

Transfer of *Aloe thorncroftii* from Appendix I to Appendix II. Proponent: South Africa.

Summary: *Aloe thorncroftii* is a solitary succulent plant with leaves about 30 cm long. It has a restricted distribution and is confined to the mountains of the Barberton and Carolina districts in the Mpumalanga province of South Africa. There are eight known sub-populations, only one of which has been monitored in the past, and which appears to be reasonably stable. Habitat alteration, invasive species and frequent burning are the main threats to the species. Plants are propagated by a small number of nurseries in South Africa and abroad. CITES trade data indicate that there was no legal or illegal international trade in *A.thorncroftii* between 1981 and 1995, and there is no recent evidence of international trade in this species. *A. thorncroftii* is currently protected by provincial legislation, and three of the populations are located within protected reserves. A permit is required for any specimen to be traded across provincial or national borders. It is similar in appearance to *A. suprafoliata*, which is currently listed in Appendix II. This proposal seeks to transfer *Aloe thorncroftii* from Appendix I to Appendix II in accordance with Resolution Conf. 9.24, Annex 4, criterion B 2a).

Analysis Following Resolution Conf. 9.24, *Aloe thorncroftii* arguably does not meet the biological criteria for inclusion in Appendix I. The population is greater than 5 000 individuals and, although it appears to have a restricted distribution, it does not appear to meet any of the relevant sub-criteria. There is no evidence that the population is in decline. Although the species is in small-scale cultivation, there is no evidence of any international demand for wild specimens. Any demand can evidently be met by specimens raised from seed.

Supporting Statement (SS)	Additional information
South Africa	<p style="text-align: center;"><u>Range</u></p> <p style="text-align: center;"><u>IUCN Global Category</u></p>
	<i>VU, using pre-1994 criteria (Walter and Gillett, 1998).</i>

Biological criteria for inclusion in Appendix I**A) Small wild population**

(i) Population or habitat decline; (ii) small sub-populations; (iii) one sub-population; (iv) large population fluctuations; (v) high vulnerability due to biology or behaviour

There are eight known subpopulations and the total survey population is 7 906 plants. However, it is likely that undetected subpopulations exist and that the overall population size has been underestimated.

Only one subpopulation has been monitored in the past and this has remained stable from 1985 to 2000.

The average age of plants at sexual maturity is six years though this can vary from four to ten years depending on the soil depth where seeds germinate (Craib, 2002).

B) Restricted area of distribution

(i) Fragmented or localised population; (ii) large fluctuations in distribution or sub-populations; (iii) high vulnerability due to biology or behaviour; (iv) decrease in distribution, population, habitat or reproductive potential

This species is naturally restricted in its distribution, occurring in the mountains of the Barberton and Carolina districts in the Mpumalanga province of South Africa, at between 1 250 m and 1 750 m above sea level.

There is no indication of a range reduction although alteration of *A. thorncroftii* habitat means that some range reduction may have taken place, 48% of its potential habitat has been transformed.

Although Aloe thorncroftii appears to have a restricted distribution, it does not appear to meet the any of the relevant subcriteria.

Sajeva (2002) notes that the species is restricted but not fragmented in its distribution.

Supporting Statement (SS)	Additional information
<p><u>C) Decline in number of wild individuals</u> (i) Ongoing or historic decline; (ii) inferred or projected decline</p> <p>There has been no documented evidence of a decline in the number of wild individuals although the habitats of three of the eight subpopulations are infested with invasive plant species.</p> <p><u>D) Status suggests inclusion in Appendix I within 5 years</u></p>	<p><i>Craib (2002) believes that the population has increased in places.</i></p>

Trade criteria for inclusion in Appendix I

The species is or may be affected by trade

There is currently no evidence of legal or illegal international trade of this species. CITES trade data indicate that there was no international trade in *Aloe thorncroftii* between 1981 and 1985. A handful of nurseries propagate *Aloe thorncroftii* for horticultural purposes both in South Africa and abroad. There is a small amount of national trade of seedlings, which have attractive white spots and so are popular as horticultural specimens. Adult plants are not traded.

Craib (2002) and Sajeve (2002) agree that there is no evidence of international trade of this species.

*A nature reserve was proclaimed specifically for the protection of *A. thorncroftii* in 1967, when it was feared that extensive collecting of the taxon may have led to its extinction. Such collection pressure has diminished considerably since then and in the most recent population survey no new signs of collecting were observed (Krynauw, 2000).*

Precautionary Measures

B2a: CoP satisfied with: the species is not in demand for international trade, nor is its transfer to Appendix II likely to stimulate trade in, or cause enforcement problems for, any other species included in Appendix I Annex 4, Res Conf 9.24

The species is not in demand for international trade, nor is it likely to become so if transferred to Appendix II.

