

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



Seventeenth meeting of the Conference of the Parties  
Johannesburg (South Africa), 24 September – 5 October 2016

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Inclusion of the genus *Beaucarnea* (Lemaire, 1861) in Appendix II, as follows:

- In accordance with Article II 2a) of the Text of the Convention, and Resolution Conf. 9.24 (Rev. CoP16), Annex 2a, criterion B:
  - 1) *Beaucarnea recurvata*
- And, in accordance with Article II 2b) of the Text of the Convention, and Resolution Conf. 9.24 (Rev. CoP16), Annex 2b, criterion A:
  - 2) *Beaucarnea compacta*
  - 3) *Beaucarnea goldmanii*
  - 4) *Beaucarnea gracilis*
  - 5) *Beaucarnea guatemalensis*
  - 6) *Beaucarnea hiriartiae*
  - 7) *Beaucarnea inermis*
  - 8) *Beaucarnea pliabilis*
  - 9) *Beaucarnea purpusii*
  - 10) *Beaucarnea sanctomariana*
  - 11) *Beaucarnea stricta*

B. Proponent

Mexico\*

C. Supporting statement

1. Taxonomy

- |                        |  |
|------------------------|--|
| 1.1 Class:             | Liliopsida (APG III, 2009)   |
| 1.2 Order:             | Asparagales (APG III, 2009)  |
| 1.3 Family:            | Asparagaceae (APG III, 2009)   |
| 1.4 Genus and species: | <ol style="list-style-type: none"> <li>1) <i>Beaucarnea compacta</i> (L. Hern. &amp; Zamudio, 2003)</li> <li>2) <i>Beaucarnea goldmanii</i> (Rose, 1909)</li> <li>3) <i>Beaucarnea gracilis</i> (Lemaire, 1861)</li> </ol> |

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\* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

- 4) *Beaucarnea guatemalensis* (Rose, 1906)
- 5) *Beaucarnea hiriartiae* (L. Hern., 1992)
- 6) *Beaucarnea inermis* (Rose, 1906)
- 7) *Beaucarnea pliabilis* (Rose, 1906)
- 8) *Beaucarnea purpusii* (Rose, 1906)
- 9) *Beaucarnea recurvata* (Lem, 1861)
- 10) *Beaucarnea sanctomariana* (Hernández-Sandoval, 2001)
- 11) *Beaucarnea stricta* (Lem, 1861)

### 1.5 Scientific synonyms:

| Species:   | Synonyms (The Plant List, 2013)   |
|--|---|
| 1) <i>Beaucarnea recurvata</i>                         | - <i>Beaucarnea tuberculata</i><br>- <i>Dasyllirion recurvatum</i><br>- <i>Dasyllirion inerme</i><br>- <i>Dasyllirion recurvatum</i><br>- <i>Nolina recurvata</i><br>- <i>Pincenectitia tuberculata</i>             |
| 2) <i>B. compacta</i>                                  | (N/A)   |
| 3) <i>B. goldmanii</i>                                 | (N/A)   |
| 4) <i>B. gracilis</i>                                  | - <i>Beaucarnea oedipus</i><br>- <i>Dasyllirion gracile</i><br>- <i>Nolina gracilis</i><br>- <i>Nolina histrix</i>  |
| 5) <i>B. guatemalensis</i>                             | - <i>Nolina guatemalensis</i>   |
| 6) <i>B. hiriartiae</i>                                | (N/A)   |
| 7) <i>B. inermis</i>                                   | (N/A)   |
| 8) <i>B. pliabilis</i>                                 | - <i>Beaucarnea ameliae</i><br>- <i>Beaucarnea petenensis</i><br>- <i>Beaucarnea petenensis</i> var. <i>Petenensis</i><br>- <i>Dayllirion pliabile</i><br>- <i>Dracaena petenensis</i><br>- <i>Nolina pliabilis</i> |
| 9) <i>B. purpusii</i>                                  | (N/A)   |
| 10) <i>B. sanctomariana</i> (Hernández-Sandoval, 2001) | (N/A)   |
| 11) <i>B. stricta</i> (Lemaire, 1861)                  | - <i>Beaucarnea glauca</i><br>- <i>Dasyllirion strictum</i><br>- <i>Nolina stricta</i><br>- <i>Pincenectitia glauca</i>   |

- 1.6 Common names: The following names are used for all species of the genus *Beaucarnea*:
- Spanish: Palma monja, pata de elefante, apachite, palma petacona, despeinada
- French: Pied d'éléphant; Arbre bouteille
- English: Ponytail palm, elephant-foot tree, bottle palm

## 2. Overview

*Beaucarnea recurvata* is an endemic plant to Mexico, specifically in the low deciduous forests of Veracruz and Oaxaca. Its wild populations are small, with a maximum recorded density of 135 individuals per hectare (Hernández-Sandoval, et al., 2012a). However, to date there is no updated and accurate estimate of the number and size of wild populations. The habitat of *B. recurvata* could be described as specialized, given that it is located in rocky substrate or steep mountains (Osorio-Rosales, et al., 2011).

The main threats to the wild populations of *B. recurvata* are: a) habitat loss; and b) illegal harvesting of wild plants for ornamental purposes, as they are subject to high demand on the international market. As such, the origin of parent material of live plants offered outside of Mexico is unknown.

Currently, Mexican legislation – Official Mexican Standard NOM-059-SEMARNAT-2010 – classifies the species as ‘threatened’ (A). However, this classification is not supported by an assessment using the

Method to Assess the Risk of Extinction of the Plants of Mexico (MER) required by the Standard (Normative Annex II).

In 2013, the CITES Scientific Authority of Mexico (National Commission for the Knowledge and Use of Biodiversity (CONABIO) and TRAFFIC North America developed the study entitled “Study to identify relevant Mexican species within the framework of international trade” (Mosig & Reuter, 2013). Among the main results, the study concluded that the ponytail palm (*B. recurvata*) is one of the Mexican species that could meet the criteria for inclusion in Appendices I or II of CITES.

To corroborate the above, CONABIO invited experts from the government, academia, and civil and manufacturing sectors to a “Workshop to assess the appropriateness of including *Beaucarnea recurvata* in CITES” (25 and 26 September 2014; Mexico City). Among the main results was the recommendation to list the ponytail palm in Appendix II.

In summary, the proposal to include the ponytail palm (*B. recurvata*) in CITES Appendix II is based on the following:

- a) *B. recurvata* is an endemic species to Mexico, and is at risk of extinction, according to the most recent assessment that was made during the aforementioned Workshop;
- b) The available evidence on trade in the species indicates that there is high demand on the international market, and also suggests that the majority of specimens marketed are of wild origin (and possibly illegal); and,
- c) It is necessary to regulate international trade in the species through the provisions of the Convention to ensure that trade does not threaten the species’ survival.

Further, at the 22nd meeting of the Plants Committee (PC22; Tbilisi, Georgia, 2015), Mexico submitted document PC22 Doc. 22.2 “Assessment of *Beaucarnea recurvata* based on the criteria of Resolution Conf. 9.24 (Rev. CoP16) for amending Appendices I and II”, which was a preliminary version of this proposal to amend the Appendices. As a result, the Committee recommended consideration of an inclusion at genus level, given that the 10 remaining species of the genus *Beaucarnea* meet the criterion for inclusion for reasons of look-alike problems: *B. compacta*, *B. goldmanii*, *B. gracilis*, *B. guatemalensis*, *B. hiriartiae*, *B. inermis*, *B. pliabilis*, *B. purpusii*, *B. sanctomariana*, and *B. stricta*.

### 3. Species characteristics

#### 3.1 Distribution

The natural range of the *Beaucarnea* genus reaches from Tamaulipas (Mexico) to Honduras, and probably the north of Nicaragua and Central America. The wild populations of the species of this genus are small, are found in ecologically sensitive areas and have extremely slow growth rates (Hernández-Sandoval, 1993). Specifically, *B. recurvata* is an endemic species to the States of Veracruz and Oaxaca (Osorio et al., published). **Table 1** includes the coordinates of recorded locations of *B. recurvata* arising from herbariums and information provided by the Elephant’s Foot Network of the National Seed Inspection and Certification Service-National System for Plant Genetic Resources for Food and Agriculture (SNICS-SINAREFI).

| State  | Latitude    | Longitude   | Year | Source/Herbarium        |
|--------|-------------|-------------|------|-------------------------|
| Oaxaca | 16° 22' 54" | 94° 55' 17" | 1990 | CAS, ENCB, MEXU, NY     |
|        | 16° 22' 54" | 94° 55' 17" | 1990 | Elephant’s Foot Network |
|        | 16° 37' 38" | 94° 54' 57" | 1989 | MEXU, TEX, UAT          |
|        | 16° 37' 38" | 94° 54' 57" | 1989 | MEXU, TEX, UAT          |
|        | 16° 40' 22" | 94° 57' 45" | 1981 | ENCB, MEXU              |
|        | 16° 44' 11" | 95° 34' 17" | 1991 | MEXU, TEX               |
|        | 16° 46' 00" | 94° 58' 00" | -    | Elephant’s Foot Network |
|        | 16° 53' 00" | 94° 57' 00" | -    | Elephant’s Foot Network |
|        | 16°39'56.7" | 95°0'22.9"  | 2010 | Field                   |
|        | 16°39'57.4" | 95°0'21.8"  | 2010 | Field                   |
|        | 16°39'59.2" | 94°56'32"   | 2010 | Field                   |

