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CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA: A CITES TIMELINE

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ABSTRACT. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has been described as the best-recognized international treaty on endangered species and, at the same time, as the least understood. This paradox may result from CITES being structured, implemented, and enforced as a trade treaty, rather than as a conservation measure. The title of the treaty fails to mention conservation and makes no such promises, even though endangered species may rely on wise-use conservation for their survival. By specifying endangered wild species, the title contributes to the paradox, because nations party to the treaty not only address endangered species but also threatened species and, adopting the precautionary principle, species that might become threatened because of trade. To accommodate port-of-entry inspectors untrained in taxa identification, whole families, such as the Orchidaceae, are listed on CITES appendixes, including species that are neither endangered nor wild. A timeline of significant events in the establishment of international flora and fauna treaties, beginning with a 1900 London Convention to conserve wild animals of Africa and moving forward to CITES and beyond, is presented to increase the general understanding of how CITES came to be, how it applies to plants, and especially how it applies to orchid conservation.

Key words: CITES history, implementation, Conference of the Parties, endangered species, threatened species, precautionary principle

INTRODUCTION

Highlights in the history of international legislation on flora and fauna are presented in chronological order to emphasize how one event has influenced the next. Concern for the survival of species began with charismatic mega-fauna, such as elephants, and then extended to their habitats, which brought the survival of plant species into focus. The CITES timeline documents that conservation does not happen quickly but takes years of planning, effort, and expense and that the impact of such efforts, especially the impact on orchid conservation, is difficult to measure.

General material on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is supplemented with examples of implementation, primarily in the USA, since this U.N. treaty was known in its early years as the "Washington Convention," the USA was the first nation to ratify CITES, and U.S. archival material was most accessible to the author. An account of how nations party to the treaty enforce it in their homelands would make another article, as would a behind-the-scenes account of each of the thirteen Conferences of the Parties.

TIMELINE

1900

Wild Animals in Africa Convention

The London Convention Designed to Ensure Conservation of Various Species of Wild Animals in Africa Which Are Useful to Man or Inoffensive was adopted in 1900 as a pioneer effort to use international legislation to promote wildlife conservation (McNeely 2003). Note that the emphasis was clearly on "man" and "wild animals." Plants weren't mentioned, but this pioneer treaty did include an early use of "conservation" based on the German foresters' concept of sustainable yield—not harvesting more in a year than a natural population can reproduce.

1911

Fur Seal Convention

The Fur Seal Convention, another early attempt, was designed to deal with over-exploitation of fur seals on the Pribilof Islands off the coast of Alaska. Over-exploitation was the obvious threat.

1933

Fauna and Flora Preservation Convention

In 1933, governments of Anglo-Egyptian Sudan, Belgium, Egypt, France, Great Britain, Italy, Portugal, Spain, and the Union of South Africa met in London to establish the London Convention Relative to the Preservation of Fauna and Flora in Their Natural State. Note this early evidence of a fauna-first bias and the use of "preservation," suggesting protection rather than wise-use conservation.

1940

Western Hemisphere Convention

The Washington Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere was a regional attempt to prevent the extinction of habitats and species. Note the use of "protection" and "preservation" rather than "conservation."

1945

Birth of the United Nations

In June 1945 in San Francisco, California, 50 countries gathered for the United Nations Conference on International Organization (UNCIO). The phrase, "United Nations," was coined by U.S. President Franklin D. Roosevelt in his 1942 "Declaration by United Nations" to fight as Allies in World War II. At San Francisco, charter U.N. members adopted a mission to promote peace, international cooperation, and security. Temporary headquarters were established at Lake Success on Long Island, New York, the U.N. flag was adopted in 1947, and the United Nations Building was completed in 1952 in Manhattan. Today U.N. membership includes 191 countries, the majority of which are signatories to the U.N. treaty known as CITES.

1946

Convention on the Regulation of Whaling

In December 1946 in Washington, D.C., 24 nations met to sign the Convention on the Regulation of Whaling. An International Whaling Commission was set up to regulate over-exploitation of the largest mammals by the whaling trade.

1948

Birth of the IUPN

The International Union for the Protection of Nature (IUPN), predecessor of the IUCN (International Union for the Conservation of Nature and Natural Resources), was founded in 1948 at Fontainebleau, France, as a network of members in most countries of the world. With backing by the U.N. Educational, Scientific, and Cultural Organization (UNESCO), IUPN membership included governments, national conservation agencies, and non-governmental organizations (NGOs), ranging from "the highly scientific to the stridently activist" (Holdgate 1999). Again "protection" superseded "conservation."

