

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. PROPONENT

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, Cauce, Tigrillo, Gato Monte
- 16. Code Numbers: A-112.007.001.030

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 (Anon., 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 (Aguilar, 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 - WTMU database).

Country/Year	1980	1981	1982	1983	1984	1985	1986
Belize	160	2	-	-	-	-	-
Bolivia	-	-	-	-	-	-	2230
Brazil	1	-	-	1	-	-	-
Colombia	286	116	5	2	-	-	-
Costa Rica	-	-	-	1	1	-	1
Ecuador	-	1	3	-	-	-	4
Honduras	1566	7	-	-	-	-	1
Mexico	3	2	2	6	9	-	4
Nicaragua	-	1	-	-	-	-	-
Panama	1171	20	-	-	-	-	-
Paraguay	16693	17488	13071	8558	4068	138	-
Peru	1638	-	1	-	-	-	1
Unknown	303	5	156	15	579	-	16
TOTAUX	21821	17642	13138	8583	4657	138	2257

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 2. Apparent minimum net imports of Felis wiedii skins reported to CITES, 1980-1986. (Source 1980-1985 - Broad et al., 1988; 1986 - WTMU database).

Pays/année	1980	1981	1982	1983	1984	1985	1986
Argentina	774	-	-	-	-	-	-
Austria	773	789	110	1399	811	138	62
Belgium	-	-	102	42	-	-	-
Canada	-	630	500	809	3	-	105
Denmark	936	-	-	2377	-	-	-
Germany, Fed. Rep.	5655	6363	7079	-	-	-	203
France	286	116	-	-	3257	-	2230
Hong Kong	435	46	-	-	70	-	-
Israel	24	44	-	-	-	-	64
Italy	8496	8375	5379	3062	-	-	-
Japan	68	128	-	-	-	-	19
Mexico	111	-	-	-	-	-	-
Norway	24	-	-	-	-	-	-
Netherlands	24	-	-	-	-	-	-
Saint Lucia	-	-	-	-	2	-	-
Spain	990	1016	12	838	-	-	-
Turkey	-	-	-	40	-	-	-
United States	12	19	18	23	12	-	22
TOTAL	19981	17526	13200	8590	4155	138	2705

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 3

Country	CITES	Hunting	Trade	Export
Argentina	1981	1981	1981	1981
Belize	1981	1981	1981	1981
Bolivia	1979	1979	1979	1979
Brazil	1975	?	1967	1967
Colombia	1981	1973	1973	1973
Costa Rica	1975	1984	1984	1984
Ecuador	1975	-	-	1981
El Salvador	1987	-	-	-
French Guyana	1978	1975	1975	1975
Guatemala	1980	1970	1970	1970
Guyana	1977	-	-	1987
Honduras	1985	-	1978	1978
Mexico	-	R 1951	?	1982
Nicaragua	1977	1977	1977	1977
Panama	1978	1980	1980	1980
Paraguay	1977	1975	1975	1975
Peru	1975	R 1977	R 1977	1977

Suriname	1981	1977	1977	1977
United States	1975	-	-	-
Uruguay	1975	1978	1978	1978
Venezuela	1975	1970	1970	1970

? = pas d'information; R = réglementée

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 overlaps 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

- Aguilar, W., 1978. El manejo de la Vida Silvestre en Honduras. In: Morales, R., Macfarland, C., Incer, J. and Hobbs, A. (eds), Memorias de la Primera Reunión Regional Centroamericana sobre Vida Silvestre. Matagalpa, Nicaragua 25-29 Julio 1978. Unidad de areas silvestres y cuencas del CATIE.
- Anon., 1980. The International Trade in Felidae. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Proceedings of the second meeting of the Conference of the Parties. San José, Costa Rica, 19 to 30 March 1979. Vol. 1. Secretariat of the Convention, IUCN, Gland, Switzerland.
- Anon., 1982b. IUCN Directory of Neotropical Protected Areas. Commission of National Parks and Protected Areas, IUCN, Tycooly Int., Dublin, 436 pp.
- Anon., 1987. EEC import restrictions. TRAFFIC Bulletin 8(4): 57-58.
- Berger, D. and Portal, C., 1982. Dossier: Espèces animales guyanaises menacées. Unpublished report, 49pp.
- Broad, S., 1987. The harvest of and trade in Latin American spotted cats (Felidae) and otters (Lutrinae). IUCN Wildlife Trade Monitoring Unit, Cambridge, UK, 139 pp.
- Broad, S., Luxmoore, R. and Jenkins, M., 1988. Significant trade in wildlife: a review of selected species in CITES Appendix II. Vol. I. IUCN Conservation Monitoring Centre, Cambridge, UK, pp. 183.
- Cabrera, A., 1957. Catalogo de los mamíferos de America del Sur, vol. I. Methatheria, Unguiculata, Carnivora. Recista del Museo Argentino de Ciencias Naturales 'Bernadino Rivadavia', Ciencias Zoológicas 4(1): 1-307.
- Caldwell, J.R., 1984. South American cats in trade: The German connection. Traffic Bulletin 6(2): 31-32.
- Cunha Vieira, C. da., 1955. Lista remissiva dos mamíferos do Brasil. Arquivos de Zoologia do Estado de Sao Paulo 8(2): 341-474.
- Dathe, H. and Schops, P. (Hrsg.), 1986. Peltztieratlas. VEB Gustav Fischer Verlag, Jena, 323 pp.

