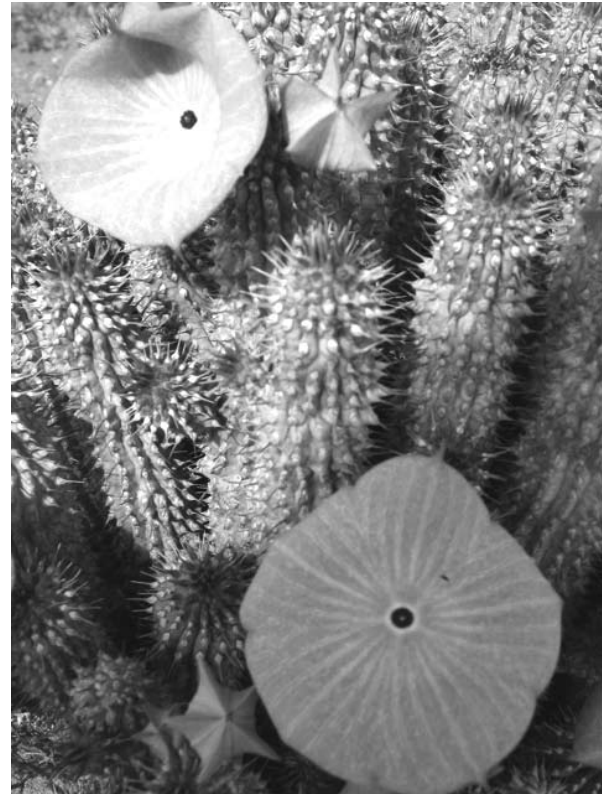


Hot air over Hoodia

Rachael Wynberg

Almost 20 years ago the Convention on Biological Diversity was signed into existence. Now one of its core provisions – the creation of a regime that provides for equitable access to and benefit sharing from biodiversity – appears close to agreement. In October, the Parties to the Convention will meet in Nagoya, Japan, and are expected to agree on a final text. Meanwhile, at the national level, governments have started legislating on this issue. In this article, Rachel Wynberg¹ analyses what this benefit sharing amounts to in the case of the San people of southern Africa, who have seen Hoodia – a plant used locally to stave off hunger – propelled into the centre of commercial interest.



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Hoodia is surely one of the most famous biopiracy cases. It is often used to demonstrate the benefits of bioprospecting for indigenous peoples and the way biopiracy issues might be resolved. The reality, however, is a lot more complex, raising more questions than answers about access and benefit sharing, and the implications of benefit-sharing agreements.

The story emerges from the arid regions of southern Africa, where the succulent plant has long been used to stave off hunger and thirst by the indigenous San peoples, one of the oldest – and most marginalised – human communities of Africa. Their knowledge of the plant was published by colonial botanists and was used by the South African-based Council for Scientific and Industrial Research (CSIR) to investigate the plant's potential as an appetite

suppressant. In 1997, after a lengthy period of development, the CSIR patented the use of the plant's active constituents responsible for suppressing appetite. A subsequent agreement was developed in 1998 between the CSIR and the UK-based company Phytopharm, followed by a further licence and royalty agreement between Phytopharm and Pfizer, the US-based pharmaceutical giant.

Until 2001, the San had no idea that their knowledge of *Hoodia* had commercial application, and that this knowledge had led to research, scientific validation, and the filing of international patents by the CSIR. They were, moreover, excluded from lucrative deals being struck to develop commercial products. In 2001 the San were alerted to the use of their knowledge without consent. In fact, the CSIR had told Phytopharm that the 100,000 strong San "no longer existed"! Political pressure and intense media coverage forced the CSIR to negotiate with the San, leading to the adoption of a benefit-sharing agreement in 2003.

The benefit-sharing agreement stated that the San would receive 6 per cent of all royalties received

by the CSIR from Phytopharm for products, and 8 per cent of milestone income when certain targets were reached. Money was to be paid into a Trust set up jointly by the CSIR and the South African San Council “to raise the standard of living and well-being of San peoples of southern Africa”. Strict rules were developed to distribute the funds. San representatives recognised that knowledge about the plant was held collectively by the San community, and therefore agreement was reached to share the money between all southern Africa’s San.

