AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

Other Proposals

A. PROPOSAL

Transfer of Felis wiedii from Appendix II to Appendix I. (Note: The subspecies Felis wiedii nicaraguae and Felis wiedii salvinia are listed in Appendix I.)

B. PROPOONENT

The Federal Republic of Germany.

C. SUPPORTING STATEMENT

1. Taxonomy

   11. Class: Mammalia
   12. Order: Carnivora
   13. Family: Felidae
   14. Species: Felis wiedii
   Synonym: Leopardus wiedii

   15. Common Names:
       English: margay cat
       French: margay
       Spanish: Margay, Cecel, Tigrillo, Gato Monte


2. Biological Data

   21. Distribution: The margay cat occurs from Mexico through Central and South America to Patagonia, Argentina. The margay occurs in the following countries: Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay and Venezuela.

       In Honduras and Nicaragua only the subspecies Felis wiedii nicaraguae occurs. The subspecies Felis wiedii nicaraguae also occurs in Costa Rica. In El Salvador only the subspecies Felis wiedii salvinia occurs. Both subspecies are listed in Appendix I.

       The subspecies Felis wiedii salvinia also occurs in Guatemala.

Remark: The above given distribution of the species and some subspecies is no longer scientifically supported. There is now a consensus among scientists that the coloration and external characteristics of the skins are not valid scientific criteria on which the subdivision of the species into subspecies can be based (see App. A). At present there is no agreement among scientists on the distribution of the subspecies or on the way their distribution should be determined (see App. B).
Consequently the distribution of the subspecies is no longer defined and an everywhere equal enforcement of the regulations of CITES, for this species, is not possible!

22. Population:

Argentina: Rare to uncommon (Amon., 1976). Threatened by human destruction and habitat loss. The species only occurs in the North-eastern parts of the country.

Belize: Not directly threatened, but habitat loss will occur in coming years. It was found to be common in a number of localities (Weyer, 1982).

Bolivia: Reported as endangered in 1981 (Thornback and Jenkins, 1982). According to Tello (1986) the species had made a good recovery, but the major threat was thought to be professional hunting. He also reported that the species survived well in forests subject to selective cutting for timber, on farms with patches of forest and thicket as well as in regions of shifting farming where the forests are partially destroyed in mosaic patterns.

Brazil: Considered as common and widespread in the Amazon Basin, but rare with isolated populations in the central and southern parts of the country. Poaching and habitat loss are considered major threats (Melquist, 1984).

Colombia: No information available, but large areas of suitable habitat do exist (Melquist, 1984).

Costa Rica: Large habitat loss has occurred since 1940 (Vaughan, 1983). It is considered endangered (Lopez, 1978).

Ecuador: Massive deforestation in the Costa region, has destroyed the best habitat. All spotted cats are considered rare (Melquist, 1984).

El Salvador: Described as vulnerable (Serrano, 1978).

French Guiana: Situation probably similar to Suriname.

Guatemala: The species has apparently always been very rare (Saunders et al., 1950).

Guyana: Situation probably the same as in Suriname. It is hunted by farmers (Melquist, 1984).

Honduras: All of the felidae were reported as reduced in numbers or threatened (Aquilar, 1978).

Mexico: Reported as rare by Guggisberg (1975). It was indicated by Ramos (1986) that hunting of spotted cats was a major problem.

Nicaragua: Recorded as endangered (Salas, 1978).

Panama: Reported to be the rarest wild cat in Panama. The population has been severely reduced by human destruction and alteration of suitable habitat (Panama CITES MA, 1985).
Paraguay: Hunting and commercial trade were extensive until the late 1970s. Habitat loss remains a problem, especially in the East of the country (Melquist, 1984).

Peru: It is generally regarded as uncommon (Grimwood, 1969). Habitat loss is still a problem (Melquist, 1984). It only occurs along the border with Brazil and in the North-western parts of the country.

Suriname: Still reasonably common, extensive areas of suitable habitat remain (Melquist, 1984).

United States: The occurrence is based only upon a single specimen (Hall, 1981).

Uruguay: Probably very rare, and confined to the northern parts of the country (Melquist, 1984). It was described by Thornback and Jenkins (1982) as the least abundant spotted cat in Uruguay.

Venezuela: Quite restricted and threatened (Zawisza, 1984). It seems to be much rarer than the ocelot (Hoogersteijn cited in Broad et al., 1988).

The present available population studies do not give clear scientific criteria on which the actual status of this species can be based. The only conclusion, which can be drawn from these studies, is that there are populations which are certainly threatened and that the status of the other populations is not known.

Experts think that due to the enormous trade in skins (see Tables 1 and 2), which has taken place till far in the 1980s, more than the already listed populations, if not all, have become threatened.

