

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



Thirty-third meeting of the Animals Committee
Geneva (Switzerland), 12 – 19 July 2024

Appendices of the Convention

Periodic Review of species included in Appendices I and II

PERIODIC REVIEW OF *MONACHUS TROPICALIS*

1. This document has been submitted by the CITES Scientific Authority of Mexico (CONABIO) *.
2. *Monachus tropicalis* is a species that occurred in the Caribbean Sea and part of the Gulf of Mexico, from the south of Florida to Colombia and Venezuela; records show that it was last sighted in 1952. In 1986, the IUCN Pinniped Specialist Group classified the species in the IUCN Red List as Extinct. In 2008, the United States of America finalized an in-depth review of its List of Endangered Species (ESA), and also concluded that the species was extinct.
3. At the 25th meeting of the Animals Committee (Geneva, Switzerland, July 2011), in response to Notification to the Parties No. 2011/038, the United States of America volunteered to evaluate the Caribbean monk seal (*Monachus tropicalis*) as part of the Periodic review of CITES-listed species, in accordance with Resolution Conf. 14.8 (Rev. CoP19). At its 27th meeting (Veracruz, Mexico, April–May 2014), the Animals Committee agreed with the recommendation from the United States of America to delete this extinct species from Appendix I ([AC27 SR](#)). In December 2023, Mexico offered to take over this matter from the United States of America in order to finalize the process.
4. Currently, the threats affecting other species in the genus *Monachus* are not related to direct use or to domestic/international trade, but rather to other human activities (tourism and infrastructure, pollution, climate change, and fisheries). Since 1975, there has been only one record of international movement of specimens for scientific purposes, and trade of look-alike species is low.
5. Following an updated review of the species' status, Mexico recommends deletion of the Caribbean monk seal (*Monachus tropicalis*) from CITES Appendices, given that it does not meet the biological criteria (Annex 1), nor the precautionary criteria for possibly extinct species (Annex 4D) of Resolution Conf. 9.24 (Rev. CoP17).
6. Mexico requests the opinion of the Animals Committee and its nomenclature specialist regarding the periodic review of *Monachus tropicalis* included in the Annex to this document. Mexico also invites range States to provide feedback and further information to supplement this document.

* 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.

A. Proposal

Delete the extinct species *Monachus tropicalis* from Appendix I as it no longer meets the biological criteria (Annex 1) nor the precautionary criteria for possibly extinct species (Annex 4D) to Resolution Conf. 9.24 (Rev. CoP17).

B. Proponent

Mexico

C. Supporting statement

1. Taxonomy

- 1.1 Class: Mammalia
- 1.2 Order: Carnivora
- 1.3 Family: Phocidae
- 1.4 Species: *Monachus tropicalis* (Gray, 1850)
- 1.5 Scientific synonyms: None
- 1.6 Common names:
- | | |
|----------|---|
| English: | Caribbean Monk Seal, West Indian Monk Seal, West Indian Seal, Jamaican Seal |
| French: | Phoque moine des Caraïbes |
| Spanish: | Foca Monje del Caribe, Foca Fraile del Caribe |
| Russian: | Вест-индский тюлень-монах, Карибский тюлень-монах, Тропический тюлень-монах |
| Czech: | Tuleň karibský |
| Finnish: | Karibianhylje |
| Italian: | Foca monaca dei Caraibi |
- 1.7 Code numbers: None