| State    | Latitude       | Longitude   | Year | Source/Herbarium         |
|----------|----------------|-------------|------|--------------------------|
| Veracruz | 18° 35' 27"    | 95° 11' 46" | 1989 | MEXU, TEX, UAT           |
|          | 18° 35' 27"    | 95° 11' 46" | 1989 | MEXU, TEX, UAT           |
|          | 19°06'50"      | 96°42'00"   | -    | Elephant's Foot Network  |
|          | 19°13'45"      | 96°44'00"   | -    | Elephant's Foot Network  |
|          | 19°26'12.99"   | 96°44'00"   | -    | Elephant's Foot Network  |
|          | 19°32'39.0012" | 96°41'00"   | -    | Elephant's Foot Network  |
|          | 19°34'11.12"   | 96°47'00"   | -    | Elephant's Foot Network  |
|          | 19° 00' 00"    | 96° 36' 07" | 1990 | Elephant's Foot Network  |
|          | 19° 05' 27"    | 97° 05' 17" | 1906 | MO                       |
|          | 19° 20' 43"    | 96° 32' 00" | 1989 | XAL                      |
|          | 19° 21' 00"    | 96° 47' 00" | 1998 | Field                    |
|          | 19° 21' 00"    | 96° 47' 00" | 1979 | ENCB, MEXU, XAL          |
|          | 19° 21' 00"    | 96° 47' 00" | 1998 | -                        |
|          | 19° 28' 22"    | 96° 56' 22" | 1966 | MO                       |
|          | 19° 30' 00"    | 96° 29' 43" | 1986 | XAL                      |
|          | 19° 31' 38"    | 96° 51' 49" | 1981 | ENCB                     |
|          | 19° 32' 11"    | 96° 49' 49" | 1976 | CAS, ENCB, MEXU, NY, XAL |
|          | 19° 34' 00"    | 96° 44' 40" | 1976 | ENCB, MEXU, NY, XAL      |
|          | 19°34'2.9"     | 96°47'19.9" | 2010 | -                        |
|          | 20° 21' 16"    | 98° 21' 46" | -    | A, GH, NY, US            |

**Table 1.** Georeferenced information on the presence of *B. recurvata* in Mexico.

Based on the georeference data contained in Table 1, CONABIO developed the following distribution map for *B. recurvata* in Mexico (Figure 1). Nevertheless, it is essential to update the range information for the species in future.

### 3.2 Habitat

*B. recurvata* lives on steep slopes of hills in low deciduous forests, at altitudes between 350 and 420 metres above sea level, with rocky floors on cliffs or steep mountains. The temperature is generally greater than 20° C and precipitation varies between 800 and 1,200 mm, with an average dry period of 7 or 8 months (Osorio-Rosales, et al., 2011; Hernández-Sandoval, et al., 2012).

### 3.3 Biological characteristics

*Beaucarnea recurvata* is a dioecious, long-lived plant with relatively slow growth rates in the wild. Pollinization is carried out mainly by bees (hymenoptera) and diptera and seed dispersion is by wind and occurs from November to February. The number of seeds per inflorescence is more than 2000, while the number of inflorescences per specimen is (on average) seven in a range from 1 to 42. The species is synchronous in its flowering, with male and female specimens flowering simultaneously. Additionally, there is alternation in reproductive events, which means that the same specimens do not reproduce every year. In the wild, germination is immediate when there is suitable humidity; however, the number of plants that establish themselves is low, owing to a lack of water, herbivory grazing, extraction and other causes (Osorio-Rosales, et al., 2011).

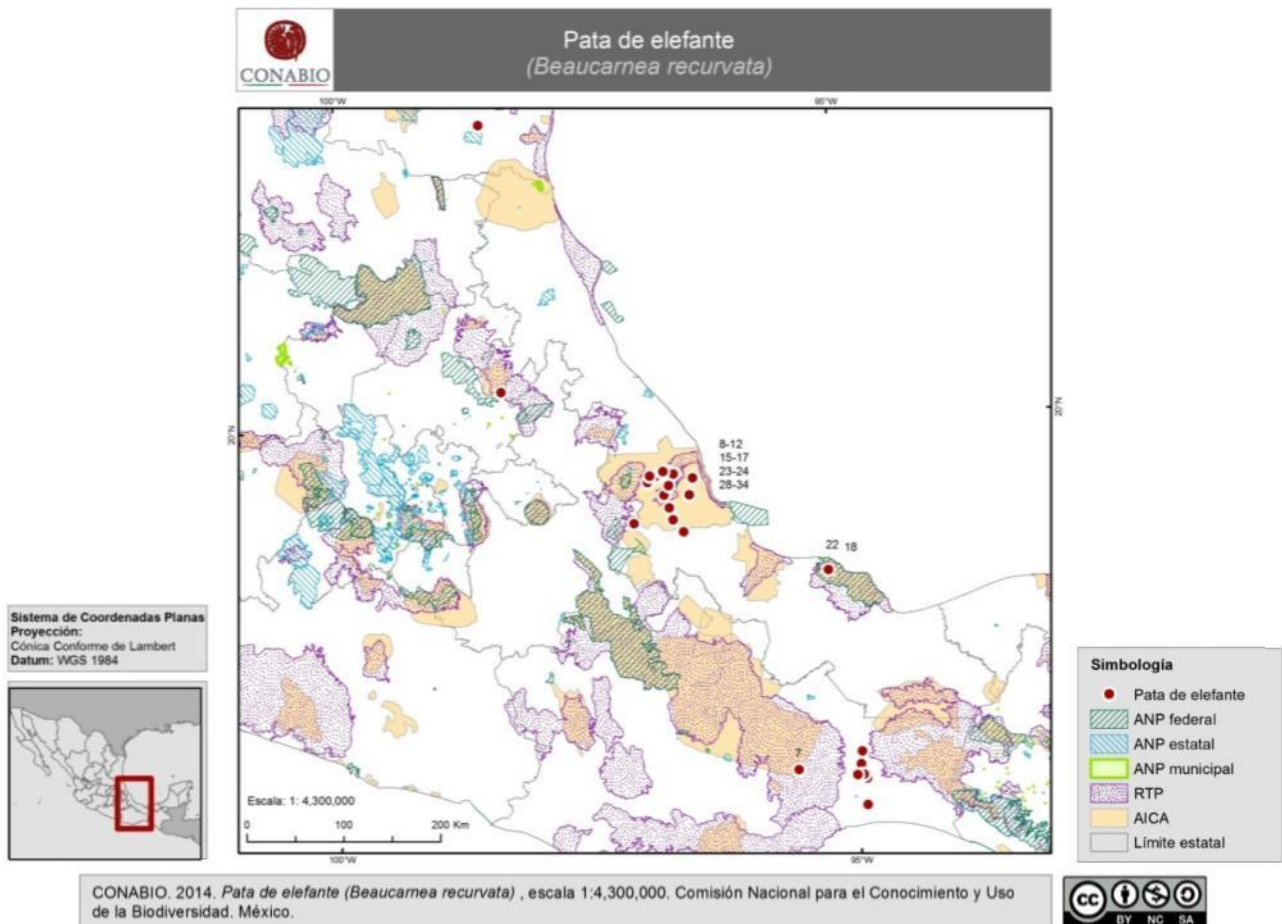


Figure 1. Distribution of *B. recurvata* based on currently available georeference data. ANP=Protected natural area, RTP=Priority terrestrial area, AICA=Important bird conservation area

### 3.4 Morphological characteristics

*B. recurvata* is an aborescent, monocotyledonous, non-wood plant and it can reach almost 15 m in height, with abundant branches and a pseudo-dichotomous branching pattern (Figure 2) (Hernández-Sandoval, *et al.*, 2010).



Figure 1. Life form of *B. recurvata* (Hernández-Sandoval, *et al.*, 2010).

Its base is a globose cone, becoming an ovate-ellipsoid (resembling a boot). The bark at the base and on the trunk is between grey and dark brown, with elongated quadrangular patches (Hernández-Sandoval, et al., 2010).

The leaves are green to bright green, with a ribbed and smooth surface (Osorio-Rosales, et al., 2011), and they are grouped in bunches at the end of the branches. They are reflexed and measure from 80 to 150 cm in length and 1 to 2.5 cm wide (Hernández-Sandoval, et al., 2010).

The inflorescences are extremely ovoid to extremely ellipsoid panicles, measuring between 0.7 and 1.3 m, and are yellow to reddish in colour (Hernández-Sandoval, et al., 2012b). The male flowers grow in groups of two to three per node, with pedicels measuring from 1.5 to 2 mm articulated close to the flower, with tepals measuring 2 to 2.5 mm in length. The female flowers grow in groups of 1 to 4 per node, with pedicels measuring from 2.5 to 4 mm and articulated half-way, tepals measuring from 1.5 to 2.5 mm in length and basal nectars (Hernández-Sandoval, et al., 2010).

The fruits are ellipsoid to slightly obovate, measuring 1.2 to 1.4 mm by 8 to 10 mm with three wings pale yellow in colour, an apical notch of 2 to 2.5 mm, and stems measuring 3.5 to 6 mm articulated close to the fruit (Hernández-Sandoval, et al., 2010). The seeds are ellipsoid to globose, with three lobes and the pip is smooth to slightly coarse and dark brown to reddish in colour (Hernández-Sandoval, et al., 2010).

### 3.5 Role of the species in its ecosystem

According to Hernández-Sandoval et al. (2012a) the small plants of *B. recurvata* grow below the nurse canopy of the low deciduous forest and in some locations is the dominant species. In turn, it hosts a group of epiphytic plants, such as cacti, orchids, bromeliads and ferns, among others.