23. Habitat/Ecology: The margay is largely arboreal and thus restricted to forest habitat (Guggisberg, 1975). It is found in humid forests up to 1500 m elevation in Venezuela (Zawisza, 1984) and in arid regions in Oaxaca and the Yucatan Peninsula, Mexico (Hall, 1981). It seems to be most strongly associated with moist forest habitats (Eisenberg, cited in Broad et al., 1988)

The margay has a weight of 2.3-3.5 kg, a body-length of 45-70 cm and a tail of 35-50 cm long (Dathe, 1986). Hunting is largely arboreal and prey consists of small and medium-sized mammals, birds and reptiles (Guggisberg, 1975). Less is known about reproduction. A litter consists of 1-2 young. (Dathe, 1986).

3. Trade Data

31. National Utilization: For the local market skins are used for making garments and coats. Worked skins are also sold to tourists as souvenirs.

32. Legal International Trade: In the late 1970s large numbers of skins were traded. There has been a notable decline in numbers in trade during the 1980s. The levels of exploitation in the past are difficult to estimate as Felis wiedii has not often been distinguished from other spotted cats such as Felis pardalis and Felis tigrina in trade (Paradiso, 1972).
In the Tables 1 and 2, respectively the numbers of skins exported by the reported countries of origin (or exporting country if no origin reported); and the minimum net imports of Felis wiedii skins reported to CITES, for the years 1980-1986, are given.

Table 1. Reported countries of origin (or exporting country if no origin reported) of skins of Felis wiedii reported to CITES, 1980-1986. (Source 1980-1985 - Broad et al., 1988; 1986 - WJU database).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belize</td>
<td>160</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2230</td>
</tr>
<tr>
<td>Bolivia</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Colombia</td>
<td>286</td>
<td>116</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Ecuador</td>
<td>-</td>
<td>1</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Honduras</td>
<td>1566</td>
<td>7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mexico</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Panama</td>
<td>1171</td>
<td>20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Paraguay</td>
<td>1693</td>
<td>17488</td>
<td>13071</td>
<td>8538</td>
<td>4068</td>
<td>138</td>
<td>-</td>
</tr>
<tr>
<td>Peru</td>
<td>1638</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td>303</td>
<td>5</td>
<td>156</td>
<td>15</td>
<td>579</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2182</td>
<td>17642</td>
<td>13138</td>
<td>8583</td>
<td>4657</td>
<td>138</td>
<td>2257</td>
</tr>
</tbody>
</table>

Over 20,000 skins of this species were reported in trade in 1977 and 1978 (Broad, 1987). Numbers in the following years have been steadily declining, which resulted in a meager 138 in 1985. The main source country was always Paraguay, except for 1986.


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>774</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Austria</td>
<td>773</td>
<td>789</td>
<td>110</td>
<td>1399</td>
<td>811</td>
<td>138</td>
<td>62</td>
</tr>
<tr>
<td>Belgium</td>
<td>-</td>
<td>-</td>
<td>102</td>
<td>42</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Canada</td>
<td>-</td>
<td>630</td>
<td>500</td>
<td>809</td>
<td>3</td>
<td>-</td>
<td>105</td>
</tr>
<tr>
<td>Denmark</td>
<td>936</td>
<td>-</td>
<td>2377</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Germany, Fed. Rep.</td>
<td>5655</td>
<td>6363</td>
<td>7079</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>203</td>
</tr>
<tr>
<td>France</td>
<td>286</td>
<td>116</td>
<td>-</td>
<td>-</td>
<td>3257</td>
<td>-</td>
<td>2230</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>435</td>
<td>46</td>
<td>-</td>
<td>-</td>
<td>70</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Israel</td>
<td>24</td>
<td>44</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>64</td>
</tr>
<tr>
<td>Italy</td>
<td>8496</td>
<td>8375</td>
<td>5379</td>
<td>3062</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Japan</td>
<td>68</td>
<td>128</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>19</td>
</tr>
<tr>
<td>Mexico</td>
<td>111</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Netherlands</td>
<td>24</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Saint Lucia</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>990</td>
<td>1016</td>
<td>12</td>
<td>838</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Turkey</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>United States</td>
<td>12</td>
<td>19</td>
<td>18</td>
<td>23</td>
<td>12</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>TOTAL</td>
<td>19981</td>
<td>17526</td>
<td>13200</td>
<td>8590</td>
<td>4155</td>
<td>138</td>
<td>2705</td>
</tr>
</tbody>
</table>
Almost all skins in trade were imported by western European countries. Up to 1982 the Federal Republic of Germany and Italy were the major importing countries.

33. Illegal Trade: Paraguay has been the main exporting country for *Felis wiedii*. All wildlife exports from Paraguay have been illegal in Paraguay since 1975 (Fuller et al., 1987).

In several range state there are still large legal and illegal stocks present. Apparently these stocks never dry up! At present it is tried to bring these skins into trade through free-ports and non-Party countries. The volume of this illegal trade is difficult to define, but it could be high.

34. Potential Trade Threats:

341. Live Specimens: No trade threat. Only a limited trade in live specimens exists, mainly for zoos.

342. Parts and Derivatives: The most important threat is the trade in skins. Although all range states prohibit, at the moment, the commercial export of skins, poaching and smuggling continues.