1949

1st U.N. Conservation Conference

The United Nations sponsored its first conservation meeting, the U.N. Scientific Conference on the Conservation and Utilization of Resources (UNSCCUR) at Lake Success on Long Island, New York. The pairing of "conservation and utilization" was not surprising, for the meeting was the brainchild of Gifford Pinchot, who, in the early 1900s, introduced sustainable-yield and wise-use forest management to the United States and popularized the phrase, "the conservation of natural resources." Pinchot, the architect of the U.S. Forest Service, had drafted a resolution calling for the U.N. conference, which Franklin Roosevelt carried to Yalta (Pinchot 1950). By the time of the conference, both FDR and Pinchot had passed on, but UNSCCUR brought together 4000 scientists, economists, engineers, resource technicians, and other specialists to discuss how to apply resource conservation and utilization to development in the postwar world (Holdgate 1999).

Held in parallel with UNSCCUR was the IUPN-UNESCO Conference on the Protection of Nature. This second conference made "recommendations concerning legislative measures, which might be taken on a national and international scale for the maintenance of nature's equilibrium." At Lake Success, the first official list of "gravely endangered" species was drawn up (Holdgate 1999); it was the forerunner of the Red Lists that would become IUCN's most famous product.

1956

Birth of the IUCN

In 1956, when the International Union for the Protection of Nature changed its name to the International Union for the Conservation of Nature and Natural Resources (IUCN), the pairing of "nature and natural resources" was a statement that both nature (implying preservation) and natural resources (implying utilization) could be conserved.

In 1961, the World Wildlife Fund for Nature (WWF) was founded and became a major financial supporter of IUCN. Eventually the president of one group would serve as the vice-president of the other, and the two groups would share a headquarters in Gland, Switzerland. The IUCN was instrumental in formulating the World Conservation Strategy with the United Nations in 1980; and in 1982, WWF President HRM Prince Philip, Duke of Edinburgh, suggested simplifying the IUCN name to World Conservation Union (Holdgate 1999). The IUCN membership

compromised and, in 1989, registered the simplified name retaining the historic acronym, thus, IUCN World Conservation Union. The IUCN has had three logos: a 1954 insignia with a stylized tree that came to be known as the "Brussels Sprout" for the original headquarters in Brussels, Belgium; a 1977 letter block; and the current logo of the IUCN World Conservation Union adopted in 1992. Following this topical treatment of IUCN history, the Timeline now reverts to chronology.

1960s

Groundwork for an International Wildlife Convention

The 1960 IUCN General Assembly held the first international discussion of "exploitation and international trade in wildlife" (Wijnstekers 2001). Wildlife conservationists were concerned that the demand for live animals and animal products in the developed world posed a threat to species survival in developing countries. The focus was on trophy hunting and trapping of elephants for ivory, spotted cats for fur, primates for medical research, and crocodiles for skins (Huxley 2000).

The 1963 IUCN General Assembly, meeting in Nairobi, Kenya, passed a resolution calling for the needed framework of "an international convention on regulations of export, transit, and import of rare or threatened wildlife species or their skins or trophies." Since plants are not said to have skins or trophies, a faunal emphasis can be assumed; and note the phrase, "rare or threatened," rather than endangered. Governments were urged to restrict the import of animals in accordance with export regulations of the countries of origin, but no framework existed to acquaint importing countries with such regulations.

The IUCN prepared a first draft of an international convention on endangered species in 1964 and then, after consulting with the United Nations and the World Trade Organization/General Agreement on Tariffs and Trade (GATT), prepared a 1965 draft of a trade convention on endangered species. The IUCN sent formal drafts of the convention to the United Nations in 1967 and 1969 (McNeely 2003). Note that "endangered" had replaced "rare or threatened" in the title. At the 1969 IUCN General Assembly, held in New Delhi, India, a proposed list of species to be covered by a draft international trade treaty first appeared.

In the United States, Congress passed the 1969 Endangered Species Conservation Act (ESA), calling for an international ministerial meeting to create a binding international convention on the conservation of endangered species. Note the use of "conservation" in the title of the legislation. Amending 1963 and 1966 acts on endangered species, the 1969 ESA called for protection of threatened species of the world by banning all imports of such species, whether or not they could be taken legally in their country of origin. This act influenced development of CITES by moving the thinking toward trade controls based on the views of importing countries as to what should be allowed by exporting countries (Huxley 2000). Note that although "endangered" was in the title, the law called for protection of "threatened" species.