## 4. Status and trends

### 4.1 Habitat trends

According to a recent study in the dry tropical forests of the State of Veracruz (López-Barrera, et al., 2014), which analysed geographical information on deforestation for the period 1973–2000 and information on forest regeneration for the period 2007–2008, the typical habitat of *B. recurvata* is dominated by pressure from land-use change (whether by the establishment of pastures for farming or by agricultural land and irrigation). However, the annual rates of forest cover loss were moderate to low, with historical records that suggest that the majority of deforestation occurred at the start of the eighteenth century. However, these rates fluctuated considerably, with slight periods of reforestation (1.55 per cent from 1973 to 1990), followed by a marked reduction (-8.08 per cent from 1990 to 2000), and finally with notable increases in forest cover (4.92 per cent) during the period 2000–2007; the latter increases coincide with changes in public policies and migration trends among the local population. Lastly, although the number of forest patches tripled between 1973 and 2000, the average area of those patches reduced by almost 80 per cent during this period.

### 4.2 Population size

Maximum densities of 161 individuals of *Beaucarnea recurvata* in an area of 1.2 hectares have been recorded, in populations located in Veracruz, which represents an approximate density of 135 individuals per hectare (Hernández-Sandoval, et al., 2012b). However, only a few populations have been sampled and the available data are not representative of the situation of the species across its entire range area.

### 4.3 Population structure

According to a sampling exercise performed by Hernández-Sandoval et al. (2012) at a site with 161 individuals, 59 per cent of the individuals were adults, 20 per cent were juveniles and 21 per cent were seedlings. However, it is necessary to carry out a representative sampling of wild populations of the species.

#### 4.4 Population trends

There is no up-to-date demographical information that enables understanding of population trends, but Osorio et al. (2011) and Hernández-Sandoval et al. (2012a) suggest that the trend is a decreasing population.

#### 5. Threats

According to Osorio *et al.* (published), the main threats to *B. recurvata* are:

- a) Habitat loss (deciduous tropical forest); and
- b) Illegal harvesting of wild plants for ornamental purposes.

Regarding the first threat, fragmentation has been identified in the ecoregions in which the species is distributed, mainly attributable to land-use change to agriculture and livestock activities (Society for the Study of Biological Resources of Oaxaca and SNICS, 2013). Specifically, the habitat of the populations of the species in Veracruz demonstrate clear fragmentation (focused on the middle zone of the basins of the Actopan and La Antigua rivers) (Osorio-Rosales, et al., 2011). This has resulted in damage to the structure (population and sex), and to the natural regeneration processes of the wild populations of the species (Hernández-Sandoval, et al., 2010). With regard to the second threat, the seeds, seedlings, and adult plants of all *Beaucarnea* species have been collected for ornamental purposes since the 1980s (Hernández-Sandoval, 1993).

Specifically in the case of the ponytail palm (*B. recurvata*), the most valued species in the genus on the national and international ornamental plant markets, selling of the product is mainly illegal. According to Osorio-Rosales and Contreras-Hernández (2013) the modus operandi of foreign buyers is to visit sites on which the species is distributed and to request the peasants to collect as many young plants as possible in exchange for a daily payment. The wild plants collected by the peasants are taken to illegal nurseries in order to acclimatize them and they are later placed in pots and offered to legally registered nurseries. The plants are then prepared for sale abroad, the majority of illegal trade leaves Mexico in containers and freight, together with other native species of high endemic value.

In recent years, the high commercial demand has increased illegal sales, exceeding the monitoring capacities of environmental authorities (Osorio-Rosales & Contreras-Hernández, 2013).

It should be noted that, to date, none of the species of the genus has been assessed using the International Union for Conservation of Nature (IUCN) Red List criteria.

#### 6. Utilization and trade

##### 6.1 National utilization

*B. recurvata* is mainly used as an ornamental plant for inside spaces (plants in pots) and open spaces, particularly public and domestic gardens, hotels and central reservations (Osorio-Rosales, et al., 2011).

According to an assessment of the functioning of the UMA (Wildlife Management and Conservation Units) framework during the first ten years following its establishment (CONABIO, 2012), *B. recurvata* was notably one of the flora species in greatest demand on the ornamental market, and had the highest number of records of use under the intensive UMA framework (more than 100,000 specimens approved during the period in question). However, the available information does not make it possible to identify the type of specimens of ponytail palm used (whether they are seeds, juvenile plants or adult plants or other forms).

As of 2016, there are 158 UMAs with authorized management plans for the use of *B. recurvata*. These include 140 intensive UMAs and nurseries (**Annex 1, Table 5**); the remaining 18 are PIMVS (**Annex 1, Table 6**). The intensive UMAs and greenhouses authorized for the use of *B. recurvata* are spread across 20 states in the country, the majority of which are located in the States of Morelos and Veracruz, followed by Yucatán, Colima and Campeche. The PIMVSs authorized to use *B. recurvata* are spread across 12 states, the majority of which are found in Campeche and Morelos, although the species is not found naturally in these states.

## 6.2 Legal trade

Based on an analysis of online trade of *B. recurvata* (Camarena Osorno, 2015), and responses received to the consultations sent by the Scientific Authority of Mexico on 9 July 2015 to the CITES Authorities of the Parties identified as marketing countries (in Asia, Europe, North America and Oceania), 81 companies or nurseries in 15 countries were identified that market (offer) the species online (**Table 2**):

| Country              | Company or nursery   | Website   |
|----------------------|--|---|
| 1. Germany           | 1) Pflazenart  | <a href="http://www.pflanzenart-shop.de">http://www.pflanzenart-shop.de</a>   |
|                      | 2) Palmenhandel  | <a href="http://www.palmenhandel.de">http://www.palmenhandel.de</a>   |
|                      | 3) Terrapalme (Home and Garden Design)                               | <a href="http://www.terrapalme.com">http://www.terrapalme.com</a>   |
|                      | 4) Rare Plants   | <a href="http://www.rareplants.de">www.rareplants.de</a>  |
|                      | 5) Palmen Bolschetz  | <a href="http://www.palmen-bolschetz.de/">http://www.palmen-bolschetz.de/</a>   |
|                      | 6) Australian seed (ebay)  | <a href="http://australianseed.com/shop/item/beaucarnea-recurvata-">http://australianseed.com/shop/item/beaucarnea-recurvata-</a>   |
|                      | 7) Buy Sell Trees and Palms  | <a href="http://www.buyselltrees.com/index">http://www.buyselltrees.com/index</a>   |
|                      | 8) Gumtree   | <a href="http://www.gumtree.com.au/">http://www.gumtree.com.au/</a>   |
| 2. Canada            | 9) Rarexoticseeds  | <a href="http://www.rarexoticseeds.com/en/">http://www.rarexoticseeds.com/en/</a>   |
| 3. China             | 10) Alibaba.com  | <a href="http://www.alibaba.com/">http://www.alibaba.com/</a>   |
| 4. Denmark           | 11) Gartneriet Lundager  | <a href="http://www.75012.dk">www.75012.dk</a>  |
|                      | 12) Easy Care  | <a href="http://www.feldborg.com">www.feldborg.com</a>  |
| 5. Slovakia          | 13) VICTOR -   | <a href="http://www.kvetyvictor.sk/rastlina/beaucarnea-recurvata/">http://www.kvetyvictor.sk/rastlina/beaucarnea-recurvata/</a>   |
|                      | 14) HORNBAACH  | <a href="http://www.hornbach.sk/cms/sk/sk/projekty_pre_vas/zahradne_projekty/specialne_navody_zo_zahrady/xxl_rastliny/specialny_sortiment_hornbachu/nolina_slonia_noha/nolina-slioni-noha.html">http://www.hornbach.sk/cms/sk/sk/projekty_pre_vas/zahradne_projekty/specialne_navody_zo_zahrady/xxl_rastliny/specialny_sortiment_hornbachu/nolina_slonia_noha/nolina-slioni-noha.html</a> |
|                      | 15) FLORADIES s.r.o.   | <a href="http://www.floradies.sk/c/24/crepnikove-rastliny/">http://www.floradies.sk/c/24/crepnikove-rastliny/</a>   |
|                      | 16) HORNBAACH BAUMARKT SK spol. s r.o.                               | <a href="http://www.hornbach.sk">http://www.hornbach.sk</a>   |
|                      | 17) Viktor Hrobák – VICTOR   | <a href="http://www.kvetyvictor.sk/rastlina/beaucarnea-recurvata/">http://www.kvetyvictor.sk/rastlina/beaucarnea-recurvata/</a>   |
|                      | 18) florist's Galéria Kvetín   | <a href="http://www.galeriakvetin.sk/nolina-slonia-noha">http://www.galeriakvetin.sk/nolina-slonia-noha</a>   |
| 6. Slovenia          | 19) Ing. Miroslava Kráľovičová Petržalová                            | <a href="http://www.zpvp.sk/www-zpvp-sk/0/0/3/52/9/0/?hledatjak=2&amp;slovo=recurvata">http://www.zpvp.sk/www-zpvp-sk/0/0/3/52/9/0/?hledatjak=2&amp;slovo=recurvata</a>   |
|                      | 20) Agrokor  | <a href="http://www.agrokor.si">www.agrokor.si</a>  |
|                      | 21) Vrtnarstvo Revital   | <a href="http://www.revital-vrtnarstvo.si">www.revital-vrtnarstvo.si</a>  |
|                      | 22) Vrtnarija Skocjan  | <a href="http://www.komunalakoper.si">http://www.komunalakoper.si</a>   |
| 7. United States     | 23) Bonsai Boy of New York   | <a href="http://www.bonsaiboy.com/">http://www.bonsaiboy.com/</a>   |
|                      | 24) Botanical Partners   | <a href="http://www.botanicalpartners.com/retail/retail-home.php">http://www.botanicalpartners.com/retail/retail-home.php</a>   |
|                      | 25) Florida Palm Trees.com   | <a href="http://www.florida-palm-trees.com/">http://www.florida-palm-trees.com/</a>   |
|                      | 26) Gardino Nursery  | <a href="http://www.rareflora.com/">http://www.rareflora.com/</a>   |
|                      | 27) Green Desert Nursery   | <a href="http://www.greendesertnursery.com/index.htm">http://www.greendesertnursery.com/index.htm</a>   |
|                      | 28) Local Harvest  | <a href="http://www.localharvest.org/">http://www.localharvest.org/</a>   |
|                      | 29) Mass Spectrum Botanicals   | <a href="http://massspectrumbotanicals.com/">http://massspectrumbotanicals.com/</a>   |
|                      | 30) Moon Valley Nursery  | <a href="http://www.moonvalleynurseryca.com/">http://www.moonvalleynurseryca.com/</a>   |
|                      | 31) Real Palm Trees.com  | <a href="http://realpalmtrees.com/palm-tree-store/">http://realpalmtrees.com/palm-tree-store/</a>   |
|                      | 32) San Marcos Growers   | <a href="http://www.smgrowers.com/index.asp">http://www.smgrowers.com/index.asp</a>   |
|                      | 33) Stokes Tropicals   | <a href="http://stokestropicals.plants.com/Default.aspx">http://stokestropicals.plants.com/Default.aspx</a>   |
|                      | 34) The Nursery at Ty Ty   | <a href="http://www.tytyga.com/">http://www.tytyga.com/</a>   |
|                      | 35) Top Tropicals  | <a href="http://www.toptropicals.com">www.toptropicals.com</a>  |
|                      | 36) Trio Nursery   | <a href="http://www.trionursery.com/">http://www.trionursery.com/</a>   |
|                      | 37) Accents for home and garden                                      | <a href="http://www.accentsforhomeandgarden.com/">www.accentsforhomeandgarden.com/</a>  |
|                      | 38) Almost Eden  | <a href="http://www.almostedenplants.com/">http://www.almostedenplants.com/</a>   |
|                      | 39) Bunnings Warehouse   | <a href="http://www.bunnings.com.au">www.bunnings.com.au</a>  |
|                      | 40) Buy Sell Trees and Palms   | <a href="http://www.buyselltrees.com">www.buyselltrees.com</a>  |
|                      | 41) Tropical   | <a href="http://www.365tropical.com">www.365tropical.com</a>  |
|                      | 42) Florida Palm Trees   | <a href="http://www.florida-palm-trees.com">www.florida-palm-trees.com</a>  |
| 43) Palm Talk        | <a href="http://www.palmtalk.org">www.palmtalk.org</a>               |   |
| 44) Real Palm Trees  | <a href="http://www.realpalmtrees.com">www.realpalmtrees.com</a>     |   |
| 45) Stokes Tropicals | <a href="http://www.stokestropicals.com">www.stokestropicals.com</a> |   |
| 46) Top Tropicals    | <a href="http://www.toptropicals.com">www.toptropicals.com</a>       |   |
| 8. France            | 47) Ethnoplants Shop   | <a href="http://www.ethnoplants.com">www.ethnoplants.com</a>  |
| 9. Ireland           | 48) plantstore.ie  | <a href="http://www.plantstore.ie">www.plantstore.ie</a>  |
|                      | 49) E Bay  | <a href="http://www.ebay.ie">www.ebay.ie</a>  |
|                      | 50) Adverts.ie   | <a href="http://www.adverts.ie">www.adverts.ie</a>  |
| 10. Italy            | 51) Il Giardino Azienda Floricola                                    | <a href="http://www.ilgiardino.it/">http://www.ilgiardino.it/</a>   |
|                      | 52) Florence fiori online  | <a href="http://www.florencefiorionline.com">http://www.florencefiorionline.com</a>   |
|                      | 53) PVB Fuels SPA - Quadrifoglio                                     | <a href="http://www.quadrifogliopiante.it">www.quadrifogliopiante.it</a>  |
| 11. New Zealand      | 54) Coast Palms & Cycads   | <a href="http://www.coastpalms.co.nz">www.coastpalms.co.nz</a>  |
| 12. Netherlands      | 55) De Italiaanse Oase   | <a href="http://www.italiaanse-oase.nl/contacts/index/">http://www.italiaanse-oase.nl/contacts/index/</a>   |
|                      | 56) Planten Voorkantoor.NL   | <a href="http://www.plantenvoorkantoor.nl">http://www.plantenvoorkantoor.nl</a>   |
|                      | 57) Plantcomplete  | <a href="http://www.plantcomplete.nl/winkel/beaucarnea-recurvata-2/">http://www.plantcomplete.nl/winkel/beaucarnea-recurvata-2/</a>   |
|                      | 58) Sjaloombv  | <a href="http://www.sjaloombv.com/verzorging.php">http://www.sjaloombv.com/verzorging.php</a>   |