2. Overview

The proposal is to delete the Caribbean monk seal (*Monachus tropicalis*) from Appendix I. This extinct species was a phocid that occurred in the Caribbean Sea and part of the Gulf of Mexico, from the south of Florida to Colombia and Venezuela. The species was first described in 1492 during the voyages of Christopher Columbus to America, and was last sighted in 1952. The species was included in Appendix I in 1975 within the genus (*Monachus* spp.), along with the Mediterranean and Hawaiian monk seals. In 1986, the IUCN Pinniped Specialist Group classified the species the IUCN Red List as Extinct. In 2008, the United States of America finalized an in-depth review of their List of Endangered Species (ESA) and also concluded that the species was extinct. Factors that led to the species' disappearance included intensive hunting for its blubber/oil and, to a lesser extent, for skins and meat. Currently, the threats affecting other species within the genus are not related to direct use, or to domestic or international trade, but rather to other human activities (tourism and infrastructure, pollution, climate change and fisheries). Since 1975, there is only one record of international movement of specimens for scientific purposes. Trade in look-alike species is low, and no increase of trade is expected as a result of deleting *M. tropicalis* from the Appendices. The majority of countries where the species potentially occurred have regulations in place for the protection of marine mammals. In view of this, the Caribbean monk seal does not meet the biological criteria (Annex 1) nor the precautionary criteria for possibly extinct species (Annex 4D) of Resolution Conf. 9.24 (Rev. CoP17) for it to remain in Appendix I. It should be noted that at its 27th Meeting (Veracruz, Mexico, 2014), the Animals Committee agreed with the recommendation from the United States of America to delete this species from Appendix I ([AC27 Doc. 24.3.4](#)).

3. Species characteristics

3.1 Distribution

Monachus tropicalis occurred in the Gulf of Mexico and on the coasts of the Caribbean Sea, from Central America to South America, including the Greater and Lesser Antilles (Timm *et al.* 1997; Adam 2004; McClenachan and Cooper, 2008). Also, bone records have been found in Colombia that would indicate that the species occurred in the southwest Caribbean region (**Figure 1**; Rodríguez-Mahecha *et al.* 2006; [AC27 Doc. 24.3.4](#)).

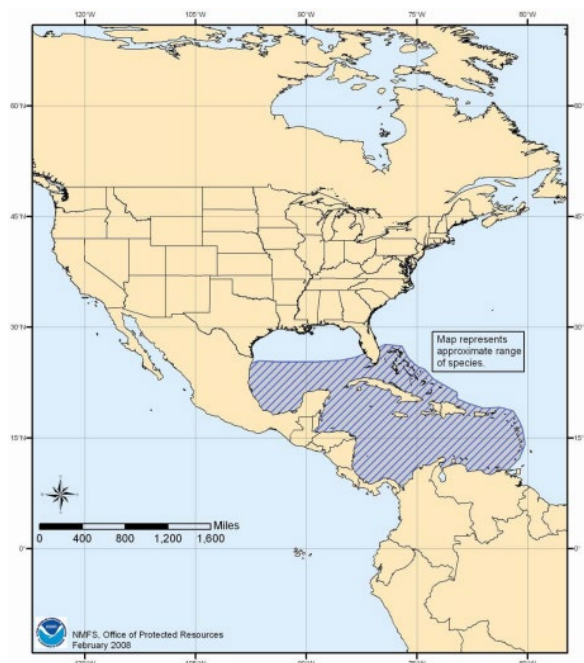


Figure 1. Map of the historic range of the Caribbean monk seal (*Monachus tropicalis*; figure taken from document [AC27 Doc.24.3.4](#)).

3.2. Habitat

The main habitat of the Caribbean monk seal encompassed coastal environments on the mainland and islands, cays, and atolls surrounded by shallow waters protected by reefs (Adam 2004; McClenachan and Cooper 2008). The species used sandy, rocky areas for shelter, and as breeding sites (King 1983 in [AC27 Doc.24.3.4](#)). Records of the species mainly encompassed Sal Cay to the north of Cuba, Pedro Bank to the south of Jamaica, Scorpion Island, and the Coral Triangle to the south of Mexico (where the first sightings occurred), and also in some islets in Honduras such as Seal Cay (Allen 1890; Adam, 2004).

3.3. Biological characteristics

Observations of these seals at Triangle Reef, at different times of the year, suggest that seasonal migration to breeding sites was highly unlikely (Adam y García 2003). *Monachus tropicalis* is believed to have had low pupping synchrony due to the limited seasonal variations in climate and (Adam y García 2003; Adam 2004), and it is likely that breeding occurred from late November to early December (Ward 1887; Allen 1890; Adam and García 2003; [AC27 Doc. 24.3.4](#)), with an annual birth rate of 15 % (Rice 1973; Adam 2004).