All around the world shipments, without legal CITES documentation, are being held in stock. As long as the species is not covered by Appendix I of CITES, a potential market for these illegal skins will continue to exist.

4. Protection Status

41. National: All range states with exception of Mexico are Parties to CITES.

In Table 3 the legal prohibitions on hunting, internal trade and commercial export of all range states are given. Dates are those on which the legislation came into force (Fuller et al., 1987).

<table>
<thead>
<tr>
<th>Country</th>
<th>CITES</th>
<th>Hunting</th>
<th>Trade</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>1979</td>
<td>1979</td>
<td>1979</td>
<td>1979</td>
</tr>
<tr>
<td>Brazil</td>
<td>1975</td>
<td>?</td>
<td>1967</td>
<td>1967</td>
</tr>
<tr>
<td>Colombia</td>
<td>1981</td>
<td>1984</td>
<td>1984</td>
<td>1984</td>
</tr>
<tr>
<td>Ecuador</td>
<td>1975</td>
<td>-</td>
<td>-</td>
<td>1981</td>
</tr>
<tr>
<td>El Salvador</td>
<td>1987</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Guyana</td>
<td>1977</td>
<td>-</td>
<td>-</td>
<td>1987</td>
</tr>
<tr>
<td>Honduras</td>
<td>1985</td>
<td>-</td>
<td>1978</td>
<td>1978</td>
</tr>
<tr>
<td>Mexico</td>
<td>- R</td>
<td>1951</td>
<td>?</td>
<td>1982</td>
</tr>
<tr>
<td>Paraguay</td>
<td>1977</td>
<td>1975</td>
<td>1975</td>
<td>1975</td>
</tr>
</tbody>
</table>
42. **International:** The species is listed in Appendix II of CITES since 1977. The subspecies *Felis wiedii nicaraguae* and *Felis wiedii salvinia* are listed in Appendix I of CITES since 1977.

In October 1986 the EEC installed a ban on the import of skins of *Felis wiedii* (Anon., 1987).

The species is known to occur in a number of protected areas (national parks), throughout its range (Anon., 1982b).

43. **Additional Protection Needs:** If the Berne Criteria are interpreted in a narrow way, then it will be observed that, for this species, these Criteria are not fulfilled. However the special circumstances (e.g. the impossibility to determine the distribution of the subspecies and the impossibility to determine the origin of the skins) and the situation in the range states require the strongest possible protection, which in this case can only be given through an Appendix I listing. The present subdivision into subspecies within the appendices of CITES is not an effective measure to protect the threatened populations.

Listing of the whole species in Appendix I of CITES will prevent a further decline of the populations, throughout its range, as a result of poaching for the skin trade. The subspecies already listed in Appendix I will benefit from this measure.

At the moment there is insufficient information on the status, distribution and ecology of the species to ensure a sustainable harvest. When this information is on hand, trade, under a strict quota system, could be considered again.

5. **Information on Similar Species**

The most similar species are *Felis pardalis*, which is generally larger, but has a shorter tail and shorter legs, and *Felis tigrina*, which is smaller and has a shorter tail and legs. Both species have an almost complete overlap in range with the margay.

Skins of *Felis wiedii* can be distinguished from skins of *Felis tigrina* as the hairs on the neck are directed towards the crown and not to the tail as in *Felis tigrina*; and from skins of *Felis pardalis* because there is only one whirl on the shoulder and not two whirls as in *Felis pardalis* (Dollinger, 1982).

6. **Comments from Countries of Origin**

This proposal was discussed during the 2nd meeting of the Animals Committee in Montevideo (April 1989). The representatives of several range states (i.e. Bolivia, Costa Rica, Paraguay and Uruguay), showed a positive attitude towards the proposal.

All range states will be consulted as soon as possible.
7. Additional Remarks

71. Skin Quality/Coloration: The quality of the skin is the same as for the ocelot (Dathe, 1986). The colour and markings are very similar with those of the ocelot. The ground colour above ranges from pale to ochre, marked with black stripes on the neck and along the mid-dorsal line, with brown rosettes or elongate blotches bordered with black on the side. Underparts with dark brown or black spots (Dollinger, 1982).

72 Captive Breeding: An annual average of 6 animals were bred between 1972 and 1986 in collections contributing to the International Zoo Yearbook (Duplaix-Hall, 1974-1975; Olney, 1976-1988). In 1986 a total of 81 animals were present in 32 collections (Olney, 1988).

8. References


Tello, J. L., 1986. The situation of the wild cats (Felidae) in Bolivia. Including notes on other wildlife species and on general aspects of the conservation and utilization of natural resources. CITES Secretariat, 60 pp.


