

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



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ARTIFICIALLY PROPAGATED *TILLANDSIA XEROGRAPHICA*
FROM GUATEMALA AND THE PHILIPPINES

This information document has been submitted by the Scientific Authority of the Netherlands.

Note on import of
2750 artificially propagated (A) *Tillandsia xerographica* from Guatemala and
1000 artificially propagated (A) *Tillandsia xerographica* from the Philippines.

Applications

1. 03/235, 25-3-2003: Application for import in the Netherlands of 400 live plants of *Tillandsia xerographica* (A) from Agro Inversiones S.A., Guatemala.
2. 03/300, 11-4-2003: Application for import in the Netherlands of 500 live plants of *Tillandsia xerographica* (A) from Insular Botanicals International Inc., Barangay Kilib, Luvban, Quezon, Philippines.
3. 03/308, 22-4-2003: Application for import in the Netherlands of 500 live plants of *Tillandsia xerographica* (A) from Insular Botanicals International Inc., Barangay Kilib, Luvban, Quezon, Philippines.
4. 03/421, 22-5-2003: Application for import in the Netherlands of 350 live plants of *Tillandsia xerographica* (A) from Agro Inversiones S.A., Guatemala.
5. 03/488, 18-6-2003: Application for import in the Netherlands of 2000 live plants of *Tillandsia xerographica* (A) from Ventura Loyo, Guatemala.

Distribution

Guatemala, El Salvador, Mexico (see ref. 9).

Status in the wild

Tillandsia xerographica is collected from the wild in Guatemala in huge numbers. The populations in Guatemala and El Salvador are totally depleted by Guatemalan commercial collectors (Rauh, pers. comm.; Vollmer, in lit. in 3.b).. Many plants are collected from forest reserves. *Tillandsia* harvest causes substantial damage to tropical forests. The very attractive, slow growing form of *Tillandsia xerographica* from Guatemala is the most popular example for extreme threat by trade. It is offered in trade in large

quantities, frequently in quite big, flowering specimens. The Mexican form of *Tillandsia xerographica* is not as attractive as the Guatemalan one. As a consequence in southern Mexico some populations still exist (Hromadnik, pers.comm. in 3.b).

The species *Tillandsia xerographica* is in danger of becoming extinct in the wild (3b)

Trade

In 1986-1988 the Netherlands imported 5230 kg. of different *Tillandsia* species from Guatemala. Total export of Guatemala in those years was 39,080 kg. of different *Tillandsia* species. One Guatemalan nursery was exporting 30-40,000 plants of *Tillandsia xerographica* annually (3.b). A seized shipment in the Netherlands in 1999 of 8000 live plants of *Tillandsia xerographica* from Guatemala contained very heterogeneous mature plants with several wild characteristics, such as dirt, pieces of bark from host tree, spiders and ants nests, irregular shapes, insect damage, etc. The plants had been rigorously cleaned and leaves had been cut away. It appeared that wild plants and vegetatively propagated plants can be well distinguished from artificially propagated plants (5, 8).

Size and morphology of seized shipments in Switzerland suggested wild origin (11).

Artificial propagation

Tillandsia xerographica takes 12-18 years to mature and seed is produced. Because of the slow growth rate, exclusive artificial propagation seems unlikely. 95% of plants in trade were estimated in 1991 as wild collected and 5% as from vegetative propagation (3.a). One nursery in the Netherlands made an attempt in 1991 to produce plants from seeds (8). Confiscated *Tillandsia xerographica* appeared easy to cultivate in Switzerland, although very slow growing. It flowers and produces offsets easily and losses are low, if certain climatic conditions are offered (11).