It is likely that birthing took place in shallow waters (Ward, 1887) and weaning was probably two weeks after birth. Pups reportedly developed rapidly, and were as active as adults by 9 months old (Nesbitt, 1836 in Adam, 2004). Related species have been observed to reach maturity at 4–8 years of age and can live up to 20 years (Adam, 2004).

3.4. Morphological characteristics

Pelage of the Caribbean monk seal is described as dark, dorsally brown and grizzled from the light-coloured hair tips. Lighter colour laterally, fading to pale yellow or yellowish-white ventrally, with a mottled patch on the belly. Nose to tail length ranged from 228 to 244 cm. No sexual dimorphism, females were slightly smaller, and there were no notable differences in colour or shape (Adam 2004; Allen 1890; True and Lucas 1884).

The species had a typical seal-like appearance, with smooth contours, a well-developed blubber layer, flippered limbs and a short tail; females had two pairs of functional mammary glands. In males, the penis was concealed within the body contours and testes were inguinal. Head was large and prominent, brown eyes with little sclera at iridial margins (Adam 2004).

Females were slightly smaller than males; mean estimated length for four pregnant females was 224 cm, and up to 244 cm for males. The skull of *Monachus tropicalis* has poorly-developed sagittal crests, a mean condylobasal length of 256 mm, mastoid breadth of 146 mm, and a zygomatic width of 157.6 mm. Vertebral formula 7 C, 15T, 5 L, 3 Sis 11-13 Cd (Adam, 2004). Monk seals had 1 –13 ribs; tibia and fibula were practically fused; short, distally expanded femora. Bones covered with thick musculature, and estimated brain mass of 460 gr (Adam, 2004).

Smallest known sexually mature female was 199 cm long. Collected fetuses were quite large, measuring 85–89 cm long, with a long, soft, glossy black lanugo coat (Ward, 1887; Allen, 1890).

3.5. Role of the species in its ecosystem

All stomachs of wild specimens of *M. tropicalis* analyzed were found empty, therefore, there is no record of their natural diet (Ward, 1887; Adam and García, 2003; Adam, 2004). Dental and osteological skull features are consistent with a generalist feeding strategy (Adam and Berta, 2002), just like other species within the genus *Monachus*, so it is likely that Caribbean monk seals played a similar ecological role and that their diet might have included fish, cephalopods and crustaceans (Lowry, 2015; Littnan *et al.*, 2018). Given that they were found in large numbers and were predators, it is likely that they had a major impact on the abundance and composition of their prey populations in the Caribbean reefs (McClenachan and Cooper, 2008; [AC27 Doc. 24.3.4](#)).

Apart from humans, their natural predator was possibly some shark species, and attacks probably involved several sharks (Adam, 2004). *Monachus tropicalis* shared its range with diverse seabirds, such as frigate birds (*Fregata magnificens*), terns (*Sterna maxima*), and boobies (*Sula* sp.), among others (Ward, 1887; Adam, 2004).

4. Status and trends

4.1 Habitat trends

The main cause of extinction of the Caribbean monk seal was overharvesting, mainly for oil (from blubber), but also for skins and meat (Gaumer, 1917; Adam and García, 2003; Adam, 2004; McClenachan and Cooper, 2008; Jørgensen 2022). Habitat-related issues were not a factor in the extinction of this species ([AC27 Doc. 24.3.4](#)).

Nonetheless, the historical range of *M. tropicalis*, the Caribbean region, is currently strongly affected by human activities, such as overfishing, coastal development (urban, residential, tourism and industrial), pollution (untreated waste water, refuse, and agricultural waste), climate change (extreme climate events), and ocean acidification (impact of coral bleaching on reefs). These are mutually reinforcing factors which, when added to a number of specific events (e.g., the introduction of invasive species) hasten environmental degradation (Pulwarty *et al.*, 2010; Palanisamy *et al.*, 2012; Monteiro and Costa, 2018; Diez *et al.*, 2019; UNEP-CEP 2020).