| Country            | Company or nursery         | Website   |
|--------------------|----------------------------|---|
|                    | 59) ZadenJungle.nl         | <a href="https://www.zadenjungle.nl/">https://www.zadenjungle.nl/</a>   |
|                    | 60) Zadengigant.nl         | <a href="http://www.zadengigant.nl/">http://www.zadengigant.nl/</a>   |
|                    | 61) Vreeken's Zaden        | <a href="https://www.vreeken.nl/621600-beaucarnea-recurvata">https://www.vreeken.nl/621600-beaucarnea-recurvata</a>                 |
|                    | 62) Platenbakken & Planten | <a href="http://www.plantenbakkenplanten.nl">http://www.plantenbakkenplanten.nl</a>   |
|                    | 63) Fachjan Project Plants | <a href="http://www.fachjan.nl">www.fachjan.nl</a>  |
| 13. United Kingdom | 64) Ebay                   | <a href="http://www.ebay.co.uk">www.ebay.co.uk</a>  |
|                    | 65) Crocus                 | <a href="http://www.crocus.co.uk">www.crocus.co.uk</a>  |
|                    | 66) House of plants        | <a href="http://www.houseofplants.co.uk">www.houseofplants.co.uk</a>  |
|                    | 67) The Palm Centre        | <a href="http://www.palmcentre.co.uk">www.palmcentre.co.uk</a>  |
| 14. Czech Republic | 68) House of plants        | <a href="http://www.houseofplants.co.uk">www.houseofplants.co.uk</a>  |
|                    | 69) Hydroflora s.r.o.      | <a href="http://www.hydroflora.cz/beaucarnea-recurvata-slioni-noha/">http://www.hydroflora.cz/beaucarnea-recurvata-slioni-noha/</a> |
|                    | 70) Pěstík.cz              | <a href="https://www.pestik.cz/beaucarnea-guatemalensis-6817.html">https://www.pestik.cz/beaucarnea-guatemalensis-6817.html</a>     |
|                    | 71) Semeniště.cz           | <a href="http://semeniste.cz">http://semeniste.cz</a>   |
| 15. Sweden         | 72) Květináče.cz           | <a href="http://www.kvetinace.cz/p/beaucarnea-recurvata-35x90cm/">http://www.kvetinace.cz/p/beaucarnea-recurvata-35x90cm/</a>       |
|                    | 73) Blomstergrossisten     | <a href="http://www.blomstergrossisten.net">www.blomstergrossisten.net</a>  |
|                    | 74) Tibidao AB             | <a href="http://www.tibidao.se/">http://www.tibidao.se/</a>   |
|                    | 75) Blomsterlandet         | <a href="http://www.blomsterlandet.se">www.blomsterlandet.se</a>  |
|                    | 76) Bakker Holland AB      | <a href="http://www.bakker.se">www.bakker.se</a>  |
|                    | 77) Plantagen              | <a href="http://www.plantagen.se">www.plantagen.se</a>  |
|                    | 78) Impecta Fröhandel AB   | <a href="http://www.impecta.se">www.impecta.se</a>  |
|                    | 79) Succseed               | <a href="http://www.succseed.com/">http://www.succseed.com/</a>   |
|                    | 80) Wermland desertplants  | <a href="http://www.wermlanddesertplants.se/sortiment.html">http://www.wermlanddesertplants.se/sortiment.html</a>                   |
|                    | 81) Jalapeno               | <a href="http://jalapeno.nu/flasklilja.html">http://jalapeno.nu/flasklilja.html</a>   |

**Table 2.** Online companies and websites selling ponytail palms

Eleven of the countries that responded to the consultations confirmed that there is trade in seeds and plants of *B. recurvata*, the majority of which are of unknown origin (U) or artificially propagated (A). These countries were: China, Croatia, Czech Republic, Denmark, Ireland, Latvia, Netherlands, Slovakia, Slovenia, Spain, and Sweden.

With regard to the total number of plants in trade (mostly artificially propagated), Denmark reported an average of 200,000 specimens exported per year, while Slovenia reported an average of 5943 plants imported per year from China, Israel, and the European Union (without specifying countries).

Moreover, Croatia, the Czech Republic and Italy confirmed that the species is very common on the ornamental plant market in the country. In addition, the majority of European Union countries consulted mentioned that the majority of imports of the species come from China. Some of the countries consulted (for example, Italy, Latvia, Sweden and United States of America) clarified that as the species is not listed in the CITES Appendices, and because there are no trade records in the UNEP-World Conservation Monitoring Centre database, the reported trade levels for the species could be underestimated.

Accordingly, it is important to ascertain the legal origin of specimens in international trade given that, according to the information provided by the General Wildlife Directorate of the Ministry of Environment and Natural Resources of Mexico (DGVS-SEMARNAT, the CITES Management Authority in Mexico) during the workshop in September 2014, no export permits have been granted for *B. recurvata* since 2009. Therefore, it should be verified whether the ponytail palm is being exported from Mexico with incorrect documentation, i.e., phytosanitary permits issued by the Ministry of Agriculture, Livestock and Rural Development, Fisheries and Food (SAGARPA), similarly to what occurred in recent years with *Yucca queretaroensis* (CITES, 2013), listed in Appendix II following a unanimous decision by the sixteenth meeting of the Conference of the Parties to the Convention (CoP16, Bangkok 2012).