Tillandsia experts who visited nurseries in Guatemala (8) report different types of production:

1. *Tillandsias* are collected from the wild and directly exported. These plants are of wild origin (W).
2. *Tillandsias* are collected from the wild and put in nurseries. Plants that are not flowering or have not flowered recently are cleaned and cleared of dead and damaged leaves. These plants are most probably at least 20 years old. These plants can be recognized by their very thick stems of about 20 to 30 mm diameter. These plants are exported and should be considered as from wild origin (W).
3. *Tillandsias* are collected from the wild and put in nurseries. Plants that have flowered are tied to vertical racks and form a shoot, which grows to a mature plant within 1 or 2 years, feeding exclusively on the mother plant. After some time the mother plant deteriorates and dies off. These plants can be recognized by having some scales at the base of the plant (prophylls), that rapidly grow into big leaves. When this shoot is taken from the mother plant, it could be regarded as a cutting, as defined in paragraph a) of the definition of artificially propagated plants in resolution Conf. 11.11.

Usually one wild plant forms only one shoot and produces thus one cutting. One plant from the wild means one plant for export. This process is thus as detrimental to the survival of the species as direct wild export under 1) and 2) above. Therefore these plants cannot be considered to fulfil criterion b) of resolution Conf. 11.11. The cultivated parental stock used for artificial propagation is not established in such a manner that it is not detrimental to the survival of the species in the wild; and also the nursery cannot be considered to be managed in such a way that long-term maintenance of this cultivated stock is guaranteed. Therefore these plants are not artificially propagated in conformity with the CITES definition and should be considered as of wild origin (W).

4. *Tillandsias* are collected from the wild and put in nurseries. Plants that have flowered are tied to vertical racks and form a shoot, which grows to a mature plant within 1 or 2 years, feeding exclusively on the mother plant. Under certain conditions of disturbance - treatment with chemicals - some plants may form more than one shoot, sometimes even 4 or 5. These shoots can be removed from the mother plant at an early stage to grow by itself till mature tradeable size. In the wild plants only have one shoot. These multiple shoots have to share the nutrients of the mother plant, and grow therefore 4 times slower than single shoots. These shoots are less interesting for the nursery,

because it will take many more years (5 to 10) before they produce plants in a tradeable size for export. It is clear that this method is not preferred by nurseries.

For this method, one plant from the wild may produce 2, maybe 3 plants for export. This process is less detrimental than the method under 3) above, but these plants cannot be considered to fulfil criterion b) of resolution Conf. 11.11, because the growers do not maintain a stock of mother plants. The mother plants die off. Actually these so-called mother plants are not true mother plants, but genetically unchanged vegetatively reproduced shoots. The cultivated parental stock used for artificial propagation is not established in such a manner that it is not detrimental to the survival of the species in the wild; and the nursery cannot be considered to be managed in such a way that long-term maintenance of this cultivated stock is guaranteed. They always need many new plants from the wild every year. Therefore these plants are not artificially propagated in conformity with the CITES definition and should be considered as of wild origin (W).

5. Plants can be produced from seed, but it will take 10 to 15 years to produce half mature plants. These truly artificially propagated plants can be recognized by a very regular leaf size sequence from basis to top and the stem being never thicker than 2 cm. at most. Half mature plants are not to be found in large amounts in the wild and are therefore not interesting for the trade. These artificially propagated plants look healthy and undamaged (9).

During a visit of nurseries in Guatemala all propagation from seed was present in only one square meter in one nursery; all other plants in the nurseries were mature plants from the wild (5). This could be because the growers may have chosen the best plants that produce many seeds, but still one would expect other phases to be present like young and half-mature plants.

Based on this information it is to be assumed that most trade in artificially propagated plants of *Tillandsia xerographica* from Guatemala involves a mix of types as described above, with the larger part being from type 1, 2 and 3. Most of this trade should thus be regarded as trade in wild plants.

Additional comment

99.9% of all so called cultivated plants die within a year after sale (3.a). This means that this species is a candidate for listing under article 4.6.c of Council Regulation 338/97.

Consultation of several botanists in Europe generated support to suspend international trade in *Tillandsia xerographica* completely.

Conclusion

No positive advice can be given at the moment. No import permits should be issued for artificially propagated (A) *Tillandsia xerographica* from any country for the time being.

Detailed information is required about the propagation methods and procedures in relation to the definition in resolution 11.11. Management authorities and scientific authorities of exporting countries Guatemala and the Philippines are to be consulted.

SRG should be informed.

References

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