4.2. Population size

There is limited data on the size of the population of *M. tropicalis* prior to extinction. According to some authors, in 1688, hundreds of seals were hunted by night (Sloane, 1707; McClenachan and Cooper, 2008; Jørgensen 2022); in 1836, there was a sighting of 500 individuals (Nesbitt, 1836), and in 1911, there is a record of 200 individuals being captured (Gaumer, 1917; Jørgensen, 2022). The

National Information System on Biodiversity (NISB) - CONABIO database in Mexico holds at least 66 historic records (1700-1984) of this species (CONABIO 2024).

According to a reconstruction based on historic (and some anecdotal) data for hunting and fertility, it was estimated that population size in the 17th century was between 233,000 and 338,000 individuals distributed among 13 colonies (**Figure 2**; McClenachan and Cooper, 2008).

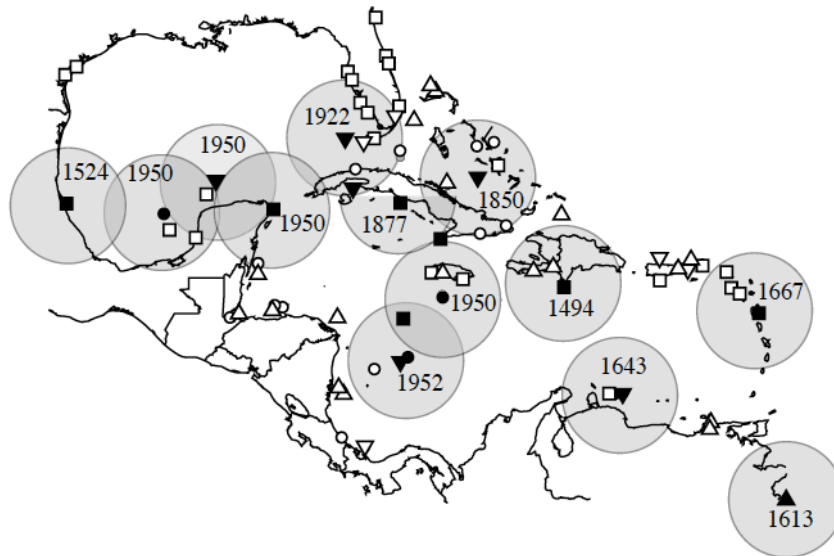


Figure 2. Location of 13 historic colonies of Caribbean monk seal (*Monachus tropicalis*); date of last sighting is shown for each colony (McClenachan y Cooper, 2008).

4.3. Population structure

The most specific information on population structure was obtained during an expedition in the year 1900 in Mexico. The male:female ratio of collected specimens was 24:76, with subadults (between 0.5 and 2.5 years old) comprising 21% of the sample (Rice, 1973; Adam, 2004).

4.4. Population trends

Available reports indicate that the species was abundant, but due to continued overharvesting, by the end of the 19th century it had become rare (Adam, 2004; McClenachan and Cooper, 2008; Lowry, 2015). There was a significant decline in the number of individuals by the end of the 1800s when hunting in breeding colonies was a common activity that limited the range, and led to colonies becoming rare even 100 years before the species disappeared (McClenachan and Cooper, 2008). The last photographic record of the species in the wild dates back to 1900, and was taken at the Triangle Reef in Mexico, and the last verifiable report of a sighting was in 1952 (NMFS, 2008).

McClenachan and Cooper (2008) estimated that the extinction of monk seal colonies followed a predictable pattern, and occurred in two distinct stages. In the first wave of extinction in the 18th century, the middle colonies (fewer than 1500 km from the centre of distribution) had less than a 10 % probability of extinction, while colonies on the periphery (over 1500 km) had a 35 % chance of extinction. In the second wave in the 20th century, the probability of extinction had increased for all colonies, and was higher in peripheral colonies.

In 1973, an aerial search for *M. tropicalis* was carried out in areas in the Gulf of Mexico and the Caribbean, on islands and atolls in Campeche, Yucatan and Quintana Roo in Mexico, and also in Belize, Honduras, Nicaragua and the Central Caribbean as far as Jamaica, comprising an area of 6,377 km. No Caribbean monk seals were found nor evidence of their occurrence, and it was concluded that even if a few seals were still alive, there would be little likelihood of the species recovering (Kenyon 1977).