2nd Meeting of CITES Animals Committee
Montevideo, Uruguay, 4 – 6 April 1989

Continuation of Ten Year Review - Status of Lesser Latin-American Spotted Cats

Working document submitted by Switzerland

*Felis tigrina oncilla*

a) The ISIS Taxonomic Directory recognizes the following *Felis tigrina* subspecies:

- *F. t. tigrina*: E Venezuela to NE Brazil
- *F. t. guttata*: E and C Brazil to N Argentina
- *F. t. pardinoides*: W Venezuela to W Ecuador

"Oncilla" (Costa Rica – Panama) is not listed.

b) P. Schauenberg (1873) refers to the high degree of individual variation in fur colour and pattern also in *Felis tigrina* and notes that the fur cannot be used as a basis for establishing subspecies:

> La fourrure de l' oncilla varie considérablement dans sa coloration et dans son ornemementation, comme c'est le cas chez les autres félinés tachetés, mais toutes ces variations restent individuelles et ne sauraient constituer des caractères valables pour distinguer des formes locales, voire des sous-espèces.

c) Allen (1919) notes:

> The number of local forms of *Margay* and *Oncilla* and their geographical relationships cannot now be determined, as they are poorly represented in museums. In order to satisfactorily settle these questions a large amount of material will have to be brought together, comprising large series of specimens from many localities. Hence it will undoubtedly be many years before such conditions will be realized. The early described forms are, as usual, extremely difficult to determine, the descriptions being too vague to be distinctive, and usually based on specimens from undesignated or wrongly designated localities.

D.G. Elliot (1904, *The Land and Sea Mammals of Middle America and the West Indies, Chicago*) writes on *tigrina*: "Color very variable. ... Other examples are gray, yellowish brown, or reddish buff, and the patterns have endless variety."
The taxon "oncilla" is attributed by him to the species "pardinoides". He gives the brief description by Thomas (1903) of the type specimen which originated from Volcan de Irazu, and notes that the type consists only of one skin (without skull or other parts of the skeleton). A footnote is of special interest:

This animal is compared with F. pardinoides Gray, which has not been satisfactorily separated from F. geoffroyi. It is reasonable to expect that this should be done before a subspecies of F. pardinoides is created. It would be difficult to accurately determine that new species was the same as Mr. Thomas's species without comparison with the type, as there are only slight specific differences indicated in the description, unless a "richer and drier ground color" may be considered, but which is a comparative distinction of questionable value.

e) Allen 1919 gives no details on the taxon. Note that the other subspecies which have been described by Thomas and which still were recognized by Allen are no longer considered as valid by Cabrera:

2. *Oncilla pardinoides oncilla* (Thomas)

   Known only from Costa Rica.

3. *Oncilla pardinoides andina* (Thomas)
   - *Oncilla pardinoides andina* Lindberg, Ark. för Zoologi, VIII, No. 16, p. 47, July 12, 1913. Ahuachapán, below Maderas, and north side of Mt. Pichincha, at altitude of 10,000 to 11,000 ft.

   Known only from the Andes of Ecuador.

   Type, total length 810, "head and body 520, tail 220, hind foot 100, ear 41. Skull, greatest length 85, basal length 73.5, zygomatic breadth 53.5, breadth of braincase 41."

4. *Oncilla pardinoides emerita* (Thomas)
   - Merida, Venezuela, and southwest in the Eastern Andes to Huila, Colombian.

   Known only from Costa Rica.

   f) The IUCN Red Data Book (1981) refers to Cabrera's taxonomy, but also to Leyhausen's view that *Felis tigrina* may cover two or even three species.

   g) The Significant Trade in Wildlife report (1988) refers to Gardner:

   "... although in a study of *Felis tigrina oncilla* Gardner (1971) stated that he would hesitate to distinguish this subspecies from *Felis tigrina pardinoides* were it not for the apparent absence of the species in the intervening area of Panama."
Felis tigrina oncilla (cont'd) - 3 -

**Distribution:** According to the IUCN Red Data Book, it inhabits Costa Rica where it is found throughout except for part of the Atlantic zone, and northern Panama. The species is also included in a 1976 list of endangered mammals of Nicaragua, but is not recorded by Hall and Kelso as occurring in that country.

Felis pardalis mearnsi and mitis

a) Both subspecies are listed by the ISIS Taxonomic Directory:

020002 FELIS PARDALIS PARDAVIS
OCELOT VERACRUZ TO HONDURAS

020003 FELIS PARDALIS AEQUATORIALIS
OCELOT COSTA RICA TO PERU

020004 FELIS PARDALIS ALBESCENS
OCELOT TEXAS TO TAMAILIPA MEX.

020005 FELIS PARDALIS MARIPENSIS
OCELOT OXINOCO TO AMAZON BASIN

020006 FELIS PARDALIS MEARNSI
OCELOT NICARAGUA TO PANAMA

020007 FELIS PARDALIS MITIS
OCELOT E. CEN. BOLIVIA TO N. ARGENTIN

020008 FELIS PARDALIS NELSONI
OCELOT SINALOA TO OAXACA

020009 FELIS PARDALIS PSEUDOPARDALIS
OCELOT N. VENEZ. TO N. COLOMBIA

020010 FELIS PARDALIS PUSACA
OCELOT SW. ECUADOR

020011 FELIS PARDALIS SONORIENSIS
OCELOT ARIZONA TO SINALOA, MEX.

020012 FELIS PARDALIS STEINBACHI
OCELOT CEN. BOLIVIA

however:

b) P. Schauenberg (1973) in Burton and Burton (eds.), Le royaume des animaux, makes the following comments:

