pass where there are dense thickets of wild prickly pear. The fruit was sold in Hankey, Patensie, Jeffreys Bay, Humansdorp and Tsitsikamma. Hawkers kept stalls along some of the main roads. There was a fairly standardized set of measures: 5, 10 and 20 litre containers. Prices were lower in early and mid-season when 5 litres were sold at R6-10. When supply was at its height a 20 litre container could sell for R20. Late in the season, prices rose sharply - to R15 for 5 litres in March.⁵⁸ Bulk purchases were sometimes made by shop-owners or for syrup and chutney.

A white farmer in Cathcart, near Hewu district, also marketed prickly pear commercially up to the 1980s.⁵⁹ He recalled transporting bakkie loads to an East London fruit merchant, who in turn supplied hawkers and supermarkets. Supermarkets could buy in bulk and sell at higher prices than hawkers. By the mid-1980s they were already selling at about 50c per fruit and by 2002 at R1. The problem for farmers was that labour costs were high. The wild fruit is scattered, delicate, and does not last long. Picking, washing, packing and offloading had to be done by hand. Unlike citrus, economies of scale were harder to achieve and it may be that prickly pear lends itself to handling on a smaller scale. Fruit was also displayed and sold at agricultural shows in places such as Cathcart, Queenstown, Stutterheim and King William's Town. A prickly pear festival has been operating for some years in Uitenhage.

The farmer in Cathcart was reluctant to allow farmworkers, or outsiders, to pick and sell prickly pear because it disturbed work programmes, and created disorder.

We could have a case of the usual harvesters assigning kids to pick up the fruit. Once that happens, kids would invite their friends, tree leaves could be broken, and fruit would be peeled off and eaten on the spot. The last thing we need is uncontrolled growth. Moreover, the tendency is once you start allowing people free access to any protected resource our fences tend to go.⁶⁰

In fact women interviewed on the R67 roadside in 2002, bordering Hewu and Cathcart, claimed that they did get fruit from farms and sold it at the weekends. They said it was their only chance to generate quick cash; a 5-litre container sold at R10.

58. Interview, le Roux.

59. Interview, Luvuyo Wotshela with F. Miles, Roslin, Cathcart district, 24 June 2002 (57 years old).

60. Interview, Miles.

Two women who sold at Ngwenya on the R83 between Middledrift and Alice came from villages just south of the road (Macibini and Capo). In 2002, a particularly good season, they harvested enough to sell for three to four days a week from January to March.⁶¹ The 2003 harvest was less bountiful but prices went up and they could sell 2.5 kg (18-20 fruits) at R4, mostly to passing motorists. Occasionally the owners of supermarkets and spaza shops in Alice and Middledrift bought larger quantities. They usually earned R50-70 a day and claimed to have made about R2,000 in January 2002. This is a very useful income supplement for a poor rural family, even if it lasts only a few months a year. (They had to give some of the money to their husbands in recognition of the long periods they spent absent from household duties.)

For women to earn on this scale involves considerable labour. These two women walked a couple of kilometers to thickets on farms across the Tyume in Victoria East, incorporated into the former Ciskei. They preferred to pick in the afternoons, soak the fruits overnight, clean them and then carry them about five kilometers to the road in two 20 litre containers the next morning.

Sometimes groups of women hired men or youths to transport bulk loads with donkey carts or bakkies. Two Fort Beaufort women picked their fruit for sale partly on the town commonage but largely on two white-owned farms near Grahamstown.⁶² They paid R10 in 2003 (R6 in 2001 and 2002) for entry to the farm, by arrangement with its owner and caretaker, and could pick as much as they wished. As part of a group of seven women, they hired a bakkie for transport. They were charged R35 each and they could carry 100 kg. They sold as individuals, on stands on the main road, near the taxi rank and garages, and door to door in Fort Beaufort to both white and black households.

When demand was strong, they could get about R160 from their loads, and the squashed or leftover fruit was brewed or fed to livestock. At the peak of the season, they picked and sold three times a week, clearing over R100 per journey. After the prickly pear season (January to March), they sold citrus till June. Citrus hawking was more competitive, because fruit was easily available through farmstalls and supermarkets. They brewed throughout this period and were able to extend the brewing season beyond June by recycling a culture. These informants suggest that a significant income could be generated from hawking and brewing, over some months of the year, and that it could be financially worthwhile hiring vehicles for transport, which diminished the strenuous walks to thickets and marketing points.

Although there are some suggestions in the interviews of a decline in the availability and marketing of prickly pear, there is still a good deal being transported and sold in the Eastern Cape. It is interesting that prices are much the same in Hewu, Middledrift, Fort Beaufort and Hankey, suggesting a regional market of kinds. Hankey seemed to be a more important centre for the supply of towns and supermarkets. Fort Beaufort and Middledrift have a larger local market for hawkers and brewers. The difficulties of bulk picking, and the nature of the wild fruit itself, have clearly resulted in some space being maintained for harvesting and informal marketing, especially by women.

