1. The work was conducted through two subcommittees (Fauna and Flora) that were established at the ninth meeting of the Conference of the Parties. This report is presented in two parts: 1) Fauna Subcommittee report and 2) Flora Subcommittee report. Each part covers: a) Status of Checklists; b) Proposed Work Plan; and c) Proposed Operating Budget. The Fauna Subcommittee report also summarizes responses, endorsed by the Subcommittee, to notable enquiries received since the last Conference of the Parties.

2. Recommendations of the Nomenclature Committee, calling for decisions of the Conference of the Parties, are included in documents Doc. 10.19 and Doc. 10.77.

3. The Fauna Subcommittee met in conjunction with the 13th meeting of the Animals Committee in Pruhonice, Czech Republic (23 September 1996). The Flora Subcommittee met in conjunction with the sixth (Tenerife, Spain, 19-23 June 1995) and seventh (San Jose, Costa Rica, 11-15 November 1996) meetings of the Plants Committee. This report conveys the principal decisions/recommendations of those meetings.

4. The Nomenclature Committee will continue to provide timely services to the Parties and the Secretariat, including: i) responding to enquiries regarding the nomenclature of taxa listed in the appendices; ii) designation of appropriate taxonomic authorities for the nomenclature of taxa listed in the appendices that are not included in standard references that have been adopted by the Parties; iii) reviews of the nomenclature of the taxa that have been listed in the appendices in consultation with the Secretariat; iv) reviews of the nomenclature of species proposed for listing in the appendices prior to their consideration at the meetings of the Conference of the Parties; and v) advising the Secretariat of recommended changes in the nomenclature that should be used in the appendices.

**Fauna Subcommittee**

**Status of Checklists**

**Amphibians**

5. As reported at the last meeting of the Conference of the Parties, *Amphibian Species of the World* is out of print. The checklist is being revised by Darrel Frost, the original compiler. The second edition will be published in two volumes in collaboration with the Herpetologists’ League. Volume one will cover the salamanders and caecilians. Volume two will cover frogs and toads. The first volume is about 95 per cent complete. An annex will be included in each volume, cross-referencing changes of taxonomic names and higher taxonomic relationships in comparison with the 1985 edition.

6. The Fauna Subcommittee endorsed the use of *Amphibian Species of the World: Additions and Corrections* (Duellman, W.E., 1993) as an additional standard reference for amphibian nomenclature, pursuant to Resolution Conf 9.26. It is available from the University of Kansas Museum of Natural History as a Miscellaneous Publication. If the Conference of the parties agrees, Resolution Conf 9.26 should be amended to reflect this decision.

**Snakes**


8. *Snake Species of the World* is being published in three volumes. It will cover 18 families, 17 subfamilies, 450 genera and 2,518 species. Table 1 summarizes the contents of each volume. The first volume has been submitted to the publisher. The second volume will be submitted to the printer within six months. The third volume is progressing. The initial checklist of the third volume has been compiled and reviewers have been identified for designated subparts of the list.

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**Table 1: Content of Snake Species of the World: A Taxonomic and Geographic Reference**

<table>
<thead>
<tr>
<th>Volume 1: Primitive Snakes</th>
<th>Genera</th>
<th>Species</th>
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<tbody>
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<tr>
<td>Anomalepididae</td>
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<td>Anomochilidae</td>
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<tr>
<td>Boidae</td>
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<tr>
<td>Boinae</td>
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<tr>
<td>Erycinae</td>
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<tr>
<td>Cylindrophiidae</td>
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<tr>
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<tr>
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<tr>
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<tr>
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</tr>
<tr>
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<tr>
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<td>147</td>
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<tr>
<td>Viperinae</td>
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<td>66</td>
</tr>
<tr>
<td>Xenopeltidae</td>
<td>1</td>
<td>2</td>
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<tr>
<td><strong>Volume 1: Subtotal</strong></td>
<td><strong>76</strong></td>
<td><strong>662</strong></td>
</tr>
</tbody>
</table>

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Lizards

9. A lack of funding prevented the start of work on preparation of a checklist.

Turtles, Crocodilians and Tuataras

10. A lack of funding prevented work on updating these checklists.

Birds


Mammals

12. The second edition of the checklist was prepared by the American Society of Mammalogists. It was published in early 1993 by the Smithsonian Institution. Since then it has been reprinted twice. The second reprinting is nearly exhausted. At a meeting of the Nomenclature Committee (Brussels; September 1993) it was agreed to recommend preparation of a cross-referenced index showing changes in taxonomic names and higher taxonomic relationships.

