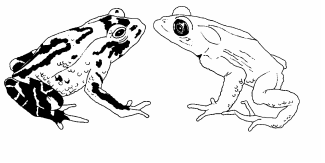
CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Eighteenth meeting of the Animals Committee
San José (Costa Rica), 8-12 April 2002

Periodic review of animal taxa in the Appendices (Resolution Conf. 11.1)

REPORT OF THE WORKING GROUP

This document has been prepared by the Chairman of the working group on review of animal taxa in the Appendices.

Introduction

1. The North American Regional Representative has been coordinating an intersessional working group on review of animal taxa in the Appendices, with the goal of making significant progress on tasks resulting from deliberations at AC 17. Tasks identified at AC 17 included: (a) the completion of various taxon reviews identified at AC 15 and AC 16; (b) development of guidelines for conducting reviews of animal taxa in the Appendices, (c) development of a rapid assessment technique for screening multiple taxa (or higher-order taxa) at one time; and (d) evaluation of crocodile ranching operations in the framework of the Review of the Appendices.

Remaining Species from AC 15 through AC 16

2. At the conclusion of AC17, 11 species reviews remained to be completed, and one preliminary draft review (*Cnemidophorus hyperythrus*) was identified for revision (Table 1). In the period since AC17, the review of *Cnemidophorus hyperythrus* has been completed, and two of the other species reviews have been completed (*Anas aucklandica*, *Parnassius apollo*). This low completion percentage is one drawback to the voluntary nature of the review process, and lends support to the need to look at alternative approaches for getting reviews done. The reviews for *Cnemidophorus hyperythrus* , *Anas aucklandica*, and *Parnassius apollo* are included as annexes to this report.

INSECTA

Parnassius apollo (reviewed by Spain) Annex 1

AVES

Anas aucklandica (reviewed by New Zealand) Annex 2

REPTILIA

Cnemidophorus hyperythrus (reviewed by the United States of America) Annex 3

Facilitating the Review Process

3. At AC17, the working group on the review of the Appendices discussed various ways for the review process to be facilitated. Dr. Javier Alvarez (from the U.S. Scientific Authority), volunteered to draft guidelines for conducting future reviews based on the discussions of the working group on the review of the Appendices at AC16 and AC17. The draft guidelines are included as Annex 4 to this document.

4. At AC17, the CITES Secretariat was requested to conduct a pilot project to develop, test, and evaluate a rapid-assessment technique for screening multiple taxa (or higher-level taxa) at one time to determine which should be the subject of more in-depth reviews. Since AC17, the Secretariat has contacted the principal nongovernmental organizations that conduct species assessments for other purposes, including IUCN, TRAFFIC and WCMC, to learn about the screening processes they have employed in previous reviews, to see if any of these processes could be adapted to the task at hand. The Secretariat also asked IUCN whether the Specialist Groups could be used to conduct reviews, so that a large number of reviews might be completed over the next 2-3 years. The Secretariat is awaiting IUCN's response and an estimate of costs that might be involved in such a project.

5. Once a final version of the guidelines are adopted by the Animals Committee, the United States of America has indicated its intention to request that the family Felidae be considered for review under the review of the Appendices. As a higher-taxon listing from early in the Convention's history, this family fulfills the draft guidelines in Annex 4. To start the review process, the United States of America has offered to conduct a review of its principal native cat species, the bobcat, *Lynx canadensis*, lynx, *Lynx lyn*x, and mountain lion, *Puma concolor*. The Cat Specialist Group might logically be enlisted to evaluate the CITES-listing status of the remaining cat species.

Review of Crocodile Breeding Operations

6. At AC17, the CITES Secretariat was requested to contact the IUCN Crocodile Specialist Group (CSG) regarding the possibility that CSG could compile an exhaustive list of crocodile ranching operations authorized under Resolution Conf. 11.16, and review those operations under the framework of the Review of the Appendices. Since AC17, the Secretariat has contacted CSG and requested that they conduct the review, which they have agreed to do. CSG may be able to provide a report, in the form of an Information Document or verbal report, at AC 18.

Table 1. Status of Species Reviews Identified at AC15 through AC17

Species	Task identified at AC17	Progress since AC17
Agapornis fischeri	Tanzania indicated its intention to conduct this review and, if possible, submit a report at AC18.	Tanzania has indicated that it will not be able to submit a report for AC 18, but will attempt to submit a report at a later date.
Cephalophus sylvicultor	Approach IUCN Specialist Group about doing review	No progress – coordinator did not have time to make necessary contacts
Caloenas nicobarica	Approach NGO or regional Party about doing review	No progress – coordinator did not have time to make necessary contacts
Anas aucklandica	Regional Representative from Oceania agreed to try to undertake the review.	Review completed and submitted for AC 18
Dermatemys mawii	Mexico agreed to try to do review	Mexico has undertaken this review, but results will not be available for AC 18
Ambystoma mexicanum	Mexico agreed to try to do review	Mexico has undertaken this review, but results will not be available for AC 18
Crocodilurus lacertinus	Netherlands was requested to do review	Reviewer did not have time to complete this review
Dyscophus antongilli	Netherlands was requested to do review	Reviewer did not have time to complete this review
Bufo superciliarus	Netherlands was requested to do review	Reviewer did not have time to complete this review
Ornithoptera alexandrae	Approach NGO and regional Party about doing review	No progress – coordinator did not have time to make necessary contacts
Parnassius apollo	Scientific Authority of Spain agreed to do the review	SA of Spain indicated intention to have for AC 18 review completed for AC 18
Cnemidophorus hyperythrus	USA to revise preliminary review	Revised review submitted for AC 18

Annex 1

REVIEW OF *PARNASSIUS APOLLO* (LINNAEUS, 1758) UNDER THE "PERIODIC REVIEW OF ANIMAL TAXA IN THE APPENDICES [RESOLUTIO N CONF. 9.1. (REV)]"

INTRODUCTION

At the 15th meeting of the Animals Committee, held in Antananarivo, Madagascar in July 1999, Spain undertook to carry out the review of *Parnassius apollo* as part of the "Periodic review of animal taxa in the Appendices (Res. Conf. 9.1. (Rev))".

In order to do so, Spain sent a questionnaire to the range States of this species, requesting information, as it related to their respective territories, on the following aspects:

- Current status of the populations
- Trends in the populations
- Preferences with regard to habitat
- Legislation protecting the species at the national level
- Legislation protecting the species at the international level
- National trade (legal and illegal)
- Existing management measures
- Threats
- Tracking programmes or research projects
- Captive breeding

Twenty countries responded to the questionnaire:

Austria, Bulgaria, China, Czech Republic, Germany, Greece, Hungary, Italy, Latvia, Liechtenstein, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Turkey and Yugoslavia.

Three of the countries, Hungary, Latvia and the Netherlands, reported that the species does not currently exist in their respective territories and Turkey reported only on its intention to carry out a study on the species. In consequence, for the purposes of the information supplied by the questionnaire there are 16 national responses to consider, and those are what is meant when this text subsequently refers to "all the countries which responded to the questionnaire".

As a source of general information, use was also made of the *Red Data Book of European Butterflies* (Van Swaay & Warren, 1999), published by the Council of Europe (referred to below as the *Red Data Book*). Within the area covered by this book, the range area of *Parnassius apollo* comprises 28 countries.