- Dollinger, P. (ed)., 1982. CITES Identification Manual. Vol. I. CITES Secretariat, Lausanne, Switzerland.
- Duplaix-Hall, N. (ed),. 1974-1975. International Zoo Yearbook, Volumes 14-15, Zoological Society of London, London.
- Foote, R.W. and Scheuerman, R.G., 1973. Reptilian and mammalian hides exported from Leticia, Amazonas, Colombia during 1972 and January - March of 1973. Unpublished report, 6 pp.
- Fuller, K.S., Swift, B., Jorgensen, A. and Bräutigam, A., 1987. Latin American wildlife trade laws (Revised). World Wildlife Fund-US, 418 pp.
- Goldman, E.A., 1943. The races of the Ocelot and Margay in Middle America. Journal of Mammalogy. 24(1): 372-385.
- Grimwood, I. R., 1969. Notes on the distribution and status of some Peruvian Mammals in 1968. Special Publication 21. American Committee for International Wildlife Protection and New York Zoological Society, Bronx, New York, 86 pp.
- Guggisberg, C.A.W., 1975. Wild Cat of the World, David and Charles, London, 328 pp.
- Hall, E.R., 1981. The mammals of North America, 2nd edition. 2 vols. Wiley. New York, 1358 pp.
- Handley, C.O., 1976. Mammals of the Smithsonian Venezuelan Project. Brigham Young University Scientific Bulletin Biological Series 20(5): 1-89.
- Inskipp, I, and Barzdo, J., 1987. World checklist of threatened mammals. Nature Conservancy Council, Peterborough, UK, 125 pp.
- Koford, C.B., 1973. Spotted Cats in Latin America: An interim report. Oryx 7 (1): 37-39.
- Lopez, E., 1978. Informe sobre las actividades de la Dirección General de Recursos Pesqueros y Vida Silvestre de Costa Rica. In: Morales, R., Macfarland, C., Incer, J. and Hobbs, A. (eds), Memorias de la Primera Reunión Regional Centroamericana sobre Vida Silvestre. Matagalpa, Nicaragua 25-29 Julio 1978. Unidad de areas silvestres y cuencas del CATIE.
- Mares, M.A., Ojeda, R.A. and Kosco, M.P., 1981. Observations on the distribution and the ecology of the mammals of Salta Province, Argentina. Annals of the Carnegie Museum 50: 151-206.
- Melquist, W.E., 1984. Status survey of otters (Lutrinae) and spotted cats (Felidae) in Latin America. Contract completion report, IUCN, Switzerland, 269 pp.
- Olney, P.J.S. (ed)., 1976-1988. International Zoo Yearbook, Volumes 16-27, Zoological Society of London, London.
- Paradiso. J. L., 1972. Status Report on Cats (Felidae) of the World, 1971. U.S. Dept. of the Interior, Fish and Wildlife Service, Washington, D.C.