*Craib (2002) contends that there is minimal trade in *Aloe thorncroftii* and that if this species is transferred to Appendix II, any international trade would most likely be in seeds.*

Other information

Threats

The main threats are invasive species infestation, afforestation and alteration of habitat. Frequent burning has been reported to damage populations, although some fire is necessary to maintain its habitat.

Craib (2002) concurs the species is not currently threatened by trade but may become threatened as a result of invasive species.

*This species is considered rare in South Africa (Sajeve, 2002). Smith et al. (2000) considered *Aloe thorncroftii* as lower risk (least concern). Hilton-Taylor and Smith (1994) consider *Aloe thorncroftii* to be vulnerable. Hardy and Fabian (1992) describe *Aloe thorncroftii* as 'rare' but no longer 'endangered'.*

Conservation, management and legislation

Aloe thorncroftii is currently protected by provincial legislation (*Mpumalanga Nature Conservation Act*, 10 of 1998 Schedule 11).

The largest population (7 079 plants) was recorded only recently and is not located within a nature reserve (Krynauw, 2000).

Three of eight populations are in protected areas. No programmes are currently in place to further conserve the habitat of this species.

*Craib (2002) highlights the need to monitor the encroachment of invasive species on populations of *Aloe thorncroftii*.*

Permits are required for any specimen traded across provincial and national borders.

Similar species

Aloe suprafoliata looks very similar to *Aloe thorncroftii* but is not known to be in trade.

Aloe suprafoliata is in Appendix II of CITES and is available to buy on a number of European websites,

Supporting Statement (SS)	Additional information
	<p>costing approximately USD 3. The source of these specimens is not indicated.</p> <p>Sajevo (2002) notes that it is similar to some aloes listed in Appendix II; transferring this species to Appendix II may help avoid identification problems.</p> <p>Hardy and Fabian (1992) state that a characteristic that distinguishes <i>A. thorncroftii</i> from other members of the genus is that the leaf surfaces are rough to touch and, when young, are covered with tubercles.</p>

Artificial propagation

It is easier to grow plants from seed than to collect plants from wild populations. A handful of nurseries propagate *Aloe thorncroftii* for horticultural purposes both in South Africa and abroad.

Seed could be collected by nature conservation officials to supply the nurseries and reduce the temptation to collect the plants from wild populations.

Sajevo (2002) concurs that this taxon is cultivated in several botanic gardens around the world. Craib (2002) notes that it is not a popular aloe in cultivation.

Van Wyk and Smith (1996) note that it is more difficult to cultivate than *A. suprafoliata* and is not often encountered in collections, although Krynauw (2000) states that it grows very readily from fresh seed.

A. thorncroftii produces an excessive amount of seed relative to the carrying capacity of the natural environment and therefore a controlled seed harvesting programme could be used to supply any demand for seeds (Craib, 2000).

Reviewers: C. Craib, S. Krynauw, TRAFFIC East/Southern Africa - South Africa, M. Sajevo.

References:

- Craib, C., 2000. The ecology of *Aloe thorncroftii*. *Haworthiad* July 2002: 79-80.
- Craib, C., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Hardy, D. and Fabian, A., 1992. *Succulents of the Transvaal*. Southern Book Publishers, Halfway House. Cape Town, South Africa.
- Hilton-Taylor, C. and Smith, G.F., 1994. The conservation status of Aloaceae in southern Africa. In: Huntley, B. J. (Ed.), *Botanical diversity in southern Africa*. *Strelitzia*, occasional publication of the National Botanical Institute, Pretoria 1: 287-303.
- Krynauw, S., 2000. Conservation Plan for *Aloe thorncroftii*. Unpublished report for Mpumalanga Parks Board, Lydenburg, South Africa.
- Krynauw, S., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Sajevo, M., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Smith, G.P., Steyn, E.M.A., Victor, J.E., Crouch, N.R., Golding, J. and Hilton-Taylor, C., 2000. ALOACEAE, The conservation status of *Aloe* in South Africa: an updated synopsis. *Bothalia* 30 (2):206-211.
- Van Wyk, BE and Smith, G., 1996. *Guide to the Aloes of South Africa*. Briza Publications, Pretoria, South Africa.
- Walter, K.S. and Gillett, H.J. (Eds.), 1998. *1997 IUCN Red List of Threatened Plants*. World Conservation Monitoring Centre, Cambridge, UK, and IUCN – The World Conservation Union, Gland, Switzerland and Cambridge, UK.