### 6.3 Parts and derivatives in trade

The main specimens on the market are: live plants (including seedlings) and seeds. The live plants are offered at heights of 0.4 to 7.5 metres, with prices that vary as follows (**Table 3**):

| Plant size        | Plant height (cm)   | Average price (USD) |
|-------------------|---------------------|---------------------|
| Small (juveniles) | Less than 200 cm    | \$1,390             |
| Medium and adults | Greater than 200 cm | \$7,276.5           |

**Table 3.** Sizes and prices of plants in online trade

Seeds are offered in amounts (packets) ranging from one to 2000, reaching the following prices (Table 4): A

| Number of seeds | Maximum price reached (USD) |
|-----------------|-----------------------------|
| 1               | \$3.0                       |
| 5               | \$4.6                       |
| 50              | \$10.0                      |
| 500             | \$15.0                      |
| 2000            | \$45.0                      |

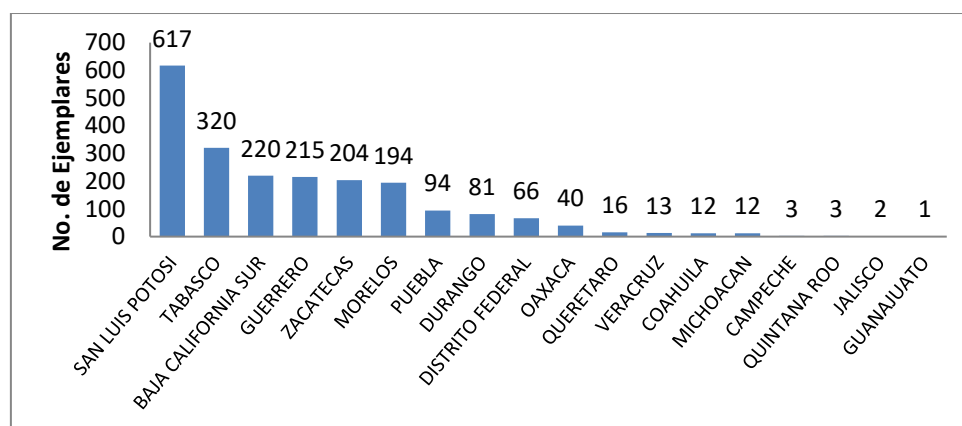
**Table 4.** Prices of seed packets in online trade

#### 6.4 Illegal trade

The detailed trade analysis shown in Section 6.2 above confirms the situation reported by Golubov *et al.* (2007), i.e., that a large number of Internet websites are selling plants and germplasm from diverse species of Mexican Nolinaceas that are/were harvested in Mexico.

According to data provided by the Federal Attorney's Office for Environmental Protection (PROFEPA, the CITES Implementing Authority in Mexico) on confiscations and seizures of *B. recurvata* during the period 2004-2014, 171 inspections of specimens of *B. recurvata* were carried out in 25 Mexican states, leading to the seizure of 446,520 specimens (individuals) of *B. recurvata*: 73.4% from inspections made in the state of Morelos; 12.4% from inspections in Colima; and 7.4% from inspections in Veracruz. The remaining percentage of specimens seized (6.8 per cent) were found across the 22 remaining states through inspections carried out by PROFEPA. During the period in question (2004–2014), the years with the highest number of seizures of *B. recurvata* were 2010 and 2011, which were significantly higher than the other years.

With regard to confiscations during the period 2004–2015, these amounted to 2113 specimens, mainly coming from the States of: San Luis Potosí (29 per cent); Tabasco (15 per cent); and Baja California Sur, Guerrero and Zacatecas (10 per cent each) (**Figure 3**).



**Figure 2.** Confiscations of *B. recurvata* during the period 2004–2014.

Additionally, based on an analysis of confiscations in ports, airports and borders recorded by PROFEPA and records of illegal exports of Mexican species in the Law Enforcement Management Information System (LEMIS) database of the United States of America during the period 1994–2004, combined with considerations on the conservation status (according to Official Mexican Standard NOM-059-SEMARNAT-2010) and endemism, the ponytail palm (*B. recurvata*) was identified by the “Study to identify relevant Mexican species within the framework of international trade” (Mosig & Reuter, 2013) as an at risk species with significant international trade that could meet the criteria for listing in CITES Appendix II.

Although there are nurseries in Mexico that produce (legally) the ponytail palm, the number of available specimens does not satisfy the demand on the national and international ornamental plant markets. This has apparently been the driver behind the illegal harvesting of seeds, and wild juvenile and adult plants, which could ultimately lead to the extinction of wild species, since there is a risk that this will further reduce the minimum size of the viable population (Osorio-Rosales & Mata-Rosas, 2005).

## 6.5 Actual or potential trade impacts

The *Beaucarnea* genus comprises 11 species, which can be grouped according to their commercial relevance as follows:

- a) Group 1 (frequent trade): *B. inermis*, *B. recurvata*, *B. goldmanii*, *B. pliabilis* (syn. *B. ameliae*, and *B. petenensis*), *B. hiriartiae*, *B. guatemalensis*
- b) Group 2 (not so frequent): *B. gracilis*, *B. stricta*, *B. sanctomariana* (mainly seeds)
- c) Group 3 (no trade): *B. purpusii* and *B. compacta*

As indicated in Section 5 above (on threats), the overharvesting of wild specimens for ornamental purposes has detrimental effects on the viability of wild populations of *B. recurvata*.

Further, species of the genus *Beaucarnea* spp. have a high potential for sustainable harvesting, which can be fostered by improving traceability and through better regulation of the value chain at national and international levels.

## 7. Legal instruments

### 7.1 National

At national level, nine of the eleven species of the genus *Beaucarnea* are included in some category of the Official Mexican Standard NOM-059-SEMARNAT-2010 (SEMARNAT, 2010), as follows:

| Species of the genus <i>Beaucarnea</i> | Category under NOM-059-SEMARNAT 2010  |
|--|---|
| 1) <i>B. goldmanii</i>                 | Threatened (A)  |
| 2) <i>B. gracilis</i>                  | Threatened (A)  |
| 3) <i>B. hiriartiae</i>                | Threatened (A)  |
| 4) <i>B. inermis</i>                   | Threatened (A)  |
| 5) <i>B. pliabilis</i>                 | Threatened (A)  |
| 6) <i>B. purpusii</i>                  | Endangered  |
| 7) <i>B. recurvata</i>                 | Threatened (A)*<br>* However, the most recent assessment of the species, which was made during the September 2014 workshop using the methodology established by NOM-059-SEMARNAT-2010, classified <i>B. recurvata</i> as a species 'at risk of extinction' (P). |
| 8) <i>B. sanctomariana</i>             | Threatened (A)  |
| 9) <i>B. stricta</i>                   | Threatened (A)  |

In accordance with the provisions of the Wildlife Law (SEMARNAT, 2000), the management, harvest, and export of species listed in Standard NOM-059-SEMARNAT-2010 are regulated by the Directorate General for Wildlife of SEMARNAT, and implemented under a system of *Plant Conservation Management Units* (UMAs) either:

- a) *In situ* (or UMAs in the wild); or
- b) *Ex situ*, such as intensive UMAs, nurseries or estates and installations that manage wildlife in a confined manner outside of its natural habitat (PIMVS).

### 7.2 International

It is not listed in the Appendices of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES, 2013).

## 8. Species management

### 8.1 Management measures

The UMA “3 de mayo” (Veracruz; record 118 in Table 5, Annex 1) is one of the most significant and successful initiatives in the conservation of *B. recurvata* (Hernández-Sandoval, et al., 2012a). This intensive UMA (nursery) comprises 14 communities distributed in 21 locations and 10 towns in the State of Veracruz (2010). One hundred and nineteen producers participate, with 31 nurseries installed across 195 hectares of remains of deciduous tropical forest.

Moreover, the species is present in germplasm banks of the Network of Conservation Centres of the National Seed Inspection and Certification Service-National System for Plant Genetic Resources for Food and Agriculture (SNICS-SINAREFI) of the Ministry of Agriculture, Livestock and Rural Development, Fisheries and Food (SAGARPA).

With regard to its presence in Mexican botanic gardens, the species is found in eight such gardens, with the following number of specimens recorded:

- a) “Francisco Javier Clavijero” Botanic Garden (59 specimens)
- b) “Roger Orellana” Botanic Garden (1 specimen)
- c) Culiacán Botanic Garden (1 specimen)
- d) Africam Safari Botanic Garden (1 specimen)
- e) El Charco del Ingenio Botanic Garden (7 specimens)
- f) Oaxaca Ethnobotanical Garden (Undetermined number of specimens)
- g) Ethnobotanical Garden and Museum of Traditional Medicine of the Morelos National Institute of Anthropology and History (8 specimens)

### 8.2 Population monitoring

The Elephant’s Foot Network (*Beaucarnea* spp.), founded in 2008, monitors the situation of a number of species from this genus. The Network is coordinated by the National System for Plant Genetic Resources for Food and Agriculture (SINAREFI) at SAGARPA, and has a Strategic Plan for the Management and Conservation of species of *Beaucarnea* (Hernández-Sandoval et al., 2012).

### 8.3 Control measures

#### 8.3.1 International

At present, the species is not listed in the CITES Appendices.

#### 8.3.2 Domestic

Besides the management measures described in Section 8.1 above, further initiatives exist at a national level, notably, the Elephant’s Foot Network (SNICS-SINAREFI), and the activities of national institutions (Directorate General for Wildlife and PROFEPA) to comply with the provisions of the General Wildlife Act.