- Sallas, J. B., 1978. Informe sobre las actividades que desarrolla el Departamento de Vida Silvestre en Nicaragua. In: Morales, R., Macfarland, C., Incer, J. and Hobbs, A. (eds), Memorias de la Primera Reunión Regional Centroamericana sobre Vida Silvestre. Matagalpa, Nicaragua 25 - 29 Julio. Unidad de areas silvestres y cuencas del CATIE.
- Serrano, F., 1978. Informe sobre las actividades de la Unidad de Parques Nacionales y Vida Silvestre en El Salvador. In: Morales, R., Macfarland, C., Incer, J. and Hobbs, A. (eds), Memorias de la Primera Reunión Regional Centroamericana sobre Vida Silvestre. Matagalpa, Nicaragua 25 - 29 Julio 1978. Unidad de areas silvestres y cuencas del CATIE.
- Smith, N.J.H., 1976. Spotted cats and the Amazon skin trade. Oryx 13(4): 362-371.
- 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.
- Thornback, J. and Jenkins, M., 1982. The IUCN Mammal Red Data Book, Part 1. IUCN, Gland, Switzerland, 516 pp.
- Vallester, E., 1978. Informe de Panama sobre la situacion de la Fauna Silvestre. In: Morales, R., Macfarland, C., Incer, J. and Hobbs, A. (eds), Memorias de la Primera Reunión Regional Centroamericana sobre Vida Silvestre. Matagalpa, Nicaragua 25 - 29 Julio 1978. Unidad de areas silvestres y cuencas del CATIE.
- Ximenez, A., Langguth, A. and Praderi, R., 1972. Lista sistematica de los mamiferos del Uruguay. Anales Mus. Nac. Nat. Montevideo 7(5): 1-49.
- Zawisza, T., 1984. Guia ecologica de la fauna de Venezuela, Caracas.



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

<u>tigrina</u>	E Venezuela to NE Brazil
<u>guttula</u>	E and C Brazil to N Argentina
<u>pardinoides</u>	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'oncille
varie considérablement dans sa coloration
et dans son ornementation, 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 doubtless 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 undesignedated or wrongly designated localities.

- d) 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 "oncella" 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. pardnoides* 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. pardnoides* is created. It would be difficult to accurately determine that any specimen was the same as Mr. Thomas's species without comparison with the type, as there are but slight specific characters indicated in the description, unless a "richer and deeper ground color" may be so 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. *Oncella pardnoides oncella* (Thomas)

1. *Felis pardnoides oncella* THOMAS, Ann. Mag. Nat. Hist., (7) XII, p. 237, Aug. 1903. Based on a skin from Volcan de Irazu, Costa Rica.

Felis carrikera ALLEN, Bull. Amer. Mus. Nat. Hist., XX, p. 47, Feb. 29, 1904. Pozo Azul, Pinar Province, Costa Rica. Apparently a melanism of *O. pardnoides oncella* (Thomas). I have before me a similar melanism of *O. pardnoides emerita* from Merida, Venezuela.

Known only from Costa Rica.

3. *Oncella pardnoides andina* (Thomas)

Felis pardnoides andina THOMAS, Ann. Mag. Nat. Hist., (7) XII, p. 235, Aug. 1903. Jima, Province of Azuay, Ecuador. Altitude 2400 m.

Felis pardnoides andina LÖNNBERG, Ark. för Zoologi, VIII, No. 16, p. 6, July 12, 1913. Abunchi, below Melchiqui, and north side of Mt. Pichincha, at altitudes of 10,000 to 11,000 ft.

Known only from the Andes of Ecuador.

Type, total length 810, "head and body 520, tail 290, hind foot 109, ear 41. Skull, greatest length 86, basal length 73.5, zygomatic breadth 53.5, breadth of braincase 41."

4. *Oncella pardnoides emerita* (Thomas)

Figures 4b, 6b, 9b, 12c

Felis pardnoides emerita THOMAS, Ann. Mag. Nat. Hist., (5) X, p. 44, July 1912. Montes de la Cutala, Merida, Venezuela.

Margay tigrina wiedi ALLEN, Bull. Amer. Mus. Nat. Hist., XXXV, p. 223, May 31, 1916. Part; the Andalusia specimen only.

Margay tigrina emerita ALLEN, Bull. Amer. Mus. Nat. Hist., XXXV, p. 552 (footnote), Aug. 9, 1916. Record of a specimen (practically a topotype) from Merida, Venezuela.

Merida, Venezuela, and southward in the Eastern Andes to Huila, Colombia.

- 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 oncella* Gardner (1971) stated that he would hesitate to distinguish this subspecies from *Felis tigrina pardnoides* were it not for the apparent absence of the species in the intervening area of Panama."

Distribution: According to the IUCN Red Data Book: 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 1978 list of endangered mammals of Nicaragua, but is not recorded by Hall and Kelson as occurring in that country.

