

Deletion of Swartland Sugarbush *Protea odorata* from Appendix II

Proponent: The Republic of South Africa

Summary: Swartland Sugarbush *Protea odorata* is an extremely rare shrub that occurs only in the Western Cape Province, South Africa. Currently the only known population, estimated in 2002 at 27 plants, is restricted to a single location. Historically it was known from five populations between the towns of Paarl and Malmesbury in the west coast lowlands. The species has specific habitat requirements, being found only in West Coast Renosterveld, a vegetation type, which has been severely reduced and highly fragmented by agricultural activities. The few remaining fragments are all either heavily over-grazed or densely invaded by the Australian tree *Acacia saligna*. The single location where the species now occurs is privately owned and there is very little likelihood that this land will be purchased for conservation. The taxon is difficult to propagate and artificially propagated material is scarce. Recent attempts to establish the species at nature reserves have failed. Seed is stored in the Millennium Seed Bank at the Royal Botanic Gardens, Kew and is available for reintroduction programmes. The South African National Biodiversity Institute and Custodians for the Rescue of Endangered Wildflowers are actively involved in monitoring *P. odorata*, and are liaising closely with South African conservation authorities to implement an action plan to conserve the species.

As it is fairly nondescript, without any scent and with very small flowers, *Protea odorata* has attracted very little attention from horticulturalists or cut-flower growers. One very limited attempt to commercialize the species in South Africa in the early 1980s failed because there was no demand for it. There has been no recorded legal or illegal international trade. The species was listed in Appendix I in 1975 because of an initial misunderstanding by the South African Management Authorities regarding the purpose of CITES. It was transferred to Appendix II in 1997 under the precautionary measures specified in Annex 4 (A. 1.) of *Resolution Conf. 9.24 (Rev CoP14)*. National legislation is regarded as sufficient to protect the species from any collection or trade pressure that may occur in the future. If removed from the Appendices, the species would remain in the “Protected Species” category of the Threatened and Protected Species list of the *National Environment Management Biodiversity Act*. It would also still be protected by the Cape Nature and Environmental Conservation Ordinance 19 of 1974, and so be subject to strict controls, including the need for permits in order to pick or sell specimens. The Department of Agriculture has agreed not to issue any permit allowing further transformation into agricultural land of remaining natural vegetation in the area where the species occurs. The taxon is listed in the African Proteaceae Red Data List (in prep.) as “Critically Endangered”, assessed according to the IUCN Categories and Criteria and will be submitted for inclusion as such in *The IUCN Red List of Threatened Species*.

Analysis: *Protea odorata* has a highly restricted range and very small population size, occurring in a threatened habitat type on private land that is not formally protected. However, the species itself is legally protected and has never been recorded in trade, either legal or illegal. It is extremely unlikely that there will be any international demand for *P. odorata*, and its continued survival is dependent on the conservation of its habitat, rather than on control of trade. National legislation would appear to be sufficient to protect it from any collection pressure that may arise in the future. No other *Protea* species are listed in the CITES Appendices. More than two intervals between meetings of the Conference of the Parties have now passed since the species was transferred from Appendix I to Appendix II and it is highly unlikely there will be any future trade in this species. It would therefore be unlikely to qualify for inclusion in the Appendices in the near future. The species therefore does not appear to meet the criteria for inclusion in Appendix II.

Supporting Statement (SS)	Additional information
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<p><u>Taxonomy</u></p> <p> </p> <p><u>Range</u></p> <p> </p> <p>South Africa</p> <p> </p> <p><u>IUCN Global Category</u></p> <p> </p> <p>Not assessed.</p>	
<p>Biological and trade criteria for retention in Appendix II (Resolution Conf. 9.24 (Rev. CoP14) Annex 2 a)</p>	
<p><u>A) Trade regulation needed to prevent future inclusion in Appendix I</u></p>	
<p>Past distribution is poorly known; historically it was probably limited to an area of 30 km² on the lowlands between Paarl and Malmesbury towns in Western Cape Province of South Africa. How much of the former range it occupied is difficult to estimate, but it was fairly common at sites where it occurred. Now it only occurs at one of the five originally known sites (Joostenbergkloof) and occupies a couple of square metres in total. Six plants were recorded here in 1975. An initial count in 1998 revealed 22 plants and additional surveys increased this number to 34 plants. This declined to 27 plants in 2002.</p> <p>In the 1970s, the overall population may have numbered just over 1000 plants.</p> <p>In the African Proteaceae Red Data List, which is currently in preparation, the proposed IUCN status is Critically Endangered A2c, B1a(ii)b(i,ii,iii,v)c(iv), B2a(ii)b(i,ii,iii,v)c(iv), C1, C2a(i,ii) and D.</p> <p>No regulation of trade in <i>Protea odorata</i> is necessary. There is no record in the CITES trade database of any trade in the species. No parts or derivatives are in trade. Illegal trade is highly unlikely, as the species is not sought after for horticulture or the cut-flower trade.</p>	<p><i>The taxon is difficult to transplant from the wild owing to its specific habitat requirements (Simpson, 1997).</i></p> <p><i>There are no records of Protea odorata in the CITES trade database. The absence of international trade in P. odorata was confirmed by Western Cape Nature Conservation authorities (Simpson, 1997).</i></p> <p><i>Hilton-Taylor (2009) also confirms there is no trade for this species and never has been. He considers that as the flowers are small and largely nondescript, they are never likely to be in demand. Rebelo et al. (in prep.) describes the flowers as scentless, despite the plant's name.</i></p> <p><i>The Botanical Society of South Africa does not advertize seeds of the species in its internationally distributed seed catalogue (Botanical Society of South Africa, 2009).</i></p>
<p><u>B) Regulation of trade required to ensure that harvest from the wild is not reducing population to level where survival might be threatened by continued harvest or other influences</u></p>	
<p>No regulation of trade is necessary because <i>Protea odorata</i> is not harvested from the wild and is not sought after for horticulture. National regulations adequately protect the species.</p>	<p><i>Hilton-Taylor (2009) is of the opinion that adequate domestic controls are in place and, as there is no demand for P. odorata, it is unlikely to ever be traded.</i></p>