1970

Red Data Book on Angiosperms

IUCN published *Angiosperms (Flowering Plants),* compiled by Robert Melville, Royal Botanic Gardens Kew, as Volume V of its Red Data Books (see Scott et al. 1987).

1971

IUCN Lists of Endangered Species

The IUCN sent a revised formal draft of a trade convention on endangered species to the United Nations. By then, several revisions of a proposed list of species to be covered by an international trade treaty had been completed with input from 39 governments and 18 NGOs.

1972

U.N. Stockholm Conference

The United Nations Conference on the Human Environment, held at Stockholm, Sweden, in June 1972, adopted an Action Plan for the Human Environment. Among the recommendations was establishment of the U.N. Environment Programme (UNEP). Principle 2 of the Stockholm Conference read: "The natural resources of the earth, including the air, water, land, flora and fauna, and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management as appropriate." Note "flora" preceding "fauna" and this early reference to ecosystem management. Recommendation 99.3 of the Action Plan, however, proposed that "a plenipotentiary conference be convened as soon as possible, under appropriate governmental or intergovernmental auspices, to prepare and adopt a convention on export, import, and transit of certain species of wild animals and plants" (fauna first).

According to Holdgate (1999), the USA found the original IUCN text for the convention,

"a very European document influenced by European industry and customs," and chose not to support it. The Audubon Society sent an expert to Kenya to work with the new UNEP, and a "Kenya Version" was produced with text more sensitive to developing countries and to conservation. This draft served as the basis of discussion for what would become known as the "Washington Convention."

1973

Birth of CITES

On February 15, 1973, U.S. President Richard Nixon called for protection of endangered species in his State of the Union Message on the Environment. At the time, representatives from 80 countries were meeting in Washington, D.C., at the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife, 12 February to 2 March 1973. Another eight countries and six organizations attended as observers. After 3 weeks of debate, the delegates agreed on the final text of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

According to CITES Secretary-General Willem Wijnstekers, "the limited scope" of early IUCN resolutions calling for the treaty "may be at the origin of the later title of CITES, which gives the wrong impression that the Convention only concerns endangered species" (Wijnstekers 2003). "Endangered" in the title would not stop party nations from expanding the scope of CITES from endangered to non-endangered but also from wild to cultivated.

The Convention consisted of a Preamble, 25 Articles, three species lists (Appendices I, II, and III), and a permit model (Appendix IV). Among the animal and plant taxa first listed on the CITES appendices in 1973 was the entire orchid family (Orchidaceae), with only a few species in Appendix I and all others in Appendix II (van Vliet 1994). The Conference of the Parties was established as the decision-making body to make recommendations and adjust the Convention and species lists. On March 3, 1973, delegates of 21 attending countries became charter signatories to the Convention.

Switzerland agreed to serve as the Depository Government for CITES, with the U.N. Environment Programme (UNEP) providing the Secretariat. According to Holdgate (1999), the assumption had been that IUCN would provide the Secretariat, but "the USA, distrustful of the IUCN, backed UNEP, largely to keep the IUCN at bay." UNEP, however, then assigned the IUCN as its agent to provide the CITES Secretariat, which IUCN did for nearly a decade.

The United Nations required ratification by the governments of ten signatory nations before the treaty would enter into force. CITES was not a self-executing treaty; it did not automatically become the "law of the land." Enabling legislation was required by each Party nation to bind citizens of that country to the terms of the treaty (Balistrieri 1993c).

In the USA, Congress passed the Endangered Species Conservation Act of 1973 (ESA) as enabling legislation for CITES. The Act, which retained "conservation" in its title, recognized endangered plants and ecosystems as well as animals. This revised legislation resulted in the USA becoming, in January 1974, the first country to ratify "the Washington Convention" (Bittner et al. 1978).

1974

CITES Scientific and Management Authorities

Each Party to CITES was required to establish a Scientific Authority and a Management Authority to implement the treaty.