The data on trade were provided by the CITES Secretariat and UNEP-WCMC.

DRAFT PROPOSAL TO AMEND THE APPENDICES (in accordance with Annex 6 of. Resolution Conf. 9.24, amended)

A. Proposal

It is proposed that the species should be maintained in Appendix II, pursuant to Criterion B of Annex 2a -"Criteria for the inclusion of species in Appendix II in accordance with Article II, paragraph 2 (a)"- of Resolution Conf. 9.24, according to which:

"A species should be included in Appendix II when either of the following criteria is met.

B. It is known, inferred or projected that the harvesting of specimens from the wild for international trade has, or may have, a detrimental impact on the species by either:

i) exceeding, over an extended period, the level that can be continued in perpetuity; or

ii) reducing it to a population level at which its survival would be threatened by other influences."

B. Author of the proposal

Proposal drawn up by Spain.

C. Justification

1. TAXONOMY.

1.1.	Class:	Insecta
1.2.	Order:	Lepidoptera
1.3.	Family:	Papilionidae
1.4.	Genus and species:	*Parnassius apollo* (Linnaeus, 1758)
1.5.	Scientific synonyms:	None known
1.6.	Common names:	German: Apollo-Falter Danish: Apollo Spanish: Apolo, Gota de sangre, Mariposa apolo Finnish: Isoapollo French: Apollon Dutch: Apollo vlinder English: Apollo, Apollo Butterfly, Mountain Apollo Italian: Parnassio Swedish: Apollofjäril
1.7.	Code number:	The species does not have a sheet in the Identification Manual.

2. BIOLOGICAL PARAMETERS

2.1. DISTRIBUTION

According to data from UNEP-WCMC and Van Swaay & Warren (1999), *Parnassius apollo* is thought to be distributed over the following countries:

Albania, Andorra, Armenia, Austria, Azerbaijan (?), Belarus, Bosnia, Bulgaria, China, Croatia, Czech Republic, Finland, France, Georgia, Germany, Greece, Hungary (ex.), Iran, Iraq, Italy, Kazakhstan, Kyrgyzstan, Latvia (ex.), Liechtenstein, Lithuania, Mongolia, Netherlands (ex.), Norway, Poland, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, the former Yugoslav Republic of Macedonia, Turkey, Ukraine and Yugoslavia.

The question mark indicates that it is not certain whether the species is found in the country concerned. The note (ex.) after a country indicates that the response to the questionnaire has confirmed that the species is now extinct in that country.

2.2. PREFERENCES WITH REGARD TO HABITAT

The *Red Data Book of European Butterflies* defines the habitat of *Parnassius apollo* as "sunny and stony hillsides, stone quarries, cliffs and slopes, valleys and grasslands with abundant flowers, principally over a calcareous substratum and occasionally in wooded areas. In Scandinavia principally along rocky costs. Food plant: *Sedum album* and *Sedum telephium*, and also other species of the genera *Sedum* and *Sempervivum* in central and southern Europe (family *Crassulaceae*)".

This definition matches fairly well all of the information concerning habitat preference provided by the countries consulted, but does not make any reference to altitude, which is important in the case of certain territories. Additionally, there are other specific details:

With respect to altitude, Austria reports that *Parnassius apollo* appears between 600 and 1720 metres. Bulgaria is very similar, with a range between 800 and 1700 metres, although under exceptional circumstances it can appear between 300 and 2000 metres. In Spain, it appears between 800 and 2000 metres, with the altitude varying together with the latitude. In Liechtenstein it is principally found in dry and semidry grasslands in the Rhine valley, but in the Alps it goes up to 1500 metres. In Poland it is found between 600 and 1100 metres. In Sweden it inhabits the continental zone in sunny and rocky coastal habitats where *Sedum telephium* is found, and on the island of Gotland it lives in dry grasslands and habitats above calcareous rock with pine trees, junipers and heather containing *Sedum album* (this is one of the unusual cases in which *P. apollo* flies at sea level and in habitats with clearly defined woodland). In Switzerland it flies between 550 and 2000 metres, under exceptional circumstances reaching 2400 metres.

Many countries noted that the populations of *Parnassius apollo* establish themselves in areas with abundant supplies of the food plants both of the larvae, already referred to, and of the adults. The food plants of the latter come mainly from the family *Asteraceae*, from which they suck the nectar out of the flowers.

It must be remembered that as a result of the strong attraction for *Parnassius apollo* of mountainous environments, its natural distribution is necessarily fragmentary, with populations in many cases being inevitably kept isolated from one another.

In addition to this isolation, it is common to find this species grouped in fairly dense populations occupying just a few hectares within a mountainous area extending over thousands of square kilometres in which, theoretically, it could live, since its habitat needs appear to be provided in areas much larger than those which it actually occupies in practice. This certainly indicates a lack of detailed

knowledge of the real habitat needs of *P. apollo*. Such knowledge would be needed in order to understand why it is found in certain localities and not in others apparently similar, and might also explain the disappearance of populations in which - again, apparently - the changes that have occurred in the habitat are insignificant or, indeed undetectable.

Additionally, a more detailed knowledge of habitat needs might perhaps explain, for example, why in China *P. apollo* flies solely in one mountainous massif (as far as is currently known), when the apparent availability of habitat for this species in the country is definitely much greater than its present occupation indicates. It must also be remembered that there are a number of other species of the genus *Parnassius* living in China, and perhaps they are occupying the niches which *P. apollo* occupies in other places.

In this general context, it is currently difficult to evaluate habitat availability for *Parnassius apollo.* While there are many European countries in which certain human activities can readily be identified as the direct cause of the alteration or destruction of the species' habitat, with its consequent disappearance from such localities, it is not clear why it does not occupy territories which apparently also meet its habitat needs and which would enormously increase its capacity for survival, both globally and locally.

In consequence, given that there is unquestionably local reduction or disappearance of populations (see next section) and a clear attack on its habitat in certain localities, it would have to be concluded that habitat is becoming less and less available, since the species does not occupy certain habitats which appear to meet its needs, but which in practice prove not to be appropriate for it.

2.3. CURRENT SITUATION AND TRENDS IN THE POPULATIONS

Parnassius apollo stays in mountainous environments in most of its range States. This means that it normally has a naturally fragmented distribution, with populations isolated from one another and with a level of absolute abundance which is limited by the presence of mountains. Thus, the fact that populations are small does not necessarily mean that this species is threatened or that such low levels are the product of human activity, but it does frequently imply that many of those populations are extremely vulnerable, normally owing to their isolation.

Among the responses to the questionnaire, a significant portion of the countries considered *P. apollo* to be under some category of threat, or include it in red lists or red books. Thus, for example, in Germany, Slovakia and the Czech Republic it is considered as "Critically endangered"; in Slovenia it is considered "Endangered" and Austria includes it in risk category 2 ("seriously endangered owing to the destruction of its habitat") of its Red List. Sweden has recently (2000) classified it as "Almost endangered" and in the revision of Spain's National Catalogue of Endangered Species currently in progress it is proposed to classify it as "Lesser risk, lesser concern". In Latvia it has become extinct.