Population: Species rated vulnerable by IUCN Red Data Book (1981). Considered "endangered" in Costa Rica, but no reliable data available. Very rare in Panama after Koford (1975).



Felis pardalis mearnsi and mitis

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

- 020002 FELIS PARDALIS PARDALIS
OCELOT VERACRUZ TO HONDURAS
- 020003 FELIS PARDALIS AEQUATORIALIS
OCELOT COSTA RICA TO PERU
- 020004 FELIS PARDALIS ALBESCENS
OCELOT TEXAS TO TAMAULIPA MEX.
- 020005 FELIS PARDALIS MARIPENSIS
OCELOT ORINOCO TO AMAZON BASIN
- * 020006 FELIS PARDALIS MEARNSEI
OCELOT NICARAGUA TO PANAMA
- * 020007 FELIS PARDALIS MITIS
OCELOT E. + CEN. BRAZIL TO N. ARGENTINA
- 020008 FELIS PARDALIS NELSONI
OCELOT SINALOA TO OAXACA
- 020009 FELIS PARDALIS PSEUDOPARDALIS
OCELOT N. VENEZ. + N. COLOMBIA
- 020010 FELIS PARDALIS PUSAEA
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 fautive et ne fait qu'embrouiller inutilement la systématique des félinés, 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.

- c) *Felis pardalis mearnsi* is considered a synonym to *aequatorialis* by Cabrera (1957), Catalogo de los Mamíferos de América de Sur:

Felis pardalis aequatorialis Mearns.

- Felis pardalis* Alston, Biol. Centr.-Americ., Mamm., 1882 : 60 (no Linné, 1758).
- Felis costaricensis* Mearns, Proc. U. S. Nat. Mus., 25, 1902 : 245 (no Merriam, 1901).
- Felis aequatorialis* Mearns, loc. cit., 1902 : 246.
- Felis mearnsi* J. A. Allen, Bull. Americ. Mus. Nat. Hist., 28, 1910 : 108.
- Oncoides pardalis aequatorialis* J. A. Allen, Bull. Americ. Mus. Nat. Hist., 35, 1916 : 222.
- Leopardus pardalis mearnsi* J. A. Allen, Bull. Americ. Mus. Nat. Hist., 41, 1919 : 346, figs. 1-3 y 12a.
- Leopardus pardalis aequatorialis* J. A. Allen, loc. cit., 1919 : 347.

Hab. — Noroeste 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* fué repetidas veces reconocida tanto por Allen como por Godman, pese a considerarlos como subespecies distintas. Lo cierto es que no hay ni un solo carácter bien definido que permita separar al 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 mitis* F. Cuvier, Hist. Nat. Mammif., 2, fasc. 18, 1820 : lám. 137.
- Felis pardalis* Wied, Beitr. Naturg. Brasil., 3, 1826 : 361 (no Linné, 1758).
- Felis ocelot* Hamilton Smith, en Griffith, Anim. Kingd., 3, 1827 : 475, núms. 1 y 2, láms. (no Link, 1795).
- Felis chibigouazou* Gray, en Griffith, Anim. Kingd., 5, 1827 : 167.
- Felis chati* Gray, loc. cit., 1827 : 169.
- Felis hamiltoni* Fischer, Syn. Mammal., Add., 1830 : 568.
- Felis chibigouazu* Fischer, loc. cit., 1830 : 568.
- Felis armillatus* F. Cuvier, Hist. Nat. Mammif., fasc. 1832 : lám. 139.
- Felis smithii* Swainson, Anim. in Meneg., 1838 : 120, fig. 19.
- Felis maracaya* Wagner, Schreb. Säug. Suppl., 2, 1841 : 492.
- Felis brasiliensis* Schinz, Syst. Verz. Säug., 1, 1844 : 435.
- Felis tigrina* Elliot, Proc. Zool. Soc. London, 1877 : 706 (parte; no Schreber, 1775).
- Felis (Zibethailurus) pardalis* Lahille, Prim. Reun. Congr. Cient. Lat. Amer., 3, 1899 : 178.
- Felis pardalis chibigouazou* Ihering, Rev. Mus. Paulista, 8, 1911 : 177.
- Oncoides pardalis chibigouazou* J. A. Allen, Bull. Americ. Mus. Nat. Hist., 35, 1916 : 580.
- Leopardus pardalis chibigouazou* J. A. Allen, Bull. Americ. Mus. Nat. Hist., 41, 1919 : 488, figs. 14-18.
- Felis pardalis brasiliensis* Osgood, Journ. Mammal., 1, 1920 : 90.
- Felis chibigouazou* Dittmars, Guide New York Zool. Park., 1939 : 27 (error reiterado por chibigouazou).
- Leopardus pardalis* Cabrera y Yepes, Mamif. Sud-America., 1940 : 164, lám. 30.
- Leopardus pardalis brasiliensis* Pocock, Field Mus. Nat. Hist., 27, 1941 : 322.