For example, the U.S. President issued Executive Order 11911 in 1976, designating the U.S. Department of the Interior as the CITES Management Authority and a 7-person Endangered Species Scientific Authority (ESSA) with representatives of the Departments of Interior; Agriculture; Commerce; Health, Education, and Welfare; the National Science Foundation; White House Council on Environmental Quality; and Smithsonian Institution. ESSA provided a full force of government scientists and trade specialists to guide implementation of CITES. The Secretary of the Interior named the Fish and Wildlife Service (FWS), Federal Wildlife Permit Office, as the CITES Management Authority. Enforcement of CITES trade restrictions on plants was assigned to the Department of Agriculture, Animal and Plant Health Inspection Service (APHIS). The FWS published CITES regulations, which took effect in May 1977 (Bittner et al. 1978). In 1979, however, Amendments to the Endangered Species Act eliminated ESSA and transferred CITES Scientific Authority to the Secretary of the Interior, who delegated responsibilities to the Fish and Wildlife Service. Thus the FWS became both Scientific Authority and Management Authority for CITES. An International Conservation Advisory Commission (ICAC) was established to advise the Secretary of the Interior on Scientific Authority responsibilities (DOI/FWS/Federal Wildlife Permit Office 1980).

In contrast, the United Kingdom designated two Scientific Authorities: the Joint Nature Conservation Committee (for animals) and the Royal Botanic Gardens, Kew (for plants). A third entity, the Global Wildlife Division of the Department for Environment, Food, and Rural Affairs (Defra), was designated as the Management Authority.

IUCN Threatened Plants Committee

Critics (e.g., Hutton & Dixon 2000) state that CITES has a faunal bias (beginning with "fauna" preceding "flora" in the title) and that plants were an afterthought. In 1974, however, the IUCN, then providing the CITES Secretariat, established a Threatened Plants Committee to gather data on threatened plant species worldwide. This committee continued the work on listing threatened species conducted by the IUCN since its inception (Scott et al. 1987).

1975

CITES Entry into Force

The first ten countries to ratify CITES were Canada, Chile, Cyprus, Ecuador, Nigeria, Sweden, Switzerland, Tunisia, the United States of America, and Uruguay. On 1 July 1975, CITES entered into force as a U.N. treaty, when the Depository Government (Switzerland) transmitted a certified copy of the tenth ratification of the convention (Canada) to the U.N. Secretariat, for registration and publication in accordance with Article 102 of the U.N. Charter.

1976

1st CITES Conference of Parties

See TABLE 1 for data on Conference of Parties (1976–2004).

1977

1st CITES Special Working Session

The 1st CITES Special Working Session was held at Geneva, Switzerland, in November 1977, with 20 Parties and observers from five non-Party nations and 24 NGOs, who reviewed criteria for listing species in CITES appendices.

1978

Red Data Book on Plants

The IUCN published a *Red Data Book on Plants* covering 250 selected species in 89 countries (Lucas & Synge 1978).

1979

2nd CITES Conference of the Parties

IUCN Species Conservation Monitoring Unit

In 1979, the IUCN established the Species Conservation Monitoring Unit (SCMU) to support preparation of the Red Data Books and collection of data on trade in species listed.

1980

U.N. World Conservation Strategy

The U.N. General Assembly approved the World Conservation Strategy, emphasizing the sustainability of life-support systems, as they relate to human needs. This strategy, designed by the UNEP, IUCN, and WWF, refocused the conservation debate on sustainable development, a concept based on the sustainable use practiced by European foresters for hundreds of years.

1981

3rd CITES Conference of the Parties

First Use of the CITES Elephant Logo

The CITES logo, an arrangement of the letters C-I-T-E-S in the shape of an elephant, was introduced at the 3rd Conference of the Parties, continuing a fauna-first focus. The elephant, however, is a keystone species; thus conserving it means conserving its habitat, since plant seeds are spread by elephant herds. The elephant was first listed on CITES Appendix III and then moved to Appendix II. In May 1989, a number of CITES Parties banned the commercial import of ivory; and in October of that year, the elephant was moved to Appendix I, following a trend to up-list CITES species. Uplisting alone, however, does not address habitat destruction and may exacerbate the problem by removing any financial incentive to conserve.

IUCN Species Survival Commission

The IUCN works through six commissions, the largest being the Species Survival Commission (SSC) established in 1981. The SSC's 7000 volunteer members from most countries in the world are deployed in some 120 specialist groups and task forces. A third of the specialist groups are devoted to plants, including the Orchid Specialist Group (OSG) established in 1984. In addition to producing the IUCN Red List of Threatened Species, the IUCN/SSC provides technical and scientific advice to governments, international environmental treaties (such as CITES), and conservation organizations. The SSC also publishes species action plans and pol-

TABLE 1. CITES Conferences of the Parties, 1976–2004.