The following may be reported about the presence of the species on the territory and the evolution thereof:

In Austria it has suffered a sharp decrease between 1960 and 1970 as a result of agriculture and cattle-raising.

In Bulgaria it is known to inhabit 63 UTM 10 km x 10 km grid squares and some populations are known to have disappeared. Consequently it should be considered to be in decline.

In China it appears solely in the Tianshan Mountains, in the autonomous region of Xinjiang Uygur, in the west of the country; this is a relatively recent discovery, and no detailed information is available on the populations, but overall they are considered to be in decline.

In the Czech Republic it is present exclusively in one locality. The species became extinct at the beginning of the 20th century and was reintroduced using specimens from Slovakia. As a consequence, the 9 sub-species existing in the Czech Republic and Moravia have become extinct. The current (reintroduced) population is considered to be stable and viable, although there is a certain risk of illegal capture.

In Germany it is in decline. Up to 1979 the distribution of the species extended over 139 UTM 10 km x 10 km grid squares and in 1999 it was present in only 38 of those squares, having disappeared completely from certain areas and being much reduced in the remainder.

In Greece it is considered stable.

In Italy a major fluctuation in the populations has been detected, in particular in those in the Apennines, but they are considered stable in the long term. In general, this is a species which is very common in the mountains of Italy, which does not require legal protection except for the isolated populations in the south of the country, which are very limited and are on the southernmost edge of the range area of the species.

In Liechtenstein there is no specific information but observations reveal a population that appears stable.

In Poland the species has been in decline since the beginning of the 19th century, at which time it existed in the Sudeten mountains, in the Carpathians and probably in the north of the country. At the beginning of the 20th century it existed only in the Carpathians and by the Fifties only two populations were known, both located in national parks.

In Slovakia 310 locations have been reported, but in many cases these were isolated individuals; it is suspected that about 28 established populations are in existence, of which 13 have been confirmed.

In Slovenia it has been reported in 32 UTM 10 km x 10 km grid squares from 1920 to 1995, but only a few of the populations are considered to be strong and stable; the populations in the low-lying areas have disappeared in recent decades and those in specified areas have probably become extinct also. In general it is considered to be in decline.

In Spain it has been reported in 295 UTM 10 km x 10 km grid squares and there are populations in almost all of the mountainous massifs and ranges, but some populations have disappeared in recent decades for no known or apparent reason; the abundance of the different populations is highly variable. Overall, it is considered to be in decline; there are populations that have disappeared recently and others whose abundance is decreasing gradually.

In Sweden, the known populations have remained stable over recent decades, with a possible drop in some of them in the Nineties, but new populations have been discovered in places in which the species was not reported before, basically in some localities in the west of the country, where there may be isolated populations not yet well known. In general it is considered stable.

In Switzerland it is considered generally stable at the present time, but the populations from the low-lying areas have disappeared since 1950.

In the former Yugoslav Republic of Macedonia it is known to exist on 38 UTM 10 km x 10 km grid squares, with relatively numerous and stable populations. The general population is considered stable.

In Turkey the status of the species is unknown, and at the present time attempts are being made to investigate this.

In Yugoslavia the total population is small but stable, although it does appear that the abundance is decreasing in some populations. It is reported in 52 locations matching UTM 10 x 10 km grid squares.

According to the *Red Data Book*, taking as a basis the old criteria of the IUCN, 9 national compilers (countries) consider *Parnassius apollo* "Endangered", 6 "Vulnerable", 2 "Rare", 2 "Indeterminate", 1 "Insufficiently known" and 3 report it as extinct. The *Red Data Book* classifies *P. apollo* overall in the territory of Europe as "Vulnerable" – SPEC 3 – corresponding to species that exist both in Europe and outside it but are considered endangered in Europe. "The species is in decline in all the low-lying areas, and maintains strong and healthy populations in the high zones of the Alps and other European mountains".

The European *Red Data Book* reports that the general trend in Europe over the past 25 years has been one of a decline of 20-50%. Over the same period, the development by individual countries has been as follows:

- extinct:	3 countries, but one is the Czech Rep., to which it has been reintroduced
- decline of 75-100%:	3 countries
- decline of 50-75%:	2 countries
- decline of 25-50%:	2 countries
- decline of 15-25%:	4 countries
- stable:	5 countries
- unknown:	8 countries

Further, the IUCN (Hilton-Taylor, 2000) has classified *Parnassius apollo* as "Vulnerable", in accordance with criteria A1cde. Review carried out in 1996.

2.4. THREATS

The European *Red Data Book* (Van Swaay & Warren,1999) lists a wide range of threats and orders them by the number of compilers reporting them. We are reproducing part of this information here:

Threats	Reports
- Collection:	14
- Development construction (including roads, buildings and mining):	12
- Isolation and habitat fragmentation:	11
- Recreational activities and disturbances:	11
- Reforestation of treeless habitats:	10
- Abandonment and change in management of woodlands: (including replanting of conifers and inappropriate habitat management)	9
- Climate change:	9
- Agricultural upgrades:	8
- Felling and destruction of woodlands:	8

The threats reported by the range States are generally included in the listing above. While it is certain that there are frequent specific references to habitat alteration and destruction, it is also clear that the threats listed by the *Red Data Book* are in themselves causes of habitat alteration and destruction. Various countries make special mention of the spontaneous growth of tree and shrub vegetation and reforestation, especially with conífers, which take away the open spaces that are needed both by the butterfly itself and by its food plants. In some cases, the spontanteous growth of unusual vegetation is blamed on an excess of nitrogen in the soil owing to atmospheric contamination deposited on the ground.

While the majority of the countries consider collection to be a major threat, two countries take the view that the populations are well able to support certain levels of capture and that collection does not represent a threat.

3. UTILIZATION AND TRADE

The main and almost only utilization of *Parnassius apollo* by mankind is to satisfy collection demand, principally on the part of private individuals and only minimally for scientific or institutional purposes. This is the case both at national and at international level. Additionally, we have already commented on the fragmentary distribution of this species, with a large number of populations which are more or less isolated and have given rise to the description of a wide variety of sub-specific and lower taxa. This aspect is an extremely important incentive to collecting, the ultimate objective of which entails gathering specimens from the greatest number of possible populations, with all that that may imply in terms of national and international trade.

These considerations, however, highlight the extremely low figures recorded for international trade, and in consequence it may reasonably be assumed that there is a certain amount of illegal trade.

3.1. NATIONAL UTILIZATION AND TRADE (LEGAL AND ILLEGAL)

The legal protection of *Parnassius apollo* in all of the countries that responded to the questionnaire, and also in all of the countries which are signatories to the Bern Convention, for example, excludes trade in native specimens from their respective populations, which means that there cannot be legal national trade in this species, except in the case of captive-bred specimens, but the section corresponding to the latter reports that it is virtually never performed.

China, which does grant some permits on an exceptional basis, reports that there is some trade for museums and collectors, and estimates the number of specimens in museums as around 2000.

In Spain there is also some legal national trade in specimens bred in captivity but its scale is not known in detail. The data for captive breeding are included in the appropriate section.

Sweden reports that no trade is known in any species of butterfly native to Sweden, but that there may be exchanges.

The information received on illegal trade is as follows:

- Germany: there is a study by TRAFFIC which reports that *Parnassius apollo* is commonly offered on insect markets in Germany and outside. It is doubtful that all of the specimens are captive-bred or pre-Convention.