Despite extensive searches, the Caribbean monk seal has not been sighted since 1952, and is therefore considered to be extinct (Kenyon, 1977; Leboeuf *et al.*, 1986; Lowry, 2015). In 1986, the IUCN Pinniped Specialist Group classified the species in the IUCN Red List as Extinct (Lowry, 2015).

4.5. Geographic trends

Distribution of the Caribbean monk seal declined drastically after the colonial period. By 1900, the species only occurred in the Central Caribbean near the coasts of the Yucatan Peninsula, Central America and in Caribbean islands, such as Cuba and Jamaica (Adam, 2004; McClenachan and Cooper, 2008) until its extinction (**Figure 3**).

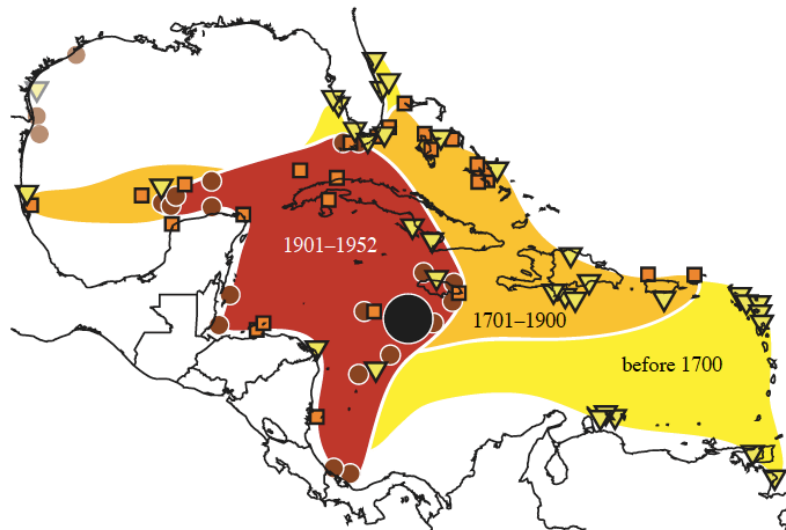


Figure 3. Total extent of the range of the Caribbean monk seal over time (*Monachus tropicalis*; taken from McClenachan and Cooper, 2008). triangles = observations prior to the 18th century; squares = observations from the 18th and 19th century; small circles = observations from the early 1900s.

5. Threats

The main cause of extinction of the Caribbean monk seal was overharvesting of the species, mainly for oil (from blubber), but also for skins and meat (Gaumer, 1917; Adam and García, 2003; Adam, 2004; McClenachan and Cooper, 2008; Jørgensen, 2022). This process was accelerated by specimens being collected for zoos and scientific studies ([AC27 Doc. 24.3.4](#)).

Annex 2 of document [AC27 Doc. 24.3.4](#) and the NMFS (2008) present a chronology of the different events leading to the extinction of *Monachus tropicalis*.

6. Utilization and trade

6.1 National utilization

There is currently no data as the species is considered to be extinct; however, it has been reported that its blubber (for oil), skins, and meat were used (Gaumer, 1917; Adam and García, 2003; Adam, 2004; McClenachan and Cooper, 2008; Jørgensen, 2022).

6.2 Legal trade

There is currently no trade of *M. tropicalis* as the species is considered extinct. According to the CITES Trade Database (UNEP-WCMC, 2024), there is only one record of trade in this species in 2009, which involved the transfer of 6 pre-Convention specimens for scientific purposes from the United States of America to Germany. There is no historic data to indicate that the species was traded, but it is likely that trade occurred as the species was harvested for oil, skins and meat ([AC27 Doc. 24.3.4](#)). There is currently very little trade in the other two extant species of *Monachus* (82

records of trade between 1878 and 2022, mainly for scientific purposes), both of which are listed in Appendix I (NMFS, 2008; [AC27 Doc. 24.3.4](#); UNEP-WCMC, 2024).

6.3 Parts and derivatives in trade

The only record of international trade refers to six pre-Convention specimens for scientific purposes in 2009.

6.4 Illegal trade

There has been no previous or current indication of illegal trade in the Caribbean monk seal. Illegal trade is not considered to have been a factor in the extinction of this species ([AC27 Doc. 24.3.4](#)).