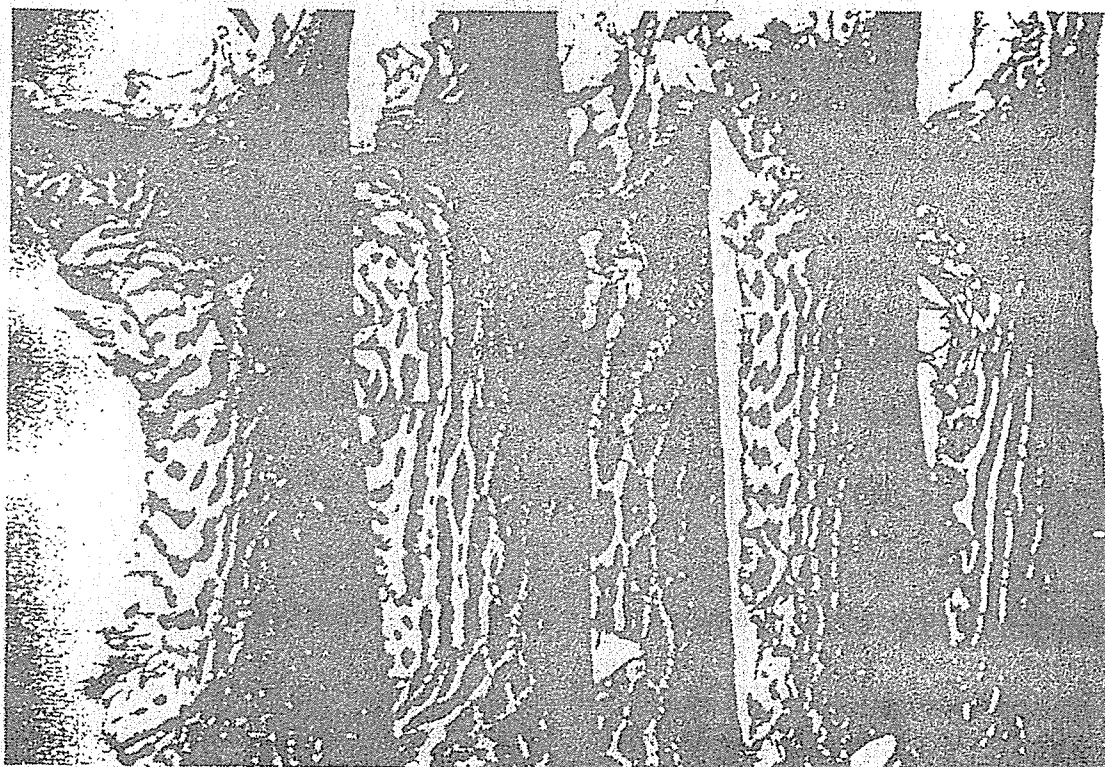
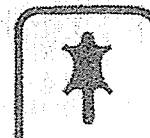
Hab. — Brasil central y oriental (al sur del bajo Amazonas), Paraguay y norte de Argentina, desde Misiones y Corrientes hasta Tucumán. Localidad típica: Río de Janeiro, Brasil, sugerida por Jardine, 1834.

- 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

5



- ⑥ 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 *aequatorialis* as different subspecies, but stating that they are similar in size and colour:

3. *Leopardus pardalis mearnsi* (Allen)

Figures 1 to 3, 12a.

Felis castrovillensis Mearns, Proc. U. S. Nat. Mus., XXV, p. 215, Sept. 17, 1900. Type locality, Talamanca, Costa Rica. Not *Felis bairdi castrovillensis* Mearns, 1900.
Felis mearnsi Allen, Bull. Amer. Mus. Nat. Hist., XX, p. 71, Pl. 1, 2, 1900.
 Substitute name for *castrovillensis* Mearns, preoccupied.