- Italy reports that there is no evidence of trade, arguing that the collectors and potential gatherers are aware of the legal risk. Nevertheless, the southern breeds run a greater risk of being collected, although this is illegal. It is said that foreign collectors have captured the southern breeds in their hundred or thousands. This was probably before the protection of the species and the locations, but the risk still exists.

- Slovakia: there is some illegal trade and exchange. It is known that specimens from the Carpathians of Slovakia have been offered in other countries.

- Slovenia reports illegal captures for private collections, but trade as such is unknown.

- Poland: there may be some illegal trade, but this is considered highly improbable, given that the species lives exclusively in national parks. There is some trade in specimens captured in the first half of the 19th century.

- Czech Republic: it is considered that the strict protection measures and the scarcity of the species make (illegal) trade in this species unattractive. If any illegal trade does exist, it must be very limited.

- Yugoslavia: no data available; there may perhaps be some trade on an individual level.

3.2. INTERNATIONAL TRADE

Information provided by the CITES Secretariat and UNEP-WCMC:

Total trade in *Parnassius apollo*											
				Imports recorded				Exports recorded			
Year	Imp.	Exp.	Origin	Quantity	Item	P	S	Quantity	Item	P	S
1977	NL	CH						9	bodies		
1977	CH	NL		23	bodies						
1979	SE	GB		9	bodies	S					
1980	DE	CH	XX					154	bodies		
1980	DE	FI						30	eggs	N	
1983	CH	DE		50	bodies	U					
1983	DK	DE	XX	16	manufactured items	P					
1983	DE	DK	SE					36	Bodies	T	
1983	US	DK	SE					4	bodies	T	
1984	CH	DE	XX	123	bodies	U		146	bodies	T	
1984	CN	JP	XX					2	bodies	T	
1986	CH	DE	XX	20	bodies			20	bodies	T	
1990	DE	CH	XX					6	bodies		
1990	JP	CN		7	specimens	T		7	bodies	E	
1990	DE	FI						2	bodies	S	
1991	US	GB	XX	1	bodies		W				
1991	CN	JP	CN					90	bodies		
1994	DE	AT						1	bodies	S	O
1994	DE	AT		1	bodies	S	U				
1994	AT	XX		1	bodies	S	O				
1995	ES	AU	XX	1	bodies		I				
1995	GB	NO						150	specimens	S	W
1995	SK	PL		5	live	B	W	5	live	B	C
1995	PL	SK		5	live	B	W	5	live	B	W
1996	GB	NO						50	specimens	S	W
1996	SK	PL		5	live	B	F	5	live	S	W
1996	PL	SK		5	live		W	5	live	B	W
1996	MC	XX		50	bodies	P	O				
1997	DE	CZ						1	bodies	P	W
1997	SK	PL		5	live	B	F	5	live	N	C
1997	PL	SK		5	live	N	W	5	live	B	W
1997	TG	US						1	live		C
1998	US	CA	XX	1	bodies		W				
1998	DE	CZ		1	bodies	P	O				
1998	SK	PL						5	live		W
1998	PL	SK		5	live		W	5	live	B	W
1999	SK	PL						5	live	N	W
2000	US	GB	CH	5	bodies	S	W				
2000	US	GB	XX	2	bodies	P	W				
2000	AU	NO		11	bodies	T	O	11	bodies	P	O

A situation of international trade not recorded by CITES could be considered to be the "movement" of specimens between the countries of the European Union, for which export or import permits are not required, although "CITES Certificates" are required. In Spain, "CITES Certificates" have been issued for all the captive-bred specimens of *P. apollo* extant in that country (see corresponding section), which could be considered as forming part of international trade. Since no permits have been issued for exporting this species from Spain, it has to be considered that this trade has remained within the European Union. The certificates issued from Spain numbered 44 in 1995, 386 in 1996, 363 in 1997, 470 in 1998 and 274 in 1999, all relating to specimens bred in captivity.

Comments from countries with respect to possible illegal international trade already referred to in the preceding section:

Germany reports that *P. apollo* is offered on insect markets both in Germany and elsewhere and doubts that all of the specimens are captive-bred or pre-Convention.

Italy states that the breeds of the south of the country have been captured in their hundreds or thousands by foreign collectors, probably before protection was granted to the species and the locations.

In Slovakia, it is known that specimens from the Carpathians of Slovakia have been offered in other countries.

4. CONSERVATION AND MANAGEMENT

4.1. LEGAL SITUATION

4.1.1. LEGISLATION PROTECTING THE SPECIES AT THE NATIONAL LEVEL

Parnassius apollo is protected by national legislation (or by direct application of international legislation) in all of the countries that respond to the questionnaire, except Turkey, whose response does not include this information. It is assumed that the species is not protected there. Some countries simply refer to this protection in a generic way, while the nature of the protection is explained in detail by others, such as, for example Germany, Greece, Slovenia and Spain. In the case of Slovenia, which gives the most exhaustive description, it is specified that it is forbidden to capture, kill, poison, sell, arrange to sell, buy, export or deliberately disturb this species. It is also assumed that these restrictions are common to the legal protection in force in the other countries.

In two cases there is a report on national protection based on observance of international legislation that covers *Parnassius apollo*. The two cases are the former Yugoslav Republic of Macedonia as a signatory to the Bern Convention and Sweden as a member of the European Union and thus subject to the provisions of Directive 43/92 EEC, commonly called the Habitats Directive.

Only China refers to the possible penalties for those infringing the law protecting *P. apollo*. While it is possible to obtain permits for capture and selling under certain specified circumstances, smuggling is punished with prison sentences, and under very grave circumstances may even lead to life imprisonment or the death penalty.

Various countries report on the inclusion of *P. apollo* in Red Lists, Red Books and Catalogues of Endangered Species, or other similar publications.

The *Red Data Book* reports that legal protection (no capture, trade, etc) exists for the species in 19 countries of the 28 that it covers and that there is legal protection of habitats of importance to butterflies in 13 countries.

4.1.2. LEGISLATION PROTECTING THE SPECIES ON THE INTERNATIONAL LEVEL

In the international sphere, *Parnassius apollo* is protected by the following legislation:

- CITES, Appendix II.

- Convention on the conservation of European wildlife and natural habitats. Appendix II: Strictly protected fauna species. Commonly known as the Bern Convention, to which many of the European range States of the species are signatories.

- Council Directive (European Union) 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Annex IV: Animal and plant species of Community interest in need of strict protection. Commonly referred to as the Habitats Directive.

- Council Regulation (European Union) (CE) 338/97 of 9 December 1996 protecting species of wild fauna and flora by regulating trade therein. Annex A, equivalent to CITES Appendix I.

4.2. MANAGEMENT OF THE SPECIES

4.2.1. EXISTING MANAGEMENT MEASURES

The responses received indicate that measures for management of *Parnassius apollo* are currently being implemented in the following countries:

- Bulgaria: protection of the locations having populations of the species inside the national parks and reserves; registration of all known populations; prohibition on collecting.

- China: various projects covering restoration of the natural environment, uses of the territory and conservation of wildlife will impact the conservation of the habitat of this species, although management of *P. apollo* is not the primary purpose of these activities.