Conference	Year	Location	Actions pertinent to orchids
CoP1	1976	Berne, Switzerland	Attending were 24 of 33 Parties, who adopted the Berne Criteria for amending species from Appendices I and II and called for a Special Working Session on the Criteria.
CoP2	1979	San José, Costa Rica	Attending were 34 of 51 Parties, who adopted guidelines for transporting species. After a lively discussion on distinguishing a plant from a plant part, Parties adopted a definition of "artificially propagated" (Cook 1979). Parties called for the 1st Extraordinary Meeting to amend the Convention to replace UNEP funding with contributions from the Parties; the U.N. was asked to establish a CITES Trust Fund. The Meeting was held at Bonn, Germany, in June 1979, but the Bonn Amendment did not enter into force until 13 April 1987.
CoP3	1981	New Delhi, India	The Technical Committee (forerunner of the Animals Committee and Plants Committee) was established. Resolution of Conf. 3.6. adopted the first harmonized permit form. First use was made of the CITES elephant logo.
CoP4	1983	Gabarone, Botswana	Parties discussed the Trophy Hunting Paradox, that trophy hunting, long considered a threat to wild species, could serve conservation as a source of funding for nature reserves (Huxley 2000). Parties then held the 2nd Extraordinary Meeting to amend Article XXI, allowing organizations such as the European Economic Community (EEC) accession to CITES, although the Meeting adopted the amendment, it awaits acceptance by a sufficient number of Parties.
CoP5	1985	Buenas Aires, Argentina	Parties adopted procedures for including species in Appendix III. CITES devoted its first 10 years to debating how the treaty should operate and which species should be listed in the Appendices (Huxley 2000).
CoP6	1987	Ottawa, Canada	The Animals Committee, Plants Committee, and Nomenclature Committee were formed.
CoP7	1989	Lausanne, Switzerland	As proposed by The Netherlands, the Parties placed all *Paphiopedilum* species on Appendix I as well as all *Phragmidedium* species (proposed by the Federal Republic of Germany); discussed improving procedures on ranching, captive breeding, and artificial propagation.
CoP8	1992	Kyoto, Japan	Listing of commodity species were discussed. Parties began development of new criteria to amend Appendices I and II.
CoP9	1994	Fort Lauderdale, FL, USA	Resolutions were adopted on unlisted species; 9.24 (based on the Precautionary Principle) required restrictions if a threatened species may be affected by trade or if a species may become threatened by trade (McGough 1994).
CoP10	1997	Harare, Zimbabwe	A Resolution was adopted on the relationship of CITES and the Convention on Biological Diversity. Parties reviewed an effectiveness study that found "the impact of CITES on the conservation status of individual species is very complex and cannot be measured easily or precisely". An export permit was adopted to implement Article IV.
CoP11	2000	Gigiri, Kenya	The focus was on species issues: the listing, uplisting, and downlisting of species on Appendices I, II, and III.
CoP12	2002	Santiago, Chile	A Decision was reached on establishing a Memorandum of Understanding with the U.N. Food and Agriculture Organization. Neotropical bigleaf mahogany was up-listed to Appendix II (U.S. House of Representatives 2003).
CoP13	2004	Bangkok, Thailand	Future CoPs will be scheduled every 3 years as an economy measure.

Sources: Unless otherwise cited, the table is based on Wijnstekers (2001, 2003) and McNeely (2003).

icy guidelines, as well as implementing on-ground conservation projects.

1983

4th CITES Conference of the Parties

World Commission on Environment and Development

The United Nations established the World Commission on Environment and Development in 1983 to formulate a global agenda for change and to propose strategies for sustainable development by year 2000. With members from 22 nations, it became known as the Brundtlund Commission for G.H. Bruntlund, the chair. The Commission published the Brundtlund Report, *Our Common Future,* in 1987 and planned the U.N. Conference on Environment and Development (UNCED), which adopted in 1992 the Convention on Biological Diversity (CBD).

Plant Listing at Species Level

In the United States, the CITES Management Authority (U.S. Fish and Wildlife Service) began listing all plant shipments (imports or exports) at the species or variety level, if that information appeared on CITES documents. Prior to 1983, CITES plants had been listed only at the family or genus level (DOI/FWS/Federal Wildlife Permit Office 1984).