Notable Enquiries

Naja naja (Asian cobra)

13. Canada sought answers to the following questions: a) was the monocled cobra identified as a subspecies of the India cobra in the proposal to list Naja naja? b) is the monocled cobra currently recognized as a subspecies of the India cobra by CITES? and c) should the binomial or trinomial be listed on an export permit accompanying captive-bred specimens? In response, Canada was informed that:

14. – The India Cobra was listed in Appendix II at the seventh meeting of the Conference of the Parties (Lausanne, 1989) based on a proposal submitted by India. That proposal lists ten subspecies, including Naja naja kaouthia.

15. – At the time of the enquiry, CITES had not adopted a standard reference to the snake species but a checklist was in preparation. The Elapidae (including the genus Naja) will be included in the second volume. The most recent revision of the cobras was published in 1992: Asiatic cobras: Population systematics of the Naja naja species complex (Serpentes: Elapidae) in India and Central Asia (W. Wüster and R. S. Thorpe. Herpetologica, 48(1):69-85). This paper recognizes Naja kaouthia as a distinct species.

16. – From a nomenclatorial standpoint both the trinomial (Naja naja kaouthia) and binomial (Naja kaouthia) refer to the same biological entity, therefore, either name conveys the same information. Naja naja should be annotated to reflect this.

Tupinambis spp.

17. The Chairman of the Animals Committee, on behalf of Argentina and Paraguay, sought clarification as to the most appropriate reference to the taxonomy of the genus Tupinambis. The Fauna Subcommittee recommended that the Parties adopt Cei (1993) as the nomenclatorial reference of preference for identification of species of Tupinambis from Argentina and Paraguay. The Secretariat was requested to notify the Parties of this decision. The Fauna Subcommittee recommended a procedure for Parties to follow in designating nomenclatorial references for those taxonomic groups not covered by standard references that have been adopted by the Parties. This reference should be included in the Resolution on Standard Nomenclature (cf. document Doc. 10.77).

Varanus indicus complex

18. The CITES Secretariat requested clarification regarding the taxa included in the Varanus indicus complex. Based on a review of the literature, prepared by the Checklist Staff at the Smithsonian Institution, the Fauna Subcommittee recognized four species in the Varanus indicus complex: V. indicus (Daudin, 1802), V. doreanus (Meyer, 1941), V. spilurus Mertens, 1941 and V. jobiensis Ahi, 1932. The Secretariat was asked to notify the Parties of the decision to recognize these species. The Chairman was asked to inform the delegate from Indonesia, who was attending the Animals Committee meeting, of this decision. The delegate from Indonesia noted that Varanus indicus kalabecki was protected under Indonesia law and as such would have to be named on export permits. According to the most recent taxonomy (which was endorsed by the Fauna Subcommittee) Varanus indicus kalabecki is a synonym of Varanus indicus. Solutions to this potential conflict will be considered by the Indonesia Management Authority in consultation with the Scientific Authority.

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Ovis vignei

19. Germany, as chairman of a working group established to review the status of subspecies of Ovis vignei, sought advice regarding a recommendation of the working group to submit a proposal to list the species in Appendix I. The Fauna Subcommittee concluded that it was not possible to determine with certainty the precise taxonomic entity that was intended for protection when it was originally listed. It was therefore recommended that the current listing be interpreted on the basis of the standard references to mammal nomenclature that had been adopted by the Parties: a) Mammal Species of the World: A Taxonomic and Geographic Reference (Honacki, et al., 1982) adopted in 1984; and b) Mammal Species of the World: A Taxonomic and Geographic Reference, 2nd edition. (Wilson and Reeder, 1993) adopted in 1994. This checklist includes a list of the subspecies (and synonyms) of the various taxa that are included in O. vignei.

20. The Fauna Subcommittee recommended that Germany circulate the information that had been compiled on Ovis vignei at the 10th meeting of the Conference of the Parties (see document Doc. 10.78: Information on the population status of, and threats to, Ovis vignei). To provide further clarification of the listing of Ovis vignei, it is recommended that the listing in Appendix 1 be annotated to read: includes O. v. arkal, O. v. bocharensis, O. v. cycloceros, O. v. blanfordi, O. v. punjabiensis, O. v. severtzovi and O. v. vignei.