Felis pardalis mearnsi Allen, Bull. Amer. Mus. Nat. Hist., XXVIII, p. 105, April 30, 1910. Rio Coco and Poma Blanca, Nicaragua (eastern slope of the highlands).

A large dark form, based on a series of seven specimens. Darker and larger than *L. pardalis pardalis*.

7. *Leopardus pardalis equatorialis* (Mearns)

Felis equatorialis MEARNs, Proc. U. S. Nat. Mus., XXV, p. 246, 1902. Type locality, Paramba, northwestern Ecuador.

Oncoides pardalis equatorialis ALLEN, Bull. Amer. Mus. Nat. Hist., XXXV, p. 222, May 31, 1916. Rio Cauca and Caquetá districts of Colombia.

Similar in size and general coloration to *L. p. mearnsi* 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 (hunters' pelts, of which only two have skulls)—collected by George K. Cherrie in 1917 at Descalvados on the Paraguay River about 300 miles north of Curumbá, 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 to only 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 regards 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 Figs. 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 (hunters' pelts) from Curumbá, 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 catenata* H. Smith (1827), are *Felis mitis* F. Cuvier (1820), *Felis brasiliensis* F. Cuvier (1828, name preoccupied), *F. armillata* F. Cuvier (1832), *Felis pseudopardalis* Boitard (1842), *Felis melanura* Ball (1844, no locality nor measurements), *Felis pardalis minimus* Wilson (1860, Realejo, Nicaragua, but "too young to eat anything except milk"), *Felis pardoides* Gray (1867), *Panthera ludoviciana* and *P. jardiini* Fitzinger (1869), and others.

- 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 preoccupied 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 MEARNSEI Allen

Mearns' Ocelot; Manigordo; Tigre Chico

Felis mearnsi ALLEN, Bull. Amer. Mus. Nat. Hist., Vol. 20, p. 71, February 29, 1904. (Substitute for *F. costaricensis* Mearns, which is preoccupied by *F. bangsi costaricensis* Merriam.) Type from Talamanca, Costa Rica. (Probably from near Sipurio in the valley of the Rio Sicsola.)

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 Pirre, 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."

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 of 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, chibigouazou 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 (Vagstad, 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.



Bundesamt für Veterinärwesen
Office vétérinaire fédéral
Ufficio federale di veterinaria

Felis wiedii salvinia and nicaraguae

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

<u>Felis wiedii cooperi</u>	Mexico: Nuevo Leon, USA: Texas
<u>glaucula</u>	Mexico: Sinaloa to N Oaxaca
<u>oaxacensis</u>	Mexico: Tamaulipas to Oaxaca
<u>yucatan</u>	Mexico: N Chiapas to Yucatan, Guat.
<u>salvinia</u>	Mexico: Chiapas; Guatemala, El Salv.
<u>nicaraguae</u>	Honduras to Costa Rica
<u>pirrensis</u>	Panama to N Peru
<u>vicens</u>	Orinoco to Amazon Basin
<u>amazonica</u>	Amazon Basin of Brazil
<u>wiedii</u>	E and C Brazil to N Argentina
<u>boliviae</u>	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. Margay glaucula nicaraguae, new subspecies

Type, No. 28957, ♂ ad., Volcan de Chinandego, Nicaragua, August 20, 1905, W. B. Richardson.

Similar in general color pattern to M. glaucula 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 pectoral area with narrow linear stripes of black, and a broad black throat band. Differs from a specimen of typical glaucula from Los Masos, Julisco, Mexico, chiefly in its much richer, more fulvous coloration.