Un pelage varié à l'infini
Les zoologues ont subdivisé l'ocelot en dix sous-espèces géographiques, qu'ils ont établies en se basant sur la coloration du pelage. Une telle classification est entièrement fausse et ne fait qu'embrouiller inutilement la systématique des félidés, déjà suffisamment confuse. Fort heureusement les plus éminents spécialistes en la matière, dont I. Weigel, en 1961, ont démontré que la variation individuelle de l'ocelot est telle que toutes les teintes possibles et imaginables se retrouvent chez les individus d'une seule et même localité, réduisant à néant les tentatives de classification des amateurs de sous-espèces. Il est pratiquement impossible de trouver deux peaux absolument identiques.
Felis pardalis (cont'd)

 Felis pardalis is considered a synonym to aequatorialis by Cabrera (1957), Catálogo de los Mamíferos de América de Sur:

 Felis pardalis aequatorialis kisaras.

- Felis aequatorialis Mearns, loc. cit., 1902: 246.

Felis aequatorialis is considered as synonym to aequisauro by Cabrera (1957), Catalogo de los Mamiferos de Arner, de Sur:

- Leopardo pardalis aequisauro, (no Linné, 1758).

Hab.—Nordeste de América del Sur, en toda la zona de montaña de Colombia, Ecuador y Perú, y además, por el norte, en Panamá y Costa Rica. Localidad típica: Paramba, Ecuador.

La gran semejanza entre aequatorialis y mearnsi fue repetida veces reconocida tanto por Allen como por Godman, pese a consideraciones como subspecies distintas. Lo cierto es que no hay ni un solo carácter bien definido que permitiese separar el ocelote del país montañoso de Colombia y Ecuador del que vive en la parte oriental de Centro América.

while the same author accepts the subspecies mitis:

 Felis pardalis mitis F. Cuvier.

- Felis chibi Cuvier, loc. cit., 1830: 568.
d) But the CITES Identification Manual clearly demonstrates the high degree of variability in fur colour and pattern of ocelots which originate from the distribution area of the "subspecies" mitis, proving so the impossibility of determining subspecies on the basis of fur characteristics.

Fur Skins / Family Felidae

Felis pardalis

Variation in colour and pattern — all skins originate from the same lot, confiscated by the Swiss Federal Veterinary Office. "Origin" most probably Paraguay.

e) J.A. Allen (1919, Notes on the Synonymy and Nomenclature of the Smaller Spotted Cats of Tropical America, Bull. A. Mus. Nat. Hist., Vol. 41, 341-420) recognizes mearnsi and equatorialis as different subspecies, but stating that they are similar in size and colour:

3. Leopardus pardalis mearnsi (Allen)

(Figures 1 to 3, 12a)


Subspecies name for "furanecus". Mearns, described.


A large dark form, based on a series of seven specimens. Thicker and larger than *L. pardalis* pardalis.
Felis pardalis (cont'd) - 4 -

7. *Leopardus pardalis aquatorialis* (Mearns)


Similar in size and general coloration to *L. p. orangutana* of Costa Rica.

f) But in the same publication, Allen refers to the wide range of individual variation in colour and pattern in ocelots from the same area (which should logically, lead to the conclusion that no subspecies can be established on the basis of fur criteria):

Individual Variation in the Color Characters of Ocelots

Figures 14 to 18.

A series of eight specimens—flat skins (hunting pelts), of which only two have skulls—collected by George K. Cheesie in 1917 at Descalvados on the Paraguay River about 300 miles north of Curumâia, in Matto Grosso, well illustrates the wide range of individual variation in color in ocelots. The color patterns of five of these specimens are shown below in Figures 14 to 18 (pp. 402-406); the other three are variously intermediate in ground color and markings between the five that are figured, no two of the series being alike. The ground color varies in the different specimens from deep ochraceous buff to pale buff. This feature is indicated only by a slight degree in the photographic reproductions by the depth of tone. The pattern of coloration, however, is sharply defined and permits of comparison of details in the markings of the different specimens. As respects the ground color, it is deepest in the specimen represented in Fig. 14, less deep in Fig. 15, but much deeper in this than in either of the other three. In the specimens shown in Fig. 16 and 17, the ground color is practically the same, while the one shown in Fig. 18, represents the extreme of paleness for the series. In regard to the color patterns, attention is called to the variation in the size or areas of the black markings in comparison with the extent of the intervening ground color, the extremes being represented in Figs. 1 and 5. Also the diversity presented in the nape bands, the shoulder markings, and in the median dorsal stripes.