1984

IUCN Orchid Specialist Group

The Orchid Specialist Group (OSG) of the IUCN Species Survival Commission was established in 1984 as a network of professional and non-professional volunteers committed to assisting in international efforts to conserve plant diversity. OSG members provide technical support and encouragement for the development and execution of programs to study, document, save, restore, and manage wisely orchids and their habitats. Today the OSG has 200+ members in 50+ countries. Members include orchid taxonomists, ecologists, population biologists, data managers, commercial and amateur growers, in-vitro propagation experts, seed bank managers, reintroduction and restoration specialists, nature reserve managers, specialists in conservation education and training, and international wildlife legislation experts. More than 150 organizations and societies with conservation interests are represented, including botanic gardens, herbaria, universities, nurseries, government departments, and orchid societies. In 1986, the OSG published *Orchids: Status Survey and Conservation Action Plan,* which called for more information on the conservation status of orchids especially in tropical areas of Africa, Southeast Asia, Meso America, and South America. Regional OSGs continue to be established, and OSG newsletters include *Orchid Conservation News* and, since 2002, *Orchids In Situ.*

CITES Secretariat Moves to UNEP

In 1984, the CITES Secretariat, after nearly a decade within the IUCN, came under direct administration of the U.N. Environment Programme. In a notification to the Parties in November 1984, the Secretariat distributed the official CITES Logo for use by Parties to the treaty.

1985

5th CITES Conference of the Parties

1987

6th CITES Conference of the Parties

CITES Plants Committee

The CITES Plants Committee was formed by the 6th CITES Conference of the Parties (CoP6) to advise the Parties on biological and trade information on plant species. The Committee, directed by the CITES Plants Officer, was set up to advise when plant species are subjected to unsustainable trade and to recommend remedial action. The committee undertakes periodic reviews of plant species listed on the appendices, and drafts resolutions on plant matters for consideration at Conferences of the Parties. Plant Committee members are elected from each CITES region by the Conferences.

1989

7th CITES Conference of the Parties

1st Meeting of the CITES Plants Committee

The CITES Plants Committee first met at Lausanne, Switzerland, in October 1989. PC-1 discussed uplisting all *Paphiopedilum* and *Phragmipedium* species to Appendix I.

1990

Two Orchid Genera Uplisted to CITES Appendix I

Effective 18 January 1990, CITES placed all *Paphiopedilum* species on Appendix I as endangered species (proposed by The Netherlands) as well as all *Phragmipedium* species (proposed by the Federal Republic of Germany).

CITES Plants Officer

Ger van Vliet, of the Leiden Botanic Garden, was appointed Plants Officer in the CITES Secretariat and took up his post in Lausanne, Switzerland.

Protecting All Native Orchids

In 1990, the IUCN recommended that governments protect all native orchid species to avoid difficulties with identification of species, whether or not they are classified as endangered.

1992

8th CITES Conference of the Parties

2nd Meeting of CITES Plants Committee

The 2nd meeting of the Plants Committee was held in Bangkok, Thailand. PC-2 clarified that taxa of hybrid orchids need not be listed on international trade permits.

U.S. Legislative Amendments to Implement CITES

In the USA, amendments to the Endangered Species Act implemented CITES resolutions on exotic birds and authorized the Secretary of the Interior to support wild bird management in other nations, including conservation of migratory bird habitats (Curtis & Walsh 1993).

The Earth Summit

The U.N. Conference on Environment and Development (UNCED), better known as the Earth Summit, met at Rio de Janeiro, Brazil, in 1992. With an agenda prepared by the U.N. Brundtlund Commission, the Earth Summit adopted the Convention on Biological Diversity (CBD), which some believe may eventually subsume CITES (Morrison 1997). As CBD addresses issues such as sustainable use, access, and benefit-sharing, some suggest viewing CITES as a protocol under the CBD Umbrella.

1994

9th CITES Conference of the Parties

1995

CITES Orchid Checklist I

Volume 1 of the *CITES Orchid Checklist* was published for the genera: *Cattleya, Constantia, Cypripedium, Laelia, Paphiopedilum, Phalagnopsis, Paraphalagnopsis, Phragmipedium, Pleione, Sophronitella,* and *Sophronitis* (Roberts et al. 1995).

1996

CITES-CBD Memorandum of Understanding

The CITES Secretariat and the Secretariat of the Convention on Biological Diversity (CBD) signed a Memorandum of Understanding in October 1996 to establish areas of cooperation between the secretariats of the two treaties. Morrison (1997) described CITES as the "continuation of imperialism by other means" with developed nations dictating to developing nations, and the Convention on Biological Diversity (CBD) as an "anti-imperialist riposte to it."