Cracks start to show

The agreement was hailed initially as a significant breakthrough in the access and benefit-sharing impasse. Here was an example of how the CBD could work in practice to benefit both indigenous communities and those seeking to reap profit from traditional knowledge and biological resources. The dietary control of obesity is valued at US\$3 billion per annum in the US alone, and thus returns were expected to be lucrative. But very soon the cracks began to show. Analysis of the agreement revealed that, although the San might receive a considerable amount of money, this would be only a minuscule sliver of a very large cake. Moneys received by the San would be extracted from royalties received by the CSIR, but profits accruing to Pfizer and Phytopharm were to remain untouched. Was this equitable benefit sharing? The requirement for the San to have an exclusive agreement with the CSIR was also troubling as it would reduce any other opportunities that may arise for the San to benefit from the use of *Hoodia*. What if the Pfizer deal fell through? Additionally, the inflow and distribution of potentially huge sums of money to the San were worrying because local San institutions are fragile and weak. What impact would this have on the San, and how could a system

Pelargonium benefits?

The recent patent challenge of the Pelargonium plant from South Africa and Lesotho clearly illustrates the ease with which government and companies manipulate power relations and select the communities and issues that they will deal with. The knowledge about the healing properties of Pelargonium was first obtained from traditional healers in Lesotho in the early nineteenth century by a Swiss doctor. Schwabe, a German pharmaceutical company has been producing a very effective drug from the root of the plant for decades. It is just one of many biological products from the South to be used as medicine in industrialised countries. But when Schwabe was granted a number of patents at the European Patent Office, a challenge was launched by a community from the small town, Alice, in South Africa’s Eastern Cape. With support from national and international NGOs, their challenge was successful. The South African government is now forced to respond to this issue and is considering issuing a national bioprospecting permit to Schwabe, which would include benefits flowing back to a local chief. Meanwhile, the provincial government went ahead and gave Schwabe monopoly access by granting a permit to local middlemen with the condition that they should supply Schwabe exclusively. So the South African authorities choose to deal with the issue by ignoring the community that challenged the patent, and instead working out deals with a pharmaceutical company, a handpicked local chief and a newly formed community trust. In the process they avoid having to work with the more informed Alice community and the NGOs. Is this equitable sharing of the benefits?

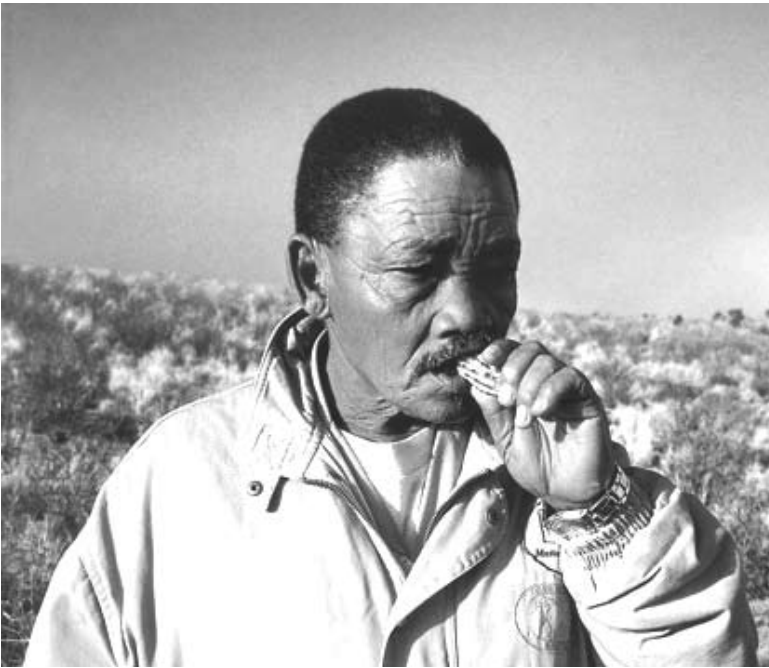
be created that ensured fairness and equity across three countries? This matter was especially complex because of the wide distribution of San across very remote parts of southern Africa.