- Czech Republic: monitoring of the population and maintenance of the habitat by means of the "Plan of Action" for the species. This population is the result of the reintroduction after its complete extinction in the country at the beginning of the 20th century, as described above.

- Germany: creation of protected areas in three regions. But it is reported that this has worked only when combined with habitat restoration measures or agreements with the users of the territory, such as the wine-growers of the Moselle.

- Poland: Project for recovery of Parnassius apollo in the Pieniny National Park, since 1991. The results after 10 years have been: increase in the population from 30 specimens in 1991 to 1000-1200 in the years 1998-2000; recovery of the metapopulation structure existing there between 1840 and 1850; cooperation with the authorities of Slovakia in this project; establishment of a population in the Sudeten mountains in the locality in which it existed in the 19th century, but whether it will be permanent has not yet been confirmed.

4.2.2. TRACKING PROGRAMMES OR RESEARCH PROJECTS

The following information was received:

- Bulgaria: mapping of the locations by UTM coordinates through the National Fund for Scientific Research.

- Czech Republic: there is continuous monitoring of the existing population as part of the “Plan of Action” for the species.

- Poland: wide-ranging and detailed studies are performed on the recovering population in the Pieniny National Park. These studies have resulted in various publications and seminars on the recovery of species of small size. In 2000 a course was held for students from Ukraine and Germany.

- Slovakia: project for revitalization of the populations of *P. apollo* in the Pieniny National Park, in cooperation with Poland, since 1995. A project on the national level has been in progress since 1997 for inventorying localities and populations of *P. apollo* and review of their status.

- Spain: preparation of the relevant sheet for inclusion of the species in the National Catalogue of Endangered Species; this has required in-depth review of the species in the country.

- Sweden: at the present time a study is being prepared of the distribution of the species on the island of Gotland.

The European *Red Data Book* reports that there is scientific research into the species' needs in 5 countries out of the 28 that it considers for this species; all of the populations are monitored periodically (every 1-5 years) in one country and at least part of the populations are monitored (every 1-5 years) in five countries.

4.2.3. CAPTIVE BREEDING

Most countries responded that either there is no breeding in captivity or that any such breeding is unknown by the authorities. The cases known are as follows:

In Poland there is breeding in the Pieniny National park for the project described in the section on Management Measures.

In Slovakia, the food plant is cultivated and the butterflies are bred in the Pieniny National Park (it appears clear that this breeding does not have any commercial purpose); a permit from the Ministry of the Environment is required for captive breeding.

In Spain there is a registered breeding facility, and its breeding statistics are as follows:

SPECIES (sub-species)		1995	1996	1997	1998	1999	2000
P. apollo germanie		5	18	26	36	49	32
P. a. hispanicum		9	92	93	98	42	35
P. a. manleyi		10	86	89	96	43	43
P. a. nevadensis		6	71	54	107	50	16
P. a. asturiensis	8	87	65	72	35	32	
P. a. escalareae x *hispanicum*		6	32	36	61	29	--
P. a. pyrenaicus	--	--	--	--	26	24	
P. a. escalareae	--	--	--	--	--	18	
TOTAL		44	386	363	470	274	200

In Sweden there is breeding, carried out legally, by two or three enthusiasts.

5. INFORMATION ON SIMILAR SPECIES

The genus *Parnassius* has 38 species currently recognized (UNEP-WCMC database), and many are very similar to one another. Also, a very significant portion of this quantity lives in mountainous environments, which has favoured the existence of isolated populations and the consequent description of numerous sub-species, breeds and forms, which complicates even more the identification of the specimens. The result of this situation, as explained earlier, is that all or a significant portion of these species are to be found in international trade, although only *Parnassius apollo* is covered in CITES.

This situation leads to the conclusion that "it cannot be reasonably anticipated that a person who is not an informed expert would be capable of identifying them with certainty".

6. REFERENCES

The most immediate references for the greater portion of the information used in this review are the persons that responded to the questionnaire sent out or those that provided the information submitted. They are as follows:

- **Austria**: i. A. Jakab Andrea. Bundesministerium für Land- und Forstwirtschaft Umwelt und Wasserwirtschaft.
- **Bulgaria**: Hristo Bojinov. Director of "National Nature Protection Service" Directorate. CITES Management Authority of Bulgaria.
- **China**: Meng Xianlin. Deputy Director General. CITES Management Authority of P. R. China. Fan Zhiyong. Fauna Division Chief. CITES Management Authority of P. R. China.
- **Czech Republic**: Dr. Jan Plesnik. Chairman of the CITES Scientific Authority Management Group.
- **Germany**: Dr. Ute Grimm. German Scientific Authority to CITES (Zoology). Deputy Head of Division.
- **Greece**: *Person providing information*: Dr. Anastasios Legakis. Zoological Museum. Dept. of Biology. Univ. of Athens.
- **Hungary**: Dr. Katalin Rodics. CITES Scientific Authority.
- **Italy**: Dr. Alberto Zilli. Museo Civico di Zoologia. Rome.
- **Latvia**: Vilnis Bernards. Senior Officer. Nature Conservation Department. CITES Management Authority of Latvia.
- **Liechtenstein**: Georg Willi. Botanisch-Zoologische Gesellschaft. Liechtenstein-Sargans-Werdenberg.

- **Netherlands**: Drs. A. A. Helmens. CITES Management Authority of the Netherlands.
- **Poland:** *Contact*: Zygmynt Krzeminski. Deputy Director. Depart. of Forestry, Nature Conservation and Landscape. Ministry of the Environment. CITES Management Authority – Poland. *Person providing information*: Prof. Dr. Zbigniew Witkowski. Institute of Nature Conservation. Polish Academy of Sciences.
- **Slovakia**: *Person providing information*: Ing. Peter Urban, PhD. State Nature Conservancy of the Slovak Republic. *Specialist:* Ing. Tomás Kizek (Societas Europaea Lepidopterologica), SA P (SEA – Slovak Environmental Agency)
- **Slovenia**: Robert Bolješic, CITES Officer, Counsellor to the Director; Andreja Cercek Hocevar, PhD. Counsellor to the Government; *Person providing information on the taxa:* Mrs. Urška Mavri, BSc. Biol. Nature Protection Authority.
- **Spain**: *Compilers*: Carlos Ibero Solana. CITES Scientific Authority (Fauna). Mercedes Núñez. CITES Management Authority. *Lepidopterologists*: José Martín Cano, Enrique García Barros and Miguel L. Munguira. University Autónoma de Madrid. Dep. Biología. Fac. de Ciencias.
- **Sweden**: *Contact*: Lena Berg. Swedish CITES Scientific Authority. *Specialists*: Björn Cederberg and Håkan Elmqvist. Threatened Species Unit. Univ. of Agricultural Science. Uppsala.
- **Switzerland**: Dr. T. Althaus. Head of Endangered Species. Permits and Inspections. Bundesamt für Veterinärwesen. Bern.
- **The former Yugoslav Republic of Macedonia**: Mr. Sasko Jordanov. Senior Adviser at the Ministry. Ministry of Environment and Physical Planning.
- **Turkey**: Ismail Karaca. Ministry of Environment. General Directorate of Environment Protection. Ankara.
- **Yugoslavia**: Predrag Jaksic, PhD., Biologist (Lepidopterologist). Institute for Protection of Nature of Serbia. Novi Beograd.