1997

10th CITES Conference of the Parties

CITES Orchid Checklist II

Volume 2 of the *CITES Orchid Checklist* was published for the genera: *Cymbidium, Dendrobium* (selected sections), *Disa, Dracula,* and *Encyclia* (Roberts et al. 1997).

IUCN Red List of Threatened Plants

The 1997 IUCN *Red List of Threatened Plants* included 1779 records of threatened orchid taxa, representing an estimated 6 % of the world's orchid flora.

International Orchid Conservation Conference

In June 1997, an International Orchid Conservation Conference convened at the Marie Selby Botanical Gardens in Sarasota, Florida. The keynote speaker noted the "belated recognition to the special features of plants in a Convention designed for animals" (Morrison 1997). Observing that many special provisions on plants have been passed by CITES Conferences of the Parties, Morrison suggested that these provisions be collated and expressed in what might be called a "plant protocol." The Resolutions of this 1997 Conference recommended downlisting from CITES Appendix II those orchid genera and species "not known to be in trade to any significant continuing degree" (Beckner 2001).

1999

9th Meeting of CITES Plants Committee

At Darwin, Australia, in June 1999, PC-9 announced Orchidaceae as the next plant group to be reviewed for appropriateness of listing of some 22,818 species in 890 genera on Appendices I and II. PC-9 also launched *CITES and Plants—A User's Guide* with 40 color slides and text.

2000

11th CITES Conference of the Parties

CITES Orchids on Appendices I and II

By July 2000, seven orchid species and two orchid genera were listed on CITES Appendix I as endangered, and all other orchid species were listed on Appendix II.

2nd Joint Meeting of the CITES Plants and Animals Committee

In December 2000, the 2nd Joint Meeting of the CITES Plants and Animals Committee (note plants preceding animals) was held at the National Conservation Training Center at Shepherdstown, West Virginia, USA, to discuss revision of the criteria for listing species on the CITES appendices defined in Resolution of the Conf. 9.24. The USA had hosted a meeting of the CITES Listing Criteria Working Group, whose report was the basis for comments on proposed amendments.

10th Meeting of CITES Plants Committee

Held at Shepherdstown, West Virginia, following the meeting of the CITES Plants and Animals Committee, PC-10 considered a recommendation of the CITES Secretariat that an Orchids Working Group study the listing of orchids and advise the Plants Committee on how to proceed with a review of the Orchidaceae.

2001

11th Meeting of CITES Plants Committee

Meeting in September 2001 in Langkawi, Malaysia, the PC-11 considered guidelines for evaluating medicinal plants, live plant transport, and tree species. The Committee discussed regulation of flasked seedlings produced in a manner intensively manipulated by human intervention.

CITES Orchid Checklist III

Volume 3 of the *CITES Orchid Checklist* was published for the genera: *Aerangis, Angraecum, Ascocentrum, Bletilla, Brassavola, Calanthe, Catasetum, Miltonia, Miltonioides, Miltoniopsis, Renanthera, Renantherella, Rhynchostylis, Rossioglossum, Vanda,* and *Vandopsis* (Roberts et al. 2001).

1st International Orchid Conservation Congress

The 1st International Orchid Conservation Congress (IOCC) was held in September 2001 at Kings Park and Botanic Garden, in Perth, Australia.

The IUCN/SSC Orchid Specialist Group established an *In situ* Conservation Committee to promote the knowledge necessary to determine if orchid populations in the wild are self-sustainable or require human intervention. Members, committed to each orchid species having a home and that home being its natural habitat, announced plans for an *Orchids In Situ* online newsletter sponsored by the IUCN/SSC/OSG and the University of Puerto Rico in Humacao.

2002

12th CITES Conference of the Parties

12th Meeting of CITES Plants Committee

Meeting at Leiden, The Netherlands, PC-12 discussed de-listing artificially propagated orchid hybrids.

6th Conference of the Parties to the Convention on Biological Diversity

The 6th Conference of the Parties to the Convention on Biological Diversity (CBD) met in April 2002 at The Hague, Netherlands. The guiding framework for biodiversity conservation and sustainable use, CBD recognized the value of plant genetic resources and adopted a Global Strategy for Plant Conservation.

World Summit on Sustainable Development

The United Nations convened the World Summit on Sustainable Development in Johannesburg, South Africa, in August–September 1992 with 100 heads of state and 10,000 delegates attending. The United Nations had established a 53-member Commission on Sustainable Development in 1992 to ensure follow-up of the Earth Summit. A 5-year review took place in 1997 at a U.N. General Assembly meeting in special session, and the World Summit constituted the 10-year review.

