CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Transfer of *Aloe thorncroftii* from Appendix I to Appendix II in accordance with Annex 4 section B. 2(a).

B. Proponent

Republic of South Africa.

C. Supporting statement

1. Taxonomy

1.1	Class:	Liliopsida
1.2	Order:	Asparagales
1.3	Family:	Asphodelaceae
1.4	Species:	*Aloe thorncroftii* (Pole-Evans) 1917
1.5	Scientific synonyms:	None
1.6	Common names:	None
1.7	Code numbers:	EC Reg 338/97

2. Biological parameters

2.1 Distribution

Aloe thorncroftii is restricted in its distribution to the mountains of the Barbeton and Carolina districts in Mpumalanga province of South Africa (25°45'-26°00'S, 30°45'-31°15'E). It occurs between altitudes of 1250m and 1750m above sea level.

2.2 Habitat availability

Aloe thorncroftii grows predominantly on rocky outcrops in a grassland vegetation type known as Mountain Sourveld. Satellite images show that 48% of this habitat has been transformed. Commercial afforestation is responsible for 41.6% of this transformation. Of the eight known populations 2 have had habitat reduced by road construction. Invasion by alien plant species is the main future threat to the habitat of this plant. Three populations already have high levels of alien infestation.

2.3 Population status

A survey of all known sub-populations was conducted in September 2000. Three new sub-populations were encountered during this survey, bringing to eight the number of known sub-populations. The total survey population for this taxon was 7 906 plants. It is likely that the total population count is an underestimate for the following reasons:

- *Aloe thorncroftii* grows in steep mountainous terrain so it is highly probable that undetected sub-populations remain.

- Limited time was spent locating new sub-populations during this survey.
- One of the sub-populations could not be reached and plants were counted using binoculars.
- Moribund grass at most of the sub-populations made it difficult to find seedlings and juveniles.

Of the total 7906 plants surveyed a large proportion of these plants (7079) grow in one newly discovered sub-population.

Sub–population	Number of adult plants	Number of juvenile plants	Dead	New population	Total
1	72	3	1		75
2 *	7079	-	71		7079
3	50	1	1		51
4	4	0	0		4
5 *	17	1	0		18
6	200	?	?		200
7 *	65	5	1		70
8	409	-	10		409

Total plants: 7906

2.4 Population trends

Only one sub-population has been monitored in the past. Population size for this sub-population has remained reasonably stable over the past 15 years with 428 plants counted in 1985 and 419 in 2000. Monitoring of this population between these dates was not thorough, making it impossible to tell whether population numbers have fluctuated or remained relatively stable during this time.

2.5 Geographic trends

All known sub-populations still exist and there is no indication of range reduction. As already mentioned, however, the habitat in which *Aloe thorncroftii* grows has been severely reduced by afforestation making it possible that this species had a larger range in the past.

2.6 Role of the species in its ecosystem

Little is known about the ecology of this plant and it's importance within the ecosystem.

2.7 Threats

Frequent burning has been reported to damage populations. Seedlings do not survive fire in unprotected sites and are found predominantly on "fire-islands" on bedrock and in rock cracks. Fire is however necessary at the correct intervals as no burning results in surrounding grasses becoming moribund, which also limits seedling establishment. Seedlings are highly susceptible to fungal attack promoted by the lack of light penetration, the retention of moisture, and lack of wind in moribund vegetation (Craib, pers comm.).

Three of the eight sub-populations are infested with invasive plant species, mainly *Pinus patula, Acacia mearnsii,* and *Acacia dealbata,* which have escaped from surrounding plantations. Continued spread of invasive plants is likely given that plantations surround most sub-populations.

Aloe thorncroftii was originally listed on Appendix ? on account of a small population size and the threat of collection. The last report of collection from populations is from 1978. The recent survey carried out on all sub-populations reports no sign of collection and therefore collection is not a threat to this species.

3. Utilization and trade

3.1 National utilization

Levels of national utilisation of *Aloe throncroftii* are not high. A handful of specialist succulent nurseries propagate this plant in small numbers for horticultural purposes. Small plants (seedlings) are popular horticultural specimens as leaves have attractive white spots. Adults are not traded as leaves have no spots and the plant's architecture is lanky and unattractive. The plant has no other utilisation.

3.2 Legal international trade

According to a TRAFFIC analysis of CITES trade data, there was no trade in *Aloe thorncroftii* between 1981 and 1995 (Newton and Chan, 1998). There is no recent evidence of international trade in this species.

3.3 Illegal trade

There is no evidence of illegal trade in this species. The species does not appear on web sites offering plant material for sale and surveys of wild populations showed no signs of wild harvesting.

3.4 Actual or potential trade impacts

Given the small amount of horticultural interest in this species it is considered highly unlikely that the proposed amendment will affect demand levels for this species.

3.5Artificial propagation for commercial purposes

At present, *Aloe thorncroftii* is grown in a handful of nurseries abroad. It is not known whether mother stock for these specimens was collected before or after *Aloe thorncroftii* was listed on Appendix I.

4. Conservation and Management

4.1 Legal status

4.1.1 National

Aloe thorncroftii is currently protected by provincial legislation: Mpumalanga Nature Conservation Act, 10 of 1998 Schedule 11, which is considered sufficient to protect the plant.

4.1.2 International

None.

4.2 Species management

4.2.1 Population monitoring

The former Transvaal Provincial Nature Conservation Department (1985-1987) carried out monitoring of one population of *Aloe thorncroftii*. Conservation officials felt that population numbers were not declining and monitoring was stopped. No management of populations is presently taking place.

4.2.2 Habitat conservation

Three of the eight populations are protected, two on formally proclaimed reserves and one on a natural heritage site. One reserve, The Thorncroft Nature Reserve was proclaimed for the sole purpose of protecting this species. No programmes are presently in place to conserve further habitat of this species. Alien clearing in *Aloe thorncroftii* habitat would most benefit the conservation of this species and is recommended.

4.2.3 Management measures

None.

4.3 Control measures

4.3.1 International trade

The Mpumalanga Parks Board permit system requires that any specimen traded across provincial or national borders needs to have a permit.

4.3.2 Domestic measures

The Mpumalanga Nature Conservation Act is enforced to protect *Aloe thorncroftii* and is considered effective.

5. Information on Similar Species

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

6. Other Comments

None.

7. Additional Remarks

Aloe thorncroftii is a relatively fast growing species and plants can grow from seed to flowering stage within 3 years. It is much easier and cheaper to grow plants from seed, than to collect plants from the wild populations. This species produces large quantities of seed and seed could be collected by Nature conservation officials and cultivated for ex-situ conservation purposes or to supply the small demand for plants from the handful of nurseries wanting to propagate this species. Such a facility would prevent the temptation to collect mother-stock from wild populations.

It unlikely that collection from wild populations will threaten this species in the future for the following reasons:

- most *Aloe thorncroftii* populations occur in remote areas, difficult to find by collectors
- levels of interest in this plant from collectors are not high

- only seedlings are desirable, of which there are relatively few in a population, making them time consuming and thus expensive to locate

8. References

Krynauw, S. 2000. Conservation plan for Aloe thorncroftii. Unpublished report for Mpumalanga Parks Board, Lydenburg, South Africa.

Newton, D. and Chan, J. 1998. South Africa's trade in southern African succulent plants. TRAFFIC East/ Southern Africa, Johannesburg, South Africa.