Additionally, some national responses included a notable quantity of bibliographical references while in others these were scarce or non-existent. Despite the latter, the total references were considered too voluminous for them all to be included here, but they will be sent to anyone requesting them. Some generally applicable references are:

- **Hilton-Taylor, C.** (Compiler) (2000). *2000 IUCN Red List of Threatened Species*. IUCN, Gland, Switzerland and Cambridge, UK. xviii + 61 pp.
- **UNEP-WCMC** (2001). *Checklist of fish and invertebrates listed in the CITES Appendices and in the Annexes of the Council of the European Union Regulation (EC) 338/97*. 5th Edition. JNCC Reports, No. 292.
- **UNEP-WCMC database.**
- **Van Swaay, C.A.M. & Warren, M.S.** (1999). *Red Data Book of European Butterflies (Rhopalocera)*. Nature and Environment, No. 99, Council of Europe Publishing, Strasbourg.

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whom we had the occasion to review and discuss the topics covered here. Our most sincere thanks of all of them.

Anas aucklandica (Brown, Campbell Island and Auckland Islands Teal)
Prepared by:
New Zealand CITES Scientific Authority
January 2002

Taxon: *Anas aucklandica*
Kingdom: Fauna
Phylum: Chordata
Class: Aves
Order: Anseriformes
Family: Anatidae
Sub-family: Anatinae
Synonyms: Includes *Anas chlorotis*, *Anas nesiotis*, and *Anas aucklandica*
Common names:

French: Sarcelle de Nouvelle Zélande

Anas chlorotis

English: Brown teal; Mäori: Pateke; French: Sarcelle brune

Anas nesiotis

English: Campbell teal; Campbell Island teal

Anas aucklandica
English: Auckland teal; Auckland Island teal; Spanish: Cerceta alicorta de Auckland; French: Sarcelle terrestre des îles Auckland

INTRODUCTION

The request to review *Anas aucklandica* was made at the 15th meeting of the Animals Committee in Antananarivo, Madagascar in 1999. The review was not available for the 16th and 17th meetings at Shepherdstown and Hanoi, so the regional representative for Oceania agreed to ask the Scientific Authority for New Zealand to prepare the review.

Anas aucklandica was first listed on the Appendices to the Convention in 1975. Under the accepted taxonomy at the time, the three subspecies, *A. aucklandica chlorotis* (brown teal), *A. aucklandica nesiotis* (Campbell teal) and *A. aucklandica aucklandica* (Auckland teal) were listed in Appendices II, I and II respectively. In 1995, all three taxa were included in Appendix I. Additionally, their emerging specific status is recognised in annotation 358, which includes the synonyms *A. chlorotis* and *A. nesiotis* in the listing.

TAXONOMIC STATUS

The taxonomy of this group of ducks has been relatively fluid until recently. When first listed on the CITES Appendices in 1975, they were regarded as conspecific, in keeping with the nomenclature accepted by Kinsky (1970), Dumbell (1986) and Turbott (1990). The three taxa are recognised as full species by the current standard reference to birds of the region (Marchant and Higgins 1990). This taxonomy is confirmed by the allozyme analysis of Daugherty *et al.* (1999) and, most recently, strongly reinforced through the analysis of three mitochondrial DNA genes by Kennedy and Spencer (2000).

CONSERVATION STATUS

The IUCN Red List (Hilton-Taylor, 2000) classifies the three species as follows:

- *A. aucklandica*: VU D1+2
- *A. nesiotis* : CR D
- *A. chlorotis* : EN B1+2abcde

LEGAL AND OTHER CONSERVATION MEASURES

The species are under the full protection of the New Zealand Wildlife Act 1953 and Conservation Act 1987. It is illegal to hunt these species, or to handle or possess them without permits. Captive breeding is permitted for conservation purposes under tightly regulated conditions. Trade from New Zealand is prohibited without permit and would continue to be so if the species were not covered by CITES.

The teals are subject to Recovery Plans (Williams and Dumbell 1996) and programmes (McLelland 2000), which involve protection from predators, habitat protection and restoration, and captive breeding and translocation.

The greatest and most realistic potential increase lies with the flightless Campbell teal (population stable but under threat). Following their discovery in 1975 on 26 ha. Dent Island, a steep rocky island close to Campbell Island, a total of 11 birds was brought to New Zealand as the basis of a captive breeding stock. Currently there are around 45 of this species in captivity and 50 in the wild, including around 30 remaining on Dent Island. A small number has been released on Whenua Hou Island in preparation for a liberation on 3000 ha. Campbell Island, the species' ancestral home before Norway rats invaded and ate them. An operation to eradicate the rats was undertaken in 2001. Its apparent success will need to be confirmed two years following the operation before teal are returned to the island.

The total population of the Auckland teal (also flightless) is relatively stable, between 500 and 1000, distributed between Adams, Disappointment, Dundas, Enderby, Ewing, French, Ocean and Rose Islands in the Aucklands group, but it has disappeared from the main Auckland Island, probably the victim of pigs and cats. There are 9-10 in captivity.

While the brown teal is probably still the most numerous of the group, it is suffering the most rapid decline. From approximately 2300 birds before 1993 (Heather and Robertson 1996), the total population is now around 1000 birds (M. Williams pers.com.). Though this species can fly, individual populations are still very sedentary and the smaller are unlikely to remain viable under current conditions of predation and changes in land-use. The majority of the birds are found on Great Barrier Island, which is free of mustelid predators. Official counts (Shaun O'Connor pers.com) show a steady decline from 1500 birds in 1986 to less than 600 in 2001 on the island. Smaller populations remain tenuously on the eastern coast of Northland; the counts there have declined from 500 in 1988 to approximately 100 in 2001. There are a few apparently hybrid birds found in Fiordland in the far south of the South Island. Outside these populations, brown teal have been reintroduced to 3 sites in the Wellington region, with a maximum of 20 birds on Mana Is, 23 on Kapiti Is and 16 in Karori Sanctuary in August 2000. There are approximately 5 birds on Tiritiri Matangi Is near Auckland with small numbers also reported on nearby (HERE A NAME OF AN ISLAND IS MISSING). All populations, with the exception of some very small groups on offshore islands, are apparently in decline. Significant numbers of brown teal are held and bred in captivity, though the potential for captive production is not realised because of a paucity of agreed sites for liberation.

TRADE STATISTICS

Trade in the *Anas aucklandica* group of species since they have been listed in the appendices has been minimal. As indicated by Table 1, a completely accurate assessment is not possible because of mismatches between the import and export data. In addition, the final record, of re-export of birds from the United States of America to Switzerland, is likely to represent a coding error, given that their origin is listed as wild-caught in Brazil.

Overall, trade since listing has consisted of approximately 16 live animals for commercial purposes, all from captive stock and three to five scientific specimens, two of which were of wild origin. This clearly constitutes a very low level of trade. There is no information available on illegal trade, but circumstantial evidence suggests it to be very low or non-existent.