### 8.4 Artificial propagation

In spite of the production of *B. recurvata* in intensive UMAs, nurseries and PIMVS at the national level, this does not satisfy demand on the national and international ornamental plant markets, meaning that seeds are constantly subject to illegal overharvesting. As an alternative Osorio-Rosales and Mata-Rosas (2005) propose a system of micropropagation through organogenesis that could satisfy horticultural market demand while at the same time having the potential to contribute to reintroduction programmes in the wild.

## 8.5 Habitat conservation

As can be seen from **Figure 1**, to date, no known wild populations of *B. recurvata* are represented in Natural Protected Areas.

## 9. Information on similar species

*B. inermis* is the most similar species to *B. recurvata*, and the juvenile and adult forms can be distinguished by means of leaf margin analysis. Further, the base of *B. inermis* has extensions, compared to *B. recurvata*, the base of which has buttresses (Hernández-Sandoval, et al., 2012a). Also, the range of *B. inermis* is limited to the northeast of San Luis Potosí and the south of Tamaulipas (Hernández-Sandoval, 1993). The information generated by Martínez et al. (2014) may be of great use for distinguishing between the species from the genus based on foliar anatomy and other diagnostic features.

However, based on expert conclusions, the seeds and seedlings of the species in the genus are undistinguishable by non-specialists. Therefore, by listing *B. recurvata* in CITES Appendix II it is possible that other species in the genus will meet the inclusion criteria based on similarity (criteria A of Annex 1b of Resolution Conf. 9.24 [Rev. CoP16]): “*The specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II [...] so that enforcement officers who encounter specimens of CITES-listed species are unlikely to be able to distinguish between them.*”

Further, according to Engineer Emiliano Sánchez, from Cadereyta Regional Botanical Garden, Science and Technology Council of Querétaro State (pers. comm.), it is possible to distinguish specimens of wild ponytail palm (*B. recurvata*) from artificially propagated specimens, given that the latter have a perfectly-formed, round base. Moreover, the roots of the plants grown in pots have a typical cylindrical shape.

## 10. Consultations

On 8th January 2016, by means of official communication No. DGCII-001/2016 (**Annex 3** of this proposal), Mexico consulted the Management and Scientific Authorities of Belize, El Salvador, Guatemala, Honduras, and Nicaragua about the proposal to include all species of the genus *Beaucarnea* in Appendix II.

In subsequent electronic contacts with the aforementioned Authorities, and following a teleconference on 18th March 2016 with Guatemala, El Salvador, Honduras, and Mexico, the range countries responded positively to the proposal and commended Mexico for its initiative.

## 11. Additional remarks

None.

## 12. References

**Annex 2** of the proposal.

**UMAs y PIMVS con planes de manejo autorizados para aprovechamiento de *B. recurvata*****Tabla 5.** UMA intensivas y viveros con planes de manejo autorizados para aprovechamiento de *B. recurvata*.

| Estado/State                    | UMA intensiva o vivero                                   | Clave de registro/Code of registry   |
|---------------------------------|--|--------------------------------------|
| BAJA CALIFORNIA SUR<br>CAMPECHE | 1. JUNGLE CACTUS S. DE R.L. DE C.V.                      | SEMARNAT-UMA-VIV-061-BCS/08          |
|                                 | 2. LA PERSEVERANCIA DOS                                  | MX/VIV-CO-063-CAM.                   |
|                                 | 3. VIVERO DESPEINADAS HZILITIL                           | SEMARNAT-UMA-IN-0029-CAMP-2008       |
|                                 | 4. VIVERO ESTADO DE MEXICO                               | SEMARNAT-UMA-IN-0047-CAMP/12         |
|                                 | 5. VIVERO MILLONARIA                                     | SEMARNAT-UMA-IN-0053-CAMP/12         |
|                                 | 6. VIVERO ENRIQUES                                       | SEMARNAT-UMA-IN-0048-CAMP/12         |
|                                 | 7. VIVERO AGUILAS SERDAN                                 | SEMARNAT-UMA-IN-0044-CAMP/12         |
|                                 | 8. VIVERO CAYAL  | SEMARNAT-UMA-IN-0045-CAMP/12         |
|                                 | 9. VIVERO SANTA CRISTINA                                 | SEMARNAT-UMA-IN-0046-CAMP/12         |
|                                 | 10. VIVERO ADOLFO LOPEZ MATEOS                           | SEMARNAT-UMA-IN-0043-CAMP/12         |
| COLIMA                          | 11. VIVERO LA RESERVA S.P.R. DE R.L.                     | SEMARNAT-UMA-IN-062-COL/2008         |
|                                 | 12. FOLLAJES TROPICALES DE COLIMA S.P.R. DE R.L. DE C.V. | MX/VIV-CO-185-COL                    |
|                                 | 13. VIVERO JARDIMAC                                      | SEMARNAT-UMA-IN-038-COL/2006         |
|                                 | 14. VIVERO PELAYO  | SEMARNAT-UMA-IN-037-COL/2006         |
|                                 | 15. VIVERO LA COLUMNARIA                                 | SEMARNAT-UMA-IN-051-COL/2007         |
|                                 | 16. VIVERO EL GUAYACAN                                   | SEMARNAT-UMA-IN-057-COL/2007         |
|                                 | 17. VIVEROS RANCHO CALDERON, S. DE R.L. DE C.V.          | SEMARNAT-UMA-IN-054-COL/2007 (PIMVS) |
|                                 | 18. VIVERO LOS MEZCALES                                  | SEMARNAT-UMA-IN-056-COL/07           |
|                                 | 19. HORTA NURSERY S.P.R. DE R.L                          | SEMARNAT-UMA-IN-063-COL/2008         |
|                                 | 20. VIVERO VALLES VERDE                                  | SEMARNAT-UMA-IN-031-COL/2005         |
|                                 | 21. VIVERO LOS CHORRITOS                                 | SEMARNAT-UMA-IN-033-COL/2006         |
|                                 | 22. VIVERO EL CAPIRO                                     | SEMARNAT-UMA-IN-035-COL/2006         |
| GUANAJUATO                      | 23. VIVERO DE PLANTAS DEL DESIERTO                       | SEMARNAT-UMA-INT-0043-GTO            |
|                                 | 24. VIVERO "PALMAS Y ARBOLES DEL BAJIO"                  | SEMARNAT-UMA-IN-038-GTO              |
|                                 | 25. ZOOLOGICO QUINTA LAS PALMAS                          | SEMARNAT-UMA-IN-0034-GTO.            |
|                                 | 26. LA PUNTA   | DGVS-CR-IN-0888-GTO/06               |
| JALISCO                         | 27. VIVERO EL MANGUITO                                   | SEMARNAT-UMA-VIV-0009-COL/01         |
|                                 | 28. RANCHO SANTA TERESA                                  | SEMARNAT-UMA-VIV-0042-JAL            |
| MICHOACAN                       | 29. VIVERO JARDIN DEL CUBILETE                           | SEMARNAT-UMA-IN-0052-MICH/04         |
|                                 | 30. VIVERO JARDIN DEL CUBILETE                           | SEMARNAT-UMA-VIV-0052-MICH/13        |
| MORELOS                         | 31. VIVERO FEDERICO SANCHEZ ABUNDEZ                      | SEMARNAT-UMA-VIV-045-MOR.2006        |
|                                 | 32. VIVERO MARIA LUISA                                   | SEMARNAT-UMA-VIV-046-MOR.2006        |
|                                 | 33. VIVERO ROSAURA DOMINGUEZ PERUN                       | SEMARNAT-UMA-VIV-042-MOR.2006        |
|                                 | 34. VIVERO BUGAMBILIAS                                   | SEMARNAT-UMA-VIV-049-MOR.2006        |
|                                 | 35. VIVERO DEL VALLE                                     | SEMARNAT-UMA-VIV-051-MOR.2006        |
|                                 | 36. VIVERO NEY   | SEMARNAT-UMA-VIV-054-MOR.2006        |
|                                 | 37. VIVERO ALONDRA                                       | SEMARNAT-UMA-VIV-052-MOR.2006        |
|                                 | 38. VIVERO LAS TORRES                                    | SEMARNAT-UMA-VIV-048-MOR.2006        |
|                                 | 39. HERBAFLOR VIVEROS                                    | MX/VIV-CO-0238-MOR/07                |
|                                 | 40. VIVERO ESTRELLA 2                                    | SEMARNAT-UMA-VIV-047-MOR.2006        |
|                                 | 41. VIVERO LOS LAURELES I                                | SEMARNAT-UMA-VIV-036-MOR.2006        |
|                                 | 42. VIVEROS ANDREAS S. MÜLLER JUNG                       | MX/VIV-CO-145-MOR/98                 |
|                                 | 43. JARDÍN JONACATEPEC                                   | SEMARNAT-UMA-VIV-017-MOR             |
|                                 | 44. VIVERO AGROPECUARIA LAS LUPITAS                      | SEMARNAT-UMA-VIV-019-MOR             |
|                                 | 45. VIVERO YAUTEPEC                                      | SEMARNAT-UMA-VIV-018-MOR             |
|                                 | 46. VIVERO AMBIENTAL                                     | SEMARNAT-UMA-VIV-020-MOR             |
|                                 | 47. VIVERO PLANTEC                                       | SEMARNAT-UMA-IN-VIV-0025-MOR-05      |
|                                 | 48. VIVERO EL ROSARIO                                    | SEMARNAT-UMA-VIV-032-MOR.2006        |
|                                 | 49. VIVERO MUNDO 2000                                    | SEMARNAT-UMA-VIV-035-MOR.2006        |
|                                 | 50. VIVERO SAN PABLO                                     | SEMARNAT-UMA-VIV-034-MOR.2006        |
|                                 | 51. VIVERO ROSSY   | SEMARNAT-UMA-VIV-040-MOR.2006        |
|                                 | 52. VIVERO ARACEAS ORNAMENTALES                          | MX/VIV-CO-221-MOR/05                 |
|                                 | 53. VIVERO RAMON CABELLO ALCANTARA                       | MX/VIV-CO-224-MOR/05                 |
|                                 | 54. VIVERO DOMINGO                                       | SEMARNAT-UMA-VIV-058-MOR.2006        |
|                                 | 55. VIVERO EL CHINO                                      | SEMARNAT-UMA-VIV-059-MOR.2006        |
|                                 | 56. VIVERO SANTA MARIA                                   | SEMARNAT-UMA-VIV-031-MOR.2006        |
|                                 | 57. VIVERO LOS LAURELES                                  | SEMARNAT-UMA-VIV-037-MOR.2006        |
|                                 | 58. VIVERO JESUS   | SEMARNAT-UMA-VIV-039-MOR.2006        |
|                                 | 59. VIVERO LA ESTACION                                   | SEMARNAT-UMA-VIV-033-MOR.2006        |