6.5 Actual or potential trade impacts

It appears that the Caribbean monk seal was not subject to trade prior to its extinction, and if it were to be rediscovered, it is very unlikely that it would be traded for commercial purposes ([AC27 Doc. 24.3.4](#)).

7. Legal instruments

7.1 National

Mexico: The species is listed as probably extinct in the wild (E) in the Official Mexican Standard NOM-059-SEMARNAT-2010 published in the Official Gazette of the Federation (DOF, 2019). Should the species reappear, Article 60 bis of the General Wildlife Law prohibits the exploitation of all species of marine mammals. Similarly, according to Article 55 bis of the aforementioned Law: "Import, export, and re-export of specimens of any species of marine mammal or primate are prohibited, and likewise any parts or derivatives thereof, with the exception of those intended for scientific research, and any samples of liquids, tissues or reproductive cells of specimens in captivity...".

United States of America: In 2008, the species was considered extinct, and in 2011, it was deleted from the List of endangered species in the United States of America (ESA; 73 FR 32521, 2008; 73 FR 63901, 2008; 76 FR 20558, 2011). If the species were to reappear, it would be protected by the Marine Mammal Protection Act (MMA 2019; [AC27 Doc. 24.3.4](#)).

Colombia: The species is listed as extinct in the Colombian Red List of Mammals (Rodríguez-Mahecha *et al.*, 2006; Ramírez-Chaves *et al.*, 2021).

Nicaragua: The species is listed as extinct in the Nicaraguan Red List of Mammals published in 2018 (Medina-Fitoria, 2018).

In most countries, the species no longer appears in regulations or national red lists as it is considered extinct (Rodríguez Rojas-Suárez, 1995; González *et al.*, 2012).

7.2 International

Monachus tropicalis and the other two extant species within the genus *Monachus* are listed in CITES Appendix I.

8. Species management

8.1 Management measures

Known specimens are to be found in science museums and scientific collections; for example, the Smithsonian National Museum of Natural History houses the largest collection of *Monachus tropicalis* with 44 specimens (Scheel *et al.*, 2014; Jørgensen, 2022). Whenever these specimens need to be moved across borders, there are national and international measures in place to manage and regulate such movements (see paragraphs 7.1 and 8.6).

Currently, no management measures are applied with regard to wild populations as the species has been declared extinct.

8.2 Population monitoring

The species is considered to be extinct. As previously mentioned, several surveys were carried out across its former range, but nothing was found to indicate its presence (Kenyon, 1977, Leboeuf *et al.*, 1986). There was great interest in the Caribbean monk seal over the 19th century when the species was documented, described, and collected, and although the number of sightings increased, there were few new discoveries. (**Figure 4**; McClenachan y Cooper, 2008).

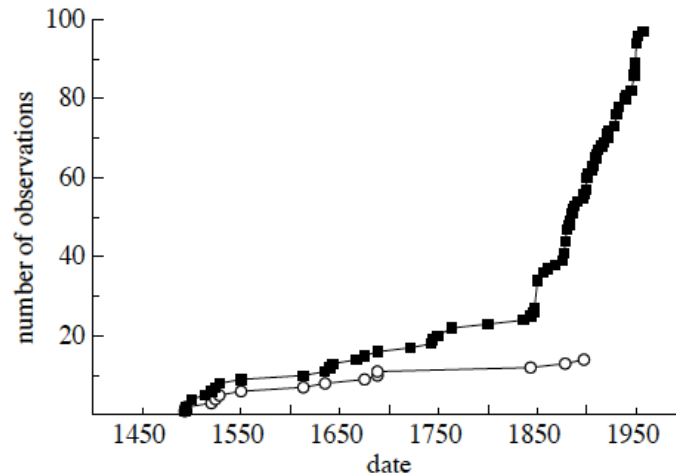


Figure 4. Number of independent observations (dark squares) and discovery of new populations of *Monachus tropicalis* (open dots; taken from McClenachan and Cooper, 2008).