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Retention in Appendix II to improve control of other listed species	
<u>A) Specimens in trade resemble those of species listed in Appendix II under Resolution Conf. 9.24 (Rev. CoP14) Annex 2 a or listed in Appendix I</u>	
There are no species in trade which could be confused with <i>Protea odorata</i> .	<i>No other Protea species are included in the CITES Appendices.</i>
<u>B) Compelling other reasons to ensure that effective control of trade in currently listed species is achieved</u>	
There are no reasons to continue to include <i>Protea odorata</i> in Appendix II, as there is no trade in the species.	

Other information**Threats**

The main threats have been habitat loss owing to agriculture and invasion of remaining habitat remnants by the alien *Acacia saligna*. Road works at one site are known to have destroyed a population. Invasion of a fungal pathogen at another site (probably because of increased disturbance) also killed many plants. Brush-cutting to improve cattle grazing has had a negative impact. Although this species does require fire at 10–15 year intervals to ensure recruitment and regeneration, many of the remnants have been burnt at far more frequent intervals to create grazing for cattle and this is an additional threat.

Other threats are browsing by sheep and cattle, causing destruction of the plants as well as soil compaction, dumping, water table depletion, habitat change leading to the development of a grassy understory, agriculture (planting of oats on one site) and possible golf course development (Rebelo et al., in prep.).

Conservation, management and legislation

The single site where *Protea odorata* occurs is privately owned and there is very little likelihood it will be purchased for conservation purposes. One former site (Riverlands) is a proclaimed provincial nature reserve and active measures are being taken by Cape Nature to remove all alien vegetation and restore the reserve. The threat at all the sites caused by *Acacia saligna* invasion is slowly being reduced by the introduction of gall rust *Uromycladium tepperianum* as a biocontrol agent.

An *ad hoc* reintroduction of around 10 plants that had been artificially propagated into a former site was attempted in 1990, but as there was no follow-up, the reproduction failed.

P. odorata was protected from international trade by its listing in CITES Appendix I from 1975 to 1997 and in CITES Appendix II from 1997 onwards. Because of its CITES listing, this species is listed as “Endangered Flora” in terms of the 1974 *Cape Nature and Environmental Conservation Ordinance 19*. This means no person without a permit may possess, sell, donate, receive as a donation, pick, or import into, export from, or transport through the province the species. If removed from CITES completely, the species would fall into the “Protected Flora” category and would still

Protea odorata is listed as Endangered in the Red Data List of Southern African Plants (Hilton-Taylor, 1996) and is also listed in the 2009 Red List of South African Plants (Raimondo et al., in press; Foden, 2009).

Protea odorata is listed under the “Protected Species” category in the Threatened and Protected Species List of South Africa’s National Environment Management: Biodiversity Act (Newton, 2009).