| Estado/State    | UMA intensiva o vivero   | Clave de registro/Code of registry  |
|-----------------|--|-------------------------------------|
|                 | 60. VIVERO OAXCOYOC  | MX/VIV-CO-0239-MOR./08              |
|                 | 61. VIVERO HORTENCIA   | MX/PIMVS-VIV-CO-259-MOR./10         |
|                 | 62. VIVERO LA TOMA   | SEMARNAT-UMA-VIV-038-MOR.2006       |
|                 | 63. VIVERO BORIS   | SEMARNAT-UMA-VIV-INT-067-MOR        |
|                 | 64. VIVERO ERIK PREDIO I Y II  | SEMARNAT-UMA-VIV-INT-071-MOR        |
|                 | 65. VIVERO LAS 6   | SEMARNAT-UMA-VIV-INT-070-MOR        |
|                 | 66. LA CASA DE LOS ARBOLES   | SEMARNAT-UMA-VIV-INT-065-MOR        |
|                 | 67. VIVERO FINA FLOR   | SEMARNAT-UMA-VIV-INT-063-MOR        |
|                 | 68. VIVERO HAYDEE  | SEMARNAT-UMA-VIV-041-MOR.2006       |
|                 | 69. VIVERO PABLO TORRES CAMACHO  | SEMARNAT-UMA-VIV-044-MOR.2006       |
|                 | 70. FLORAPLANT, S.A. DE C.V.   | SEMARNAT-UMA-VIV-055-MOR.2006       |
|                 | 71. VIVERO LA RANA   | SEMARNAT-UMA-VIV-056-MOR.2006       |
| NUEVO LEON      | 72. VIVEROS LAS ABRAS  | SEMARNAT-UMA-VIV-0002-N.L.          |
| OAXACA          | 73. VIVEROS SANTA ROSA DE OAXACA S. DE R.L. DE C.V.                        | SEMARNAT-UMA-INT-116-OAX            |
|                 | 74. VIVEROS DE OAXACA S.C.L.   | SEMARNAT-UMA-INT-117-OAX            |
| PUEBLA          | 75. VIVERO LOS ANGELES DE ATLIXCO  | SEMARNAT-UMA-VIV-0001-PUE           |
|                 | 76. PALMEIRA VIVE VERDE  | SEMARNAT-UMA-IN-VIV-0149-VER/12     |
| QUERETARO       | 77. DESARROLLOS RESIDENCIALES TURÍSTICOS                                   | SEMARNAT-UMA-IN-0024-QRO.           |
|                 | 78. LOS PORTICOS   | SEMARNAT-UMA-IN-0052-QRO/13         |
| QUINTANA ROO    | 79. VIVERO MOON PALACE   | MX/VIV-CO-353-QROO/12               |
|                 | 80. CARIBE PARADISE  | MX/VIV-CO-210-Q.ROO                 |
|                 | 81. TANKAH   | SEMARNAT/UMA-VIV-0011-06/QROO       |
|                 | 82. VIVERO IXORA   | MX/VIV-CO-0235-Q.ROO/07             |
|                 | 83. IMPERATORS   | DGVS-CR-IN-1587-QROO/13             |
|                 | 84. RANCHO SAN SALVADOR  | DGVS-CR-IN-0960-Q.ROO/07            |
| SAN LUIS POTOSI | 85. MADRE NATURALEZA   | MX/VIV-CO-150-S.L.P.                |
|                 | 86. RANCHO TURU  | SEMARNAT-UMA-INT-0009-S.L.P.        |
| TAMAULIPAS      | 87. VALMELEN   | SEMARNAT-VIV-IN-0227-TAM            |
|                 | 88. VIVEROS HORTENSIA  | SEMARNAT-UMA-VIV-0183-TAM/04        |
|                 | 89. EJIDO NUEVO SAN FRANCISCO  | SEMARNAT-UMA-VIV-0151-TAM           |
|                 | 90. LOS CAMALEONES   | CEVS-UMA-VIV-IN-337-TAM             |
|                 | 91. VIVEROS TRADICIONALES DE GONZALEZ                                      | CEVS-UMA-VIV-325-TAM                |
|                 | 92. SAN GERARDO  | CEVS-UMA-VIV-IN-335-TAM             |
|                 | 93. PARQUE ZOOLOGICO DE ALTAMIRA   | CEVS-UMA-IN-ZOO-0311-TAM            |
|                 | 94. CALQUIN S.A. DE C.V.   | CEVS-UMA-IN-108-TAM                 |
| VERACRUZ        | 95. VIVERO NATURA  | SEMARNAT-UMA-IN-VIV-0044-VER/05     |
|                 | 96. VIVERO CAVAZOS   | SEMARNAT-UMA-IN-VIV-0041-VER/05     |
|                 | 97. ADVENTURE VERACRUZ EXPEDICIONES, S. A. DE C. V.                        | SEMARNAT-UMA-IN-VIV-0030-VER/03     |
|                 | 98. LA ARAUCARIA   | MX/VIV-CO-159-VER                   |
|                 | 99. VIVERO PALO ALTO   | SEMARNAT-UMA-VIV-0134-VER/12        |
|                 | 100. XOCOTITLA   | SEMARNAT-UMA-IN-VIV-0146-VER/12     |
|                 | 101. EL PATIO DE LAS ORQUÍDEAS   | SEMARNAT-UMA-IN-VIV-0021-VER/02     |
|                 | 102. VIVERO MUNDO VERDE  | SEMARNAT-UMA-IN-VIV-0032-VER/04     |
|                 | 103. VIVERO HERMANOS DURAN   | SEMARNAT-UMA-IN-VIV-0154-VER/12     |
|                 | 104. MONTE OSCURO  | DGAERN/MX/VIV-CO-015-VER/12         |
|                 | 105. VIVERO DE PLANTAS ORNAMENTALES LAS CICADAS                            | SEMARNAT-UMA-IN-VIV-0153-VER/12     |
|                 | 106. LA ESTANCIA   | SEMARNAT-UMA-IN-VIV-0027-VER/02     |
|                 | 107. VIVERO LA PIEDRA  | SEMARNAT-UMA-IN-VIV-047-VER/06      |
|                 | 108. VIVERO APIAXCO  | MX-VIV-CO-359-VER/12                |
|                 | 109. EBEN-HEZER  | SEMARNAT-UMA-IN-VIV-0124-VER/11     |
|                 | 110. RAUL GARCIA DIAZ  | SEMARNAT-UMA-VIV-0131-VER/11        |
|                 | 111. GRUPO PRODUCTIVO DE CACTACEAS Y SUCULENTAS                            | SEMARNAT-UMA-IN-VIV-0029-VER/03     |
|                 | 112. LA FLOR DE SANTAMARIA   | SEMARNAT-UMA-VIV-0059-VER/07        |
|                 | 113. TEXON   | SEMARNAT-UMA-IN-VIV-0063-VER/08     |
|                 | 114. GUARDIANES DEL BOSQUE   | SEMARNAT-UMA-EX-VIV-0082-VER/08     |
|                 | 115. VIVERISTAS UNIDOS DE LA PERLA VERACRUZ                                | SEMARNAT-UMA-IN-VIV-0074-VER/09     |
|                 | 116. VIVERO MARIAM   | MX/VIV-CO-285-VER/11                |
|                 | 117. CUMKU   | SEMARNAT-UMA-IN-VIV-0067-VER/07     |
|                 | 118. 3 DE MAYO   | SEMARNAT-UMA-IN-VIV-0035-VER/04     |
|                 | 119. VIVERO MARGARITAS   | SEMARNAT-UMA-IN-VIV-0038-VER/04     |
|                 | 120. JARDIN SANTA MARIA  | SEMARNAT-UMA-VIV-0104-VER/11        |
|                 | 121. MARIA CRISTINA  | MX-VIV-CO-149-VER./06               |
|                 | 122. LUCERTAS (CRIADERO EXTENSIVO CON MODALIDAD DE INTENSIVO Y DE VIVIERO) | SEMARNAT-UMA-EX -CR-VIV-0054-VER/07 |
| YUCATAN         | 123. VIVERO ARAUCARIA  | SEMARNAT-UMA-VIV-0100-YUC-06        |