61. Interview, Xhaphé and Joko.

62. Interview, Ningiza and Platyi.

Ciskei Plantations

Spineless cactus (*etolofiya engenameva*), available since the early twentieth century, has been widely planted by commercial livestock farmers for fodder. It is easily reproduced by placing cladodes on bare soil. Livestock can eat it as it stands, and it requires little or no preparation. While it is not sufficient in itself as a fodder, the high water content of the cladodes provides valuable moisture in droughts and annual dry seasons. In Hewu, A.D. Sishuba remembers that his uncle obtained leaves from a farmer and planted them at Upper Hukuwa in the 1940s.⁶³ His plantation became a source of cladodes for others.

During the drought of the mid-1960s, people in Didimana (near Tsolwana Game Reserve) purchased cladodes at about R2 per wagon from neighbouring white farmers.

Mind you those days that was not regarded as cheap, and, in fact a number of villagers used to make a collective contribution. One would provide draught oxen, one would provide the wagon and maybe two households would provide the R2 for the load and once it was fetched it would be split up. We were so amazed with the density of spineless cactus ... plantations on white owned farms. The trees were fenced, arranged in linear rows and the pruning was well regulated.⁶⁴

They were already using wild prickly pear for fodder but this was

always a painstaking process. First one had to endure the process of pruning thorny leaves from the trees and carrying them from the veld to home ... Once picked and collected these leaves were (*rhawula*) brazed with fire in order to burn thorns. People were quite apprehensive about thorns spiking livestock on their mouths.

In the 1970s the Ciskei Department of Agriculture and Forestry (later Rural Development) developed spineless cactus projects. They ran a nursery growing mainly two types: a round leafed variety, which produced a large light green fruit (*indyumba*) and a long leaf variety with reddish fruit (*ugazini*).⁶⁵ One was primarily for fruit production, and had to be sprayed against insect infection, and the other for fodder.⁶⁶ Plantations were established under Tribal Authorities, supervised by extension officers, and the department carried the costs. They were designed partly as a soil conservation (*ulondolozo mhlaba*) measure, as an element in rural planning, and partly for fodder.⁶⁷ In some areas of Middledrift, spineless cactus was planted, along with agave and salt bush, at the same time that betterment and rotational grazing were introduced. Areas that suffered from particularly

63. Interview, Sishuba.

64. Interview, Mxiki.

65. We have not yet been able to research the varieties in the documentary records.

66. I.P. van Heerden, 'The Establishment of Drought Resistant Fodder Crops in Ciskei', *Ciskei Agricultural Journal*, vol. 6, 1987, 17.

67. Interview, Ngoma.

severe erosion were prioritized. By the 1980s, trial plots had been established in 35 of 43 Tribal Authorities.⁶⁸ Spineless cactus projects were introduced in Bulhoek and Nqobokeni in Hewu.

Transplantation of spineless cactus, initial irrigation, and the fencing of the planted area, was largely done by volunteers who were promised access to leaves for fodder, and fruit for household consumption. The local communities also supplied draught oxen and ploughs to prepare the ground. But as the Ciskei moved towards 'independence' in 1981, the department subsidised and controlled these projects more directly. Draught oxen were replaced by departmental tractors. Workers were paid. Rangers were appointed to guard the plantations. The tribal authorities were responsible for selecting the workers, distributing the leaves to livestock owners (for a small payment) and also for controlling access to fruit. 'The department subsidised the operation of the entire projects, whereas the output was under the control of the respective tribal authorities.'⁶⁹

A former Ciskeian agricultural officer felt that before 1981, these were generally regarded as community plantations. But as the political position polarized, and as Tribal Authority supporters gained disproportionate advantage, hostility grew and they heard complaints about '(itolofoya karhulumente) the government's prickly pear'.⁷⁰ As another informant recalled, 'during fruiting seasons, the rangers and some Tribal Authority members would pick fruit ... [that] was sold on the open market.'⁷¹ They made some quick cash out of it.⁷² One woman in Hewu noted, 'women like us did not benefit from the Ciskei spineless cactus plantations. While they were there we continued picking fruit from the wild prickly pear on the veld.'⁷³ As with other government projects, these became a target for opponents of the regime by the mid-1980s. Fences were cut, livestock grazed on plantations, and fruit stolen. Occasionally, livestock was impounded and people arrested for taking leaves and fruit. But this only exacerbated the problem and it became difficult to maintain the plantations. Rangers were assaulted by comrades (*amaqabane*). Hewu was particularly intensely politicized because of conflicts over the fate of people who had moved from Glen Grey and Herschel.⁷⁴ As the Tribal Authorities collapsed in the late 1980s and early 1990s, the plantations became open access and the plants disappeared. A similar pattern was reported from Middledrift, although the plantations seemed to have lasted a little longer. Agave plants, which could not be grazed directly by livestock, survived.⁷⁵