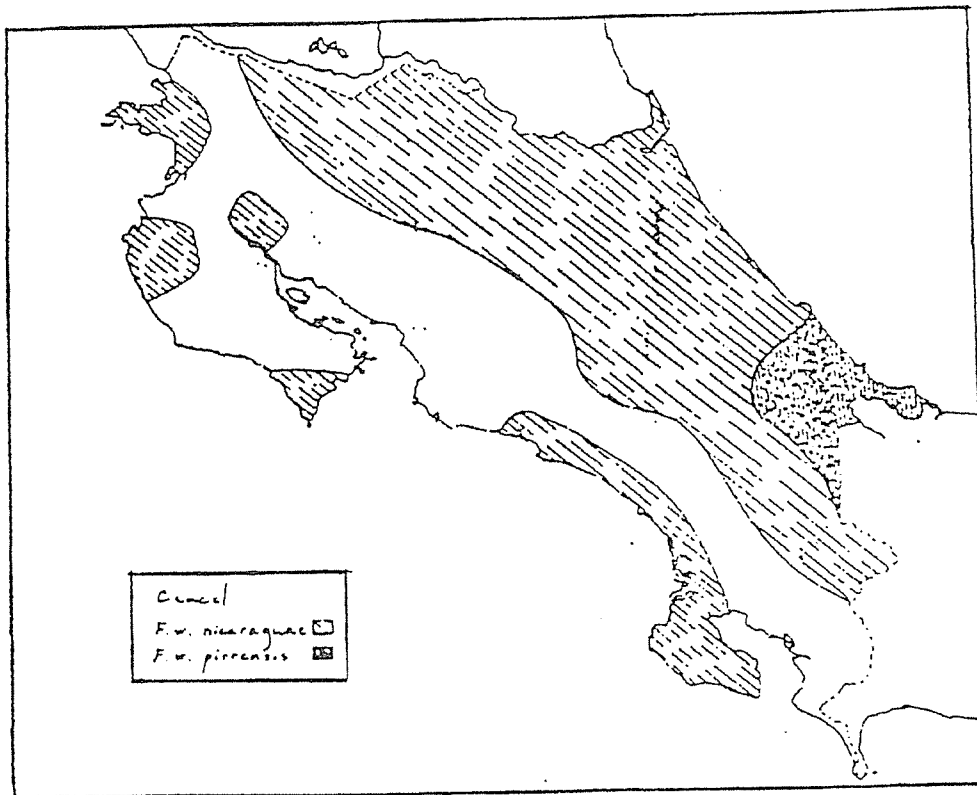
Collector's measurements of the type in the flesh: total length, 1260 mm; head and body, 750; tail vertebrae, 510; hind foot (from skin), 116. Skull: total length, 107; basal length, 93; condylobasal length, 100.9; zygomatic breadth, 72.2; nasals on middle line, 18.7; interorbital breadth, 19.2; tip to tip of postorbital processes, 51.6; interorbital constriction, 32.3; breadth of brain-case, 43; palatal length (from notch to anterior base of incisors), 40.5; length of bulla, 20.8; length of p⁴, 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, 390; hind foot (from skin), 110. Skull: condylobasal length, 89; zygomatic breadth, 65.8; interorbital breadth, 16.9; tip to tip of postorbital processes, 52.5; postorbital constriction, 35.2; length of bulla, 19.7; breadth of brain-case, 47.5; length of p⁴, 11.3.

- c) According to Eduardo Lopez Pizarro (undated, San José) nicaraguae 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 nicaraguae* (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 (1986) both refer to the fact that the distribution of subspecies is only poorly defined.

Felis wiedii (cont'd)

- 3 -

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 Jucuaran in El Salvador were tentatively ascribed to this subspecies.

According to ISIS also in Chiapas, Mexico

Felis wiedii nicaraguae: Honduras, Nicaragua and Costa Rica other than Sixzola 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
salvinia (?)

3. Bolivia

a) Felis pardalis steinbachi

b) Felis wiedii boliviae

4. Brazil

a) Felis pardalis maripensis
mitis
steinbachi (?)

b) Felis tigrina guttula
tigrina

c) Felis wiedii amazonica
boliviae
wiedii
vogens

5. Colombia

- a) Felis pardalis aequatorialis
mearnsi (?)
pseudopardalis

- b) Felis tigrina pardinoides

- 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 pardinoides

- 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 mitis
- b) Felis tigrina guttula
- c) Felis wiedii boliviae
wiedii

16. Peru

- a) Felis pardalis aequatorialis
pusae
- b) Felis tigrina pardinoides
- 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 albescens
sonoriensis

20. Uruguay

Felis wiedii wiedii

21. Venezuela

- a) Felis pardalis maripensis
pseudopardalis
- b) Felis tigrina pardinoides
tigrina
- c) Felis wiedii vigens

B) 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 glauca

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 oncella

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 pardalis pseudopardalis

Colombia

Trinidad and Tobago

Venezuela

Felis pardalis pusaea

Ecuador

Peru

Felis pardalis nelsoni

Mexico

Felis pardalis albescens

Mexico (?)

U. S. A.

Felis pardalis sonoriensis

Mexico

U. S. A.