Proposed Work Plan

21. Subject to approval of the requested budget, the Fauna Subcommittee will undertake the following activities in the period between the 10th and the 11th meetings of the Conference of the parties:

22. – complete the preparation of the third volume of the snake checklist;
23. – continue to assist revision and updating of those taxonomic checklists that have been adopted by the Parties as standard references;
24. – identify and nominate published taxonomic reviews to serve as standard references to lizard nomenclature for the species that are listed in the appendices;
25. – review Amphibian Species of the World: Additions and Corrections (Duellman, W.E., 1993) and advise the Secretariat about changes in the nomenclature of species listed in the appendices;
26. – provide timely advisory services in response to enquiries from Parties;
27. – provide, in consultation with the Secretariat, periodic reviews of the nomenclature of the taxa that have been listed in the appendices;
28. – when called upon, identify appropriate taxonomic authorities for taxonomic groups not included in the standard references that have been adopted by the Parties;
29. – review the nomenclature of species proposed for listing in the appendices prior to their consideration at the meetings of the Conference of the Parties; and
30. – where appropriate, advise the Secretariat which in turn should inform the Parties, of recommended changes in the nomenclature that should be used.

31. The Fauna Subcommittee will not begin preparation, or substantial revision, of comprehensive checklists (as it has in the past).

Proposed Operating Budget (in USD)

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Consultancies</td>
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<tr>
<td>Total</td>
<td>29,500</td>
<td>22,000</td>
<td>22,000</td>
<td>73,500</td>
</tr>
</tbody>
</table>

¹ Switzerland pledged CHF 20,000 toward completion of the snake checklist at the ninth Conference of the Parties. The proposed operating budget includes USD 20,000 in 1998, which is the amount estimated to complete the third volume.

Flora Subcommittee

Status of Checklists

Cactaceae

32. The second edition of the CITES Cactaceae Checklist will be published by the Royal Botanic Gardens, Kew, following its approval at the 10th meeting of the Conference of the Parties. Its production and publication is funded from the budget of the CITES Nomenclature Committee and by the Royal Botanic Gardens, Kew. The Checklist was prepared on the basis of a consensus reached by an international panel of experts, including specialists from the major range States of the species concerned. The introductory chapters to the Checklist will be in English, French and Spanish.

Orchids

33. Volume 1 of the CITES Orchid Checklist was published following the ninth meeting of the Conference of the Parties. The first volume covered the heavily traded genera Cattleya, Cypripedium, Laelia, Paphiopedilum, Phalaenopsis, Phragmipedium, Pleione and Sophronitis. The second volume will be published following its approval at the 10th meeting of the Conference of the Parties. Volume 2 will contain over two thousand names of taxa in the genera Dendrobium, Disa, Dracula, Cymbidium and Encyclia. Both volumes were prepared on the basis of consensus reached by an international panel of experts, including specialists from the major range States of the species concerned. Their production and publication are funded from the budget of the CITES Nomenclature Committee and by the Royal Botanic Gardens, Kew. The introductory chapters to Volume 2 will be in English, French and Spanish.
34. The CITES Checklist of Succulent *Euphorbia* (Euphorbiaceae) will be published by the German Federal Agency for Nature Conservation following its approval at the 10th meeting of the Conference of the Parties. This Checklist is based on the *Lexicon of Succulent Plants*. The extraction of the information in this Lexicon that is relevant for CITES implementation, as well as the production and publication of the Checklist, is being funded by the Government of Germany. The introductory chapters will be in English, French and Spanish.

**Bulbs**

35. The CITES Bulb Checklist will be published following its approval at the 10th meeting of the Conference of the Parties. This Checklist is intended to be a guideline for the Parties when making reference to the names of *Galanthus* and *Stembergia* (Liliaceae) and of *Cyclamen* (Primulaceae). Its production and publication is funded by the Royal Botanic Gardens, Kew and the Ministry of Agriculture, Nature Management and Fisheries of the Netherlands. Introductory chapters will be in English, French and Spanish.