8.3 Control measures

8.3.1 International

Monachus tropicalis and the two extant species of the genus *Monachus* are listed in CITES Appendix I. Permits are required for import or export of specimens.

8.3.2 Domestic

Mexico: The Federal Attorney's Office for Environmental Protection (PROFEPA) operates at ports, airports, and border crossings to enforce national environmental laws and international conventions. The Federal Attorney's Office verifies compliance with non-tariff legal provisions and restrictions applying to imports, exports, re-exports, and returns of goods whose import and export are subject to regulation by SEMARNAT, including species mentioned in NOM-059-SEMARNAT-2010.

United States of America: Under the Marine Mammals Protection Act (MMPA), the National Marine Fisheries Service (NMFS) is responsible for scientific research, issuing permits, promulgating regulations, and law enforcement, as needed, to attain the purposes of the MMPA.

8.4 Captive breeding and artificial propagation

According to a review published by Adam (2004), at least 18 individuals were kept in captivity on eight separate occasions; breeding was unsuccessful and survival was low (living from 1 week to 2 years). There are no further records of captive-breeding programmes for the Caribbean monk seal prior to its extinction.

8.5 Habitat conservation

The estimated distribution of the Caribbean monk seal was quite extensive and encompassed a large part of the Caribbean and parts of the Gulf of Mexico (**Figure 3**). Although there are still suitable habitats across its original estimated distribution, generally speaking, they have been modified or diminished by urban and tourist developments, mainly in the Central Caribbean (from Venezuela to

Mexico and the Antilles islands), and it is very unlikely that the species could adapt or move to other habitats like the Hawaiian or Mediterranean seals (Sullivan and Bustamante, 1999; Rojas-Bracho, 2014, pers. comm. to the Mexican CITES Scientific Authority). There are other threats to the habitat, such as fisheries and petrochemical activities (particularly in the Gulf of Mexico) (Sullivan and Bustamante, 1999). Indirectly (whether as a result of changes in the food web due to overfishing or the discharge of nutrient-rich waters), macroalgae blooms are a threat to the health of corals, which compromises the main habitat that was the feeding grounds for the Caribbean monk seal (Aronson and Precht, 2006). The regions where better conserved habitats are located are around the Bahamas and Turks and Caicos Islands, also the south of Florida, as a result of there being less pressure from population growth and the existence of protected areas (e. g., Dry Tortugas National Park, and Florida Keys National Marine Sanctuary (Sullivan y Bustamante, 1999).

8.6 Safeguards

Should the species be rediscovered in Mexico, Article 60 bis of the General Wildlife Law prohibits harvesting of any species of marine mammal. Similarly, Article 55 bis of this law states that "Import, export and re-export of specimens of any species of marine mammal or primate, or parts and derivatives thereof, with the exception of specimens intended for scientific research, and any samples of liquids, tissues or reproductive cells of specimens kept in captivity..."

In the United States of America, should the species be rediscovered, it would immediately be protected under the Marine Mammal Protection Act. According to United Nations (2021), there are laws in place in at least nine Caribbean countries for the protection of marine mammals.

CITES: Precautionary measures defined in Annex 4 of Resolution Conf. 9.24 (Rev. CoP17), paragraph D:

"Species that are regarded as possibly extinct should not be deleted from the Appendices if:

"1. they may be affected by trade in the event of their rediscovery;"

Extensive searches for the species have been unsuccessful, and it is classified as extinct by the IUCN (1986; and by the United States of America since 1984, with evaluations up until 2008; NMFS, 2008). Nonetheless, the threats that affected the species (hunting for blubber and skins) no longer exist for the majority of seal populations. Current threats that affect other seal populations mainly include factors such as climate change (impact on potential prey), competition with fisheries, gillnets, etc.

"2. they resemble extant species included in the Appendices "

There are two similar species listed in CITES Appendix I: *Monachus monachus* and *M. schauinslandi*. The three species can be distinguished from one another based on their morphology, mainly by bone features, size and, in some cases, by pelage colouring (see paragraph 9).