Table 1. Trade statistics for *Anas aucklandica* reported to UNEP-WCMC up until January 2002

Year	App.	Taxon	Imports reported					Exports reported					
			Imp.	Exp.	Origin	Quantity	Term	P	S	Quantity	Term	P	S
1988	2	*Anas aucklandica aucklandica*	US	NZ		1	specimen	S					
1989	2	*Anas aucklandica chlorotis*	US	NL		8	live	T	C	4	live	T	C
1990	2	*Anas aucklandica aucklandica*	US	NL		6	live	T	C	6	live		C
1993	2	*Anas aucklandica chlorotis*	ZA	GB						2	live	T	C
1996	1	*Anas aucklandica*	US	NZ						5	skins	S	
1996	1	*Anas aucklandica chlorotis*	US	NZ		2	specimens	S	W				
1997	1	*Anas aucklandica chlorotis*	CH	US	BR					1	live		W

STATUS ACCORDING TO CITES CRITERIA

Anas aucklandica
Clearly meets biological criteria but is marginal for trade criteria

Anas nesiotis
Clearly meets biological criteria but is marginal for trade criteria

Anas chlorotis
Clearly meets biological criteria but is marginal for trade criteria

CONCLUSIONS

Trade in these species is very low and, at current levels, could not be expected to be a significant factor in the long-term survival of any of these species. However, it is not clear whether delisting them or down-listing them to Appendix II will have any impact on commercial demand. Theoretically, greater availability and publicity surrounding the recovery programmes, plus the relative ease with which at least the brown teal can be held and bred in captivity mean that a greater demand for traded specimens could be realised. The threat of illegal trade in wild caught specimens of the two flightless subantarctic species is considered low because of the remoteness and difficult access of their populations. In contrast, the brown teal lives in very accessible locations and there is a significant number in captivity. Illegal capture would be relatively easy.

The case for listing or delisting these species is marginal. Like a number of species on Appendix I, their status is sufficiently at risk to render even a small increase in trade an unacceptable threat to the species. This is notwithstanding the high level of protection and regulation that they enjoy

regardless of the provisions of CITES. While removing them from the appendices may not increase the risk to a large degree, retaining them is also not a large imposition on either the Convention or efforts to protect and restore their populations.

RECOMMENDATION

The Committee, on the advice of the Working Group, should consider the potential impact of delisting these species. The Committee may consider that the small risk of increased trade associated with downlisting or delisting *Anas chlorotis* may not be worth the risk. Similarly, the other two species are candidates for retention in Appendix I, to be further reviewed as recovery programmes take effect.

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APPENDIX 1. Analysis of *Anas aucklandica* group of species against CITES criteria.

Criteria ⇨ **Taxon** ⇩	**A** The wild population is small, and is characterised by **at least one** of the following (i-v):					**B** The wild population has a restricted area of distribution and is characterised by **at least one** of the following (i-v):				**C** A decline in the number of individuals in the wild, which has been **either** (i-ii):		**D** If not included in A1, species would satisfy A,B or C within 5 years	**Trade Criteria** At **least one** of the following (i-iv)				**Appendix I (Y/N)**	**Application problems**
	i	ii	iii	iv	v	i	ii	iii	iv	i	ii		i	ii	iii	iv		
A. aucklandica	N1	Y	N1	N1	N1	Y	N1	Y	N1	Y	Y	N	N	N	N	N?	Y?	None known
A. nesiotis	N1	Y	Y	N1	Y	Y	N1	Y	N1	Y	N1	N	N	N	N	N?	Y?	None known
A. chlorotis	Y	Y	Y	N1	Y	Y	N1	Y	Y	Y	Y	N	N	N	N	N?	Y?	None known

Cnemidophorus hyperythrus (Orange-throated whiptail lizard)
Periodic review of animal taxa in the Appendices
Prepared by:
United States of America with input from Mexico

Taxon: *Cnemidophorus hyperythrus*
Kingdom: Animalia
Phylum: Cordata
Class: Reptilia
Order: Squamata
Family: Teiidae
Genus: *Cnemidophorus* (Wagler 1830)
Species: *hyperythrus* (Cope 1863)
Subspecies: Cape orange-throated whiptail lizard, *C. h. hyperythrus* (Cope 1863)
Belding orange-throated whiptail lizard, *C. h. beldingi* (Stejneger 1895)
Monserrate Island orange-throated whiptail lizard, *C. h. pictus* (Van Derburgh and Slevini 1921)
Common Name:
English: orange-throated whiptail lizard, orange-throated racerunner
Spanish: corredor gorguinaranja, huico garganta-anaranjada
French: coureur à gorge orange

LISTING STATUS UNDER CITES

Cnemidophorus hyperythrus was listed in CITES Appendix II when CITES went into effect on July 1, 1975. As such, there is little information available on the original rationale for listing.

SPECIES DISTRIBUTION

The orange-throated whiptail lizard is limited to southwestern California, United States of America (U.S.A.) and the peninsula of Baja California, Mexico, including seven islands in the Gulf of California (Carmen, Espíritu Santo, Monserrate, Partida Coronados, San Francisco, San José, and San Carlos) and two islands (Magdalena and Santa Margarita) in the Pacific Ocean off the coast of Baja California, Mexico (Thompson et al. 1998). There are three subspecies of *Cnemidophorus hyperythrus*: *C. h. hyperythrus* (Cape orange-throated whiptail lizard), *C. h. beldingi* (Belding orange-throated whiptail), and *C. h. pictus* (Monserrate Island orange-throated whiptail lizard) (Wright and Vitt 1993, Thompson et al. 1998). *Cnemidophorus h. hyperythrus* occurs in the State of Baja California del Sur, Mexico. *Cnemidophorus h. beldingi* is found in the foothills and mountains of Los Angeles, San Bernardino, Orange, Riverside, and San Diego Counties, State of California, U.S.A.; and the State of Baja California del Norte, Mexico. *Cnemidophorus h. pictus* is restricted to the Island of Monserrate, State of Baja California del Sur, Mexico.

NATURAL HISTORY

The orange-throated whiptail lizard generally occupies open, xeric habitats with sandy or gravelly soils (Thompson et al. 1998). *Cnemidophorus h. beldingi* reaches sexual maturity in the spring following hatching the previous summer (Bostic 1964, 1966). Females two years of age or older deposit two

clutches of eggs per year. The mean clutch size is only 2.3 eggs with a maximum of 3 eggs. Juvenile survival and recruitment rates have not been studied. Bostic (1964) and Stebbins (1972) observed that the distribution of *C. h. beldingi* correlated with the distribution of the western subterranean termite *Reticulitermes hesperus* which is restricted to the lower coastal slopes.

POPULATION SIZE AND TRENDS

The current population status of *C. hyperythrus* in California is unknown. However, in 1980, McGurty described the status of this subspecies in San Diego County as "seriously depleted."

In Mexico, surveys of *C. hyperythrus* have been conducted for three years on the islands of Carmen, Coronados, and Monserrate in the Gulf of California. The species is considered to be abundant on these three islands and populations have remained stable. Population surveys for populations in other islands or the Baja California Peninsula are not available.