**Cycads**


**Proposed Work Plan**

37. The publication of four checklists following the 10th meeting of the Conference of the Parties will see the successful completion of an important phase in the development of standard nomenclature and references for plant species included in the appendices. The funding from the Trust Fund, Parties and institutions involved has allowed for the rapid and cost effective production of checklists for a range of taxa that are highly traded. The proposed work plan for the period between the 10th and the 11th meetings of the Conference of the Parties will complete the major tasks relating to nomenclature for plants.

38. If the proposed operating budget is approved, those tasks will be the following.

**Orchidaceae**

39. The orchid family contains perhaps 25,000 species in over 500 genera and is the most highly traded of all the CITES plant families. The Flora Subcommittee has concentrated on key genera identified through the Review of Significant Trade. To date some thirteen genera covering about 3,500 names have been completed. Following the publication of the first two volumes of the Orchid Checklist, the following genera, which were outlined in the first Review of Significant Trade in Species of Plants listed in Appendix II of CITES remain to be treated: *Aerangis*, *Angraecum*, *Ascocentrum*, *Bletilla*, *Brassavola*, *Calanthe*, *Catasetum*, *Coeogyne*, *Comparretia*, *Epidendrum*, *Lycaste*, *Masdevallia*, *Miltonia*, *Miltoniopsis*, *Odontoglossum*, *Oncidium*, *Renanthera*, *Rhyynchostylis*, *Rossioglossum*, *Vanda* and *Vandopsis*.

40. Given that this selection is based on a review reported at the eighth meeting of the Conference of the Parties, this list is being subjected to further expert review. To produce adequate CITES checklists for all the above taxa is probably beyond the scope and budget of the Convention, and would certainly require many more years of work. Therefore, the genera selected for inclusion in Volume 3 of the Orchid Checklist will be reviewed by an international panel of experts and the final choice will be made taking into account the requirements of the Parties, the lack of available standards for adoption, the view of the expert panel, the input from the present Review of Significant Trade and the available budget. The selection will be submitted to the Plants Committee for approval. The budget proposed for 1998-2000 is therefore less than that required to produce checklists for the genera for which the checklists have been completed. It is based on the intention to produce a reference covering approximately 2,000 names for genera for which no suitable references are available.

**Carnivorous Plants**

41. A standard reference for CITES purposes does not exist. A preliminary checklist has been published (*A World Carnivorous Plant List*, Schluauer, J., Carnivorous Plant Newsletter Volume 15, Numbers 3 and 4, pp. 59-117, 1986), but it is outdated and contains insufficient information for use as a CITES standard reference. An updated list, meeting the standards of CITES plant checklists including explanatory texts in English, Spanish and French, will be produced. This work will be carried out in association with the IUCN/SSC Carnivorous Plant Specialist Group.

**Succulent Plants**

42. The basic information to produce CITES checklists for succulent plants will soon be available in the form of a specialized lexicon. The lexicon itself will not be suitable for adoption as a CITES reference as it will not present the relevant data in a form that is useful to Parties. It will also be expensive and likely to be inaccessible to many Parties. However the pertinent information can be extracted from this lexicon, supplemented with information relevant to CITES and published as a widely available and cheaply produced standard text.

**Significant Trade**

43. If the Conference of the Parties approves the proposed programme for the Review of Significant Trade in plants (cf. document Doc. 10.56), this may include identification of the need to develop checklists for selected plant groups that previously have been neglected. To allow such action to be initiated it is proposed to allocate some funds for this purpose as well.

**Database Update and Maintenance**

44. All of the information used to produce the CITES plant checklists is, or will be, included in databases. These are held in institutions and to encourage these institutions to update and maintain this information in a form useful to the Parties to CITES, a small amount of funding will be dedicated to this process. The institutions concerned will be encouraged to make the databases accessible to third parties for CITES purposes. If possible under the existing copyrights, consideration will be given to making the current checklists available on the CITES sites on the World Wide Web.
<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
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<th>Total</th>
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<td>Carnivorous plants, <em>Aloe</em> and <em>Pachypodium</em></td>
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<tr>
<td><strong>Total</strong></td>
<td>35,000</td>
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<td>125,000</td>
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</table>
Regarding amendments to the current Resolution

Conf. 9.26 on Standard Nomenclature

1. The Nomenclature Committee recommends that the Parties:

2. – agree to insert a new first paragraph in the operative part of this Resolution that reads:

3. – RECOMMENDS that countries authorizing export of animals or plants (or their parts or derivatives) of taxa for which no standard references have been adopted by the Conference of the Parties inform the CITES Secretariat and prospective importing countries of their preferred published taxonomic authority. [Taxonomic authority means the most recent published paper or monograph that reviews the nomenclature of the taxon (being exported) and that has been reviewed by professionals in the pertinent discipline.] In cases where specimens of the taxon are exported from several countries and the exporting countries do not agree, or the exporting and importing countries do not agree, on the taxonomic authority, the Fauna or Flora Subcommittee of the Nomenclature Committee will determine the most appropriate taxonomic authority.