" 3. their deletion would cause difficulties implementing the Convention"

Deletion of the species is not expected to imply any problems regarding implementation: ever since the Convention first came into force, there has been only one international movement of *M. tropicalis*, for scientific purposes; on account of the fact that the species became extinct before CITES was implemented (1975), all specimens meet the provisions of Resolution Conf. 13.6 (Rev. CoP18) to be considered pre-Convention, therefore, the exemptions provided in Article VII of the Convention text are now applicable. With regard to similar species (Appendix I), almost all specimens traded (there being very few records over the past 24 years: 30 records for *M. monachus* and 15 for *M. schauinslandi*; UNEP-WCMC/CITES) were exported for scientific purposes.

"4. their removal would complicate the interpretation of the Appendices"

The species was listed in the Appendices in 1975 on inclusion of all species within the genus *Monachus* (at that time, *M. monachus*, *M. tropicalis*, and *M. Schauinslandi*). Deletion of *M.*

tropicalis from the Appendices will require a reference annotation to the genus listing that indicates “except for *M. tropicalis*, considered to be extinct”.

9. Information on similar species

Mediterranean monk seal (*Monachus monachus*): based on a population of 600 to 700 individuals on the coasts of Turkey and Greece, the species is classified in the IUCN Red List as Vulnerable, with an increasing population (Karamanlidis *et al.* 2023). Although *M. monachus* is slightly larger than *M. tropicalis* and *M. schauinslandi* (Aguilar and Lowry, 2013, in [AC27 Doc. 24.3.4](#)), there are some differences in colouring and bone features that help distinguish them (Adam 2004): *M. monachus* – pelage has a lighter-coloured/white ventral patch (which *M. tropicalis* and *M. schauinslandi* do not have); upper incisors without marked cervical constriction (marked in *M. tropicalis* and *M. schauinslandi*); teeth P2-4 and p2-4 with single cusp posterior to main cusp (two cusps in *M. tropicalis* and *M. schauinslandi*); antorbital process prominent (reduced for *M. tropicalis* and *M. schauinslandi*); pterigoid processes poorly defined and not visible in dorsal view (laterally curved, well developed and visible in dorsal view in *M. tropicalis* and *M. schauinslandi*); anterior tips of nasals rounded (flat or incised in *M. tropicalis* and *M. schauinslandi*); auditory bulla without distinct oblique ventral sulcus (with ventral sulcus in *M. tropicalis* and *M. schauinslandi*); visibility through paired optic foramina in lateral view not blocked by bone (blocked by bone in *M. tropicalis* and *M. schauinslandi*).

Hawaiian monk seal (*Monachus schauinslandi*): only found in the Hawaiian archipelago, with a population between 630 and 1200 individuals; classified in the IUCN Red List as Endangered, with a declining population (at least, until 2015, Littnan *et al.* 2015), and classified as Endangered under the U.S. Endangered Species Act (ESA). Mean size and weight of adults are similar in Caribbean and Hawaiian monk seals (Aguilar and Lowry, 2013). Differences between the species can be observed at bone level (Adam, 2004) or at genetic level (Scheel *et al.*, 2014), and there is little difference in pelage (Gilmartin y Forcada, 2009; Scheel *et al.* 2014). With regard to differences at bone level (Adam, 2004): *M. schauinslandi* has an extra bone encircling the jugular foramen (absent in *M. tropicalis*); postorbital constriction absent except in presence of Wormian bones on interorbital septum (constriction present in *M. tropicalis*); frontomaxillary suture passes through antorbital process (antorbital process confined to maxilla in *M. tropicalis*); posterior ends of nasals rounded (pointed in *M. tropicalis*).

10. Consultations

At its 27th meeting (Veracruz, Mexico, 2014), the Animals Committee agreed with the recommendation to delete this extinct species from Appendix I ([AC27 SR](#)).

The draft review submitted by the United States of America at the 27th meeting of the Animals Committee ([AC27 Doc. 24.3.4](#); Veracruz, 2014) indicates that countries from the historic range were consulted, and of the six countries that responded (Aruba, the Caribbean Netherlands, the Cayman Islands, Colombia, the Dominican Republic, France, and Mexico), none expressed concern over the proposal to remove the species from Appendix I.

11. Additional remarks

Not applicable

12. References

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