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<p>be subject to strict controls, including the need for permits to pick or sell. Written permission is also required from the land owner concerned. The Department of Agriculture has agreed not to issue a permit allowing any further transformation of remaining natural vegetation into agricultural lands.</p> <p>There is adequate domestic legislation to protect the species. No controls on harvesting are necessary as the species is not sought after.</p> <p>Currently the South African National Biodiversity Institute and Custodians for the Rescue of Endangered Wildflowers (CREW) are actively involved in the monitoring, and are liaising closely with the conservation authorities to implement an action plan to save the species from extinction.</p>	
<u>Captive Breeding/Artificial Propagation</u>	
<p>Horticulturists at Kirstenbosch National Botanical Garden developed a successful method to germinate the species and to grow it from cuttings. Plants established from seeds obtained from the last remaining site are being propagated and it is intended to introduce them into the Durbanville and Briers Low Nature Reserves, the only suitable areas under conservation.</p> <p>A commercial wild flower farmer at Kaimansgat Nursery grew approximately 10 plants from seed in the early 1980s, but as there was no demand for the species in cut-flower form, he abandoned the plants. No plants are known to be in cultivation outside South Africa.</p> <p>Seeds and seedlings were originally included in the Fynbos genebank at Elsenberg (Dept of Agriculture) and seeds were collected for propagation at Kirstenbosch, but none survived.</p>	<p><i>Protea odorata can be propagated and is usually grown from seed, but with difficulty. The taxon does not root easily and it sets few seeds, therefore artificially propagated material is scarce (Brits, 1997). Plants only produce seed in their third season of growth, and few viable seeds are produced, making seed collection rather difficult. P. odorata seeds are stored in the Millennium Seed Bank at the Royal Botanic Gardens, Kew and are available for reintroduction programmes for the species (Cowell, 2006; 2007).</i></p> <p><i>According to Rebelo et al. (in prep.), although there were 32 plants at Kirstenbosch National Botanic Centre in 2000, none remained in 2005. Attempts to establish a population at Riverlands Nature Reserve from seeds failed in 1990. At Briers Low Nature Reserve plants that were planted in winter 2005 and 2006 did not survive the following summer (Rebelo et al., in prep.).</i></p>
<u>Other comments</u>	
<p>The listing of <i>P. odorata</i> in Appendix I was because of an initial misunderstanding by the South African Management Authorities regarding the purpose of CITES. The downlisting to Appendix II in 1997 was a precautionary measure as specified in Annex 4 of <i>Resolution Conf. 9.24</i>. There is no reason to keep the species listed in any CITES Appendix, despite its being threatened with imminent extinction, as its continued survival is dependent on the conservation of its habitat, not control of trade in the species.</p>	<p><i>More than two intervals between meetings of the Conference of the Parties have now passed since the species was transferred from Appendix I to Appendix II.</i></p>

Reviewers:

Craig Hilton-Taylor, TRAFFIC East/Southern Africa.

References:

- Botanical Society of South Africa (2009). *2009 Kirstenbosch seed catalogue*. <http://www.sanbi.org/products/seedcatalogue2009.pdf>. Viewed 8 November 2009.
- Brits, G. (1997). Pers. comm. to J. Chan, TRAFFIC East/Southern Africa-South Africa, Johannesburg, South Africa.
- Cowell, C. (2006) Plant story. *Protea odorata*. Millennium Seed Bank Project, Kew. http://www.kew.org/msbp/plantstories/Protea_odorata.htm. Viewed 1 November 2009.
- Cowell, C. (2007) Contributing to Target 8: The use of seed bank collections from threatened species for habitat restoration in South Africa. *Samara* 13:9. http://www.kew.org/msbp/scitech/publications/samara/samara13_english.pdf Viewed 1 November 2009.
- Foden, W.(2009). *In litt.* to IUCN/TRAFFIC Analyses team, Cambridge, UK. 18 November 2009.
- Hilton-Taylor, C. (1996). *Red Data List of Southern African Plants*. Strelitzia 4. National Botanical Institute, Pretoria, South Africa.
- Hilton-Taylor, C. (2009). *In litt.* to IUCN/TRAFFIC Analyses team, Cambridge, UK, November and December 2009.
- Newton, D. (2009) *in litt.* to IUCN/TRAFFIC Analyses team, Cambridge, UK. December 2009.
- Raimondo, D., Von Staden, L., Foden, W., Victor, J.E., Helme, N.A., Turner, R.C., Kamundi, D.A., Manyama, P.A. (Eds.) (In press). *Red List of South African Plants*. Strelitzia. South African National Biodiversity Institute, Pretoria, South Africa.
- Rebelo, A.G., Helme, N., Holmes, P.M., Forshaw, C.N., von Staden, L., Richardson, S.H., Euston-Brown, D., Foden, W., Raimondo, D., Ebrahim, I., Victor, J.E., Bomhard, B., Oliver, E.G.H, Johns, M., Van der Venter, J., van der Walt, R., Von Witt, C., Low, A.B., Paterson Jones, C., Rourke, J.P., Hitchcock, A., Schutte-Vlok, A., Potter, L., Vlok, J. and Pillay, D. (In prep.). African Proteaceae Red Data List.
- Simpson, M. (1997). Pers. comm. to J. Chan, TRAFFIC East/Southern Africa-South Africa, Johannesburg, South Africa.