The Future

A number of informants suggested that the use of wild prickly pear (*Opuntia ficus-indica*) for multiple purposes was declining and, while the pic-

68. Brutsch and Zimmerman, 'Prickly Pear'.

69. Interview, Ngoma.

70. Interview, Ngoma.

71. Interview, Sishuba.

72. Interview, Matshoba.

73. Interview, Ngudle.

74. Luvuyo Wotshela, 'Homeland Consolidation, Resettlement and Local Politics in the Border and Ciskei Region of the Eastern Cape, South Africa, 1960 to 1996' (Unpublished D.Phil. thesis, University of Oxford, 2001).

75. Interview, Luvuyo Wotshela with M. Gege, Middledrift extension officer, 8.10. 2002 (38 years old).

ture in respect of its incidence is uneven, it is probably becoming less common. Spineless cactus - the most valuable resource of all - has largely disappeared in the former Ciskeian districts, except within fenced garden plots. There were, however, reports of remnant small stands, partly run wild, on former white farms that have not yet been densely settled. By contrast, spineless cactus is very widely grown on private commercial livestock farms in the semi-arid districts and there is some renewed interest in its potential.

The least useful and most dangerous species of opuntia, jointed cactus, is probably spreading. There is little enforcement of noxious weeds legislation and, according to a former headman, the 'comrades who are now in control do not even visit the veld.'⁷⁶ Other species of cactus, including declared weeds, are being used for fencing in former Ciskeian districts because they are not grazed like spineless cactus and prickly pear, and not poached and cut like wire fencing. We are not certain about the species involved at present, and one Xhosa name used, *isihlehle*, refers also to euphorbia. However, samples seem to be of the cylindrical cactus *Cereus peruvianus* or 'Queen of the Night', which has been quite widely grown as a barrier plant and an ornamental on account of its attractive white flower.⁷⁷ One informant at Kamastone noted that even former Ciskeian headmen, of whom he was one, were using this plant as fencing, even though they knew it was illegal.⁷⁸ (The plant can also be seen on white-owned farms and in Karoo villages such as Nieu Bethesda.) In addition to its other advantages, this plant 'knits from a very low height and does prevent passage.'⁷⁹

The position revealed in interviews during 2002-3 does suggest that opportunities remain for small-scale collection, consumption, processing and sale. From an ecological point of view, the gradual demise of *itolofiya yasendle*, or the wild, white prickly pear since the 1940s can be considered a success. But in other respects, some of the African occupied districts of the Eastern Cape have the worst of both worlds. The most dangerous species, jointed cactus, is uncontrolled, and presents an environmental threat; the most valuable spineless cactus plants are in short supply.⁸⁰

Opinions are still divided about prickly pear. Most people who have grown up in Hewu villages, Mr. Mrubatha noted, care about the future of prickly pear: 'we still rely much on our wild prickly pear on the veld.'⁸¹ In Hankey, a number of poorer black families 'live on it' during the fruiting season.'⁸² Yet even in Hewu, it was not always popular. A member of the Farmers Association argued for the removal of the prickly pear on the Shiloh commonage:

76. Interview, Matshoba.

77. Henderson et. al., *Declared Weeds*, 27; T. Olckers, 'Introduction' in T. Olckers and M.P. Hill, *Biological Control of Weeds in South Africa (1990-1998)* (Pretoria: The Entomological Society of South Africa, African Entomology Memoir no.1, 1999), 6. This has other common names, and is sometimes confused with euphorbia. Informants suggest that it can be used for fodder in an emergency, but its sharp spikes require very thorough burning and treatment before it is fed to animals.

78. Interview, Mpendukana.

79. Interview, Luvuyo Wotshela with M. Mrubatha, Bulhoek, Hewu, 26.10.2001 (born 1960s).

80. Interviews have not yet been done with officials and it may be that eradication programmes are still being pursued. One informant mentioned that some Departmental financing for eradication was made available in 2002.