2003

13th Meeting of CITES Plants Committee

In Geneva, Switzerland, PC-13 discussed implementing the U.N. Convention on Biological Diversity (CBD) Global Strategy for Plant Conservation.

1st International Conference of Neotropical Orchidology

The 1st International Conference of Neotropical Orchidology was held at San José, Costa Rica, in May 2003 to stress the need for public awareness of the global themes of orchid conservation. A 2-day workshop on in-situ orchid conservation preceded the Congress.

2004

14th Meeting of the CITES Plants Committee

Meeting in February 2004 at Windhoek, Namibia, PC-14 considered CITES exemptions for in-vitro specimens of Appendix I orchids. An amendment was suggested to the Conf. 11.11 resolution exempting flasked seedlings, stating that exempted flasked seedlings must be produced from parental material acquired in accordance with CITES provisions and national laws.

2nd International Orchid Conservation Congress

The 2nd International Orchid Conservation Congress (IOCC II) was held at the Marie Selby Botanical Gardens in Sarasota, Florida, USA, in May 2004 to review progress on conserving orchids. Prominent among the presentations were updates on the use of DNA in identifying orchid taxa. The DNA presenters, mostly graduate students, were questioned respectfully by their elders, the intrepid field botanists. During a CITES Forum, which considered the effectiveness of the treaty in dealing with orchids, Roddy Gabel, U.S. Fish and Wildlife Service, urged U.S. orchidists to send a representative to meetings of the CITES Plants Committee.

13th CITES Conference of the Parties

Conclusion

At last count, CITES had 166 Parties committed to regulating international trade of fauna and flora, including 22,818+ species of orchids and 890+ orchid genera. Since 1976, CITES Parties have adopted 235 Resolutions of the Conference, of which 71 remain in effect (McNeely 2003), with a number of these relating to orchids. With regard to the treaty, two camps have formed: Those who consider Appendix I listings (banning all commercial trade) a victory for orchid conservation, and those who consider habitat management, commercial propagation, and regulated trade the best chance for the survival of many orchid species.

The opposing camps have historic roots in a conservation vs. preservation debate that occurred in the USA in the early 1900s. Known as the Pinchot-Muir debate, its spokesmen were Gifford Pinchot, architect of the U.S. Forest Service, advocating wise-use conservation of natural resources, and John Muir, founder of the Sierra Club, advocating nature preservation. Martin Holdgate, former director general of the IUCN, observed that "the debate between Muir and Pinchot has echoed down the years, and while Pinchot's concept of conservation as 'sustainable use' has dominated the approach of official government agencies, Muir's preservationism has equally impelled many parts of the non-governmental conservation movement and was taken up anew by the environmentalists of the mid-20th century." Holdgate (1999) concluded that "the dichotomy is still apparent in IUCN General Assemblies today."

The preservation-conservation dichotomy also is apparent in CITES, with proponents declaring CITES the most successful of all wildlife treaties and critics countering that CITES is a trade treaty, whose inflexible regulations leave no room to consider other processes that may be threatening species besides trade, such as habitat loss, or other policies that might be more effective in conserving species, such as sustainable use, or other reasons that might exist for allowing trade, such as the poverty of local people (Dickson 2000). The debate continues, and international legislation becomes expensive to implement and ineffective unless the majority of people believe that it is right and just (Dixon et al. 2003). For nations party to CITES, the IUCN has updated its guide to amending CITES appendices (Rosser et al. 2004).

Attorney-orchidist Carlo Balistrieri (1993a–1993e) has provided a legal analysis of CITES. Because the treaty was not originally drafted with plants in mind, he found many of its provisions for flora to be afterthoughts, contained not in the convention itself but in Resolutions of the Conference of the Parties. International trade in plants is regulated by analogy to animal rules, he noted, and proposals for plants are scrutinized to assure that no loophole is created for animal specimens. With new pronouncements, judicial and legislative, occurring regularly and often with little or no notice to those they may affect, he warned that new court decisions will affect the way that CITES is interpreted, administered, and enforced. Finding no indication that a separate system of regulation was ever considered for plants, Balistrieri concluded, "The best the Conference of Parties can do is to pass resolutions to improve implementation for plants."

At the 1997 International Orchid Conservation Conference, held at Selby Gardens, the keynote speaker, Alasdair Morrison, suggested that special provisions on plants passed by CITES conferences of the Parties be collated for use as a plant protocol (Morrison 1997). His suggestion remains timely.

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