4. – add a new paragraph i) under RECOMMENDS, that reads as follows:

5. – that adoption of a standard checklist or reference does not by the action itself change the status of any listed or unlisted entity and the status of the entity remains as intended in the proposal adopted by the Parties, unless specifically changed by a further decision of the Parties.

6. – adopt the standard references for fauna and flora, discussed in document Doc. 10.18, paragraphs 5-8, 14, and 28-32, and included in document Doc. 10.77, Annex, paragraphs d)–f) and i)–m) under ADOPTS.

Regarding annotations to and nomenclatural changes in the appendices

FAUNA

7. *Naja naja* should be annotated to reflect the fact that the binomial name *Naja kaouthia* refers to the same biological entity as the trinomial name *Naja naja kaouthia*.

8. To clarify the current listing of *Ovis* vignei in Appendix I, it is recommended that the listing be annotated to read: “includes *O. v. arkal*, *O. v. bocharensis*, *O. v. cycloceros*, *O. v. blanfordi*, *O. v. punjabiensis*, *O. v. severtzovi* and *O. v. vignei.*”

FLORA

Cactaceae

9. Two new species have been described in the genus *Strombocactus* (J.J. Halsa, Ova nové strombokakty z Querétara, Cactaceae etc., pp. 83-91). These new species are the result of separation of the taxa from the original species *S. discoformis* that is listed in Appendix I. To reflect the intent of the Parties when they adopted the proposal to include *S. discoformis*, the current listing should be amended to read *Strombocactus* spp.

Bowenia (Zamiaceae)

10. Following the publication of an update to *A World List of Cycads* (D.W. Stevenson, R. Osborne and K.D. Hill, 1995; In: P. Vorster (Ed.), Proceedings of the Third International Conference on Cycad Biology, pp. 55-64, Cycad Society of South Africa, Stellenbosch), which was adopted as the standard reference to species of Cycadaceae, Stangeriaceae and Zamiaceae at the ninth meeting of the Conference of the Parties, the genus *Bowenia* (Appendix II), formerly considered to be in Zamiaceae, is now placed in the family Stangeriaceae. The taxonomy of Appendix II should reflect the current taxonomic position of this genus.

Anacampseros (Portulacaceae)

11. A recent revision of the genus *Anacampseros* has resulted in some species being allocated to the genus *Grahamia* (formally a monotypic genus not included in the CITES appendices) and to the newly created genus *Avonia* (cf. G.D. Rowley, 1994, *Anacampseros and allied genera – A reassessment*; Bradleya 12/1994: 105-112). To reflect these changes the current listing of *Anacampseros* spp. in Appendix II should be amended to read *Anacampseros* spp. and *Avonia* spp. The genus *Avonia* only includes species formerly included in *Anacampseros*. *Anacampseros* spp. should further be annotated to read: *Anacampseros australiana* and *A. kurtzii* are also referenced in the genus *Grahamia*.

12. The Plants Committee, while reviewing the appendices should consider the listing of these two latter taxa since hardly any international trade has been recorded in these.

Euphorbia (Euphorbiaceae)

13. Several species of *Euphorbia* included in Appendix I contain a number of subspecies. To avoid circumvention of the Parties’ intent to prohibit trade in these species, the current annotations (i.e. =426 and =427) should be maintained and the following annotations should be included in the relevant sections of Appendix I and II:

- *E. decaryi* (includes *E. decaryi* var. *ampanihyensis*, *capsaintemariensis*, *robinsonii* and *spiroplastyla*);
- *E. francoisii* (includes *E. francoisii* var. *rakotozafy*); and
- *E. moratii* (includes *E. moratii* var. *antsingiensis*, *bemarahensis* and *multifora*).