A series of flat skins (hunting pelts) from Curumâia, received from the Roosevelt South American Expedition, completely parallels the series of eight already described in tone of ground color and character of markings. The ground color ranges from pale buff to ochraceous buff, and the markings are equally variable in extent in comparison with the intervening areas of ground color and in pattern. A smaller proportion, however, have the median dorsal line solid black.

g) *Felis pardalis mitis* is listed by Allen as a not valid taxon:

Among the unidentifiable names given to the *pardalis* group in addition to *Felis ocelot* Smith and Griffith and *Felis catenaria* H. Smith (1802), are *Felis mite* F. Cuvier (1820), *Felis bastetiana* F. Cuvier (1825, name preoccupied), *F. aurillata* F. Cuvier (1832), *Felis pardalis* Hartt (1842), *Felis melanura* Hall (1844, insolvency specimens), *Felis pardalis minimus* Wilson (1860), Realjob, Nicaragua, but "too young to eat anything except milk"), *Felis pardalis* Gray (1867), *Panther ludovicianus* and *P. jardini* Fitzinger (1859), and others.
Felis pardalis (cont'd)

h) E.A. Goldman (1920, Mammals of Panama, Smithsonian Miscellaneous Collections Vol. 69, Number 5, p.167/168) indicates that the name mearnsi has been introduced by Allen, 1904, as a substitute for F. costaricensis which was pre-occupied by Felis bangsi costaricensis (= Felis concolor costaricensis).

Goldman gives no information on how mearnsi differs from other ocelot "subspecies". On the other hand, it becomes obvious from his publication, that the scientific basis for the naming and renaming of mearnsi was extremely poor:

**FELIS PARDALIS MEARNSI** Allen

Mearns' Ocelot; Manigordo; Tigre Chico

*Felis mearnsi* Allen, Bull. Amer. Mus. Nat. Hist., Vol. 20, p. 21, February 29, 1904. (Substitute for *F. costaricensis* Mearns, which is preoccupied by *F. bangsi* costaricensis Merriam.) Type from Talamanca, Costa Rica. (Probably from near Sipario in the valley of the Rio Sierola.)

Bangs (1902, p. 48) records the collection of a fine adult male at 4,000 feet altitude near Boquete by W. W. Brown, Jr. Under the name *Felis mearnsi*, proposed as a substitute for *Felis costaricensis* Mearns (which proved to be preoccupied by *F. bangsi* costaricensis Merriam for the puma), Allen (1904, p. 71) notes a specimen obtained by J. H. Batty at Boqueron. Anthony (1916, p. 371) lists a specimen from Real de Santa Maria.

Specimens examined: Boqueron, 1; Boquete, 1; Gatun, 3; Mount Pire, 1; Punta de Peña (near Bocas del Toro), 1; Real de Santa Maria, 1.

i) The IUCN Red Data Book (1981) states:

"Many subspecies have been described but data on their distribution and status are scanty and the validity of many seems dubious and requires further study.

j) The same opinion is shared by the authors of the Significant Trade in Wildlife report (1988):"Many subspecies have been described; at least eleven are currently recognized (Cabrera, 1957, Hall, 1981). However they have been largely based on pelage of limited numbers of specimens and geographic evidence. A study of the cranial dimensions of individuals assigned to a number of subspecies found that they are virtually indistinguishable (Ximenez, 1974), thus the validity of many of them seems doubtful."
Felis pardalis (cont'd) - 6 -

Distribution:

Felis pardalis mearnsi: Nicaragua, most of Costa Rica, Panama almost certainly extending into Colombia. The Colombian populations are also assigned to aequatorialis, and there have been populations in Panama and Costa Rica referred to aequatorialis also [Significant Trade in Wildlife].

Panama, Costa Rica, Nicaragua (Red Data Book, ISIS) if Cabrera's taxonomy is adopted, the range in South America would also include all mountain areas of Colombia, Ecuador and Peru.

Felis pardalis mitis: Following Cabrera: Central and eastern Brazil, south of the lower Amazonas, Paraguay, northern Argentina from Misiones and Corrientes to Tucuman. Note that the subspecies recognized by ISIS also maripensis occurs in Brazil (Orinoco to Amazon basin) and that ISIS gives no information as to the subspecies occurring in the south-west of Brazil.

According to Allen who does not recognize mitis, the subspecies tumatumari occurs in the Guianas and north-eastern Brazil, chibigoulouz in Paraguay and the Matto Grosso.

Population: No reliable data available.
The species is listed as "vulnerable" in the IUCN Red Data Book.

Felis pardalis mearnsi: Rated "endangered" in Nicaragua by Salas, 1978

Costa Rica: Numbers greatly reduced, listed as "endangered" in 1978, population estimates vary from 200 (Lopez, cited in Melquist, 1984) to 2000-3000 in large forest areas alone (Vaughan, 1983) which does not include variably altered habitats.

Panama: Rated "endangered" in 1978.

"... Melquist indicates that the range of the ocelot extends throughout Panama.

Felis pardalis mitis: Argentina: Listed as "endangered" by law. Outlook is better than for the Jaguar but favourable habitat is declining.