| Estado/State | UMA intensiva o vivero   | Clave de registro/Code of registry |
|--------------|--|------------------------------------|
|              | 124. VIVERO SANTA TERESA   | SEMARNAT-UMA-VIV-0146-YU-08        |
|              | 125. VIVERO PALMA REAL   | SEMARNAT-UMA-VIV-0096-YUC-06       |
|              | 126. CENTRO DE JARDINERIA HACIENDA SAN ANTONIO COCUL                           | SEMARNAT-UMA-VIV-0150-YUC-08       |
|              | 127. YA'AX TUUNICH   | SEMARNAT-UMA-VIV-0142-YUC-08       |
|              | 128. SAN JOSE YAAXCHE  | SEMARNAT-UMA-VIV-0033-YUC-02       |
|              | 129. VIVERO MONTECRISTO  | SEMARNAT-UMA-VIV-0027-YUC-02       |
|              | 130. FLORES DE MANGLE  | SEMARNAT-UMA-VIV-0220-YUC-11       |
|              | 131. CENTRO DE JARDINERIA HACIENDA SAN ANTONIO CUCUL                           | SEMARNAT-UMA-VIV-0150-YUC-08       |
|              | 132. BANCO DE GERMOPLASMA DE PLANTAS UTILES DE LA CULTURA MAYA                 | SEMARNAT-UMA-VIV-0192-YUC-10       |
|              | 133. VIVERO PALMA REAL   | SEMARNAT-UMA-VIV-0235-YUC/12       |
|              | 134. VIVERO SAN JOSE TZAL  | SEMARNAT-UMA-VIV-221-YUC-11        |
|              | 135. VIVERO-ISYSA-LAS COLORADAS  | SEMARNAT-UMA-VIV-0152-YUC-08       |
|              | 136. GANADERIA DIVERSIFICADA   | SEMARNAT-UMA-IN-0077-YUC-05        |
|              | 137. TAMANCEH  | SEMARNAT-UMA-IN-0186-YUC-10        |
|              | 138. VIVERO DE PLANTAS MEDICINALES, FRUTALES Y ORNAMENTALES NACHI COCOM (BAJA) | SEMARNAT-UMA-VIV-0058-YUC-04       |
|              | 139. BEBELSAH (BAJA)   | SEMARNAT-UMA-VIV-0060-YUC-04       |
|              | 140. VIVERO DEL PUERTO   | SEMARNAT-h-VIV-0001-QROO-02        |

**Tabla 6.** PIMVS con planes de manejo autorizados para aprovechamiento de *B. recurvata*.

| Estado                               | PIMVS   | Clave de registro              |
|--------------------------------------|---|--------------------------------|
| BAJA CALIFORNIA SUR                  | 1. LA PAZ                                     | MX/PIMVS-VIV-CO-0243-BCS/08    |
| CAMPECHE                             | 2. VIVERO JARDIN LAS PALMAS                   | MX/PIMVS-VIV-CO-329-CAMP/12    |
|                                      | 3. VIVERO MARIA DOLORES                       | MX/PIMVS-VIV-CO-333-CAMP/12    |
|                                      | 4. VIVERO FORESTAL LA MANCOLONA               | MX/PIMVS-VIV-CO-334-CAMP/12    |
| DISTRITO FEDERAL<br>DISTRITO FEDERAL | 5. PARQUE BICENTENARIO JARDIN NATURA          | DGVS/PIMVS-JB-063-DF/10        |
|                                      | 6. PIMVS CACTACEAS Y SUCULENTAS DE XOCHIMILCO | MX-PIMVS-VIV-CO-373-DF/13      |
| GUANAJUATO                           | 7. VIVERO DE CACTUS NEUTLA                    | MX/PIMVS-VIV-CO-260-GTO./10    |
| JALISCO                              | 8. VIVERO TABACHINES                          | MX/PIMVS-VIV-CO-354-JAL/12     |
| MICHOACAN                            | 9. ZITACUARO                                  | MX/PIMVS-VIV-CO-0244-MICH/08   |
| MICHOACAN                            | 10. JARDINES Y CACTUS SAN ANTONIO             | MX-PIMVS-VIV-CO-381-MICH/13    |
| MORELOS                              | 11. TEHUIXTLA                                 | MX/PIMVS-VIV-CO-0242-MOR/08    |
| MORELOS                              | 12. TIKUPE S.A. DE C.V.                       | MX/PIMVS-VIV-CO-350-MOR/12     |
| MORELOS                              | 13. PALMAS EXOTICAS DEL MUNDO                 | MX-PIMVS-VIV-CO-357-MOR/12     |
| NAYARIT                              | 14. VIVERO CYCALI                             | MX-PIMVS-VIV-CO-317-NAY/12     |
| PUEBLA                               | 15. RANCHO ECOLOGICO EL ANGEL DE TU SALUD     | MX/PIMVS -JB-066-PUE/12        |
| SINALOA                              | 16. PALMAS EXOTICAS DE ANGOSTURA              | MX/PIMVS-CO-250-SIN/09         |
| TABASCO                              | 17. EL FORTIN                                 | MX/PIMVS-VIV-CO-249-TAB/09     |
| VERACRUZ                             | 18. LAS MARAVILLAS                            | SEMARNAT-PIMVS-VIV-0010-VER/13 |



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**Consulta a los países del área de distribución del género *Beaucarnea*****CONABIO**COMISIÓN NACIONAL PARA EL  
CONOCIMIENTO Y USO DE LA BIODIVERSIDADDirección General de Cooperación Internacional  
e Implementación**Oficio DGCII-001/2016**

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México, D.F., a 08 de enero de 2016.

**Autoridades Administrativas y Científicas de Belice, El Salvador, Guatemala, Honduras, y Nicaragua**

Estimados colegas,

Hago referencia a la situación del género de plantas *Beaucarnea* (Lemarie, 1861) cuyo intervalo de distribución va desde el sur de Tamaulipas (México), hasta Honduras y posiblemente el norte de Nicaragua (Hernández-Sandoval, 1993). Las especies del género *Beaucarnea* son comúnmente conocidas como “pata de elefante”, y suman once especies: 1) *B. compacta*, 2) *B. goldmanii*, 3) *B. gracilis*, 4) *B. guatemalensis*, 5) *B. hiriartiae*, 6) *B. inermis*, 7) *B. pliabilis* (syn. *B. ameliae* y *B. petenensis*), 8) *B. purpusii*, 9) *B. recurvata*, 10) *B. sanctomariana*, y 11) *B. stricta*.

Específicamente *B. recurvata* (o palma monja) es una especie endémica de México considerada en peligro de extinción, y con una alta demanda en el comercio internacional. Por lo anterior, en septiembre de 2014, la Autoridad Científica CITES de México (CONABIO) organizó el “Taller para evaluar la pertinencia de incluir a *B. recurvata* (palma monja) en los Apéndices de la CITES”, que derivó en recomendaciones para fortalecer su uso sostenible, legal y trazable a nivel nacional e internacional, destacando la recomendación de enlistarla en el Apéndice II de la CITES.

Derivado de lo anterior, México presentó a consideración de la “22ª reunión del Comité de Flora” (PC22, Tbilisi 2015) el documento PC22 Doc. 22.2, que incluye un borrador de propuesta de inclusión de *Beaucarnea recurvata* en el Apéndice II con arreglo al criterio B del Anexo 2a de la Resolución de la Conferencia 9.24 (Rev. CoP16).

Como resultado, el PC22 apoyó que la propuesta de México se presente a consideración de la 17ª reunión de la Conferencia de las Partes (CoP17, Johannesburgo, 2016), y adicionalmente sugirió evaluar la pertinencia de enlistar a las diez especies restantes del género en el Apéndice II por criterio de similitud (ver PC22 sum. 4 [Rev. 1], <https://cites.org/sites/default/files/eng/com/pc/22/ExSum/E-PC22-ExSum-04-Rev1.pdf>).



**CONABIO**

COMISIÓN NACIONAL PARA EL  
CONOCIMIENTO Y USO DE LA BIODIVERSIDAD

Dirección General de Cooperación Internacional  
e Implementación

**Oficio DGCII-001/2016**

Página 2 de 2

México, D.F., a 08 de enero de 2016.

En preparación para la CoP17 (2016), y como países del área de distribución del género *Beaucarnea*, agradeceremos su retroalimentación respecto a lo siguiente:

- a) El borrador de propuesta de enmienda para incluir a *B. recurvata* en el Apéndice II (Anexo al presente oficio);
- b) La posibilidad de enlistar a las 10 especies restantes del género por criterio de similitud (criterio A, Anexo 2 de la Res. Conf. 9.24 [Rev. CoP16]), y en su caso, la disponibilidad de compartirnos cualquier información que tuvieran disponible sobre dichas especies; y
- c) La disponibilidad de su país para apoyar una propuesta de inclusión en el Apéndice II del género *Beaucarnea* spp., y en particular, de ser co-proponentes junto con México de la misma.

Agradeceremos recibir su respuesta a más tardar el **15 de febrero de 2016**, a los correos [ac-cites@conabio.gob.mx](mailto:ac-cites@conabio.gob.mx).

De antemano, agradezco su valiosa colaboración.

Biól. Gabriela López Segurajáuregui  
Coordinación de la Autoridad Científica CITES  
Firma en ausencia del Biól. Hesiquio Benítez Díaz  
Director General de Cooperación Internacional e Implementación

ICO

c.c.e.p. Vera Teresinha Rauber Coradin.- Representante de América Central, del Sur y el Caribe ante el Comité de Flora CITES  
Dora Ingrid Rivera.- Representante de América Central, del Sur y el Caribe ante el Comité de Flora CITES  
John Scanlon.- Secretario General de la CITES  
Jorge Maksabedian de la Roquette.- Director General de Vida Silvestre, SEMARNAT.- Autoridad Administrativa de México ante la CITES  
Karla Acosta Resendi.- Directora General de Puertos Aeropuertos y Fronteras, PROFEPA, SEMARNAT, Autoridad de Observancia y Aplicación de la Ley de México ante la CITES

Liga Periférico - Insurgentes Sur, Núm. 4903, Col. Parques del Pedregal, Delegación Tlalpan, 14010, México, D.F.  
Tel.: (55) 5004.5000 [www.conabio.gob.mx](http://www.conabio.gob.mx) | [www.biodiversidad.gob.mx](http://www.biodiversidad.gob.mx)