81. Interview, Mrubatha.

82. Interview, Jones.

I wish it could be uprooted. Our fence on that perimeter boundary is gone since prickly pear harvesters as well as hunters who hunt wild animals such as baboons and bush pigs do not have a respect for fences. You often see and hear hunters from either Langedraai or Sada with a pack of dogs, proclaiming that they would be hunting on the prickly pear hills (*ezintabeni zetolofiya*). It seems as if prickly pear has made it convenient for them because these wild animals tend to live around it. But unfortunately areas where there is dense growth of prickly pear have also become graveyards for our livestock. If they are not targeted by hunters themselves they often become prey to renegade hunting dogs.⁸³

The few white farmers who were interviewed also expressed uneasiness about prickly pear. As one in Hankey recalled: ‘We used to joke, but in a serious manner that we could not continue living on prickly pear as baboons did.’⁸⁴

A number of informants regretted the loss of spineless plantations, which have the capacity to provide local employment and resources. Reintroduction on communal lands would require not only some investment but effective policing, land administration and control of livestock.⁸⁵ As one former agricultural officer said: ‘You probably know that a number of people are no longer cultivating their fields because they cannot keep out animals and their fences are either cut or are disappearing on a regular basis. I can imagine it could be even more difficult to control a communal project.’⁸⁶ Yet a project of this kind might not only be beneficial, at relatively low cost, but provide a route to improving other administrative services.

It is unlikely that opuntia can be eradicated completely or that the Eastern Cape government would now regard eradication as a priority. However, there is a strong argument for changing the status quo and, in particular, discouraging those species that are ecologically most dangerous, and encouraging types of spineless cactus that also bear edible fruit. Opuntia is well-embedded in Eastern and midland Cape society and many people, especially poorer people, still have the skills to use and market its products. There is certainly also a case for encouraging landowners who have thickets of prickly pear to allow access by women to pick the fruit.

Expanded spineless cactus plantations could produce plants that revert and precipitate a new spread of wild prickly pear. However, livestock and the cochineal are likely to be a sufficient control. Spineless cactus varieties are largely cultivars derived from *Opuntia ficus-indica*, which is no longer spreading. Research is certainly desirable on which spineless cactus varieties are less likely to revert or hybridise, which might be the most useful for particular communities, and which are most easily managed in areas where landownership is not private. Grootfontein Agricultural Development Institute is replanting a wide variety of spineless cactus cultivars for research and distribution.⁸⁷ Commercial fruit growers and scientific researchers are rapidly expanding knowledge of the properties of different varieties.

83. Interview, Kata.

84. Interview, Schellingehout.

85. Interview, Ngoma.

86. Interview Mxiki.

87. Interview, William Beinart with S. Schoonraad, Grootfontein, Middelburg, August 2003.

Renewed state or NGO support for spineless cactus nurseries and plantations within the communal tenure areas could be valuable. While they do have to be protected against livestock, they are more easily managed than - for example - irrigation projects. Local skills may still be available. Production of large 'cactus pear' fruit for major produce markets, especially in Gauteng, and for export is growing. Techniques developed elsewhere for securing high yields have been adapted to South African conditions. If the flowers of spineless cactus are removed when they first appear, the plants flower again, later in the season, and generally produce bigger fruits.⁸⁸ This practice extends the season and allows growers to reach markets when prices are at their highest. It was tested successfully at Fort Hare in 1989-90.⁸⁹ There is also a case for education in the local media to encourage reproduction of favoured thornless species by cladode only.

In respect of the wild prickly pear, further investigation of techniques of processing medicines, alcohol and preserves might facilitate new products, or labour saving methods. Brutsch and Zimmermann, who have been at the forefront of opuntia research in South Africa, have suggested for some years that control of the common prickly pear is no longer a priority, and that new strategies of usage should be explored. One is the production of young leaves as nopalitos, used widely as a vegetable, both fresh and pickled, in Mexico and the United States. This does not seem to be common in the Eastern Cape. A low-technology method of drying the inner layer of the wild prickly pear peel has been developed: 'it has a good flavour, texture and appearance, with wide appeal, and stores satisfactorily for up to five months.'⁹⁰ Mass rearing of cochineal insects may be possible on the dense stands around Uitenhage for red dye-stuffs.⁹¹ There is a market for natural dyes to replace synthetics in the food industry; in the early 1990s, the bulk of world production came from Peru and the Canary Islands. Uitenhage's rainfall is too heavy for cochineal production in the open, but experimental production under cover was tried in the 1980s.

There is surely a case for advertising prickly pear fruits and linking rural communities with urban markets, supermarkets, and the prickly pear festival. The danger in formalizing markets and supplies, however, might be to exclude those poor rural women for whom informal marketing provides a valuable income.

88. Nobel, *Remarkable Agaves and Cacti*.

89. Brutsch and Zimmermann, 'Prickly Pear'.

90. A.P. Mkeni and M.O. Brutsch, 'A simple solar drier and fruit-processing procedure for producing an edible, dried product of high quality from the peel of *Opuntia ficus-indica* fruit in the Eastern Cape Province of South Africa', in Abstracts of the IVth International congress on Cactus Pear and Cochineal, Hammanet, Tunisia, 2000.

91. Brutsch and Zimmermann, 'Prickly Pear'; Nobel, *Remarkable Agaves and Cacti*.