Brazil: Generally rare with isolated populations located primarily in protected areas. The species is rated "vulnerable" in Brazil by the Red Data Book. The Significant Trade Report quotes Smith (1976) saying that the population was thought to have remained stable despite heavy hunting pressure.

Paraguay: Occurs in the various habitats throughout Paraguay. Populations in the Chaco may have increased because of the obvious reduction of hunting pressure since 1976.
Felis wiedii salvinia and nicaraguae

a) The ISIS Taxonomic Directory lists 11 subspecies of *Felis wiedii*, seven of which occurring from Mexico to Panama:

- *Felis wiedii cooperi*
  - *glaucula*
  - *oaxacensis*
  - *Yucatana salvinia*
  - *nicaraguae*
  - *pirrensis*
  - *Vipens amazonica*
  - *wiedii*
  - *boliviae*

- Mexico: Nuevo Leon, USA: Texas
- Mexico: Sinaloa to Oaxaca
- Mexico: Tamaulipas to Oaxaca
- Mexico: N Chihuahua to Yucatan, Guat.
- Mexico: Chippas; Guatemala, El Salv.
- Honduras to Costa Rica
- Panama to N Peru
- Orinoco to Amazon Basin
- Amazon Basin of Brazil
- E und S Brazil to N Argentina
- Bolivia, Mato Grosso/Brazil

b) *nicaraguae* has been introduced as a new subspecies by Allen (1919) with the following description, based on one single specimen:

5. *Margin glaucula nicaraguae*, new subspecies


Similar in general color pattern to *F. glaucula* but much more richly colored and apparently larger.

Ground color of upperparts fulvous instead of "pale drab gray"; black markings narrow, linear, sharply defined, occasionally enclosing patches of the ground color, arranged on the thighs in transverse rows of large oval blotches, on the shoulders in vertical bands; whole underparts and inside of limbs pure white, the chin, throat, and abdominal region unspotted, the percutural area with narrow linear stripes of black, and a broad black throat band. Differs from a specimen of typical *glaucula* from Los Mamos, Jalisco, Mexico, chiefly in its much richer, more fulvous coloring.

Collector's measurements of the type in the Field:
- Total length, 1230 mm
- Head and body, 700; tail vertebrae, 510; hind foot (from skin), 170
- Skull: total length, 107; basal length, 93; condylobasal length, 100; zygomatic breadth, 72.2; tip to tip of postorbital processes, 51.6; interorbital constriction, 22.2; breadth of brain-case, 43; palatal length (from notch to anterior base of incisors), 40.5; length of bulla, 20.8; length of p1, 12.4

A second animal which is referred to the same subspecies, shows considerable deviation in fur colour:

An adult female from Matagalpa, Nicaragua, is also referred to this subspecies, which resembles the type in all essentials except that it is just appreciably lighter in coloration and slightly smaller. It is however much more richly colored and decidedly larger than either an adult male from the type region of *glaucula*, or than the type of *glaucula* as indicated by the description. Total length, 970; head and body, 580; tail, 300; hind foot (from skin), 110. Skull: condylobasal length, 89; zygomatic breadth, 68.8; interorbital breadth, 16.9; tip to tip of postorbital processes, 32.3; interorbital constriction, 22.2; breadth of brain-case, 43; palatal length (from notch to anterior base of incisors), 40.5; length of bulla, 20.8; length of p1, 12.4.
c) According to Eduardo Lopez Pizarro (undated, San José) *nicaraguensis* is not the only subspecies found in Costa Rica: in the map given by him he shows also *pirrensis* in the south east of the country, but there is no obvious reason why there should be two different subspecies.

C. Henderson (1970) menciona que la especie *Felis wiedii nicaraguensis* (J. A. Allen) aparece en todo el país excepto en el área de Sixaola, frontera con Panamá, donde la especie que existe es *Felis wiedii pirrensis* Goldman.

d) IUCN Red Data Book (1981) and Significant Trade in Wildlife (1985) both refer to the fact that the distribution of subspecies is only poorly defined.
Felis wiedii (cont'd)

Distribution: According to the IUCN Red Data Book (1981):

Felis wiedii salvinia: In Guatemala in 1950 known only from Vera Paz. Specimens taken in 1961 from Mt. Cocaguatique and Colinas de Jucuer were tentatively ascribed to this subspecies. According to ISIS also in Chiapas, Mexico

Felis wiedii nicaraguae: Honduras, Nicaragua and Costa Rica other than Sixzoa region

Population: Species rated vulnerable by IUCN Red Data Book (1981). Considered very rare in Guatemala, no specific information from Honduras recorded as endangered in Nicaragua (1978), believed to be much commoner than the ocelot but still vulnerable in El Salvador, Costa Rica rated "endangered", but from nowhere reliable information is available.
Appendix B

Working document submitted by the Federal Republic of Germany

A) Countries of origin for Felis pardalis, F. tigrina and F. wiedii on a subspecies basis (Source: S. Broad, The harvest of and trade in Latin American spotted cats and otters, WTMU, 1987)