These concerns were to some extent prophetic. In 2003, Pfizer merged with Pharmacia and closed its Natureceuticals group, which had been responsible for developing *Hoodia*. Pfizer discontinued clinical development of the drug and handed the rights back to Phytopharm. In 2004, the consumer giant Unilever stepped in through a joint development agreement with Phytopharm, and began investigating *Hoodia* as an ingredient for its line of Slim Fast® drinks. A massive cultivation programme was launched, involving over 300 ha of *Hoodia* in South Africa and Namibia, clinical safety trials, manufacturing, and an agreement to develop a 750-million-Rand (c. US\$105 million) extraction facility.

1 In 1997, Rachel Wynberg came across the *Hoodia* patent filed by South Africa’s Council for Scientific and Industrial Research, did research to uncover the traditional use of the plant, and began a campaign through Biowatch to alert the media and the San to the exploitative use of this knowledge. She has been involved in research relating to *Hoodia* and its commercialisation for the past 10 years and recently published a book about the case, together with Doris Schroeder and Roger Chennells (see the “Going further” section at the end of the article.)



Hoodia seedlings of various ages in a polytunnel



The San remain among the most marginalised people in southern Africa, with a long history of dispossession, persecution and relocation. Most live in remote, harsh, and arid environments, scratching a living from agriculture, livestock, wage labour and the harvesting of non-timber forest products. Many San live in poverty and face extreme hardship in terms of access to social services, employment and income-generating opportunities. Introducing large sums of money into such communities could have potentially divisive and even catastrophic impacts.

☛ Caught up in the *Hoodia* frenzy, a swathe of opportunistic *Hoodia* growers and traders emerged. The CSIR patent was focused on the *Hoodia* extract, and nothing prevented other companies from simply selling raw *Hoodia* for incorporation into herbal supplements. Unregulated collection from the wild soared, and by 2004 concerns about the threat posed to natural populations had led to the inclusion of *Hoodia* species in Appendix II of the Convention on International Trade in Endangered Species (CITES). Dozens of *Hoodia* products were advertised on the internet and sold in drugstores and pharmacies as diet bars, pills, creams, and drinks, traded by myriad companies using the publicity and clinical trials of Phytopharm and Unilever. The San were receiving no benefits from these products, many of which were of dubious authenticity and quality. Growing concerns about the environmental impact and about quality led to a more regulated industry based on cultivated material. Those involved in growing *Hoodia* for the herbal and dietary supplement market also negotiated another benefit-sharing agreement with the San. As the *Hoodia* industry became more organised, it was dealt a blow by the sudden withdrawal of Unilever in 2008, which announced that it was abandoning plans to develop *Hoodia* as a functional food because of concerns about safety

and efficacy. Although some *Hoodia* herbal products remain on the market today, the multi-million dollar projections of profit remain elusive.

Important points have emerged from the *Hoodia* case. Most significantly, it has revealed that expectations of what bioprospecting can bring are both unrealistic and, often, misleading. Bioprospecting is far more likely to help to build scientific and technological capacity than it is to alleviate poverty or improve biodiversity conservation. The development of commercial products is costly and risky and seldom benefits communities on the ground. Where benefit-sharing agreements are developed, these are no solution to problems of development, and may end up causing worse problems than they resolve. To date, only US\$100,000 has been received by the San *Hoodia* Trust, but already the challenges of distributing this money are immense, and divert energy away from other needs. Many of the organisations set up to represent the San politically are very new, lack capacity, and are unable to handle the introduction of large sums of money.

Questions also need to be asked about the relevance of ABS for indigenous peoples in the context of other development challenges and priorities. These involve securing rights to the resources, knowledge and land that have been alienated from them over centuries. ABS debates have typically taken place without recognising these realities, and the broader threats to biodiversity and culture – such as logging, mining and commercial agriculture. Greater integration of these issues is vital if the dual objectives of achieving equity and conserving biodiversity are to be achieved.

GOING FURTHER

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