THREATS

In the U.S.A., the primary threat to *C. h. beldingi* is loss of suitable contiguous habitat in southern California, particularly in San Diego County, as a direct result of urban, commercial, and agricultural development. The majority of suitable habitat for *C. h. beldingi* occurs in the chaparral (both open and dense vegetation areas) and coastal sage scrub ecosystems at low elevations. By 1994, an estimated 75% of former *C. h. beldingi* habitat had been destroyed due to development (Jennings and Hayes 1994). The remaining stronghold for this subspecies appears to be the pinyon-juniper habitat type, where *C. h. beldingi* has been found at elevations of approximately 6,000 ft. This subspecies has not been located at higher elevations in mixed conifer forests (McGurty 1980). In addition to habitat destruction, *C. h. beldingi* is further threatened by a short season of activity (adults enter into hibernation as early as July) and low reproductive potential.

In Mexico, the species is threatened primarily by habitat destruction (Benítez-Díaz 2001). In addition, populations inhabiting the islands in the Gulf of California and the Pacific Ocean are threatened by exotic species, primarily predators.

LEGISLATION

Cnemidophorus hyperythrus is listed as "Protected" by the State of California; permits to collect and/or possess these species are only granted for scientific purposes. Additionally, the sale of all native species in California is prohibited and permits for the sale of native reptiles by biological supply houses to scientific and educational institutions must be permitted by the California Department of Fish and Game. However, species designated as "Protected" do not receive the habitat protection afforded to state-listed "Endangered" and "Threatened" species, including the requirement to determine the impacts from projects on the habitats of these species and the determination of mitigation measures prior to project implementation.

In Mexico, the species is listed as "Threatened" and "Rare" (Benítez-Díaz 2001). Although there are no protected areas for this species in the Baja California Peninsula, many island populations are found within protected nature reserves.

Because of its listing in Appendix II of CITES, the orange-throated whiptail lizard is included in Annex B of Regulation EC 2724/2000.

TRADE

Documented international trade in *C. hyperythrus* has included the import of 37 live specimens by the United States from Mexico in 1980; import of 112 live specimens to the United States from Mexico in

1985; import of 7 museum specimens to the United States from Mexico in 1996; export of 25 live specimens by the United States to Japan in 1996; export of 11 scientific specimens by Mexico to the United States in 1996; and export of 96 live specimens by the United States to Hong Kong in 1997 (World Conservation Monitoring Centre 2001). Neither domestic nor international trade appear to constitute a threat for populations of the species in Mexico (Mellink 1995).

Table 1. Number of Specimens of *Cnemidophorus hyperythrus* in international trade between 1980 and 2000.

Year	No. of Specimens Exported	No. of Specimens Imported
1980		37
1985		112
1996	36	7
1997	96	
TOTAL	132	156

PRELIMINARY EVALUATION

Based on the limited reported international trade in this species in the past 20 years and domestic measures for the protection of the species, *C. hyperythrus* appears to qualify for removal from Appendix II of CITES, pursuant to Resolution Conf. 9.24 (see attached table).

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Draft guidelines for the periodic review of animal taxa in the CITES Appendices [Resolution Conf. 9.1 (Rev.)]

The periodic review of the Appendices is designed to review listings that may no longer be appropriate, utilizing the listing criteria adopted at the Ninth Meeting of the Conference of the Parties (Resolution Conf. 9.24). At the 15th meeting of the Animals Committee, AC15 (Madagascar; July 1999) and AC16 (United States; December 2000), 33 taxa were selected for review (31 and 2, respectively). As of August 2001, only 12 species reviews had been submitted to the Chair of the Animals Committee. At AC16 and again at AC17 (Vietnam; August 2001), the Working Group on Review of the Appendices discussed various ways for the review process to be facilitated. At AC17, Dr. Javier Alvarez (from the Scientific Authority of the United States of America), volunteered to draft guidelines for conducting future reviews based on the discussions of the Working Group on Review of the Appendices at AC16 and AC17. The draft guidelines are provided in this document.

Objective of the periodic review process

The objective of the periodic review process is to determine if species that were listed prior to adoption of Resolution Conf. 9.24 are in the correct Appendix, or if a proposal to transfer the species within or off the Appendices should be recommended.

If the reviewing Party or Regional Representative obtains information identifying previously unknown or new threats to a species (i.e., illegal trade, sharp population declines, etc.), that goes beyond the issue of whether or not the species is listed in the correct Appendix, it is recommended that such information be submitted to the Animals Committee, the Secretariat, or the Standing Committee, as appropriate, for their consideration.

Identification of species for review

The Working Group on Review of the Appendices recommends the following criteria for the selection of species to be subject to review.

1) The following species should not be included in reviews:

   i) "High visibility" species (e.g., elephants, whales, sea turtles).

   ii) Species that have already been evaluated for listing pursuant to Resolution Conf. 9.24 (i.e., species for which proposals to amend the Appendices have been considered at COP10 and COP11, or will be considered at COP12).

   iii) Species that have been or are currently subject to the Significant Trade Review process (Resolution Conf. 8.9 (Rev.)).

2) The following species should be included in reviews:

   i) Higher priority should be given to species that were listed early in the Convention's history and higher taxa listings (i.e., genus, family, etc.).

   ii) For Appendix-II species, priority should be given to species with very little trade. However, the Working Group cautions that little trade does not always mean that trade does not constitute a threat to the species and the current listing is not warranted. Little trade may occur because of a species' small population size, low demand for the species, or a Party's Scientific Authority

being unable to make the required non-detriment findings. Moreover, illegal trade could be significantly higher than legal trade.

iii) Species reviewed should reflect geographic diversity, both Appendix-I and -II species, and diversities of life history strategies.

Process for future reviews

The Working Group on Review of the Appendices recommends that:

1) Future reviews should be handled as a three-tiered process as follows:

   i) Production of trade data output to identify potential species for review (see "identification of species for review" above).

   ii) Completion of an "abridged species review" containing the following information:

      - rationale for initial listing (whenever available);
      - summary of trade data since the initial listing in the Appendices;
      - current population status;
      - population trends;
      - current conservation status.

   iii) In cases when the "abridged species review" is not sufficient for the AC to determine if the current CITES listing is warranted, an "in-depth species review" should be conducted, which should be based on the information requirements outlined in Annex 6 of Resolution Conf. 9.24. If Resolution Conf. 9.24 is amended at COP12 (November 2002), the format for species proposals (Annex 6) in the new resolution should be used.

2) For all species, the tables in Doc. AC.16.8 Annex 2 should also be completed as part of the species review.

3) Reviewers are urged to solicit input from range country Scientific and Management Authorities, as well as conduct a literature review and seek information from relevant experts, scientists, and conservation organizations. To assist in the gathering of information from range countries and relevant experts, it is highly advisable to use questionnaires similar to the ones developed by the United States of America for its reviews (copies attached). These questionnaires are based on the listing criteria in Resolution Conf. 9.24.

4) In all cases, a Party or member of the Animals Committee should be responsible for submission of a species review, but a Party may request that a non-governmental organization or individual scientist conduct the review. (At AC17, the Working Group acknowledged that reliance on Parties to conduct the reviews is not always effective, as reflected in the large number of species selected for review at AC15 and AC16 whose reviews have not been completed by the volunteering Party or for which no Party has volunteered to conduct the review. At AC17, the Working Group discussed other options to conduct the reviews. One is for the Secretariat to contract someone to conduct the reviews as it is currently done in the Significant Trade Review process. Other options are to involve students in the CITES Master's course or the IUCN Specialist Groups.