1. Argentina
   a) Felis pardalis mitis
   b) Felis tigrina guttula
   c) Felis wiedii wiedii

2. Belize
   a) Felis pardalis pardalis
   b) Felis wiedii yucatanica
       salviniae (?)

3. Bolivia
   a) Felis pardalis steinbachii
   b) Felis wiedii boliviae

4. Brazil
   a) Felis pardalis maripensis
       mitis
       steinbachii (?)
   b) Felis tigrina guttula
       tigrina
   c) Felis wiedii amazonica
       boliviae
       wiedii
       vigens
5. Colombia
a) *Felis pardalis aequatorialis mearnsi* (?)
   *pseudopardalis*
b) *Felis tigrina pardina:des*
c) *Felis wiedii pirrensis*

6. Costa Rica
a) *Felis pardalis mearnsi*
b) *Felis tigrina oncilla*
c) *Felis wiedii nicaraguae pirrensis*

7. Ecuador
a) *Felis pardalis aequatorialis pusaea*
b) *Felis tigrina pardina:des*
c) *Felis wiedii pirrensis*

8. El Salvador
a) *Felis pardalis pardalis*
b) *Felis wiedii salvinia*

9. French Guiana and Guyana
a) *Felis tigrina maripensis*
b) *Felis tigrina tigrina*
c) *Felis wiedii vigens*
10. Guatemala
   a) *Felis pardalis pardalis*
   b) *Felis wiedii salvinia*
      *yucatanica*

11. Honduras
   a) *Felis pardalis pardalis*
   b) *Felis wiedii nicaraguae*

12. Mexico
   a) *Felis pardalis albescens* (?)
      *nelsoni*
      *pardalis*
      *sonoriensis*
   b) *Felis wiedii glaucula*
      *oaxacensis*
      *yucatanica*

13. Nicaragua
   a) *Felis pardalis mearnsi*
   b) *Felis tigrina oncilla* (?)
   c) *Felis wiedii nicaraguae*

14. Panama
   a) *Felis pardalis mearnsi*
   b) *Felis tigrina oncilla* (?)
   c) *Felis wiedii pirrensis*
15. Paraguay
a) Felis pardalis ritis
b) Felis tigrina guttula
c) Felis wiedii boliviae
   wiedii

16. Peru
a) Felis pardalis equatricialis
   pusae
b) Felis tigrina parincides
c) Felis wiedii amazonica (?)
   pirrensis

17. Suriname
a) Felis pardalis maripensis
b) Felis tigrina tigrina
c) Felis wiedii vigens

18. Trinidad and Tobago
Felis pardalis pseudopardalis

19. U. S. A.
Felis pardalis albecens
   schortiensis

20. Uruguay
Felis wiedii wiedii
21. Venezuela

a) *Felis pardalis maripensis*
   *pseudopardalis*

b) *Felis tigrina pardinoides*
   *tigrina*

c) *Felis wiedii vigens*
E) The different subspecies and their supposed distribution (Source: See ...

**Felis wiedii wiedii**
- Argentina
- Brazil
- Paraguay
- Uruguay

**Felis wiedii salvinia**
- Belize (?)
- El Salvador
- Guatemala

**Felis wiedii cooperi**
- U. S. A. (?)

**Felis wiedii yucatanica**
- Belize
- Guatemala
- Mexico

**Felis wiedii boliviae**
- Bolivia
- Paraguay (?)
- Brazil

**Felis wiedii amazonica**
- Brazil
- Peru (?)

**Felis wiedii vigens**
- Brazil
- French Guiana
- Guyana
- Suriname
- Venezuela
**Felis wiedii pirrensis**
Colombia
Costa Rica
Ecuador
Panama
Peru

**Felis wiedii glaucula**
Mexico

**Felis wiedii nicaraguae**
Costa Rica
Honduras
Nicaragua

**Felis wiedii oaxacensis**
Mexico

**Felis tigrina guttula**
Argentina
Brazil
Paraguay

**Felis tigrina tigrina**
Brazil
French Guiana
Guyana
Suriname
Venezuela

**Felis tigrina pardinoides**
Colombia
Ecuador
Peru
Venezuela
Felis tigrina oncilla
Costa Rica
Nicaragua
Panama (?)

Felis pardalis mitis
Argentina
Brazil
Paraguay

Felis pardalis pardalis
Belize
El Salvador
Guatemala
Honduras
Mexico

Felis pardalis steinbachi
Bolivia
Brazil (?)

Felis pardalis maripensis
Brazil
French Guiana
Guyana
Suriname
Venezuela

Felis pardalis aequatorialis
Colombia
Ecuador
Peru

Felis pardalis mearnsi
Colombia (?)
Costa Rica
Nicaragua
Panama
Felis pardinis pseudopardinis
Colombia
Trinidad and Tobago
Venezuela

Felis pardinis pusaea
Ecuador
Peru

Felis pardinis nelsoni
Mexico

Felis pardinis albescens
Mexico (?)
U. S. A.

Felis pardinis sonoriensis
Mexico
U. S. A.